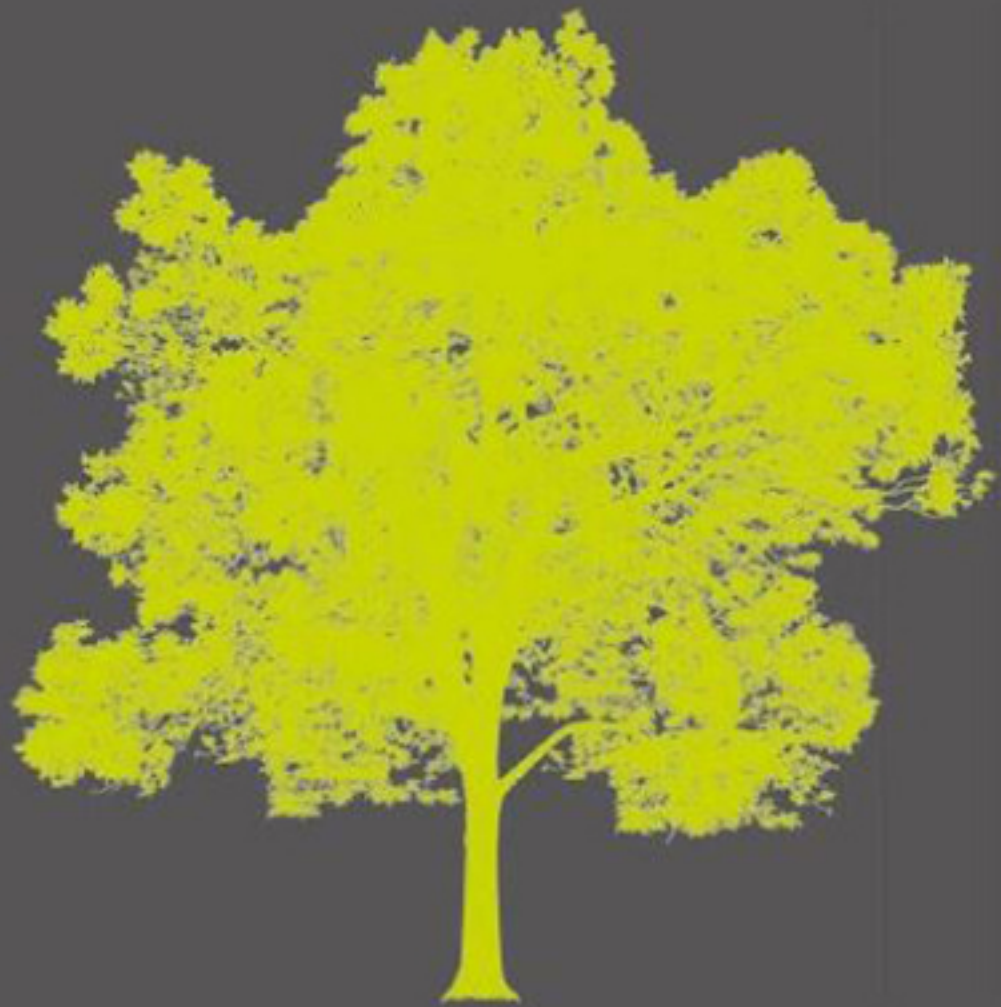


SEVENTH EDITION

Peter Atrill

**FINANCIAL  
MANAGEMENT  
FOR DECISION MAKERS**



# FINANCIAL MANAGEMENT FOR DECISION MAKERS

## PEARSON

At Pearson, we have a simple mission: to help people make more of their lives through learning.

We combine innovative learning technology with trusted content and educational expertise to provide engaging and effective learning experiences that serve people wherever and whenever they are learning.

From classroom to boardroom, our curriculum materials, digital learning tools and testing programmes help to educate millions of people worldwide – more than any other private enterprise.

Every day our work helps learning flourish, and wherever learning flourishes, so do people.

To learn more, please visit us at [www.pearson.com/uk](http://www.pearson.com/uk)

SEVENTH EDITION

# FINANCIAL MANAGEMENT FOR DECISION MAKERS

Peter Atrill

**PEARSON**

Harlow, England • London • New York • Boston • San Francisco • Toronto • Sydney  
Auckland • Singapore • Hong Kong • Tokyo • Seoul • Taipei • New Delhi  
Cape Town • São Paulo • Mexico City • Madrid • Amsterdam • Munich • Paris • Milan

**Pearson Education Limited**

Edinburgh Gate  
Harlow CM20 2JE  
United Kingdom  
Tel: +44 (0)1279 623623  
Web: [www.pearson.com/uk](http://www.pearson.com/uk)

---

First published 1997 (print)  
Second edition published 2000 (print)  
Third edition published 2003 (print)  
Fourth edition published 2006 (print)  
Fifth edition published 2009 (print)  
Sixth edition published (print) 2012  
**Seventh edition published 2014** (print and electronic)

© Pearson Education Limited 2014 (print and electronic)

The right of Peter Atrill to be identified as author of this work has been asserted by him in accordance with the Copyright, Designs and Patents Act 1988.

The print publication is protected by copyright. Prior to any prohibited reproduction, storage in a retrieval system, distribution or transmission in any form or by any means, electronic, mechanical, recording or otherwise, permission should be obtained from the publisher or, where applicable, a licence permitting restricted copying in the United Kingdom should be obtained from the Copyright Licensing Agency Ltd, Saffron House, 6–10 Kirby Street, London EC1N 8TS.

The ePublication is protected by copyright and must not be copied, reproduced, transferred, distributed, leased, licensed or publicly performed or used in any way except as specifically permitted in writing by the publishers, as allowed under the terms and conditions under which it was purchased, or as strictly permitted by applicable copyright law. Any unauthorised distribution or use of this text may be a direct infringement of the author's and the publishers' rights and those responsible may be liable in law accordingly.

All trademarks used herein are the property of their respective owners. The use of any trademark in this text does not vest in the author or publisher any trademark ownership rights in such trademarks, nor does the use of such trademarks imply any affiliation with or endorsement of this book by such owners.

Pearson Education is not responsible for the content of third-party internet sites.

*The Financial Times*. With a worldwide network of highly respected journalists, *The Financial Times* provides global business news, insightful opinion and expert analysis of business, finance and politics. With over 500 journalists reporting from 50 countries worldwide, our in-depth coverage of international news is objectively reported and analysed from an independent, global perspective. To find out more, visit [www.ft.com/pearsonoffer](http://www.ft.com/pearsonoffer).

ISBN: 978-1-292-01606-1 (print)  
978-1-292-01609-2 (PDF)  
978-1-292-01607-8 (eText)

**British Library Cataloguing-in-Publication Data**

A catalogue record for the print edition is available from the British Library

**Library of Congress Cataloguing-in-Publication Data**

A catalogue record for the print edition is available from the Library of Congress

10 9 8 7 6 5 4 3 2 1  
16 15 14 13 12

Front cover image: Getty Image

Print edition typeset in 9.25/13pt Helvetica Neue LT Pro by 35  
Print edition printed and bound by L.E.G.O. S.p.A., Italy

NOTE THAT ANY PAGE CROSS REFERENCES REFER TO THE PRINT EDITION

# Contents

Preface	xiii
Acknowledgements	xiv
How to use this book	xvii
Guided tour of the book	xx
<b>1 The world of financial management</b>	<b>1</b>
<i>Introduction</i>	1
<i>Learning outcomes</i>	1
The finance function	2
Structure of the book	4
Modern financial management	4
Why do businesses exist?	5
Balancing risk and return	12
Behaving ethically	14
Protecting shareholders' interests	17
Shareholder involvement	20
<i>Summary</i>	27
<i>Key terms</i>	28
<i>References</i>	28
<i>Further reading</i>	29
<i>Review questions</i>	29
<b>2 Financial planning</b>	<b>31</b>
<i>Introduction</i>	31
<i>Learning outcomes</i>	31
Planning for the future	32
The role of projected financial statements	33
Preparing projected financial statements	34
Preparing the projected statements: a worked example	35
Projected cash flow statement	36
Projected income statement	40
Projected statement of financial position (balance sheet)	42
Projected financial statements and decision making	43
Per-cent-of-sales method	45
Long-term cash flow projections	49
Taking account of risk	54

<i>Summary</i>	59
<i>Key terms</i>	61
<i>Further reading</i>	61
<i>Review questions</i>	61
<i>Exercises</i>	61
<b>3 Analysing and interpreting financial statements</b>	<b>69</b>
<i>Introduction</i>	69
<i>Learning outcomes</i>	69
Financial ratios	70
Financial ratio classifications	70
The need for comparison	72
Calculating the ratios	73
A brief overview	75
Profitability	76
Efficiency	83
Relationship between profitability and efficiency	88
Liquidity	90
Financial gearing	92
Investment ratios	95
Financial ratios and the problem of overtrading	101
Trend analysis	103
Using ratios to predict financial failure	104
Limitations of ratio analysis	109
<i>Summary</i>	115
<i>Key terms</i>	116
<i>References</i>	116
<i>Further reading</i>	117
<i>Review questions</i>	117
<i>Exercises</i>	117
<b>4 Making capital investment decisions</b>	<b>125</b>
<i>Introduction</i>	125
<i>Learning outcomes</i>	125
The nature of investment decisions	126
Investment appraisal methods	127
Accounting rate of return (ARR)	128
Payback period (PP)	133
Net present value (NPV)	136
Why NPV is better	144
Internal rate of return (IRR)	145
Some practical points	150
Investment appraisal in practice	154
Investment appraisal and strategic planning	156
The investment appraisal process	157
Investment decisions and human behaviour	162

<i>Summary</i>	163
<i>Key terms</i>	165
<i>Further reading</i>	165
<i>Review questions</i>	166
<i>Exercises</i>	166
<b>5 Making capital investment decisions: further issues</b>	<b>173</b>
<i>Introduction</i>	173
<i>Learning outcomes</i>	173
Investment decisions when funds are limited	174
Comparing projects with unequal lives	177
The ability to delay	180
The problem of inflation	181
The problem of risk	182
Sensitivity analysis	184
Scenario analysis	191
Simulations	191
Risk preferences of investors	193
Risk-adjusted discount rate	196
Expected net present value	197
Event tree diagrams	201
Risk and the standard deviation	204
The standard deviation and the normal distribution	208
The expected value–standard deviation rule	209
Measuring probabilities	209
The limits of probability analysis	210
Portfolio effects and risk reduction	211
<i>Summary</i>	219
<i>Key terms</i>	221
<i>Further reading</i>	221
<i>Review questions</i>	221
<i>Exercises</i>	222
<b>6 Financing a business 1: sources of finance</b>	<b>227</b>
<i>Introduction</i>	227
<i>Learning outcomes</i>	227
Sources of finance	228
External sources of finance	228
External sources of long-term finance	229
External sources of short-term finance	249
Long-term versus short-term borrowing	253
Internal sources of finance	255
Internal sources of long-term finance	255
Internal sources of short-term finance	257
<i>Summary</i>	261
<i>Key terms</i>	263
<i>Further reading</i>	263



<i>Review questions</i>	264
<i>Exercises</i>	264
<b>7 Financing a business 2: raising long-term finance</b>	<b>269</b>
<i>Introduction</i>	269
<i>Learning outcomes</i>	269
The Stock Exchange	270
Stock market efficiency	275
Are the stock markets really efficient?	280
Share issues	284
Long-term finance for the smaller business	292
Business angels	301
Government assistance	304
The Alternative Investment Market (AIM)	305
Amazon.com: a case history	307
<i>Summary</i>	308
<i>Key terms</i>	309
<i>References</i>	309
<i>Further reading</i>	310
<i>Review questions</i>	310
<i>Exercises</i>	310
<b>8 The cost of capital and the capital structure decision</b>	<b>315</b>
<i>Introduction</i>	315
<i>Learning outcomes</i>	315
Cost of capital	316
Weighted average cost of capital (WACC)	330
Specific or average cost of capital?	333
Limitations of the WACC approach	334
Cost of capital – some evidence	334
Financial gearing	336
Degree of financial gearing	339
Gearing and capital structure decisions	341
Constructing a PBIT–EPS indifference chart	344
What determines the level of gearing?	346
The capital structure debate	348
<i>Summary</i>	360
<i>Key terms</i>	361
<i>References</i>	361
<i>Further reading</i>	361
<i>Review questions</i>	362
<i>Exercises</i>	362
<b>9 Making distributions to shareholders</b>	<b>371</b>
<i>Introduction</i>	371
<i>Learning outcomes</i>	371

Paying dividends	372
Dividend distributions in practice	373
Dividend policy and shareholder wealth	376
The importance of dividends	382
Factors determining the level of dividends	386
Dividend policy and management attitudes: some evidence	390
Dividend smoothing in practice	392
What should managers do?	393
Alternatives to cash dividends	394
<i>Summary</i>	401
<i>Key terms</i>	403
<i>References</i>	403
<i>Further reading</i>	403
<i>Review questions</i>	403
<i>Exercises</i>	404
<b>10 Managing working capital</b>	<b>407</b>
<i>Introduction</i>	407
<i>Learning outcomes</i>	407
What is working capital?	408
The scale of working capital	409
Managing inventories	412
Inventories management models	418
Managing trade receivables	423
Managing cash	433
Managing trade payables	441
<i>Summary</i>	445
<i>Key terms</i>	447
<i>Further reading</i>	447
<i>Review questions</i>	448
<i>Exercises</i>	448
<b>11 Measuring and managing for shareholder value</b>	<b>455</b>
<i>Introduction</i>	455
<i>Learning outcomes</i>	455
The quest for shareholder value	456
Creating shareholder value	456
The need for new forms of measurement	457
Net present value (NPV) analysis	459
Managing the business with shareholder value analysis	466
Implications of SVA	467
Economic value added (EVA®)	467
Eva®-based ratios	472
EVA® in practice	473
EVA® and SVA compared	476
EVA® or SVA?	477
Market value added (MVA)	479

The link between MVA and EVA®	480
Limitations of MVA	481
Total shareholder return	483
Criticisms of the shareholder value approach	487
Measuring the value of future growth	488
Implementing the shareholder value approach	489
Directors' share options and shareholder value	490
<i>Summary</i>	494
<i>Key terms</i>	496
<i>References</i>	496
<i>Further reading</i>	496
<i>Review questions</i>	496
<i>Exercises</i>	497

## **12 Business mergers and share valuation** **501**

<i>Introduction</i>	501
<i>Learning outcomes</i>	501
Mergers and takeovers	502
Merger and takeover activity	503
The rationale for mergers	503
Wealth-enhancing motives for mergers	504
Other motives for mergers	509
Forms of purchase consideration	513
Mergers and financial performance	516
Who benefits?	519
The merger puzzle	522
Ingredients for successful mergers	523
Rejecting a takeover bid	524
Restructuring a business: divestments and demergers	526
The valuation of shares	529
Choosing a valuation model	542
<i>Summary</i>	542
<i>Key terms</i>	544
<i>References</i>	545
<i>Further reading</i>	545
<i>Review questions</i>	545
<i>Exercises</i>	546

<b>Appendix A Present value table</b>	<b>555</b>
<b>Appendix B Annual equivalent factor table</b>	<b>557</b>
<b>Appendix C Solutions to self-assessment questions</b>	<b>559</b>
<b>Appendix D Solutions to review questions</b>	<b>571</b>
<b>Appendix E Solutions to selected exercises</b>	<b>581</b>

<b>Glossary</b>	<b>605</b>
<b>Index</b>	<b>615</b>

## Companion Website

For open-access **student resources** specifically written to complement this textbook and support your learning, please visit [www.pearsoned.co.uk/atrill](http://www.pearsoned.co.uk/atrill)



## Lecturer Resources

For password-protected online resources tailored to support the use of this textbook in teaching, please visit [www.pearsoned.co.uk/atrill](http://www.pearsoned.co.uk/atrill)



# Preface

This book has been written for those wishing to achieve a broad understanding of financial management at either undergraduate or postgraduate/post-experience level. It is aimed primarily at students who are studying financial management as part of their course in business, management, accounting, economics, computing, or some other area. The book should also be suitable for those who are not following a particular course but nevertheless need an understanding of financial management to help them manage their business.

As there are several excellent books on financial management already published, you may wonder why another book is needed in this area. Many of the available books are too detailed and demanding to provide a suitable introduction to the subject. They are often around 1,000 pages in length and contain mathematical formulae that many students find daunting. This book assumes no previous knowledge of financial management (although a basic understanding of financial statements is required) and is written in an accessible style. Each topic is introduced carefully and there is a gradual building of knowledge. In addition, mathematical formulae have been kept to a minimum.

The book rests on a solid foundation of theory, but the main focus throughout is its practical value. It is assumed that readers are primarily concerned with understanding financial management in order to make better financial decisions. The title of the book reflects this decision-making focus.

The book is written in an 'open learning' style; that is, it tries to involve you in a way not traditionally found in textbooks. Throughout each chapter there are activities and self-assessment questions for you to attempt. The purpose of these is to help check understanding of the points that are being made and to encourage you to think around particular topics. More detail concerning the nature and use of these activities and self-assessment questions is given in the 'How to use this book' section following this preface. The open learning style has been adopted because, I believe, it is more user friendly. Irrespective of whether you are using the book as part of a taught course or for independent study, the interactive approach employed makes it easier for you to learn.

As it is likely that most of you will not have studied financial management before, the use of technical jargon has been kept to a minimum. Where technical terminology is unavoidable, I try to provide clear explanations. To help you further, all the key terms are highlighted in the book and then listed at the end of each chapter with a page reference to help you rapidly revise the main concepts. All these key terms are listed alphabetically with a short definition in the glossary, which can be found towards the end of the book.

In writing the seventh edition, I have taken account of helpful comments and suggestions made by lecturers, students and other readers. Many areas have been revised to improve the clarity of the writing and I have introduced new topics such as directors' share options. I have also expanded certain areas such as the measurement of shareholder value and the problem of short termism. Finally, I have introduced more activities throughout to enhance the interactive nature of the text.

I do hope that you will find the book readable and helpful.

*Peter Atrill*  
*June 2013*

# Acknowledgements

We are grateful to the following for permission to reproduce copyright material:

## Figures

Figure 1.5 adapted from Ownership of UK quoted shares 2012, based on information from the Office of National Statistics, [www.ons.gov.uk](http://www.ons.gov.uk), Crown copyright, source: Office for National Statistics licensed under the Open Government Licence v.2.0; Figure 3.3 from *Accounting and Finance for Non-specialists*, 7 edn, (Atrill, P. and McLaney, E., 2010) p. 206, FT/Prentice Hall, Pearson Education Ltd; Figures 4.1, 4.2, 4.4 from *Accounting An Introduction*, 5 edn, (Atrill, P. and McLaney, E., 2009) FT/Prentice Hall, Pearson Education Ltd; Figure 4.6 from *Accounting and Finance for Non-specialists*, 8 edn, (Atrill, P. and McLaney, E., 2013) Pearson Education, Pearson Education Ltd; Figure 7.3 from 'Reading the signs', *The Independent*, 27/03/2004, reproduced with permission from *The Independent*; Figures 8.6, 8.7 from "'Practitioners" perspectives on the UK cost of capital', *European Journal of Finance*, 10, 123–38 (McLaney, E., Pointon, J., Thomas, M. and Tucker, J., 2004).

## Tables

Table 7.14 from *Angel Investing: Matching Start-up Funds with Start-up Companies – A Guide for Entrepreneurs and Individual Investors*, Jossey-Bass Inc. (Van Osnabrugge, M. and Robinson, R.J., 2000) Copyright © 2000, John Wiley and Sons.

## Text

Box 1.1 from 'Assessing the rate of return', *Financial Times Mastering Management Series*, 1, 13 (Dimson, E., 1995), *Financial Times*; Box 1.3 from 'Forget how the crow flies', *The Financial Times*, 17/01/2004 (Kay, J.), copyright © The Financial Times Limited, All Rights Reserved; Box 1.5 adapted from Extracts from Code of Ethics, Sage Group [www.sage.com](http://www.sage.com), Sage Group plc; Box 1.10 from 'Sly Bailey to leave Trinity Mirror', *Financial Times*, 03/05/2102 (Fenton, B., Davoudi, S. and Burgess, K.), copyright © The Financial Times Limited, All Rights Reserved; Box 1.12 from UK Stewardship Code, July 2012, [www.frc.org.uk](http://www.frc.org.uk), Financial Reporting Council, © The Financial Reporting Council – adapted and reproduced with the kind permission of the FRC, all rights reserved; Box 2.2 from 'Companies need to learn to care for cash', *Financial Times*, 02/10/2009 (Sakoui, A.) © The Financial Times Limited, All Rights Reserved; Box 2.3 from 'Vanco's shares fall on profit warning', *Financial Times*, 21/08/2007 (Staffor, P.), © The Financial Times Limited, All Rights Reserved; Box 2.4 from 'Funding plans a key matter in annual reports', *Financial Times*, 25/01/2009 (Hughes, J.), © The Financial Times Limited, All Rights Reserved; Box 2.6 from Analysts' consensus, J. Sainsbury plc, [www.j-sainsbury.co.uk](http://www.j-sainsbury.co.uk); Box 3.4 adapted from 'Costs vibrate as VW accelerates', *Financial Times*, 29/03/2010 (Schäfer, D.), © The Financial Times Limited, All Rights Reserved; Box 3.5 adapted from

'Companies monitor companies credit scores', *Financial Times*, 26/01/2012 (Moules, J.), © The Financial Times Limited, All Rights Reserved; Box 3.6 from 'Gearing levels set to plummet', *Financial Times*, 10/02/2009 (Grant, J.) © The Financial Times Limited, All Rights Reserved; Box 3.10 from 'New study re-writes the A to Z of value investing', *Financial Times*, 14/08/2009 (Mathurin, P.), © The Financial Times Limited, All Rights Reserved; Box 3.12 from *Arnold Weinstock and the Making of GEC* (Aris, S., 1998) Aurum Press; Box 4.6 from 'Deutsche Telekom backs MetroPCS takeover', *Financial Times*, 03/10/2012 (Taylor, P. and Gelles, D.), © The Financial Times Limited, All Rights Reserved; Box 4.11 from 'Easy ride', *Financial Times*, 26/10/2007 (Hughes, C.), © The Financial Times Limited, All Rights Reserved; Box 5.4 from 'Positive scoping study at 100% owned Azuca project in southern Peru', news release, Hochschild Mining plc, [phx.corporate-ir.net](http://phx.corporate-ir.net/phx.corporate-ir.net); Box 5.5 from 'A story can be more useful than maths', *Financial Times*, 26/02/2013 (Kay, J.), © The Financial Times Limited, All Rights Reserved; Box 5.6 from South Hampshire Rapid Transit Fareham–Gosport–Portsmouth Investment Appraisal, 2005, [www.hants.gov.uk](http://www.hants.gov.uk) Hampshire County Council, contains public sector information licensed under the Open Government Licence v2.0. <http://www.nationalarchives.gov.uk/doc/open-government-licence/version/2/>; Box 5.7 from 'Mace set to grow in all directions', *Financial Times*, 01/08/2010 (Hammond, E.), © The Financial Times Limited, All Rights Reserved; Box 6.1 from 'St Modwen to launch unsecured bonds', *Financial Times*, 17/10/2102 (Eley, J.), © The Financial Times Limited, All Rights Reserved; Box 6.2 from Shareholder letter, Berkshire Hathaway Inc., [www.berkshirehathaway.com](http://www.berkshirehathaway.com), Warren Buffett, the material is copyrighted and used with permission of the author; Box 6.3 from 'Man Utd's first bond suffers from lack of support', *Financial Times*, 03/02/2010 (Sakoui, A. and Blitz, R.), © The Financial Times Limited, All Rights Reserved; Box 6.5 from Lex column, 'Sony – group bonding', 15 November 2012 [www.FT.com](http://www.FT.com), © The Financial Times Limited, All Rights Reserved; Box 6.9 from Wolseley plc Annual Report 2012, p. 148 [www.wolseley.com](http://www.wolseley.com), Wolseley Group plc; Box 6.9 from Barratt Developments plc, Annual Report and Accounts 2012, [www.barrattdevelopments.co.uk](http://www.barrattdevelopments.co.uk) Barratt Developments plc; Box 6.12 from 'Seeds of Woolworths' demise sown long ago', *Financial Times*, 29/11/2008 (Rigby, E.), © The Financial Times Limited, All Rights Reserved; Box 7.4 from 'Esure moves closer to bumper valuation', *Financial Times*, 13/03/2013 (Gray, A.), © The Financial Times Limited, All Rights Reserved; Box 7.5 from 'Dell to go private in \$24.4bn deal', *Daily Telegraph*, 06/02/2013 (Blackden, R.), copyright © Telegraph Media Group Limited 2013; Box 7.7 from Tempure Pedic: Hard Landing Lex column, 08/06/2012, [www.ft.com](http://www.ft.com), © The Financial Times Limited, All Rights Reserved; Box 7.9 from 'Abramovich invests in "gas-to-liquids" in UK', *Financial Times*, 04/01/2013 (Chazan, G.), © The Financial Times Limited, All Rights Reserved; Box 7.12 from 'Does tax relief tempt angels?', *Financial Times*, 20/04/2012 (Mason, C.); Box 9.4 from Shareholder letter, [www.berkshirehathaway.com](http://www.berkshirehathaway.com), Warren Buffett, the material is copyrighted and used with permission of the author; Box 9.5 from 'BP raises dividend after Russian deal', *Financial Times*, 30/10/2012 (Chazan, G.), © The Financial Times Limited, All Rights Reserved; Box 9.6 from 'Companies in Europe see dividend rises', *Financial Times*, 22/02/2010 (Milne, R.), © The Financial Times Limited, All Rights Reserved; Box 9.7 from R. Wall, 'Aer Lingus profit falls as dividend raised in Ryanair bid battle', [www.bloomberg.com](http://www.bloomberg.com), Bloomberg; Box 9.13 from 'The value of share buybacks', *Financial Director* (Goddard, M.), copyright Incisive Media Investments Ltd 2010, reproduced with permission; Box 10.4 from 'Wal-Mart aims for further inventory cuts', *Financial Times*, 19/04/2006 (Birchall, J.), © The Financial Times Limited, All Rights Reserved; Box 10.5 from 'Inventory control in retail', *Financial Times*, 13/02/2012 (Bird, J.), © The Financial Times Limited, All Rights Reserved; Box 10.9 from [www.atradius.us/news/press-releases](http://www.atradius.us/news/press-releases); Box 10.11 from 'Dash for Cash', Karaian, J., *CFO Europe Magazine*, 8 July 2008, [www.cfo.com](http://www.cfo.com), CFO.com; Box 10.12 from 'Big companies



resist prompt payment code', *Financial Times*, 09/01/2013 (Rigby, E. and Parker, G.), © The Financial Times Limited. All Rights Reserved.; Box 10.13 from 'Dash for Cash', Karaian, J. *CFO Europe Magazine*, 8 July 2008, www.CFO.com, CFO.com; General displayed texts 11 from Annual Report to shareholders, Berkshire Hathaway Inc 1985, www.berkshirehathaway.com, Warren Buffett, the material is copyrighted and used with permission of the author; Box 11.1 from 'Siemens chief finds himself in a difficult balancing act', *Financial Times*, 06/05/2006 (Milne, R.), © The Financial Times Limited, All Rights Reserved; Box 11.9 from Boston Consulting Group, 'The 2012 value creators rankings', www.bcgperspectives.com, Boston Consulting Group; Box 11.13 from 'Ebay seeks to alter terms of stock options', *Financial Times*, 11/03/2009 (Gelles, D.), © The Financial Times Limited, All Rights Reserved; Box 12.2 adapted from 'Computing the future for Yahoo and Microsoft', *Financial Times*, 04/05/2007 (Nuttall, C. and Waters, R.), © The Financial Times Limited, All Rights Reserved; Box 12.3 from 'Dear Mickey: open letter to Disney', *Financial Times*, 11/02/2004, © The Financial Times Limited, All Rights Reserved; Box 12.4 from 'Decline of the conglomerates', *Financial Times*, 04/02/2007 (Guerrera, F.), © The Financial Times Limited, All Rights Reserved; Boxes 12.5, 12.9 from Letter to shareholders, www.berkshirehathaway.com, Warren Buffett, the material is copyrighted and used with permission of the author; Box 12.6 adapted from Shareholders letter, Berkshire Hathaway Inc, www.berkshirehathaway.com 26 February 2010, Warren Buffett, the material is copyrighted and used with permission of the author; Box 12.8 from 'Merger to provide \$100m boost for advisers,' *Financial Times*, 02/02/2012 (Sakoui, A. and Blas, J.), © The Financial Times Limited, All Rights Reserved; Box 12.11 from 'Logic of corporate shrinkage asserts itself', *Financial Times*, 04/09/2011 (Jackson, T.), © The Financial Times Limited, All Rights Reserved.

In some instances we have been unable to trace the owners of copyright material and we would appreciate any information that would enable us to do so.

# How to use this book

The contents of the book have been ordered in what I believe is a logical sequence and, for this reason, I suggest that you work through the book in the order in which it is presented. Every effort has been made to ensure that earlier chapters do not refer to concepts or terms that are not explained until a later chapter. If you work through the chapters in the ‘wrong’ order, you will probably encounter concepts and points that were explained previously but which you have missed.

Irrespective of whether you are using the book as part of a lecture/tutorial-based course or as the basis for a more independent form of study, I recommend you follow broadly the same approach.

## Integrated assessment material

Interspersed throughout each chapter are numerous **Activities**. You are strongly advised to attempt all these questions. They are designed to stimulate the sort of ‘quick-fire’ questions that a good lecturer might throw at you during a lecture or tutorial. Activities seek to serve two purposes:

- To give you the opportunity to check that you understand what has been covered so far.
- To encourage you to think about the topic just covered, either to see a link between that topic and others with which you are already familiar, or to link the topic just covered to the next.

The answer to each Activity is provided immediately after the question. This answer should be covered up until you have deduced your solution, which can then be compared to the one given.

Towards the end of most chapters, there is a **Self-assessment question**. This is rather more demanding and comprehensive than any of the Activities and is designed to give you an opportunity to see whether you understand the core material in the chapter. The solution to each of the Self-assessment questions is provided at the end of the book. As with the Activities, it is very important that you attempt each question thoroughly before referring to the solution. If you have difficulty with a Self-assessment question, you should go over the relevant chapter again.

## End-of-chapter assessment material

At the end of each chapter, there are four **Review questions**. These are short questions requiring a narrative answer or discussion within a tutorial group. They are intended to enable you to assess how well you can recall and critically evaluate the core terms and concepts covered in each chapter. Suggested answers to these questions are included at the end of the book. Again, a real attempt should be made to answer these questions before referring to the solutions.

At the end of a chapter, there are normally seven Exercises. (However, Chapter 1 has none, and Chapters 9 and 11 have six.) These are mostly computational and are designed to reinforce your knowledge and understanding. Exercises are of varying complexity, with the more advanced ones clearly identified. Although the less advanced Exercises are fairly straightforward, the more advanced ones can be quite demanding. Nevertheless, they are capable of being successfully completed if you have worked conscientiously through the chapter and have attempted the less advanced Exercises beforehand.

Answers to those Exercises marked with a coloured number are provided at the end of the book. Three of the Exercises in each chapter are marked with a coloured number to enable you to check progress. The marked Exercises are a mixture of less advanced and more advanced Exercises. Solutions to the Exercises that are not marked with a coloured number are given in a separate lecturer's Solutions Manual. Yet again, a thorough attempt should be made to answer these Exercises before referring to the solutions.



# Guided tour of the book

**Chapter 5**

## MAKING CAPITAL INVESTMENT DECISIONS: FURTHER ISSUES

**INTRODUCTION**

The simple NPV decision rules mentioned in the previous chapter were: (1) all projects with a positive NPV should be accepted, and (2) where there are competing projects, the one with the highest (or highest positive) NPV should be selected. There are circumstances, however, that call for a modification to these simple decision rules and in this chapter we consider these.

Inflation has been a persistent problem for most industrialised economies. We shall examine the problems that inflation creates, and the ways in which we can adjust for the effects of inflation when undertaking discounted cash flow analysis.

Investment appraisal involves making estimates about the future. However, producing reliable estimates can be difficult, particularly where the environment is fast-changing or where new products are being developed. Risk, which is the likelihood that what is estimated to occur will not actually occur, is an important part of investment appraisal. We discuss this chapter by considering the problem of risk and how it may be taken into account when making investment decisions.

**Learning outcomes**

When you have completed this chapter, you should be able to:

- Explain the modifications needed to the simple NPV decision rules where investment funds are limited or where there are competing projects with unequal lives.
- Discuss the effect of inflation on investment appraisal and explain how inflation may be taken into account.
- Discuss the nature of risk and explain why it is important in the context of investment decisions.
- Describe the main approaches to the measurement of risk and discuss their limitations.

**Learning outcomes** Bullet points at the start of each chapter show what you can expect to learn from that chapter, and highlight the core coverage.

and its remaining assets are distributed, the shareholders' claim against those assets goes to the bottom of the pile. The claims of other 'stakeholders', such as employees, customers, lenders and suppliers, are given legal priority over those of shareholders. These other stakeholders may also have the added advantage of being able to protect themselves against the risk of assets.

**Activity 1.1**

Can you think of any way in which

(a) a lender, and

(b) a supplier

could avoid the risk of loss, even though the business with which they are dealing is in financial difficulties and may even fail?

Lenders can insist that the business offers adequate security for any loans that they provide. This may allow assets to be seized to pay off amounts due in the event of any default in interest or loan repayments. Suppliers can insist on being paid in advance for the goods or services provided.

Note that shareholders have a residual claim on the wealth generated by a business, while other stakeholders, such as employees, lenders and suppliers, normally have a fixed claim. In other words, shareholders receive whatever remains after other stakeholders have received the fixed amounts due to them. Having a residual claim means that shareholders have an incentive to increase the size of their claim by ensuring that the business undertakes new and risky ventures. Entrepreneurial activity is therefore encouraged, which should benefit all those connected with the business. Stakeholder groups with a fixed claim on the business do not have the same incentive as that of shareholders. Providing the business can meet their claims, this will normally be enough. (To minimise their risks, they might even prefer the business to avoid new ventures.)

**Wealth maximisation**

As stated earlier, a business is assumed to exist to create wealth for its shareholders. We can be more precise by saying that the assumed objective of a business is shareholder wealth maximisation. Within a market economy, shareholders provide funds to a business in the expectation that they will receive the maximum possible increase in wealth for the level of risk that must be faced. When we use the term 'wealth' in this context, we are referring to the market value of the ordinary shares. The market value of these shares will, in turn, reflect the future returns the shareholders will expect to receive over time from the shares and the level of risk involved. Note that a business is not concerned with maximising shareholders' returns over the short term, but rather with providing the highest possible returns over the long term.

**Wealth maximisation and profit maximisation**

Instead of seeking to maximise shareholder wealth, a business may seek to maximise profit. In broad terms, profit represents the surplus generated by a business and so it may be

**6 CHAPTER 1 THE WORLD OF FINANCIAL MANAGEMENT**

**Activities** These short questions, integrated throughout each chapter, allow you to check your understanding as you progress through the text. They comprise either a narrative question requiring you to review or critically consider topics, or a numerical problem requiring you to deduce a solution. A suggested answer is given immediately after each activity.

**Key terms** The key concepts and techniques in each chapter are highlighted in colour where they are first introduced.

Sometimes a distinction is made in the literature between risk and uncertainty. However, this distinction is not useful for our purposes and in this chapter the two words are used interchangeably.

**Real World 5.3**

### Wealth lost in the Channel

The Channel Tunnel, which runs for 31 miles between Folkestone in the UK and Sangatte in Northern France, was started in 1986 and opened for public use in 1994. From a technological and social perspective it has been a success, but from a financial point of view it has been a disaster. The tunnel was purely a private sector venture for which a new business, Eurotunnel plc, was created. Relatively little public money was involved. To be a commercial success the tunnel needed to cover all of its costs, including interest charges, and leave sufficient to enhance the shareholders' wealth. In fact, the providers of long-term finance (lenders and shareholders) have lost virtually all of their investment. Though the main losers were banks and institutional investors, many individuals, particularly in France, bought shares in Eurotunnel.

Since the accounting year ended 31 December 2007, the business has made a profit, and in 2009 it paid its first dividend. However, this was achieved only as a result of the business forcing lenders, who would expect to be paid interest, to convert their investment to ordinary shares. This meant that the business eliminated the cost of financing some of the cost of building the tunnel.

Key inputs to the pre-1986 assessment of the project were the cost of construction and creating the infrastructure, the length of time required to complete construction and the level of revenue that the tunnel would generate when it became operational.

In the event:

- construction cost was £10 billion – it was originally planned to cost £5.6 billion
- construction time was seven years – it was planned to be six years
- revenues from passengers and freight have been well below those projected – for example, 21 million annual passenger journeys on Eurostar trains were projected; the numbers have consistently remained at around 7 million.

The failure to generate revenues at the projected levels has probably been the biggest contributor to the problem. When preparing the projection pre 1986, planners failed to take adequate account of two crucial factors:

- Finance competition from the ferry operators. At the time many thought that the ferries would roll over and die.
- The rise of no-frills, cheap air travel between the UK and the continent.

The commercial failure of the tunnel means that it will be very difficult in future for projects of this nature to be financed from private sector funds.

Sources: Annual Reports of Eurotunnel plc; J. Rendall, 'How Eurotunnel went wrong', BBC News, www.bbc.co.uk, 13 June 2005.

**THE PROBLEM OF RISK 183**

**'Real World' illustrations** Integrated throughout the text, these illustrative examples highlight the practical application of accounting concepts and techniques by real businesses, including extracts from company reports and financial statements, survey data and other insights from business.

**Example 5.6**

Telematic plc is considering two mutually exclusive projects: Cable and Satellite. The possible NPVs for each project and their associated probabilities are as follows:

Cable		Satellite	
NPV £m	Probability of occurrence	NPV £m	Probability of occurrence
10	0.1	15	0.6
20	0.5	20	0.2
25	0.4	40	0.2

To calculate the standard deviation, the ENPV for each project must be calculated. In the case of the Cable project, the ENPV is as follows:

(a)	(b)
NPV £m	Probability of occurrence
10	0.1
20	0.5
25	0.4
	<b>10.0</b>
	<b>21.0</b>

The next step is to calculate the deviations around the ENPV by deducting the expected NPV from each possible outcome. For the Cable project, the following set of deviations will be obtained:

(a)	(b)	(a - b)
Possible NPV £m	ENPV £m	Deviation £m
10	21	-11
20	21	-1
25	21	4

The calculations reveal that two of the deviations are negative and one is positive. To prevent the positive and negative deviations from cancelling each other out, we can eliminate the negative signs by squaring the deviations. The sum of the squared deviations is referred to as the variance. The variance for the Cable project will be:

Deviations £m	Squared deviations £m
-11	121
-1	1
4	16
	<b>Variance 138</b>

The problem with the variance is that it provides a unit of measurement that is the square of the NPV deviations. In this case, the variance is 138 (£m<sup>2</sup>) which is difficult to interpret. To make things easier, it is a good idea to take the square root of the variance. The final step in calculating the standard deviation is to do just that. The standard deviation is:

**Standard deviation =  $\sqrt{\text{Variance}}$**

**206 CHAPTER 5 MAKING CAPITAL INVESTMENT DECISIONS: FURTHER ISSUES**

**Examples** At frequent intervals throughout most chapters, there are numerical examples that give you step-by-step workings to follow through to the solution.

**Self-assessment questions** Towards the end of most chapters you will encounter one of these questions, allowing you to attempt a comprehensive question before tackling the end-of-chapter assessment material. To check your understanding and progress, solutions are provided at the end of the book.

An 8 per cent rise in average fares lifted the airline to a profit of £18 million in the traditionally weak three months to December, compared with an average forecast by five analysts... *Source: C. Humphries, 'Ryanair's profit forecast on resilient Northern Europe', www.reuters.com, 28 January 2013.*

**Self-assessment question 2.1**

Quards Ltd is a small business that imports high-quality laser printers. The most recent statement of financial position of the business is as follows:

**Statement of financial position as at 31 May Year 8**

	£000	£000
<b>ASSETS</b>		
<b>Non-current assets</b>		
Property	460	430
Accumulated depreciation	(20)	
Fixtures and fittings	35	
Accumulated depreciation	(10)	25
		425
<b>Current assets</b>		
Inventories		24
Trade receivables		34
Cash at bank		60
		118
<b>Total assets</b>		<b>543</b>
<b>EQUITY AND LIABILITIES</b>		
<b>Equity</b>		
£1 ordinary shares	200	
Retained earnings	144	144
		344
<b>Non-current liabilities</b>		
Borrowings – loan		125
<b>Current liabilities</b>		
Trade payables		22
Tax due		46
		68
<b>Total equity and liabilities</b>		<b>512</b>

58 CHAPTER 2 FINANCIAL PLANNING

**SUMMARY**

The main points in this chapter may be summarised as follows:

**Investment decisions when funds are limited**

- Where projects are divisible, managers should maximise the present value per £ of scarce finance.
- The profitability index provides a measure of the present value per £ of scarce finance.
- Where funding requirements extend beyond a single period, linear programming can be used to maximise NPV.

**Comparing projects with unequal lives**

- Can be done by assuming each project forms part of a repeat chain of replacement and then by making comparisons using the shortest-common-period-of-time approach.
- As an alternative, the equivalent-annual-annuity approach converts the NPV of a project into an annual annuity stream over its expected life.

**The problem of inflation**

- Inflation may be included by adjusting the annual cash flows and the discount rate to take account of price increases.
- Inflation may be excluded by adjusting the cash flow to real terms and by using a 'real' discount rate.

**Risk**

- Is important because of the long time-scales and amounts involved in investment decisions.
- Various methods of dealing with risk are available, including sensitivity analysis, scenario analysis, simulation, risk-adjusted discount rate and the expected net present value method.

**Sensitivity analysis**

- Provides an assessment, by taking each input factor in turn, of how much each one can vary from estimate before a project is not viable.
- Is a static form of analysis that does not indicate the likelihood of each factor variation occurring.
- Does not give a clear decision rule.

**Scenario analysis**

- Changes a number of variables simultaneously to provide a particular 'state of the world'.
- Often three different states – optimistic, pessimistic and most likely – are portrayed.
- Does not indicate the likelihood of each state occurring or other possible states that may occur.

**Simulations**

- Involve identifying the key variables of the project and their key relationships.
- Possible values are attached to each factor and a computer is used to select one of the possible values on a random basis to produce a projected cash flow.

219

**Bullet point chapter summary** Each chapter ends with a 'bullet-point' summary. This highlights the material covered in the chapter and can be used as a quick reminder of the main issues.

**Key terms summary** At the end of each chapter, there is a listing (with page references) of all the key terms introduced in that chapter, allowing you to refer back easily to the most important points.

**KEY TERMS**

Profitability index p. 175	Expected value p. 198
Linear programming p. 176	Expected net present value (ENPV) p. 198
Shortest-common-period-of-time approach p. 177	Event tree diagram p. 201
Annuity p. 179	Standard deviation p. 205
Equivalent-annual-annuity approach p. 179	Normal distribution p. 208
Sensitivity chart p. 189	Expected value-standard deviation rule p. 209
Simulation p. 191	Objective probabilities p. 209
Risk-seeking investors p. 193	Subjective probabilities p. 211
Risk-neutral investors p. 193	Coefficient of correlation p. 212
Risk-averse investors p. 193	Diversifiable risk p. 215
Utility function p. 193	Non-diversifiable risk p. 215
Risk-adjusted discount rate p. 196	

For definitions of these terms see the Glossary, pp. 605–613.

**FURTHER READING**

If you wish to explore the topics discussed in this chapter in more depth, try the following books:

Arnold, G. (2013) *Corporate Financial Management*, 5th edn, Pearson, Chapters 5, 6 and 7.

Bingham, E. and Ehrhardt, M. (2013) *Financial Management: Theory and Practice*, 14th edn, South-Western Cengage Learning, Chapter 11.

McLaney, E. (2011) *Business Finance: Theory and Practice*, 9th edn, Financial Times Prentice Hall, Chapters 5 and 6.

Pike, R., Neale, B. and Linsley, P. (2012) *Corporate Finance and Investment*, 7th edn, Pearson, Chapters 7 and 8.

**REVIEW QUESTIONS**

Answers to these questions can be found at the back of the book on pp. 000–000.

5.1 Some businesses fail to take account of inflation in investment decisions. Does it matter given that, in recent years, the level of inflation has been low? What would be the effect of dealing with inflation incorrectly on NPV calculations (that is, would NPV be overstated or understated) by (a) discounting cash flows that include inflation at real discount rates and (b) discounting real cash flows at market discount rates that include inflation?

5.2 What is risk and to what extent can it be diversified away when making investment decisions?

5.3 What practical problems arise when using the risk-adjusted discount rate to deal with the problem of risk?

5.4 Explain why the standard deviation may be useful in measuring risk.

REVIEW QUESTIONS 221

**Further reading** This section comprises a listing of relevant chapters in other textbooks that you might refer to in order to pursue a topic in more depth or gain an alternative perspective.

**REVIEW QUESTIONS**

Solutions to these questions can be found at the back of the book on pp. 577–6.

10.1 Tariq is the credit manager of Heflex plc. He is concerned that the pattern of monthly cash receipts from credit sales shows that credit collection is poor compared with budget. Heller's sales director believes that Tariq is to blame for this situation, but Tariq insists that he is not. Why might Tariq not be to blame for the deterioration in the credit collection period?

10.2 How might each of the following affect the level of inventories held by a business?

- An increase in the number of production bottlenecks experienced by the business.
- A rise in the business's cost of capital.
- A decision to offer customers a narrower range of products in the future.
- A switch of suppliers from an overseas business to a local business.
- A deterioration in the quality and reliability of bought-in components.

10.3 What are the reasons for holding inventories? Are these reasons different from the reasons for holding cash?

10.4 Identify the costs of holding:

- too little cash
- too much cash.

**EXERCISES**

Exercises 10.4 to 10.7 are more advanced than 10.1 to 10.3. Those with coloured numbers have solutions at the back of the book starting on p. 697. If you wish to try more exercises, visit the students' side of the companion website.

10.1 The chief executive officer of Sparkrite Ltd, a trading business, has just received summary sets of financial statements for last year and this year:

**Income statements for years ended 30 September**

	Last year		This year	
	£000	£000	£000	£000
Sales revenue		1,800		1,800
Cost of sales				
Opening inventories	160		200	
Purchases	1,120		1,175	
	(2,280)		(2,250)	
Closing inventories	(200)	(1,080)	(250)	(1,125)
<b>Gross profit</b>		<b>720</b>		<b>795</b>
Expenses		(680)		(750)
<b>Profit for the year</b>		<b>40</b>		<b>45</b>

448 CHAPTER 10 MANAGING WORKING CAPITAL

**Review questions** These short questions encourage you to review and/or critically discuss your understanding of the main topics covered in each chapter, either individually or in a group. Solutions to these questions can be found at the back of the book.

**Exercises** These comprehensive questions at the end of most chapters. The more advanced questions are separately identified. Solutions to five of the questions (those with coloured numbers) are provided at the end of the book, enabling you to assess your progress. Solutions to the remaining questions are available online for lecturers only. Additional exercises can be found on the companion website at [www.pearsoned.co.uk/atrill](http://www.pearsoned.co.uk/atrill).



# Chapter 1

## THE WORLD OF FINANCIAL MANAGEMENT

### INTRODUCTION

In this first chapter, we shall look at the role of the finance function within a business and the context within which financial decisions are made. This should help to set the scene for subsequent chapters. We begin by identifying the tasks of the finance function and their relation to the tasks of managers. We then go on to consider the objectives that a business may pursue.

Modern financial management theory assumes that the primary objective of a business is to maximise the wealth of its shareholders. We shall examine this and other possible objectives for a business to understand why shareholder wealth maximisation is considered the most appropriate. There is, however, a danger that businesses will adopt too narrow a focus in pursuit of this objective. For a business to survive and prosper over the long term, it must be pursued in a way that takes account of the business environment. We shall see that managers therefore must act in an ethical manner and must be sensitive to the interests of other groups with a stake in the business.

Simply stating that a business's primary objective is shareholder wealth maximisation will not automatically cause this to happen. There is always a risk that managers will pursue their own interests at the expense of shareholders' interests. This is often referred to as the 'agency problem'. We end the chapter by considering how this problem may be managed through such methods as regulation and through the active involvement of shareholders.

### Learning outcomes

**When you have completed this chapter, you should be able to:**

- Discuss the role of the finance function within a business.
- Identify and discuss possible objectives for a business and explain the advantages of the shareholder wealth maximisation objective.
- Explain how risk, ethical considerations and the needs of other stakeholders influence the pursuit of shareholder wealth maximisation.
- Describe the agency problem and explain how it may be managed.



## THE FINANCE FUNCTION

Put simply, the finance function within a business exists to help managers to manage. To understand how the finance function can achieve this, we must first be clear about what managers do. One way of describing the role of managers is to classify their activities into the following categories:

- *Strategic management.* This involves developing objectives for a business and then formulating a strategy (long-term plan) to achieve them. Deciding on an appropriate strategy will involve identifying and evaluating the various options available. The option chosen should be the one that offers the greatest potential for achieving the objectives developed.
- *Operations management.* To ensure that things go according to plan, managers must exert day-to-day control over the various business functions. Where events do not conform to earlier plans, appropriate decisions and actions must be taken.
- *Risk management.* The risks faced by a business must be identified and properly managed. These risks, which may be many and varied, arise from the nature of business operations and from the way in which the business is financed.

As we can see from Figure 1.1, these three management activities are not separate and distinct. They are interrelated, and overlaps arise between them. When considering a particular strategy, for example, managers must also make a careful assessment of the risks involved and how these risks may be managed. Similarly, when making operational decisions, managers must try to ensure they fit within the strategic (long-term) plan that has been formulated.



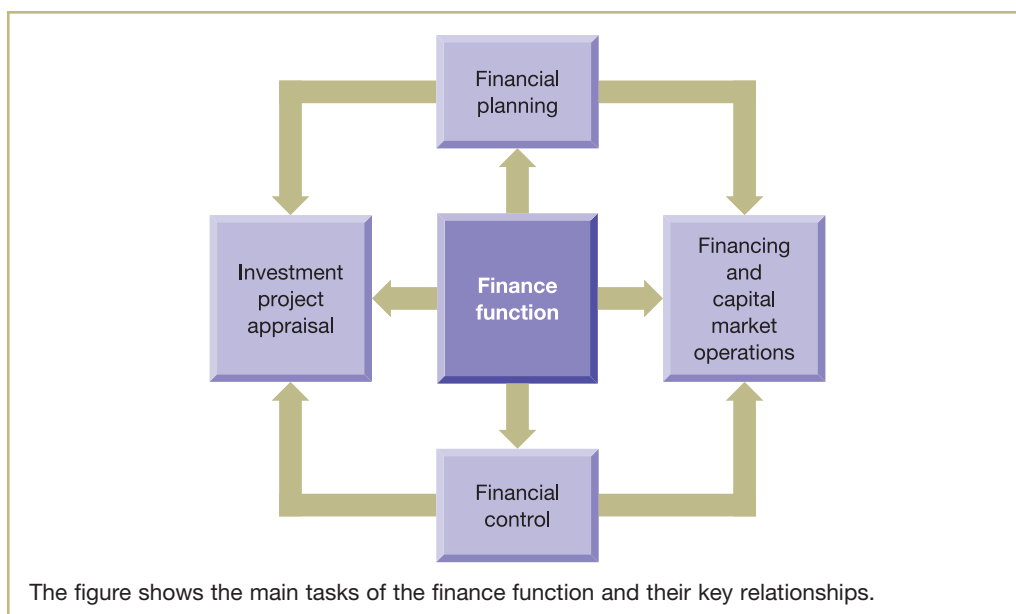
**Figure 1.1** The role of managers

The finance function is concerned with helping managers in each of the three areas identified. This is achieved by undertaking various key tasks, which are set out in Figure 1.2 and described below.

- *Financial planning.* It is vital for managers to assess the potential impact of proposals on future financial performance and position. They can more readily evaluate the implications of their decisions if they are provided with projected financial statements (such as projected cash flow statements and projected income statements) and with other estimates of financial outcomes.
- *Investment project appraisal.* Investment in new long-term projects can have a profound effect on the future prospects of a business. By carrying out appraisals of the profitability

and riskiness of investment project proposals, managers can make informed decisions about whether to accept or reject them. Financial appraisals can also help to prioritise those investment projects that have been accepted.

- *Financing decisions.* Investment projects and other business activities have to be financed. Various sources of finance are available, each with their own characteristics and costs, which need to be identified and evaluated. When selecting an appropriate source, consideration must be given to the overall financial structure of a business. An appropriate balance must be struck between long-term and short-term sources of finance and between the financing contribution of shareholders and that of lenders. Not all of the finance required may come from external sources: some may be internally generated. An important source of internally generated finance is profits, and the extent to which these are reinvested by a business, rather than distributed to the owners, requires careful consideration.
- *Capital market operations.* New finance may be raised through the capital markets, such as through a stock exchange or banks. Managers will often need advice on how finance can be raised through these markets, how securities (shares and loan capital) are priced, and how the markets may react to proposed investment and financing plans.
- *Financial control.* Once plans are implemented, managers must ensure that things stay on course. Regular reporting of information on actual outcomes, such as the profitability of investment projects, levels of working capital and cash flows, is required as a basis for monitoring performance and, where necessary, taking corrective action.



**Figure 1.2** The tasks of the finance function

The links between the tasks of managers, which were identified earlier, and the tasks of the finance function are many and varied. Strategic management decisions, for example, may require an input from the finance function on issues relating to financial planning, investment project appraisal, financing and capital market operations. Operations management may require an input on issues relating to financial planning, investment project appraisal, financing and financial control. Risk management may require an input from the finance function on issues relating to all of the tasks identified above.

## STRUCTURE OF THE BOOK

In this book, each of the tasks of the finance function will be considered in some detail. We begin, in Chapter 2, by examining the way in which financial plans are prepared and the role of projected financial statements in helping managers to assess likely future outcomes.

In Chapter 3, we go on to consider how financial statements can be analysed and interpreted. The financial techniques examined in this chapter are important for financial planning, including the control of working capital and the evaluation of projected financial statements, as well as for long-term financing decisions, which are discussed in later chapters.

Chapters 4 and 5 are concerned with investment project appraisal. In these two chapters, we take a look at the methods used to assess the profitability of investment proposals. We also consider how risk may be taken into account and how investment projects, once implemented, may be monitored and controlled.

Chapters 6 to 9 are concerned with various aspects of the financing decision. We first discuss the various sources of finance available and the role and efficiency of capital markets. We then go on to consider the mix of finance that a business might have within its capital structure and how the level of borrowing can affect future risks and returns. Finally, we consider the dividend decision and the factors to be taken into account when deciding upon the appropriate balance between the retention and distribution of profits.

In Chapter 10, we look at the ways in which managers can exert financial control over the working capital of a business. We examine the key elements of working capital (inventories, receivables, cash and payables) and discuss the various techniques available for controlling each element.

In Chapter 11, we consider some of the main methods for measuring and managing shareholder wealth. We shall evaluate their usefulness and explore the reasons why new methods of measuring shareholder wealth were necessary.

Finally, in Chapter 12, we take a look at mergers and takeovers. This will involve drawing on our understanding of a number of topics covered earlier, in particular investment appraisal, financing and capital market operations. We consider the effect of mergers on shareholder wealth and the ways in which merger proposals may be financed. We end the chapter by seeing how the shares of a business may be valued for mergers and for other purposes.

## MODERN FINANCIAL MANAGEMENT

In the early years of its development, financial management was really an offshoot of accounting. Much of the early work was descriptive, and arguments were based on casual observation rather than on any clear theoretical framework. However, over the years, financial management became increasingly influenced by economic theories and the reasoning applied to particular issues has become more rigorous and analytical. Indeed, such is the influence of economic theory that modern financial management is often viewed as a branch of applied economics.

Economic theories concerning the efficient allocation of scarce resources have been taken and developed into decision-making tools for management. This development of economic theories for practical business use has usually involved taking account of both the time dimension and the risks associated with management decision making. An investment decision, for example, must look at both the time period over which the investment extends and the

degree of risk associated with the investment. This fact has led to financial management being described as the *economics of time and risk*. Certainly time and risk will be recurring themes throughout this text.

Economic theories have also helped us to understand the importance of **capital markets**, such as stock exchanges and banks, to a business. Capital markets have a vital role to play in bringing together borrowers and lenders, in allowing investors to select the type of investment that best meets their risk requirements, and in helping to evaluate the performance of businesses through the prices assigned to their shares.

**Real World 1.1** is an extract from an article by Professor Dimson of London Business School. It neatly sums up how time, risk and capital markets are at the centre of modern financial management.

## Real World 1.1

### Finance on the back of a postage stamp

The leading textbooks in finance are nearly 1,000 pages long. Many students learn by making notes on each topic. They then summarise their notes. Here is one student's summary of his Finance course: Time is money . . . Don't put all your eggs in one basket . . . You can't fool all the people all of the time.

- The idea that time is money refers to the fact that a sum of money received now is worth more than the same sum paid in the future. This gives rise to the principle that future cash flows should be discounted, in order to calculate their present value.
- You can reduce the risk of an investment if you don't put all your eggs in one basket. In other words, a diversified portfolio of investments is less risky than putting all your money in a single asset. Risks that cannot be diversified away should be accepted only if they are offset by a higher expected return.
- The idea that you can't fool all of the people all of the time refers to the efficiency of financial markets. An efficient market is one in which information is widely and cheaply available to everyone and relevant information is therefore incorporated into security prices. Because new information is reflected in prices immediately, investors should expect to receive only a normal rate of return. Possession of information about a company will not enable an investor to outperform. The only way to expect a higher expected return is to be exposed to greater risk.

These three themes of discounted cash flow, risk and diversification, and market efficiency lie at the very heart of most introductory finance courses. Each of these themes will be considered in this book.

**FT**

Source: Dimson, E. (1995), *Assessing the Rate of Return*, Financial Times Mastering Management series, supplement issue no. 1, p. 13.  
© The Financial Times Limited 2012. All Rights Reserved.

## WHY DO BUSINESSES EXIST?

A key assumption underpinning modern financial management is that businesses exist to create wealth for their shareholders. This has provoked much debate and so is worth exploring in some detail. Shareholders are considered of paramount importance because they effectively own the business and therefore bear the residual risk. During the good times they benefit, but during the bad times they must bear any losses. Furthermore, if the business fails

and its remaining assets are distributed, the shareholders' claim against those assets goes to the bottom of the pile. The claims of other 'stakeholders', such as employees, customers, lenders and suppliers, are given legal priority over those of shareholders. These other stakeholders may also have the added advantage of being able to protect themselves against the risk of losses.

### Activity 1.1

Can you think of any way in which

- (a) a lender, and
- (b) a supplier

could avoid the risk of loss, even though the business with which they are dealing is in financial difficulties and may even fail?

Lenders can insist that the business offers adequate security for any loans that they provide. This may allow assets to be seized to pay off amounts due in the event of any default in interest or loan repayments. Suppliers can insist on being paid in advance for the goods or services provided.

Note that shareholders have a residual claim on the wealth generated by a business, while other stakeholders, such as employees, lenders and suppliers, normally have a fixed claim. In other words, shareholders receive whatever remains after other stakeholders have received the fixed amounts due to them. Having a residual claim means that shareholders have an incentive to increase the size of their claim by ensuring that the business undertakes new and risky ventures. Entrepreneurial activity is therefore encouraged, which should benefit all those connected with the business. Stakeholder groups with a fixed claim on the business do not have the same incentive as that of shareholders. Providing the business can meet their claims, this will normally be enough. (To minimise their risks, they might even prefer the business to avoid new ventures.)

## Wealth maximisation

As stated earlier, a business is assumed to exist to create wealth for its shareholders. We can be more precise by saying that the assumed objective of a business is **shareholder wealth maximisation**. Within a market economy, shareholders provide funds to a business in the expectation that they will receive the maximum possible increase in wealth for the level of risk that must be faced. When we use the term 'wealth' in this context, we are referring to the *market value of the ordinary shares*. The market value of these shares will, in turn, reflect the future returns the shareholders will expect to receive *over time* from the shares and the level of risk involved. Note that a business is not concerned with maximising shareholders' returns over the short term, but rather with providing the highest possible returns over the long term.

## Wealth maximisation and profit maximisation

Instead of seeking to maximise shareholder wealth, a business may seek to maximise profit. In broad terms, profit represents the surplus generated by a business and so it may be

tempting to conclude that the maximisation of profit will ultimately lead to the maximisation of shareholder wealth. Unfortunately, things aren't so straightforward.

Profit maximisation is a vague concept that does not adequately capture all aspects of shareholder wealth. The following difficulties lay in the path of attempts to implement profit maximisation as a business objective:

*Lack of precision:* the term 'profit' is imprecise and different measures of both profit and profitability exist. They include:

- operating profit (that is, profit before interest and tax)
- profit before tax
- profit after tax
- profit available to shareholders per ordinary share
- profit available to shareholders as a percentage of ordinary shareholders' funds invested.

These measures do not all move in lockstep. An injection of new share capital, for example, may result in an increase in profit after tax whereas the profit available to shareholders per ordinary share may decrease. It is quite possible, therefore, for different profit measures to offer a different narrative of financial performance.

*Lack of objectivity:* the profit measures mentioned cannot be objectively determined. They are all influenced by the particular accounting policies and estimates employed, such as those relating to depreciation, inventories and bad debts. They are also susceptible to manipulation by managers who may wish to present a particular picture of financial health to investors.

*Time period:* the period over which profit should be maximised is uncertain. This is a serious flaw as conflict can occur between short-term and long-term profit maximisation. It is possible, for example, to maximise short-term profits at the expense of long-term profits.

## Activity 1.2

How might the managers of a business increase short-term profits at the expense of long-term profits?

Managers may reduce operating expenses, and so increase short-term profits, by:

- cutting research and development expenditure
- cutting staff training and development
- buying lower-quality materials
- cutting quality control mechanisms.

The methods identified, however, may well injure the long-term competitiveness and performance of the business.

*Risk:* the goal of profit maximisation takes no account of the risks involved. Shareholders, however, are normally very concerned with risk. To protect their investment, they may shy away from high-risk projects even where there is the potential to generate large profits.

*Opportunity cost:* suppose that managers decide to reinvest current profits in order to boost future profits. This policy may well be consistent with the goal of profit maximisation, but what if the returns on profits reinvested were lower than those that shareholders could achieve

from investing in a similar business with similar levels of risk? It would mean that, by reinvesting the profits, shareholders are effectively impeded from maximising their wealth.

The weaknesses of the profit maximisation objective are not shared by the shareholder wealth maximisation objective. The latter is more precise and, as we shall discuss in some detail in later chapters, takes account of both risk and the opportunity cost of shareholders' funds.

### **Do managers really have a choice?**

Within a market economy there are strong competitive forces at work to ensure that failure to maximise shareholder wealth will not be tolerated for long. Competition for the funds provided by shareholders and competition for managers' jobs should ensure that the interests of the shareholders prevail. If the managers of a business do not provide the expected increase in shareholder wealth, the shareholders have the power to replace the existing management team with a new team that is more responsive to their needs. Alternatively, the shareholders may decide to sell their shares in the business (and reinvest in other businesses that provide better returns in relation to the risks involved). The sale of shares in the business is likely to depress the market price of the shares, which management will have to rectify in order to avoid the risk of takeover. This can be done only by pursuing policies that are consistent with the needs of shareholders.

It should also be mentioned that managers are usually encouraged to maximise shareholder wealth through their remuneration arrangements. Financial incentives are normally on offer to help align the interests of the managers with those of the shareholders. These incentives, which are often linked to share price performance, may take the form of bonus payments and options to buy shares in the business.

### **Criticisms of shareholder wealth maximisation**

Critics of the shareholder wealth maximisation objective believe that a number of the problems of modern business can be laid at its door. It has been argued, for example, that the relentless pursuit of this objective has led businesses to implement measures such as cost cutting, redundancies and forcing suppliers to lower prices. These are sometimes carried to a point which results in serious conflict between various stakeholder groups and leaves businesses too weak to exploit profitable opportunities. It is difficult to see, however, how this kind of behaviour is consistent with the objective of maximising shareholder wealth. As mentioned earlier, shareholder wealth maximisation is a long-term goal and the sort of behaviour described will only undermine the achievement of this goal.

A further criticism is that, by making shareholders the dominant group, other stakeholders will feel like second-class citizens and will not become fully engaged with the business. Shareholder wealth maximisation cannot be achieved if other stakeholders are unhappy with their lot. Discontented staff can lead to low productivity and strikes. Discontented suppliers can lead to the business being given lower ordering priority and receiving slower deliveries in the future. In both cases, the wealth of shareholders will be adversely affected. At the very least this means that the needs of other stakeholders must somehow be satisfied if shareholder wealth maximisation is to be successfully pursued.

A final criticism is that shareholder wealth maximisation encourages unethical behaviour. In a highly competitive environment, managers are under huge pressure to produce the returns that shareholders require. To achieve these returns, they may be tempted to act in unethical ways.



### Activity 1.3

Can you think of three examples of what managers might do in pursuit of higher returns that would be regarded by most people as unethical?

These might include:

- exploiting child labour in underdeveloped countries
- polluting the environment in order to cut costs
- paying bribes to government officials in order to secure contracts.

You may have thought of others.

To survive and prosper over the longer term, a business needs the approval of the society in which it operates. Increasingly, society expects high standards of business behaviour, and so ethical behaviour may be a necessary condition for maximising shareholder wealth. This point will be considered in more detail a little later in the chapter.

## The stakeholder approach

Those who are uncomfortable with the idea that a business should be run for the principal benefit of shareholders often propose a **stakeholder approach** as an alternative. This approach is not very clearly defined and varying views exist as to what it is and what it entails. In broad terms, however, it embodies the idea that a business should serve those groups which may benefit from, or which may be harmed by, its operations.

### Activity 1.4

Which groups might be regarded as stakeholders in a business? Try to think of at least five groups.

Those regarded as stakeholders may include:

- employees
- suppliers
- customers
- lenders
- shareholders
- the community
- government.

This is not an exhaustive list. You may have thought of others.

According to the stakeholder approach, each group with a legitimate stake in the business should have its interests reflected in the objectives that the business pursues. Thus, managers should not simply serve the interests of shareholders but should promote the interests of, and mediate between, various stakeholder groups.

This alternative approach acknowledges the interest of the shareholders in a business but does not accept that this particular interest should dominate. This may seem strange given the fact that shareholders are effectively the owners of a business. Supporters of the stakeholder approach, however, tend to view things from a different perspective. They argue