

FINANCIAL MANAGEMENT FOR DECISION MAKERS

NINTH EDITION

Peter Atrill

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MANAGEMENT
FOR DECISION MAKERS**



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KAO Park
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Web: 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 2012 (print)
Seventh edition published 2014 (print and electronic)
Eighth edition published 2017 (print and electronic)
Ninth edition published 2020 (print and electronic)

© Peter Atrill 1997, 2012 (print)
© Peter Atrill 2014, 2017, 2020 (print and electronic)

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ISBN: 978-1-292-31143-2 (print)
978-1-292-31146-3 (PDF)
978-1-292-31145-6 (ePub)

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

Names: Atrill, Peter, author.

Title: Financial management for decision makers / Peter Atrill.

Description: Ninth edition. | Harlow, England ; New York : Pearson, 2020. |

Includes bibliographical references and index. | Summary: "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 not engaged in formal study but, nevertheless, need to understand financial management to help manage their business"-- Provided by publisher.

Identifiers: LCCN 2019033692 | ISBN 9781292311432 (hardback) | ISBN 9781292311456 (epub)

Subjects: LCSH: Accounting. | Decision making.

Classification: LCC HF5636 .A8843 2020 | DDC 658.15--dc23

LC record available at <https://lccn.loc.gov/2019033692>

10 9 8 7 6 5 4 3 2 1
24 23 22 21 20

Front cover image: © Singora/Shutterstock

Print edition typeset in 9.25/13 pt Helvetica Neue LT W1G by SPi Global
Print edition printed and bound in Slovakia by Neografia

NOTE THAT ANY PAGE CROSS REFERENCES REFER TO THE PRINT EDITION

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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 not engaged in formal study but, nevertheless, need to understand financial management to help manage their business.

As there are several excellent books on financial management already published, it is reasonable to ask 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 a thousand pages in length and contain mathematical formulae that many find daunting. This book assumes no previous knowledge of financial management (although a basic understanding of financial statements is required) and every attempt has been made to make the writing as accessible as possible. 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 the reader in a way not traditionally found in textbooks. Throughout each chapter there are activities and self-assessment questions to attempt. The purpose of these is to help check understanding of the points being made and to encourage the reader to think around particular topics. The open learning style has been adopted because, I believe, it is more 'user friendly'. Irrespective of whether the book is being used as part of a taught course or for independent study, the interactive approach employed makes it easier to learn.

As it is likely that most readers 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. As a further aid, all key terms are highlighted in the book and then listed at the end of each chapter with a page reference to enable rapid revision of the main concepts. All 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 ninth edition, I have taken account of helpful comments and suggestions made by lecturers, students and other readers. To improve clarity, I have rewritten some sections and have added further diagrams. To improve coverage, I have expanded certain topics including share valuation and behavioural finance, and have added a completely new chapter dealing with the international aspects of financial management. This new chapter, which was co-written with my colleague Eddie McLaney, covers topics such as foreign exchange markets, foreign investments and exchange rate risk. I have also introduced additional activities throughout to enhance the interactive nature of the text. Finally, to help deepen understanding, I have replaced some of the review questions and end-of-chapter exercises with others that are a little more challenging.

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

Peter Atrill
April 2019

Publisher's acknowledgements

Text

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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 how they relate 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 always a danger, however, that businesses will adopt too narrow a focus in pursuit of this objective. We shall see that, for a business to survive and prosper over the long term, it must be pursued in a way that takes account of the surrounding environment. This requires managers to behave in an ethical manner and to be sensitive to the interests of the various groups that have 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 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 aims and 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 aims and 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 are 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 estimates of financial outcomes. These can often take the form of projected financial statements, such as projected cash flow statements and projected income statements.
- *Investment project appraisal.* Investment in new long-term projects can have a profound effect on the future prospects of a business. By undertaking appraisals of the profitability

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

- **Financing decisions.** Investment projects and other business activities have to be financed. The various sources of finance available need to be identified and evaluated: each will have its own characteristics and costs. When evaluating different sources, consideration must be given to the overall financial structure of the business. An appropriate balance must be struck between long- and short-term sources of finance and between the contribution of shareholders (owners) 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 within the business, rather than distributed to the owners, requires careful consideration.
- **Capital market operations.** New finance may be raised through the capital markets, which include stock markets and banks. Managers will often seek advice and guidance on how finance can be raised through these markets, how securities (shares and loan capital) are priced, and how the markets are likely to react to proposed investment and financing plans.
- **Financial control.** Once plans are implemented, managers must ensure that things stay on course. Here, regular reporting of information on actual outcomes, such as the profitability of investment projects, levels of working capital and cash flows, can play a vital role. This can help monitor performance and detect when corrective action is needed.

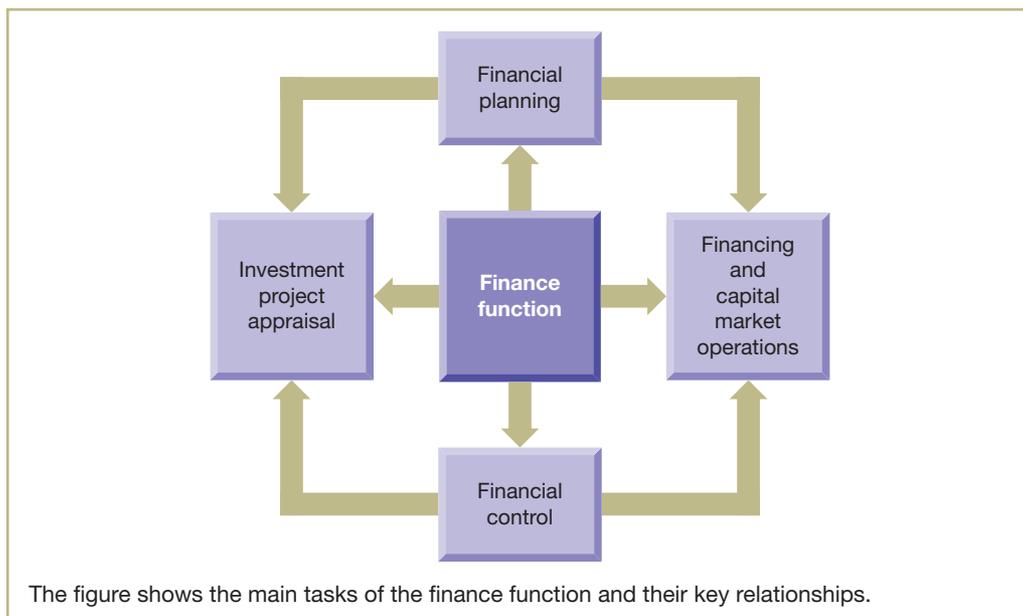


Figure 1.2 The tasks of the finance function

Links between the tasks of managers and those of the finance function, which have just been discussed, are many and varied. Strategic management, 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 on issues relating to all of the finance function tasks identified above.

STRUCTURE OF THE BOOK

This book considers each of the tasks of the finance function in some detail. In Chapter 2, we begin by examining how financial plans are prepared and the role of projected financial statements in helping managers assess likely future outcomes. We then go on to consider how risks and returns to shareholders are affected by the way in which a business is financed and by the cost structure that it adopts.

In Chapter 3, we consider how financial statements can be analysed and interpreted. We discuss, in some detail, techniques that can be applied to the financial statements to help assess various aspects of financial health. These techniques are also used in short-term financial planning decisions, such as the control of working capital, as well as for long-term financing decisions, such as the issue of shares. We shall, therefore, encounter these techniques again in later chapters.

Chapters 4 and 5 are concerned with the appraisal of investment projects. This is a vitally important area as investment decisions can have far reaching financial consequences. In these two chapters, we examine the main methods employed to assess the viability of investment proposals. We also discuss how risk may be taken into account when evaluating investment projects and how, once implemented, projects may be monitored and controlled.

Chapters 6 to 9 are concerned with various aspects of the financing decision. We begin by identifying the main sources of finance available and the role and efficiency of capital markets. We then go on to examine the cost of each of the main sources of finance and to discuss whether the financing decision has any effect on shareholder wealth. Finally, we consider the decision concerning whether to retain or to distribute profits to shareholders. We identify the key factors to be taken into account when making this decision as well as the issues surrounding the form that any distribution might take.

In Chapter 10, we discuss the importance to a business of managing its working capital effectively. We then go on to examine the key elements of working capital (inventories, receivables, cash and payables) and describe the various techniques available for controlling each element.

In Chapter 11, we consider the main methods available for measuring shareholder wealth and for promoting its creation. We begin by discussing the limitations of conventional methods and then continue by discussing newer, alternative, methods that may be employed. Finally, we consider how managerial rewards may be aligned to the goal of creating shareholder wealth.

In Chapter 12, we examine the rationale for mergers and takeovers. We also consider how they may be financed and who benefits from this form of business activity. The chapter concludes by looking at ways in which shares in a business may be valued. This is relevant for merger and takeover decisions as well as for other purposes. This chapter draws on our understanding of topics covered in earlier chapters such as investment appraisal, financing methods and capital market operations.

Finally, in Chapter 13, we consider the international aspects of financial management. In this modern era, many businesses have an international reach. This goes beyond buying and selling goods and services and will often involve investing and financing activities. Engaging in international operations is accompanied by various financial risks. In this chapter, we identify these risks and discuss how they may be managed.

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. Over the years, however, 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 book.

Economic theories have also helped us to understand the importance of **capital markets**, such as stock markets and banks, to a business. Capital markets have a vital role to play in bringing together borrowers and lenders. They also help investors to select the type of investment that best meets their risk requirements and 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.

Source: Dimson, E. (1995) *Assessing the Rate of Return*, Financial Times Mastering Management series, supplement issue no. 1, p. 13. © Professor E. Dimson 1995, reproduced with permission of the author. 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 take steps to 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 a 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 can 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

We have just seen that a business is assumed to exist to create wealth for its shareholders. We can be more precise, however, by saying that a business is assumed to pursue the goal of **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 involved. 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 that shareholders are expected to receive *over time* from the shares and the level of risk that must be faced. It is important to emphasise that the assumed goal is not to

maximise shareholders' returns over the short term, but rather to generate the highest possible returns over the long term.

Wealth maximisation or 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 during a period and so it is tempting to conclude that the maximisation of profit will ultimately lead to the maximisation of shareholder wealth. Unfortunately, things aren't quite so straightforward.

The goal of profit maximisation is rather vague and fails to capture all aspects of shareholder wealth. Various difficulties lay in the path of attempts to implement this goal including:

- *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 always move in lockstep. An injection of new share capital, for example, may increase profit after tax but may lead to a decrease in profit available to shareholders per ordinary share. Different profit measures may, therefore, provide 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 vulnerable to manipulation by managers wishing to present a particular picture of financial health to investors.
- *Time period*: the period over which profit should be maximised is unclear. 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? Try to think of at least two ways.

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

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

The methods identified, however, may undermine 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 though they have 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, rather than distributing them, shareholders are being prevented from maximising their wealth.

The weaknesses just mentioned do not apply to the goal of shareholder wealth maximisation. It is more precise and, as we shall see 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 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, 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, perhaps, 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.

Real World 1.2 below concerns a recent failed takeover bid and its consequent effect on the target business. It neatly illustrates some of the points raised above.

Real World 1.2

A lesson quickly learned

The failed attempt by Kraft Heinz, the US food business to take over Unilever, the Anglo-Dutch business, can be viewed as a case study in what happens when a business loses sight of the importance of maximising shareholder value. Prior to the failed bid, the chief executive of Unilever, Paul Polman, was an outspoken critic of the shareholder value approach. Instead, he demonstrated a concern for environmental, social and corporate governance issues as a means of promoting the interests of all stakeholders.

The takeover bid came as a shock to the Unilever board, despite growing evidence that shareholder returns were disappointing when compared with those of the business's main rivals. Once the bid had been withdrawn, the board recognised that things could not simply carry on as before. It, therefore, announced a 12 per cent increase in dividends as well as a share buyback programme. It doubled planned cost cuts to two billion euros by 2020, to boost profit margins, and announced a strategic review of business operations to find ways 'to accelerate delivery of value for the benefit of our shareholders'. The overall effect of these

initiatives was to cause the share price to rise to the Kraft Heinz bid price, thereby making Unilever a less attractive takeover target to prospective bidders.

Sources: Based on information in Vermaelen T. (2017) Unilever: *Why firms should maximise shareholder value*, <https://knowledge.insead.edu/blog/insead-blog/unilever-why-firms-should-maximise-shareholder-value-5336> 27 February; A.Edgecliffe-Johnson (2018) *Unilever chief admits Kraft Heinz bid forced compromises* ft.com, 27 February; P. Jarvis (2017) *Unilever reviewing options for change after Kraft Heinz bid fails* chicagotribune.com, 22 February.

It should 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 awards of shares in the business.

Criticisms of shareholder wealth maximisation

Critics of the shareholder wealth maximisation objective believe that many 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 will lead businesses to implement measures such as cost cutting, redundancies and forcing suppliers to lower prices. These measures can be carried to a point where serious conflict can arise between the various stakeholders (shareholders, employees, suppliers and so on) associated with a business. As a result, the business becomes weakened and incapable of exploiting profitable opportunities.

While the kind of behaviour mentioned may well occur, it is difficult to see how it would be consistent with the goal of maximising shareholder wealth.

Activity 1.3

Can you see why?

As mentioned earlier, shareholder wealth maximisation is a long-term goal and the sort of behaviour described would only undermine the achievement of this goal.

A further criticism made is that, by making shareholders the dominant group, other stakeholders will feel like second-class citizens and so will not fully engage 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 be considered 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 1.4

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
- subjecting employees to dangerous working conditions in order to cut costs
- evading taxation on profits and gains through ‘creative accounting’ methods
- abusing market power by delaying payments to small suppliers
- covering up safety defects in the products sold in order to avoid compensation claims.

You may have thought of others.

The rise of globalised businesses, so it is argued, has driven some of the unethical behaviour that has been reported. It is claimed that managers dealing with operations in remote locations may often find it easier to escape their ethical obligations.

The kind of behaviour mentioned above cannot be reconciled with the goal of shareholder wealth maximisation. 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 it may well be that ethical behaviour has become a necessary condition for maximising shareholder wealth. We shall return to this point a little later in the chapter. However, let us conclude this section with a cautionary tale. **Real World 1.3** reveals how one well-known retailer was hit by allegations of improper conduct towards its employees and other failings. This coincided with a plummeting share price.

Real World 1.3

Not being a good sport

Following a halved share price over the last six months, and a value that has fallen by £1.6bn over the last three, Sports Direct has been formally relegated from the London Stock Exchange FTSE 100. Every quarter, a review takes place on the 100 most valuable listed firms and at close of business on Tuesday [1 March 2016], *The Guardian* reported that Sports Direct was ranked at 142.

In December, a *Guardian* investigation revealed thousands of temporary Sports Direct warehouse workers as being underpaid, receiving hourly rates effectively below the minimum wage. Undercover reporters employed inside the retailer’s warehouse in Shirebrook, Derbyshire, discovered thousands of workers were subject to unorthodox searches and surveillance, and that staff were terrified to take time off work.

In riposte, the sporting goods retailer announced a pay rise for staff, as well as a review of agency staff terms and conditions, which was to be overseen personally by its founder Mike Ashley.

It has denied that minimum wage law isn’t being met, but Ashley’s review in the treatment of his employees is not expected to emerge for several weeks. Meanwhile, local MPs are to visit the company’s warehouse on 21 March.

‘This should be a cautionary tale for companies who treat their workers badly’, said Frances O’Grady, General Secretary of the TUC. ‘The reputational and financial damage Sports Direct has suffered is of its own making. Subjecting staff to workhouse conditions is not the way to build a successful business. Shareholders must demand root and branch changes or Sports Direct’s name will continue to be dragged through the mud.’

‘It is hardly surprising that Sports Direct has fallen out of the FTSE 100’, added Ashley Hamilton Claxton, Corporate Governance manager at Sports Direct shareholder, Royal London Asset Management. ‘Over the long term, shareholder value is intrinsically linked to corporate governance and companies ignore this at their peril. The long list of corporate governance failings at Sports Direct is a contributing factor in its fall from the FTSE 100 in our view.’

Source: Sabharwal, V. (2016) ‘Sports Direct falls out of FTSE 100’, www.retailgazette.co.uk, 2 March.

Wealth maximisation in practice

There is some evidence that businesses pursue shareholder wealth maximisation as their main goal, or at least claim to do so. These claims often adorn their annual reports and websites.

Real World 1.4 provides five examples of businesses that seek to maximise shareholder wealth (or shareholder value, as it is often called).

Real World 1.4

Something of value

Ferguson plc, a distributor of plumbing and heating products, states:

The Board is committed to maximising shareholder value.

Permanent TSB Group Holdings plc, an Irish retail bank, claims:

The bank’s governing objective is to maximise shareholder value over the long term.

Imperial Minerals plc, a mining business, states:

In the longer term, the Group aims to maximise shareholder value through the allocation of its resources towards the sourcing, vetting and securing of one or more natural resources exploration, development or production assets in order to develop the Group into a self-sustained natural resources business.

The chairman of Just Group plc, a financial services group, states:

My focus is on maximising shareholder value, with no options excluded.

Diamond Corp plc is a diamond producer that is focused on:

Maximising shareholder value through the development of high-margin diamond production assets.

Sources: Ferguson plc, Annual Report and Accounts 2018, p.13; Permanent TSB Group Holdings plc, www.permanenttsbgroup.com, accessed 26 November 2018; Imperial Minerals plc, *Corporate Governance*, www.imperialminerals.com, accessed 26 November 2018; Diamond Corporation plc, www.diamondcorpplc.uk, accessed 26 November 2018.

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 who may benefit from, or who may be harmed by, its operations.

Activity 1.5

Which groups might be regarded as stakeholders in a business? Try to think of at least five groups. (*Hint: We have already mentioned a few in earlier sections.*)

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 that a business corporation is a separate legal entity, which no one really owns. They also argue that the business is essentially a web of contracts. That is, contracts exist between the business, which is at the centre of the web, and its various stakeholder groups such as suppliers, employees, managers, lenders and so on. The contract between the business and its shareholders forms just one part of this web.

Other arguments can be used to diminish the relative importance of shareholders within a business. These are often based on the view that shareholders are more remote and less engaged than other stakeholders. Thus, it is claimed that shareholders can, by having a diversified share portfolio, diversify away risks associated with their investment in the business whereas employees, for example, cannot diversify away their employment risks. Furthermore, shareholders can sell their shares within seconds whereas other stakeholder groups, such as employees, suppliers and lenders, cannot usually exit from the business so easily.

Activity 1.6

Is it always possible for shareholders to exit from a business easily? Can you think of an example where it may be difficult for a shareholder to sell shares in a business?

One important example is a shareholder wishing to sell shares in a small business that does not have its shares traded on a stock exchange. Many family-owned businesses would fit into this category. It may be difficult to find a buyer and there may also be restrictions on the right to sell shares. It is worth pointing out that small businesses are far more numerous than large businesses that have shares listed on a stock exchange.

Problems with the stakeholder approach

A major difficulty with the stakeholder approach is that it does not offer a simple, clear-cut objective for managers to pursue and for which to account. Considering the needs of the various stakeholder groups will inevitably lead a business to having multiple objectives. It has been pointed out, however, that this means no objectives at all. To implement this approach, the managers must consider the competing needs of all the various stakeholder groups and then carefully weigh these before embarking on any course of action. An obvious question that arises is, 'How is this done?' In the absence of a well-reasoned method of doing this, there really is no effective objective to pursue.

Adopting this approach will add to the problems of accountability for two reasons. The first is that there is no clear way in which we can determine whether there has been an improvement or deterioration in performance during a particular period. The fact that, say, profit is lower than in previous periods may be caused by the pursuit of other legitimate objectives. The second reason is that multiple objectives can be used by managers as a convenient smokescreen behind which they can pursue their own objectives. It can, therefore, provide an incentive for them to promote the stakeholder approach at the expense of shareholder wealth maximisation.

A final problem with the stakeholder approach is that it raises many thorny questions concerning the identification and treatment of the various stakeholder groups. Who are the stakeholders? Should a broad view be taken so that many stakeholder groups are included or should a narrow view be taken so as to include only those with close links to the business? Are competitors considered to be stakeholders of the business? Should all stakeholder groups benefit equally from the business or should those that contribute more receive more? If it is the latter, how will the benefits attributable to each group be determined? Should stakeholder groups that contribute nothing to the business, but are affected by its actions, receive any benefits and, if so, how will these benefits be determined? Although such questions may create endless happy hours of debate for academics, there seems little chance that they will be resolved in a way that provides clear decision rules for managing a business.

Shareholders versus stakeholders

When comparing the shareholder and stakeholder approaches, a few points are worth making. First, the gulf between the two may not be as wide as is sometimes portrayed. We saw earlier that, in pursuit of shareholder wealth maximisation, managers must take account of the needs of other stakeholders. Factors such as customer satisfaction, employee morale and status within the community will determine the degree of success in achieving their ultimate objective. Balancing the needs of the various stakeholder groups must feature, therefore, in management decisions.

A second point is that shareholders are not an exclusive group. Other stakeholders may become shareholders if they so wish. They may acquire shares directly through the market or indirectly through, for example, membership of an employee share purchase scheme. Thus, by widening share ownership, the potential for conflict between shareholders and other stakeholders may be reduced.

Perhaps we can sum up the discussion concerning the two approaches by saying that, within a competitive market economy, the shareholder approach has more to commend it. The quest for shareholder wealth maximisation provides a convincing business objective.

It is, however, by no means perfect. The potential for conflict between shareholders and other stakeholders undoubtedly exists.

A paradox

Let us now turn our attention to how a business should go about maximising shareholder wealth. It is often argued that this involves concentrating on controlling costs, increasing revenues and ensuring that only opportunities offering clear, wealth-maximising outcomes are undertaken. An interesting counterargument, however, is that such a narrow focus may prove to be self-defeating and that shareholder wealth maximisation is more likely to be achieved when pursued indirectly. It has been claimed that those who are most successful in generating wealth are often seized by a passion to develop the best possible product or to provide the best possible service for their customers. If a business concentrates its efforts on the challenges that this entails, financial rewards usually follow. To maximise shareholder wealth, therefore, it may be best for a business to concentrate on something else.

Real World 1.5 is an extract from an article written by John Kay in which he points out that the world's richest individuals are often not driven by cravings for wealth or material gain.

Real World 1.5

How to make real money

Sam Walton, founder and principal shareholder of Wal-Mart, the world's largest retailer, drove himself around in a pick-up truck. 'I have concentrated all along on building the finest retailing company that we possibly could. Period. Creating a huge personal fortune was never particularly a goal of mine,' Walton said. Still, five of the top ten places in the Forbes rich list are occupied by members of the Walton family . . .

Warren Buffett, the most successful investor in history, still lives in the Omaha bungalow he bought almost fifty years ago and continues to take pleasure in a Nebraskan steak washed down with cherry Coke. For Buffett, 'It's not that I want money. It's the fun of making money and watching it grow.'

The individuals who are most successful in making money are not those who are most interested in making money. This is not surprising: the principal route to great wealth is the creation of a successful business, and building a successful business demands exceptional talents and hard work. There is no reason to think that these characteristics are associated with greed and materialism: rather the opposite. People who are obsessively interested in money are drawn to get-rich-quick schemes rather than to business opportunities, and when these schemes come off, as occasionally they do, they retire to their villas in the sun . . .

FT

Source: Kay, J. (2012) Forget how the crow flies, *Financial Times*, 17 January, p. 21.
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BALANCING RISK AND RETURN

All decisions attempt to influence future outcomes and financial decisions are no exception. The only thing certain about the future, however, is that we cannot be sure what is going to happen. There is a risk that things will not turn out as planned, and this should be taken into account when making financial decisions.

As in other aspects of life, risk and return tend to be related. Evidence shows that returns often relate to risk in the way shown in Figure 1.3.

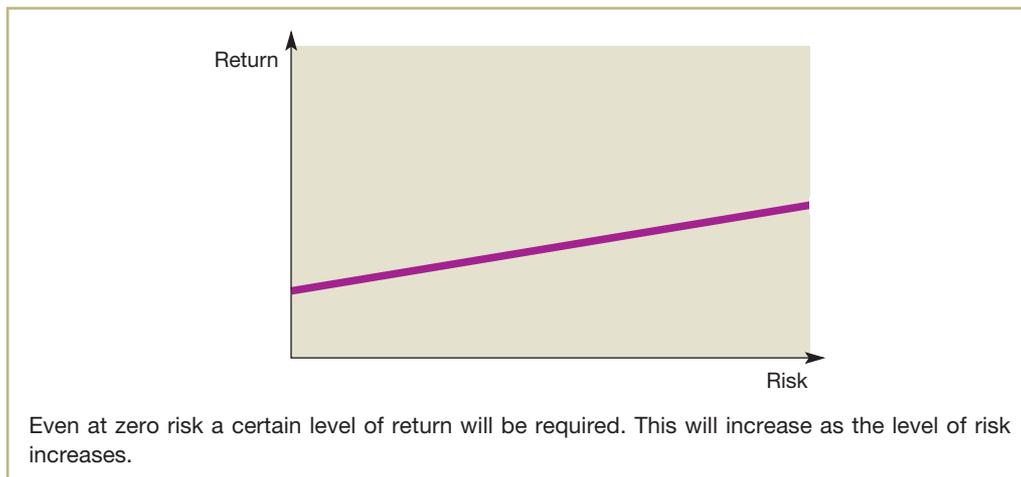


Figure 1.3 Relationship between risk and return

Activity 1.7

Look at Figure 1.3 and state, in broad terms, where an investment in:

- (a) a government savings account, and
 - (b) shares in an oil exploration business
- should be placed on the risk–return line.

A government savings account is normally a very safe investment. Even if a government is in financial difficulties, it can always print more money to repay investors. Returns from this form of investment, however, are normally very low.

Investing in shares in a commercial business runs a risk of losing part or, possibly, the entire amount invested. Moreover, oil exploration carries more risk than many types of business activity. It can, however, produce very high, positive returns.

Thus, the government savings account should be placed towards the far left of the risk–return line and the oil business shares towards the far right.

This relationship between risk and return has important implications for the shareholders of a business. They will require a minimum return to induce them to invest at all, but will require an additional return to compensate for taking risks; the higher the risk, the higher the required return. Thus, future returns from an investment must be assessed in relation to the likely risks involved. As stated earlier, managers who pursue the shareholder wealth maximisation objective should choose investments that provide the highest returns in relation to the risks involved.

The turmoil in the banking industry has shown that the right balance between risk and return is not always struck. Some banks have taken excessive risks in pursuit of higher returns, with disastrous consequences. **Real World 1.6** discusses the implications of this for the future of banking.

Real World 1.6

Banking on change

The taxpayer has become the majority shareholder in the Royal Bank of Scotland (RBS). This change in ownership, resulting from the huge losses sustained by the bank, will shape the future decisions made by its managers. This does not simply mean that it will affect the amount that the bank lends to homeowners and businesses; rather, it is about the amount of risk that it will be prepared to take in pursuit of higher returns.

In the past, those managing banks such as RBS saw themselves as producers of financial products that enabled banks to grow faster than the economy as a whole. They didn't want to be seen as simply part of the infrastructure of the economy. It was too dull. It was far more exciting to be seen as creators of financial products that generated huge profits and, at the same time, benefited us all through unlimited credit at low rates of interest. These financial products, with exotic names such as 'collateralised debt obligations' and 'credit default swaps', ultimately led to huge losses that taxpayers had to absorb in order to prevent the banks from collapse.

Now that many banks throughout the world are in taxpayers' hands, they are destined to lead a much quieter life. They will have to focus more on the basics such as taking deposits, transferring funds and making simple loans to customers. Is that such a bad thing?

The history of banking has reflected a tension between carrying out their core functions and the quest for high returns through high-risk strategies. It seems, however, that for some time to come they will have to concentrate on the former and will be unable to speculate with depositors' cash.

Source: Based on information in Peston, R. (2008) 'We own Royal Bank', *BBC News*, www.bbc.co.uk, 28 November.

BEHAVING ETHICALLY

The pursuit of shareholder wealth maximisation has gained impetus in recent years. One of the effects of the global deregulation of markets and of technological change has been to provide investors with greater opportunities to increase their returns. They are now able to move their funds around the world with comparative ease. This has increased competition among businesses for investment funds and has put managers under greater pressure to produce returns that are attractive in international, rather than merely national, terms.

Given these pressures, there is a risk that shareholder wealth maximisation may be pursued by managers using methods that are generally regarded as unethical. Examples of such behaviour were considered earlier in the chapter. Nevertheless, some managers may feel that even unethical behaviour can be justified because 'all is fair in business'. Professor Rose, however, points out that responsibility to maximise the wealth of shareholders 'does not mean that managers are being asked to act in a manner which absolves them from the considerations of morality and simple decency that they would readily acknowledge in other walks of life' (see reference 1 at the end of the chapter). When considering a particular course of action, managers should therefore ask themselves whether it conforms to accepted moral standards, whether it treats people unfairly and whether it has the potential for harm.

Despite the examples of unethical acts that have attracted publicity over recent years, it would be unfair to conclude that most businesses are involved in unethical activities. Nevertheless, revelations of unethical practice can be damaging to the entire business community. Lying, stealing and fraudulent behaviour can lead to a loss of confidence in business and the imposition of tighter regulatory burdens. In response to this threat, businesses often seek to demonstrate their commitment to acting in an honest and ethical way.

One way of doing this is to develop, and adhere to, a code of ethics concerning business behaviour. **Real World 1.7** provides an example of one such code.

Real World 1.7

The only way is ethics

The Sage Group is a global provider of business management software. It has a code of ethics, which states that the business:

will operate responsibly and in accordance with all relevant laws and regulations.

Specifically, we will:

- promote ethical business practice
- ensure equal opportunities
- provide a safe and healthy work environment
- value diversity in the workplace
- trade ethically
- provide a safe route for people to highlight non-compliance.

These practices sit alongside our principles of trust, integrity, simplicity, agility and innovation and together act at the heart of all our dealings and drive the way we work for the benefit of our people, customers, suppliers, shareholders and other stakeholders.

Source: Code of Ethics, Sage Group plc, www.sage.com, accessed 26 November 2018.

Ethical behaviour and the pursuit of shareholder wealth maximisation need not conflict. Indeed, some believe that high ethical standards may be a necessary condition for wealth maximisation.

Activity 1.8

Can you think why this may be the case?

When customers, suppliers and employees are treated fairly and with integrity, a business is more likely to flourish over the longer term. Stakeholders will demonstrate a greater sense of commitment and loyalty towards the business, which can be vitally important during difficult periods.

In recent years, attempts have been made to demonstrate a link between high ethical standards and superior financial performance over time. **Real World 1.8** describes one of these.

Real World 1.8

Does fame lead to gain?

The Ethisphere Institute is a well-known organisation that promotes ethical business practices. Each year it produces a list of the World's Most Ethical Companies. The criteria used for evaluating businesses cover various aspects, including corporate governance, compliance programmes, culture of ethics, reputation and corporate citizenship.

To see whether investing in ethical businesses led to superior investor returns, one study created an investment portfolio of businesses that were included in the list of the World's Most Ethical Companies as well as being listed on a US stock market. For the period 2007–2011, returns from this portfolio were then compared to the market returns, as measured by a market index (S&P 500). After adjusting for differences in risk, the study found that the portfolio of ethical businesses consistently outperformed the market. Investing in the portfolio



generated returns up to 8% higher than expected during periods when the market was rising as well as when it was falling. The authors of the study argued that this latter finding suggested that ethical businesses benefit from special protection in times of crises.

Source: Carvalho, A. and Areal, N. (2016) 'Great Places to Work®: resilience in times of crisis', *Human Resource Management*, vol. 55, no. 3, pp. 479–98.

While the above findings are interesting, we should be cautious in drawing conclusions. Perhaps ethical practices do not drive superior performance but rather well-managed, high performing businesses tend to adopt ethical practices.

Ethics and the finance function

Integrity and ethical behaviour are particularly important within the finance function, where many opportunities for sharp practice exist. To demonstrate their commitment to integrity and ethical behaviour, some businesses provide a code of standards for their finance staff. **Real World 1.9** provides an example of one such code.

Real World 1.9

Code calling

Vodafone plc, the telecommunications business, has a code of ethics for its chief executive and senior finance and accounting staff. The code states that they to have a duty to:

. . . act with integrity. Integrity requires, among other things, being honest and candid. Deceit, dishonesty and subordination of principle are inconsistent with integrity. Service to the Company should never be subordinated to personal gain and advantage.

The code specifically states that they must:

- act with integrity, including being honest and candid while still maintaining the confidentiality of Company information where required or in the Company's interests;
- observe, fully, applicable governmental laws, rules and regulations;
- comply with the requirements of applicable accounting and auditing standards and Company policies in the maintenance of a high standard of accuracy and completeness in the Company's financial records;
- adhere to a high standard of business ethics and not seek competitive advantage through unlawful or unethical business practices; and
- avoid conflicts of interest wherever possible. Anything that would be a conflict for a Relevant Officer will also be a conflict if it is related to a member of his or her family or a close relative.

Source: Vodafone plc, *Code of Ethics*, accessed 13 February 2019 www.vodafone.com

Although there may be rules in place to try to prevent sharp practice, these will provide only a partial answer. The finance staff themselves must appreciate the importance of fair play in building long-term relationships for the benefit of all those connected with the business.

PROTECTING SHAREHOLDERS' INTERESTS

In recent years, the issue of **corporate governance** has generated much debate. The term is used to describe the ways in which businesses are directed and controlled. Corporate governance is important because in businesses of any size, those who own the company (that is, the shareholders) are usually divorced from the day-to-day control of the business. The shareholders

employ professional managers (known as directors) to manage the business for them. These directors may, therefore, be viewed as *agents* of the shareholders (who are the *principals*).

Given this agent–principal relationship, it may seem reasonable to assume that the best interests of shareholders will guide the directors’ decisions. In other words, the directors will seek to maximise the wealth of the shareholders. However, in practice this does not always occur. Directors may be more concerned with pursuing their own interests and so a conflict can occur between their interests and those of the shareholders.

Activity 1.9

What sort of interests might the directors pursue that would benefit themselves, but which may conflict with the interests of shareholders? Try to think of at least two.

These interests may include:

- increasing their pay and bonuses,
- negotiating perquisites (perks), such as expensive cars, overseas visits and lavish offices,
- improving their job security, and
- increasing their status and power within the business.

It can be argued that in a competitive market economy, this **agency problem**, as it is termed, should not persist over time. The competition for the funds provided by shareholders, and competition for directors’ jobs, should ensure that the interests of the shareholders will prevail. However, if competitive forces are weak, or if information concerning the directors’ activities is not available to shareholders, the risk of agency problems will be increased. Shareholders must be alert to such risks and should take steps to ensure that the directors operate the business in a way that is consistent with shareholder needs.

Protecting through rules

Where directors pursue their own interests at the expense of the shareholders, it is clearly a problem for the shareholders. However, it may also be a problem for society as a whole.

Activity 1.10

Can you think why directors pursuing their own interests, rather than those of shareholders, may be a problem for society as a whole?

If shareholders believe that their funds will be mismanaged, they will be reluctant to invest. A shortage of funds will lead to businesses making fewer investments. Furthermore, the costs of finance will increase as businesses compete for what limited funds are available. A lack of concern for shareholders can therefore have a profound effect on the performance of individual businesses and, with this, the health of the economy.

To avoid these problems, most competitive market economies have a framework of rules to help monitor and control the behaviour of directors. These rules are usually based around three guiding principles:

- **Disclosure.** This lies at the heart of good corporate governance. Adequate and timely disclosure can help shareholders to judge the performance of the directors. Where performance is considered unsatisfactory this will be reflected in the price of shares. Changes should then be made to ensure the directors regain the confidence of shareholders.

- *Accountability.* This involves defining the roles and duties of the directors and establishing an adequate monitoring process. In the UK, the law requires that the directors of a business act in the best interests of the shareholders. This means, among other things, that they must not try to use their position and knowledge to make gains at the expense of the shareholders. The law also requires larger businesses to have their annual financial statements independently audited. The purpose of an independent audit is to lend credibility to the financial statements prepared by the directors.
- *Fairness.* Directors should not be able to benefit from access to ‘inside’ information that is not available to shareholders. As a result, both the law and the London Stock Exchange place restrictions on the ability of directors to buy and sell the shares of the business. One example of these restrictions is that the directors cannot buy or sell shares immediately before the announcement of the annual trading results of the business or before the announcement of a significant event, such as a planned merger or the loss of the chief executive.

Activity 1.11

What consequences for stock markets may arise from a failure to ensure that directors do not benefit from inside information?

Buying and selling shares must be seen as a ‘fair game’ where all investors have access to the same information. Where investors feel that the dice is loaded and directors can benefit from inside information, they are unlikely to invest.

The guiding principles are set out in Figure 1.4.

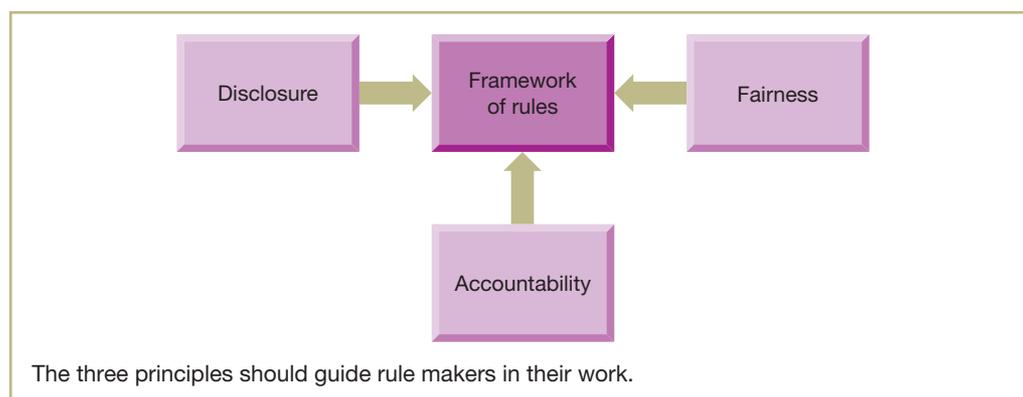


Figure 1.4 Principles underpinning a framework of rules

Strengthening the framework of rules

The number of rules designed to safeguard shareholders has increased considerably over the years. This has been in response to weaknesses in corporate governance procedures that have been exposed, through well-publicised business failures and frauds, excessive pay increases to directors, and evidence that financial reports were being ‘massaged’ so as to mislead shareholders.

The most important development has been the introduction of the **UK Corporate Governance Code**, which sets out best practice on corporate governance for large businesses listed on the London Stock Exchange. It is produced by the Financial Reporting Council, an independent regulator that seeks to promote high quality corporate governance and

accountability. The UK Code deals with such matters as the role and remuneration of directors, their relations with shareholders, and their accountability. In **Real World 1.10**, the key principles underpinning the code are described.

Real World 1.10

The UK Corporate Governance Code

The UK Code takes the view that good corporate governance is of vital importance to the long-term success of a business. It sets out a number of key principles rather than rigid rules. These principles, which are grouped into five main areas, are summarised below.

Board leadership and company purpose

The Code states that the board of directors should be committed to the long-term sustainability of the business. Furthermore, it should seek to generate shareholder value and to contribute to society more generally. The board is responsible for setting out the objectives and strategy of the business and for promoting a culture that aligns with these. It is also responsible for ensuring that the business has the resources needed to pursue its objectives. Finally, the board is expected to engage with shareholders and stakeholders and to ensure workforce policies and practices mirror the values of the business.

Division of responsibilities

This area concerns the roles and responsibilities of board members. The Code states that there should be a chair to provide leadership for the board. This will involve fostering good relations among board members and encouraging open, constructive debate. To facilitate debate, board members should receive all necessary information in a timely manner. Board composition should reflect a suitable mix of executive and non-executive directors. The role of the latter is to offer advice and guidance and to constructively challenge the plans and policies of the executive directors. To ensure that no single individual has unfettered power, the Code states that leadership of the board should be separate from leadership of the day-to-day management of the business. Finally, the board should have everything it needs in order to operate effectively.

Composition, succession and evaluation

This area is concerned with the effectiveness of the board. The Code states that procedures for appointing board members and for succession planning should be in place and these should be both transparent and rigorous. Board appointments should be based on merit and should promote diversity. Furthermore, the board should contain a suitable combination of skills, knowledge and experience. To maintain a vibrant board, its membership should be renewed regularly. As a check on its effectiveness, the board, along with individual members, should be subject to annual evaluation.

Audit, risk and internal control

This area focuses on the issue of risk. The Code states that the board should ensure that suitable controls are in place to manage risk. Furthermore, it should ensure the internal and external audit functions within the business operate effectively. This is of vital importance in protecting the reliability of financial and other statements provided by the business. The board should also identify the key risks the business is prepared to take in pursuit of its objectives. To enhance accountability, the board should provide a fair and impartial evaluation of the business's position and prospects.



Remuneration

This final area deals with the thorny issue of executive remuneration. The Code states that remuneration policies should be attuned to the need for long-term sustainable success and should be consistent with the long-term plans of the business. It further states that executive remuneration should be clearly related to the achievement of the business's objectives. When developing remuneration policies, account should be taken of business and individual performance, along with any wider issues. Finally, procedures for developing the remuneration package of directors and other senior executives should be transparent and should ensure that individual directors are prevented from setting their own remuneration.

The above principles are accompanied by more detailed provisions and supporting guidance.

Source: Based on information in *The UK Corporate Governance Code*, July 2018, Financial Reporting Council. www.frc.org.uk

Businesses listed on the London Stock Exchange are expected to comply with the requirements of the UK Code or must give their shareholders good reason why they do not. Failure to do one of these can lead to the company's shares being suspended from listing.

Activity 1.12

Why might this be an important sanction against a non-compliant business?

A major advantage of a Stock Exchange listing is that it enables investors to sell their shares whenever they wish. A business that is suspended from listing would find it harder and, therefore, more expensive to raise funds from investors because there would be no ready market for the shares.

Listed businesses usually comply with the provisions of the Code. A recent survey found that more than 95 per cent of the largest 350 listed businesses adhere to all, or all but one or two, of its provisions (see reference 2 at the end of the chapter).

It is generally believed that the Code has improved the quality of information available to shareholders. It has also resulted in better checks on the powers of directors, and provided greater transparency in corporate affairs. However, rules can only be a partial answer. Ultimately, good corporate governance behaviour depends on a healthy **corporate culture**. By this we mean the values, attitudes and behaviour displayed towards the various stakeholders, as discussed earlier. Thus, effective governance rules rely on managers adhering to high standards of integrity and accountability.

Rulemaking is a tricky business. Where corporate governance rules are too tightly drawn, entrepreneurial spirit may be stifled and risk taking may be discouraged. However, problems can also arise where rules are too loosely drawn.

Activity 1.13

Can you think of a possible problem with corporate governance rules that are too loosely drawn?

In this case, it would be easier for unscrupulous directors to find ways around them.

Thus, when creating corporate governance rules, a balance must somehow be struck between the need to protect shareholders and other stakeholders and the need to encourage entrepreneurial behaviour.

SHAREHOLDER INVOLVEMENT

Improving corporate governance has focused mainly on developing a framework of rules for managing businesses listed on the London Stock Exchange. While rules are important, it is also important for the shareholders who own the businesses to play their part by actively monitoring and controlling the behaviour of directors. In this section, we identify the main shareholders of listed businesses and discuss their role in establishing good corporate governance. We also consider why there has been greater shareholder activism in recent years.

Who are the main shareholders?

Real World 1.11 provides an analysis of the ownership of shares in UK-listed businesses at the end of 2016.

Real World 1.11

Going overseas

The breakdown of ownership of UK listed shares as at 31 December 2016 is as shown in Figure 1.5.

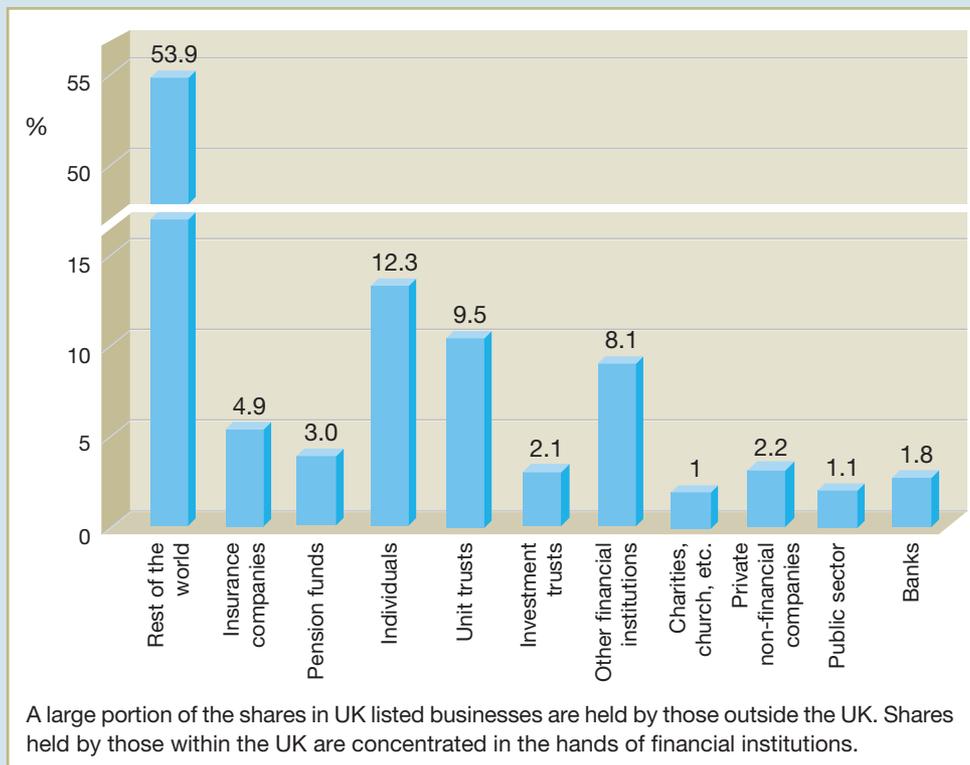


Figure 1.5 Ownership of UK listed shares, end of 2016



Looking at the changes in the ownership of listed shares over the years shows two striking features:

- 1 The value of listed shares owned by overseas residents has gone up progressively from 30.7 per cent in 1998 to 53.9 per cent in 2016.
- 2 The value of listed shares held by UK individuals has fallen from 16.7 per cent in 1998 to 12.3 per cent in 2016.

However, the percentage of shares held by each group appears to have stabilised in the past few years.

Source: Ownership of UK Quoted Shares 2016, Table 4, Office for National Statistics, 29 November 2017. Office for National Statistics licensed under the Open Government Licence v3.0.

Activity 1.14

The rise of financial institutions means that private individuals have less direct investment in listed shares than in the past. Does that mean they have less financial interest in listed shares?

No. It means that individuals are tending to invest through the institutions, for example by making pension contributions rather than buying shares directly. Ultimately, all of the investment finance must come from individuals.

The concentration of ownership of listed shares means that financial institutions have enormous voting power. Thus, they can exert significant influence over the way in which stock exchange listed businesses are directed and controlled. In the past, however, they have been reluctant to exercise their powers. They have been criticised for being too passive and for allowing the directors of businesses too much independence.

What can shareholders do?

There are two main ways in which shareholders can try to control the behaviour of directors. These are by:

- introducing incentive plans for directors that link their remuneration to the share performance of the business. In this way, the interests of directors and shareholders should become more closely aligned; and
- closely monitoring the actions of the directors and exerting influence over the way in which they use business resources.

The first issue will be picked up in Chapter 10. It is the second issue to which we now turn.

Getting active

In the past, financial institutions have chosen to take a non-interventionist approach to the affairs of a business. Instead, they have preferred to confine their investment activities to deciding whether to buy, hold or sell shares in a particular business. They appear to have taken the view that the costs of actively engaging with directors and trying to influence their decisions are too high in relation to the likely benefits. It is worth pointing out that these costs are borne by the particular financial institution that becomes actively involved, whereas the

benefits are spread across all shareholders. (This phenomenon is often referred to as the 'free-rider' problem.)

Waking the sleeping giants

In recent years, financial institutions have begun to play a more active role in corporate governance. More time is being invested in monitoring the actions of directors and in engaging with the directors over key decisions. This change of heart has occurred for a variety of reasons. One important reason is that the increasing concentration of share ownership has made it more difficult for financial institutions to simply walk away from an investment in a poorly performing business by selling its shares.

Activity 1.15

Why might it be a problem for a financial institution that holds a substantial number of shares in a poorly performing business to simply sell the shares?

Where a substantial number of shares are held, a decision to sell can have a significant impact on the market price, perhaps leading to heavy losses.

A further reason why it may be difficult to disinvest is that a business's shares may be included in a stock market index (such as the FTSE 100 or FTSE 250). Certain types of financial institution, such as investment trusts or unit trusts, may offer investments that are designed to 'track' the particular index and so they become locked into a business's shares in order to reflect the index. In both situations outlined, therefore, a financial institution may have little choice but to stick with the shares held and try to improve performance by seeking to influence the actions and decisions of the directors.

It is also worth mentioning that financial institutions have experienced much greater competitive pressures in recent years. There have been increasing demands from clients for them to demonstrate their investment skills, and thereby justify their fees, by either outperforming benchmarks or beating the performance of similar financial institutions. These increased competitive pressures may be due, at least in part, to the fact that economic conditions have not favoured investors. In the not-too-distant past, they have experienced periods of relatively low stock market returns. Whatever the reason, the increased pressure to enhance the wealth of their clients has led financial institutions, in turn, to become less tolerant towards underperforming boards of directors.

The regulatory environment has also favoured greater activism on the part of financial institutions. This point will be considered in more detail a little later.

Forms of activism

It is important to be clear about what is meant by the term 'shareholder activism' as it can take various forms. In its simplest form, it involves taking a more active role in voting for or against the resolutions put before the annual general meeting or any extraordinary general meeting of the business. This form of activism is seen by the UK government as being vital to good corporate governance. The government expects higher levels of participation and would like institutional shareholders to exercise their right to vote. In the past, financial institutions have often indicated their dissent by abstaining from a vote rather than by outright opposition to a

resolution. However, they are now more prepared to use their vote to oppose resolutions of the board of directors.

A particularly rich source of contention between shareholders and directors, concerns directors pay and this has led to several shareholder revolts. **Real World 1.12** provides evidence of recent discontent.

Real World 1.12

Revolting shareholders

Shareholder rebellions over high executive pay at the UK's largest companies have doubled this year, with companies from AstraZeneca to BT and Shell suffering big protest votes at their annual meetings. High pay has risen up the agenda for investors in the face of sustained public anger and criticism from politicians over big payouts for corporate bosses.

Some signs have been evident that companies have taken steps towards reform in recent years, either by restructuring or simply cutting remuneration. However, the number of pay resolutions at FTSE 100 companies where at least 20 per cent of votes were against management was 18 by the end of July, compared with nine during the same period in 2017, according to a public register that tracks shareholder rebellions. Chris Cummings, chief executive of the Investment Association, the asset management trade body that compiles the register, said shareholders 'clearly remain unimpressed' with executive pay and were 'frustrated the message is not getting through to some boardrooms'. 'FTSE 100 companies must do more to ensure the pay packets of their top team align with company performance and remain at levels that shareholders find acceptable,' he added.

Some companies, including AstraZeneca, Old Mutual and WPP, have had protests over high pay for two consecutive years or more. One senior figure at a large UK asset manager said the 2018 annual meeting season was 'a lot louder than I thought it would be'. 'I can't remember as many high-profile votes against.' There was a much greater emphasis on 'fairness', looking at factors such as the ratios between the highest and lowest paid, he said. 'A company can have a reasonable [remuneration] structure and pay linked to performance. But investors can say that it is too high.'

The IA public register data also revealed a large rise in opposition to re-electing individual directors, with investors increasingly holding them responsible for issues including excessive pay. A corporate governance specialist at a big UK investor added that investors were more willing than ever to target individuals who agree to high pay packages. 'We have been having these discussions about pay with people for a long time, and it is not changing fast enough,' he said. The number of resolutions on director re-election where at least 20 per cent of investors voted against rose to 80 in 2018 from 38 last year across the FTSE All-Share index of all quoted companies.

FT

Source: Mooney, A. (2018) Shareholder rebellions over high pay double in a year, ft.com, 29 August.
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The latest version of the UK Code seeks to defuse some of the tensions relating to this issue by laying down various principles concerning how directors' remuneration should be calculated and managed. It also requires boards to be sensitive to shareholder dissatisfaction, which includes dissatisfaction over directors' remuneration. Procedures must now be followed by the board where 20 per cent or more of shareholders' votes have been cast against a board resolution. It is too early to say, however, whether these recent changes will make a significant contribution towards dealing with the problem.

Shareholder revolts are widely reported and often catch the newspaper headlines. As a result, the benefits for shareholders of flexing their muscles and voting against resolutions put

forward by the directors may go beyond their immediate, intended objective. Other boards of directors may become more alert to shareholder dissatisfaction. This may decide to adjust their decisions to avoid the risk of bad publicity. The cost of voting need not be high as there are specialist agencies that offer research and advice to financial institutions on how their votes should be cast.

Another form of activism involves meetings and discussions between representatives of a particular financial institution and the board of directors of a business. At such meetings, a wide range of issues affecting the business may be discussed.

Activity 1.16

What might financial institutions wish to discuss with the directors of a business? Try to think of at least two financial and two non-financial aspects of the business.

Some of the more important aspects include:

- objectives and strategies adopted
- trading performance
- internal controls
- policies regarding mergers and acquisitions
- major investments and disinvestments
- adherence to the recommendations of the UK Corporate Governance Code
- corporate social responsibility
- directors' incentive schemes and remuneration.

This is not an exhaustive list. As shareholders, and therefore owners, of a business, anything that might have an impact on their wealth should be a matter of concern.

This form of activism requires a fairly high degree of involvement with the business and some of the larger financial institutions have dedicated teams for this purpose. It can, therefore be a costly exercise.

Meetings between financial institutions and the managers of investee companies can be a useful mechanism for exchanging views and for gaining a greater understanding of the needs and motivations of each party. This may help to pre-empt public arguments between the board of directors and financial institutions, which is rarely the best way to resolve issues.

The final form of activism involves intervention in the affairs of the business. This can be very costly, however, depending on the nature of the problem. Where strategic and operational issues raise concerns, intervention can be very costly indeed. Identifying the weaknesses and problems relating to these issues requires a detailed understanding of the nature of the business. This implies close monitoring by relevant experts who are able to analyse the issues and then propose feasible solutions. The costs associated with such an exercise would normally be prohibitive, although the costs may be mitigated through some kind of collective action by financial institutions.

Not all forms of intervention in the affairs of a business need be costly, however. Where there are corporate governance issues to be addressed, for example, such as a failure to adhere to the recommendations of the UK Corporate Governance Code, a financial institution may nominate individuals for appointment as non-executive directors who can be relied upon to ensure that necessary changes are made. This should involve relatively little cost for the financial institution.

The main forms of shareholder activism are summarised in Figure 1.6.

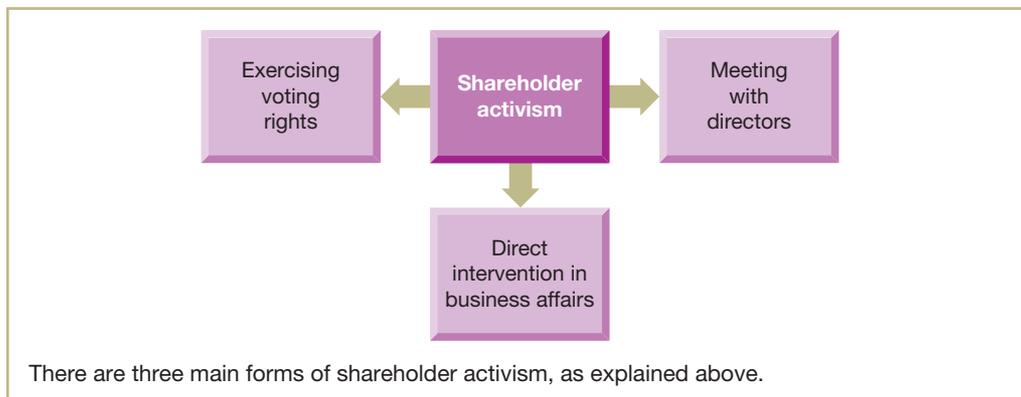


Figure 1.6 The main forms of shareholder activism

UK Stewardship Code

To improve the quality of engagement between financial institutions and investee businesses, the Financial Reporting Council (FRC) has published the **UK Stewardship Code**. This sets out key principles concerning the way in which financial institutions should engage with investee businesses. They relate to financial institutions:

- establishing policies relating to stewardship and voting procedures, along with periodic reporting of how these policies were actioned
- checking on investee businesses
- establishing the circumstances under which stewardship activities are intensified and accepting the need, at times, to act in concert with other shareholders
- disclosing conflicts of interest arising from stewardship activities and how they are resolved.

The Code also offers guidance on how these principles should be enacted.

The UK Stewardship Code, like the UK Corporate Governance Code, operates on a 'comply or explain' basis. It is designed to provide principles and guidance rather than rigid rules. Financial institutions that are signatories to the code are graded, or tiered, by the FRC according to the quality and transparency of the information provided.

Real World 1.13 describes how Fidelity International, the large investment advisers, engages with investee businesses.

Real World 1.13

Getting engaged

As a general policy, we aim to support the management of the companies in which we invest but our dialogue with companies is a robust one and we will form our own views on the strategy and governance of a business. On occasion our views may differ from those of management or the Board and this may give rise to an escalation in our engagement. Factors taken into account prior to an escalation include an assessment of the materiality of the matter in dispute, the size of our shareholding, the timeframe of the investment thesis and the ownership profile of the business in question. Escalation can also occur when we become aware of differences between directors. Our specific response will always be determined on a case by case basis and there will be instances when we choose to sell our shares.

When escalation is deemed appropriate our first step is often to make contact with other significant shareholders to determine whether they share our views or concerns. Following these conversations, we will speak to the company's advisers and/or independent directors for a further exchange of views. Our strong preference is to achieve our objectives in a consensual and confidential manner but when differences with a company remain we may consider joint engagement with other shareholders, escalating concerns if necessary to regulators and more public forms of dissent, although as a general policy we do not favour using the media to help achieve our objectives. If differences with a company remain unresolved we may vote against the Board in a general meeting or even requisition an extraordinary general meeting to enable all investors to vote on the matter in dispute. We would not normally intervene on an operational matter but topics which have given rise to escalation in the past include the need for management and/or Board change, strategy, capital structure, M&A, protection of shareholder rights, remuneration and other ESG-related issues.

Source: Extract from (2018) *Responsible Investment Policy Fidelity International*, February, p. 4.

Shareholder activism and short-term behaviour

Shareholder activism is generally regarded as a force for good. There are times, however, when this may not be the case. Some shareholders engage with businesses simply to extract short-term gains. **Real World 1.14** warns of the problems this can create.

Real World 1.14

Ignoring the long term

Terry Smith, a successful fund manager, has warned against activist shareholders who seek only short-term gains. He has argued:

When an activist shareholder becomes involved in a company, the modus operandi is often something like this.

- 1 Acquire a stake in the company, usually via on-market purchases;
- 2 Campaign noisily for change, which can entail the company trying to sell itself to an acquirer, splitting itself into a number of listed entities for each of its activities, taking on more debt, buying back its own shares, or some combination of these;
- 3 The share price rises as a result of excitement about this activity, which it is claimed will 'create shareholder value' and benefit all investors;
- 4 Sell the shares at a profit.

Nothing wrong with that, you might think, and certainly not from the point of view of the activist. But there is plenty wrong for those of us who are long-term investors and actually want to own the shares to gain from their ability to compound in value over time. We are often left trying to make sense of fragmented businesses, new management teams, higher gearing, the costs of separation or integration and financial statements which are rendered incomprehensible by many adjustments.

This particular problem of activism comes from confusing creating shareholder value with making the share price go up. One should lead to the other, but when short-term share price movements become the main objective, as they clearly are with many activists, the inevitable by-product is future problems for the business and its long-term shareholders.

FT

Source: Smith, T. (2015) 'Shareholder value is an outcome not an objective', *Financial Times*, 6 February.
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The future of shareholder activism

Shareholder activism appears to be taken an increasing hold. In a study of 400 activist campaigns in the US, McKinsey and Co found that shareholder activism is becoming more frequent and target businesses are becoming larger in size. Perhaps unsurprisingly, the study also found that activism is often provoked by the underperformance of a business in relation to industry peers. While three quarters of activist campaigns began by taking a collaborative approach, almost half of these eventually turned hostile (see reference 3 at the end of the chapter).

A key question to be answered is whether shareholder activism makes any real difference to financial performance. Early research in the US was not encouraging for those who urge large investing institutions to take a more active approach. However, a more recent study of 2,000 active interventions found that the operating performance of US businesses was improved for a five-year period following the interventions (see reference 4 at the end of the chapter).

The McKinsey study mentioned above also found a positive effect from activist interventions. The study states:

Our analysis of 400 activist campaigns (out of 1,400 launched against US companies over the past decade) finds that, among large companies for which data are available, the median activist campaign reverses a downward trajectory in target-company performance and generates excess shareholder returns that persist for at least 36 months. (p. 1)

This suggests that shareholder activism is unlikely to be simply a passing phase.

SUMMARY

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

The finance function

- Helps managers in carrying out their tasks of strategic management, operations management and risk management.
- Helps managers in each of these tasks through financial planning, investment appraisal, financing decisions, capital market operations and financial control.

Modern financial management

- Is influenced by economic theory.
- Has been described as the economics of time and risk.

Shareholders

- Are assumed to be the most important stakeholder group because they effectively own the business and bear the residual risk.

Shareholder wealth maximisation

- Is assumed to be the primary objective of a business.
- Is a long-term rather than a short-term objective.

- Takes account of both risk and the long-term returns that shareholders expect to receive.
- Must take account of the needs of other stakeholders.
- May be best achieved indirectly through a commitment to developing the best possible product or service.

Profit maximisation

- Does not automatically lead to shareholder wealth maximisation.
- Is a vague concept that can be interpreted in different ways.
- Cannot be objectively measured and may be manipulated by managers.
- Fails to take account of risk and the opportunity cost of shareholders' funds.

The stakeholder approach

- Reflects the idea that a business should serve those groups that benefit from, or are harmed by, its operations.
- Will lead to a business having multiple objectives, which adds to the problems of accountability.
- Raises many questions about the identification and treatment of stakeholder groups.

Risk and return

- Are related.
- Shareholders normally require additional return to compensate for additional risk.
- Shareholder wealth maximisation involves selecting investments that provide the highest returns in relation to the risks involved.

Behaving ethically

- May be vital for the achievement of shareholder wealth maximisation.
- May be set out in policies and codes.
- Is particularly important in the finance function.

Protecting shareholders

- An agency problem may exist between shareholders and directors.
- This has led to rules, set out in the UK Corporate Governance Code, to help monitor and control the behaviour of directors.

Shareholder involvement

- Financial institutions are now the most important group of UK shareholders in London Stock Exchange listed businesses.
- Shareholder involvement may take the form of providing incentives for directors and/or monitoring and controlling their actions.
- Shareholder activism may involve taking a more active role in voting, meetings and discussions with directors and direct intervention in the affairs of the business.

KEY TERMS

Capital markets p. 5

Shareholder wealth maximisation p. 6

Stakeholder approach p. 11

Corporate governance p. 18

Agency problem p. 19

UK Corporate Governance Code p. 20

Corporate culture p. 22

UK Stewardship Code p. 28

For definitions of these terms, see the Glossary, pp. 685–94.

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- 1 Rose, H. (1995) *Tasks of the Finance Function*, Financial Times Mastering Management Series, supplement issue no. 1, p. 11.
- 2 Grant Thornton (2017) *Corporate Governance Review*, p. 26, www.grant-thornton.co.uk.
- 3 Criac, J., De Backer, R. and Sanders, J. (2014) *Preparing for Bigger, Bolder, Shareholder Activists*, www.mckinsey.com, March.
- 4 Bebchuk, L., Brav, A. and Jiang, W. (2013) 'The long-term effect of hedge fund activism', Working paper, ssrn.com.

FURTHER READING

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

Lumby, S. and Jones, C. (2019) *Corporate Finance: Theory and Practice*, 10th edn, Cengage Learning, Chapters 1 and 2.

Mallin, C. (2019) *Corporate Governance*, 6th edn, Oxford University Press, Chapters 2, 3, 4 and 6.

Pike, R., Neale, B. and Akbar, S. (2018) *Corporate Finance and Investment*, 9th edn, Pearson, Chapter 1.

The Open University (2016) *Influences on Corporate Governance*, Open University.

Reading the *Financial Times* and *Investors Chronicle* on a regular basis can help you to keep up to date on financial management topics.

CRITICAL REVIEW QUESTIONS

Solutions to these questions can be found at the back of the book on p. 649.

- 1.1 'One effect of the recent globalisation of business is that it is now easier for owners and managers to escape their ethical obligations than in previous eras.' Can you think of any reasons in support of this viewpoint?
- 1.2 A large listed business has become the target of a shareholder activist. What steps should the board of directors take in response to this event?
- 1.3 Some managers, if asked what the main objective of their business is, may simply state: 'To survive!' What do you think of this as a primary objective?
- 1.4 What are the main drawbacks of adopting the stakeholder approach as the basis for setting the objectives of a business?

Chapter 2

FINANCIAL PLANNING

INTRODUCTION

In this chapter, we take a look at various aspects of financial planning. We begin by considering the role that projected (or forecast) financial statements play in the planning process. We shall see how these statements help managers assess the likely impact of their decisions on the financial performance and position of a business. We shall also examine the way in which these statements are prepared and the issues involved in their preparation.

Risk, the likelihood that what is forecast to occur will not actually occur, should be taken into account when using projected financial statements. We shall explore two approaches to dealing with the forecast risk inherent in these statements. Both approaches discussed are designed to give managers a better ‘feel’ for likely future outcomes.

When making financial plans, managers must be aware of the effects of gearing. We shall discuss both financial and operating gearing and see how each can affect the risks and returns associated with a business.

This chapter and the one that follows assume some understanding of the three major financial statements: the cash flow statement, the income statement and the statement of financial position (balance sheet). If you need to brush up on these statements, please take a look at Chapters 2–6 of *Financial Accounting for Decision Makers* by Atrill and McLaney (9th edition, Pearson, 2019).

Learning outcomes

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

- Explain how business plans are developed and the role that projected financial statements play in this process.
- Prepare projected financial statements for a business and interpret their significance for decision-making purposes.
- Describe the manner in which projected financial statements may take account of risk and uncertainty.
- Explain the effect of financial and operating gearing on the risks and returns associated with a business.

PLANNING FOR THE FUTURE

It is vital that a business develops plans for the future. Whatever a business is trying to achieve, it is unlikely to succeed unless the future is mapped out in a systematic way. Finance lies at the heart of the planning process. To ensure that the limited resources of a business are used as effectively as possible, managers must carefully evaluate the financial implications of each possible course of action.

Developing plans for a business involves the following key steps:

- 1 *Set the aims and objectives of the business.* The starting point is to establish the long-term aims and objectives of the business. These will set out what the business is trying to achieve and should provide managers with a clear sense of direction. We saw in Chapter 1 that the primary objective of a business is assumed to be the maximisation of shareholder wealth.
- 2 *Identify the options available.* To achieve the long-term aims and objectives that are set, a number of possible options (strategies) may be available to the business. Each option must be clearly identified, which will involve collecting a wide range of information. This can be extremely time-consuming, particularly when the business is considering entering new markets or investing in new technology.
- 3 *Select an option and develop long-term plans.* Each option (strategy) must be examined within the context of the long-term aims and objectives that have been set. In selecting an option, the resource capabilities of the business must also be taken into account. Ideally, the final choice will play to the strengths of the business rather than expose its weaknesses. This option choice will become the long-term (strategic) plan for the business and will usually cover a period of 3–5 years.
- 4 *Develop short-term plans.* Within the framework of the long-term (strategic) plan, detailed short-term (tactical) plans will normally be prepared for the forthcoming year. These help to ensure that day-to-day management decisions and actions are consistent with the long-term plans.

Figure 2.1 sets out this process diagrammatically.

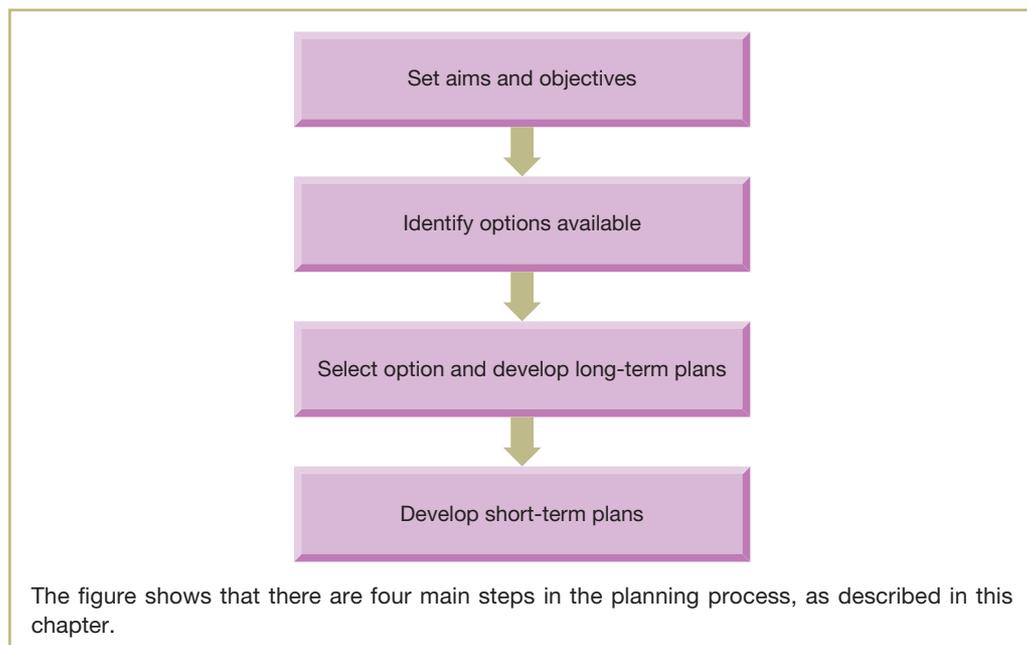


Figure 2.1 Steps in the planning process

THE ROLE OF PROJECTED FINANCIAL STATEMENTS

Projected (forecast) financial statements can play a vital role in the final two steps of the planning process – that is, the evaluation of long-term strategic options and the development of short-term plans. Both will require forecasts of future financial performance and position. This means that projected financial statements must be prepared for both long and short time horizons. The length of the time horizon, however, will influence the level of detail that can be provided. As we shall see later, the longer the time horizon, the more we must rely on simplifying assumptions when preparing these statements.

The main financial statements used for planning purposes are:

- a projected cash flow statement
- a projected income statement
- a projected statement of financial position (balance sheet).

When taken together, they provide a comprehensive picture of likely future performance and position. Where different options are being considered, they enable comparisons to be made of the impact of each option on future profitability, liquidity and financial position. This should help managers in identifying the most suitable way forward.

Activity 2.1

Assume that the managers of a business are considering only one option. Could projected financial statements still help them?

Where only one course of action is being considered, a comparison can still be made with the option to do nothing. Once the course of action has been adopted, projected financial statements can also provide targets against which to compare actual performance.

We mentioned earlier that, for long-term planning, projected financial statements for each year may be prepared to cover a period of 3–5 years. For short-term planning, they may be prepared for a period of one year. However, quarterly, monthly or weekly projections may also be prepared to help assess likely progress towards achieving the short-term plan.

Real World 2.1 describes the projected, or forecast, financial statements prepared for one large business on a routine basis.

Real World 2.1

Read all about it!

Trinity Mirror plc, which owns a number of newspapers, websites and digital products describes its short-term financial planning as follows:

Weekly revenue and profit forecasts are received from all operating units followed by monthly management accounts, which are prepared promptly and reported against the approved budget (that is, short-term financial plan). Profit and cash flow forecasts for the current year together with a treasury report were prepared and submitted to the Board twice during the year.

Source: Adapted from *Audit and risk committee report*, Trinity Mirror plc, Annual Report 2017, p. 44.

Preparing projected financial statements usually means collecting and processing large amounts of information. This can be a costly and time-consuming exercise, which must be weighed against likely benefits. To help strike the right balance, a trade-off may be made between the reliability of the forecast information produced and the cost and time involved. Sometimes, this trade-off is achieved by employing simplifying assumptions in the preparation process. We shall see a little later how this may be done.

PREPARING PROJECTED FINANCIAL STATEMENTS

To prepare projected financial statements, the key variables affecting performance and position must be identified. These variables fall into two broad categories: external and internal.

External variables usually relate to government policies and to economic conditions, and include:

- rates of taxation
- interest rates for borrowings
- rates of inflation.

There is often a great deal of published information available to help identify future rates for each of the variables mentioned. Care must be taken, however, to ensure that their particular impact on the business is properly assessed. When estimating the likely rate of inflation, for example, each major category of item affected by inflation should be considered separately. Using an average rate of inflation for all items is often inappropriate as levels of inflation can vary significantly between items.

Internal variables cover the policies and agreements to which the business is committed. Examples include:

- capital expenditure commitments
- financing agreements
- inventories' holding policies
- credit period allowed to customers
- payment policies for trade payables
- accounting policies (for example, depreciation rates and methods)
- dividend policy.

The last item may require some clarification. For large businesses at least, a target level of dividends is often established and managers are usually reluctant to deviate from this target. The target is often linked to the level of profits for the particular year or to dividends paid in previous years. (This issue is discussed in more detail in Chapter 9.)

THE SALES FORECAST

Once the key variables influencing future performance and position have been identified, we can begin to forecast the items included in the projected financial statements. We have to make a start somewhere and the usual starting point is to forecast sales. It is sales that normally sets a limit to business growth and determines the level of operating activity. The influence of sales

on other items appearing in the financial statements, such as cost of goods sold, overheads, inventories, trade receivables and so on, makes a reliable sales forecast essential. If this forecast is wrong, other forecasts will also be wrong. When producing a sales forecast account is normally taken of key factors such as general economic conditions, industry conditions and the threat posed by major competitors.

Two main approaches to forecasting sales can be found in practice. The first is a *qualitative approach*. This approach produces a forecast based on subjective judgement and relies on one, or more, of the following sources:

- sales force polling
- managers' opinions
- consumer surveys
- opinions of a panel of experts.

The second is a *quantitative approach*. This approach will undertake a numerical analysis of past sales in order to discern future trends. Techniques that may be employed include:

- trend analysis
- exponential smoothing
- regression analysis
- econometric models
- neural networks.

Qualitative sales forecasting may be favoured where past sales data are not available or where future sales are expected to be quite different from sales in past periods. Quantitative sales forecasting may be favoured where past sales data are available and where past sales patterns are expected to be repeated in the future. There are, however, no hard and fast rules concerning which approach to use. Managers must assess the benefits of each approach in terms of reliability and then weigh these benefits against the associated costs.

Activity 2.2

Managers may decide to use both approaches rather than only one. Why might they do this?

They may wish to carry out a cross-check on the reliability of forecast figures. By using both of the two approaches, this can be done.

PREPARING THE PROJECTED STATEMENTS: A WORKED EXAMPLE

We shall now take a look at how projected financial statements are put together. It was mentioned earlier that these financial statements consist of a:

- projected cash flow statement
- projected income statement
- projected statement of financial position (balance sheet).

For short forecast horizons, these statements are usually prepared in some detail. Where the forecast horizon is fairly long, however, or the costs of preparation are prohibitive, simpler, less

detailed statements are often provided. We shall look first at how to prepare detailed projected financial statements, and then look at simpler statements a little later.

If you already have some background in accounting, the following sections, which deal with the detailed approach, should pose few problems. This is because projected financial statements employ the same methods and principles as those for conventional financial statements. The key difference is that projected financial statements rely on forecast, rather than actual, information.

To illustrate the preparation of projected financial statements, let us consider Example 2.1.

Example 2.1

Designer Dresses Ltd is a small business to be formed by James and William Clark to sell an exclusive range of dresses from a small boutique. On 1 January, they plan to invest £50,000 cash to acquire 25,000 £1 shares each in the business. Of this, £30,000 is to be invested in new fittings in January. These fittings are to be depreciated over three years on the straight-line basis – their scrap value is assumed to be zero at the end of their lives. (The straight-line basis of depreciation allocates the total amount to be depreciated evenly over the life of the asset.) In this case, a half-year's depreciation is to be charged in the first six months. The sales and purchases projections for the business are as follows:

	<i>Jan</i>	<i>Feb</i>	<i>Mar</i>	<i>Apr</i>	<i>May</i>	<i>June</i>	<i>Total</i>
Sales revenue (£000)	10.2	30.6	30.6	40.8	40.8	51.0	204.0
Purchases (£000)	20.0	30.0	25.0	25.0	30.0	30.0	160.0
Other costs* (£000)	9.0	9.0	9.0	9.0	9.0	9.0	54.0

*'Other costs' includes wages but excludes depreciation.

The sales will all be made by credit card. The credit card business will take one month to pay and will deduct its fee of 2 per cent of gross sales before paying amounts due to Designer Dresses. One month's credit is allowed by suppliers. Other costs shown above do not include rent and rates of £10,000 per quarter, payable on 1 January and 1 April. All other costs will be paid in cash. The value of closing inventories at the end of June is expected to be £58,000.

Having set up the example, we shall now go on to prepare a projected cash flow statement and income statement for the six months to 30 June, and a projected statement of financial position as at that date (ignoring taxation and working to the nearest thousand pounds).

PROJECTED CASH FLOW STATEMENT

The projected cash flow statement monitors future changes in liquidity and helps managers to assess the impact of expected future events on the cash balance. Cash has been described as the 'lifeblood' of a business and so managers keep a close eye on forecast cash flows.

Activity 2.3

Can you think why cash is so important to a business?

To survive, a business must have sufficient cash resources to meet its maturing obligations. Ultimately, all businesses that fail do so because they do not have the cash to pay for the goods and services needed to continue operations.

The projected cash flow statement helps to identify when cash surpluses and cash deficits are likely to occur. Managers can then plan for these events. Where there is a cash surplus, they should consider the profitable investment of the cash. Where there is a cash deficit, they should consider ways in which it can be financed.

The cash flow statement is fairly easy to prepare. It simply records the cash inflows and outflows of the business. The main sources of cash inflows and outflows are:

- issue and redemption of long-term funds (for example, shares and loans)
- purchase and sale of non-current assets
- operating activities (sales revenue and operating expenses)
- tax and dividends.

These are set out in Figure 2.2.

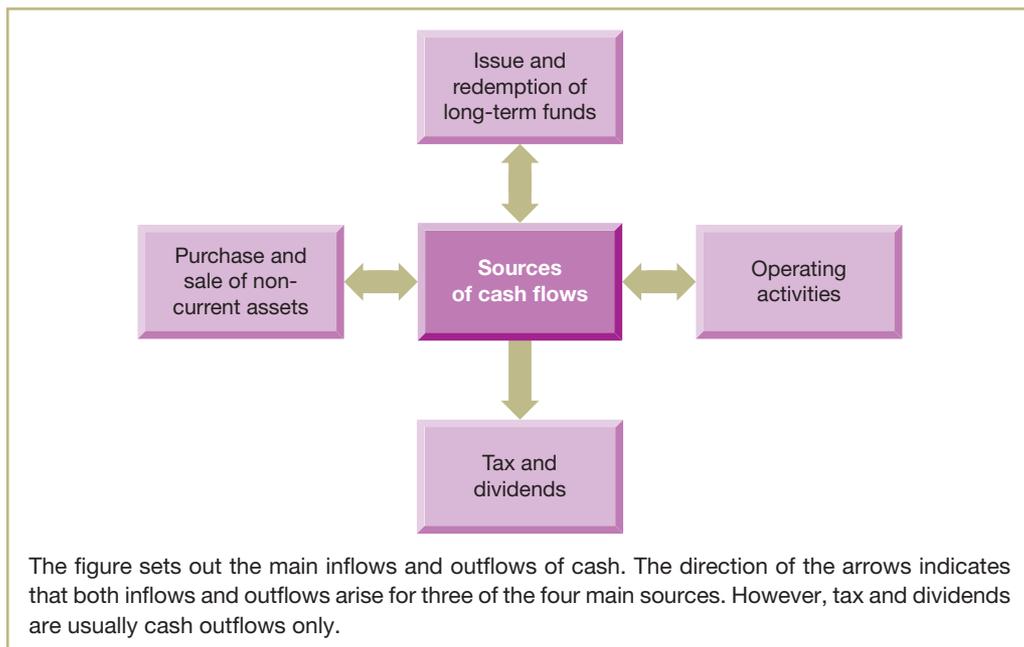


Figure 2.2 Sources of cash inflows and outflows

When preparing the cash flow statement for a short period, such as six months or a year, it is often useful to provide a monthly breakdown of all cash inflows and outflows. This helps managers to monitor closely changes in the cash position of the business. There is no set format for this statement as it is normally used for internal purposes only. Managers are free to decide on the form of presentation that best suits their needs.

Set out below is an outline projected cash flow statement for Designer Dresses Ltd for the six months to 30 June. This format seems to be widely used and we shall use it throughout the chapter.

Projected cash flow statement for the six months to 30 June

	<i>Jan</i> £000	<i>Feb</i> £000	<i>Mar</i> £000	<i>Apr</i> £000	<i>May</i> £000	<i>June</i> £000
Cash inflows						
Issue of shares						
Credit sales	—	—	—	—	—	—
Cash outflows						
Credit purchases						
Other costs						
Rent and rates	—	—	—	—	—	—
Net cash flow						
Opening balance	—	—	—	—	—	—
Closing balance	==	==	==	==	==	==

We can see from this outline that:

- each column represents a monthly period
- at the top of each column the cash inflows are set out and a total for each month's inflows is shown
- immediately below the monthly total for cash inflows, the cash outflows are set out and a monthly total for these is also shown
- the difference between the monthly totals of cash inflows and outflows is the net cash flow for the month
- if we add this net cash flow to the opening cash balance, which has been brought forward from the previous month, we derive the closing cash balance. (This will become the opening cash balance in the next month.)

In preparing a projected cash flow statement, we should ask two questions when examining a particular item of financial information. The first question is: *Does it involve a cash inflow or cash outflow?* If the answer is no, then it should be ignored when preparing the statement. Various items of information relating to a financial period, such as depreciation charges and bad debts, do not involve cash movements. If the answer is yes, we must ask the second question: *When did the cash inflow or outflow take place?* Where there is a monthly breakdown of cash flows, it is important to identify the particular month in which the cash movement occurred. Where sales and purchases are made on credit, the cash movement will often take place a month or two after the sale or purchase. (We return to this point later when discussing the projected income statement.)

Problems in preparing cash flow statements usually arise because the two questions above have not been properly addressed.

Activity 2.4

Fill in the outline cash flow statement provided earlier for Designer Dresses Ltd for the six months to 30 June using the information contained in Example 2.1.

The completed statement will be as follows:

Projected cash flow statement for the six months to 30 June

	Jan £000	Feb £000	Mar £000	Apr £000	May £000	June £000
Cash inflows						
Issue of shares	50	–	–	–	–	–
Credit sales	–	<u>10</u>	<u>30</u>	<u>30</u>	<u>40</u>	<u>40</u>
	<u>50</u>	<u>10</u>	<u>30</u>	<u>30</u>	<u>40</u>	<u>40</u>
Cash outflows						
Credit purchases	–	20	30	25	25	30
Other costs	9	9	9	9	9	9
Rent and rates	10	–	–	10	–	–
Fittings	<u>30</u>	–	–	–	–	–
	<u>49</u>	<u>29</u>	<u>39</u>	<u>44</u>	<u>34</u>	<u>39</u>
Net cash flow	1	(19)	(9)	(14)	6	1
Opening balance	–	<u>1</u>	<u>(18)</u>	<u>(27)</u>	<u>(41)</u>	<u>(35)</u>
Closing balance	<u>1</u>	<u>(18)</u>	<u>(27)</u>	<u>(41)</u>	<u>(35)</u>	<u>(34)</u>

Notes:

- 1 The receipts from credit sales will arise one month after the sale has taken place. Hence, January's sales will be received in February, and so on. Similarly, trade payables are paid one month after the goods have been purchased.
- 2 The closing cash balance for each month is deduced by adding to (or subtracting from) the opening balance, the cash flow for the month.

Some further points

In the above example, the projected cash flow statement is broken down into monthly periods. Some businesses, however, carry out a weekly, or even daily, breakdown of future cash flows. Feasibility and cost/benefit considerations will determine whether more detailed analysis should be carried out.

Cash flow projections are normally prepared for a particular period and towards the end of that period, a new cash flow projection is prepared. This means that, as time passes, the forecast horizon becomes shorter and shorter. To overcome this problem, it is possible to produce a **rolling cash flow projection**. Let us use the information in Example 2.1 to explain how this works. To begin with, a cash flow projection for the six months to 30 June will be prepared as before. At the end of January, however, a cash flow projection is prepared for the month of July. As a result, a full six months' forecast horizon is then restored. At the end of February, a cash flow projection is prepared for the month of August – and so on.

Activity 2.5

Can you see any problems with adopting this approach to preparing cash flow projections?

A major problem with this approach is the need for constant forecasting, which may encourage a rather mechanical attitude to the whole process. Rolling forecasts may also prove time consuming and costly.

Let us round off this section by looking at **Real World 2.2**. It is taken from an article by Luke Johnson who is a 'serial entrepreneur'. Among other things, he was closely involved with taking Pizza Express from a business that owned just 12 restaurants to over 250 and, at the same time, increasing its share price from 40 pence to over £9. In this article, he highlights the importance of cash flow in managing a business.

Real World 2.2

Cash flow is king

Wise entrepreneurs learn that profits are not necessarily cash. But many founders never understand this essential accounting truth. A cash flow projection is a much more important document than a profit and loss [income] statement. A lack of liquidity can kill you; whereas a company can make paper losses for years and still survive if it has sufficient cash. It is amazing how financial journalists, fund managers, analysts, bankers and company directors can still focus on the wrong numbers in the accounts – despite so many high-profile disasters over the years.

FT

Source: Johnson, L. (2013) The most dangerous unforced errors, ft.com, 9 July.
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PROJECTED INCOME STATEMENT

A projected income statement provides an insight into likely future profits (or losses), which represent the difference between the predicted level of revenue and expenses for a period. Revenue is reported when control of the goods, or services has been transferred to the customer. Thus, revenue from a sale will normally be recorded *before* the cash is actually received. This is because, in most industries, sales are made on credit. Expenses are matched to the revenues they help to generate and so are included within the same income statement. This means that expenses may be reported in an income statement covering a period before, or after, they are actually paid. This may seem odd at first sight. We should bear in mind, however, that the purpose of the income statement is to measure productive effort. This takes the form of profits (or losses) made during a particular period and will be the difference between revenue and expenses. The timing of cash inflows from revenues generated, as well as cash outflows for expenses incurred, is irrelevant for this purpose.

The format of the projected income statement for Designer Dresses Ltd is as follows:

	£000	£000
Credit sales revenue		
<i>Less</i> Cost of sales		
Opening inventories		
<i>Add</i> Purchases	—	
<i>Less</i> Closing inventories	—	—
Gross profit		
<i>Less</i>		
Credit card discounts		
Rent and rates		
Other costs		
Depreciation of fittings		—
Profit for the period		—

Activity 2.6

Fill in the outline projected income statement for Designer Dresses Ltd above for the six months to 30 June, using the information contained in Example 2.1.

The statement will be as follows:

Projected income statement for the six months to 30 June

	£000	£000
Credit sales revenue		204
<i>Cost of sales</i>		
Opening inventories	—	
Purchases	<u>160</u>	
	160	
Closing inventories	<u>(58)</u>	<u>(102)</u>
Gross profit		102
Credit card discounts		(4)
Rent and rates		(20)
Other costs		(54)
Depreciation of fittings		<u>(5)</u>
Profit for the period		<u>19</u>

Notes:

- 1 There were no opening inventories in this case.
- 2 The credit card discount is shown as a separate expense and not deducted from the sales figure. This approach is more informative than simply netting off the amount of the discount against sales.

PROJECTED STATEMENT OF FINANCIAL POSITION (BALANCE SHEET)

The projected statement of financial position (or *balance sheet*) reveals the end-of-period balances for assets, liabilities and equity. It is the last statement to be prepared as the other two statements produce information needed for this statement.

- The projected cash flow statement provides the end-of-period cash balance for inclusion under 'current assets' (or where there is a negative balance, for inclusion under 'current liabilities').
- The projected income statement provides the projected profit (or loss) for the period for inclusion under the 'equity' section of the statement of financial position (after adjustment for dividends). This statement also provides the depreciation charge for the period, which is used to adjust non-current assets.

The format of the projected statement of financial position for Designer Dresses Ltd will be as follows:

Projected statement of financial position as at 30 June

	£000
ASSETS	
Non-current assets	
Fittings	
Less Accumulated depreciation	—
	—
Current assets	
Inventories	
Trade receivables	—
	—
Total assets	—
EQUITY AND LIABILITIES	
Equity	
Share capital	
Retained earnings	—
	—
Current liabilities	
Trade payables	
Bank overdraft	—
	—
Total equity and liabilities	—

Activity 2.7

Fill in the outline projected statement of financial position for Designer Dresses Ltd as at 30 June. When doing so, use the information contained in Example 2.1 and in the answers to Activities 2.4 and 2.5.

The completed statement will be as follows:

Projected statement of financial position as at 30 June

	£000
ASSETS	
Non-current assets	
Fittings	30
Less Accumulated depreciation	<u>(5)</u>
	<u>25</u>
Current assets	
Inventories	58
Trade receivables	<u>50</u>
	<u>108</u>
Total assets	<u>133</u>
EQUITY AND LIABILITIES	
Equity	
Share capital	50
Retained earnings	<u>19</u>
	<u>69</u>
Current liabilities	
Trade payables	30
Bank overdraft	<u>34</u>
	<u>64</u>
Total equity and liabilities	<u>133</u>

Note: The trade receivables figure represents June credit sales (less the credit card discount). Similarly, the trade payables figure represents June purchases.

Activity 2.8

Evaluate the performance and position of Designer Dresses Ltd as set out in the projected financial statements. Pay particular attention to the projected profitability and liquidity of the business.

The projected cash flow statement reveals that the business will have a bank overdraft throughout most of the period under review. The maximum overdraft requirement will be £41,000 in April. Although the business will be heavily dependent on bank finance in the early months, this situation should not last for too long. This is providing the business achieves, and then maintains, the level of projected profit and providing it does not invest heavily in further assets.

The business is expected to generate a profit of 9.3p for every £1 of sales (that is, £19,000/£204,000). The profit of £19,000 on the original outlay of £50,000 by the owners seems high. However, the business may be of a high-risk nature and therefore the owners will be looking to make high returns. It is not clear from the question whether the wages (under 'other costs' in the income statement) include any remuneration for James and William Clark. If no remuneration for their efforts has been included, the level of returns (after wages) may not be so attractive.

When evaluating the performance and position of Designer Dresses Ltd, two points are worth making. First, this is a new business and so it may be very difficult to project into the future with any accuracy. The bases upon which the projections have been made must, therefore, be carefully investigated. Second, we must avoid the temptation to make a simple

extrapolation of projected revenues and expenses for the six-month period in order to obtain a projected profit for the year. It is unlikely, for example, to be double the profit for the first six months.

Activity 2.9

Can you think why it would be unlikely to be double the profit for the first six months?

Two possible reasons are:

- the business is seasonal in nature
- a clear pattern of revenue is unlikely to emerge until the business becomes more established.

You may have thought of others.

Real World 2.3 reveals the results of a survey of businesses in three European countries concerning the level of detail forecasts contain in practice.

Real World 2.3

Looking at the detail

KPMG, the auditing, tax and advisory business, conducts an annual survey of businesses in Germany, Austria and Switzerland. The 2018 survey enquired about various financial practices. One question posed concerned the level of detail of the financial forecasts being prepared.

Figure 2.3 below reveals the responses from the 276 businesses surveyed.

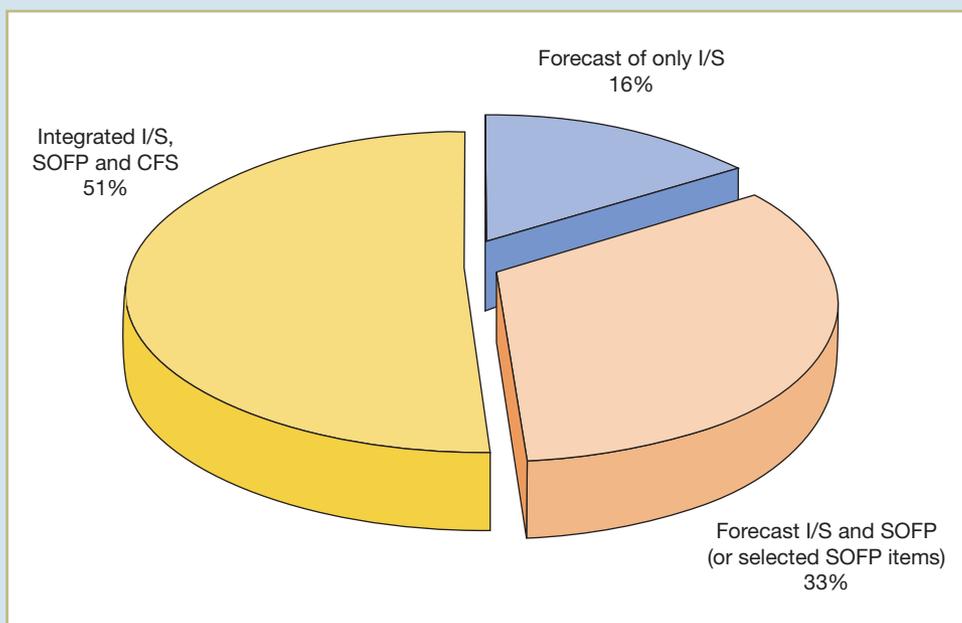


Figure 2.3 Degree of detail of the financial forecasts

Note:

IS = Income statement

SOFP = Statement of financial position

CFS = Cash flow statement

We can see that more than half of the businesses surveyed produced a complete set of forecast financial statements.

Source: Adapted from KPMG Cost of Capital Study 2018, <https://assets.kpmg/content/dam/kpmg/ch/pdf/cost-of-capital-study-2018.pdf>, p.11.

PER-CENT-OF-SALES METHOD

An alternative approach to preparing a projected income statement and statement of financial position is the **per-cent-of-sales method**. This is a simpler approach to forecasting, which assumes that most items appearing in the income statement and statement of financial position vary with the level of sales. Hence, these statements can be prepared by expressing most items as a percentage of the sales revenue that has been forecast for the period.

To use this method, an examination of past records should be undertaken to see by how much items vary with sales. It may be found, for example, that inventories levels have been around 30 per cent of sales in previous periods. Thus, if the sales for the forecast period are, say, £10 million, the level of inventories will be forecast as £3 million (that is, $30\% \times £10$ million). The same approach will be used for other items.

Below is a summary of how key items appearing in the income statement and statement of financial position are usually derived using the per-cent-of-sales-method.

Income statement

The following income statement items are normally expressed as a percentage of sales:

- expenses
- profit before tax, which is the difference between sales revenues and expenses.

Tax will vary with the level of profit before tax and so is expressed as a percentage of that figure. It has, therefore, an indirect relationship with sales.

Statement of financial position

The following items in the statement of financial position are expressed as a percentage of sales:

- current assets that increase 'spontaneously' with sales, such as inventories and trade receivables
- current liabilities that increase spontaneously with sales, such as trade payables and accrued expenses
- cash (as a projected cash flow statement is not prepared to provide a more accurate measure of cash).

However:

- non-current assets will be expressed as a percentage of sales only if they are already operating at full capacity – otherwise they will not usually change

- non-current liabilities and equity will not be expressed as a percentage of sales but will be based on figures at the beginning of the forecast period (unless changes are made as a result of management decisions)
- dividends, which will affect the retained earnings figure for the year, may be expressed as a percentage of profit for the year (unless an alternative dividend policy is in operation).

Identifying the financing gap

Where sales revenue is increasing over time, a business may outgrow the amount of finance committed. The additional assets required to sustain the increased sales may exceed the combined increase in equity (in the form of retained earnings) and liabilities. Where this occurs, there will be a financing gap. This future financing gap is easily identified under the per-cent-of-sales method because the projected statement of financial position will not balance: total assets will exceed total equity plus liabilities. Thus, the additional finance required will be the amount that will make the statement of financial position balance.

The way in which a business decides to fill the financing gap is referred to as the **plug**. Various forms of finance may be used as a plug, including borrowings and injections of equity share capital. These will be discussed in detail in Chapter 6.

A worked example

Let us go through a simple example to show how the per-cent-of-sales method works.

Example 2.2

The financial statements of Burrator plc for the year that has just ended are as follows:

Income statement for Year 8

	£000
Credit sales revenue	800
Cost of sales	(600)
Gross profit	200
Selling expenses	(80)
Distribution expenses	(20)
Other expenses	(20)
Profit before taxation	80
Tax (25%)	(20)
Profit for the year	<u>60</u>

Statement of financial position as at the end of Year 8

	£000
ASSETS	
Non-current assets	160
Current assets	
Inventories	320
Trade receivables	200
Cash	<u>20</u>
	540
Total assets	<u>700</u>

	£000
EQUITY AND LIABILITIES	
Equity	
Share capital – 25p ordinary shares	60
Retained earnings	<u>380</u>
	<u>440</u>
Current liabilities	
Trade payables	240
Tax due	<u>20</u>
	<u>260</u>
Total equity and liabilities	<u>700</u>

In line with previous years, a dividend of 50 per cent of the profit for the year was proposed and paid during the year.

The following information is relevant for Year 9:

- 1 Sales revenue is expected to be 10 per cent higher than in Year 8.
- 2 The non-current assets of the business are currently operating at full capacity.
- 3 The tax rate will be the same as in Year 8 and 50 per cent of the tax due will be outstanding at the year-end.
- 4 The business intends to maintain the same dividend policy as for Year 8.
- 5 Half of the tax relating to Year 9 will be outstanding at the year-end. Tax due at the end of Year 8 will be paid during Year 9.
- 6 Any financing gap will be filled by an issue of long-term loan notes.

We shall prepare a projected income statement and statement of financial position for Year 9 using the per-cent-of-sales method (assuming that Year 8 provides a useful guide to past experience).

To prepare the projected income statement, we calculate each expense as a percentage of sales for Year 8 and then use this percentage to forecast the equivalent expense in Year 9. Tax is calculated as a percentage of the profit before tax for Year 9, using percentages from Year 8.

The statement is therefore as follows:

Projected income statement for the year ended 31 December Year 9

	£000
Credit sales revenue (800 + (10% × 800))	880
Cost of sales (75% of sales)	(660)
Gross profit (25% of sales)	220
Selling expenses (10% of sales)	(88)
Distribution expenses (2.5% of sales)	(22)
Other expenses (2.5% of sales)	<u>(22)</u>
Profit before taxation (10% of sales)	88
Tax (25% of profit before tax)	<u>(22)</u>
Profit for the year	<u>66</u>

We apply the same broad principles when preparing the projected statement of financial position for Year 9.

Activity 2.10

Prepare a projected statement of financial position for Burrator plc as at the end of Year 9.

This will be as follows:

Projected statement of financial position as at 31 December Year 9

	£000
ASSETS	
Non-current assets (20% of sales)	176
Current assets	
Inventories (40% of sales)	352
Trade receivables (25% of sales)	220
Cash (2.5% of sales)	<u>22</u>
	594
Total assets	<u>770</u>
EQUITY AND LIABILITIES	
Equity	
Share capital – 25p ordinary shares	60
Retained earnings [380 + (66 – 33)]	<u>413</u>
	473
Non-current liabilities	
Loan notes (balancing figure)**	<u>22</u>
Current liabilities	
Trade payables (30% of sales)	264
Tax due (50% of tax due)	<u>11</u>
	275
Total equity and liabilities	<u>770</u>

* The dividend is 50 per cent of the profit for the year (as in previous years) and is deducted in deriving the retained earnings for the year.

** It is assumed that the 'plug' for the financing gap will take the form of an issue of loan notes.

Evaluating the per-cent-of-sales method

The main advantage of the per-cent-of-sales method is that the task of preparing the projected financial statements becomes much more manageable. It can provide an approximate figure for future financing requirements without the need to prepare a projected cash flow statement. It can also reduce the time and cost of forecasting every single item appearing in the projected income statement and statement of financial position. This can be of particular benefit for large businesses.

This method suffers from two main drawbacks, however. First, it employs relationships between individual items and sales that are based on the past. These relationships may change over time because of changes in strategic direction (for example, launching completely new products) or because of changes in management policies (for example, allowing longer credit periods to customers). Second, it fails to recognise that many expenses are fixed in relation to time and do not vary with the level of sales.

Activity 2.11

Can you think of *three* examples of fixed expenses that a business may incur?

They may include:

- salaries
- rent payable
- insurance
- depreciation of equipment.

You may have thought of others.

Where sales are increasing, the per-cent-of-sales method will increase fixed expenses in line with the increase in sales. The effect will be to overstate expenses and to understate profits for the period. Where sales are decreasing, the opposite will be true. The higher the level of fixed expenses incurred by the business, the greater will be the resulting overstatement or understatement when the level of sales changes.

Activity 2.12

The above suggests that the per-cent-of-sales method is best suited to a business with at least one of two possible characteristics. Try to identify at least one of these.

It is probably best suited to a business where:

- sales remain stable over time, and/or
- expenses are not fixed but vary directly with sales.

The second characteristic mentioned, however, would be a very rare occurrence. For most businesses, fixed expenses account for the greater part of total expenses incurred.

LONG-TERM CASH FLOW PROJECTIONS

The projected cash flow statement prepared in Activity 2.4 required a detailed analysis of each element of the cash flows of the business. This approach may be fine when dealing with a short forecast horizon. However, as the forecasting horizon increases, forecasting difficulties start to mount. A point will be reached where it is simply not possible to undertake such detailed analysis.

To prepare projected cash flow statements for the longer term, a method that uses simplifying assumptions rather than detailed analysis may be used. The starting point is normally to identify the sales revenue for each year of the planning horizon. The operating profit (that is, profit before interest and taxation) for each year is then calculated as a percentage of the sales revenue figure. (The particular percentage is often determined by reference to past experience.) A few simple adjustments can then be made to the annual operating profits in order to derive annual operating cash flows.

These adjustments rely on the fact that, broadly, sales revenue gives rise to cash inflows and expenses give rise to outflows. As a result, operating profit will be closely linked to the operating cash flows. This does not mean that operating profit for the year will be equal to operating

cash flows. An important reason for this is timing differences. When sales are made on credit, the cash receipt occurs some time after the sale. Thus, sales revenue made towards the end of a particular year will be included in that year's income statement. Most of the cash from those sales, however, will flow into the business and should be included in the cash flows for the following year. Fortunately, it is easy to deduce the cash received, as we see in Example 2.3.

Example 2.3

The sales revenue figure for a business for the year was £34 million. The trade receivables totalled £4 million at the beginning of the year, but had increased to £5 million by the end of the year.

Basically, the trade receivables figure is dictated by sales revenue and cash receipts. It is increased when a sale is made and decreased when cash is received from a credit customer. If, over the year, the sales revenue and the cash receipts had been equal, the beginning-of-year and end-of-year trade receivables figures would have been equal. Since the trade receivables figure increased, it must mean that less cash was received than sales revenues were made. This means that the cash receipts from sales must be £33 million (that is, $34 - (5 - 4)$).

Put slightly differently, we can say that as a result of sales, assets of £34 million flowed into the business during the year. If £1 million of this went to increasing the asset of trade receivables, this leaves only £33 million that went to increase cash.

Other important adjustments for timing differences relate to cash payments for purchases (by adjusting for opening and closing trade payables) and cost of goods sold (by adjusting for opening and closing inventories). The same general point, however, is true in respect of most other items that are taken into account in deducing the operating profit figure. An important exception is depreciation, which is not normally associated with any movement in cash. It is simply an accounting entry.

All of this means that we can take the operating profit (profit before interest and taxation) for the year, add back the depreciation charged in arriving at that profit, and adjust this total amount for movements in trade (and other) receivables and payables and for inventories. This will provide us with a measure of the operating cash flows. If we then go on to deduct payments made during the year for taxation, interest on borrowings and dividends, we have the net cash flows from operations.

When preparing long-term cash flow projections, however, detailed adjustments to each element of **working capital** (that is, inventories, trade receivables and trade payables) can be avoided. A simplifying assumption can be adopted that takes working capital investment as a fixed percentage of sales revenue. Changes in the working capital investment are then calculated according to changes in sales revenue.

Activity 2.13

Why might calculating working capital as a fixed percentage of sales provide a reasonable simplifying assumption?

Key elements of working capital, such as trade receivables, inventories and trade payables, tend to increase, or decrease, in line with increases, or decreases, in sales revenue.

Let us now look at a worked example to see how a projected cash flow statement, using the approach outlined, is prepared.

Example 2.4

Santos Engineering Ltd started operations on 1 January Year 1 and has produced the following forecasts for annual sales revenue:

<i>Year to 31 December</i>	<i>Year 1</i>	<i>Year 2</i>	<i>Year 3</i>	<i>Year 4</i>
Forecast sales revenue (£)	500,000	560,000	640,000	700,000

The following additional information has been provided:

- 1 The operating profit of the business is expected to be 20 per cent of the sales revenue throughout the four-year period.
- 2 The business has issued £400,000 5 per cent loan notes, which are redeemable at the end of Year 4.
- 3 The tax rate is expected to be 25 per cent throughout the four-year period. Tax is paid in the year following the year in which the relevant profits were made.
- 4 An initial investment in working capital of £50,000 is required. Thereafter, investment in working capital is expected to represent 10 per cent of sales revenue for the relevant year.
- 5 Depreciation of £40,000 per year must be charged for the non-current assets currently held.
- 6 Land costing £490,000 will be acquired during Year 2. This will not be depreciated as it has an infinite life.
- 7 Dividends of £30,000 per year will be announced for Year 1. Thereafter, dividends will rise by £6,000 each year. Dividends are paid in the year following the period to which they relate.
- 8 The business has a current cash balance of £85,000.

We shall now prepare projected cash flow statements showing the financing requirements of the business for each of the next four years. The starting point is to calculate the projected operating profit for the period and then to make the depreciation and the working capital adjustments as described earlier. This will provide us with a figure of operating cash flows. We then simply adjust for the interest, tax and dividends to deduce the net cash flows from operations each year.

The financing requirements for Santos Engineering Ltd are calculated as follows:

Projected cash flow statements

	<i>Year 1</i>	<i>Year 2</i>	<i>Year 3</i>	<i>Year 4</i>
	£	£	£	£
Sales revenue	<u>500,000</u>	<u>560,000</u>	<u>640,000</u>	<u>700,000</u>
Operating profit (20%)	100,000	112,000	128,000	140,000
Depreciation	40,000	40,000	40,000	40,000
Working capital*	<u>(50,000)</u>	<u>(6,000)</u>	<u>(8,000)</u>	<u>(6,000)</u>
Operating cash flows	90,000	146,000	160,000	174,000



	Year 1 £	Year 2 £	Year 3 £	Year 4 £
Interest	(20,000)	(20,000)	(20,000)	(20,000)
Tax**		(20,000)	(23,000)	(27,000)
Dividends		(30,000)	(36,000)	(42,000)
Non-current assets		(490,000)		
Loan repayment	_____	_____	_____	(400,000)
Net cash flows from operations	70,000	(414,000)	81,000	(315,000)
Opening balance	<u>85,000</u>	<u>155,000</u>	<u>(259,000)</u>	<u>(178,000)</u>
Closing balance	<u>155,000</u>	<u>(259,000)</u>	<u>(178,000)</u>	<u>(493,000)</u>

* The initial investment in working capital will be charged in the first year. Thereafter only increases (or decreases) in the level of working capital will be shown as an adjustment.

** The tax charge for each year is shown below.

	Year 1 £	Year 2 £	Year 3 £	Year 4 £
Operating profit (as above)	100,000	112,000	128,000	140,000
Interest	<u>(20,000)</u>	<u>(20,000)</u>	<u>(20,000)</u>	<u>(20,000)</u>
Profit before tax	80,000	92,000	108,000	120,000
Tax (25%)	<u>(20,000)</u>	<u>(23,000)</u>	<u>(27,000)</u>	<u>(30,000)</u>

Note: Tax will be paid in the year after the relevant profit is made. (Note 3)

PROJECTED FINANCIAL STATEMENTS AND DECISION MAKING

The performance and position revealed by projected financial statements should be examined with a critical eye. There is always a danger that the figures will be too readily accepted. Forecast figures are rarely completely accurate and some assessment must be made of the extent to which they can be relied upon. Thus, managers should ask questions such as:

- How were the projections developed?
- What underlying assumptions have been made and are they valid?
- Have all relevant items been included?

Only when satisfactory answers to these questions have been received should the statements be used for making decisions.

Real World 2.4 below confirms the need to adopt a questioning attitude.

Real World 2.4

Reality check

KPMG, the auditing, tax and advisory business, produced a report based on a worldwide survey of 544 senior executives in a variety of different industries. The executives, all of whom were involved in financial forecasting, were asked to assess the reliability of the forecasts produced. Specifically, they were asked to estimate the approximate variance occurring between forecast and actual performance within their business over the preceding three years. The survey results are shown in Figure 2.4 below.

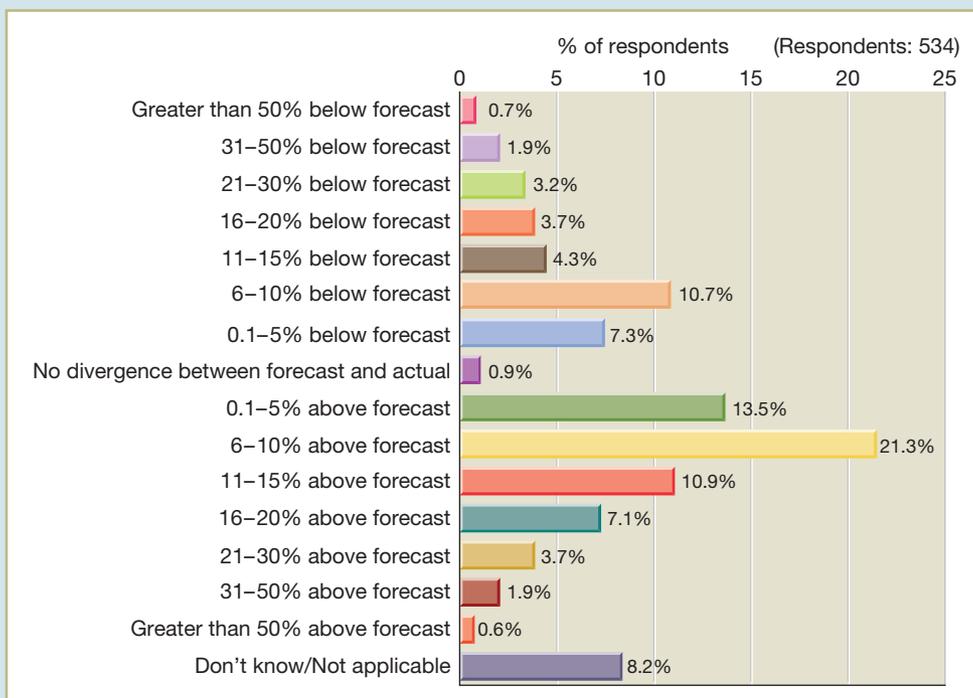


Figure 2.4 Variance between actual performance and forecast performance

We can see from the figure that there is a bias towards forecasts being lower than actual results.

Source: KPMG (2016) Forecasting with confidence, KPMG, p. 41.

Projected financial statements do not come with clear decision rules to indicate whether a proposed course of action should go ahead. Managers must use their judgement when examining the information before them. To help form a judgement, the following questions may be asked:

- Are the cash flows satisfactory? Can they be improved by changing policies or plans (for example, delaying capital expenditure decisions, requiring receivables to pay more quickly and so on)?
- Is there a need for additional financing? Is it feasible to obtain the amount required?
- Can any surplus funds be profitably reinvested?
- Is the level of projected profit satisfactory in relation to the risks involved? If not, what could be done to improve matters?
- Are the sales and individual expense items at a satisfactory level?
- Is the financial position at the end of the period acceptable?
- Is the level of borrowing acceptable? Is the business too dependent on borrowing?

TAKING ACCOUNT OF RISK

We have just seen in **Real World 2.4** above that, when making estimates concerning the future, things may not turn out as expected. The likelihood that what is estimated to occur will not actually occur is referred to as **risk** and this will be considered in some detail in Chapter 5. However, it is worth taking a little time at this point to consider the ways in which managers may deal with the problem of risk in the context of projected financial statements. In practice, there are various methods available to help managers deal with any uncertainty surrounding the reliability of the projected financial statements. Below we consider two popular methods.

Sensitivity analysis

Sensitivity analysis is a useful technique to employ when evaluating the contents of projected financial statements. This involves taking a single variable (for example, volume of sales) and examining the effect of changes in the chosen variable on the likely performance and position of the business. By examining the shifts that occur, it is possible to arrive at some assessment of how sensitive changes are for the projected outcomes. Although only one variable is examined at a time, a number of variables that are considered to be important to the performance of a business may be examined consecutively.

One form of sensitivity analysis is to pose a series of ‘what if?’ questions. If we take sales as an example, the following ‘what if?’ questions may be asked:

- What if sales volume is 5 per cent higher than expected?
- What if sales volume is 10 per cent lower than expected?
- What if sales price is reduced by 15 per cent?
- What if sales price could be increased by 20 per cent?

In answering these questions, it is possible to develop a better ‘feel’ for the effect of forecast inaccuracies and possible changes on the final outcomes. However, this technique does not assign probabilities to each possible change, nor does it consider the effect on projected outcomes of more than one variable at a time.

Real World 2.5 looks at how one large business uses sensitivity analysis.

Real World 2.5

A sensitive subject

Kindred Group plc is an online gambling operator that owns various brands such as 32Red, Unibet and iGame. The business undertakes sensitivity analysis to identify those factors where changes are likely to have the greatest effect on its profitability. The following is taken from the company’s website:

The Kindred Group’s performance is affected by a number of factors. The sensitivity analysis below only takes into account direct changes.

It is likely that actual changes in a specific factor will also affect other factors and that estimates made by the Group and other parties on the basis of a change of circumstance would also affect other factors.

Kindred Group considers movements in the factors below to have the most impact on profit before tax (PBT).

<i>Factor</i>	<i>% change</i>	<i>PBT impact GBPm</i>
Gross winnings revenue	+/-1	+/-5.441
Administrative expenses	+/-1	+/-1.214
Marketing expenses	+/-1	+/-1.445

Source: Kindred Group plc, www.kindredgroup.com/investors, accessed 16 November 2018.

Scenario analysis

Another approach to helping managers gain a feel for the effect of forecast inaccuracies is to prepare projected financial statements according to different possible 'states of the world'. For example, managers may wish to examine projected financial statements prepared on the following bases:

- an optimistic view of likely future events
- a pessimistic view of likely future events
- a 'most likely' view of future events.

This approach is referred to as **scenario analysis** and, unlike sensitivity analysis, it will involve changing a number of variables simultaneously in order to portray a possible state of the world. It does not, however, identify the likelihood of each state of the world occurring. This information would also be useful in assessing the level of risk involved.

Real World 2.6 describes a pessimistic scenario created by a large retailer to evaluate the downside risk arising from increasing online competition.

Real World 2.6

Creating a scene

Next plc, a leading UK retailer, looked at the worst-case scenario for cash generated by its portfolio of stores over a forecast period of fifteen years. It did so to see whether the stores would remain a valuable asset to the business given the shift in consumer behaviour towards online sales. The following is an extract from its 2018 annual report

Store portfolio stress test A more pessimistic longer term scenario

Whilst there is much we can do to make our stores more profitable and relevant in an online world, we also need to model a worst-case scenario for our stores. In our last report, we projected what would happen to the economics of our store portfolio in the event of ten years of -6% negative like-for-like (LFL) sales. With last year's like-for-like sales of -9.1%, we have tested what would happen to our stores at -10% over a longer period of time.

It is important to emphasise that the scenario we set out below is only a scenario. It is not what we actually think will happen. The purpose of this scenario is not to plan the future; rather it is to test whether our store portfolio is an asset or a liability in extreme circumstances.

Our verdict is that it remains an asset, albeit one that is declining in value, and not a liability.

Stress test assumptions

The following stress test is based on the following assumptions:

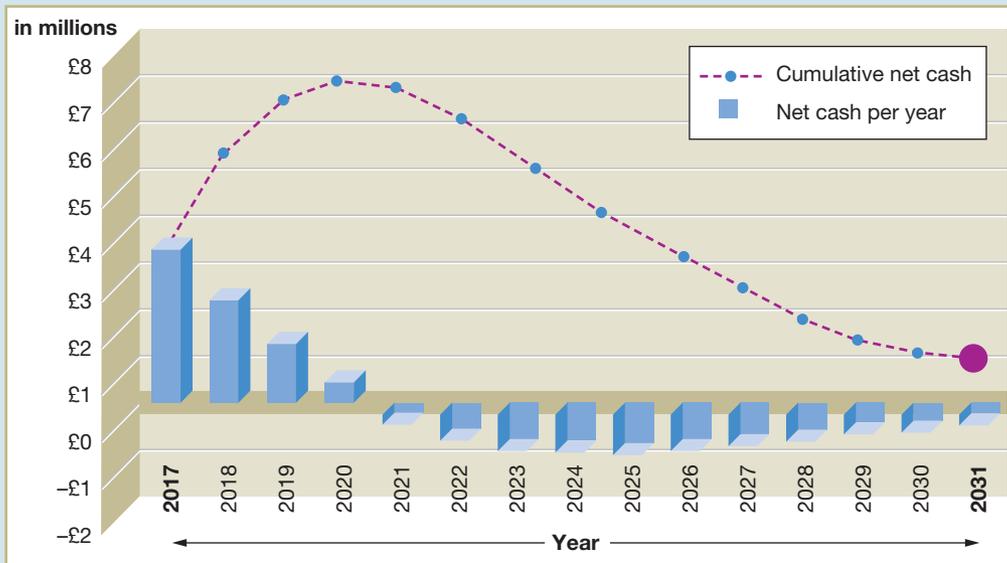
- We shut unprofitable stores at their lease expiry.
- When profitable stores reach the end of their lease we are able to continue trading, paying the same rent on a short-term lease ("holding over").



- We take on no new space, are unable to reduce any rents and take on no concession income.
- Fixed costs that are shared between the Retail and Online businesses are absorbed as the Online business grows. For the purpose of this model, it is assumed that Online sales growth matches the Retail sales decline.

Base scenario: like-for-like sales at -10% for fifteen years

In this scenario, the cumulative cash generated by our stores over fifteen years is £86m and in year 15 there is a £19m cash loss from the remaining portfolio.



Note: Next plc produced a further scenario showing how certain factors, such as rent reduction would, if taken into account, significantly boost the likely future performance of its stores.

Source: Adapted from Next plc, *Annual Report and Accounts*, January 2018, Pp 33-34.

FINANCIAL PLANNING AND GEARING

When making financial plans, managers must take account of the effect of gearing. It is important because gearing can exert a powerful influence on the risks and returns associated with a business. In this final part of the chapter, we consider both financial and operating gearing.

FINANCIAL GEARING

Financial gearing (also known as *financial leverage*) occurs when a business is financed, at least in part, by borrowing (or by other funds with a fixed rate of return). The higher the proportion of borrowing, in relation to finance provided by ordinary shareholders, the higher is the level of financial gearing. The term ‘financial gearing’ is applied because using borrowed funds will accentuate any changes in operating profit on returns to ordinary shareholders. The effect is similar to two intermeshing cog wheels of unequal size (see Figure 2.5). The movement in the larger cog wheel (operating profit) causes a more than proportionate movement in the smaller cog wheel (returns to ordinary shareholders).

Borrowing increases risk. This is because it normally involves an obligation to pay interest charges and to make capital repayments, which can place a strain on cash flows. We shall also see later that the commitment to pay interest charges increases the volatility of returns to ordinary shareholders. It is the case, nevertheless, that most businesses take on borrowing. Given the risks involved, we may wonder why. Sometimes, ordinary shareholders may not be able to raise all the finance needed and so borrowing is used to fill the gap. Often, however, it is because the risks of borrowing are outweighed by the increased returns to ordinary shareholders. This occurs where the returns generated from borrowed funds exceed the cost of paying interest charges.

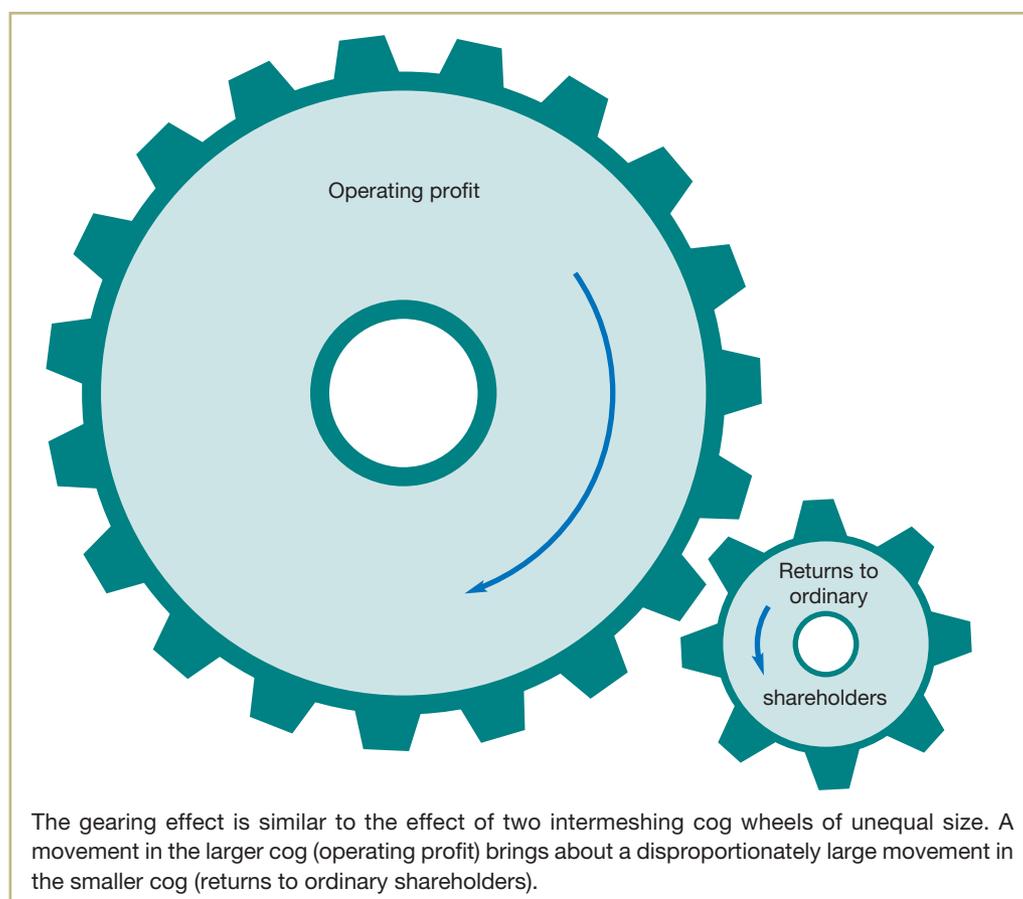


Figure 2.5 The effect of financial gearing

Example 2.5 considers the relationship between returns to shareholders and the level of borrowing.

Example 2.5

Hidalgo plc has recently been formed to manufacture washing machines. The new business will require £400 million in long-term finance and the directors are currently deciding how to raise the funds required. Three options are being considered:

- all £400 million from £1 ordinary shares (the 'all-share option'); or
- £300 million from £1 ordinary shares and £100 million from the issue of secured loan notes paying interest at 10 per cent a year (the 'low-gearred option'); or



- £100 million from £1 ordinary shares and £300 million from the issue of secured loan notes paying interest at 10 per cent a year (the 'high-gearred option').

Operating profit (that is, profit before interest and taxation) is expected to fall within the range of £30 million to £70 million per year. However, the most likely figure is £50 million per year. The rate of corporation tax is 20 per cent.

To evaluate the three options, we can calculate future returns to ordinary shareholders over the range of possible operating profits. These will be measured using the following formula:

$$\text{Earnings per share (EPS)} = \frac{\text{Profit available to ordinary shareholders}}{\text{No. of ordinary shares in issue}}$$

As we shall see in the following chapter, this is a widely-used measure that relates the profit after tax to the number of ordinary shares in issue.

Let us now consider each financing option under different profit scenarios.

All-share option

	£m	£m	£m	£m	£m
Operating profit	30.00	40.00	50.00	60.00	70.00
Interest (10%)	—	—	—	—	—
Profit before taxation	30.00	40.00	50.00	60.00	70.00
Taxation (20%)	(6.00)	(8.00)	(10.00)	(12.00)	(14.00)
Profit for the year	<u>24.00</u>	<u>32.00</u>	<u>40.00</u>	<u>48.00</u>	<u>56.00</u>
EPS*	6.0p	8.0p	10.0p	12.0p	14.0p

* At £30m operating profit EPS = £24m/400m = 6.0p and so on.

Low-gearred option

	£m	£m	£m	£m	£m
Operating profit	30.00	40.00	50.00	60.00	70.00
Interest (10%)	(10.00)	(10.00)	(10.00)	(10.00)	(10.00)
Profit before taxation	20.00	30.00	40.00	50.00	60.00
Taxation (20%)	(4.00)	(6.00)	(8.00)	(10.00)	(12.00)
Profit for the year	<u>16.00</u>	<u>24.00</u>	<u>32.00</u>	<u>40.00</u>	<u>48.00</u>
EPS*	5.3p	8.0p	10.7p	13.3p	16.0p

* At £30m operating profit EPS = £16m/300m = 5.3p and so on.

High-gearred option

	£m	£m	£m	£m	£m
Operating profit	30.00	40.00	50.00	60.00	70.00
Interest (10%)	(30.00)	(30.00)	(30.00)	(30.00)	(30.00)
Profit before taxation	—	10.00	20.00	30.00	40.00

	£m	£m	£m	£m	£m
Taxation (20%)	—	<u>(2.00)</u>	<u>(4.00)</u>	<u>(6.00)</u>	<u>(8.00)</u>
Profit for the year	<u>—</u>	<u>8.00</u>	<u>16.00</u>	<u>24.00</u>	<u>32.00</u>

* At £30m operating profit, EPS = £0m/100m = 0.0p and so on.

Activity 2.14

Comment on the earnings per share results, under each of the three financing options, for the different levels of operating profit.

Both geared options produce higher earnings per share than the all-share option for the most likely level of operating profit of £50 million, as well as for operating profits of £60 million and £70 million. However, both geared options produce lower earnings per share when the operating profit is £30 million. At an operating profit of £40 million, all options provide the same return to shareholders (that is 8.0p).

For both geared options, earnings per share will be more sensitive to changes in the level of operating profit. Thus, an increase in £10 million from the most likely operating profit of £50 million will increase earnings per share for the low-gear option from 10.7p to 13.3p (that is, a 24 per cent increase). For the high-gear option, the increase is from 16.0p to 24.0p (that is, a 50 per cent increase). These increases are higher than for the all-share option, which increases from 10p to 12p (that is, a 20 per cent increase).

The low-gear option and all-share option produce a positive return on earnings per share for all levels of operating profit considered. This is not the case, however, for the high-gear option.

We saw in Example 2.5 that, at an operating profit of £40 million, earnings per share is the same for all financing options (8.0p). This is not a coincidence. It is because the overall rate of return on total long-term funds employed (operating profit/long-term investment) is 10.0 per cent. This is the same as the interest rate for the loan notes.

Where a business is able to generate a rate of return greater than the interest rate on the borrowings, the effect of financial gearing is to magnify returns to ordinary shareholders (that is, EPS). Where a business is unable to generate a rate of return greater than the interest rate on the borrowings, however, financial gearing has the opposite effect. In other words, gearing operates in both directions.

Activity 2.15

Given the most likely operating profit is £50 million, which financing option in Example 2.5 above would you choose and why?

At £50 million operating profit, the high-gear option provides considerably higher earnings per share than the other two options. Providing the managers are confident that this level of operating profit can be consistently achieved, the high-gear option should be chosen. If, however, operating profits are expected to fluctuate significantly over time, one of the other two options may be preferred. The greater the degree of fluctuation, the more attractive the all-share option becomes.

Real World 2.7 provides an example of how an investment trust (a business that invests in securities, such as shares) used financial gearing to boost returns to its shareholders.

Trust in gearing

The use of gearing offset a weaker investment performance to boost the returns for the Schroder Income Growth Trust. Data from FE Analytics showed the trust returned 6.8 per cent in the year to 31 August, compared with 4 per cent for the AIC UK Equity Income sector average.

Gearing, when money is borrowed by trusts to buy more investments, can boost performance because the borrowed cash is put into the market it means each shareholder effectively has more capital invested in the trust than they actually put in. This means if an investment goes up in value the investor makes more, but if an investment falls in value those losses are amplified for the end investor.

In the results statement for the year to the end of August, the trust’s manager, Sue Noffke, said: ‘The company’s outperformance against the index reflected the twin benefits of positive sector allocation and the use of gearing in a rising market, offset to some degree by negative stock selection.’



Source: Thorpe, D. (2018) Gearing helps Schroders Income Growth trust outperform, ftadvisor.com, 9 November. © The Financial Times Limited 2019. All Rights Reserved.

Constructing an indifference chart

Earnings per share under different financing options, and at varying levels of operating profit, can be displayed in graphical form. To illustrate how this is done, let us use the information contained in Example 2.5. A chart based on this information is set out in Figure 2.6. We can see that the vertical axis of the chart plots earnings per share and the horizontal axis plots operating profits.

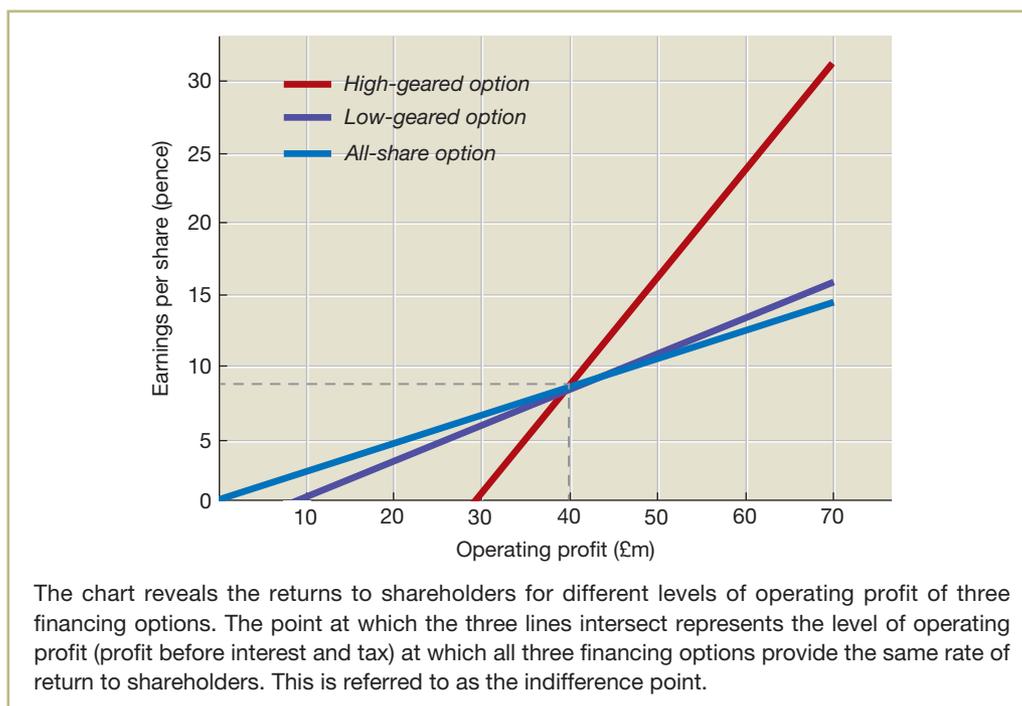


Figure 2.6 Financial gearing indifference chart for two possible financing options

To construct the above chart, we need two coordinates for each financing option. The first of these will be the operating profit needed to cover the interest charges. For the all-share option, this is zero as there are no interest charges. For the low-gear option it is £10 million and for the high-gear option it is £30 million. (These amounts are, of course the relevant interest charges under each option.) These points can be plotted on the horizontal axis.

The second coordinate for each financing option will be the earnings per share at the highest expected operating profit (although an arbitrarily determined level of operating profit could also be used). These have already been calculated in Example 2.5 and, to save you referring back, are:

	<i>All-share option</i>	<i>Low-gear option</i>	<i>High-gear option</i>
Earnings per share	14.0p	16.0p	32.0p

By joining the two coordinates relating to each financing option, we have a straight line that reveals earnings per share at different levels of operating profit.

We can see from the chart that, at lower levels of operating profit, the all-share option provides higher earnings per share to shareholders. However, the lines for the geared options have a steeper slope than the all-share option and so earnings per share rise more quickly. Beyond an operating profit of £40 million, ordinary shareholders begin to reap the benefits of financial gearing and earnings per share become higher under this alternative. The operating profit of £40.0 million is referred to as the **indifference point** (that is, the point at which the three financing schemes provide the same level of earnings per share).

The distance between the indifference point and the most likely operating profit provides an indication of the *margin of safety* for the geared options when compared with the ungeared (all share) option. It signifies the amount by which the operating profit must fall before the ungeared option becomes more attractive.

Activity 2.16

Take a look at the indifference chart in Figure 2.6. Comment on the margin of safety for the two geared options.

The chart reveals a reasonable margin of safety for both geared options. For the most likely level of operating profit, a fall of more than 20 per cent would need to occur before the all-share option becomes more attractive.

Calculating the indifference point

The indifference point between any two financing options can also be derived by using a simple mathematical approach. Example 2.6 illustrates the process.

Example 2.6

The information used in Example 2.5 above will be used to demonstrate how the indifference point is calculated. We shall consider the indifference point between the all-share option and the high-gear financing option.

Let x be the operating profit at which the two financing options provide the same returns to shareholders.



	<i>All-share option</i>	<i>High-gearred option</i>
	£m	£m
Operating profit	x	x
Interest payable	—	(30.0)
Profit before taxation	x	(x - 30.0)
Tax (20%)	0.2x	0.2(x - 30.0)
Profit after tax	<u>0.8x</u>	<u>0.8(x - 30.0)</u>
Earnings per share	$\frac{0.8x}{400.0m}$	$\frac{0.8(x - \text{£}30.0m)}{100.0m}$

Thus, earnings per share under each financing option will be equal when:

$$\frac{0.8x}{400.0m} = \frac{0.8(x - \text{£}30.0m)}{100.0m}$$

The above equation can be solved as follows:

$$80x = 320x - \text{£}9,600m$$

$$x = \text{£}40.0m$$

This answer is, of course the same as that displayed on the graph. It is also the same figure as calculated in Example 2.5, where earnings per share under each option is identical (8.0p) at £40 million operating profit.

The advantage of producing an indifference chart, rather than adopting the mathematical approach just described, is that it reveals earnings per share over a range of operating profits rather than at a single point. It provides a visual display of information that is easy to understand and which can be particularly helpful for non-financial managers.

Activity 2.17

Calculate the indifference point between the low-gearred and the high-gearred financing options.

Once again, let x be the operating profit at which the two financing options provide the same earnings per share.

	<i>Low-gearred option</i>	<i>High-gearred option</i>
	£m	£m
Operating profit	x	x
Interest payable	(10.0)	(30.0)
Profit before taxation	(x - 10.0)	(x - 30.0)
Tax (20%)	0.2(x - 10.0)	0.2(x - 30.0)
Profit after tax	<u>0.8(x - 10.0)</u>	<u>0.8(x - 30.0)</u>
Earnings per share	$\frac{0.8(x - \text{£}10.0m)}{300.0m}$	$\frac{0.8(x - \text{£}30.0m)}{100.0m}$

Thus, earnings per share under each financing option will be equal when:

$$\frac{0.8(x - \text{£}10.0\text{m})}{300.0\text{m}} = \frac{0.8(x - \text{£}30.0\text{m})}{100.0\text{m}}$$

The above equation can be solved as follows:

$$\begin{aligned} 80x - \text{£}800\text{m} &= 240x - \text{£}7,200\text{m} \\ x &= \underline{\text{£}40.0\text{m}} \end{aligned}$$

Degree of financial gearing

We have now seen that, for a financially geared business, earnings per share will be sensitive to changes in operating profit (that is, profit before interest and taxation). The higher the level of financial gearing, the more sensitive earnings per share will become. The **degree of financial gearing** measures the sensitivity of earnings per share to changes in the level of operating profit. It can be calculated in various ways, including the following:

$$\text{Degree of financial gearing} = \frac{\text{Operating profit}}{\text{Operating profit} - \text{Interest payable}}$$

Thus, at the most likely operating profit for Hidalgo plc (Example 2.5) the degree of financial gearing for the high-geared option is:

$$\begin{aligned} \text{Degree of financial gearing} &= \frac{\text{£}50\text{m}}{\text{£}50\text{m} - \text{£}30\text{m}} \\ &= \underline{2.5} \end{aligned}$$

We shall interpret this ratio in a moment. Before doing so, however, try Activity 2.18.

Activity 2.18

Calculate the degree of financial gearing at the most likely operating profit for Hidalgo plc for both the low-geared option and the all-share option.

For the low-geared option, it is:

$$\begin{aligned} \text{Degree of financial gearing} &= \frac{\text{£}50\text{m}}{\text{£}50\text{m} - \text{£}10\text{m}} \\ &= \underline{1.25} \end{aligned}$$

For the all-share option, it is:

$$\begin{aligned} \text{Degree of financial gearing} &= \frac{\text{£}50\text{m}}{\text{£}50\text{m}} \\ &= \underline{1.0} \end{aligned}$$

The ratios that we have calculated above indicate that a 1.0 per cent increase in operating profit, from the most-likely level of £50 million, will result in an increase in earnings per share of:

- 2.5 per cent for the high-gearred option,
- 1.25 per cent for the low geared option, and
- 1.0 per cent for the all-share option.

Note that the degree of financial gearing for each of the geared options is greater than 1. This indicates the presence of financial gearing. The higher the figure, the higher the level of gearing and the greater the sensitivity of earnings per share to changes in operating profit.

The impact of financial gearing becomes less pronounced as the level of operating profit increases in relation to interest charges. Where operating profit barely covers interest charges, even small changes in the former figure can have a significant impact on earnings per share. Thus, the degree of financial gearing will be high. However, as operating profit increases in relation to interest charges, earnings per share become less sensitive to changes. As a result, the degree of financial gearing measure starts to decrease.

Activity 2.19

Calculate the degree of financial gearing under both the low-gearred and the high-gearred option when operating profits are:

- (a) £60m, and
- (b) £70m.

Your answer should be as follows:

Low-gearred option

Operating profit	£60m	£70m
Degree of financial gearing		
= $\frac{\text{Operating profit}}{\text{Operating profit} - \text{Interest payable}}$	$\frac{£60m}{£60m - £10m}$	$\frac{£70m}{£70m - £10m}$
	<u>1.2</u>	<u>1.17</u>

High-gearred option

Operating profit	£60m	£70m
Degree of financial gearing		
= $\frac{\text{Operating profit}}{\text{Operating profit} - \text{Interest payable}}$	$\frac{£60m}{£60m - £30m}$	$\frac{£70m}{£70m - £30m}$
	<u>2.0</u>	<u>1.75</u>

In each case, we can see that the impact of financial gearing becomes less pronounced as the level of operating profit increases.

In the context of financial planning, calculating the degree of financial gearing can be useful when determining the likely effect of changes in interest rates and/or changes to the level of borrowing on earnings per share.

Let us end this section by striking a note of caution. **Real World 2.8** sets out the views of Warren Buffett, the legendary investor and chairman of Berkshire Hathaway Inc. He warns that we should not be beguiled by the seemingly magical properties of financial gearing.

Real World 2.8

Wealth warning

Unquestionably, some people have become very rich through the use of borrowed money. However, that's also been a way to get very poor. When gearing works, it magnifies your gains. Your spouse thinks you're clever, and your neighbours get envious. But gearing is addictive. Once having profited from its wonders, very few people retreat to more conservative practices. And as we all learned in third grade, any series of positive numbers, however impressive the numbers may be, evaporates when multiplied by a single zero. History tells us that gearing all too often produces zeroes, even when it is employed by very smart people.

Source: Adapted from Buffett, W. (2011) Shareholders letter, Berkshire Hathaway Inc., www.berkshirehathaway.com, 26 February, p. 22.

OPERATING GEARING

To understand the nature of **operating gearing** (also known as *operating leverage*), we first need to consider the nature of costs. One way of classifying operating costs incurred by a business is according to how they behave in relation to changes in the volume of activity. Thus, costs may be classified according to whether they:

- remain constant when changes occur to the volume of activity, or
- vary according to the volume of activity.

These are known as **fixed costs** and **variable costs**, respectively.

We saw earlier, when discussing projected financial statements, that examples of fixed costs included rent, insurance, staff salaries and depreciation of equipment. Variable costs may include such things as commission to sales staff.

Activity 2.20

Can you think of at least three other examples of operating costs that are likely to be variable for a manufacturing business?

They may include:

- raw materials and components used in producing the goods sold
- royalties paid under a patent agreement
- power used for equipment and machinery
- packaging costs
- transportation costs to customers
- amounts paid to employees based on work completed
- credit card fees (based on a percentage of sales).

You may have thought of others.

The relationship between fixed costs and variable costs is known as operating gearing. An activity with relatively high fixed costs compared with its total variable costs, at its normal level of activity, is said to have high operating gearing. The term *gearing* is used in a similar way to that used earlier when we discussed financial gearing. As with intermeshing gear wheels of different circumferences, a movement in one of the factors (sales output) causes a more-than-proportionate movement in the other (operating profit). This is illustrated by Figure 2.7.

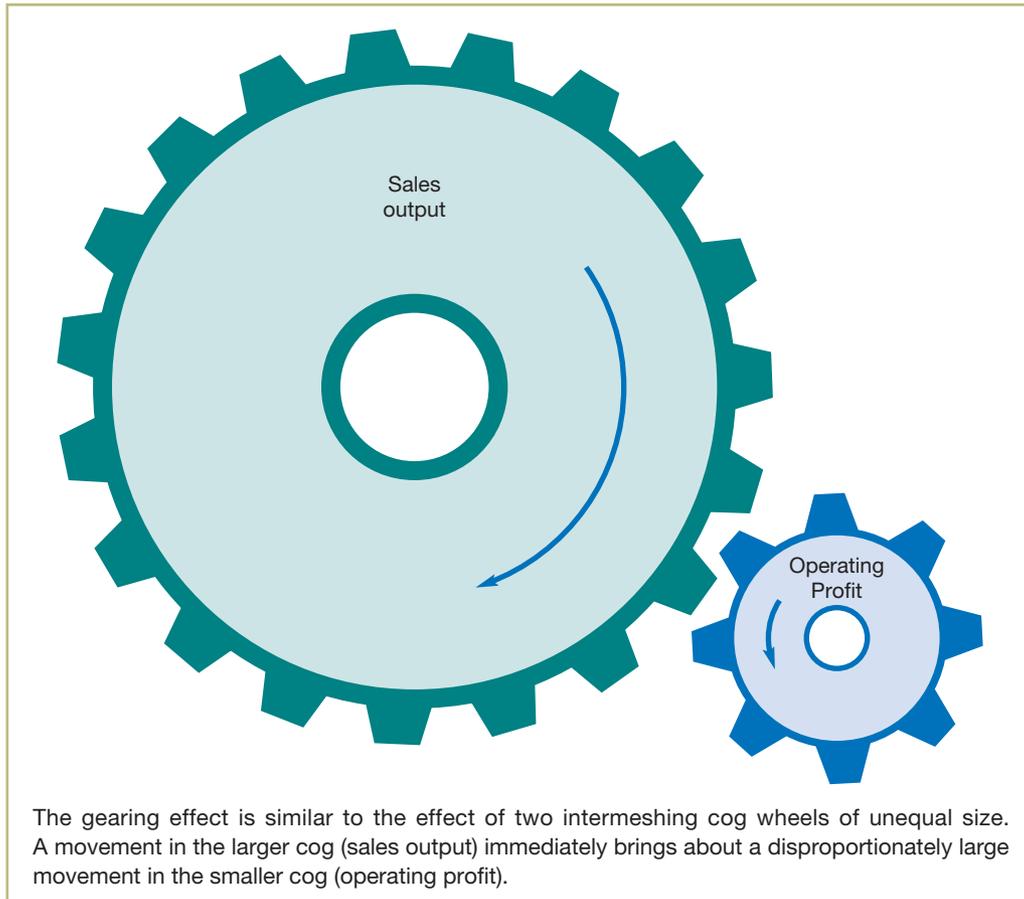


Figure 2.7 The effect of operating gearing

Activity 2.21

Which industries are likely to have high operating gearing? Try to think of at least three.

Industries that are capital intensive tend to have high operating gearing. This is because renting, or owning, capital equipment gives rise to additional fixed cost. It may also give rise to lower variable cost. Examples of capital-intensive industries include:

- oil refining
- car manufacturing
- airlines
- steel production

- telecommunication and
- chemical manufacturing.

Industries with high R&D costs also tend to have high operating gearing. Developing a new product can involve huge outlays and lead to additional fixed costs. Once developed, however, variable costs of supplying the new product may be very low. Examples of industries with high R&D costs include:

- pharmaceuticals and
- software development.

A high level of operating gearing makes operating profits more sensitive to changes in sales output. Example 2.7 demonstrates the effect of using operating gearing within a business.

Example 2.7

Lethargo plc has recently been formed to produce vacuum cleaners. The business is now considering which one of two possible strategies should be adopted:

- *Strategy 1*: outsource production of all the parts and components needed for the vacuum cleaners and focus on assembling the parts and distributing the assembled cleaners. Under this strategy, variable operating costs would be 70 per cent of the total sales output. Fixed costs would be £3 million per year.
- *Strategy 2*: make all of the parts and components needed for the vacuum cleaners and simply buy in the raw materials needed. Under this strategy, variable operating costs would be 40 per cent of the total sales output. Fixed costs would be £18 million per year.

The most likely level of sales under both strategies is £60 million. However, the range of sales is forecast to be between £30 million and £70 million.

We can see that Strategy 1 has a much higher level of operating gearing than Strategy 2. Let us now consider the effect of these different levels of gearing on operating profit for different levels of sales output.

Strategy 1 (low-gearred option)					
	£m	£m	£m	£m	£m
Sales	30.00	40.00	50.00	60.00	70.00
Variable costs (70%)	(21.00)	(28.00)	(35.00)	(42.00)	(49.00)
Fixed costs	<u>(3.00)</u>	<u>(3.00)</u>	<u>(3.00)</u>	<u>(3.00)</u>	<u>(3.00)</u>
Operating profit/(loss)	<u>6.00</u>	<u>9.00</u>	<u>12.00</u>	<u>15.00</u>	<u>18.00</u>
Strategy 2 (high-gearred option)					
	£m	£m	£m	£m	£m
Sales	30.00	40.00	50.00	60.00	70.00
Variable costs (40%)	(12.00)	(16.00)	(20.00)	(24.00)	(28.00)
Fixed costs	<u>(18.00)</u>	<u>(18.00)</u>	<u>(18.00)</u>	<u>(18.00)</u>	<u>(18.00)</u>
Operating profit/(loss)	<u>0.00</u>	<u>6.00</u>	<u>12.00</u>	<u>18.00</u>	<u>24.00</u>

