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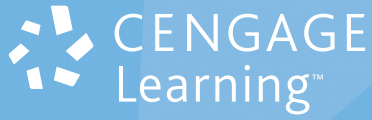
# ACCOUNTING AND FINANCE for WA

Ken KRACHLER Chris DURRANT Alan PHILLIPS John CANNON



3A
3B

ISBN 9780170182058




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**Nelson Accounting & Finance for WA 3A-3B**
**1st Edition**
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Publishing editor: Deborah Barnes
Project editor: Katharine Day
Senior designer: Ami Sharpe
Text designer: Santiago Villamizar
Cover designer: Leigh Ashforth
Cover image: Corbis Australia
Cartoons: Nicholas Hiatt
Photo researcher: Georgina Wober
Production controller: Damian Almeida
Typeset by Q2A Media

Any URLs contained in this publication were checked for currency during the production process. Note, however, that the publisher cannot vouch for the ongoing currency of URLs.

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**National Library of Australia Cataloguing-in-Publication Data**

Ken Krachler ... [et al.].
Nelson Accounting and Finance for WA 3A-3B

1st ed.
9780170182058 (pbk.)
Includes index.
Bibliography.
For secondary school age.

Accounting--Textbooks.
Finance--Textbooks.

657

**Cengage Learning Australia**
Level 7, 80 Dorcas Street
South Melbourne, Victoria Australia 3205

**Cengage Learning New Zealand**
Unit 4B Rosedale Office Park
331 Rosedale Road, Albany, North Shore 0632, NZ

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Printed in China by 1010 Printing International Limited.
2 3 4 5 6 7 8 14 13 12 11 10

**iSBN 9780170182058**

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# Foreword

Welcome to the world of accounting – from budgeting to profit analysis, you will learn important skills you can use every day and as part of your future career.

Chartered Accountants enjoy one of the most highly regarded careers in the business world today. Why? Because money makes the world go round – and accountants are the ones who understand money, numbers and whether an organisation is profitable. Accounting and finance professionals are the first to know how well an organisation is doing and what needs to happen to keep it that way.

Chartered Accountants use financial information to make decisions about an organisation's prosperity and direction. These accountants are professionals who have completed a degree and the Chartered Accountants Program to become a qualified accountant.

The depth of experience and training required to be a Chartered Accountant makes it an ideal step into senior management roles. It's not surprising that many heads of business start off with a professional accounting qualification to properly understand how businesses operate.

Chartered Accountants work everywhere – from fashion houses to charities, government organisations to local accounting firms – every company or organisation needs an accountant. Accounting can also provide opportunities to work overseas; professional accountants are recognised around the world.

Whether you see yourself investigating fraud as a forensic accountant, dealing with personal finances as a financial planner or managing personal or business tax as a tax accountant, the role of a Chartered Accountant is diverse. Your course will help you to decide which area you want to go into.

I hope you enjoy learning about all the different aspects of accounting and embrace this first step towards the rewarding and varied career of professional accounting.

Michael Spinks FCA
President (2010)
The Institute of Chartered Accountants in Australia

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Chartered Accountants
NUMBER ONE IN NUMBERS

iSBN 9780170182058

# About this book

This textbook is a stand-alone resource for Units 3A and 3B of the Accounting and Finance Course of Study (COS) developed by the Curriculum Council of Western Australia. The first six chapters cover content of Unit 3A, and the second six chapters deal with 3B, although there is some cross-referencing.

We assume that students will be familiar with the basic concepts and practices of double-entry accounting, including the use of the journal, ledger accounts, balance day adjustments, and the perpetual inventory system, covered in Units 2A and 2B of the COS. We advise students without this background to buy the 2A2B book as well.

A word on **ledger account layout**: in the real world, the use of T-form ledger accounts has been largely replaced by three-column accounts, and is the format used in computerised accounting systems. However, many textbooks, even at university level, still use the T-form account. Consequently, although we will use the three-column form in this textbook, the use of T-form accounts is still acceptable and, where appropriate, is shown in the solutions.

The same can be said about **accounting terminology**. In this book we use terms currently favoured by the profession and the regulatory authorities. However, using these terms is not mandatory, and many organisations continue to use alternatives such as 'Balance sheet' for 'statement of financial position'. Using these alternative terms is, therefore, perfectly acceptable.

## CHAPTER FEATURES

- Chapter-opening-page objectives: 'What you will learn'.
- Key concepts picking up on new and important terms to make revision easier.

**Key Concept 1.5**

**Management accounting**
Management accounting is the process of producing reports and providing financial information useful for decision-making purposes used by the managers of an enterprise in the day-to-day management of its trading operations. Reports will often be detailed and frequent and compare actual performance with budget predictions.

- Graphical summaries in chapters, to aid student understanding and revision, and help visual learners.
- Frequent practical **worked examples,** to help students grasp the understandings and skills involved in the chapter topic.

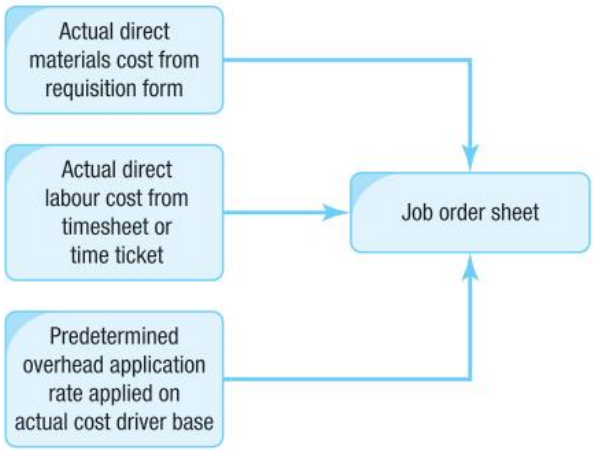



Figure 4.18 The flow of costs in a job order costing system

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EXAMPLE:

## Example 2.1

The Furniture Shed is preparing its cash budget for the next three months. The sales department advises that all sales are made on credit. It is currently September and the following table has the credit sales up to 30 September and the anticipated credit sales for October to December.

| August | September | October | November | December |
|---|---|---|---|---|
| $132 000 | $154 000 | $110 000 | $143 000 | $121 000 |

- **Reality-check case studies** and newspaper articles, which give real-life scenarios to tie down the theory.

CASE STUDY

Cobbler and Snapper are setting up a new business selling fishing and camping equipment. They have the option to purchase some premises near an established ...

REALITY CHECK 1.2

Midwest Metalworks Pty Ltd is a small manufacturing business that employs about 20 people in its workshop. As accountant ...

- What are the possible consequences for all concerned of the course of action proposed by the managing director?
- What alternative courses of action do you have? Which do you think you should adopt and why?

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- Website **URLs** where relevant. For security and currency students are encouraged to access them via the book's website: www.nelsoncengage.com/acc&fin3AB.
- End-of-chapter review questions, **'Test your knowledge'**, to reinforce theoretical knowledge and check students' understanding of the objectives.
- End-of-chapter practical questions, **'Test your understanding'**. These are so extensive they have their own menu to assist classes to quickly find the exact questions relevant to a particular lesson. Most students will probably not need to do them all; time constraints and student ability will determine how many exercises you complete.

## Test your understanding

### Topic guide

- Calculation of a schedule of cash receipts from customers: 2.1–2.3
- Preparation of cash budgets: 2.4–2.7

- At the end of each chapter there are also an **Investigation, Essay topics** and an **Ethics case study**.
- The book's **website**, www.nelsonsecondary.com.au/accfin3A3B includes easily accessible solutions to all the practical questions and suggested responses to the other questions. There are also extra questions, and some exam-style questions. For teachers, there are curriculum outcome grids. Website material will be added to from time to time.

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# Acknowledgements

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**Text and illustrations**

Extract from ABC News 'Kleenmaid directors defend financial record', first published by ABC Online, 14 April 2009/ABC News 'Qantas job cuts to be felt across Australia' by Callista Cooper, first published by ABC Online, 15 April 2009/ABC News 'Receivers reveal fate of ABC Learning centres', first published by ABC Online, 15 April 2009/ABC News 'Grim news for Alpine creditors', first published by ABC Online, 15 April 2009/ABC News 'Former secretary pleads guilty to insider trading', first published by ABC Online, 15 April 2009/ABC News 'Alpine creditors vote for liquidation', first published by ABC Online, 16 April 2009/ABC Rural Vic 'John Elliot to file for bankruptcy' by Emily Doak, first published by ABC Online, 31 October 2005, all extracts reproduced by permission of the Australian Broadcasting Corporation and ABC Online. © 2005 and 2009 ABC. All rights reserved; © The AFL logo is a registered trademark of the Australian Football League, reprinted with permission; Argyle Diamonds website, Regional Partnerships page, www.argylediamonds.com.au, 2009; © ASX Limited ABN 98 008 624 691 (ASX) 2009. All rights reserved. This material is reproduced with the permission of ASX. This material should not be reproduced, stored in a retrieval system or transmitted in any form whether in whole or in part without the prior written permission of ASX; Blair Speedy, 'Foster's backs bypass challenge', The Australian, 21 March 2009; Paige Taylor, 'Deli owner will have to slice casuals' work hours', The Australian, 24 March 2009; Fiona Buffini, 'Accountants wary of expense chestnuts', Australian Financial Review, 27 June 2002; Matthew Drummond & Ashley Midalia, 'ASIC bans broker in rumour crackdown', Australian Financial Review, 24 March 2009; Sue Mitchell, 'DJ's profit at risk if sales unravel', Australian Financial Review, 20 March 2009; © Australian Institute Of Company Directors, National Office, Level 2, 255 George Street, Sydney NSW 2000 Australia, 2005, www.companydirectors.com.au; © Australian Red Cross; Australian Shareholders' Association, www.asa.asn.au, 12 February 2009; Ian Ramsay 'Public show and tell is the way to incentivise directors and their companies to behave nicely' Australasian Business Intelligence, July 20 2005; BHP Billiton, 'Resourcing the Future: Annual Report 2008', p. 6; ABC Fiasco Draws in KPMG, Business Spectator, www.businessspectator.com.au, 4 September 2008; From ALBRECHT. Ethical Issues in the Practice of Accounting, 1E. © 1992 South-Western, a part of Cengage Learning, Inc. Reproduced by permission. www.cengage.com/permissions; Bazley & Hancock, Company AccountingSource: Table 4 Appendix in Mike Bazley and Phil Hancock, Contemporary Accounting, 6th edition, Cengage Learning, South Melbourne, 2004, pp 735–6; © The Chamber of Commerce and Industry Western Australia (CCI); DANTES, www.dantes.info, 2005; Copyright David Jones 2008. Reproduced with permission; © Just Group Ltd; © Myer Stores Pty Ltd; Reprinted with permission from Plumbtech Taranaki Ltd, © 2009; Ashley Tindall, Sacred Land Film Project, 'Federal Court Allows McArthur River Diversion to Proceed', 26 June 2008, www.sacredland.org; Source: WS Albrecht (ed.), Ethical Issues in the Practice of Accounting, South-Western, Cincinnati, Ohio, 1992; St James Ethics Centre, Sydney, Media release, www.ethics.org.au, 17 October 2008; Leon Gettler, Sydney Morning Herald, 7 July 2005, www.smh.com.au; James Doran, 'Man Utd takes a beating', The Times, 2 September 2000; © Wesfarmers Ltd; Westpac Bank, www.westpac.com.au; The Wilderness Society (WA) Inc, Media Release, www.wilderness.org.au, 1 April 2009; © Woodside Energy Ltd.

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# About the authors

**Ken Krachler** is the Dean of Business at Canning College. Over the past 26 years he has taught Accounting at TEE, TAFE and Diploma level (equivalent to first year university) in Western Australia. He has provided leadership in accounting and finance curriculum in WA for 20 years through his involvement in the Accounting Syllabus Committee and Accounting and Finance Course of Study Committee (including spells as chairperson of these committees). He has written accounting exam papers and prepared other accounting support material for use by teachers and students in WA.

**Chris Durrant** taught Year 11 and 12 Accounting for 20 years in WA. During that time he was on the Accounting Syllabus Committee and was one of the writers of the Accounting and Finance Course of Study. He co-authored a textbook on the previous accounting courses and has written numerous exam papers and other accounting support materials. Before becoming a teacher, Chris worked in a variety of commercial enterprises as an accountant or manager and set up and ran his own animal husbandry business.

**Alan W Phillips** MA BA DipEd has worked across the three secondary sectors in Western Australia. He is currently responsible for accounting at Wesley College in Perth. Recent Masters studies at Curtin University Business School renewed his interests in the legal underpinnings of financial reporting and the inevitable mandating of matters related to corporate social responsibilities. He is an advocate of computer-based processing of data and a leading curriculum renewal practitioner.

**John Cannon** has taught accounting for more than 20 years at upper secondary, TAFE and university levels to local and international students. He has been involved with the development and implementation of new courses of study for accounting and other business education subjects. For many years he has undertaken the writing and marking of accounting exams and accounting support materials. John is a CPA and was part-owner of farming and service businesses before becoming a teacher.

*This book is dedicated to the hard-working business educators of Western Australia. The authors wish to thank their colleagues for their encouragement, and most importantly their families for their constant support.*

*Thanks also to our excellent reviewers: Dr Len Therry from Edith Cowan University and Christina Habib from Penrhos College.*

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# Chapter 1
# INTRODUCTION TO FINANCIAL MANAGEMENT

## What You Will Learn

After studying this chapter you should be able to:

1 Outline the essential principles and elements of financial recording and reporting
2 Explain the main ethical constraints for businesses
3 Outline the role of the accountant in the management of business operations
4 Compare and evaluate alternative sources of short-term and long-term finance for businesses
5 Distinguish between different types of businesses – retailing, manufacturing and service – and their varying financial requirements
6 Distinguish between financial and management accounting
7 Distinguish between internal and external reporting and control
8 Outline the process of internal audit and control of a business and the principles of the management of assets, including non-current assets, accounts receivable, inventory and cash

## Introduction

It is generally assumed that people who go into business – whether directly as the owner or manager of a small business or indirectly as an investor in a large entity such as a public company – do so mainly to make money. There are, of course, many other motivations for business activity – lifestyle, personality, family history – but we will confine ourselves in this book to the financial one and the effect that this has on the recording and reporting of a business's financial transactions. Many people run their own business at some time during their lives. Almost everybody invests in one, even if only indirectly through their superannuation fund.

By now you will be familiar with the layout and classification of the two main business financial statements produced by a small business, which were covered in detail in Units 2A and 2B (revision is provided at the end of this chapter).

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# PROFITABILITY AND SECURITY

Owners and investors are concerned with *risk* and *return*, with the two key elements:

- security – How safe is my investment?
- profitability – How much money will I make on my investment?

There is likely to be a conflict between these two requirements – high return usually implies high risk (i.e. lower security) and vice versa.

## Profitability

Profit is a function of income and expense.

- *Income* is defined as an *increase* in economic benefits during the accounting period in the form of inflows or enhancements of assets, or decreases of liabilities that result in increases in equity, other than those relating to contributions from the owner(s). It includes both *revenue* (increases arising from the firm's normal trading operations, such as proceeds of sales, commission or fees) and *gains* (increases arising from other sources, e.g. surplus on sale or revaluation of assets).
- *Expense*, on the other hand, is a *decrease* in economic benefits during the accounting period in the form of outflows or depletions of assets, or incurring of liabilities that result in decreases in equity, other than payments to the owner(s). Income and the associated expense are 'recognised' (in other words, considered to have occurred and been brought to account) when it is probable that the economic benefits will flow to the entity and these benefits and the costs associated with them, can be reliably measured. The difference between income and expense is the *profit* or *loss* for the period.

Details of a firm's income and expense are contained in what is now commonly called an *Income statement* (formerly a *Profit and loss statement*), which shows the resultant profit or loss. Expenses in this statement are commonly *classified* or grouped on a functional or departmental basis so that those responsible for each function or department can be held accountable for their contribution to the firm's profit performance. The figures contained in this statement are usually subjected to further analysis to make them more meaningful and understandable (see Chapter 10).

Key Concept 1.1

**Profitability**

Profitability is:

- the entity's capacity to earn income in excess of expenses over a given period
- derived from the Income statement showing revenue and expenses (classified) and the resultant profit or loss
- further analysed by relating the information in the Income statement to other elements of the entity's financial structure, such as owner's equity or total funds invested.

## Security

An evaluation of a firm's security requires a statement of the liabilities that it must meet and the assets that are available to meet them. This is important to the users of financial reports as they seek to assess the liquidity, leverage and solvency of the business.

*Assets* are defined as resources controlled by an entity as a result of past events and from which future economic benefits are expected to flow to the entity.

*Liabilities* are defined as present obligations of the entity resulting from past events, the settlement of which is expected to result in an outflow from the entity of resources embodying economic benefits.

Like income and expenses, assets and liabilities are recognised when it is probable that the economic benefits they embody will flow into or out of the entity and these economic benefits can be reliably measured.

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The difference between the assets and liabilities of a business represents the value of the owners' investment in the business. This is known as *equity*.

The entity's assets, liabilities and equity are shown in a statement called a *Statement of financial position* (or *Balance sheet*). In order to better judge the entity's viability, the Statement of financial position identifies those assets and liabilities that are classified as *current* – to be used up or turned into cash (assets) and requiring to be paid (liabilities) within 12 months of the date of the statement. Any assets and liabilities that do not meet the definition of current are shown as *non-current*.

Key Concept 1.2

**Security**

Security is:

- the entity's capacity, at a particular date, to pay its debts when they fall due, now and in the future
- derived from the Statement of financial position showing assets and liabilities, classified as current or non-current and the owners' equity at that time
- further analysed by relating different elements of information in the Statement to each other and to other elements of the entity's financial structure as well as external data

## Distribution of profit

In the case of unincorporated businesses, such as sole traders and partnerships, the profit (or loss) for the year will be transferred directly to the owners' account (either a capital or current account) from which each owner may draw it out. Income tax is payable by each owner, based on their annual assessment, which will take into account any other income and allowable expenses they may have. For a company there are two differences:

1 Income tax is payable by the company itself on its profit at a flat rate of tax (currently 30 per cent).
2 The profit after tax can only be distributed to the owners (shareholders) at the discretion of the directors, whose recommendation on profit shares (dividends) may also require the approval of the shareholders as a whole at a shareholders' meeting.

Consequently, the estimated tax payable will be included in the Profit and loss summary account as an expense and the profit after tax will be transferred to a Retained earnings account from which dividends may later be paid.

EXAMPLE:

### Example 1.1

At the end of its last financial year on 30 June 2010, Fauntleroy Trading Pty Ltd produced the following statements relating to the financial year that ended on that date.

Fauntleroy Trading Pty Ltd
Income statement for the year ended 30 June 2010

| | $ | $ | $ |
|---|---|---|---|
| Sales (net of returns $3100) | | | 688 900 |
| *Less* Cost of sales | | | 310 000 |
| Gross profit | | | 378 900 |
| *Add* Other operating income: Commission revenue | | | 29 000 |
| | | | 407 900 |
| *Less* **Operating expenses** **Selling and distribution expenses** | | | |
| Advertising | 23 000 | | |

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| | | | |
|---|---|---|---|
| Cartage outwards | 56 000 | | |
| Depreciation, sales staff vehicles | 14 000 | | |
| Vehicle expenses | 12 000 | | |
| Wages, sales staff | 113 000 | 218 000 | |
| **Financial expenses** | | | |
| Discount allowed | 3 800 | | |
| Doubtful debts | 600 | | |
| Interest expense | 5 000 | 9 400 | |
| **General expenses** | | | |
| Depreciation, office equipment | 2 400 | | |
| General office expenses | 21 500 | | |
| Insurance expense | 22 500 | | |
| Rent | 36 000 | | |
| Wages, office | 52 000 | 134 400 | 361 800 |
| Profit before tax | | | 46 100 |
| Income tax expense | | | 13 200 |
| Profit after tax | | | 32 900 |

The profit was then transferred to the Retained earnings ledger account as follows.

| Retained earnings | | | | |
|---|---|---|---|---|
| **Date** | **Account debited/credited** | ***Dr* $** | ***Cr* $** | ***Balance* $** |
| 1/7/09 | Balance | | | 14 000 Cr |
| 30/6/10 | Profit and loss summary | | 32 900 | 46 900 Cr |

The Statement of financial position can now be prepared.

Fauntleroy Trading Pty Ltd
Statement of financial position as at 30/6/2010

| | $ | $ |
|---|---|---|
| **Current assets** | | |
| Cash | | 28 700 |
| Accounts receivable | 44 000 | |
| *Less* Allowance for doubtful debts | 500 | 43 500 |
| Inventory | | 98 000 |
| Accrued revenue | | 2 000 |
| Prepaid expense | | 3 000 |
| Total current assets | | 175 200 |
| **Non-current assets** | | |
| Office equipment, at cost | 34 000 | |
| *Less* Accumulated depreciation | 9 600 | 24 400 |
| Vehicles, sales staff, at cost | 97 000 | |
| *Less* Accumulated depreciation | 32 000 | 65 000 |
| Total non-current assets | | 89 400 |

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| | | |
|---|---|---|
| Total assets | | 264 600 |
| **Current liabilities** | | |
| Accrued expenses | | 3500 |
| Bank loan payable | | 6000 |
| Accounts payable | | 21 000 |
| Income tax payable | | 13 200 |
| Total current liabilities | | 43 700 |
| **Non-current liabilities** | | |
| Bank loan payable | | 24 000 |
| Total liabilities | | 67 700 |
| Net assets | | **196 900** |
| **Equity** | | |
| Share capital | | 150 000 |
| Retained earnings | | 46 900 |
| Total equity | | **196 900** |

These reports are underpinned by some important principles. The first of these, referred to as the *entity assumption*, is that the business is always treated, for accounting purposes, as being separate from the owner(s), whatever the legal position may be. The owners' financial records must be kept quite distinct from those of the business and any transactions with the owners must be kept at arms' length, in effect treating the owners as a special type of liability.

The second fundamental principle is that of *accrual accounting*, where the effect of transactions may be recognised and hence brought to account regardless of when those transactions take effect in terms of the payment or receipt of cash. This requires adjustments to be made at the balance date and the creation (as we have seen above) of current liabilities or assets representing cash payments or receipts not yet paid/received (accruals) or paid/received but relating to a future accounting period (prepayments).

- How useful do you think the two statements set out above would be to:
  - an outside person like a bank or potential shareholder?
  - the managers of the company?
- What additional information would make them more useful to those two users?

## ETHICAL ISSUES

Ethics can be defined as 'a set of principles or morals, rules of conduct'. The idea is that there should be constraints on human behaviour that may sometimes go beyond the restrictions placed by the law of the land. Many actions, of course, are against the law *and* ethical principles: theft and arson are obviously both illegal and unethical. However, there are many behaviours, which, while not strictly illegal and hence liable to prosecution in a court of law, may be seen as offending against accepted community standards. This concept applies very particularly to the recording and reporting of financial information by business entities. Those who carry out these processes (i.e. accountants) have a

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responsibility to act in the interests not only of the business itself but also actual or potential investors in the business, shareholders (in the case of a company), employees, suppliers, customers and the general community.

What are the principles of ethical behaviour? Dr Michael Josephson identified the following characteristics of an ethical person:

- honesty and integrity – honesty is obviously important but we should really be referring to complete honesty or perhaps to not being dishonest. For example, a six-year-old student, when asked by his teacher if he had eaten any of the chocolates she had left on her desk, replied 'No.' The fact was that he had taken the chocolates but had not eaten any. It could be argued that he did not actually lie, but he was still dishonest. Integrity refers to having the courage of one's convictions and acting on principle. Further, it is important that we have good principles
- promise keeping – fulfilling a commitment
- fidelity or loyalty – the need to be loyal. But loyal to whom or what? The problem of conflicting loyalties is often the cause of ethical problems. In a company an employee could be loyal to his immediate boss, the general manager, the board of directors or the shareholders. The company itself exists in law but it is the people within a company that give it life
- fairness – again, this is a subjective term and what is fair to one party may be unfair to another. Consider an umpire in a football game. When he awards a penalty against one side, the supporters of that side often consider the decision unfair while the supporters of the side awarded the penalty consider the decision to be fair
- caring – caring for others is perhaps best summed up by the rule 'Do unto others as you would have them do unto you'
- respect – while you may not care for everyone you should give them respect
- responsibility – complying with the laws of the country and being part of a community
- excellence – we endeavour to do our job as well as we possibly can. We expect a surgeon about to remove our appendix to be competent to do this
- accountability – to be ethical means to be accountable for your actions.

Adapted from Michael S Josephson, 'The need for ethics education in accounting', in WS Albrecht (ed.), *Ethical Issues in the Practice of Accounting,* South-Western, Cincinnati, Ohio, 1992, pages 1–20.

Professional organisations, such as the Institute of Chartered Accountants in Australia (ICAA), CPA Australia (the association of Certified Practising Accountants) and the Financial Planners Association (FPA), draw up specific Codes of Conduct for their members. The CPAA Code identifies five fundamental principles that their members are required to comply with in their work as accountants:

1 integrity – honesty, straightforwardness, fair dealing, truthfulness
2 objectivity – avoidance of bias, conflict of interest or undue influence of others
3 professional competence and due care – obtaining and maintaining a professional standard of knowledge and skill and acting diligently in accordance with technical and professional standards
4 confidentiality – not disclosing without permission information obtained as a result of professional involvement, nor using such information for personal benefit
5 professional behaviour – compliance with all relevant laws and regulations and avoidance of any act or omission that may bring the profession into disrepute.

Although the provisions of such codes do not necessarily have the force of law, the organisations themselves can apply sanctions on their members to ensure compliance, including, ultimately, the suspension or cancellation of their membership.


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REALITY CHECK 1.1

You are the accountant for Double-M Trading, a partnership business owned by Molly and Mandy. Molly works in the business, for which she receives a salary. Mandy is a 'sleeping partner' – in other words, she attends the monthly partners' meetings and is sent regular financial reports but is otherwise not involved in the day-to-day operations of the business. The two partners contributed capital equally and, apart from Molly's salary, they share the profits of the business equally.

Due to the recent difficult economic conditions, Molly has had to do quite a bit more work and she has therefore paid herself some overtime, which was included in the accounts as 'sundry wages'. She also had to lend the business some money on a couple of occasions when the overdraft limit was reached. She paid herself interest on this money, which was debited to the 'interest expense' account.

When you discussed these matters with Molly, she admitted she has not mentioned the extra payments to Mandy. However, she pointed out that the payments were perfectly fair and that Mandy would almost certainly have agreed to them if she had been consulted. In any case, she said, this was a question to be decided between the partners and is nothing to do with you.

- Do you agree with Mandy's take on the situation?
- What alternative courses of action could you take? Which do you think you should adopt and why?

REALITY CHECK 1.2

Midwest Metalworks Pty Ltd is a small manufacturing business that employs about 20 people in its workshop. As accountant for the firm, you have just become aware that for the past two years the firm has been inadvertently paying some of its employees less than they should have been getting according to the industry award. When you draw this to the managing director's attention, he instructs you to bring the wages up to their correct level with effect from the next pay. The workers will be told that they have been given a small increase. However, he says the firm cannot afford to pay the amounts that would be needed to backdate this increase for two years, so nothing is to be done about that. As he says, no-one need ever know about it and the firm made an honest mistake for which it would be unfair to penalise it now.

- What are the possible consequences for all concerned of the course of action proposed by the managing director?
- What alternative courses of action do you have? Which do you think you should adopt and why?

Key Concept 1.3

**Ethical behaviour**

Ethical behaviour is behaviour that is fair, objective and consistent and considers the interests of all those likely to be affected, directly or indirectly, by the behaviour. It is doing what is right, not just what is strictly legally required.

## THE ROLE OF THE ACCOUNTANT

Accountants can be called upon to fill a very wide range of different roles. Broadly speaking, accountants are either employed directly by organisations, such as businesses and government agencies, or they work for professional accounting firms. In the latter

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case, the accountant will be hired as an agent or contractor to do some specific task for individuals or other entities that employ the accounting firm. These may include:

- taxation affairs – advice on tax matters, completion of tax returns, etc.
- audit and assurance services – checking financial systems and records and reporting on them to the management and/or company shareholders (see also Chapter 7)
- financial planning and advice – for individuals or corporations
- maintenance of financial records and production of reports
- insolvency and administration services – the management of the liquidation, voluntary administration or receivership of a business.

The essential role of an accountant working for a business is to provide the managers of the business with the information they need to maximise the entity's financial performance. This role may include the following functions:

- the selection or design and maintenance of appropriate financial systems
- recording financial transactions
- producing financial reports for the information of managers and external users where necessary. This would include Income statements, Statements of financial position, Statement of cash flows, budgets and performance reports
- analysing the reports, interpreting the data they contain and advising management on appropriate courses of action arising from them. This might include cost–volume–profit analysis and capital budgeting
- implementing strategies for the control of the firm's assets and for the internal review and control of the firm's financial systems – this is part of the role and function of internal auditing
- cost accounting – the determination and analysis of the cost of a product or service.

In this textbook we will be focusing on the accounting function within a business, with special emphasis on the production, analysis and use of the various business financial reports. Although all accountants need to have an understanding of the 'nuts and bolts' of financial record-keeping, in practice much of this is now done automatically using computers. In general terms, the accountant will be expected to be familiar with every aspect of the firm's financial affairs and will be asked to provide management with informed and expert advice.

REALITY CHECK 1.3

You have been employed as the accountant of Growbetta Garden Supplies, a new business being set up to provide garden supplies and equipment to people living in a new residential suburb being developed north of the Perth metropolitan area. You need to make an action plan for all the items you will be responsible for over the first year or two of the firm's existence.

## Commentary

The matters you will be concerned with might include:

- planning the financing of the business
- preparing financial budgets and other documents, some of which might be used to support applications to financial institutions, if loans are to be sought
- setting up the financial recording system including (if it is to be computerised, which is most likely) the identification and purchase of the necessary hardware and software. Most businesses would purchase a computerised accounting package, though this would usually require some customising to suit it to the firm's peculiar needs, including specifying the accounts to be used, designing forms and reports and so on
- establishing banking arrangements, including the EFTPOS system, cheque account and, if expected to be necessary, overdraft facility
- establishing payroll arrangements and records, including compliance with the requirements of the ATO
- setting up systems for internal control of cash and stock and implementing these to ensure that these assets are managed effectively


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- managing financial data entry
- production of regular financial reports and interpretation of these to assist management to maximise the firm's financial performance
- maintenance of the GST records required by the ATO and the remittance to the ATO of amounts due, including production of the BAS statement as required
- preparation of the firm's tax return (if a corporation) or provision to the owner(s) of the information needed for their tax return (if a sole trader or a partnership).

## BUSINESS FINANCING

There are two methods of financing a business:

- equity financing or money contributed by the owner(s)
- debt financing, borrowings or money provided for a limited term by somebody else.

When considering equity financing or debt financing, a business must consider a number of issues, such as:

- the *cost of finance* – this includes the cost of arranging the finance and the ongoing costs in the form of interest or dividends. Interest, of course, is an expense that must be paid, regardless of profit, unlike dividends, which are a share of profit. The ability of the business to meet interest payments must be considered
- the *purpose of the finance* – for example, is it to be used for the purchase of long-term assets or to meet short-term needs?
- the *need to repay the finance* – debt requires repayment while equity normally does not. The ability of the business to generate the necessary cash for repayment of debt is an important consideration
- *taxation effects* – interest is an expense for tax purposes
- the *effect on the capital structure* – this impacts on the leverage of the business. Lenders will often restrict a business from further borrowing by stipulating the gearing ratio that the business must not exceed.

The relationship between the two forms of financing is known as *gearing* or *leverage*. A firm that has a relatively high proportion of equity in its financial structure is said to be *lowly geared* and one that has a relatively high proportion of borrowings is said to be *highly geared*. Borrowings, of course, must be repaid and regular interest payments made to the lenders, regardless of the firm's profitability. The possibility that a business may not meet a loan repayment (principal and/or interest) on time is called 'financial risk'. This makes a highly geared firm more vulnerable.

On the other hand, as long as the overall return the firm is getting on its funds remains higher than the cost of borrowings (interest), the owners' return will be enhanced, since they will be entitled to the return on the borrowed funds (after deducting costs, i.e. interest) as well as the full return on their own investment. The repayment of debt finance also has implications for the liquidity of a business, i.e. the ability of the business to meet its short-term cash outflows.

EXAMPLE:

### Example 1.2

Two firms of identical size are financed in very different ways.

| | Firm A $ | Firm B $ |
|---|---|---|
| Equity | 100 000 | 400 000 |
| Borrowings | 400 000 | 100 000 |
| | 500 000 | 500 000 |

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If we assume that the cost of borrowed money (interest) is 10% and the return on funds invested (before financing costs) is 20%, then the profit-sharing is as follows.

| | Firm A $ | Firm B $ |
|---|---|---|
| Profit before finance costs | 100000 | 100000 |
| Interest on borrowings | 40000 | 10000 |
| Profit for owners | 60000 | 90000 |
| Return on owners' investment | 60% | 22.5% |

We can see that the more highly geared firm provides the owners with a much higher return on investment. The risk of high gearing can be shown – assume that market conditions deteriorate so that the overall return on funds invested falls to 5%. The distribution of profit would now be as follows.

| | Firm A $ | Firm B $ |
|---|---|---|
| Profit before finance costs | 25000 | 25000 |
| Interest on borrowings | 40000 | 10000 |
| Profit (Loss) for owners | (15000) | 15000 |
| Return on owners' investment | (15%) | 3.75% |

Gearing or leverage will be examined further in Chapter 11.

Key Concept 1.4

**Gearing**

Gearing is the relationship between equity and borrowings. A firm with a relatively high level of borrowings is said to be highly geared.

## Long-term finance

Long-term finance would normally be used to fund the purchase of assets that are expected to generate returns over a long period of time, such as land and plant. Types of long-term finance might include those discussed below.

### Equity

Equity finance includes capital contributions by the owner, the taking on of a partner and, in the case of companies, the issue of shares (see Chapter 7). Companies may issue the following shares:

- ordinary shares – these are the most common type of share issued. They are fully paid shares that come with full voting rights at company meetings but no entitlement (fixed or otherwise) to a dividend
- preference shares – these shares have some special privileges attached to them. They are entitled to receive their capital returned, in the event of liquidation and also to receive their dividend, usually at a fixed rate, before ordinary shareholders. They usually have limited voting rights
- contributing shares – these are partly paid issued shares. They are paid in instalments and when fully paid will be ordinary shares
- company options – shareholders can buy, at a fixed price, the right to purchase shares in a company over a specified time period.

The raising of share capital may take place through a public offering or private placement:

- public offering – the initial issue of shares through the stock exchange. Alternatively, it may be a rights issue – existing shareholders are given the right to buy shares based on the number of shares they currently own


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- private placement – the private sale of shares to a small group of investors, such as banks and insurance companies.

Equity finance can also refer to the profits and reserves earned by the owners but not withdrawn – in effect reinvested in the business. These are shown in reserves and the retained earnings section of the Statement of financial position.

### Long-term loans

Long-term loans are loans of five years or more from banks or other financial institutions, such as merchant banks. These may be unsecured, usually referred to as 'term loans', but they are more often secured by a charge on the firm's assets and referred to as a mortgage (e.g. a mortgage on land).

### Leasing

Leasing is often used to acquire equipment, motor vehicles and other forms of property. Ownership of the assets financed remains legally with the funds provider, but the user has, for all practical purposes, all the rights of an owner except the right to sell the property. At the end of the lease period there may be a provision that enables the lessee to purchase the property. Leasing finance is often arranged through finance companies and banks.

### Hire-purchase

Hire purchase is similar to a lease, except that the ownership of the property will normally pass to the user at the end of the hire-purchase period. Hire-purchase finance is often arranged through finance companies and banks.

### Debentures

Debentures are loan securities issued by public companies (see Chapter 7) to the general public in exchange for cash. The loan security must be repaid at a fixed time in the future, interest at a fixed rate is paid at set times and the debentures are secured with a floating or specific charge over the company's assets.

### Unsecured notes

Unsecured notes are also issued by a public company and are very similar to debentures except that there is no fixed or specific security over any of the company's assets. They are usually issued for shorter periods of time.

### Convertible notes

A convertible note is a loan security, with a fixed interest rate, issued to a lender by a company whereby the loan can be swapped for a fixed number of shares at maturity.

## Short-term finance

The purpose of short-term finance is to deal with temporary cash shortfalls that may arise in the normal course of trading. Overall, this may be described as 'working capital' – the money needed to enable the firm to pay its bills (wages, purchases, service supplies, etc.) prior to the generation of cash through sales or other revenue. Sources of short-term finance include bank overdraft, short-term loans, supplier credit and factoring of accounts receivable.

### Bank overdraft

When a firm has a bank overdraft, they are able to withdraw money from the firm's bank account in excess of the funds deposited there, usually up to a pre-determined limit. Interest is only charged on the amount actually outstanding, but the account is usually supposed to be 'fully fluctuating' (i.e. it needs to revert to a positive balance on a reasonably regular basis).

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### Short-term loans

Short-term loans are borrowings from banks or other institutions, such as credit unions and building societies, including borrowings on the short-term money market. They usually have a fixed rate of interest and are repayable on a set date or dates. The short-term money market is a part of the capital market that caters for borrowers who require money for a short period of time. The financial institutions involved are usually banks, merchant banks, finance companies and stockbrokers. They offer such products as commercial bills, bank bills and promissory notes.

### Supplier credit

Manufacturing or merchandising firms may delay payment for their purchases. Often, for short periods of time (up to a month) the supplier will not charge interest on amounts owing. Some suppliers will offer a discount for cash payments, which means that a firm not availing itself of this discount is in effect incurring an additional cost equivalent to the discount.

### Factoring of accounts receivable

This means the selling of business accounts receivable at a discount to a factoring company. It enables the trading company to receive a discounted cash sum quickly and the factoring company to make a profit when the full amount of the debt is received.

## Sources of finance

The choice of sources of finance will depend on both the nature and the history of the business. A firm that does not have a proven record will find it more difficult to borrow to finance its business, particularly if it is unable to offer easily saleable assets (such as land or moveable plant) as security. The lenders' willingness to advance funds and the cost of lending expressed in the interest rate applicable will depend on their perception of the risk of the loan. Often the owners of small businesses are required to offer their personal assets (such as their family home) as security for the borrowings of their businesses.

In principle, firms should avoid funding long-term assets through short-term borrowings and should not enter into long-term loan obligations to deal with a short-term requirement.

REALITY CHECK 1.4

Cobbler and Snapper are setting up a new business selling fishing and camping equipment. They have the option to purchase some premises near an established shopping centre at a cost of $500 000. They would need to spend an additional $100 000 fitting it out and purchasing plant and equipment. They expect to have to buy about $200 000 worth of stock initially and will need additional working capital of about $20 000. The vendor of the premises has indicated that he would be prepared to consider a long-term lease. Cobbler and Snapper each have about $100 000 that they are able to put into the business. Both of them own their own homes, mortgaged to the bank as security for the home loans, which currently represent about two-thirds of the market value of the houses.

How should Cobbler and Snapper go about financing their business? Consider and compare the various alternatives before saying which ones you would recommend.



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**Commentary**

- The total funds needed are about $820 000, of which the partners can only initially put in $200 000.
- The funds needed would be reduced by $500 000 if the premises were to be leased. However, the partners would then not receive the benefit of any capital appreciation over the years and they would have to pay rent.
- The partners have considerable equity in their homes, which would make it easier to borrow additional funds for the business if they are prepared to put their houses up as collateral (i.e. security).
- The suppliers of stock mostly have credit terms of 30 days, although not all the stock purchases could be funded in this way.

## Over- and undercapitalisation

It is important for a business to have sufficient equity as a business that is leveraged too highly has a much higher financial risk. An inadequacy of equity may be described as *undercapitalisation*. The consequences of this can include:

- lack of working capital to effectively carry out day-to-day trading operations
- insufficient (or outdated) non-current assets, preventing the business from maximising its profit opportunities
- inadequate returns to equity-holders in times when the overall return on assets may fall below the cost of borrowing
- liquidity problems caused by the need to maintain interest payments and repay loans
- a higher rate of interest required by the lender because of the increased risk.

Undercapitalisation, commonly caused by underestimating the initial capital needed when starting a business or excessively rapid expansion, is a major reason for business failure.

Overcapitalisation (having relatively too much equity) can also cause problems. These include:

- ineffective utilisation of funds employed, leading to overall fall in returns
- lower returns to equity-holders who are unable to benefit fully from a situation – most commonly when overall return on assets exceeds the cost of borrowing.

In tough economic times, firms generally prefer to be overcapitalised rather than undercapitalised. Why do you think this is?

## Investments

Although businesses tend to focus on sources of finance, another consideration is the management of cash surpluses – investing in securities offered by financial institutions and other companies. Although a cash surplus can be safely left in the firm's operating bank account, it will earn little or no interest so this is not the best solution. If the surplus is short-term in nature, alternative destinations might include:

- term deposit with a bank or other financial institution
- deposit on the short-term money market – such as commercial bills, bank bills and promissory notes
- cash management trust – where small amounts from a range of investors are grouped and the money invested in short-term money market securities. This product is usually offered through merchant banks, banks and broking firms
- purchase of government bonds, which can be easily sold again when the cash is needed.

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In the longer term, investments may be made in managed funds, bonds, debentures, unsecured notes, convertible notes and shares. A managed fund is a type of trust through which funds may be invested, e.g. in shares, property or cash. A company may purchase shares in another company with a view to a takeover or merger.

When choosing an investment option a business will consider such factors as its liquidity requirements, taxation considerations, risk and security, return on investment, capital gain and growth potential.

If the surplus generated seems to be permanent, it could be used for:

- early repayment of long-term debt
- expansion of the business through the purchase of non-current assets or acquisition of another business
- return of capital to the owner(s).

Regular cash budgeting is vital to identify surpluses in advance and make plans to deal with them (see Chapter 2).

## TYPES OF BUSINESS

There are essentially three types of business, each with different requirements for financial recording and reporting. These are merchandising, service and manufacturing.

### Merchandising

Merchandising is also sometimes called trading. It includes businesses that sell goods in bulk to other businesses (wholesalers) and businesses that sell direct to the public (retailers). Such businesses generate profit by purchasing stock and reselling it at a higher price. Coles, Bunnings, Harvey Norman, petrol stations and your local delicatessen are examples. The main cost for such businesses is stock (inventory) and reports will focus on this item and the efficiency with which it is being managed. The income statement will identify the margin (Gross profit) that is being achieved over the cost of purchasing the stock. Decisions will need to be made on stock valuation where similar items may have been purchased at different prices.

### Service

A service business generates profit by providing a service to its customers. Examples include Telstra, Ace Cinemas, a plumber or an accounting firm. The main costs of service businesses are usually the wages of those providing the service. The valuation and treatment of stock are not significant. The income statement for a service business will not include a gross margin or profit as such, although many businesses will separately identify the direct costs of providing the service (i.e. wages of those directly involved and materials used) compared with the overheads, such as office salaries and rent (see Chapters 3 and 4).

### Manufacturing

Many businesses earn profit by purchasing raw materials or components and converting them into products, which are then sold on to other businesses or, in some cases, directly to customers. Examples of this sort of business include Houghton's Wines, General Motors Holden and a surfboard maker. The emphasis for the financial system will be the cost of the inputs and the efficiency with which these are converted to the final product. In many ways, manufacturing businesses combine the requirements of retailing and service businesses. The issue of manufacturing costs is dealt with in more detail in Chapters 3 and 4.


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Many firms, of course, combine elements of more than one type of business. A petrol station (merchandising) may also provide a service in the form of vehicle repairs; a hairdresser (service) may also retail products, such as shampoos; and a wine producer (manufacturing) may also sell its products directly to the public through sales from its cellar door. Businesses that do this will normally try to separately identify the costs and revenue of the different elements of their undertaking so that the profitability of each can be assessed.

# MANAGEMENT ACCOUNTING AND FINANCIAL ACCOUNTING

Users of financial information about a business may be divided into two broad categories – managers (those concerned with the day-to-day running of the firm) and investors (those with a financial interest in the firm that they wish to evaluate and protect). These categories may also be termed Internal users and External users. Their information needs are clearly somewhat different.

## Internal users

The managers of the firm (who may, in the case of small enterprises, also be the owners) need information that will assist them to plan, coordinate and control the business on a day-to-day basis and make decisions that will maximise the profitability of the firm and ensure the security and integrity of its assets. The exact nature of the information required will depend on the type of business. It must be sufficiently detailed to enable areas of concern to be readily identified and sufficiently frequent to enable timely decisions to be made. The production of this sort of information is known as 'management accounting'.

Most businesses would produce some sort of profit statement and cash flow statement at least monthly and perhaps more often than that. The use of computers in recording and processing financial information enables reports to be produced literally at the touch of a button without any need for lengthy and laborious calculations.

Budgets are also an important part of management accounting and reports produced can compare actual performance with budget in order to highlight problem areas and anomalies. Management accounting is not highly regulated and provides specific-purpose reports and financial information to managers. This information can be future orientated, such as the information provided through capital budgeting, to assist in assessing future investment in capital expenditure projects and cost–volume–profit analysis, which is useful for such decisions as pricing and marketing. Some of the information will be about past results, such as the performance of departments and segments of the business, so that their profitability and viability can be assessed.

Management accounting information must be timely, is not subject to external audit and is often customised to suit the manager. The requirements of internal users will be examined in more detail in Chapters 2, 3 and 4.

Key Concept 1.5

**Management accounting**

Management accounting is the process of producing reports and providing financial information useful for decision-making purposes used by the managers of an enterprise in the day-to-day management of its trading operations. Reports will often be detailed and frequent and compare actual performance with budget predictions.

## External users

There is a wide range of external users of financial information. These may include owners, customers and suppliers, lenders, employees and governments.

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## Owners

The owners of a small business are usually also the managers, but with larger firms – especially public companies – the owners are remote from the management and, indeed, usually have no wish to be involved in this. The shareholders of such a company (and their advisors – accountants, investment analysts, stockbrokers) need information to enable them to evaluate the performance of the business, compare it with alternative investments and identify trends that may impact on the future value of their investment.

Much of the financial information produced by public companies is the subject of comment in the media so, in a sense, members of the media are also users, although reporters merely interpret companies' reports for the benefit of the investing public. Similarly the Australian Securities Exchange (ASX) is a user of reports produced by companies whose shares or other securities are quoted on the ASX (listed companies). This is partly to ensure that there is an informed market, but also to satisfy the Exchange that listed companies are complying with the regulations of the ASX.

## Customers and suppliers

Those relying on a business as a market for their product or as a source of stock or components for manufacture need to know whether that business is likely to remain in existence. They will therefore have a general interest in its continuing profitability and stability.

## Lenders

Both at the time of borrowing and later during the currency of the loan, lenders (banks, finance companies, individuals) will rely on financial information to assess the financial viability of the borrower and its capacity to repay the loan and meet interest payment obligations. The Statement of financial position will be particularly important in this regard, although profitability is also important in that profits will, in the long term, have an effect on the firm's stability.

## Employees

Those working for a business obviously have an interest in the firm's future viability and thus the likelihood that they will continue to be employed.

## Governments

The federal government and, to a much lesser extent, state governments need financial information from businesses. Sometimes this is in the form of specific reports, such as those concerned with GST (federal government) or payroll tax (state government). General profit reports will be used by the government to assess the income tax liability of the owners or (in the case of a corporation) the business itself.

The requirements of external users are for less frequent and less detailed reports. The ASX requires audited financial statements from listed companies every six months. Financial accounting is highly regulated and subject to external audit and provides general purpose reports that are historical in nature and often out of date once issued. These general purpose financial reports are Statement of financial position (Balance sheet), Statement of comprehensive income (Income statement), Statement of changes in equity and Statement of cash flows.


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REALITY CHECK 1.5

## Wesfarmers Ltd Annual Report 2008

Wesfarmers Ltd and its controlled entities
Income statement for the year ended 30 June 2008

| | Note | CONSOLIDATED 2008 $m | CONSOLIDATED 2007 $m | PARENT 2008 $m | PARENT 2007 $m |
|---|---|---|---|---|---|
| **Revenue** | | | | | |
| Sale of goods | | **31 650** | 8239 | **129** | 132 |
| Rendering of services | | **1 651** | 1428 | **59** | 63 |
| Interest : subsidiaries | | **–** | – | **22** | 19 |
| Interest : other | | **121** | 72 | **16** | 4 |
| Dividends : subsidiaries | | **–** | – | **1 943** | 841 |
| Dividends : other | | **32** | – | **–** | – |
| Other | | **130** | 15 | **–** | – |
| | | **33 584** | 9754 | **2 169** | 1059 |
| **Expenses** | | | | | |
| Raw materials and inventory purchased | | **(21 788)** | (4799) | **(69)** | (75) |
| Employee benefits expenses | 4 | **(4 459)** | (1411) | **(58)** | (45) |
| Insurance expenses | | **(1 095)** | (973) | **(45)** | (54) |
| Freight and other related expenses | | **(499)** | (188) | **–** | – |
| Occupancy-related expenses | 4 | **(1 231)** | (244) | **(5)** | (4) |
| Depreciation and amortisation | 4 | **(654)** | (345) | **(2)** | (2) |
| Other expenses | 4 | **(1 751)** | (612) | **(43)** | (10) |
| | | **(31 477)** | (8572) | **(222)** | (190) |
| Other income | 4 | **96** | 40 | **–** | – |
| Finance costs | 4 | **(800)** | (200) | **(698)** | (188) |
| Share of profits and losses of associates | 15 | **40** | 83 | **–** | – |
| **Profit before income tax** | | **1 443** | 1105 | **1 249** | 681 |
| Income tax (expense)/credit | 5 | **(393)** | (319) | **234** | 45 |
| **Profit attributable to members of the parent** | | **1 050** | 786 | 1 483 | 726 |
| Earnings per share (cents per share) | 6 | | | | |
| – basic for profit for the period attributable to ordinary equity holders of the parent | | **180.6** | 204.9 | | |
| – diluted for profit for the period attributable to ordinary equity holders of the parent | | **179.5** | 202.6 | | |
| Dividends per share paid or declared out of profits for the year (cents per share) | 7 | **200.0** | 225.0 | | |

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Wesfarmers Ltd and its controlled entities
Balance sheet as at 30 June 2008

| | NOTE | CONSOLIDATED 2008 $m | CONSOLIDATED 2007 $m | PARENT 2008 $m | PARENT 2007 $m |
|---|---|---|---|---|---|
| **ASSETS** | | | | | |
| **Current assets** | | | | | |
| Cash and cash equivalents | 8 | **725** | 219 | **131** | 17 |
| Trade and other receivables | 9 | **2093** | 1513 | **6295** | 4966 |
| Inventories | 10 | **4638** | 1235 | **–** | – |
| Derivatives | 29 | **138** | 90 | **181** | 97 |
| Investments backing insurance contracts | 11 | **871** | 816 | **–** | – |
| Other | 12 | **211** | 151 | **–** | – |
| **Total current assets** | | **8676** | 4024 | **6607** | 5080 |
| **Non-current assets** | | | | | |
| Receivables | 9 | **135** | 104 | **19403** | – |
| Available-for-sale investments | 13 | **36** | 2064 | **–** | – |
| Other financial assets | 14 | **–** | – | **2899** | 2899 |
| Investment in associates | 15 | **465** | 389 | **–** | – |
| Deferred tax assets | 5 | **390** | – | **30** | 7 |
| Property, plant and equipment | 16 | **6599** | 2716 | **27** | 25 |
| Identifiable intangible assets | 17 | **4408** | 130 | **–** | – |
| Goodwill | 17 | **16387** | 2568 | **–** | – |
| Derivatives | 29 | **149** | 73 | **149** | 73 |
| Other | 18 | **61** | 8 | **11** | 8 |
| **Total non-current assets** | | **28630** | 8052 | **22519** | 3012 |
| **Total assets** | | **37306** | 12076 | **29126** | 8092 |
| **LIABILITIES** | | | | | |
| **Current liabilities** | | | | | |
| Trade and other payables | 19 | **3966** | 1255 | **137** | 41 |
| Interest-bearing loans and borrowings | 20 | **1261** | 4436 | **1007** | 4165 |
| Income tax payable | | **236** | 98 | **240** | 102 |
| Provisions | 21 | **1010** | 186 | **63** | 36 |
| Insurance liabilities | 22 | **1137** | 1122 | **–** | – |
| Derivatives | 29 | **53** | 13 | **180** | 96 |
| Other | 23 | **277** | 72 | **–** | – |
| **Total current liabilities** | | **7940** | 7182 | **1627** | 4440 |

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| | | | | | |
|---|---|---|---|---|---|
| **Non-current liabilities** | | | | | |
| Payables | 19 | **25** | 79 | **–** | – |
| Interest-bearing loans and borrowings | 20 | **8256** | 687 | **7902** | 678 |
| Deferred tax liabilities | 5 | **–** | 144 | **–** | – |
| Provisions | 21 | **940** | 170 | **18** | 11 |
| Insurance liabilities | 22 | **340** | 279 | **–** | – |
| Derivatives | 29 | **89** | – | **150** | 70 |
| Other | 23 | **126** | 32 | **5** | – |
| **Total non-current liabilities** | | **9776** | 1391 | **8075** | 759 |
| **Total liabilities** | | **17716** | 8573 | **9702** | 5199 |
| **Net assets** | | **19590** | 3503 | **19424** | 2893 |
| **EQUITY** | | | | | |
| **Equity attributable to equity holders of the parent** | | | | | |
| Contributed equity | 24 | **18173** | 2256 | **18167** | 2250 |
| Employee reserved shares | 24 | **(76)** | (111) | **(73)** | (108) |
| Retained earnings | 25 | **1163** | 1131 | **1123** | 638 |
| Reserves | 26 | **330** | 227 | **207** | 113 |
| **Total equity** | | **19590** | 3503 | **19424** | 2893 |

Source: Wesfarmers Ltd Annual Report 08, www.wesresources.com.au, pages 70–1.

## Commentary

- Figures are rounded off to the nearest $ million.
- There are separate columns for 'Parent' (Wesfarmers by itself) and for 'Consolidated' (Wesfarmers together with the other firms it controls, such as Bunnings).
- The figures for the previous financial year are given for comparison.
- Reference is made to 'Notes' (the left-hand column of figures), which will be found elsewhere in the report and contain additional details about the various items.

- If you were thinking of buying shares in Wesfarmers, which parts of this report would you be most interested in?
- What other information would be useful in making your decision?
- Would these reports be helpful to the managers of Wesfarmers? If not, why not?

There is a lot of additional information on reporting for public companies in Chapters 7–11.

Key Concept 1.6

**Financial accounting**

Financial accounting is the process of producing general purpose financial reports used by parties external to the entity, such as shareholders, investors, lenders, suppliers, customers, employees and government.

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## Internal and external reporting

External reporting is the purpose of financial accounting. It enables users to assess the performance, position and liquidity of an entity. It therefore serves to allow the custodians of the business management to be accountable for the decisions they have made and to show how they have invested the resources at their disposal. They are able to show how they have fulfilled their legal obligations and compliance with other statutory requirements. External reporting is very much controlled by legal, statutory and external obligations to such organisations as the Australian Securities and Investments Commission (ASIC) and ASX.

Internal reporting supports the managerial decision-making process. It assists in the management of the business assets, liabilities, income and expenses and is important in enabling the business to reach its goals and improve performance. Internal reporting is often closely linked with the concept of responsibility accounting. This concept is about the setting of standards against which to measure the performance of a business segment, such as a department or branch of the business. The information provided can be in the same format as that produced for external reporting purposes, such as the Statement of financial position and Income statement. However, there are no legal obligations involved in meeting the requirements, e.g. of accounting standards.

Other internal reporting can be a performance report relating to such aspects as expenses and income or a specific report requested by a manager on any area of the business operation, such as the cost of a product. Internal reports may be speculative, more subjective and often very detailed. The format is flexible and is often future-orientated compared to those reports produced for external reporting purposes. The only factor controlling the preparation of an internal report is cost.

## Regulation and control of financial reporting

It is a well-established principle in our society that people should be protected to some degree from exploitation by others who may be better informed or more expert than they are. In the world of business finance this is achieved, broadly, in three ways:

1 the development of an accounting conceptual framework, with associated accounting standards, which sets out principles and rules with which all producers of financial reports are encouraged and some are required by law, to comply
2 legislation governing the operation of certain forms of business entity, notably the *Corporations Act 2001*
3 the requirement that certain entities must have their accounting systems and reports checked by an independent expert ('external audit').



The group most in need of the protection provided by these means is clearly that section of the population that holds shares or other securities in public companies, so it is those forms of business entity that are required by statute to comply with accounting standards.

Up until 2005, the Accounting Conceptual Framework in Australia consisted of four Statements of Accounting Concept (SAC), which defined the sort of organisation that needed to comply with Accounting Standards in the production of its financial reports and what those reports needed to include. From the start of 2005, Australia adopted the Framework for the Preparation and Presentation of Financial Reports ('the Framework') set out by the International Accounting Standards Board (IASB), which, together with the former SACs 1 and 2, constitutes the conceptual outline within which Australian


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businesses must operate. The Australian Accounting Standards Board (AASB) has issued a number of Accounting Standards that deal with specific items of preparation or presentation. Generally, Standards comply with the principles contained in the Framework; though, if there is a conflict, the Standard prevails.

## SAC 1

SAC 1 defines a 'Reporting Entity', which is an organisation that must comply with standards in the production of its financial reports. A Reporting Entity, according to SAC 1, is an organisation that has users of its reports who rely upon those reports as their sole or main source of information to assist them in making economic decisions about that organisation (e.g. whether to buy, maintain or sell a shareholding in it).

The obvious example of a Reporting Entity is a public company, which may have thousands of shareholders, or potential shareholders, who will know nothing about the company other than what is contained in its financial reports and press comments on the reports. Other examples might be some large proprietary companies and listed investment trusts. Sole traders, partnerships and small proprietary companies would not normally be reporting entities.

## SAC 2

SAC 2 defines a general purpose financial report (GPFR). This is a report whose users rely on it as their sole or main source of information to assist their economic decision-making. GPFRs must comply with Accounting Standards. Clearly any financial report produced by a reporting entity is a GPFR, but there will be many instances of reports produced by organisations that would not normally be regarded as reporting entities, which are nonetheless GPFRs (see Reality check 1.6). The purpose of general purpose financial reports as outlined in SAC 2 and the Framework is to enable:

- users to assess the financial performance, position and liquidity of the business
- users to assess the financing and investing decisions made by the entity
- those charged with the responsibility of managing the entity to show compliance with statutory requirements.

Although compliance with Accounting Standards is not mandatory for all business financial reports, it does extend well beyond the bounds of statutory requirements. For one thing, the professional accounting bodies in Australia expect their members to comply with standards in all reports for whose preparation they are responsible, regardless of whether this compliance is mandatory in terms of SAC 1 or 2.

See Chapter 8 for further detail on the application of the regulatory system to corporations in Australia.

**REALITY CHECK 1.6**

Southern Stockfeeders Pty Ltd is a small family business selling stock feed and pet products in the outer metropolitan area of Perth. The shareholders, Donna and Blitzen, are husband and wife who both work in the business and make up the board of directors. The firm has the opportunity to purchase an adjoining lot to expand its business but, to do this, will need to borrow money from the bank. The owners have approached a small firm of professional accountants to assist them in the preparation of their application to the bank, which needs to include Income statements and Balance sheets for the past three years as well as forecasts for the future. The accountant dealing with their case, Rosie Fewcha, says that the past reports that the company has produced over the years will need some amendments to ensure that they comply with Accounting Standards.

Why do you think she would say that?

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### Commentary

Although Southern Stockfeeders Pty Ltd is not a reporting entity in terms of SAC 1, in that the users of its reports are normally the owners and managers (who are intimately familiar with the workings of the business), the reports that it will send to the bank in support of its application could be construed as GPFRs in terms of SAC 2. The bank has no particular knowledge of the company and will base its opinion on the profitability and future viability of the firm to a large extent on the reports that the owners submit with their application.

Rosie is presumably a member of one of the Australian accounting professional bodies and, as such, is expected, at least in the preparation of GPFRs, to comply fully with accounting standards.

## External audit

Certain types of entity – notably public companies – are required to have their accounts checked by a qualified expert accountant who is independent of the company, known as an auditor. The auditor is essentially acting on behalf of the shareholders and is appointed by them at the company's annual general meeting. The auditor is required to check the company's systems and records to make sure that they have been properly maintained and that the reports at the end of the financial period accurately represent the company's performance and position for that period. A formal report to that effect must be attached to the accounts, which are sent out to the shareholders and approved by them at the company's annual general meeting.

If the auditors are unable to state that the accounts have been properly kept and/or that the reports truly reflect the company's position, they must state as much in their report, giving details of the ways in which the records or reports are deficient. This is known as a qualified audit report. Naturally companies do not wish to have a qualified report that reflects poorly on the directors and management and it is usual for any errors or anomalies to be rectified before the accounts are published so as to avoid the need for the auditors to qualify their report.

# INTERNAL CONTROL

In addition to external controls imposed on some types of business entity, all businesses need to have systems within them that ensure that assets are safeguarded and used as effectively as possible. These procedures, policies and systems form what is called internal control. There are three main *purposes* governing internal control:

1. assets, current and non-current, need to be protected against loss or damage
2. assets must be employed as efficiently as possible
3. information must be available to management that is accurate to enable compliance with the requirements of the first two purposes and to ensure adherence to the policies they have established. This information must meet statutory requirements where necessary.

The extent to which internal control systems need to be formalised and structured will depend on the size and complexity of the business.

The *principles* of internal control are:

- segregation of duties
- established lines of responsibility
- appropriate security of assets and records
- installation of mechanical and electronic devices
- adequate recording and documentation systems
- installation of verification and checking processes
- the existence of authorisation processes
- employment of competent and reliable staff.


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## Internal audit

An integral part of internal control is the internal audit function. Internal audit is the continual review of the procedures, systems and policies of the business to ensure that they are being adhered to and working efficiently and effectively. It monitors, examines and tests the effectiveness of established internal control systems. Its purpose is to detect and correct errors and to identify deficiencies in the business operation so that improvements can be made. This function is carried out by internal auditors, who report to the management of the entity.

A large organisation with several operating divisions and hundreds of employees will need specific and explicit control systems, normally under the supervision of an internal audit committee, which would include representatives from senior management, the accounting/finance department and the operating divisions. Apart from supervising the internal control systems and process, this committee will also liaise with the external auditors to ensure that the firm is meeting the requirements of the external regulators.

For a small business, the need for formal structures will be less since the owners and managers (often the same people) will be able to have a close personal knowledge of all aspects of the business. It must be said, though, that given the very high failure rate of small businesses – often attributable to ineffective management of stock, debtors and especially cash – some formalities in relation to internal control should be applied, whatever the size of the firm, including bank reconciliation and regular cash budgeting. It is also worth making the general point that you must consider both the cost and benefits of control. There is no point in implementing a restrictive system that reduces losses to zero if the cost of the system outweighs the losses that it prevents.

While it is not the purpose of this book to go into great detail on the methods that a business might employ to control and manage its assets, we provide an outline of the general guidelines to be followed in the control of cash, inventory, debtors and non-current assets.

## Cash control

Cash, whether in the form of money in the till or deposits in the bank, is the most vulnerable asset, being both desirable to all and easily disposed of. Cash control measures must be such as to minimise the likelihood of fraud and theft by requiring systematic and separate authorisation of payments, proper documentation of receipts and payments, regular reconciliation with the bank's records and an audit trail that will enable transactions to be traced, enabling the cause of any losses to be identified. Regular cash budgeting is vital so that future surpluses or deficits can be planned for and dealt with in the most effective manner.

## Stock or inventory

In general, the stock control system should ensure that the firm has the stock it needs, but not an excessive amount and that this stock is safeguarded against loss or damage. With the use of computers, firms can control their stock effectively; most firms can afford to use the perpetual inventory system, which allows easier identification of losses due to theft and reports can easily be produced to identify slow- and fast-moving lines of stock.

Closed-circuit cameras and electronic marking of stock items have also rendered shoplifting more difficult. Even if a firm is too small to invest in this sort of technology, much can be achieved by careful documentation of purchases and sales, training of sales staff and vigilance.

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## Debtors or accounts receivable

For firms that do a significant amount of their business on credit, their debtors may represent a large investment of resources. Offering customers credit facilities may be necessary for commercial reasons, but the firm needs to ensure that the minimum amount of funds are tied up in this way and that bad debts (credit sales that eventually have to be written off as irrecoverable) are minimised. Some of the measures necessary might include:

- vetting credit customers to avoid selling to those with poor credit histories
- identifying, by means of regular debtors' reports, those who are not paying within the required period
- promptly following up slow payers with reminders of increasing severity, which may culminate in legal action and/or the refusal to sell to that customer on credit until the debt is repaid.

Standards need to be set for the level of debt and repayment periods and any adverse trends quickly identified and acted on.

## Non-current assets

For many businesses, investment in non-current assets (land, buildings, plant, vehicles, equipment, etc.) is a very significant part of the total funds employed. It is clearly important that this investment be adequate (sufficient assets to meet the firm's needs) but not excessive (assets standing idle or underutilised). The topic of capital investment decision-making is dealt with in detail in Chapter 4. Systems should be in place to ensure that assets are safeguarded and their use monitored and controlled. These would include:

- complete, up-to-date and accessible records of all assets, so that managers are aware what they have available, its age, location, cost, operating details, etc.
- operating policies for machinery and vehicles to ensure the safety and effectiveness of the assets and those operating them
- training of staff to ensure that those using assets will do so as efficiently as possible
- regular maintenance of assets, such as plant and machinery, to prolong their working life and avoid major breakdowns
- a reporting system that will swiftly identify any deficiencies in the measures listed above and enable managers to rectify them.

Key Concept 1.7

**The purpose of control**

Control is necessary because:

- assets must be safeguarded from loss or damage.
- assets must be used as efficiently as possible.
- management must be provided with the necessary information to ensure the protection and efficient utilisation of assets.

REALITY CHECK 1.7

Dorsogna Ltd is a West Australian smallgoods manufacturer that purchases pigs and other meat animals from a number of suppliers and converts these into a variety of products, including ham, salami, polony and prosciutto. These are sold to a large number of retailers throughout Western Australia, from big supermarkets to small delis. They are also exported to the eastern states and overseas. The company, which is a family concern not listed on the stock exchange, employs over 300 people, mostly in its factory in Palmyra.

What forms of internal control do you believe the company is likely to employ?



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### Commentary

Although Dorsogna is a family business, it is large enough and complex enough to require sophisticated and specific control systems. These would certainly include:

- inventory controls and records for both raw materials and finished product – a complicating factor is that both of these types of stock are relatively perishable and need to be stored at low temperatures, which is obviously expensive. Another complication arises from the fact that the demand for different products fluctuates during the year. (For example, the demand for ham rises steeply around Christmas time and the demand for bacon tends to be greater during the cooler months.)
- asset registers and control systems for a range of fixed assets, including factory machines, refrigeration equipment and delivery vehicles
- debtors' control systems – Dorsogna would have hundreds, perhaps even thousands, of credit customers and it is obviously vital to ensure that these are managed effectively to minimise the funds tied up in debtors and the losses due to bad debts
- cash management – although probably relatively few of the company's transactions are carried out on a cash basis, there still need to be strict controls on expenditure approval. Cash budgeting will be very important, especially in view of the seasonal fluctuations in demand for the company's products and the possible long lead time for delivery to some of its markets.

## ASSET MANAGEMENT

The assets of a business are extremely important to its success. They are usually costly and expected to generate sufficient cash flow to ensure ongoing liquidity and a good rate of return to maximise the wealth of the owners. Business failure is largely caused by poor asset management.

### Non-current assets

Every business requires appropriate levels of investment in non-current assets because it is these assets that are at the heart of its operations and lead to future growth. A business must decide whether to invest in real assets (such as property), financial assets (such as shares) or intangible assets (such as trademarks).

The purchase of non-current assets should be financed by long-term debt or equity finance and therefore sufficient cash flow must be generated to ensure that these debts are repaid and an adequate profitability earned so that the owners receive their anticipated rate of return on investment.

An underinvestment in non-current assets can lead to stifling business growth, an inability of the business to operate effectively and failure to provide for customer needs. An overinvestment in non-current assets can result in a lack of productivity, inability to repay debt and a poor rate of return to the owners.

### Inventory

There is a significant cost in maintaining inventory. If the type or quantity of inventory is incorrect this can result in slow-moving items or stock being out of date or deteriorating. To ensure a good inventory turnover and to keep costs to a minimum, it is necessary to have appropriate reorder points and reorder quantities and to take advantage of bulk purchase and discounts. An overinvestment in inventory can lead to opportunity cost in that the funds could have been better utilised in some other type of investment, while an underinvestment in inventory can lead to a loss of sales or disruption to production.

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## Accounts receivable

Large accounts receivable totals can lead to bad debts, opportunity cost due to the loss of investment potential and an adverse effect on the liquidity of the business. However, the lack of credit facilities for customers can lead to potential loss of sales. Credit control is costly and time consuming, but necessary. The objectives must be the identification of poor credit risks and the encouragement of prompt payment by all debtors.

## Cash

Cash is vital to the liquidity of a business. Sufficient cash must be held to meet normal operational demands so that debts can be repaid, expenses paid, assets acquired and advantage taken of discounts. Cash budgeting is a very important part of this process so that the credit rating of the business is not damaged. Maintaining too much cash in a cheque account is costly as there are fees, such as bank charges, and a very low interest rate applies. Surplus cash should be invested in marketable securities and long-term investments where possible, as they provide a better rate of return. If too little cash is held, this can lead to liquidity problems and, in some circumstances, it is important to arrange overdraft facilities in advance. A bank overdraft will allow the business to borrow funds as required rather than having to borrow on a long-term basis.

# Test your knowledge

1 Define 'profit' and the elements that make it.

2 How would you determine the security and viability of a firm?

3 What does it mean to describe assets and liabilities as 'current 'or 'non-current'? What is the significance of this distinction?

4 What is the meaning of 'ethics'?

5 List the parties whose relationships with a business might have an ethical dimension?

6 Outline the role of an accountant working for a small business.

7 List and compare the long-term sources of finance for a small- to medium-sized business.

8 List and compare the short-term sources of finance for a small- to medium-sized business.

9 What is the meaning and significance of 'gearing' in relation to business finance?

10 What are the alternative ways of dealing with temporary cash surpluses?

11 List and briefly distinguish the three main types of business.

12 Define and explain the purpose of management accounting.

13 Define and explain the purpose of financial accounting.

14 List the main external users of financial accounts.

15 What types of enterprise need to have their accounting systems and reports regulated?

16 What is a 'reporting entity' as defined by SAC 1? Give two examples.

17 What is a 'general purpose financial report' as defined by SAC 2? What is the purpose of financial reporting?

18 What is 'the Framework' and what is its purpose?

19 What is the role of an external auditor? How is such an officer appointed?

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20 Outline the principles and purpose of internal control.

21 State the main categories of assets over which a business must exercise control. Outline the reasons for and methods of control in each case.

# Test your understanding

## Topic guide

- Classification of expenses: 1.1
- Income statement: 1.2
- Classification of assets and liabilities: 1.3
- Statement of financial position: 1.4
- Income statement and statement of financial position: 1.5, 1.6

*Exercises 1.1–1.6 and 1.8 relate to revision of concepts and techniques covered in Units 2A and 2B of the Accounting and Finance Course of Study.*

- Sources of finance and financial structure: 1.7, 1.12, 1.13, 1.14
- Types of business: 1.8
- Compliance with AASB: 1.9
- Internal control, principles: 1.10
- Internal control, cash: 1.11
- Internal control, various assets: 1.14

1.1 Suggest appropriate classifications for the expenses listed below. The proposed classifications are Cost of sales, selling and distribution, Financial expenses, General expenses and Office expenses.

| Expense | Classification |
|---|---|
| Advertising | |
| Bad debts | |
| Cartage inwards | |
| Cartage outwards | |
| Cost of sales | |
| Customs duty | |
| Delivery vehicle expenses | |
| Depreciation of delivery vehicles | |
| Discount allowed | |
| Insurance | |
| Interest expense | |
| Office wages and salaries | |
| Postage and stationery | |
| Rent | |
| Sales commissions | |
| Sales salaries | |
| Telephone and internet connections | |

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1.2 The following is an extract from the Trial balance of Bean & Counter, a firm of accountants, at the end of the financial year on 30 June 2010. Produce an appropriately classified income statement for the firm for that year.

| | Dr $ | Cr $ |
|---|---|---|
| Fees earned | | 967000 |
| Interest revenue | | 2500 |
| Office rent | 48000 | |
| Depreciation of office equipment | 4500 | |
| Office wages | 98000 | |
| Accountants' salaries | 546000 | |
| Communication costs | 10500 | |
| Postage and stationery | 2600 | |
| Electricity | 7500 | |
| Accountants' training costs | 4900 | |
| Membership fees, accounting organisations | 3000 | |
| Insurance | 28000 | |

1.3 Suggest appropriate classifications for the assets and liabilities listed below. The balance date is 30 June 2010.

| Asset or liability | Classification |
|---|---|
| Accrued expenses | |
| Accrued interest revenue | |
| Bank loan (repayable 30/9/12) | |
| Cash at bank | |
| Cash in hand | |
| Debtors | |
| Fees revenue in advance | |
| Government bonds (maturing March 2011) | |
| Motor vehicles | |
| Office equipment | |
| Prepaid office rent | |
| Stock of stationery supplies | |

1.4 The following is the Trial balance of A to Z Electrical Pty Ltd, a retailer of electrical goods and computer equipment, at the end of the financial year on 30 June 2010 after the determination of the profit for the year. Use the information to produce an appropriately Classified statement of financial position for the firm at that date.

| | Dr $ | Cr $ |
|---|---|---|
| Accrued expenses | | 10800 |
| Accumulated depreciation, delivery vehicles | | 21700 |
| Accumulated depreciation, fixtures and fittings | | 28000 |
| Bank | | 7500 |


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| | | |
|---|---|---|
| Bank loan (repayable in 5 equal annual instalments starting 1/1/2011) | | 50000 |
| Creditors | | 88000 |
| Debtors | 48000 | |
| Delivery vehicles | 118000 | |
| Fixtures and fittings | 135000 | |
| Goodwill | 150000 | |
| Inventory | 166500 | |
| Prepaid insurance | 12000 | |
| Provision for doubtful debts | | 500 |
| Provision for income tax | | 25000 |
| Retained earnings | | 98000 |
| Share capital | | 300000 |
| | **629500** | **629500** |

1.5 The following is the Trial balance of Uppagumtree Trading after balance day adjustments for the year ended 30 June 2010.

| | Dr $ | Cr $ |
|---|---|---|
| Bank | 13200 | |
| Accounts receivable | 17800 | |
| Inventory at 30/6/10 | 31200 | |
| Motor vehicles | 66000 | |
| Accumulated depreciation, motor vehicles | | 37200 |
| Bad debts | 400 | |
| Sales | | 304000 |
| Cost of sales | 131250 | |
| Sales returns | 1200 | |
| Wages | 116000 | |
| Advertising | 11400 | |
| Freight outwards | 14500 | |
| Agency commission | | 5600 |
| Office expenses | 8750 | |
| Rent | 12000 | |
| Interest expenses | 800 | |
| Accounts payable | | 20900 |
| Term loan (repayable 2012) | | 30000 |
| Capital | | 40000 |
| Depreciation of motor vehicles | 13200 | |
| | **437700** | **437700** |

**Required**

a A Classified income statement for the year ended 30 June 2010.

b A Classified statement of financial position as at 30 June 2010.

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1.6 The following is the Trial balance of Mendafews Electrical Contractors after balance day adjustments for the year ended 30 June 2010.

| | Dr $ | Cr $ |
|---|---|---|
| Accounts receivable | 59200 | |
| Advertising | 2400 | |
| Bank | 27200 | |
| Motor vehicles (work vans) | 126000 | |
| Depreciation, motor vehicles | 16000 | |
| Accumulated depreciation, motor vehicles | | 62000 |
| Office equipment | 12000 | |
| Depreciation, office equipment | 1200 | |
| Accumulated depreciation, office equipment | | 5600 |
| Wages – electricians | 366000 | |
| Wages – office staff | 87000 | |
| Office expenses | 22400 | |
| Insurance | 32000 | |
| Fees | | 665000 |
| Motor vehicle expenses | 29200 | |
| Mortgage (repayable 2013) | | 50000 |
| Interest expense | 4000 | |
| Drawings | 88000 | |
| Electrical materials used | 11000 | |
| Bad debts | 600 | |
| Accounts payable | | 1600 |
| Capital | | 100000 |
| | **884200** | **884200** |

**Required**

a A Classified income statement for the year ended 30 June 2010.

b A Classified statement of financial position as at 30 June 2010.

1.7 Use the table below to indicate which source(s) of finance might be suitable for the various types of expenditure listed. Explain and justify your choice of sources.

| EXPENDITURE | SOURCES | | | | | | |
|---|---|---|---|---|---|---|---|
| | Supplier credit | Bank overdraft | Short-term loan | Long-term loan | Lease | Hire-purchase | Equity |
| Purchase of land | | | | | | | |
| Purchase of stock | | | | | | | |
| Funding debtors | | | | | | | |
| Purchase of plant | | | | | | | |
| Prepayment of lease | | | | | | | |

1.8 a State which category the following businesses fall into (merchandising, manufacturing or service). Do any of them fall into more than one category?

i Medical practice

ii Cinema

iii Concrete supplier



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iv Estate agent
v Market garden
vi Wheat/sheep farm
vii Liquor store
viii Chemist
ix Jewellery store
x Video store

b Look in the business section of the White Pages telephone directory and identify at least five businesses in each category.

1.9 Which of the following financial reports would need to comply with Australian Accounting Standards? Explain your answers.

a The Statement of financial position included in the six-monthly report made by Rio Tinto Ltd to the Australian Securities Exchange.
b The monthly performance report produced by Rio Tinto's iron ore division for senior management.
c The annual income statement produced by the accountant of Greenfields Pty Ltd, a small family horticultural business.
d The financial budgets produced by Greenfields Pty Ltd as part of its application to the Commonwealth Bank for a loan to fund a proposed expansion of the business.

1.10 Happy Harry's Hardware is a small family concern selling hardware and building materials in one of Perth's eastern suburbs. The owners are bit concerned that, although they are always busy, they do not seem to be making as much profit as they used to. They have asked you to investigate. In the course of your investigation you discover the following:

a Most payments are made by cheque, signed by one of the owners or the store supervisor. However, for greater convenience, some payments are made out of the cash in the till.
b The monthly statements received from the bank are carefully filed, though nobody actually reads them.
c New stock is ordered when the supervisor or one of the workers notices that an item is running low. The order is usually placed by telephone to the supplier to ensure that it is acted on promptly.
d A number of small builders and tradespeople have accounts with the firm and are able to enjoy the benefit of a 'trade discount'. When the accounts are finalised at the end of the year, any whose accounts are more than three months overdue are identified and a reminder letter is sent out to them.

**Required**

With reference to the principles of internal control, state whether you believe these particular practices are acceptable and, if not, what might be done to improve them.

1.11 Smart Sally's Supermarket Supplies has provided you with the following information from the financial reports of the last two years.

| | 2010 $ | 2011 $ |
|---|---|---|
| Sales | 657000 | 673000 |
| Profit | 87000 | 90000 |
| Inventory | 48000 | 81000 |
| Accounts receivable | 39000 | 62000 |
| Cash at bank (overdraft) | 15000 | (36000) |

Sally is worried about the decline in her business's cash position, despite the fact that sales and profits have increased by a small amount. Based on the information you have been given, suggest two factors that may have contributed to the firm's cash decline. Outline some measures that Sally could take to improve the situation.

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1.12 Tom the Tank Traders has recently completed a significant expansion of its operations, which, it is hoped, will greatly increase sales in the future. Some key figures before and after the expansion are given below.

| | 2010 $ | 2011 $ |
|---|---|---|
| Plant and equipment, at cost | 400000 | 750000 |
| Cash at bank (overdraft) | 40000 | (76000) |
| Accounts payable | 35000 | 69000 |
| Mortgage loan | 150000 | 100000 |
| Short-term bank loan | – | 200000 |
| Owner's equity | 100000 | 105000 |

Based on the information given, comment on the means that the firm has employed to fund the expansion. How appropriate do you think it was? Outline alternative methods of funding.

1.13 You are the manager of the Gobust Bank in your suburb. Two local small businesses have applied to you for loans. Both of them have provided you with balance sheets and profit forecasts, information from which is summarised below.

| | Tina's Tyres $ | Norm's Nursery $ |
|---|---|---|
| Land, at cost | – | 400000 |
| Other non-current assets | 20000 | 35000 |
| Current assets | 180000 | 150000 |
| Current liabilities | 90000 | 160000 |
| Non-current liabilities | 50000 | – |
| Capital | 60000 | 425000 |
| Profit forecast for the next year | 250000 | 60000 |

Both businesses are seeking loans of around $200000 with an interest rate of 8–10%, which would be repayable in five to ten years.

a Which of the given figures is likely to be of interest to you as a lender in deciding whether to approve the loans and why?
b Compare the two firms in relation to the relevant factors you have identified.
c If you were to approve the loans, what would you decide in each case as far as interest rates and repayment terms are concerned? Explain your answer.

1.14 Lawrence Ltd has been operating for many years but has struggled to maintain profitability in recent years. Some of the policy decisions made by the board of directors over the past few years are:

- sales must be made on a cash basis from 2011 onwards
- cash on hand at the bank must be maximised
- tight control must be kept on all costs, including minimising holdings of inventory
- payments to creditors should be delayed as long as possible.

Over the same period, the board has been concerned with:

- increases in customer dissatisfaction levels
- shareholder dissatisfaction with declining dividends
- a decline in the company's credit rating.

The managing director has recently suggested that the business should expand its operations through the further purchase of non-current assets and that this should be financed by a share issue.


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Some of the key figures over the past three years are given below.

| | 2010 $ | 2011 $ | 2012 $ |
|---|---|---|---|
| Inventory | 70000 | 60000 | 50000 |
| Accounts receivable | 60000 | 0 | 0 |
| Cash at bank (cheque account) | 120000 | 140000 | 150000 |
| Plant and equipment, at cost | 900000 | 900000 | 900000 |
| Property (revalued) | 400000 | 450000 | 500000 |
| Accounts payable | 100000 | 125000 | 135000 |
| Debentures | 0 | 100000 | 150000 |
| Share capital | 1200000 | 1200000 | 1200000 |
| Sales | 250000 | 200000 | 180000 |
| Profits | 100000 | 90000 | 80000 |
| Dividends | 25000 | 20000 | 15000 |

a Comment on the working capital management of the company. Do you consider that it is appropriate? What changes could you suggest to see improvement?
b Comment on the management of the non-current assets of the company. Do you consider that it is appropriate? What changes might you suggest to see improvement?
c Comment on the financial structure of the company. Are the equity levels in the company appropriate? Have the assets been financed in an appropriate way? What might be the underlying cause of dissatisfaction from the shareholders?
d Would you suggest that the company go ahead and purchase the extra non-current assets and finance these through a share issue?

## Investigation

1 Select an Australian-based company and visit its website. Search for its annual report and answer the following questions:
   a Is the business a service, manufacturing or trading/retailing business? Explain your answer.
   b What types of short-term and long-term investments does the company have?
   c What types of short-term and long-term debt does the company have?
   d What types of share capital does it have?
   e Do you think the financial statements provide useful and understandable information for external users? Explain your answer.
   f Do you think the non-financial information will be useful to external users? Explain.

2 Select one Australian financial institution from each of the following categories. For each institution locate its website and analyse and describe the features of three of its finance and investment products available to a company:
   - banks
   - merchant banks
   - finance companies.

## Essay

1 Outline the role of an accountant working for a small manufacturing company:
   - planning and setting up the business
   - recording financial transactions
   - providing management with information and advice.

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2 Explain and briefly evaluate the different sources of short-term finance available to a retailing business.

3 What is meant by 'internal control'? Show how the principles of internal control may be applied to inventory or non-current assets in the case of a medium-sized retailing business.

## Ethics case study

You have been hired by Jim's Towing Service, a sole proprietorship, to prepare the tax return for the business. Upon checking the bank statements and the cash books of the business you discover that Jim has not included in the revenue any cash received when customers paid cash. Only the amounts received from insurance companies have been included in the revenue.

Discuss what you should do.



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# Chapter 2
# INTRODUCTION TO BUDGETING

## What You Will Learn

After studying this chapter you should be able to:

1 Explain the importance of business planning
2 Distinguish between goals, objectives and generic business strategies
3 Explain the difference between the business strategies of cost leadership and differentiation
4 Explain the importance of strategic initiatives and performance management to reduce costs and risks
5 Outline the nature and importance of the master budget with reference to operating budgets, financial budgets and capital budgets
6 List the purposes of preparing budgets
7 Identify the purpose and function of cash budgets and the importance of cash budgets to business liquidity
8 Prepare cash budgets for business operations and interpret cash budgets and explain how such interpretations contribute to the understanding of business liquidity and management
9 Outline the differences between cash and accrual budgeting
10 Identify the purpose and function of budgeted income statements and the importance of budgeted income statements to the business
11 Prepare budgeted income statements for business operations
12 Interpret budgeted income statements and explain how such interpretations contribute to the understanding of business profitability and management
13 Identify the purpose and function of cash and income performance reports and the importance of performance reports in the budget cycle
14 Prepare performance reports on cash and budgeted income statements for business operations
15 Interpret and comments on cash and income performance reports and explain how such interpretations contribute to the quality of business management

## Introduction

In this chapter, we will examine the purpose of budgets, the preparation of budgets and performance reports.

A budget is a financial plan anticipating future outcomes generally focusing on profitability and liquidity. A budget must match the organisation's needs. Factors such as the nature and size of the organisation and the commercial environment in which it operates will influence the sort of budgets prepared. For example, in a retail organisation the budget focus is on the level of sales and the purchase of goods necessary to satisfy these sales. In contrast, the budget of a manufacturing organisation focuses on the sales of products and production costs. Cash budgets are critical in all business organisations.

Budgets may mean different things to different people within an organisation. For example, a budget that is introduced by management with the aim of monitoring production costs might be perceived by production managers as a device to monitor their performance. Where the goals of the individual and the entity are different, the budgeting process may have a negative effect. Positive behaviour flows from budgets when the goals of the entity and the individual are aligned. In these cases, the manager is motivated to achieve the budget's goals.

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# BUSINESS PLANNING

Planning involves working out the goals and objectives of a business and expressing how they are to be attained. Planning also involves a series of stages:

- the development of business goals, often expressed as a mission statement or vision statement – a mission statement is a statement of purpose that serves to guide the business. For example, the mission statement of the Bendigo Bank is 'We will focus on building and improving the prospects of our customers, communities and partners in order to develop sustainable earnings and growth for our business and thus provide increasing wealth for our shareholders'
- the setting of objectives to achieve these goals – an important part of the planning process is for a business to undertake a SWOT analysis of itself and its environment. SWOT means, strengths, weaknesses, opportunities and threats. From this a business can develop its objectives, strategies and priorities
- determining strategies to meet the objectives
- taking the operational decisions necessary to put the strategies into effect.

Budgeting is a vital part of this process – the effect of the strategies and operational decisions is predicted in financial terms over the budget period. Budgets need to be constantly under review in the light of changed circumstances and comparison with actual past performance to improve future accuracy of forecasts.

## Importance of planning

Business planning, in particular strategic planning, is important to the success of any business. A lack of planning means that a business may just drift along and simply react to events as they occur. Planning is vitally important today as the rate of change is so fast. There are many reasons why a business should plan. A budget can:




- give purpose and direction
- anticipate future events and plan how to deal with them
- connect and coordinate business activity
- encourage the challenging of accepted practice – is there a better way to do things?
- galvanise the energy of all staff, focus their activity and give employees a sense of belonging
- improve decision-making processes and bring forth creativity
- provide a business with a competitive advantage and improved market recognition.

One of the main purposes of business planning is to reduce risk and costs. By anticipating what might occur in the future, a business can prepare itself to respond to future changes. Planning is also about reducing costs and making savings. The planning process should highlight those areas of the business that are not operating effectively or that need to improve efficiency and productivity. The budgeting tool is often an important aspect of planning.

## Objective setting

An objective is a specific target for a business. Objectives must be specific, attainable, measurable, consistent and related to time. The objective of most businesses is to maximise profit. Other objectives include quality of service to customers and social and community objectives. Increasingly, reporting entities are including non-financial objectives by including objectives for social and environmental outcomes. Businesses normally set short-term, medium-term and long-term objectives.


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## Strategic objectives and planning

Strategic decisions are those that determine the long-term policies of the business. Strategic planning is often done at a high level by directors or senior executives rather than line managers.

REALITY CHECK 2.1

The following strategic objectives are from the online report of the Westpac Bank for 2008–09. These specific strategic goals are focused on customers and were developed to enhance customer response and, ultimately, the bank's financial returns.

Westpac's customer-centric business strategy is based on:

- developing a deep understanding of our customers' needs
- providing value-added solutions that seek to meet these needs
- deepening and building long-term relationships
- dramatically improving the experience customers have with us.

Our strategic priorities are focused on improving our distribution and customer offerings:

- putting customers at the centre of everything we do — driving a strong customer culture while developing and implementing compelling customer segment strategies – bringing banking and wealth management together for the customer
- further developing our people's capabilities — strengthening skills, depth of talent, collaboration and teamwork. Encouraging boldness and promoting achievement
- transforming our distribution model — establishing and driving locally empowered businesses – very close to the communities they serve. Continuing to invest in business banking and wealth
- investing in operations improvements — being easy to deal with, transforming service delivery, strengthening technology capabilities, increasing reliability and consistency of service and focusing on driving productivity while eliminating duplication
- leading in sustainability — embedding sustainability concepts in all elements of the business. Continuing to develop risk management as a competitive advantage.

Source: 'Our Strategy', Westpac Bank website, www.westpac.com.au.

www.westpac.com.au

### Commentary

The key strategic goals are focused on customers, employees, business networks, operational efficiency and sustainability.

REALITY CHECK 2.2

The following extract from the BHP Billiton Ltd 2008 Annual Report makes the company objectives clear.

### Chairman's Review

This year, we reported another record profit of US$15.4 billion, the seventh consecutive full-year profit increase. This represents a 602 per cent increase in attributable profit since 2001. Over the same period, Total Shareholder Returns, the movement in our share price plus dividends, have increased by 863 per cent, reflecting progressive dividend increases and the market value of the Company. We also rebased our dividend for the second successive year. This represents a 150 per cent increase over the past three years. Unfortunately, mining stocks have seen a significant de-rating since May this year on the back of short-term uncertainty. This is disappointing for the management and shareholders of BHP Billiton.

Source: BHP Billiton, *Resourcing the Future: Annual Report 2008*, www.bhpbilliton.com.au, page 6.

www.bhpbilliton.com.au

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### Commentary

In these opening remarks by the chairman, profit and dividends are of paramount importance!

Key Concept 2.1

**Strategic decisions**

Strategic decisions are those that determine the long-term policies of the business, which require the formation of specific objectives.

## Operating decisions

Operating decisions are those that focus on the efficient use of the resources available to the firm in the short term. Operating decisions are translated into a short-term plan, which is referred to as a budget. Budgets are simply plans of action expressed in monetary terms. Strategic goals need to be formulated into action plans so managers can look ahead and coordinate their activities. Without such forward plans a business might drift along and encounter undesirable situations.

Budgets also provide a basis for judging performance through comparison of budgeted and actual figures. It is important that budgets are communicated to personnel in an organisation so that they are aware of the planned targets and can act in accordance with the plan.

Key Concept 2.2

**Budget**

A budget is a written financial projection showing how activities and resources will be used during a specified period to achieve an organisation's objectives.

REALITY CHECK 2.3

### Qantas job cuts to be felt across Australia

by Callista Cooper

The head of Qantas, Alan Joyce, says job losses announced yesterday will be felt in every major capital city in Australia.

Yesterday Qantas announced it will axe 500 management positions and up to 1250 equivalent full-time positions will be affected because of the global financial crisis.

Mr Joyce says most of the management job losses will be felt in Sydney where the majority of those positions are based, but all capital cities will be impacted.

'Obviously this is a cut across our network, so Melbourne will be impacted, but there won't be a removal of any routes,' he said.

'There is frequency changes on certain routes both domestically and internationally but the network will remain intact.'

'Unfortunately I think there will be job losses across the network and that involves every major capital.'

Mr Joyce says the staff cuts are necessary to ensure the future long-term viability of the airline.

'In this half of the year alone, the airline will probably lose over 100 million dollars,' he said.

'We can't continue the way we are. If we did continue the way we are, we would result in risking the viability of the airline, so we need to make this decisive action.' ...

Source: ABC News, www.abc.net.au, 15 April 2009.

www.abc.net.au

### Commentary

The Chairman of the Qantas board announces operational changes necessary to the viability and future of the company. The global financial challenges and decline in airline bookings has forced these budgetary changes onto the airline.



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## Cost leadership and product differentiation strategies

At the executive level, planning decisions about products and services are made that may include product cost leadership or product differentiation strategies. A business may focus on costs of particular items and seek market or niche advantages against its competitors.

### Cost leadership

Cost leadership is a strategy to position a business as being price sensitive. Therefore it is also about being able to sell products more cheaply than competitors. National retail chains, such as Woolworths and Bunnings, are constantly focused on cost leadership strategies. Cost leadership involves a systematic process to eliminate waste and inefficiencies and lower purchasing costs through, for example, economies of scale in order to maintain and improve the entity's competitive position in the market.

### Differentiation

Differentiation strategy is about positioning the business so that it is recognised as providing a good or service that is distinct from competing products. The product itself does not need to be unique but some aspect of it should be exclusive or distinct. This alternative strategy to cost leadership may involve differentiating the product for the market or parts of the market by exclusive features (e.g. leather upholstery, timber finishes and high-tech accessories in vehicles). A department store like Myer or David Jones may seek to differentiate itself from its competitors by focusing on quality products and service.

Key Concept 2.3

**Cost leadership and product differentiation**

Cost leadership and product differentiation are alternative strategies to maximise sales and profit by emphasising either cost competitiveness or superiority or uniqueness of a product.

# THE PURPOSE OF BUDGETS

The purpose of budgets depends on the type of organisation making the budget. The following are common to most organisations.

### Encouragement of planning

The introduction of budgets within an organisation forces management to look ahead and set both short- and long-term targets, particularly in regard to cash management. By looking to the future, management can anticipate potential problems. For example, the identification of shortages of cash at particular times in the budget period gives management the opportunity to make provisions to supplement this shortage, such as by negotiating an overdraft facility with the bank.

### Coordination of functions within an organisation

The preparation of budgets tends to increase the coordination between departments and units within an organisation because it requires that the individual plans of managers are integrated. The managers are obliged to consider the relationships *between* various departments. For example, it is important that a purchasing department is aware of the material requirements for manufacture so that buying and inventory (stock) levels are maintained to service the needs of the manufacturing activity during the budget period.

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## A form of communication

A budget is often a useful means by which senior management can formally communicate objectives and strategies for the forthcoming period. This function is reinforced periodically through a control mechanism (referred to later), which reviews actual performance against the budget during the budget period. The extent to which lower-level managers are involved in establishing budgets communicates important information about the philosophy of senior management.

## A basis for responsibility accounting

Individual managers are identified with their budget centres and made responsible for achieving the budgeted targets. These targets of expenditure, income and output are those that are considered to be within the manager's control. Responsibility accounting represents an important feature of the delegation of responsibility within an organisation.

## A basis for a control mechanism

The budget provides a basis for comparing actual performance with a plan and identifying any deviation from that plan. The identification of these deviations gives management the opportunity to take corrective action so that such deviations do not persist in the future. When budgets are used as a control mechanism, it is described as 'budgetary control'.

## Authorisation of expenditure

The budget can act as a formal authorisation of future expenditure from senior management to the individuals responsible for the expenditure. If an item of expenditure is contained in a budget that has been approved by the top management of the organisation, it implies that the item has been approved and generally no further authorisation is required.

## Motivation of employees

The budget can be used as a target to motivate employees to reach certain levels of attainment. For example, if, during one budget period, a salesperson achieves sales of products to the value of $30000, the target for the next budget period might be increased to, say $40000 in the hope that this new target will motivate the salesperson to exceed the levels of the previous period.

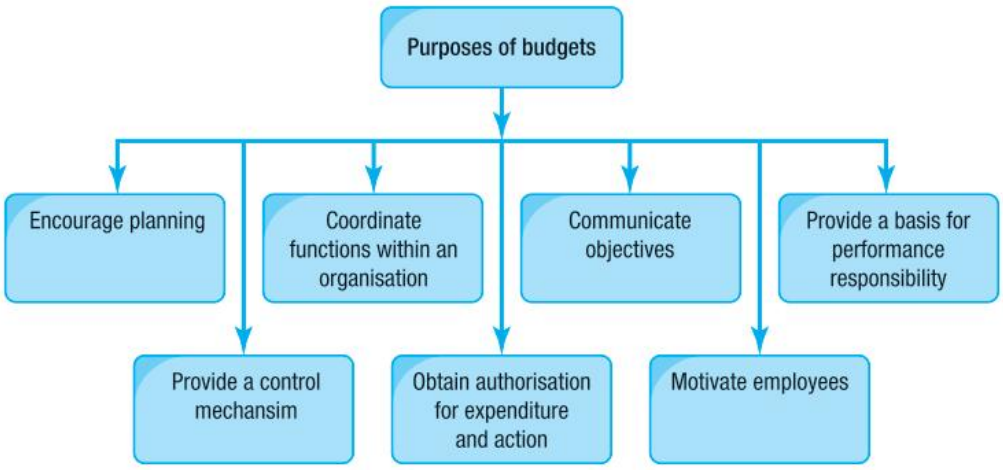



Figure 2.1 Purposes of budgets


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Key Concept 2.4

**Purposes of budgets**

The purposes of budgets include planning, coordinating, communicating, controlling, authorising and motivating.

# THE MASTER BUDGET

The master budget consists of an entity's interrelated financial plans to achieve the strategic financial goals of the business. The master budget usually consists of the budgeted income statement and balance sheet, which represent a summary of the individual operational and financial budgets of the organisation as a whole.

## Operating budgets

Operating budgets for a retailer could include budgets for sales; cost of goods; purchases and inventory; marketing, advertising and sales staff; general and administrative costs; occupancy costs; and financial costs.

The sales/budgeted income statement for all businesses is the budget on which, to a large extent, the other budgets will be built. For a manufacturing business the sales plan will link to the level of production and all related aspects of required materials, labour and overhead costs. For a retailer the purchases of inventory budget will be a critical consideration in forward planning.

## Finance budgets

Finance budgets include cash and capital expenditure budgets. Operational budgets require working capital and the extent of working capital will be evident in a cash budget. The purpose of the cash budget is to effectively manage this important current asset. Cash in the bank earns low returns and excess cash can be more efficiently invested in more productive assets. Insufficient cash, on the other hand, can cause problems and significant expenses. A budget can assist in forward planning for cheaper alternatives to cash deficits.

### Capital expenditure budget

The capital expenditure budget – which will, of course, have an impact on both the cash statement and the budgeted income statement – is the second major element of the finance budget. This budget predicts expenditure on major non-current assets and how this expenditure is to be financed (by equity, borrowings, leasing or whatever).

For most organisations, the budgeted Income statement, balance sheet and cash budget are sufficient for management's view of the future. The information contained in these three budgeted statements provides a reasonable base from which to anticipate the forthcoming period and evaluate it in the light of actual performance.

Key Concept 2.5

**Master budget**

A master budget consists of all the interrelated budgets necessary to determine the key financial objectives of a business.

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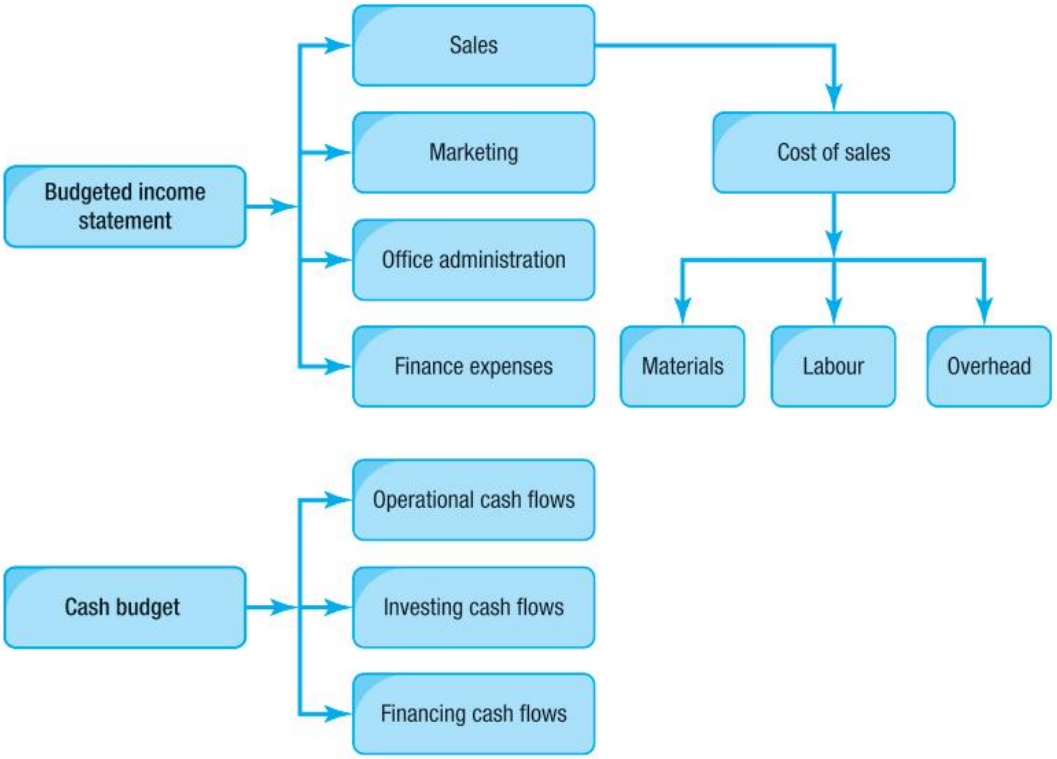



Figure 2.2 Master budget model for a manufacturer

Key Concept 2.6

**Operational budgets**

Operational budgets are detailed descriptions of the income and expenses of the projected activities necessary to produce the desired profit levels. Operational budgets would typically include incomes or sales; purchases, cost of sales and/or production; and selling, administration and finance costs.

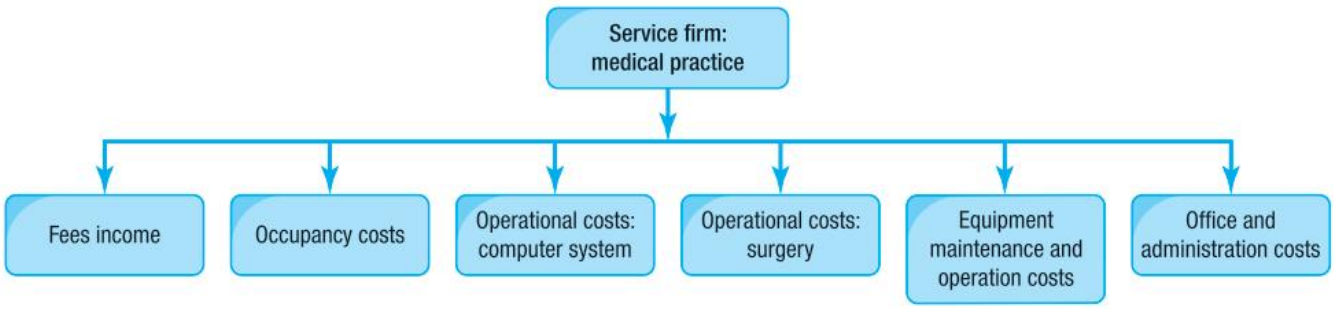



Figure 2.3 A series of operational budgets for a service firm

## THE BUDGET PROCESS

The budget process refers to the sequence of planning steps necessary to produce a budget for a particular organisation. Its main features are described here.



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## Executive decisions and planning

Guidelines are formulated for the preparation of the budgets. The guidelines represent a system for people who prepare the budgets – they identify the overall levels of activity and the organisation's policies on performance criteria, such as productivity. At this stage, the only people involved in the process are the organisation's top-level management. The products that are manufactured and/or sold in a budget period are determined by management decisions. These decisions are initially made separately from the functions within an organisation that support the manufacture and sales of the products that have been chosen.

## Communications

When the output levels and associated policies have been determined by top management, they must be communicated to the preparers of the budgets, along with the guidelines. Budgets are prepared within the individual responsibility centres, which have been defined by the organisation's hierarchy. These centres are managed by those who are responsible for particular functions within the organisation, such as sales, production, transport and financial services.

## Coordination

In a manufacturing organisation, for example, the main task of coordination is to ensure that the level of production is sufficient to meet the sales demand for products plus any inventory of finished goods that is required. For example, if the sales demand for a product is 150 units and the desired closing inventory of finished goods is 30 units, assuming there is no opening inventory of finished goods available, 180 units will have to be manufactured to meet the sales and inventory requirements in the budget period. Supporting functions, such as marketing and finance necessary for these levels of output, are also considered at this stage.

## Participation and responsibility

The extent to which lower-level managers may be involved in the preparation of the budgets for their own departments varies from organisation to organisation and depends on management style. Top management of some organisations imposes rules on subordinates without any discussion. Where a manager is solely responsible for the preparation of the budget, there is a danger that budget targets may be set too low, thus gaining the favour of superiors when they are exceeded. If the budget is imposed from above without consultation this is likely to adversely affect the managers' motivation and attitude to their superiors. It is likely that a manager of a responsibility centre will have a greater degree of knowledge and understanding of the operation of the centre than any other personnel within the organisation so this knowledge is important in the formulation of budgets.

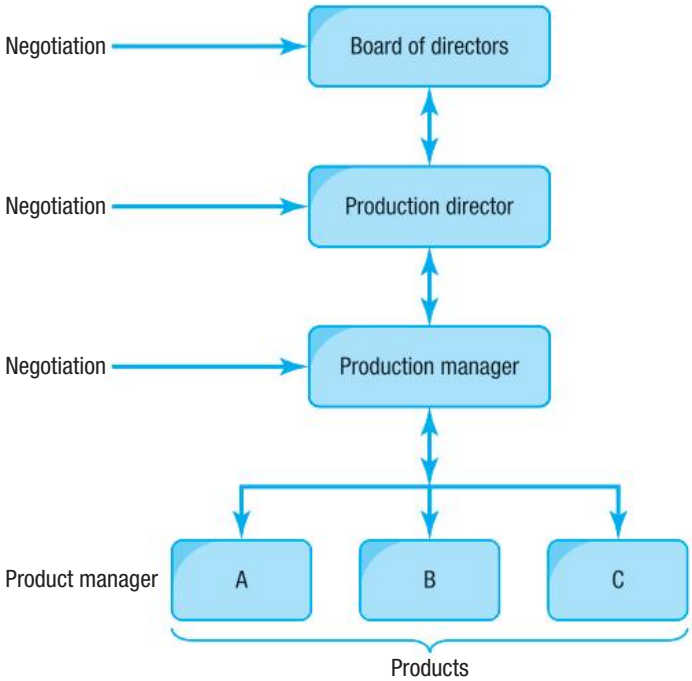



Figure 2.4 Typical negotiation process for a production budget

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On balance, there is a strong case for some involvement by the manager of a responsibility centre in the preparation of the centre's budget. Participative budgeting occurs when lower-level managers are involved in the budget process rather than having the budget imposed from above.

Figure 2.4 (page 43) shows the potential for a two-way flow in the establishment of the budget. This process will vary across entities. In some entities, the flow will be one way (down from the board), while in others there will be participation by lower-level managers in the process. In some entities, lower-level managers will appear to be involved in the process but, ultimately, top-level managers will make the decisions. This process of only appearing to involve lower-level managers is referred to as '*pseudo-participation*'.

## Control and performance reports

It is essential to monitor actual outcomes during and at the end of the budget period. Control during the period of the budget ensures adjustments are made to reflect unpredicted circumstances. Performance reports assessing both financial and non-financial measures at the end of the budget period can help identify past problems and improve subsequent budgeting.

REALITY CHECK 2.4

### Deli owner will have to slice casuals' work hours

by Paige Taylor

A Perth delicatessen and cafe owner ... predicts she will be forced to employ her casual staff for fewer hours if the Fair Pay Commission rules in favour of a minimum increase of $21 per week in July.

[The owner], who has run small businesses for the past 15 years, said the price of labour at her cafe in the Perth foothills was an increasing concern for her and her partner...

[The owner] said there had been a small drop in the number of customers each day at her deli since WA began to feel the effects of the global financial crisis...

Source: *The Australian*, www.theaustralian.news.com.au, 24 March 2009.

**Commentary**

Higher wage costs as a result of an increase in the award wage and lower revenue as a result of the general economic downturn are factors that will cause this business owner and others to revise their budgets.

# BUDGET PERIOD

The budget period normally employed by organisations is one year, which coincides with the periodic reporting requirements for tax purposes. There is usually a link between the information in the budgets and the annual accounts – a firm's budget normally includes the planned total sales for the period while the annual accounts show the actual sales achieved in the same period.

Generally, for control purposes, the budget for the year is broken down into quarterly, monthly and weekly periods, depending on the needs of the particular organisation and the state of the economy. A business that is experiencing liquidity problems may wish to review its cash budgets on a monthly or even weekly basis.

An organisation that operates in a very competitive market will also want to monitor performance on a frequent basis to ensure it is maintaining its competitive position in the market. A budget developed in very volatile financial conditions may be prepared with a series of flexible outcomes.



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Key Concept 2.7

**Budget period**

Cash and profit planning have an immediate perspective, i.e. within one year, while capital expenditures and loan management are usually viewed over years rather than months.

# CONTINUOUS CONTROL AND FLEXIBLE BUDGETS

The nature of budgeting that has been described so far is static, in the sense that the planning process is based upon certain assumptions and events that will occur in the forthcoming budget period. In reality, the business environment is dynamic and events might not turn out as anticipated in the budget. Variances from the budget might be harmful to the organisation. For example, the cost of producing a product might be greater than anticipated in the budget or the volume of sales might be less.

It is therefore important that the 'actual' events in a budget period are monitored against the budget so that action can be taken to alleviate any undesirable situations.

When undesirable variances from the budget are caused by events that are within the organisation's control, action can be taken to ensure that such variances do not occur in the future.

Events outside the control of the organisation, such as a downturn in the economy, could mean that the organisation has to reconsider its plans. Typically, this results in organisations 'trimming' their operations to lower levels of activity or diversifying into other markets.

The point to remember here is that undesirable situations can be averted if an efficient system of control is imposed and if the actual and budgeted performances are compared during the life of the budget.

REALITY CHECK 2.5

## DJ's profit at risk if sales unravel

by Sue Mitchell

David Jones chief executive Mark McInnes has conceded the upmarket retailer could miss its profit growth forecasts if sales fall faster than expected.

Australia's second-largest department store chain achieved 2 per cent growth in net profit for the January half despite an 8 per cent fall in like-for-like sales over the same period. It is anticipating profit growth of between zero and 5 per cent in the current half, even though like-for-like sales are expected to fall 13 per cent.

Mr McInnes said David Jones had spent the past two years preparing for the consumer spending downturn and was in a better position than most discretionary retailers to emerge from the recession in good shape.

Source: *Australian Financial Review*, 20 March 2009.

### Commentary

Budget growth forecasts had been made though external factors could have a negative influence on the anticipated results. Planning had prepared the business for negative outcomes.

# PERFORMANCE REPORTS

At the end of the budget period it is important to match the actual outcomes against the budget forecasts. This process has a number of stages:

1 identify and quantify differences (variances), both positive and negative
2 identify and classify the causes of significant variances into those within the firm's control (e.g. cost inefficiencies, inadequate marketing effort) and those outside its control (e.g. deterioration in the general economy)

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3 consider where variances are unfavourable and what may be done to improve performance in the future
4 modify future budgets in light of past performance and any further predictive information.

There may, of course, be difficulties in identifying the causes of variances. Moreover, senior management must beware of attributing all responsibility for variances to the responsible budget manager: blaming the manager for lower performance that was caused by factors outside their control can be very discouraging.

If possible, performance reports should also consider important non-financial outcomes, such as customer satisfaction, supply reliability or employee morale, rather than just an examination of numerical variances.

Key Concept 2.8

**Performance report**

Once a budget period has been completed and actual outcomes are contrasted with the budget, the differences or variances are examined to evaluate the quality of the planning and assist in shaping action and future plans.

# BUDGET PREPARATION

The following sections provide examples of cash and budgeted income statements and indicate how these budgets are developed.

## Collection of cash from accounts receivable

Businesses can increase their level of income by offering credit to customers. The disadvantage of credit provision is the potential for credit customers to be slow in paying or defaulting altogether and being written off as bad debts. It is usually possible to predict patterns of payments from debtors over time. Business knowledge of this kind allows a schedule (spreadsheet) of receipts from debtors to be prepared. These cash collections are then included in the overall cash budget.

EXAMPLE:

### Example 2.1

The Furniture Shed is preparing its cash budget for the next three months. The sales department advises that all sales are made on credit. It is currently September and the following table has the credit sales up to 30 September and the anticipated credit sales for October to December.

| August | September | October | November | December |
|---|---|---|---|---|
| $132 000 | $154 000 | $110 000 | $143 000 | $121 000 |

**INFORMATION ABOUT THE SALES**

Accounts receivable are usually collected as follows:

- 70% in the same month of sale
- 20% in the next month after sale
- 9% in the second month after sale
- the balance of 1% is uncollectable and is written off as a bad debt at the end of the third month.

**REQUIRED**

Prepare a schedule of receipts from accounts receivable

**SOLUTION**

For each month's sales (including the past months of August and September, some of whose sales will be received during the budget period) a prediction can be made and inserted into the spreadsheet of the amount to be received in each of the budget months, as follows.



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| Accounts receivable (collections schedule) | | | | |
|---|---|---|---|---|
| **Months** | ***Total sales* $** | ***October* $** | ***November* $** | ***December* $** |
| August | 132 000 | 11 880 | | |
| September | 154 000 | 30 800 | 13 860 | |
| October | 110 000 | 77 000 | 22 000 | 9 900 |
| November | 143 000 | | 100 100 | 28 600 |
| December | 121 000 | | | 84 700 |
| **Total** | | **119 680** | **135 960** | **123 200** |

**EXPLANATION**

- August sales: 9% will be collected in October
- September sales: 20% will be collected in October and 9% in November
- October sales: 70% will be collected in October, 20% in November and 9% in December
- November sales: 70% will be collected in November and 20% in December; the remaining 9% will presumably be included in the following budget
- December sales: 70% will be collected in December and the balance in the next budget period

Note that there is a symmetrical pattern of collections (in this example, offset sets of three), which can be a useful guide as to whether the schedule has been prepared correctly.

The final figures for each month will then be transferred to the cash budget proper.

A similar schedule may be drawn up for payments to credit suppliers, although obviously these are entirely within the control of the business and are thus easier to predict.

## Budgeted income statement

The treatment of sales and purchases in a budgeted income statement is generally simpler, since there is no need to consider the timing of the receipts and payments. The only complication will be including as revenue or expense any discounts expected to be received or allowed and any bad debts expected to be written off.

A budgeted income statement for Furniture Shed for the months of October to December would include the following items. Bad debts expense estimates are 1% of the actual or estimated sales for the month before the previous one.

| | ***October* $** | ***November* $** | ***December* $** |
|---|---|---|---|
| Sales revenue | 110 000 | 143 000 | 121 000 |
| Bad debts expense | 1 320 | 1 540 | 1 110 |

Here is another example showing how purchase and sales estimates are made for inclusion in both cash and budgeted income statements.

## Example 2.2

M Georgopulos & Sons expected the following sales for the three months ending 30 June 2011.

| | ***April* $** | ***May* $** | ***June* $** |
|---|---|---|---|
| Greengrocery | 40 000 | 35 000 | 30 000 |
| Grocery | 200 000 | 240 000 | 240 000 |
| Bread | 15 000 | 18 000 | 20 000 |
| Meat | 45 000 | 50 000 | 50 000 |
| Sundries | 10 000 | 10 000 | 10 000 |
| Total budgeted sales | 310 000 | 353 000 | 350 000 |

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Their actual credit sales for February were $80000 and $79000 for March. Of all sales, 80% are expected to be cash with the balance paid equally in the two following months.

The schedule of receipts from cash and credit sales is as follows.

| Cash sales and trade debtors' collection schedule | | | | | |
|---|---|---|---|---|---|
| **Actual/estimated sales** | ***Total sales* $** | ***Credit sales* $** | ***April* $** | ***May* $** | ***June* $** |
| Cash sales (80% of total) | | (20% of total) | 248 000 | 282 400 | 280 000 |
| February | | 80 000 | 40 000 | | |
| March | | 79 000 | 39 500 | 39 500 | |
| April | 310 000 | 62 000 | | 31 000 | 31 000 |
| May | 353 000 | 70 600 | | | 35 300 |
| June | 350 000 | 70 000 | | | |
| Collections from debtors | | | 79 500 | 70 500 | 66 300 |
| Budgeted cash | | | 327 500 | 352 900 | 346 300 |

## Explanation

Cash sales calculations:

- April: $310000 × 80% = $248000
- May: $353000 × 80% = $282400
- June: $350000 × 80% = $280000

Credit sales calculations:

- April: $310000 × 20% = $62000
- May: $353000 × 20% = $70600
- June: $350000 × 20% = $70000

M Georgopulos & Sons purchases stock 50% for cash paid in the month of purchase and the remainder on credit paid in the month following purchase (to obtain a 3% discount for prompt payment).

Actual purchases of inventory for March were $234000. Estimated cash purchases and credit purchases are as follows.

| Purchases planned | | | |
|---|---|---|---|
| | ***April* $** | ***May* $** | ***June* $** |
| Greengrocery | 20000 | 18000 | 15000 |
| Grocery | 150000 | 180000 | 180000 |
| Bread | 10000 | 12000 | 14000 |
| Meat | 35000 | 40000 | 40000 |
| Total purchases | 215000 | 250000 | 249000 |

| Cash purchases and trade creditors' collection schedule | | | | | |
|---|---|---|---|---|---|
| **Actual/estimated sales** | ***Total purchases* $** | ***Credit purchases (less 3%)* $** | ***April* $** | ***May* $** | ***June* $** |
| Cash purchases (50% of total) | | (50% of total) | 107 500 | 125 000 | 124 500 |
| March | 234 000 | 117 000 | 113 490 | | |
| April | 215 000 | 107 500 | | 104 275 | |
| May | 250 000 | 125 000 | | | 121 250 |
| June | 249 000 | 124 500 | | | |
| Payments for purchases | | | 220 990 | 229 275 | 245 750 |
| Discount received | | | 3 510 | 3 225 | 3 750 |



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The discount is calculated by multiplying the amount to be paid to creditors in any month by 3%. The amount actually paid is the amount owing less the discount.

The amounts calculated in these schedules can now be used, with the following additional information, to prepare the budgets for this period.

### ADDITIONAL INFORMATION

Bank balance at 31 March is $40 000.

| Other budgeted payments | April $ | May $ | June $ |
|---|---|---|---|
| Selling and distribution | 46 900 | 58 450 | 55 200 |
| Administration expense | 11 500 | 11 600 | 11 650 |
| Financial expense | 2 900 | 3 600 | 3 900 |
| Drawings | 5 000 | 5 000 | 6 000 |
| Capital expenditure (Purchases of equipment) | 21 000 | 56 000 | |
| Loan repayment | 20 000 | 20 000 | 20 000 |

Depreciation is expected to be $1500 for the first two months, rising to $2000 in June.

M Georgopulos & Sons
Cash budget for the three months April to June

| | April $ | May $ | June $ |
|---|---|---|---|
| Open bank balance 31 March | 40 000 | 39 210 | 8 185 |
| **Receipts** | | | |
| Cash sales | 248 000 | 282 400 | 280 000 |
| Collections from debtors | 79 500 | 70 500 | 66 300 |
| **Total cash available** | 367 500 | 392 110 | 354 485 |
| **Payments** | | | |
| Cash purchases | 107 500 | 125 000 | 124 500 |
| Credit purchases | 113 490 | 104 275 | 121 250 |
| Selling and distribution | 46 900 | 58 450 | 55 200 |
| Administration expense | 11 500 | 11 600 | 11 650 |
| Financial expense | 2 900 | 3 600 | 3 900 |
| Drawings | 5 000 | 5 000 | 6 000 |
| Loan repayment | 20 000 | 20 000 | 20 000 |
| Capital expenditure | 21 000 | 56 000 | |
| Total budgeted payments | 328 290 | 383 925 | 342 500 |
| **Budgeted cash balance** | 39 210 | 8 185 | 11 985 |

Note that depreciation, not being a cash outflow, is not included in this budget.

A quick glance at the budget shows that there has been a substantial decline in cash holdings over the period – not surprising since the firm has purchased $77 000 of assets without any further capital contributions or borrowings. It would only require actual sales to be 2% below budget for the bank account to be overdrawn in June. The firm might want to plan for this possibility by arranging an overdraft facility or deferring the payment for assets due by May.

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The budgeted income statement, using the same information, is as follows.

M Georgopulos & Sons
Budgeted income statement for the three months April to June

| Sales | April $ | May $ | June $ | Notes |
|---|---|---|---|---|
| Greengrocery | 40 000 | 35 000 | 30 000 | |
| Grocery | 200 000 | 240 000 | 240 000 | |
| Bread | 15 000 | 18 000 | 20 000 | |
| Meat | 45 000 | 50 000 | 50 000 | |
| Sundries | 10 000 | 10 000 | 10 000 | |
| Total | 310 000 | 353 000 | 350 000 | |
| **Cost of sales** | | | | |
| Greengrocery | 20 000 | 18 000 | 15 000 | |
| Grocery | 150 000 | 180 000 | 180 000 | |
| Bread | 10 000 | 12 000 | 14 000 | |
| Meat | 35 000 | 40 000 | 40 000 | |
| Total cost of sales | 215 000 | 250 000 | 249 000 | |
| **Gross profit** | 95 000 | 103 000 | 101 000 | |
| **Other revenue** | 3 510 | 3 225 | 3 750 | (i) |
| | 98 510 | 106 225 | 104 750 | |
| **Expenses** | | | | |
| Selling and distribution | 46 900 | 58 450 | 55 200 | |
| Administration | 13 000 | 13 100 | 13 650 | (ii) |
| Financial | 2 900 | 3 600 | 3 900 | |
| **Total expenses** | 62 800 | 75 150 | 72 750 | |
| **Budgeted profit** | 35 710 | 31 075 | 32 000 | |

**NOTES**

i The 'other revenue' in this case is the discount allowed by trade creditors.

ii Depreciation of $1500, $1500 and $2000 has been added to the expected cash administration expenses.

Note that drawings, loan repayments and capital expenditure, which featured in the cash budget, are omitted from the budgeted income statement as they are not items of income or expense.

The budget shows that, despite an expected increase in sales and gross profit compared to April, the months of May and June will show a small decline in profit. The management would no doubt re-examine the budget to see where improvements might be made.

Key Concept 2.9

**Cash budget**

A cash budget will include all receipts and outlays of funds expected during the budget period for whatever purpose. Cash budgets provide insights into working capital and liquidity.

Key Concept 2.10

**Budgeted income statement**

A budgeted income statement will include only income and expenses on an accrual accounting basis, including non-cash items (such as depreciation), to predict



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the profit performance of the entity for the budget period. It is also used as a benchmark to measure and evaluate actual performance.

## Budgeted income statement – service firm

The budgets for a service firm, as opposed to a merchandising firm, are not very different. The main distinctions are the absence of expenditure on inventories and perhaps greater emphasis on wages, rewarding the service-providers. An example of a budgeted income statement for such a business is given below.

EXAMPLE:

### Example 2.3

Doctor Who is considering taking on a partner. The financial data for the practice for the previous six months included the following.

| | $ |
|---|---|
| Fees earned | 114000 |
| Consulting expenses | 27000 |
| Occupancy expenses | 28000 |
| Financial expenses | 6000 |
| Operating profit | 53000 |

Who's accountant predicts that the introduction of the new partner would have the following financial consequences:

- 90% increase in fees earned
- 80% increase in consulting expenses
- 20% increase in occupancy expenses
- the same level of financial expenses.

The budgeted profit report for the six months for Dr Who and his new partner is as follows.

**Budgeted profit report**

| | *Calculation* | $ | $ |
|---|---|---|---|
| Fees | 114000 + 90% | | 216600 |
| *Less* **Expenses** | | | |
| Consulting expenses | 27000 + 80% | 48600 | |
| Occupancy expenses | 28000 + 20% | 33600 | |
| Financial expenses | Unchanged | 6000 | 88200 |
| Operating profit | | | 128400 |

From this information, Dr Who can see that, from a financial point of view, the new partnership makes sense for him. Assuming that profit is to be shared equally, he would earn $64300 in the six months, compared with $53000 earned operating on his own. This should be weighed against possible disadvantages of the arrangement, such as loss of autonomy.

# BUDGETING COMPLICATIONS

We have already dealt with the most significant complicating factor in budget preparation: the need to determine the size and timing of cash flows arising from expected credit transactions. Another complication worth mentioning at this stage is dealing with changes in prepayments and accruals arising from balance day adjustments.

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EXAMPLE:

## Example 2.4

Management of Western Wrens Aviary wishes to develop a cash budget and budgeted income statement for the quarter ending 31 March 2010.

At 1 January, the firm's ledger included the following balances.

| | |
|---|---|
| Wages payable (accrued) | $800 |
| Insurance prepaid | $4 000 |
| Accrued interest revenue | $500 |

Expected results for January–March 2010

| | |
|---|---|
| Wages expense | $57 800 |
| Insurance paid (annual premium) | $15 000 |
| Interest received | $750 |

Expected balances 31 March 2010

| | |
|---|---|
| Wages payable | $2 600 |
| Insurance prepaid | $13 750 |
| Accrued interest revenue | Nil |

**REQUIRED**

Determine the figures that would appear in the cash budget and the budgeted income statement (where appropriate) for Western Wrens Aviary for the quarter ended 31 March 2010.

There is more than one way of doing this, but probably the simplest is to reconstruct the relevant account. This is done by inserting in the account the information that is known and then arithmetically calculating the missing amounts. This has been done below for the three accounts involved in this example. In each case, the missing figure that had to be calculated is bolded.

**General ledger**

**Wages payable**

| Date | | *Dr* $ | *Cr* $ | *Balance* $ |
|---|---|---|---|---|
| 1 January | Balance | | | 800 Cr |
| 31 March | **Bank** | **56 000** | | 55 200 Dr |
| 31 March | Wages expense | | 57 800 | 2 600 Cr |

**Insurance prepaid**

| | | *Dr* $ | *Cr* $ | *Balance* $ |
|---|---|---|---|---|
| 1 January | Balance | | | 4 000 Dr |
| 31 March | Bank | 15 000 | | 19 000 Dr |
| 31 March | **Insurance expense** | | **5 250** | 13 750 Dr |

**Accrued interest revenue**

| | | *Dr* $ | *Cr* $ | *Balance* $ |
|---|---|---|---|---|
| 1 January | Balance | | | 500 Dr |
| 31 March | Bank | | 750 | 250 Cr |
| 31 March | **Interest revenue** | **250** | | – |

The figures we have calculated, together with the figures originally provided, can now be summarised as follows.

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| | Cash budget $ | Budgeted income statement $ |
|---|---|---|
| Wages | 56 000 | 57 800 |
| Insurance | 15 000 | 5 250 |
| Interest | 750 | 250 |

Following is an example that brings together the various aspects of budget preparation covered so far.

EXAMPLE:

## Example 2.5

Lucy Skye, proprietor of Diamond Pharmaceuticals, wishes to prepare cash and profit budgets for the months of September–November 2010. A list of some of her firm's ledger balances at 31 August 2010 is given below.

| | Dr $ | Cr $ |
|---|---|---|
| Accounts receivable | 17 800 | |
| Accounts payable | | 14 000 |
| Accrued wages | | 400 |
| Cash at bank | | 6 000 |
| Government bonds | 8 000 | |
| Prepaid rent | 2 000 | |

Her estimates for the next three months are as follows.

| | Sales (cash payment) $ | Purchases expenses $ | Wages $ | Rent $ | General expenses $ |
|---|---|---|---|---|---|
| September | 33 000 | 18 000 | 4 000 | 2 000 | 4 000 |
| October | 40 000 | 22 000 | 4 500 | 2 000 | 4 000 |
| November | 38 000 | 20 000 | 4 000 | 2 000 | 5 000 |

**ADDITIONAL INFORMATION**

Sales are expected to be 50% cash, 50% credit, of which 80% are expected to be received in the month following sale and the remainder in the second month after sale. Actual sales for July and August were $28 000 and $30 000 respectively.

All purchases will be on credit, paid for in the month following purchase to obtain a 2% discount.

Rent is payable three months in advance and the next payment is due on 1 October.

General expenses will include monthly depreciation of $400 on vehicles and $200 on equipment.

It is expected that the accrued wages will remain unchanged at the end of September and October but that $500 in wages will be owing at the end of November.

Lucy is planning to buy some new equipment costing $20 000, which will be paid for half on installation in November and half three months later. To help finance this, she is planning to sell, at the end of November, the government bonds on which (in view of the fall in interest rates since she bought them) she expects to make a profit of $500. Interest on the bonds at a rate of 4.8% is paid every six months, the last payment having been received on 30 June 2010.

Lucy intends to draw $2000 per month out of the business for her living expenses.

For simplicity's sake we will assume that inventory remains unchanged, so that Cost of sales = Purchases.

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**REQUIRED**

A cash budget and a budgeted income statement for September, October and November 2010.

**STEP 1**

The first stage will be to calculate the cash to be received from sales and paid for purchases including (for the latter) a calculation of the discount received. Although we have not been specifically told what the purchases were for August, we can infer this from the balance of accounts payable at the end of that month.

**Schedule of receipts from customers**

| Month | Total | September | | October | | November | |
|---|---|---|---|---|---|---|---|
| | | Cash | Credit | Cash | Credit | Cash | Credit |
| July | 28 000 | | 2 800 | | | | |
| August | 30 000 | | 12 000 | | 3 000 | | |
| September | 33 000 | 16 500 | | | 13 200 | | 3 300 |
| October | 40 000 | | | 20 000 | | | 16 000 |
| November | 38 000 | | | | | 20 000 | |
| | | 16 500 | 14 800 | 20 000 | 16 200 | 20 000 | 19 300 |

**Schedule of payments to suppliers**

| Month | Total | September | | October | | November | |
|---|---|---|---|---|---|---|---|
| August | 14 000 | 13 720 | 280 | | | | |
| September | 18 000 | | | 17 640 | 360 | | |
| October | 22 000 | | | | | 21 560 | 440 |

**STEP 2**

These figures can now be used, together with the other amounts given, to produce the cash budget as follows.

Diamond Pharmaceuticals
Cash budget for September–November 2010

| | September $ | October $ | November $ |
|---|---|---|---|
| **Opening balance** | (6 000) | 2 180 | 4 840 |
| **Receipts** | | | |
| Cash sales | 16 500 | 20 000 | 20 000 |
| Accounts receivable | 14 800 | 16 200 | 19 300 |
| Sales of bonds | | | 8 500 |
| **Total cash available** | 25 300 | 38 380 | 52 640 |
| **Payments** | | | |
| Accounts payable | 13 720 | 17 640 | 21 560 |
| Wages | 4 000 | 4 500 | 4 000 |
| Rent | | 6 000 | |
| General expenses | 3 400 | 3 400 | 4 400 |
| Purchase of equipment | | | 10 000 |
| Drawings | 2 000 | 2 000 | 2 000 |
| **Total payments** | 23 120 | 33 540 | 41 960 |
| **Balance at end of month** | 2 180 | 4 840 | 10 680 |

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**NOTES**

- General expenses exclude depreciation of $600 per month, which is not a cash outgoing.
- Although rent expense is $2000 per month, the actual payment made is for three months in October.

From this budget it can be seen that the cash situation of the firm should improve from a small overdraft at 1 September to a healthy cash surplus at 30 November. In fact, based on this forecast, Lucy does not need to sell the government bonds if she does not wish to do so.

We can now do the additional workings for the budgeted income statement, which is prepared on an accrual basis, may include non-cash items and is confined to income and expenses.

**WORKINGS**

Interest accrued on Bonds: $8000 × 4.8% = $384/12 = $32 per month.
Wages expense for November were as follows.

| Accrued wages (Ledger account) | | | | |
|---|---|---|---|---|
| **Date** | | ***Dr*** ***$*** | ***Cr*** ***$*** | ***Balance*** ***$*** |
| 31 Oct | Balance | | | 400 Cr |
| 30 Nov | Bank | 4000 | | 3600 Dr |
| 31 Mar | **Wages expense** | | **4100** | 500 Cr |

Diamond Pharmaceuticals
Budgeted income statement for September–November 2010

| | ***September*** ***$*** | ***October*** ***$*** | ***November*** ***$*** |
|---|---|---|---|
| Sales | 33000 | 40000 | 38000 |
| *Less* **Cost of sales (purchases)** | 18000 | 22000 | 20000 |
| **Gross profit** | 15000 | 18000 | 18000 |
| *Add* **Other operating income** | | | |
| Gain on sale of asset | | | 500 |
| Interest revenue | 32 | 32 | 32 |
| Discount revenue | 280 | 360 | 440 |
| **Total income** | 15312 | 18392 | 18972 |
| **Operating expenses** | | | |
| Wages | 4000 | 4500 | 4100 |
| Rent | 2000 | 2000 | 2000 |
| General expenses (including depreciation) | 4000 | 4000 | 5000 |
| **Total expenses** | 10000 | 10500 | 11100 |
| **Budgeted profit** | 5312 | 7892 | 7872 |

**NOTES**

The profit is expected to improve slightly over the period, although flattening off in November as a result of lower sales (due to fewer trading days). For management purposes, it would probably be desirable to have a breakdown of the general expenses category so that any variations from actual performance can be identified.

# FORMAT OF PERFORMANCE REPORTS

As previously mentioned, one of the important functions of the budget is to set targets against which actual performance can then be measured. This is done through a document called a Performance report in which variances from the budget are identified and quantified and, as far as possible, explained so that cost centre or department managers and their superiors can evaluate the performance of those cost centres, determine

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strategies to improve performance (if necessary) and make any necessary adjustments to future budgets.

While there is no prescribed form for a performance report, it is usual to show the actual figures for the period in question in a column alongside the budgeted figures, with the variances (difference between the two figures in each case) listed in a third adjacent column. The variances will be denoted as favourable (improving profit or cash holdings) or unfavourable (decreasing profit or cash holdings) by:

- prefixing them with a + or − sign
- showing the unfavourable variances in brackets
- placing the letter F or U after the variance.

The major variances will be discussed and, if possible, explained and suggestions made as to what might need further investigation and what, in the case of unfavourable variances, might be done to improve the situation in the future.

EXAMPLE:

## Example 2.6

The June section of the budgeted income statement shown in Example 2.2 is reproduced below with the actual results for June shown in an adjacent column (in italics) and variances in each case calculated by deducting the smaller figure from the larger one. Variances are then identified as 'F' for Favourable, or 'U' for Unfavourable.

M Georgopulos & Sons
Profit performance report for June 201X

| Sales | *June budget* $ | *June actual* $ | *Variances* $ |
|---|---|---|---|
| Greengrocery | 30 000 | *24 445* | 5 555 U |
| Grocery | 240 000 | *232 100* | 7 900 U |
| Bread | 20 000 | *18 400* | 1 600 U |
| Meat | 50 000 | *49 350* | 650 U |
| Sundries | 10 000 | *11 430* | 1 430 F |
| Total | 350 000 | *335 725* | 14 275 U |
| **Cost of sales** | | | |
| Greengrocery | 15 000 | *16 480* | 1 480 U |
| Grocery | 180 000 | *179 855* | 145 F |
| Bread | 14 000 | *14 400* | 400 U |
| Meat | 40 000 | *43 280* | 3 280 U |
| Total cost of sales | 249 000 | *254 015* | 5 015 U |
| **Gross profit** | 101 000 | *81 710* | 19 290 U |
| Other operating income | 5 300 | *5 100* | 1 350 F |
| **Total income** | 106 300 | *86 810* | 17 940 U |
| **Expenses** | | | |
| Selling and distribution | 55 200 | *57 400* | 2 200 U |
| Administration | 13 650 | *12 200* | 1 450 F |
| Financial | 3 900 | *3 700* | 200 F |
| **Total expenses** | 72 750 | *73 300* | 550 U |
| **Budgeted profit** | 33 550 | *13 510* | 18 490 U |

**COMMENTS**

The two key variances in this report are the lower-than-budgeted sales revenue and the marginal increase in the cost of sales. These combined have lowered the gross profit. Operating expenses overall are not very different to budget.



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The causes of the fall in sales revenue also need to be investigated. Are sales volumes down and, if so, why? Has the business been forced to reduce prices in a more competitive market? Can the firm do anything about this by adopting a different marketing strategy or more aggressive promotion? As to the cost of sales being over budget, is this due to higher prices and, if so, can the firm do anything about it (such as seeking other suppliers)? Has wastage or other inefficiencies in inventory management been a factor and, if so, how can this be improved?

Once it has been determined to what extent the firm can modify the causes of the underperformance, we can use this information to assist in the preparation and updating of future budgets.

Following is a comprehensive example illustrating the preparation of both cash and profit budgets and then performance reports based on actual results at the end of the budget period.

EXAMPLE:

## Example 2.7

Shazza Sales Pty Ltd, a souvenir retailer, has provided the following data and requires budgets for cash and profit for the month of June 2010.

| Month | *Actual/ budgeted sales $* | *Actual/ budgeted purchases $* |
|---|---|---|
| March | 160 000 | 81 000 |
| April | 180 000 | 84 000 |
| May | 140 000 | 66 000 |
| June | 150 000 | 67 000 |

Total sales are usually 40% cash, 30% credit paying within the same month of the sale to receive a 2% discount, 20% credit paying in the first month after sale, 9% credit paying in the second month after sale and 1% expected to be written off as bad debts in the third month. Purchases are on credit and paid in the month following purchase, gaining a 2% discount for prompt payment.

### ADDITIONAL INFORMATION

- Closing bank balance at 31 May was $15 480.
- Rent is paid quarterly in advance, last payment was made on 1 April for $6000.
- Office administration is $22 500 payable per month.
- Selling and distribution payable each month is estimated to be 25% of sales.
- Loan repayment per month is $1500 and interest payable per month is $400.
- Depreciation expense per month is $2000.
- Drawings are expected to be 5% of total sales per month.
- The stock purchased each month is sold in the same month.
- The firm is planning to buy a new delivery van to replace one disposed of in May. The cost of the new van will be $26 000 payable in cash.

### WORKINGS

Cash and debtors collections schedule for June 2010

| Month | *Total sales $* | *Cash sales $* | *June $* | *Discount 2% $* | *Bad debts 1% $* |
|---|---|---|---|---|---|
| March | 160 000 | | | | 1 600 |
| April | 180 000 | | 16 200 | | |
| May | 140 000 | | 28 000 | | |
| June | 150 000 | 60 000 | 44 100 | 900 | |
| Totals | | | 88 300 | 900 | 1 600 |

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**CALCULATIONS**

Cash sales: 40% × 150 000 = $60 000
Credit sales: April $180 000 × 9% = $16 200
May $140 000 × 20% = $28 000
June $150 000 × 30% = $45 000
Discount: $45 000 × 2% = $900
so cash received = $45 000 − $900 = $44 100
Bad debts: March sales $160 000 × 1% = $1600

Schedule of payments to creditors

| Month | Purchases $ | Discount $ | Payment $ |
|---|---|---|---|
| May | 66 000 | 1 320 | 64 680 |

**NOTES**

- Selling and distribution costs: 25% × $150 000 = $37 500
- Drawings: 5% × $150 000 = $7500

We can now use this information to produce the cash budget, as follows.

Shazza Sales Pty Ltd
Cash budget for the month of June 2010

| | $ |
|---|---|
| Bank balance at start of month | 15 480 |
| **Receipts** | |
| Cash sales | 60 000 |
| Debtors collections | 88 300 |
| Total cash available | 163 780 |
| **Payments** | |
| Creditors | 64 680 |
| Office administration | 22 500 |
| Selling and distribution | 37 500 |
| Loan repayment | 1 500 |
| Interest | 400 |
| Drawings | 7 500 |
| Purchase of delivery van | 26 000 |
| Total payments | 160 080 |
| Expected bank balance at end of month | **3 700** |

**NOTES**

- There is no rent included as there is no cash payment for this during June.
- Deprecation is omitted, not being a cash outgoing.
- The cash balance will decline, which is not unreasonable in view of the large asset purchase planned for June. It might be worth arranging a precautionary bank overdraft, since it would not take a large shortfall in sales (little over 2%) to wipe out the projected balance at the end of June.

We will now prepare the budgeted income statement for the month.

Shazza Sales Pty Ltd
Budgeted income statement for the month of June 2010

| | $ |
|---|---|
| **Income** | |
| Sales | 150 000 |
| Cost of sales | 67 000 |
| **Gross profit** | 83 000 |

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| | |
|---|---|
| Other operating income – Discount | 1 320 |
| Total income | 84 320 |
| *Less* **Expenses** | |
| Selling and distribution | 37 500 |
| Office administration | 22 500 |
| Depreciation | 2 000 |
| Interest | 400 |
| Discount expense | 900 |
| Bad debts | 1 600 |
| Rent | 2 000 |
| Total expenses | 66 900 |
| **Budgeted profit** | **17 420** |

**NOTES**

- Sales and purchases are the estimates for June, regardless of when they may be received or paid.
- Depreciation and bad debts are non-cash expenses included here.
- Rent for the month is one-third of the quarterly payment of \$6000 $= \frac{1}{3} \times$ \$6000 = \$2000.
- Other cash expenses are as previously calculated.

Whether the projected profit is satisfactory or not will depend on a number of factors, including the owner's desired return on investment and the firm's profit performance in the recent past. In any event, it will be a useful basis for the performance report.

The actual results for June recorded at the end of the month were as follows.

| | $ |
|---|---|
| Cash sales | 55 000 |
| Credit sales | 93 000 |
| Debtors collections | 89 000 |
| Discount allowed | 970 |
| Purchases | 72 500 |
| Payments to creditors (net of discount) | 64 680 |
| Rent paid | Nil |
| Office administration expenses | 22 000 |
| Selling and distribution expenses | 40 000 |
| Loan repayment | 1 500 |
| Bad debts written off | 1 220 |
| Interest | 400 |
| Drawings | 8 500 |

Depreciation expense and the cost of the van were as expected. However, the van needed an extra \$1200 spent on it to have the firm's name and logo painted on the sides.

These actual figures can now be added to the cash budget and the variances calculated, as follows.

Shazza Sales Pty Ltd
Cash performance report for the month of June 2010

| | Budget $ | Actual $ | Variance $ U/F |
|---|---|---|---|
| Bank balance at start of month | 15 480 | *15 480* | – |
| **Receipts** | | | |
| Cash sales | 60 000 | *55 000* | 5 000 U |

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| | | | |
|---|---|---|---|
| Debtors collections | 88 300 | 89 000 | 700 F |
| Total cash available | 163 780 | *159 480* | 4 300 U |
| **Payments** | | | |
| Creditors | 64 680 | *64 680* | – |
| Office administration | 22 500 | *22 000* | 500 F |
| Selling and distribution | 37 500 | *40 000* | 2 500 U |
| Loan repayment | 1 500 | *1 500* | – |
| Interest | 400 | *400* | – |
| Drawings | 7 500 | *8 500* | 1 000 U |
| Purchase of delivery van | 26 000 | 27 200 | 1 200 U |
| Total payments | 160 080 | 164 280 | 4 200 U |
| Bank balance at end of month | 3 700 | (4 800) | 8 500 U |

The actual results were somewhat worse than expected and it turned out that an overdraft (as suggested after we prepared the budget) was a necessary precaution. The reasons for the deterioration are essentially the lower-than-expected cash sales, the increase in selling and distribution expenses, the unexpected capital purchase (modifications to the new van) and the higher-than-estimated owner's drawings. In relation to improving the firm's performance and modifying future projections, the managers will need to focus on the first two of these items to try to determine the causes and see what can be done to rectify the situation.

We now apply the same process to the profit budget.

Shazza Sales Pty Ltd
Budgeted income statement for the month of June 2010

| | ***Budget* $** | ***Actual* $** | ***Variances* $ U/F** |
|---|---|---|---|
| **Income** | | | |
| Sales | 150 000 | *148 000* | 2 000 U |
| Cost of sales | 67 000 | *72 500* | 5 500 U |
| **Gross profit** | 83 000 | *75 500* | 7 500 U |
| Other operating income – Discount | 1 320 | *1 320* | – |
| Total income | 84 320 | *76 820* | 7 500 U |
| *Less* **Expenses** | | | |
| Selling and distribution | 37 500 | *40 000* | 2 500 U |
| Office administration | 22 500 | *22 000* | 500 F |
| Depreciation | 2 000 | *2 000* | – |
| Interest | 400 | *400* | – |
| Discount expense | 900 | *970* | 70 U |
| Bad debts | 1 600 | *1 220* | 380 F |
| Rent | 2 000 | *2 000* | – |
| Total expenses | 66 900 | *68 590* | 1 690 U |
| **Profit** | **17 420** | **8 230** | **9 190 U** |

The profit performance has mirrored the cash performance and for some of the same reasons – lower sales and higher expenses than estimated – although the largest single factor was the very much higher-than-expected cost of sales. Clearly management will need to look very carefully at these areas to see what can be done – via purchasing and marketing strategies or improvement of efficiencies – to lift the firm's profitability in the future. Other non-financial information will need to be considered as well. The Shazza owner should consider:

- Have general market conditions deteriorated? Are our competitors similarly affected?
- Are our products competitive in terms of quality and price?


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- How is staff morale and expertise in the relevant departments (mainly sales and purchasing)? Are they motivated and experienced?
- How effective are the inventory control systems? Is the higher cost of sales a result of higher purchase costs or is it attributable to what retailers euphemistically term 'shrinkage' (i.e. shop-lifting, employee theft or fraud and/or delivery recording errors)?

## RESPONSIBILITY ACCOUNTING

Responsibility accounting occurs when an entity is structured into strategic business units and the performance of these units is measured in terms of accounting results. The steps involved in a responsibility accounting model are:

- assigning responsibility
- establishing performance measures or benchmarks
- evaluating performance
- assigning rewards.

The more common types of business units are cost centres, profit centres and investment centres.

### Cost centres

A cost centre could be a function, an activity or even an item of equipment. A cost centre is an appropriate type of business unit structure when a manager only has control over costs but not income. A research and development or maintenance department is an example of a centre where the manager has control over certain costs but no control over income. The principle is to judge performance only over the items a manager can control.

### Profit centres

A profit centre is a business unit that is accountable for both costs and income. For example, if a business school in a university is set up to be self-funding, it can be assessed as a profit centre. The business school has control over the fees it charges and such direct costs as staff salaries, printing and stationery. Another example would be a department within a large department store, such as David Jones or Myer.

### Investment centres

An investment centre is a business unit where the manager not only has control over the profits of the unit but also has some discretion regarding the amount of investment that can be undertaken by the unit. In this case, the performance assessment of the manager should not be based solely on profit but must also relate to the size of the investment available to generate profits.

## MEASURING AND REWARDING PERFORMANCE

The objective of assessing performance should be to reward managers who have performed well. In addition, the measures used to assess performance should focus on areas over which the manager has the capacity to influence the outcome. For example, a manager of a cost centre may be rewarded for achieving certain cost reductions or having certain costs come in below budget. A manager of a profit centre may be rewarded based on measures such as return on assets. It is important that the measure of performance is consistent with the goals of the entity.

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## Financial measurements of performance

'What gets measured gets done' is a well-known saying; financial measures have traditionally been the most common measures used to assess and reward performance. Financial measures can be absolute measures (such as profit), or ratios (such as the return on assets). Some examples of absolute measures are:

- revenue or turnover, which could be expressed as the entity's share of the market
- costs (separated into controllable and uncontrollable)
- profit, taking into consideration that this figure is very dependent on the accounting policies used.

This topic is discussed in more detail in Chapter 11.

## Non-financial measures

Non-financial measures relate to aspects of performance that are difficult to measure and assign numbers to, but are, nonetheless, important in the assessment of performance. In fact, in some respects, they may be even more important than the financial measures. Examples of non-financial measures are:

- customer satisfaction
- supplier reliability
- quality of production (or quality of service for a service organisation)
- level of customer complaints
- employee morale
- delivery time.

Most performance assessment systems will use both financial and non-financial measures as a way of rewarding managers and aligning their behaviour with the goals of the entity.

Key Concept 2.11

**Performance measures**

Performance measures may be financial (such as level of sales) or non-financial (such as measures of customer satisfaction).

# Test your knowledge

1 Explain the importance of business planning.

2 Describe the business planning process.

3 Distinguish between goals and objectives.

4 What is the purpose of a mission statement?

5 What makes for a good set of objectives?

6 Distinguish between strategic and operational planning. Give examples to illustrate your answer.

7 Explain the following two main generic business strategies:
   a cost leadership
   b differentiation.

8 Explain how budgeting is useful to the successful management of a business.

9 How is performance management an essential part of business planning?

10 Explain, with examples, how business planning is important to reducing costs and risk.

11 Identify the stages and personnel that would be typically involved in the budget process for a large retail entity.

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12 Explain, with examples, the main advantages of identifying cash surpluses and shortages in a cash budget.

13 What determines the budget time period? Does this vary for different types of budgets?

14 List budgets that would possibly contribute to a master budget for:
   a a manufacturer
   b a retailer
   c a service business.

15 Explain how budgets can have both positive and negative impacts on personnel within an organisation, giving reasons.

16 Why should all senior personnel participate in formulating and submitting budget estimates?

17 Discuss the interrelationships of the sales budget and the production budget in a manufacturing organisation.

18 Explain the function of the following budgets:
   a sales budget
   b production and purchases budgets
   c capital expenditure budget
   d cash budget
   e operational expenses budget.

19 What is 'responsibility accounting' and how does it assist business operation?

20 Distinguish between financial and non-financial measures of financial performance.

# Test your understanding

## Topic guide

- Calculation of a schedule of cash receipts from customers: 2.1–2.3
- Preparation of cash budgets: 2.4–2.7
- Preparation of budgeted income statements: 2.8–2.10
- Preparation of cash budget and budgeted income statements: 2.11–2.15
- Preparation of cash budget performance reports: 2.16–2.19
- Preparation of income statement performance reports: 2.20–2.21
- Preparation of cash budget and income statement performance reports: 2.22–2.23
- Strategic planning: 2.24

2.1 Jayani & Co. expects to sell 10% of its merchandise for cash. Of sales on credit, 60% are expected to be collected in the month of the sale, 30% in the month following the sale and the remainder in the second month following the sale. Projected sales for the first five months of operations for Jayani are as follows.

| | |
|---|---|
| January | $400000 |
| February | $450000 |
| March | $480000 |
| April | $590000 |
| May | $505000 |

**Required**
Prepare a schedule indicating cash collections from sales and receivables for March, April and May.

2.2 Murari Pty Ltd is preparing budgets for the three-month period January, February and March 2010. The following information is provided.

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Total sales for the three months prior to the budget period were as follows.

| | |
|---|---|
| October | $74 910 |
| November | $104 720 |
| December | $115 500 |

Total sales for the three months of the budget period were as follows.

| | |
|---|---|
| January | $106 700 |
| February | $100 100 |
| March | $90 200 |

Past experience has revealed that 70% of all sales are on credit and the remaining sales are for cash. The receipts from accounts receivable are 60% in the first month after sale, 30% in the second month after sale and 10% in the third month after sale.

**Required**

Prepare the schedule of receipts from accounts receivable for the three-month period January to March 2010 showing the amount to be received each month.

2.3 Aldo & Maria wish to prepare its budget for the three-month period October, November and December 2010. The following information is provided to assist in its preparation.

Total sales for the three months prior to the budget period were as follows.

| | |
|---|---|
| July | $115 500 |
| August | $119 900 |
| September | $123 200 |

Total sales for the three months of the budget period were as follows.

| | |
|---|---|
| October | $132 000 |
| November | $165 000 |
| December | $193 600 |

Past experience has revealed that 40% of all sales are on credit and remaining sales are for cash. The receipts from accounts receivable are 40% in the first month after sale, 30% in the second month after sale and 30% in the third month after sale. Those debtors who pay in the first month after sale receive a 3% discount for prompt payment.

**Required**

Prepare the schedule of receipts from accounts receivable for the three-month period October to December 2010 showing the amount received each month.

2.4 Rawhide Pty Ltd has provided the following information to enable the preparation of a cash budget for the forthcoming three months: January to March 2011. The sales for October, November and December 2010 were as follows.

| | |
|---|---|
| October | $170 000 |
| November | $200 000 |
| December | $320 000 |

The projected sales for January to March 2011 are expected to be as follows.

| | |
|---|---|
| January | $230 000 |
| February | $190 000 |
| March | $160 000 |



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All sales are on credit. Past experience shows that 40% of sales are collected in the month of sale, 40% in the first month after sale and 20% in the second month after sale.

Purchases of inventory are all on account and actual/estimated purchases are as follows:

- actual purchases for December were $130000
- estimated purchases for January are $120000, February $90000 and March $80000.

It is company policy that all suppliers are paid in the month after purchase.

During the three-month period January to March 2011 the following is also anticipated:

- Expenses will be paid in cash as incurred:
  - wages and salaries of $15000 each month
  - administration expenses of $3000 in January, $3500 in February and $3750 in March
  - general expenses of $4000 will be paid each month.
- Rent of $8000 for the months of March, April and May will be paid in February 2011.
- In each month a loan repayment will be made of $2500, which includes $500 interest.
- In February the business expects to sell an item of equipment and receive $3000 cash.
- In March the business will purchase a new item of equipment costing $15000 and pay cash for this item.
- In January the company income tax of $35000 for the year ended 30 June 2010 will be paid in cash.
- The company had a bank balance of $12000 on 1 January.

**Required**

Prepare a cash budget for the three-month period January to March 2011 showing the cash balance at the end of each month.

2.5 The owner of a business that sells fitness equipment for use in homes has requested a forecast of sales for the next three months from her two sales staff. She is trying to prepare a cash budget for the next quarter of the current year. The sales staff provide the following separate forecasts.

| Month | Joe $ | Debbie $ |
|---|---|---|
| July | 100000 | 90000 |
| August | 150000 | 200000 |
| September | 170000 | 230000 |

The following details are available:

- Inventory costs, which average 70% of sales, are paid in the month of purchase.
- All sales are on account and customers pay the total within one month of the sale. Accounts receivable at 30 June 2010 is $80000.
- Fixed expenses are $10000 per month and variable expenses are 1% of sales. All operating expenses are paid in the month in which they are incurred.
- The company has $5000 cash in bank at 1 July 2010. The owner wants a minimum balance of cash on hand of $5000 at the end of every month.

**Required**

a Prepare two cash budgets for July to September 2010 with the estimates provided by Joe and Debbie and evaluate the budget outcomes in relation to the planned monthly balances.

b Discuss what the owner should do regarding the differing sales estimates from Joe and Debbie.

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2.6 As the accountant for Basilio Pty Ltd you are required to prepare a cash budget for the three months July, August and September 2010.

- The following balances appear in the accounts of the business as at 30 June 2010:

| | |
|---|---|
| Cash at bank | $63 000 Dr |
| Accounts payable | $54 560 Cr |

- The business expects it will purchase inventory during the budget period:

| | |
|---|---|
| July | $50 900 |
| August | $54 000 |
| September | $59 000 |

- The business pays its creditors in the month after purchase to take advantage of a 3% discount.
- All sales are made on credit and past experience shows that debtors pay 70% in the first month after sale and 30% in the second month after sale. Credit sales are expected to be:

| | |
|---|---|
| July | $150 000 |
| August | $148 000 |
| September | $143 000 |

- Sales for June were $142 000 and for May $132 000.
- The business expects to make the following payments each month.

| | July $ | August $ | September $ |
|---|---|---|---|
| Salaries and wages | 36 000 | 38 000 | 42 000 |
| Electricity | 6 000 | – | – |
| Advertising | 3 800 | 3 500 | 3 900 |
| Office expenses | 6 160 | 6 930 | 7 040 |

- In August the business plans to borrow $45 000 from the bank for a long-term loan. An existing loan will be paid out in July and this will require a payment of $12 000, which includes $1500 interest.
- In August the business will purchase new machinery at a cost of $58 000, paying cash.
- The business will pay its shareholders the dividend declared at the AGM in August. The dividend will be $50 000 paid in September.

**Required**

a Prepare a schedule of receipts from accounts receivable for the three months July, August and September 2010 showing the amount to be received each month.

b Prepare a cash budget for the three months July, August and September 2010 showing the expected cash balance at the end of each month.

2.7 Rendell Pty Ltd is a wholesaler and distributor of electrical goods. It has provided the following information to enable the preparation of a cash budget for the three months of July, August and September 2011.

| | Sales $ | Purchases $ |
|---|---|---|
| April (actual) | 86 360 | 37 100 |
| May (actual) | 81 300 | 35 400 |
| June (actual) | 92 700 | 38 200 |
| July (estimate) | 80 000 | 36 000 |
| August (estimate) | 100 000 | 42 000 |
| September (estimate) | 90 000 | 37 000 |



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- All sales are on credit. Past experience shows that 30% of sales are collected in the first month after sale, 40% in the second month after sale and 30% in the third month after sale.
- Purchases of inventory are all on account. The business policy is to pay all suppliers in the month after purchase.
- The following additional cash payments and receipts are anticipated during the period.

| | July $ | August $ | September $ |
|---|---|---|---|
| Rent | 5350 | 0 | 0 |
| Administration | 5900 | 5700 | 4900 |
| Salaries and wages | 9600 | 9700 | 9700 |
| Motor vehicle expenses | 8950 | 9550 | 10400 |
| General expenses | 6200 | 6400 | 8100 |

- Depreciation expense is estimated at $900 per month.
- During the month of September 2011 it is expected that the annual dividend of $48000 will be declared and paid.
- The shareholders have been asked to inject $50000 by way of a share issue. This will occur in the month of July with all money being received in that month.
- The company expects to sell a truck in August and receive $11000 in cash. A new truck costing $59000 will be purchased in September.
- Opening bank balance in July is $20000.

**Required**

Prepare a cash budget for the three months ended 30 September 2011 showing the cash balance at the end of each month.

2.8 Bicton Pty Ltd is a retailer of clothing. It wishes to prepare a budgeted income statement for the forthcoming year ended 30 June 2011.

The data collected to enable this budget to be prepared for the year ended 30 June 2011 is provided below.

- Expected sales are $450000.
- Cost of sales is expected to be 40% of sales.
- Advertising is expected to be 3% of monthly sales.
- Rent is anticipated to be $2500 per month.
- Electricity is estimated to be $450 per month.
- Salaries paid are estimated to be $130000 for the year with $2400 still owing at 31 December 2011.
- Depreciation is expected to be $640 per month.
- Sales commission will be 3% of sales.
- The annual insurance premium of $4500 will be paid in May 2011 for the period 1 June 2011 to 31 May 2012. For the period 1 January 2011 to 31 May 2011 the cost of insurance is expected to be $1900.
- The income tax expense will be at the rate of 30% of profit.
- Bad debts are expected to be $1200 for the year.

**Required**

Prepare a budgeted income statement for the year ended 30 June 2011.

2.9 Halo Pty Ltd is a retailer of ladies' clothing and shoes in Perth. It wishes to prepare its annual income statement budget for the year ended 31 December 2011. Data to assist in the preparation of this budget is provided below.

- Annual budgeted sales: clothing $640000 and shoes $430000.
- Interest revenue received in cash will be $2100 for the year plus an amount still owed at 31 December of $360.

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- Average mark-up will be clothing 60% and shoes 50%.
- Last year advertising expense of $40 000 was incurred and for the forthcoming year this is expected to increase by 8%.
- General operating expenses are expected to be $107 000 for the year.
- Insurance of $4600 will be prepaid on 31 March for the year ahead 1 April 2011 to 31 March 2012. The cost of insurance incurred for the first three months of the year was $1100.
- The plant and equipment of the business is shown in the ledger at $650 000. The business uses the straight-line depreciation method to depreciate these assets. Their residual value was estimated at $80 000 with a useful life of ten years.
- Salaries and wages of $105 000 will be paid during the year and as at 31 December 2011, $5000 will still be owing. Accrued wages at 31 December was $3800.
- The tax rate for the company is 30%.
- Sales commission is 2% of sales.
- Electricity is expected to increase by 5% on the amount paid last year of $12 000.

**Required**

Prepare a budgeted income statement for the year ended 31 December 2011.

2.10 The cash budget for Jakovich Engineering for the year ended 31 December 2011 is as follows.

| | |
|---|---|
| Cash balance at end 2010 | $16 000 |
| **Expected cash receipts** | |
| Services | $220 000 |
| Capital inflow | $43 200 |
| Rent received | $12 000 |
| Proceeds of sale of equipment | $4 000 |
| Total | $295 200 |
| *Less* **Payments** | |
| Wages | $60 000 |
| Rent | $28 000 |
| Cleaning | $4 000 |
| Cost of materials | $64 000 |
| Equipment | $42 000 |
| Loan repayment | $11 000 |
| Drawings | $72 000 |
| | $281 000 |
| Expected cash balance at end of year | $14 200 |

**Additional information**

| | |
|---|---|
| Gain on sale of equipment | $2 500 |
| Rent prepaid at 31/12/10 | $4 000 |
| Loan interest accrued | $5 000 |
| Depreciation | $8 500 |
| Bad debt | $4 500 |

**Required**

Prepare a budgeted income statement for 2011 for Jakovich Enterprises.

2.11 Andrea Dimitriou, the owner of a sports store, wants to expand the size of her shop by renting the vacant premises next door. She approaches her bank with the following projections for the six months from 1 July 2010:


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| | |
|---|---|
| Cash at bank 1 July 2010 | $12 000 |
| Total equity in current business 1 July 2010 | $200 000 |

Expected outcomes for the next six months are as follows.

| | |
|---|---|
| Cash sales | $400 000 |
| Salary payments | $60 000 |
| Accrued salaries | $5 000 |
| Depreciation | $30 000 |
| Drawings | $45 000 |
| Purchase of equipment | $85 000 |
| Operating expenses | $53 000 |
| Interest expenses | $5 000 |
| Cost of sales | $185 000 |
| Payments to trade payables | $204 000 |
| Rent expense | $12 000 |
| Prepaid rent | $3 600 |

**Required**

a Prepare a cash budget and a budgeted income statement for the next six months.
b Explain the difference in the cash and accrual outcomes.
c Which of the two outcomes is the most critical for the future success of the business?
d What is your assessment of the viability of Andrea's proposal in the light of these budgets?

2.12 Cheung Pty Ltd is a clothing retailer in Perth. It is preparing the budgets for the next two months after 30 September 2010. Following are the estimates and other details prepared.

| Month | Sales | Purchases of inventory |
|---|---|---|
| October | $88 000 | $33 000 |
| November | $77 000 | $55 000 |

The actual sales and purchases prior to the budget period are as follows.

| Month | Sales | Purchases of inventory |
|---|---|---|
| July | $89 100 | $34 980 |
| August | $89 980 | $37 950 |
| September | $99 000 | $44 000 |

- Historically, the business has sold 40% on cash and 60% on credit. Of the credit sales, 70% is received one month after the sale, 20% in the second month after sale and 10% in the third month after sale.
- Inventory purchases are all on credit and are paid in the month after purchase to take advantage of a 2% discount.
- The cost of sales is expected to be 55% of sales for the month.
- The following expenses are paid as incurred and the amounts are expected to be as follows.

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| Details | October $ | November $ |
|---|---|---|
| Advertising | 8200 | 7600 |
| Office administration expenses | 15400 | 14500 |
| Electricity | 5610 | 4202 |
| Equipment maintenance | 2100 | 1730 |
| Cleaning | 990 | 990 |
| Annual copier service | 360 | |
| Entertainment and hospitality | 600 | |
| Travel | | 725 |

- The following expenses are affected by accruals and prepayments:
  - insurance – an amount of $3300 was paid in July 2010 for a six-month period
  - salaries and wages – as at 30 September an amount of $400 was owed and this will be paid during October. During October a further $12000 is expected to be paid and a further $12500 during November. As at the end of November, $500 is expected to be owing to employees for work done.
- During October it is expected that a loan repayment of $3500 will be made, $500 of which is interest expense.
- Depreciation on equipment is $800 per month.
- During October a dividend payment of $17000 will be paid to shareholders.
- The business expects to sell equipment in October and receive $4400 in cash for the old item. A loss of $700 is expected on the old equipment item.
- The business will take out a loan of $20000 in November to purchase a new equipment item of $25080 in November.
- The opening bank balance on 1 October is $16900 debit.

**Required**

a Prepare the schedule of receipts from debtors receivable for the two months of October and November 2010 showing the expected collection for each month.
b Prepare the cash budget for the two months of October and November 2010 showing the cash balance for each month.
c Prepare the budgeted income statement for the two months ending 30 November 2010.
d If the business plans to take out a loan of $100000 to buy new equipment, do you think the business can be successful in the future, given an interest rate of 6% per year? What needs to be considered by the business during the budget period to achieve this plan?

2.13 Terry Cribb is considering going into business by opening a supermarket. Suitable premises have been found. Before granting him overdraft and lending facilities, his local bank has asked him to draw up a cash budget for the first 12 weeks of trading.

Terry has $100000 of his own money, which he is willing to invest in the business. The premises will have to be rented two weeks before opening and inventory and staff need to be on hand one week prior to trading.

Expected weekly cash sales for each of the first three months of trading are $75000, $90000 and $110000 (assuming four-week months).

**Additional information**

- Staff costs will be $15000 per week.
- Rent will be $2000 per week, payable four weeks in advance.
- Utilities will be $500 per week, payable a month in arrears.
- Insurance will be $10000, payable a year in advance.
- Administration will cost $200 per week.
- Equipment to be purchased in week 1 for $48000 cash, will be depreciated, straight line, over ten years with no residual value.


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- Assume there are four weeks in each month.
- Terry is allowing a 25% mark-up on all goods sold. Because he is a new customer, all suppliers are insisting on being paid within seven days.
- The bank is prepared, if the profit budget indicates that there will be a successful trading result, to grant overdraft facilities to a maximum of $10 000. Further, the bank is prepared to grant a long-term loan of up to $50 000 with an interest rate of 8% per annum, with interest to be paid quarterly in arrears.
- Terry estimates that his weekly turnover in 12 months' time will be $175 000.

**Required**

a Prepare a cash budget that covers all operations until the end of the last week of the budget period.
b Prepare a budgeted income statement for the 12-week period.
c Given that the forecasts are reasonable, will the business be successful?
d Given that the turnover will increase, what other costs would you expect to increase?

2.14 Betty Potter Pty Ltd is preparing its cash and income statement budgets for the period 1 January 2011 to 31 March 2011. The information below is presented to you so that this important task can be completed. The ledger accounts of the business showed the following balances as at 31 December 2010.

| | |
|---|---|
| Accounts receivable | $28 900 Dr |
| Bank (overdraft) | $3 500 Cr |
| Salaries payable | $300 Cr |

Sales for November 2010 were 13 000 units @ $5.00 per unit and for December 2010 were 15 000 units @ $5.00 per unit.

- Sales budget figures were as follows.

| | |
|---|---|
| January | 12 000 units @ $5.00 per unit |
| February | 11 000 units @ $5.00 per unit |
| March | 10 500 units @ $5.10 per unit |
| April | 11 000 units @ $5.10 per unit |

- Past experience shows that 70% of sales are for cash. However, of this 70%, 50% of customers make use of electronic commerce using EFTPOS and credit cards. The bank charges a fee of 0.8% on all amounts received via EFTPOS and credit card.
- The remaining 30% of sales are on credit. Past experience shows that 80% of customers pay in the month after sale and the remaining 20% in the second month after sale. These customers usually pay via cheque or money order.
- The firm's policy is to purchase the required amount of inventory for the following month's sales and to hold an extra 10% above this amount in case of additional sales. The cost of each unit from the supplier each month is expected to be as follows.

| | |
|---|---|
| January | $1.80 per unit |
| February | $1.80 per unit |
| March | $1.85 per unit |
| April | $1.85 per unit |

- The cost in December 2010 was $1.80 per unit.
- Accounts payable is always paid in the month after purchase.
- Depreciation on plant and equipment is determined annually and the cost is estimated to be $24 000 for the forthcoming year, to be spread evenly over 12 months.
- The business expects to purchase new plant and equipment of $5500 in March 2011. This will be paid for in cash.
- The monthly loan repayment is $850 of which $250 is interest.

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- Rent of premises is paid one month in advance. The charge for January and February is $1200 per month. This will increase in March and April to $1250 per month.
- Other monthly expenses incurred and paid in cash are estimated to be as follows.

| | |
|---|---|
| Advertising | $900 |
| General running costs | $3 100 |
| Administration costs | $1 800 |

- Salary payments are expected to be as follows.

| | |
|---|---|
| January | $2 800 |
| February | $2 850 |
| March | $2 500 |

- $400 is expected to be owing for salaries as at 31 March 2011.
- Insurance of $1200 for the year 1 July 2010 to 30 June 2011 was paid for in June of 2010.
- The company tax rate is 30%.

**Required**

a Prepare a cash budget for the three months January to March 2011 showing the balance at the end of each month.

b Prepare a budgeted income statement for the three-month period 1 January 2011 to 31 March 2011 showing the profit/loss for the period.

2.15 Tiggy Winkle Pty Ltd is preparing its cash and income statement budgets for the forthcoming period April to June 2011. You are required to prepare these budgets for the requested period. The following financial data is provided.

The ledger accounts of the business showed the following balances as at 31 March 2011.

| | |
|---|---|
| Cash at bank | $6 100 Dr |
| Salaries payable | $400 Cr |

- Sales for February were 35000 units @ $10.00 per unit and for March 45000 units @ $10.00 per unit.
- Sales budget figures are as follows.

| | |
|---|---|
| April | 32000 units @ $10.00 per unit |
| May | 31000 units @ $10.00 per unit |
| June | 30500 units @ $10.50 per unit |
| July | 31000 units @ $10.50 per unit |

- Past experience shows that 60% of sales are for cash. However, of this 60%, 70% pay using EFTPOS or credit card. The bank charges a 0.5% fee on all amounts received via EFTPOS and credit card.
- The remaining 40% of sales are on credit. Past experience shows that 70% of customers pay in the month after sale and the remaining 30% in the second month after sale. These customers usually pay via cheque or money order.
- The firm's policy is to maintain its monthly closing inventory levels at 10% of the following month's estimated units of sales.
- The cost of each unit from the supplier each month is expected to be as follows.

| | |
|---|---|
| April | $3.90 per unit |
| May | $3.90 per unit |
| June | $4.00 per unit |
| July | $4.00 per unit |



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- The cost in March was $3.90 per unit.
- Accounts payable is always paid in the month after purchase.
- Depreciation on plant and equipment is determined annually and the cost is estimated to be $36000 for the forthcoming year. This cost is then spread evenly over the 12 months of the year.
- The business expects to purchase new plant and equipment of $17000 in April 2011. The business will pay half in cash and borrow the remaining balance. The monthly loan repayment will be $360 of which $90 is interest. Loan repayment will commence in May.
- Rent for premises is paid two months in advance. The rent of $1800 per month for April and May was paid in March. This will increase to $1900 per month for June and July, which will be paid in May.
- Other monthly expenses incurred and paid in cash are estimated to be as follows.

| | |
|---|---|
| Advertising | $1 600 |
| General running costs | $5 200 |
| Administration costs | $4 200 |

- Salary payments are expected to be $3900 in April, $3950 in May and $3500 in June. $500 is expected to be owing for salaries as at 30 June 2011.
- The annual insurance premium of $2400 for the year 1 June 2010 to 31 May 2011 was paid in May of 2010. The next annual insurance premium of $2700 for the period 1 June 2011 to 31 May 2012 will be paid in May 2011.
- The directors are expected to declare an interim dividend of $14000 in April 2011 and this will be paid in May 2011.
- The company tax rate is 30%.

**Required**

a Prepare a cash budget for the three months April to June 2011 showing the balance at the end of each month.

b Prepare an income statement budget for the three-month period 1 April to 30 June 2011 showing the profit and loss for the period.

2.16 Gosnells Pty Ltd is a retailer of furniture. It is preparing its cash budget for the forthcoming two-month period of January and February 2012. As at 31 December 2011 the business had the following account balances.

| | |
|---|---|
| Bank (overdraft) | $9 800 Cr |
| Creditors | $26 700 Cr |

Sales data is as follows.

| | |
|---|---|
| November actual sales | $60 500 |
| December actual sales | $80 700 |
| January estimated sales | $70 600 |
| February estimated sales | $61 800 |

- Past experience shows that 70% of sales are cash and the remainder are on credit. The debtors usually pay 80% in the first month after sale to receive a 2% discount for prompt payment. The other 20% pay in the second month after sale.
- Purchases details are as follows:
  - January estimated purchases $27000
  - February estimated purchases $25900.
- The company policy is to pay all creditors in the month after purchase to take advantage of a discount of 2%.

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- Estimated payments for expenses are:
  - salaries will be $8000 in January and $7800 in February
  - administration will be $7860 in January and $8120 in February
  - rent of $7600 will be prepaid in February for March and April
  - an income tax income instalment of $34 000 will be paid in January.
- Other payments will be:
  - an interim dividend of $15 000 will be paid in February
  - new fittings costing $20 000 will be purchased for cash in February
  - a loan repayment of $2800 including interest of $800 will be paid in January.
- Other receipts will be:
  - a long-term bank loan of $15 000 will be received in February
  - old fittings sold will yield cash of $1900 and this will give a loss on sale of $400
  - a share issue to existing shareholders will result in a cash inflow in January of $40 000.

**Required**

a Prepare a cash budget for the period 1 January to 28 February 2012 showing the cash balance at the end of each month.

b The business directors have plans to buy new machinery in March at a cost of $55 000. What advice would you give the directors about how to achieve this priority?

**Actual results**

The actual receipts and payments results for February turned out as follows.

| | |
|---|---|
| Cash sales | $52 000 |
| Debtors' receipts | $16 900 |
| Bank loan received | $15 000 |
| Cash sale of old fittings | $690 |
| Share issue cash received | $40 000 |
| Loan repayment, including interest | $2 800 |
| New fittings cost | $21 000 |
| Interim dividend | $15 000 |
| Income tax instalment | $34 000 |
| Rent prepaid | $7 600 |
| Salaries | $7 100 |
| Administration | $7 910 |
| Creditors' payments | $24 100 |

**Required**

Prepare a cash performance report for the month of February 2012.

2.17 Rest Motels Pty Ltd is in the process of preparing its cash budget for the forthcoming three months ended 30 June 2012. The business is considering a major refurbishment of its motel in August 2012 at a cost of $100 000. It is concerned about how to pay for this and wants to know whether it will need to borrow finance. An extract of account balances shows the following as at 31 March 2012.

| | |
|---|---|
| Cash at bank | $25 390 Dr |
| Long-term investments | $45 000 Dr |
| Accounts receivable | $13 300 Dr |
| Accounts payable | $12 800 Cr |
| Stock of supplies | $11 500 Dr |



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**Information on supplies**

All supplies are purchased on credit based on the forthcoming month's estimated needs. Expected purchases of supplies are as follows.

| | |
|---|---|
| April | $14000 |
| May | $13000 |
| June | $13500 |

The business pays for its supplies in the month after purchase and receives a 2% discount for prompt payment

**Income**

Services income is expected to be as follows.

| | |
|---|---|
| April | $66000 |
| May | $65600 |
| June | $67100 |

Past experience shows that 80% of services rendered are on a cash basis. The 20% on credit is for corporate customers and they receive a 2% discount if they pay in the month after the service, which they invariably do.

Other receipts will be as follows:

- Interest revenue of $575 will be received in April 2012 but interest for May and June will not be received until August 2012.
- The company intends to sell an equipment item for $1200 in the month of May 2012.

**Expenses**

Payments for expenses are as follows:

- Prepaid insurance of $8609 for the forthcoming year 1 July 2012 to 30 June 2013 will be paid in cash in June 2012.
- Wages of $14000 will be paid each month but $2000 will still be owing as at 30 June 2012.
- Administration costs of $5830 will be paid each month.
- General expenses (including electricity) of $14800 will be paid each month.
- Electricity costs owing as at 30 June 2012 is expected to be $670.

Other payments will be as follows:

- The company will purchase new equipment costing $12000 in June, paying $8000 straight away and the balance in July.
- An income tax instalment of $12300 is due to be paid in April.

**Required**

a Prepare a cash budget for the period 1 April to 30 June 2012 showing the cash balance at the end of each month.

b Will the business have the resources to go ahead and refurbish its motel in August? What options could the directors consider to finance this project?

**Actual results**

The actual results over the three-month period were as follows:

- Income tax of $12300 was paid in April.
- New equipment cost $12500, of which the business paid $8500 in June, the remainder to be paid in July.
- Equipment was sold for $900 cash.
- Interest revenue received in April was $800.
- General expenses of $15000 were paid in April and May and $15500 was paid in June.
- Paid administration expense was $6000 in April and May and $5700 in June.
- Wages payments were $14500 each month.

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- Insurance prepaid during June was $8500.
- Services income was as follows.

| | Cash basis | Credit basis |
|---|---|---|
| April | $53 000 | $13 200 |
| May | $55 000 | $15 000 |
| June | $59 000 | $14 300 |

- Debtor's receipts were as follows.

| | |
|---|---|
| April | $12 740 |
| May | $12 936 |
| June | $14 700 |

(Note: a bad debt of $300 was incurred in April)

- Payments for supplies were as follows.

| | |
|---|---|
| April | $12 600 |
| May | $13 200 |
| June | $13 600 |

- Accounts payable for March, April and May were paid according to policy and the discount received.

**Required**

c Prepare a cash performance report for the month of June 2012 only.

d Discuss the question of whether the directors need to rethink their financing plans for the refurbishment in light of the firm's actual cash position at 30 June.

2.18 Badawi Suppliers provided the following information.

### Badawi Suppliers
### Budgeted income statement and performance report three months to 31 December 2011

| | Budgeted $ | Actual result $ |
|---|---|---|
| Sales | 1 470 000 | 1 234 500 |
| Cost of sales | 617 000 | 508 000 |
| **Gross profit** | 853 000 | 726 500 |
| | | |
| *Add* Discount revenue | 14 620 | 11 500 |
| Total income | 867 620 | 738 000 |
| *Less* Expenses | | |
| Selling and distribution | 403 600 | 380 600 |
| Office and administration | 167 500 | 149 000 |
| Depreciation | 46 000 | 45 000 |
| Interest | 31 200 | 30 000 |
| Discount expense | 12 820 | 8 400 |
| Bad debts | 34 500 | 44 500 |
| Rent | 96 000 | 96 000 |
| | | |
| Total expenses | 791 620 | 753 500 |
| **Budgeted profit** | 76 000 | (15 500) |



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**Required**

a Prepare a variance performance report for this business based on the preceding information.
b Where is there evidence that the business attempted to arrest the loss outcome?
c To improve the budget for the next three months where should the focus be?

2.19 Anouk & Astrid have provided you with the following cash budget working papers for the period January to June 2011.

| Receipts | Budget | Actual |
|---|---|---|
| Cash sales | 920 000 | 853 000 |
| Credit sales | 975 000 | 789 400 |
| Sale of investments | 45 000 | 37 200 |
| Total cash | 1 940 000 | 1 679 000 |
| Payments | | |
| Purchases | 470 000 | 375 000 |
| Advertising | 74 000 | 71 000 |
| Wages | 635 000 | 613 400 |
| Administration | 72 000 | 67 000 |
| Vehicle expenses | 68 000 | 69 000 |
| Occupancy expenses | 143 000 | 143 000 |
| Insurance | 12 400 | 12 000 |
| Equipment | 127 490 | 127 500 |
| Motor vehicle | 176 700 | 172 200 |
| Superannuation on wages | 53 000 | 51 660 |
| Total expected payments | 1 832 590 | 1 701 760 |
| Total actual payments | | |
| Receipts *Less* payments | 107 410 | 142 840 |
| Opening bank balance | 69 000 | 69 000 |
| Closing bank balance | 176 410 | 211 840 |

**Required**

a Examine the budget figures together with the actual results and identify the key variances.
b Given reduced market confidence over the period of the budget do you think the outcome for cash balances is reasonable? Explain.
c The next six-month trading period is expected to be even more difficult. Suggest ways that this business might maintain liquidity.

2.20 Trieu Pty Ltd has provided you with the following forecasts for the year ending 30 June 2010.

- Budgeted sales of $789 000, of which 60% is expected to be cash sales and 40% credit sales.
- Allowance for doubtful debts as at 1 July 2009 was $2000 and this was expected to rise to $2400 by 30 June 2010.
- Discount allowed for prompt payment from debtors is expected to be 2%. Discount is expected to be $6300.
- Gross profit margin is budgeted at 55% of sales.
- Insurance prepaid last year was $12 000 and this is expected to increase by 6% this year. At balance day for the budget period the company expects to have prepaid $840 in insurance. As at 1 July 2009 prepaid insurance was $650.
- Salaries and wages paid is expected to be $132 000 this financial year and $840 will still be owing at balance day. As at 1 July 2009 $790 was owed.

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- Electricity expense last financial year was $14 200 and this is expected to increase by 5%.
- Selling expenses are anticipated to be $34 210 for the forthcoming financial year plus commission to salespersons calculated at 4% of sales.
- Depreciation on plant and equipment will be on the reducing balance method at the rate of 20% for the financial year. Plant and equipment is shown in the statement of financial position at a cost of $370 000 and accumulated depreciation as at 1 July 2009 was $80 000.
- The company has a loan of $354 000 and the interest rate expected is 6% per annum.
- Income tax is calculated at the rate of 30% and the payment in relation to last year's tax was $79 000.
- Administration expenses are anticipated to be $56 400 for the budget period.
- General expenses are estimated to be 9% of the cost of sales.

**Actual results**

The actual results for the year ended 30 June 2010 were as follows:

- Sales were $860 000 of which only 58% was for cash.
- Allowance for doubtful debts for 2010 is expected to be $2500 and bad debts for 2009/2010 was $1800.
- Discount of 2% was given on all credit sales for the year plus to the debtors from last year who paid.
- Gross margin was 58% of sales.
- Insurance paid was $13 000 and the amount prepaid at 30 June 2010 was $910.
- Salaries and wages paid was $134 000 and $910 was owed at balance day.
- Electricity expense was $15 000, of which $400 was owed on balance day.
- Selling expenses were $30 000 and the commission to salespersons was 4% of sales.
- Depreciation was as expected.
- The interest expense was $20 500 and the loan repayment was made. However, $500 was owed on balance day.
- The income tax rate was 30%.
- Administration expenses were $55 000 for the year.
- General expenses were $32 000.

**Required**

a Prepare the budgeted income statement for the year ended 30 June 2010.
b Prepare the income statement performance report for the year ended 30 June 2010.
c Comment on the feasibility of a proposal to pay a dividend of $59 000 to shareholders.

2.21 The small manufacturing business Inspiration Pty Ltd has prepared the following budget for the next 12 months.

### Budgeted income statement for the year ended 31 December 2010

| | $ | $ |
|---|---|---|
| Sales | | 4500000 |
| Production costs | | 2900000 |
| Gross profit | | 1600000 |
| Selling expenses | 360000 | |
| Administration costs | 290000 | |
| Financial expenses | 220000 | |
| Taxation | 230000 | 1100000 |
| Estimated profit | | 500000 |


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The budget was well managed and was on track midway during the year. However, six months into the year orders began to decline rapidly due to a general economic downturn. The budget is reviewed anticipating that the second half of the year will produce a 50% decline in sales. All items are proportionally adjusted, except that the administration cost is only reduced by 20% and taxation is budgeted at 30% of pre-tax profit.

**Required**

a Prepare the adjusted budget for the last six months of the period.
b By year's end the adjusted outcomes (anticipating 50% reduction) were actually achieved with sales revenue for the second half of the year 10% higher than anticipated (all other items were as budgeted and taxation calculated 30% on profit). Prepare an income performance report for the year ended 31 December 2010.
c How viable is this business as a result of the economic decline (given that the business has an effective manufacturing unit utilising modern technology processes)?
d Provide some business advice to this operation given the financial outcomes and the known circumstances.

2.22 Kelmscott Ltd is a wholesaler. The management has been extremely worried about the firm's cash position over the last few years. In January 2011, they sought your advice and asked you to prepare a cash budget for the forthcoming months of April, May and June 2011. In addition, they asked you to write a report on the cash position over this period and, in particular, to identify ways in which it could be improved. The company is planning to expand in July to take over another business. This will cost $150 000.

As at 31 March 2011 it is noted that wages owing of $1000 is shown in the ledger accounts as payable and this will be paid in April.

The following data is made available to you regarding the firm's operations:

- Estimated sales for the six months to June 2011 are as follows.

| Month | Credit sales $ | Cash sales $ |
|---|---|---|
| January | 122 000 | 12 900 |
| February | 137 000 | 14 500 |
| March | 142 000 | 17 700 |
| April | 148 000 | 20 100 |
| May | 134 000 | 15 000 |
| June | 126 000 | 12 600 |

- Cash is received immediately on cash sales. The firm allows customers one month credit on cash sales. 99% of this amount is received with these customers receiving a 1% discount. The other 1% will be expensed as bad debt.
- Purchases of goods for resale are made on credit. The firm receives two months credit on these purchases. The required goods are purchased in the month before they are needed. The purchases needs for the six months to June 2011 are as follows.

| Month | $ |
|---|---|
| January | 62 000 |
| February | 58 000 |
| March | 71 000 |
| April | 80 000 |
| May | 54 000 |
| June | 48 000 |

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- The business pays $5600 per month in loan repayments and the interest component of this is $1300 per month.
- Kelmscott administration costs are estimated to be $12 000 per month. This includes a charge for depreciation of $2000 per month. The company takes one month to pay these expenses.
- Selling and distribution expenses are estimated to be $50 400 a year and they are incurred evenly over the year. One month's credit is taken.
- In June the firm anticipates paying $3880 tax to the Australian Taxation Office.
- The firm has agreed to purchase new inventory-handling equipment. The cost of $105 200 is payable in two equal instalments in April and May 2011.
- The firm expects to be able to buy an adjacent property (costing $150 000) in June to expand its operation.
- The firm is currently negotiating with an agency an advertising campaign. The cost will be $6300 in May and $7700 in June. Payments will be made in cash.
- It is estimated that the cash balance at 1 April will be $46 000.
- A share issue allotment of $100 000 will be made in June with all cash received in May.
- Rent of $12 000 will be prepaid in cash in June for the period of July to September.
- For each month of April, May and June $8000 was expected to be incurred and paid.

**Actual results**

- Actual sales are as follows; the business credit policy was strictly adhered to.

| Month | Credit sales $ | Cash sales $ |
|---|---|---|
| March | 144000 | 18000 |
| April | 145000 | 22000 |

- Actual purchases needed were as follows; the business policy of payment was strictly adhered to.

| Month | $ |
|---|---|
| March | 70000 |
| April | 82000 |
| May | 52000 |

- The business paid $5600 per month in loan repayments and the interest component of this was $1300 per month
- Kelmscott Ltd's administration costs paid during the month were $11 000.
- The expenses for the month were $12 600; this included a charge for depreciation of $2000 per month.
- Selling and distribution expenses were $4200 during the month and the expense for the month was $5100.
- The firm has agreed to purchase the new inventory-handling equipment as planned. The cost of $106 000 was paid in two equal monthly instalments with the first in April 2011.
- Rent of $12 000 was paid in March for the three months of April, May and June.
- Wages owing as at 30 April were $900. The expense for April was $7600 and $8500 was paid in April.

**Required**

a Prepare a cash budget for the three months to 30 June 2011 showing the bank balance each month.
b Prepare the income statement budget for the period ended 30 June 2011.
c Prepare the cash performance report for the month of April 2011.
d What would you advise the company about the planned expansion in July 2011? How can it achieve its plans?

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2.23 Norm Barton, Will Hood and Donna Newton are directors of Willetton Electronics Pty Ltd, which is an electronics repair business. The business started three years ago when the three directors, who worked for another repair business, decided it was time for them to branch out on their own. They all have qualifications in electronic repairs from TAFE but no business qualifications.

They each contributed $20000 to start the business and borrowed an additional $400000 from a bank. The interest repayments on this loan have been a crippling burden for them in spite of the fact that interest rates have come down.

They began their business in the only location they could afford to rent, in Willetton. Their nearest electronics repair competitor is situated at the large local shopping centre. Although the two businesses are not very close together, business has been slow for Willetton Electronics Pty Ltd. They began with no customer base, although the good reputation of the business has begun to bring in new customers over the past three years. The company has built up an excellent reputation with customer feedback indicating that they do a very good job.

The business employs an office administrator and three other repair technicians. The employees have indicated that they find working for the business very satisfying as the owners/managers are easy to work with and consult them on a whole range of matters. There is also good social interaction at the business.

To keep costs down, each of the directors has taken on extra roles, such as bookkeeping, marketing and financial management. However, they have found this difficult as they have no expertise or experience in these areas. As a result, the business market share is still small and the financial management is in some disarray. There has not been a great deal of advertising or promotion done for the business.

A friend suggested that they should consider linking up with the local community groups through sponsorship and donations to get a higher profile locally. This friend also pointed out that most people these days seem to dispose of their electronic equipment when something goes wrong with it, rather than have it repaired – a trend accelerated by recent falls in the price of many types of new electronic equipment. The friend suggested that the business should consider diversifying.

Overall the business's performance is not good as the business struggles to establish itself in the market and meet its debt commitments.

**Required**

a Prepare a strategic plan for the business, which includes the following:
   i A list of the strengths, weakness, opportunities and threats to the business
   ii A mission statement (i.e. the main goal for the business)
   iii A set of five main objectives for the business – two short term, two medium term and one long term
   iv Choose three of your objectives and develop one strategy for each objective.

b In preparing this strategic plan, give consideration to what business strategy the partners should follow. Should it be cost leadership or differentiation?

# Investigation

During economic crisis periods of boom or recession, budgeting is a challenge. The many variables of budgets are difficult to juggle. Income, expense and capital forecasts can be problematic. Select one large Australian public company and investigate its progress in the period from, say, 2007 to the present. Review the company's annual reports for the period and consider the following questions.

1 What has been the impact of the economic upheaval on the financial fortunes and strategic directions of the business?

2 To what extent were predictions made by the company in earlier reports borne out by later experience?

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3 How do you think the company would have managed its business during this period and what particular challenges do you think it would have faced?

4 What other means might the business have employed to manage its financial directions?

## Essay

1 Identify the budgets that would typically make up the master budget for a quality furniture manufacturing business. Explain how a cash budget would be useful in the business planning for this furniture manufacturer both in the short and long terms.

2 'During a period of business volatility, when consumers are less confident of the general state of the economy, budget preparation might appear pointless as the plans will need to be constantly adjusted.'

Comment on this statement, identify the benefits of preparing budgets and argue the case for the preparation of budgets, both for the short and long terms, irrespective of the economic conditions.

## Ethics case study

Van den Berg Pty Ltd manufactures and sells Tyrus, an automatic vacuum cleaner for swimming pools. Van den Berg employs ten salespeople and pays them a commission of $50 for each Tyrus they sell. In addition, if the sales staff meet the annual budgeted sales figure of 1000 units, they receive an annual bonus of $10 000.

Sue Botha is one of the sales staff and a close friend of Piet Jacobus, the accountant for the company. One day over lunch, Sue confides in Piet about a problem that is hurting the business profits. She explains that the sales target of 1000 is quite easy for the sales staff to achieve. Once achieved, there is no further financial incentive to increase sales in that year as the bonus is fixed at $10 000. Therefore, many sales staff commit customers to buy at the beginning of the following year, which may mean a delay on the delivery of the pool cleaners of four to eight weeks. This means that these sales are recorded next year and the salesperson is well on the way to achieving next year's target.

### Discuss

a Who are the stakeholders in this situation?
b What are the problems for Van den Berg Pty Ltd as a result of the strategies of the sales staff?
c Explain what Piet should do with this information? Should he tell management or keep it confidential as Sue requested? If management discovered that Piet knew of this practice and did not say anything, he could lose his job. However, if he does inform management, then Sue could lose her job and Piet could lose a friend.


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# Chapter 3
# CAPITAL INVESTMENT DECISIONS

## What You Will Learn

After studying this chapter you should be able to:

1 Explain the nature and importance of capital investment decisions
2 Explain the concept of the time value of money
3 Explain the factors affecting capital investment decisions
4 Explain and apply the concept of the payback period
5 Explain and apply the concept of rate of return on average investment
6 Explain and apply the concept of net present value
7 Interpret the results of calculating the payback period, rate of return on average investment and net present value to evaluate capital investment decisions

## Introduction

This chapter covers the accounting and finance techniques that assist management to make decisions about committing large amounts of funds over a long period of time. These techniques are called *capital budgeting* or *capital investment techniques* and they assist managers to make very critical decisions affecting their business.

When making capital investment decisions, managers must consider the purpose of the investment, the options available, the implementation process and the impact on the business. There are a number of techniques available; in this book we will consider the payback period, rate of return on average investment and net present value methods. We will examine their advantages and disadvantages, apply each method and interpret the results.

The results of these quantitative techniques must be considered in the light of qualitative issues that impact on the financial success of a capital investment. Capital budgeting is therefore the process of planning, financing and managing capital investment decisions in a coherent way.

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# DEFINING CAPITAL INVESTMENT DECISIONS

Key Concept 3.1

**Capital investment decision-making**

Capital investment decisions are long-term business decisions involving the commitment of large sums of money (relative to the business's size) and usually entail the acquisition of non-current assets.

Examples of capital investment decisions include whether to:

- establish a new store
- purchase new machinery
- acquire new technology
- start production of a new product
- take over an existing business
- invest in a financial institutions investment fund.

These investments will usually require capital expenditures, i.e. the purchase of assets that have long-term useful lives. These assets are expected to generate cash inflows and profit to the business and they usually require taking on a debt commitment or equity outlay with a view to long-term gain.

Key Concept 3.2

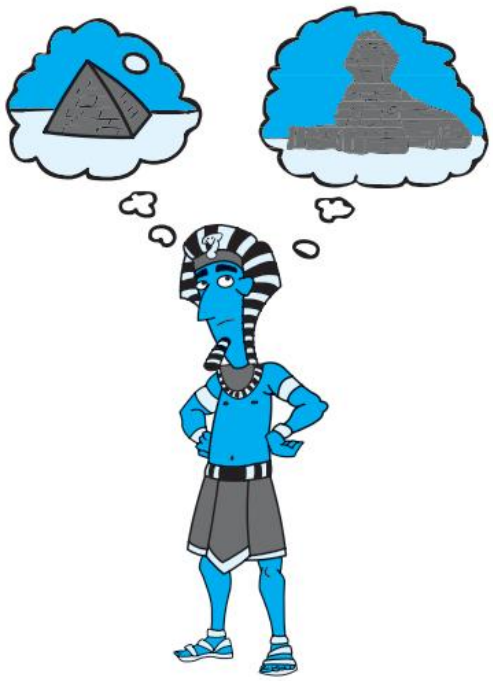
**Capital investment decisions**

Capital investment decisions have the following characteristics:

- they involve large sums of money relative to the size of the business
- expenditures are usually long term
- the decision is difficult to reverse
- they are high risk.

Capital investment decision-making is important to a business because these expenditures have the following characteristics:

- They usually involve large sums of money relative to the size of the business operation. The purchase of a delivery vehicle for a small business may be a large outlay but the acquisition of one delivery vehicle for a supermarket chain would not be that significant. However, if the supermarket chain were to replace all its delivery vehicles at one time then it would be a large outlay. Due to the large cost of the investment, businesses will often have to raise finance in addition to their own funds.



- *The expenditures are usually for the long term.* The acquisition of non-current assets means that the impact of the decision will be felt by the business for a long period of time. There is an expectation that the assets will generate cash flow and profit over time and that they will be sufficient to repay the debt finance, if required, also over a long period of time.
- *The decision cannot be easily reversed.* The decisions are difficult to change as the outlay has been made and to make any change would be costly to the business. For example, if, one year after the purchase of a particular type of delivery vehicle, the decision turns out to be the wrong one because a more advanced vehicle is now on the market, the cost of selling the now unsuitable vehicle will involve a considerable loss because of its substantially reduced market value.
- *They have a high risk attached to them.* The combination of the three previous characteristics mentioned above means that the assets must generate cash flow and profits well into the future so that lenders can be repaid and investors receive a reward. The long term is uncertain as it can be difficult to predict, for example:
  - the rate of technological change



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- economic circumstances
- customer preferences
- what your competitors will do.



Capital expenditures take time to mature but are vital to the long-term effectiveness and efficiency of the business. Investors, lenders, employees and customers are all interested in the capital investment decision as it will affect them in some way. Capital expenditures have a large impact on a business and it is expected that they will:

- earn a reasonable rate of return
- improve productivity
- enable the growth of the business
- advance product or service quality.

## FACTORS AFFECTING CAPITAL INVESTMENT DECISIONS

The capital investment decision-making process should involve both an analysis of the quantitative (i.e. accounting and finance techniques) and qualitative aspects of the alternative projects or options that are available for consideration.

When management makes a capital investment decision it must consider the qualitative aspects of the decision. These impacts are difficult to quantify but are about the business trying to gain a strategic advantage in the market as a result of the investment project or asset acquisition.

Capital investment decisions require consideration of qualitative aspects, such as improvements in product quality, business image and competitiveness; reductions in environmental impacts; and the morale of employees.

**Examples of qualitative impacts of capital investment decisions**

- Employee morale
- Effect on other parts of the business
- Environmental impact
- Effect on future business opportunities
- Effect on the business's image
- Changes to the quality of product

REALITY CHECK 3.1

### David Jones Ltd Annual Report 2008

#### The Company's FY09–FY12 Strategic Plan

In March 2008 we unveiled our Company's FY09–FY12 Strategic Plan. This plan forms the blueprint for shareholder growth over the next four years by outlining seven key sources of value. These value sources are designed to deliver NPAT growth of at least 5–10 per cent p.a. over the next four years (regardless of fluctuations in the economic cycle), dividend growth in line with NPAT growth, a strong balance sheet and strong cash flows with excess cash returned to shareholders in the most efficient manner over time.

The FY09–FY12 Strategic Plan's seven sources of value involve the Company:

1 opening 4–8 high-value new stores (in addition to Doncaster and Claremont) in centres with strong demographics which are well-located to capture our growing customer base

2 refurbishing 11–14 of our high-value stores to reinforce our contemporary branded department store positioning, to increase space for our high-margin categories and brands and to generate short- to medium-term sales and earnings before interest and tax (EBIT) growth ...

Source: *David Jones Annual Report 2008*, page 4.

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What factors would have influenced these plans? What do you think is the purpose of these plans? Note the reasons given for these capital investment plans. What other factors do you think may be the reasons for such capital investment plans?

When making a decision to invest in capital expenditure, management will want to ensure that the business:

- remains competitive in the marketplace
- meets all legal and political requirements
- meets customer expectations.

When management considers a capital investment decision it must take account of customer preferences, what its competitors are doing and government regulations.

Key Concept 3.3

**Factors affecting capital investment decisions**

Factors affecting capital investment decisions include:

- customer preferences
- competition
- government regulation.

## Customer preferences

Marketing is a complex area involving analysis of the price, product, place and promotion of a business's product(s) or service(s). Critical in this process is the fact that the customer and their demand for a product or service is influenced by their perceptions of the business. The customer's preferences will alter according to such influences as:

- changing fashion
- habits
- social values.

For example, customers and investors are looking more and more for businesses to make socially and environmentally responsible investments and they may boycott those businesses that do not operate accordingly.

## Competitors

In any industry, competition is intense and a business must keep up with or get ahead of its competitors. It must analyse all parts of the business operation, such as its:

- marketing approach
- productivity
- technology
- resources
- financial investments
- environmental impact.

It is essential to look for innovation, keep costs to a minimum and maximise revenue-earning potential. These aspects will affect the decisions that managers make and they may consider that these factors will outweigh any unacceptable quantitative results, such as a negative net present value.

## Government regulation

A business must consider the attitude of regulators, such as governments, when considering the acquisition or replacement of assets, or investment in a project. Corporate


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social responsibility is influenced by government policy and regulation. For example, businesses must:

- adhere to government demands to reduce environmental impacts
- meet regulations regarding occupational health and safety
- comply with government requirements concerning native title.

At the local government level, businesses must operate under the by-laws relating to such aspects as:

- health and safety
- business zoning
- building construction.

REALITY CHECK 3.2

Bridgetown Pty Ltd is a medium-sized business producing a range of gourmet tinned and frozen fruit and vegetable goods for the Perth market. They have been in operation for 20 years and have a factory and warehouse in Bridgetown, which is currently suitable for its operations, although it is at about 80 per cent of its maximum capacity of production.

The company directors, who are also the major shareholders, have begun plans for a business expansion. This plan involves diversification as it will entail the production of one of two potential products that are different from their current products.

Option One involves the production of a small range of dairy products, namely gourmet ice-cream and yoghurt products. This option will require a new factory and warehouse separate from the current business facilities. The cost of setting up and producing the required products will be approximately $1 000 000, which will be financed through a long-term bank loan and cash reserves currently invested. This option is less costly than the alternative outlined below and the directors have assessed the following information regarding this alternative:

- It should be relatively easy to gain local government approval for all aspects of running this operation. This includes relatively easy approval concerning the environmental impact of such a project in the Bridgetown area.
- Market research indicates that there will be a quick uptake from consumers and that demand will be satisfactory in the short term to cover costs.
- Competition in the marketplace will, however, be high in the long term, as competitors will reposition themselves to sustain market share.

Option Two is the establishment of a production process to produce both alcoholic and non-alcoholic apple cider. This will also require a new factory and warehouse although some aspects of the production process can be incorporated within the current set up. This will save some money but the total cost of setting up and producing the products will be approximately $2 000 000, which will be financed through the cash reserves currently invested, a large long-term bank loan and a share capital injection from the owners. The directors have assessed the following information regarding this alternative:

- It will take some time to obtain local government approval for all aspects of running this operation. This is mainly because approval concerning the environmental impact of such a project in the Bridgetown area will be difficult to obtain. This production process will have to meet more stringent guidelines concerning waste disposal and will require approval to remove a large area of bush and woodlands to build the large factory and warehouse required. Some local residents are likely to object to this degradation of forest area.
- Market research indicates that there will be a slow uptake from consumers but that demand will be high in the long term. In the long term, profitability will be high but the risks are much higher than those involved in the production of dairy goods.
- Competition in the marketplace will be very high in the long term, as competitors will attempt price cutting to keep new businesses from entering the market.

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Which option would you take if you were a director with the company? What factors would need to be considered?

### Commentary

The company directors should first undertake a quantitative analysis using capital investment techniques. This will involve them estimating future cash flows and determining the cost of capital. Furthermore, the directors will need to consider the impact on the environment, mainly the removal of bush and woodlands, the reaction and resistance from local residents and how this will reflect on the company's reputation. In addition, the appraisal of the risk and return of each project will need to be carefully weighed up.

How averse to risk are the owners? Students may like to discuss this case study with the fellow students and also their teacher.

## Cash flows and profit

There are a number of methods for analysing capital investments and assisting in the decision-making process. These are:

- rate of return on average investment
- payback period
- net present value.

The rate of return on average investment method uses accrual accounting as its base and measures the profitability of a project. However, the other methods – the payback period and net present value methods – use cash flows as their base. Accrual accounting is based on incomes and expenses, whereas cash flow refers to cash inflows and cash outflows.

Income is what is earned during an accounting period whereas cash inflow is the money that will be received during that period. Expenses are what are incurred during an accounting period whereas cash outflows are the money paid out during that time period.

Key Concept 3.4

**Why use cash flows?**

Cash inflows and outflows are a better determinant of the success of a capital investment project. They are what truly determines the value of an investment and it is possible to measure the time value of money.

Cash inflows for a business may be, for example:

- increased cash inflows from extra sales or fees
- increased receipts from accounts receivables
- the cash sale of an old asset
- the likely residual cash value of an investment when it is completed
- savings in payments for operational costs.

Some examples of cash outflows for a business are:

- the initial cost of an investment
- the major overhaul of an existing asset
- cash payments for operational costs, such as electricity, insurance, rates and taxes and repairs and maintenance.

The net cash flows are the difference between cash inflows and cash outflows.

Note that depreciation is not a cash outflow and must be excluded from any calculation of cash outflows.



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Some projects will require extra working capital, such as accounts receivable and inventory, and therefore the required net amount should be included in the initial cash outflow. This amount will be added to the cost of any non-current assets to give the initial cost of the investment.

## Time value of money

An important concept in capital budgeting techniques is the time value of money. This time value of money concept is applied to the value of both cash inflows and cash outflows.

REALITY CHECK 3.3

### Would you rather have $10 000 today or $10 000 in five years?

The obvious answer is $10 000 today but why? The answer is that $10 000 will buy more today than it will in five years time. This is because, over a period of five years, inflation (i.e. increasing prices) will cause the value of money to decline. In addition, the $10 000 today can be invested and earn interest. Therefore, at the end of five years we will have a larger sum of money and have possibly kept up with inflation.

Key Concept 3.5

**Time value of money**

The 'time value of money' concept is that money today does not have the same value in the future and this is due to the impact of inflation and interest rates.

Over a period of time, prices usually increase and this is called inflation. The result is that $1 in the future will not buy the same as it does today. Therefore, cash received or paid in the future does not have the same buying power as it does today. Moreover, money received today can be invested and earn interest or a rate of return, which will attempt to keep pace with inflation and also make us a 'profit'.

If we have invested $5000 in a bank account for one year at an interest rate of five per cent per year, then in one year's time we will have $5250, which is the original amount of $5000 plus interest of $250 for the year. The $5250 is therefore the future value of the $5000 we invested or, put another way, the $5000 is the present value of the $5250 to be received in one year's time.

Cash flows over time have different values. Therefore, if we wish to add them all together and make valid comparisons over time, we must ensure that they are all the same equivalent value – usually their current value, i.e. the present value. This practice of converting future cash flows to their present value is called the *discounted cash flow* technique.

When we calculate the future value of an investment we apply an interest rate (or rate of return) to determine the future value. When we calculate the present value we use what is called the discount rate. The connection between a future value and a present value is that the discount rate and the interest rate (or rate of return) are in fact the same.

The discount rate is usually equal to the cost of capital. The cost of capital is the rate of return that a business must incur to pay for the debt and equity required for the capital investment asset(s) or project. It will be the weighted average of the various rates that have had to be incurred to obtain the finance required. A business will want the rate of return from an investment to be greater than the cost of capital for that investment. Please note that the calculation of the cost of capital is beyond the scope of this textbook and that the questions at the end of this chapter will give the cost of capital, which is the discount rate.

Key Concept 3.6

**Risk and return**

The higher the risk, the higher the interest rate (or rate of return) and, therefore, the higher the discount rate will be. Investments that are considered at a higher

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risk of failure will incur a higher cost of capital. Equity finance usually demands a higher rate of return in comparison to borrowed funds because the risk to the investor is higher due to the lack of security and the order of repayment laws in the event of the liquidation of the business.

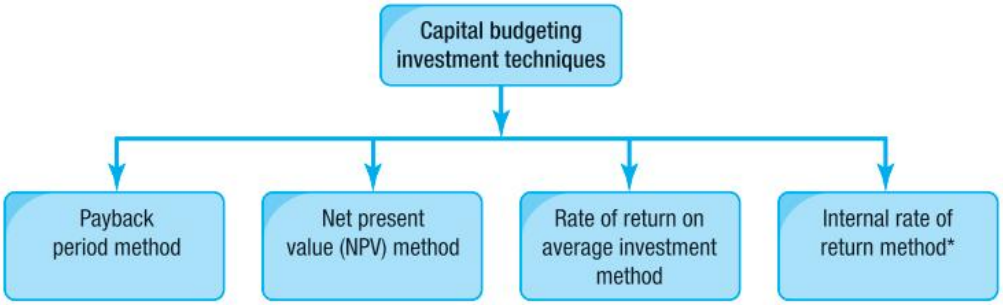



Figure 3.1 Capital investment techniques

# CAPITAL BUDGETING METHODS

The traditional methods of evaluating capital investment projects are the payback period and the rate of return on average investment. The methods that consider the time value of money are the net present value method and the internal rate of return method. We will consider both traditional methods and the net present value method in this textbook.

## Payback period

Key Concept 3.7

**Payback period**

The payback period is the period of time it takes for the cash flows from an investment to exceed the initial cost of the investment.

Note: The shorter the payback period, the better. Therefore, if there are two or more options available, the one with the smallest payback is the project that should be preferred.

The payback period method is based around the importance of cash to a business. Under this technique we determine how long it will take the business to recoup, from cash receipts due to the investment, the initial cash outlay for the capital investment.

This method is used by businesses because:

- It gives some assessment of the risks attached to a project. The longer the payback period, the greater the risk. This is because the longer it takes a business to recoup in cash its initial cash outlay then the more that can go wrong for the business.
- It is simple to use and to screen which investments should be considered before applying some other technique to make a further assessment of the investment project.
- It takes into consideration liquidity, which can be particularly important to some businesses.

To calculate the payback period, the net cash flows, after tax, are added together for each period until they equal the cash outlay for the investment project. Please note that for the purposes of simplicity in this textbook we will ignore the cash flow that may result from the disposal of old assets.


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## Constant net cash flows

When the net cash flows for a project are *equal*, i.e. constant – over a period of time, we can use this formula.

Formula 3.1

$$\text{Payback period} = \frac{\text{Initial cost of investment}}{\text{Net cash flows}}$$

EXAMPLE:

### Example 3.1

Healthy Foods Pty Ltd is considering buying a new machine at an initial cost of $50 000, which will return net cash flows of $15 000 per year for five years.

Therefore, by applying the payback period formula above the answer is as follows.

$$\text{Payback period} = \frac{\$50\,000}{\$15\,000}$$

This equals 3.333 years or three years and four months.

Note: The 0.333 in the answer above is multiplied by 12 months to give us 3.996 months, which we can round up to 4 months.

Answer: The payback period for the machine is therefore three years and four months.

## Differing net cash flows

When the net cash flows each period are *not* constant (i.e. there are differing amounts in some of the periods of the investments life) we *cannot use* the formula above to calculate the answer. In this case we must add each period's net cash flows until the sum is equal to the initial cash investment.

EXAMPLE:

### Example 3.2

Healthy Foods Pty Ltd is considering the acquisition of new equipment, which has an initial cost of $40 000 and will yield cash flows for a period of seven years. The annual net cash flows are as follows, showing the cumulative affect over the seven years.

| Year | *Net cash flow $* | *Accumulated cash flows $* | |
|---|---|---|---|
| 1 | 10 000 | 10 000 | |
| 2 | 10 000 | 20 000 | |
| 3 | 9 000 | 29 000 | |
| **4** | 8 000 | **37 000** | ← $40 000 is recovered between years 4 and 5. |
| **5** | **6 000** | 43 000 | |
| 6 | 6 000 | 49 000 | |
| 7 | 5 000 | 54 000 | |

**STEP 1**

Calculate the cumulative cash flows for each year as above. We can see that at the end of year 4 we have accumulated $37 000 and at the end of year 5 the amount is $43 000. Therefore, the initial investment is recovered after year 4, but before the completion of year 5. If we assume that the cash inflows are spread evenly during the year we can calculate the answer in years and months more precisely in the steps below.

**STEP 2**

Determine the amount still to be recovered after year 4 as follows.

$40 000 – $37 000 = $3000

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**STEP 3**

Calculate the proportion the amount to be recovered is of the total to be received in year 5. This is done as follows.

$$\frac{\$3000}{\$6000} = 0.5$$

This proportion can be expressed in months as follows.

$0.5 \times 12$ months $= 6$ months

**ANSWER**

The payback period for the equipment is therefore four years and six months.

Key Concept 3.8

**Payback period decision rule**

To judge whether the payback period is acceptable we must determine a predetermined period that the business manager will accept. Any project below this period is acceptable. If more than one project is being considered, the investment with the smallest payback period below the minimum set is the project chosen.

In the examples above relating to Healthy Foods Pty Ltd if the business had to choose between purchasing the machine or the equipment we would choose the machine. This is because the payback for the machine is three years and four months, which is lower than that of the equipment of four years and six months. It should be noted that in assessing both projects the net cash flows after the payback period has been reached are *not* considered.

| Advantages of payback period method | Disadvantages of payback period method |
|---|---|
| • It is a simple technique.<br>• It is easily understood by business managers as they appreciate the importance of cash outlays being recouped.<br>• It gives the manager some appraisal of the financial risk attached to a project. | • It does not consider the time value of money. Each period's cash inflow is considered to have the same value as the next and, as seen above, this is not necessarily true.<br>• Cash received after the payback period is not considered. Some projects may take a number of periods to generate good cash inflows and they may, in the long term, be better than those with short payback periods. |

## Rate of return on average investment

Key Concept 3.9

**Rate of return on average investment**

The rate of return on average investment is the profitability of an investment expressed as the average profit divided by the average investment.

The rate of return on average investment method is acceptable to many managers because it is simple to calculate and understand and uses the concept of profit, which they readily appreciate.

Formula 3.2

$$\text{Rate of return on average investment} = \frac{\text{Average profit}}{\text{Average investment}}$$

The average profit is the average, over the project's expected life, of the profit after tax. In this chapter, for the purpose of calculating income tax expense, profit before tax will be deemed to equal taxable income.



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Formula 3.3

$$\text{Average investment} = \frac{\text{Initial cost + residual value}}{2}$$

If there is no residual value then the average investment is the initial cost divided by two.

EXAMPLE:

## Example 3.3

The Park and London Travel Agency Pty Ltd is considering opening a new outlet in the town of Albany. The estimated cost of setting up the store is $500 000 and the refurbishment and renovations (including the required furniture, fixtures, fittings and equipment) are expected to have a useful life of seven years. At the end of this time the residual value of the required non-current assets is $55 000. The business will use the reducing balance method of depreciation in order to gain a tax advantage in the early years of the project's life. The reducing balance rate of depreciation will be 30% per year. Over the seven years the estimated income and expenses (excluding depreciation and income tax expense) based on the accrual accounting method are expected to yield profits as shown. The company tax rate is 30%.

| Year | *Profit* |
|---|---|
| 2010 | $192 857 |
| 2011 | $162 143 |
| 2012 | $144 929 |
| 2013 | $130 021 |
| 2014 | $120 301 |
| 2015 | $118 068 |
| 2016 | $113 362 |

**STEP 1**

Determine the average profit.

This will require us to calculate the depreciation for each year and determine the after-tax profit before we can compute the average profit.

The formula for reducing balance depreciation is as follows.

$$(\text{Cost} - \text{accumulated depreciation}) \times \text{Depreciation rate}$$

The depreciation is determined as follows.

| Year | *Cost* $ | *less* | *Accumulated depreciation* $ | *Carrying amount* $ | *Rate* | *Depreciation* $ |
|---|---|---|---|---|---|---|
| 2010 | 500 000 | less | 0 | 500 000 | 0.30 | 150 000 |
| 2011 | 500 000 | less | 150 000 | 350 000 | 0.30 | 105 000 |
| 2012 | 500 000 | less | 255 000 | 245 000 | 0.30 | 73 500 |
| 2013 | 500 000 | less | 328 500 | 171 500 | 0.30 | 51 450 |
| 2014 | 500 000 | less | 379 950 | 120 050 | 0.30 | 36 015 |
| 2015 | 500 000 | less | 415 965 | 84 035 | 0.30 | 25 211 |
| 2016 | 500 000 | less | 441 176 | 58 825 | 0.30 | 17 647 |

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The after-tax profit is ascertained as follows.

| Year | Profit before depreciation and income tax $ | Less depreciation $ | Profit before tax $ | Less income tax $ | After-tax profit $ |
|---|---|---|---|---|---|
| 2010 | 192 857 | 150 000 | 42 857 | 12 857 | 30 000 |
| 2011 | 162 143 | 105 000 | 57 143 | 17 143 | 40 000 |
| 2012 | 144 929 | 73 500 | 71 429 | 21 429 | 50 000 |
| 2013 | 130 021 | 51 450 | 78 571 | 23 571 | 55 000 |
| 2014 | 120 301 | 36 015 | 84 286 | 25 286 | 59 000 |
| 2015 | 118 068 | 25 211 | 92 857 | 27 857 | 65 000 |
| 2016 | 113 362 | 17 647 | 95 715 | 28 715 | 67 000 |

This is the average profit after tax in the case of a company. In the case of a sole trader or partnership there is no business income tax expense as the owners pay personal income tax on their share of the profit. The average after-tax profit for the period of seven years is as follows.

$$= \$30\,000 + \$40\,000 + \$50\,000 + \$55\,000 + \$59\,000 + \$65\,000 + \$67\,000$$
$$= \$366\,000$$

Therefore, $366 000 divided by seven years is $52 286; this is the average profit per year.

**STEP 2**
Determine the average investment. The average investment is found by adding the residual value to the original cost of the investment and dividing by two to get an average. In this case the average investment is:

$$= \frac{\$500\,000 + \$55\,000}{2}$$
$$= \$277\,500$$

**STEP 3**
Determine the rate of return on average investment as follows.

$$= \frac{\$52\,286}{\$277\,500}$$
$$= 18.84\% \text{ per year}$$

**ANSWER**
The rate of return on average investment is therefore 18.84%.

**Key Concept 3.10**

**Rate of return on average investment decision rule**
When determining which rate of return on average investment is acceptable, the project that has the highest return above a predetermined benchmark is the project that should be chosen.

The manager will determine, ahead of the calculation, what the minimum standard will be, taking into consideration the:

- returns received in the past
- cost of capital
- level of risk.

The rate of return on average investment should exceed the cost of capital. However, we must consider the level of risk when we evaluate the rate of return. Do the alternative


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projects have a similar level of risk? Management must consider the risk and return trade-off when evaluating projects and rates of returns.

In the example above, if the desired rate of return is 20 per cent then the option to open a new travel agency in Albany is acceptable. However, if the desired rate of return is 25 per cent the project is not acceptable.

When two investment projects are being considered, the project with the highest rate of return on average investment should be accepted based on the quantitative analysis.

EXAMPLE:

## Example 3.4

Ernie and Les are directors of Quality Jewels Ltd and they are considering the production of one of two possible new jewellery products. The details are as follows.

| Details | *Necklace product* | *Bracelet product* |
|---|---|---|
| Initial cost of investment | $90 000 | $120 000 |
| Residual value | $3000 | $6000 |
| Depreciation method | Straight line | Straight line |
| Life of the investment | 5 years | 6 years |
| Income, based on accrual accounting, from the product | $55 000 per year | $62 000 per year |
| Expenses (excluding depreciation and company income tax) based on accrual accounting | $14 000 per year | $17 000 per year |

The company income tax rate is 30% and the desired rate of return on average investment is 35%.

**STEP 1**

Calculate the depreciation each period for both projects as below.

### Necklace product

Straight-line method: $\frac{\text{Original cost} - \text{estimated residual value}}{\text{Estimated useful life}}$

Therefore: $\frac{\$90\,000 - \$3000}{5 \text{ years}}$

$= \$17\,400$ per year

### Bracelet product

Straight-line method: $\frac{\text{Original cost} - \text{estimated residual value}}{\text{Estimated useful life}}$

Therefore: $\frac{\$120\,000 - \$6000}{6 \text{ years}}$

Answer: $= \$19\,000$ per year

**STEP 2**

Calculate the average profit. To do this we need to determine the amount of the profit before income tax. This is calculated by subtracting the expenses, including depreciation, from the income.

### Necklace product

The expenses, including depreciation, are $\$14\,000 + \$17\,400 = \$31\,400$ per year.

The income tax rate is applied to the taxable income or, in other words, the profit before tax. Therefore, we must first calculate the profit before tax, which is $\$55\,000 - \$31\,400 = \$23\,600$. The income tax expense is $\$23\,600 \times 30\% = \$7080$. The profit after tax is now $\$23\,600 - \$7080 = \$16\,520$.

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### Bracelet product

The expenses, including depreciation, are $17 000 + $19 000 = $36 000 per year.

The profit before tax is the income minus the expenses, which is $62 000 − $36 000 = $26 000. The income tax expense is therefore $26 000 × 30% = $7800. The profit after tax can now be calculated as $26 000 − $7800 = $18 200. The average profit each year is $18 200.

**STEP 3**

Calculate the rate of return on average investment as follows.

### Necklace product

The average investment is: $\frac{\$90\,000 + \$3000}{2} = \$46\,500$

Rate of return on average investment is: $\frac{\$16\,520}{46\,500} = 35.5\%$

### Bracelet product

The average investment is: $\frac{\$120\,000 + \$6000}{2} = \$63\,000$

Rate of return on average investment is: $\frac{\$18\,200}{63\,000} = 28.8\%$

**ANSWER**

As the desired rate of return is 35%, the Bracelet product is not acceptable. The Necklace product has the higher return, is above the desired rate and should therefore be the recommended investment project.

| Advantages of rate of return on average investment method | Disadvantages of rate of return on average investment method |
|---|---|
| • It is easy to calculate.<br>• It is easily understood by managers because it involves the concept of profit.<br>• It involves a performance indicator – profit and return on investment – which is often used by investors and managers. | • It does not consider the time value of money.<br>• The same profit is not necessarily achieved every year and yet this method assumes an average profit over the asset's lifetime.<br>• The accounting measures applied under this technique are accrual-based but it is cash flows that ultimately determine the success or otherwise of a project. |

## Net present value

Key Concept 3.11

**Net present value**

The net present value is the figure that results from discounting all the cash inflows and cash outflows of a project at the minimum discount rate and then adding and subtracting the resultant present values.

The net present value (NPV) method considers the time value of money, taking into account the importance of cash flows rather than profit.

Under this method the cash inflows and cash outflows are first determined and then discounted, using a formula, to arrive at the present value of these amounts. The present value of the cash inflows and cash outflows are then subtracted to determine the net result, which is either positive or negative.

Key Concept 3.12

**Net present value decision rule**

A positive NPV result indicates that the investment is acceptable, while a negative NPV result indicates that it is not acceptable and should be rejected.

In determining the present value of a cash inflow or outflow we must first determine whether the amounts are a lump sum or an annuity. A lump sum is a unique cash flow in or out of the business whereas an annuity is a sequence of equal cash flows each period.



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## Lump sum

A lump sum is a unique amount of money received or paid.

Formula 3.4

**Lump sum**

$$PV = \frac{NCF}{(1 + i)^n}$$

where:

PV = present value

NCF = net cash flow

i = interest rate/discount rate/cost of capital

n = number of periods

This formula will be applied to a single cash inflow received, including residual values, or different cash inflows received each period or to a single cash outflow after year zero (0).

EXAMPLE:

### Example 3.5

If a project returns an amount of $12 000 cash in five years time and the interest rate is 8%, what is the present value of the return?

$$PV = \frac{\$12\,000}{(1 + 0.08)^5}$$

$$= \$8167$$

The net cash flow is $12 000 as this is the amount to be received. The period number is shown as 5 as this is the year in which the amount is received. The interest rate of 8% is expressed as 0.08.

When a number of different amounts is received for a project, the same formula is applied to each amount.

### Example 3.6

If a project returns cash flow amounts of $10 000 in year 1, $13 000 in year 3 and $16 000 in year 5 and the interest rate is 9%, what is the present value of these returns?

$$PV = \frac{\$10\,000}{(1 + 0.09)^1} + \frac{\$13\,000}{(1 + 0.09)^3} + \frac{\$16\,000}{(1 + 0.09)^5}$$

$$= \$9174 + \$10\,038 + \$10\,399$$

$$= \$29\,611$$

It is again important to remember that the period number for each year must correspond with the year in which the amount is received. It does *not* represent the number of amounts received.

The concept of the present value is applied not only to cash inflows but also cash outflows, such as the cost of a project being paid for over a number of years.

### Example 3.7

A project involves the purchase of equipment, which costs $70 000 with $50 000 to be paid at the beginning of the project's life and $20 000 in year 1. It is expected to have a residual value of $8000 at the end of its useful life of ten years. What is the present value of the residual value and the $20 000 paid in year 1? The interest rate expected during the asset's life is 7%.

The present value of the cost of $20 000 for the project paid in year 1 is as follows.

$$PV = \frac{\$20\,000}{(1 + 0.07)^1}$$

$$= \$18\,692$$

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The present value of the $8000 residual value in year 10 is as follows.

$$PV = \frac{\$8000}{(1 + 0.07)^{10}}$$

$$= \$4067$$

To determine the net present value of an investment project the present value of the net cash flows must be subtracted from the present value (usually the original cost) of the investment.

**Formula 3.5**

**Net present value**

NPV = PV net cash flows – PV of the cost of the investment

EXAMPLE:

## Example 3.8

Bell and McManus are partners in an import and export business. They have been approached by an overseas manufacturer who has asked them to invest in a joint project lasting only four years. Bell and McManus will have to contribute $130 000 now and will receive the following cash flows.

| Year | Cash inflow | Cash outflow |
|---|---|---|
| 2010 | Share of cash sales $50 000 | Share of costs $17 000 |
| 2011 | Share of cash sales $55 000 | Share of costs $19 000 |
| 2012 | Share of cash sales $60 000 | Share of costs $20 000 |
| 2013 | Share of cash sales $65 000 | Share of costs $23 000 |

The expected interest rate, (i.e. the cost of capital in this case) for the time period is 11%.

**STEP 1**

Determine the net cash flow for each year by subtracting the cash inflow from the cash outflow for each year as follows.

| Year | Year number | Cash inflow | Cash outflow | Net cash flow |
|---|---|---|---|---|
| 2010 | 1 | $50 000 | $17 000 | $33 000 |
| 2011 | 2 | $55 000 | $19 000 | $36 000 |
| 2012 | 3 | $60 000 | $20 000 | $40 000 |
| 2013 | 4 | $65 000 | $23 000 | $42 000 |

**STEP 2**

Determine if the net cash flows are an annuity or a lump sum. Because each net cash flow is different we must use the lump sum formula and we can determine the present value of the net cash flow for each year as seen below.

**STEP 3**

Determine if the cost of the investment needs to be converted to a present value. As the $100 000 contribution to the joint project is made now, that is at year zero (0), we do not need to convert it to the present value as it is already at this value. The present value is year zero (0).

**STEP 4**

Determine the present value of the net cash flows for each period.

$$PV = \frac{\$33\,000}{(1 + 0.11)} + \frac{\$36\,000}{(1 + 0.11)^2} + \frac{\$40\,000}{(1 + 0.11)^3} + \frac{\$42\,000}{(1 + 0.11)^4}$$

**STEP 5**

Calculate the net present value as follows.

$$NPV = \$29\,729.73 + \$29\,218.41 + \$29\,247.66 + \$27\,666.70 - \$130\,000$$

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NPV = $115 862.50 – $130 000

NPV = (–ve) $14 137.50

Note that the answer is a negative (–ve) result, in which case this is unfavourable.

## Annuity

An annuity is when a cash inflow or cash outflow over a period of time is the same each period.

To determine the present value of an annuity we could simply apply the formula outlined earlier to each amount of cash flow. This approach would require the following use of the lump sum formula:

$$PV = \frac{NCF}{(1+i)^1} + \frac{NCF}{(1+i)^2} + \frac{NCF}{(1+i)^3} + \frac{NCF}{(1+i)^4} + \text{etc.}$$

However, we can use another formula, which makes the calculation much easier. This formula will be applied to a stream of constant cash inflows or outflows.

**Formula 3.6**

$$PV = NCF \times PVF(i, n)$$

where:

PV = present value

NCF = net cash flow

i = interest rate/discount rate/cost of capital

n = number of periods

PVF(i, n) = annuity factor to be found in annuity table

EXAMPLE:

## Example 3.9

An investment project shows cash returns of $30 000 every year for a period of four years. If the discount rate is 8%, what is the present value of the returns?

The formula will look as follows.

PV = $30 000 × PVF(8%, 4)

The PVF is the annuity factor that we find in an annuity table. (See pages 105–6.) The formula is now as follows.

PV = $30 000 × 3.3121

PV = $99 363

As mentioned previously, to calculate the net present value of an investment the formula is as follows.

NPV = PV net cash flows – PV of the cost of the investment

## Example 3.10

Worsfold and Kemp are partners in a manufacturing business making pottery products. Their business, which is located in Bunbury, is considering making a new product. A feasibility analysis has revealed that the cost of the investment would be $80 000 initially and then a further $20 000 in year 1 of the project. The investment would provide cash inflows of $60 000 per year and the cash outflows would be $30 000 per year. The life of the project is seven years and the cost of capital is 6%. The non-current assets required have no residual value.

**STEP 1**

Determine the net cash flows each year. This is found by subtracting the cash inflows and the cash outflows and the answer is as follows.

$60 000 – $30 000 = $30 000 per year

**STEP 2**

Determine if the net cash flows are an annuity or lump sum. In this case, because the cash inflows minus the cash outflows gives the *same* amount each year we know that it is an annuity.

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**STEP 3**

Determine if the cost of the project is all paid at year zero (0) or whether some is paid after year zero (0). In analysing the cost of the investment we note that it is in two amounts and one of those amounts is not an initial payment but made in year 1. The $80 000 is paid in year zero (0), which means this amount is a present value but the $20 000 lump sum will need to be discounted to a present value. Therefore, we will need to apply the lump sum formula for this amount.

**STEP 4**

Calculate the net present value using the formula to determine the answer.

$$NPV = \$30\,000\ (6\%, 7) - \frac{\$20\,000}{(1 + 0.06)^1} - \$80\,000$$

$$\text{Therefore: } NPV = \$30\,000 \times 5.5823 - \frac{\$20\,000}{(1 + 0.06)^1} - \$80\,000$$

$$NPV = \$167\,469 - \$18\,867.92 - \$80\,000$$

$$NPV = (+\text{ve})\ \$68\,601$$

Note: For this investment project the answer is positive (+ve) and therefore we should accept the project.

In some cases we will need to exclude depreciation from the amount of expenses given, to determine the net cash flow from the project. The following is an example where this is necessary.

EXAMPLE:

## Example 3.11

Tina Court is the factory divisional manager at Courts High Quality Fashions. She is considering two different investment options put forward by the business owners. One option is the replacement of machinery at the business factory in Canning Vale. This option involves reducing the number of employees needed at the factory by replacing them with robotic technology. The second option is to establish a new factory in another state in Australia. The cost of capital is 8%. The details are as follows.

**OPTION A: REPLACEMENT OF FACTORY MACHINERY**

| | |
|---|---|
| Cost of machinery | $130 000 |
| Depreciation method | Straight line |
| Estimated useful life | 8 years |
| Residual value | $14 000 |
| Savings in cash outflows due to reduction in number of employees | $20 000 per year |
| Incremental cash inflow due to increased sales | $25 000 per year |

**OPTION B: NEW FACTORY IN ANOTHER AUSTRALIAN STATE**

| | |
|---|---|
| Cost of setting up the factory | $266 000 |
| Depreciation method | Straight line |
| Estimated useful life | 6 years |
| Residual value | $26 000 |
| Increase in expenses* (includes depreciation) | $72 000 per year |
| Incremental cash inflow due to increased sales | $90 000 per year |

* All cash expenses except depreciation.



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**STEP 1**

Determine the net cash flows for each year for Option A.

For Option A it is important to note that the savings in outflows ($20 000) have the same effect as an incremental increase in cash inflows. Therefore, it must be added to the incremental cash inflows ($25 000) and be a part of the total net cash flows for the project for years 1 to 8. In addition, in year 8 the residual value ($14 000) must be added. Therefore, in years 1 to 7 the net cash flows are $45 000 ($20 000 + $25 000) per year. In year 8 the net cash flow is $59 000 ($45 000 + $14 000).

**STEP 2**

Determine the net cash flows for each year for Option B.

For Option B the amount given for expenses includes depreciation and, therefore, because depreciation is not a cash payment it must be subtracted to determine the cash outflow. The depreciation for Option B is as follows.

$$\text{Straight-line method} = \frac{\text{Original cost} - \text{estimated residual value}}{\text{Estimated useful life}}$$

$$= \frac{\$266\,000 - \$26\,000}{6 \text{ years}}$$

$$= \$40\,000 \text{ per year}$$

The incremental cash outflow for Option B is $72 000 (total expenses) – $40 000 (depreciation) = $32 000 cash outflow per year.

The incremental cash inflow is $90 000 per year but the cash outflow of $32 000 must be subtracted to give a net cash flow of $58 000 for years 1 to 6. In addition, in year 6 the residual value of $26 000 is added to give a net cash flow of $84 000.

A summary of the net cash flows is seen below.

| Option A: Total net cash flows | Option B: Total net cash flows |
|---|---|
| Years 1 to 7:<br>$20 000 (cost savings) + $25 000 (incremental cash inflow) = $45 000 per year | Years 1 to 6:<br>$90 000 – $32 000 = $58 000 per year |
| Year 8:<br>$45 000 (as per years 1 to 7) + $14 000 (residual value) = $59 000 | Year 6:<br>$58 000 + $26 000 = $84 000 |

**STEP 3**

Calculate for Option A the NPV as follows.

$$\text{NPV} = \$45\,000\ (8\%, 7) + \frac{\$59\,000}{(1+0.08)^8} - \$130\,000$$

$$\text{Therefore: NPV} = \$45\,000 \times 5.2063 + \frac{\$59\,000}{(1+0.08)^8} - \$130\,000$$

$$\text{NPV} = \$234\,283.50 + \$31\,875.86 - \$130\,000$$

$$\text{Answer: NPV} = (+\text{ve})\ \$136\,159.36$$

Calculate for Option B the NPV as follows.

$$\text{NPV} = \$58\,000\ (8\%, 5) + \frac{\$84\,000}{(1+0.08)^6} - \$266\,000$$

$$\text{Therefore: NPV} = \$58\,000 \times 3.99271 + \frac{\$84\,000}{(1+0.08)^6} - \$266\,000$$

$$\text{NPV} = \$231\,577.18 + \$52\,934.25 - \$266\,000$$

$$\text{NPV} = (+\text{ve})\ \$18\,511.43$$

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**STEP 4**

Determine which option to accept. Both options have a positive net present value and must be considered by Tina Court. However, Option A has the higher net present value and is therefore the favoured option based on the quantitative analysis. Tina must, however, consider the qualitative issue of reducing the number of employees under Option A and what effect this may have on the morale of the rest of the workforce.

| Advantages of net present value method | Disadvantages of net present value method |
|---|---|
| • It takes into consideration the time value of money.<br>• The cash flows from the project over its entire lifetime are taken into consideration. | • It can be difficult to determine an appropriate discount rate/cost of capital.<br>• It does not take account of risk.<br>• It is more complex and can be difficult to explain. |

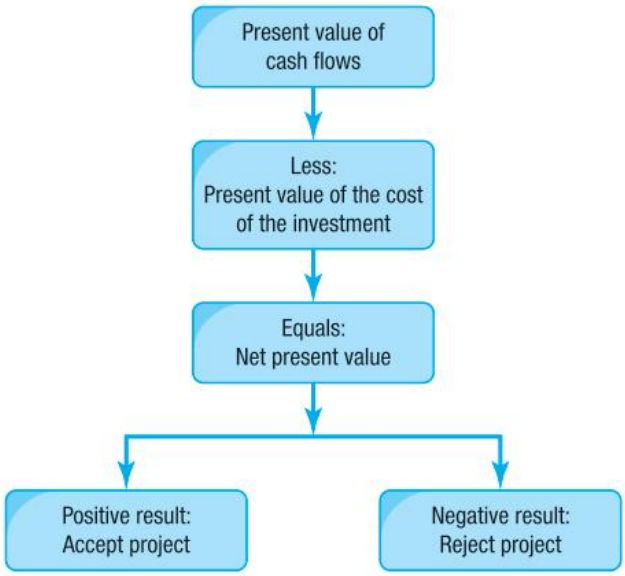



Figure 3.2 Net present value decision rule

## COMPARISON OF METHODS AND INTERPRETATION

Accrual-based income and cash inflows will differ depending, for example, on such items as accruals and prepayments. Accrual-based expenses and cash outflows will also differ due to accruals and prepayments along with doubtful debts and depreciation. For the purposes of simplicity in this chapter, our examples and questions will assume there is no difference between accrual-based income and cash inflows (i.e. we will not consider accruals and prepayments relating to income). In addition, in relation to the difference between accrual-based expenses and cash outflows, we will only consider depreciation and ignore accruals and prepayments and doubtful debts. Note also that in this textbook, for the purposes of simplicity, we will assume that the company income tax expense each year will be paid in the same year.


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EXAMPLE:

## Example 3.12

Jie Yong and Jing Chang are directors of an import and export business called Electrical Wholesalers Ltd. They are considering the expansion of their business and there are two options available to them as follows.

| Details | *Option A* | *Option B* |
|---|---|---|
| Cost of the investment | $150 000 | $120 000 |
| Residual value | zero | zero |
| Useful life | 5 years | 6 years |
| Depreciation method | Straight line | Straight line |
| Estimated incremental cash inflows | $90 000 per year | $80 000 per year |
| Estimated incremental cash outflows (including income tax payments) | $43 000 per year | $32 000 per year |
| Incremental income based on accrual accounting | $90 000 per year | $80 000 per year |
| Incremental expenses (includes depreciation and company income tax cost) based on accrual accounting | $73 000 per year | $52 000 per year |
| Predetermined payback period required | 3 years | 3 years |
| Desired rate of return on average investment | 35% per year | 35% per year |
| Discount rate | 8% | 8% |
| Project life | 5 years | 6 years |

Option A is likely to be easy to implement as there is very little government regulation to adhere to and it will have a small impact on the environment. Option B will, however, be more difficult to implement as there are strict government regulations to adhere to, it will have some impact on the environment and there may be some difficulty in obtaining the required specialist staff for this project.

**STEP 1**

Calculate the net cash flows:

- Option A: $90 000 – $43 000 = $47 000 per year
- Option B: $80 000 – $32 000 = $48 000 per year.

**STEP 2**

Calculate the payback period for each option. The payback period is calculated as follows using the formula where the cash flows are constant.

$$\text{Payback period} = \frac{\text{initial cost of investment}}{\text{net cash flows}}$$

### Option A

$$\text{Payback period} = \frac{\$150\,000}{\$47\,000}$$

$$= 3.19 \text{ years or 3 years and 3 months}$$
$$(\text{i.e. } 0.19 \times 12 = 2.28, \text{ which is 3 months})$$

### Option B

$$\text{Payback period} = \frac{\$120\,000}{\$48\,000}$$

$$= 2.5 \text{ years or 2 years and 6 months}$$
$$(\text{i.e. } 0.5 \times 12 = 6 \text{ months})$$

**STEP 3**

Calculate the rate of return on average investment. To determine the rate of return of average investment we first need to calculate the average profit by subtracting the incremental expense from the incremental income.

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### Option A

$$\text{Average profit} = \$90\,000 - \$73\,000 = \$17\,000 \text{ per year}$$

$$\text{Average investment} = \frac{\$150\,000 + 0}{2} = \$75\,000$$

$$\text{Therefore: } \frac{\$17\,000}{\$75\,000} = 23\%$$

### Option B

$$\text{Average profit} = \$80\,000 - \$52\,000 = \$28\,000 \text{ per year}$$

$$\text{Average investment} = \frac{\$120\,000 + 0}{2} = \$60\,000$$

$$\text{Therefore: } \frac{\$28\,000}{\$60\,000} = 47\%$$

**STEP 4**

Calculate the net present value for each option. Note that both options are annuities as the net cash flows are the same every year.

### Option A

$$\text{NPV} = \$47\,000\ (8\%, 5) - \$150\,000$$
$$\text{Therefore: NPV} = 47\,000 \times 3.9927 - 150\,000$$
$$\text{NPV} = \$187\,656.90 - \$150\,000$$
$$\text{Answer: NPV} = (+\text{ve})\ \$37\,656.90$$

### Option B

$$\text{NPV} = \$48\,000\ (8\%, 6) - \$120\,000$$
$$\text{Therefore: NPV} = \$48\,000 \times 4.6228 - \$120\,000$$
$$\text{NPV} = \$221\,894.40 - \$120\,000$$
$$\text{Answer: NPV} = (+\text{ve})\ \$101\,894.40$$

A comparison of the results of each method is shown in the table below.

| Details | *Option A* | *Option B* |
|---|---|---|
| Payback period | 3 years and 3 months | 2 years and 6 months |
| Rate of return on average investment | 23% | 47% |
| Net present value | $37 656.90 | $101 894.40 |

**STEP 5**

Analyse and interpret the result. An analysis of these results reveals that, based on the quantitative numbers, Option B is the best choice. This is because it has the lower payback period, a higher rate of return on average investment and the largest positive net present value. Option B has the lower risk as its payback period is shorter than that of Option A. Option A has a payback period that does not meet the predetermined requirement of being less than three years.

Option B also achieves the desired rate of return on average investment as it is above 35%. Both Option A and Option B have positive net present values and would therefore increase the wealth of the business, but, as stated before, Option B has the higher figure and is therefore the favoured option.


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The business will also need to consider the qualitative issues involved. Option A will be far easier to implement and involve a very small environmental impact. This latter point will enhance the company's image. Option B, although showing a better quantitative result, will be much harder to implement because of the strict government regulation and the difficulty in finding appropriate staff. This option will also place the company in a poor light because of the environmental aspect.

Table 3.1 Present value of \$1 per period $= \dfrac{1 - \dfrac{1}{(1 + R)^n}}{R}$

| n | 0.25% | 0.50% | 0.66% | 0.75% | 1.00% | 1.50% | 2.00% | 2.50% | 3.00% | 3.50% | n |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.997 51 | 0.995 02 | 0.993 38 | 0.992 56 | 0.990 10 | 0.985 22 | 0.980 39 | 0.975 6 | 0.970 9 | 0.966 2 | 1 |
| 2 | 1.992 52 | 1.985 10 | 1.980 18 | 1.977 72 | 1.970 40 | 1.955 88 | 1.941 56 | 1.927 4 | 1.913 5 | 1.899 7 | 2 |
| 3 | 2.985 06 | 2.970 25 | 2.960 44 | 2.955 56 | 2.940 99 | 2.912 20 | 2.883 88 | 2.856 0 | 2.828 6 | 2.801 6 | 3 |
| 4 | 3.975 12 | 3.950 50 | 3.934 21 | 3.926 11 | 3.901 97 | 3.854 38 | 3.807 73 | 3.762 0 | 3.717 1 | 3.673 1 | 4 |
| 5 | 4.962 72 | 4.925 87 | 4.901 54 | 4.889 44 | 4.853 43 | 4.782 65 | 4.713 46 | 4.645 8 | 4.579 7 | 4.515 1 | 5 |
| 6 | 5.947 85 | 5.896 38 | 5.862 45 | 5.845 60 | 5.795 48 | 5.697 19 | 5.601 43 | 5.508 1 | 5.417 2 | 5.328 6 | 6 |
| 7 | 6.930 52 | 6.862 07 | 6.817 01 | 6.794 64 | 6.728 19 | 6.598 21 | 6.471 99 | 6.349 4 | 6.230 3 | 6.114 5 | 7 |
| 8 | 7.910 74 | 7.822 96 | 7.765 24 | 7.736 61 | 7.651 68 | 7.485 93 | 7.325 48 | 7.170 1 | 7.019 7 | 6.874 0 | 8 |
| 9 | 8.888 52 | 8.779 06 | 8.707 19 | 8.671 58 | 8.566 02 | 8.360 52 | 8.162 24 | 7.970 9 | 7.786 1 | 7.607 7 | 9 |
| 10 | 9.863 86 | 9.730 41 | 9.642 90 | 9.599 58 | 9.471 30 | 9.222 19 | 8.982 54 | 8.752 1 | 8.530 2 | 8.316 6 | 10 |
| 11 | 10.836 77 | 10.677 03 | 10.572 42 | 10.520 67 | 10.367 63 | 10.071 12 | 9.786 85 | 9.514 2 | 9.252 6 | 9.001 6 | 11 |
| 12 | 11.807 25 | 11.618 93 | 11.495 78 | 11.434 91 | 11.255 08 | 10.907 51 | 10.575 34 | 10.257 8 | 9.954 0 | 9.663 3 | 12 |
| 13 | 12.775 32 | 12.556 15 | 12.413 03 | 12.342 35 | 12.133 74 | 11.731 53 | 11.348 37 | 10.983 2 | 10.635 0 | 10.302 7 | 13 |
| 14 | 13.740 96 | 13.488 71 | 13.324 20 | 13.243 02 | 13.003 70 | 12.543 38 | 12.106 25 | 11.690 9 | 11.296 1 | 10.920 5 | 14 |
| 15 | 14.704 20 | 14.416 62 | 14.229 34 | 14.136 99 | 13.865 05 | 13.343 23 | 12.849 26 | 12.381 4 | 11.937 9 | 11.517 4 | 15 |
| 16 | 15.665 04 | 15.339 93 | 15.128 48 | 15.024 31 | 14.717 87 | 14.131 26 | 13.577 71 | 13.055 0 | 12.561 1 | 12.094 1 | 16 |
| 17 | 16.623 48 | 16.258 63 | 16.021 67 | 15.905 02 | 15.562 25 | 14.907 65 | 14.291 87 | 13.712 2 | 13.166 1 | 12.651 3 | 17 |
| 18 | 17.579 53 | 17.172 77 | 16.908 94 | 16.779 18 | 16.398 27 | 15.672 56 | 14.992 03 | 14.353 4 | 13.753 5 | 13.189 7 | 18 |
| 19 | 18.533 20 | 18.082 36 | 17.790 34 | 17.646 83 | 17.226 01 | 16.426 17 | 15.678 46 | 14.978 9 | 14.323 8 | 13.709 8 | 19 |
| 20 | 19.484 49 | 18.987 42 | 18.665 90 | 18.508 02 | 18.045 55 | 17.168 64 | 16.351 43 | 15.589 2 | 14.877 5 | 14.212 4 | 20 |
| 21 | 20.433 40 | 19.887 98 | 19.535 66 | 19.362 80 | 18.856 98 | 17.900 14 | 17.011 21 | 16.184 5 | 15.415 0 | 14.698 0 | 21 |
| 22 | 21.379 95 | 20.784 06 | 20.399 67 | 20.211 21 | 19.660 38 | 18.620 83 | 17.658 05 | 16.765 4 | 15.936 9 | 15.167 1 | 22 |
| 23 | 22.324 14 | 21.675 68 | 21.257 95 | 21.053 31 | 20.455 82 | 19.330 86 | 18.292 20 | 17.332 1 | 16.443 6 | 15.620 4 | 23 |
| 24 | 23.265 98 | 22.562 87 | 22.110 54 | 21.889 15 | 21.243 39 | 20.030 41 | 18.913 93 | 17.885 0 | 16.935 5 | 16.058 4 | 24 |
| 25 | 24.205 47 | 23.445 64 | 22.957 49 | 22.718 76 | 22.023 16 | 20.719 61 | 19.523 46 | 18.424 4 | 17.413 1 | 16.481 5 | 25 |
| 30 | 28.867 87 | 27.794 05 | 27.108 85 | 26.775 08 | 25.807 71 | 24.015 84 | 22.396 46 | 20.930 3 | 19.600 4 | 18.392 0 | 30 |
| 35 | 33.472 43 | 32.035 37 | 31.124 55 | 30.682 66 | 29.408 58 | 27.075 60 | 24.998 62 | 23.145 2 | 21.487 2 | 20.000 7 | 35 |
| 40 | 38.019 86 | 36.172 23 | 35.009 03 | 34.446 94 | 32.834 69 | 29.915 85 | 27.355 48 | 25.102 8 | 23.114 8 | 21.355 1 | 40 |
| 45 | 42.510 88 | 40.207 20 | 38.766 58 | 38.073 18 | 36.094 51 | 32.552 34 | 29.490 16 | 28.833 0 | 24.518 7 | 22.495 5 | 45 |
| 50 | 46.946 17 | 44.142 79 | 42.401 34 | 41.566 45 | 39.196 12 | 34.999 69 | 31.423 61 | 28.362 3 | 25.729 8 | 23.455 6 | 50 |
| 60 | 55.652 36 | 51.725 56 | 49.318 43 | 48.173 37 | 44.955 04 | 39.380 27 | 34.760 89 | 30.908 7 | 27.675 6 | 24.944 7 | 60 |

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| n | 4.00% | 4.50% | 5.00% | 6.00% | 7.00% | 8.00% | 10.00% | 12.00% | 15.00% | 20.00% | n |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.9615 | 0.9569 | 0.9524 | 0.9433 | 0.9345 | 0.9259 | 0.9091 | 0.8929 | 0.8695 | 0.8333 | 1 |
| 2 | 1.8861 | 1.8727 | 1.8594 | 1.8333 | 1.8080 | 1.7832 | 1.7355 | 1.6901 | 1.6257 | 1.5278 | 2 |
| 3 | 2.7751 | 2.7490 | 2.7232 | 2.6730 | 2.6243 | 2.5770 | 2.4868 | 2.4018 | 2.2832 | 2.1065 | 3 |
| 4 | 3.6299 | 3.5875 | 3.5460 | 3.4651 | 3.3872 | 3.3121 | 3.1698 | 3.0373 | 2.8549 | 2.5887 | 4 |
| 5 | 4.4518 | 4.3900 | 4.3295 | 4.2123 | 4.1001 | 3.9927 | 3.7907 | 3.6048 | 3.3521 | 2.9906 | 5 |
| 6 | 5.2421 | 5.1579 | 5.0757 | 4.9173 | 4.7665 | 4.6228 | 4.3552 | 4.1114 | 3.7844 | 3.3255 | 6 |
| 7 | 6.0021 | 5.8927 | 5.7864 | 5.5823 | 5.3892 | 5.2063 | 4.8684 | 4.5638 | 4.1604 | 3.6046 | 7 |
| 8 | 6.7327 | 6.5959 | 6.4632 | 6.2097 | 5.9712 | 5.7466 | 5.3349 | 4.9676 | 4.4873 | 3.8372 | 8 |
| 9 | 7.4353 | 7.2688 | 7.1078 | 6.8016 | 6.5152 | 6.2468 | 5.7590 | 5.3282 | 4.7715 | 4.0310 | 9 |
| 10 | 8.1109 | 7.9127 | 7.7217 | 7.3600 | 7.0235 | 6.7100 | 6.1445 | 5.6502 | 5.0187 | 4.1925 | 10 |
| 11 | 8.7605 | 8.5289 | 8.3064 | 7.8868 | 7.4986 | 7.1389 | 6.4950 | 5.9377 | 5.2337 | 4.3271 | 11 |
| 12 | 9.3851 | 9.1186 | 8.8633 | 8.3838 | 7.9426 | 7.5360 | 6.8136 | 6.1944 | 5.4206 | 4.4392 | 12 |
| 13 | 9.9856 | 9.6829 | 9.3936 | 8.8526 | 8.3576 | 7.9037 | 7.1033 | 6.4235 | 5.5831 | 4.5327 | 13 |
| 14 | 10.5631 | 10.2228 | 9.8986 | 9.2949 | 8.7454 | 8.2442 | 7.3666 | 6.6282 | 5.7244 | 4.6106 | 14 |
| 15 | 11.1184 | 10.7395 | 10.3797 | 9.7122 | 9.1079 | 8.5594 | 7.6060 | 6.8109 | 5.8473 | 4.6755 | 15 |
| 16 | 11.6523 | 11.2340 | 10.8378 | 10.1058 | 9.4466 | 8.8513 | 7.8237 | 6.9740 | 5.9542 | 4.7296 | 16 |
| 17 | 12.1657 | 11.7072 | 11.2741 | 10.4772 | 9.7632 | 9.1216 | 8.0215 | 7.1196 | 6.0471 | 4.7746 | 17 |
| 18 | 12.6593 | 12.1600 | 11.6896 | 10.8276 | 10.0590 | 9.3718 | 8.2014 | 7.2497 | 6.1279 | 4.8122 | 18 |
| 19 | 13.1339 | 12.5933 | 12.0853 | 11.1581 | 10.3355 | 9.6035 | 8.3649 | 7.3658 | 6.1982 | 4.8435 | 19 |
| 20 | 13.5903 | 13.0079 | 12.4622 | 11.4699 | 10.5940 | 9.8181 | 8.5135 | 7.4694 | 6.2593 | 4.8696 | 20 |
| 21 | 14.0292 | 13.4047 | 12.8212 | 11.7640 | 10.8355 | 10.0168 | 8.6486 | 7.5620 | 6.3124 | 4.8913 | 21 |
| 22 | 14.4511 | 13.7844 | 13.1630 | 12.0415 | 11.0612 | 10.2007 | 8.7715 | 7.6446 | 6.3586 | 4.9094 | 22 |
| 23 | 14.8568 | 14.1478 | 13.4886 | 12.3033 | 11.2721 | 10.3710 | 8.8832 | 7.7184 | 6.3988 | 4.9245 | 23 |
| 24 | 15.2470 | 14.4955 | 13.7986 | 12.5503 | 11.4693 | 10.5287 | 8.9847 | 7.7843 | 6.4337 | 4.9371 | 24 |
| 25 | 15.6221 | 14.8282 | 14.0939 | 12.7833 | 11.6535 | 10.6747 | 9.0770 | 7.8431 | 6.4641 | 4.9476 | 25 |
| 30 | 17.2920 | 16.2889 | 15.3725 | 13.7648 | 12.4090 | 11.2577 | 9.4269 | 8.0552 | 6.5659 | 4.9789 | 30 |
| 35 | 18.6646 | 17.4610 | 16.3742 | 14.4982 | 12.9476 | 11.6545 | 9.6441 | 8.1755 | 6.6166 | 4.9915 | 35 |
| 40 | 19.7928 | 18.4016 | 17.1591 | 15.0462 | 13.3317 | 11.9246 | 9.7790 | 8.2438 | 6.6417 | 4.9966 | 40 |
| 45 | 20.7200 | 19.1563 | 17.7741 | 15.4558 | 13.6055 | 12.1084 | 9.8628 | 8.2825 | 6.6542 | 4.9986 | 45 |
| 50 | 21.4822 | 19.7620 | 18.2559 | 15.7618 | 13.8007 | 12.2334 | 9.9148 | 8.3045 | 6.6605 | 4.9995 | 50 |
| 60 | 22.6235 | 20.6380 | 18.9293 | 16.1614 | 14.0392 | 12.3766 | 9.9672 | 8.3240 | 6.6651 | 4.9999 | 60 |

Source: Table 4 Appendix in Mike Bazley and Phil Hancock, *Contemporary Accounting*, 6th edition, Cengage Learning, South Melbourne, 2004, pp. 735–6.

## Test your knowledge

1 List five different types of capital expenditure items.

2 Describe the characteristics of capital expenditure items.

3 Explain why capital investment decisions are important.

4 What factors affect capital investment decisions?

5 What is meant by the 'cost of capital'?

6 Explain the importance of 'qualitative factors' in capital investment decisions. Give examples to support your answer.



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7 Explain how customer preferences, competitors and government regulation can affect capital investment decisions. Give examples to support your answer.

8 Define the payback period.

9 Describe the advantages and disadvantages of the payback method.

10 Describe the advantages and disadvantages of the rate of return on average investment method.

11 Explain the concept of the 'time value of money'.

12 What do you understand by the present value of an item?

13 Describe the advantages and disadvantages of the net present value method.

14 Which capital investment technique is the recommended method of evaluating capital expenditure items and why?

# Test your understanding

## Topic guide

- Calculate payback period with constant cash flows: 3.1–3.3
- Calculate payback period with different lump sums: 3.4–3.6
- Calculate rate of return on average investment: 3.7–3.10
- Calculate the NPV with lump sum: 3.11–3.13
- Calculate the NPV with annuity: 3.14, 3.15
- Calculate the NPV for annuity and lump sum: 3.16–3.19
- Calculate and interpret all methods: 3.20–3.27

3.1 Tara Barnett is considering the purchase of new equipment for her small business in Midland. The equipment will cost $38 000 and the estimated cash flows from the new purchase are as follows.

| | |
|---|---|
| Year 1 | $8 000 |
| Year 2 | $8 000 |
| Year 3 | $8 000 |
| Year 4 | $8 000 |
| Year 5 | $8 000 |
| Year 6 | $8 000 |
| Year 7 | $8 000 |
| Year 8 | $8 000 |

**Required**
Calculate the payback period.

3.2 Fresh Supermarkets Pty Ltd owns two stores in Perth and it is considering the replacement of its fixtures and fittings and its equipment at one of its stores. These new assets will cost $80 000. The owners estimate that the new items will result in increased cash sales of $12 000 per year and cash savings in the following costs per year:

- Electricity $900
- Wages $1100
- Insurance (due to fewer stock losses) $1000
- Repairs and maintenance $2500

The new assets will last 12 years and at this time have a residual value of $5000.

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**Required**
Calculate the payback period.

3.3 Thomson and Gould DVD Hire and Sales in Bassendean is considering the purchase of a new electronic security system. There are two options. The cost to establish Option A will be $40 000 and Option B $50 000.

The estimated net cash flow from cost savings in reduced loss of sales and lower insurance premiums, offset by the cost increases in electricity and maintenance, will be $11 000 per year for Option A and $13 000 per year for Option B.

**Required**
a Calculate the payback period.
b Which option has the higher risk?

3.4 Katanning Pty Ltd, a local trucking company, is considering the purchase of a new truck to replace one of its existing fleet of vehicles. The new truck would cost $150 000 but would bring in net cash flows from increased sales and cost savings, offset by extra costs of insurance and replacement parts as follows.

| | |
|---|---|
| Year 1 | $30 000 |
| Year 2 | $35 000 |
| Year 3 | $33 000 |
| Year 4 | $28 000 |
| Year 5 | $27 000 |
| Year 6 | $22 000 |
| Year 7 | $19 000 |
| Year 8 | $14 000 |
| Year 9 | $13 000 |

**Required**
Calculate the payback period.

3.5 Melissa Carter owns a cafe at a shopping centre in Rockingham and is considering the replacement of existing equipment. The asset will cost $75 000 and be depreciated on the straight-line method. It is expected to have a useful life of seven years, at which time its expected residual value is $6000. The estimated increase in cash sales and savings in costs are as follows.

| | |
|---|---|
| Year 1 | $18 000 |
| Year 2 | $18 000 |
| Year 3 | $16 000 |
| Year 4 | $16 000 |
| Year 5 | $15 000 |
| Year 6 | $12 000 |
| Year 7 | $10 000 |

**Required**
a Calculate the payback period.
b If the predetermined acceptable payback period is four years should the project be accepted?


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3.6 Terrance Miles is a manufacturer of household cleaning agents. He is considering the production of one of two potential new products. To set up the production of these new products will require initial outlays for machinery and equipment, which will cost in total $140 000 for Option A and $120 000 for Option B. The cash sales from these products for the first seven years are expected to be as follows.

| Year | Cash sales: Option A | Cash Sales: Option B |
|---|---|---|
| 1 | $55 000 | $56 000 |
| 2 | $60 000 | $62 000 |
| 3 | $75 000 | $73 000 |
| 4 | $78 000 | $75 000 |
| 5 | $80 000 | $80 000 |
| 6 | $80 000 | $81 000 |
| 7 | $82 000 | $84 000 |

The extra cash outlays for wages, materials, electricity, insurance, maintenance, etc. each year to produce these products is as follows.

| Year | Costs: Option A | Costs: Option B |
|---|---|---|
| 1 | $25 000 | $26 000 |
| 2 | $27 000 | $26 000 |
| 3 | $29 000 | $29 000 |
| 4 | $30 000 | $31 000 |
| 5 | $33 000 | $32 000 |
| 6 | $35 000 | $38 000 |
| 7 | $36 000 | $40 000 |

In the first year there will be an extra cost associated with training staff in the handling of the new non-current assets. This cost will require a cash outlay of $5000 for both options. The machinery and equipment for Option A will be depreciated on the reducing balance method at a rate of 20% per year and their expected residual value is $22 000. For Option B the assets will be depreciated on the reducing balance method at a rate of 20% per year and are expected to have a residual value of $30 000.

**Required**

a Calculate the payback period.

b Which option has the higher risk?

3.7 Peter Seth is the sole owner of Hilton Gifts, a discount gift retail business. He has one shop and wants to update the store image to attract more customers. This will involve replacing the shop fixtures, fittings and equipment and painting the inside of the shop. The old assets had no value and were disposed of at no cost to the business. There are two options available to him and the estimated details are as follows:

**Option A**

The total cost will be $175 000 and it is expected that the assets will have a residual value of $40 000 at the end of their useful life of five years. Estimated increases in cash and credit sales as a result of the upgrade, calculated on an accrual basis, are expected to be $40 000 per year. The increased expenses due to the upgrade, such as insurance, electricity, wages and depreciation – all determined on accrual-based accounting – are anticipated to be $13 000 per year.

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**Option B**

The total cost will be $185 000 and the assets will have a useful life of five years and a residual value of $70 000. Estimated increases in income, calculated on an accrual basis, are expected to be $47 000 per year. Increased expenses, including depreciation – all determined on accrual-based accounting – are anticipated to be $14 000 per year.

**Required**

a Calculate the rate of return on average investment.
b Which option is more profitable?

3.8 Bill Burton and Josh Graham, partners in a large mechanical repair business, need to replace their vehicle hoist systems and other vehicle examination and monitoring equipment at their workshop in Armadale. The old assets were disposed of with no gain or loss resulting. The new assets will cost $120 000 and be depreciated on the straight-line method. Their useful life will be six years and their residual value $14 000.

The new machinery and equipment is expected to enable the business to take more customers and the likely increase in income over the period of six years is as follows.

| | |
|---|---|
| Year 1 | $75 000 |
| Year 2 | $75 000 |
| Year 3 | $70 000 |
| Year 4 | $70 000 |
| Year 5 | $78 000 |
| Year 6 | $76 000 |

Expected increases in expenses, all calculated on an accrual basis, are anticipated to be as follows.

| | |
|---|---|
| Year 1 | $13 000 |
| Year 2 | $13 000 |
| Year 3 | $14 000 |
| Year 4 | $14 000 |
| Year 5 | $16 000 |
| Year 6 | $18 000 |

These expenses do not include depreciation.

**Required**

Calculate the rate of return on average investment.

3.9 Heather Green is the business delivery manager at Southern Wholesalers Ltd. She needs to replace the fleet of eight existing delivery vehicles. The cost of replacing these eight delivery vehicles, plus the need for two more, is estimated at $500 000. These vehicles will be depreciated using the straight-line method. Their expected useful life is eight years and all will have a residual value of $3000.

The acquisition of the new delivery vehicles will lead to increased sales of $110 000 per year. The replacement of the eight old vehicles will lead to some cost savings in repairs and maintenance and added fuel efficiency but this will be offset with extra costs of insurance and running costs for two extra vehicles. The additional expenses per year are therefore as follows.

| | |
|---|---|
| Year 1 | $71 000 |
| Year 2 | $72 000 |
| Year 3 | $72 000 |
| Year 4 | $75 000 |


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| | |
|---|---|
| Year 5 | $75 000 |
| Year 6 | $78 000 |
| Year 7 | $83 000 |
| Year 8 | $84 000 |

All estimates for the income and expenses are based on accrual accounting and include the depreciation on the new vehicles. Company tax at the rate of 30% has, however, not been considered.

**Required**

Calculate the rate of return on average investment for the new vehicles.

3.10 Melinda Ham and Bob Carson are directors of Swan Ltd, producers of fine wine in the Swan Valley. They are considering the introduction of a new white wine and have asked you to determine if the new product is profitable. The wine is expected to be popular for a period of eight years. Expected sales determined on an accrual basis from the new wine are as follows.

| | |
|---|---|
| Year 1 | $200 000 |
| Year 2 | $210 000 |
| Year 3 | $220 000 |
| Year 4 | $240 000 |
| Year 5 | $250 000 |
| Year 6 | $240 000 |
| Year 7 | $230 000 |
| Year 8 | $220 000 |

The expenses associated with the new product, all calculated on an accrual basis, are as follows. Expenses do not include depreciation or income tax.

| | |
|---|---|
| Year 1 | $70 000 |
| Year 2 | $70 000 |
| Year 3 | $68 000 |
| Year 4 | $70 000 |
| Year 5 | $71 000 |
| Year 6 | $72 000 |
| Year 7 | $75 000 |
| Year 8 | $78 000 |

The initial cost of purchasing equipment to introduce this new product is $310 000. This equipment is to be depreciated on the reducing balance method at the rate of 34% per year and the expected residual value is $16 911 at the end of its useful life of eight years. The company income tax rate is 30%.

**Required**

a Calculate the rate of return on average investment.

b If the required rate of return on average investment is 30% should the project be accepted?

3.11 Thompson and Lillee are partners in Top Burgers and they are planning to introduce a new burger at their fast food outlet. This burger is expected to have a life cycle of only three years at which time it will be discontinued.

The cost to introduce this new burger will be $45 000 to purchase some new equipment. This new equipment will be depreciated on the straight-line method for three years and its residual value is anticipated to be $12 000.

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The new product will result in cash sales of $50 000 in year 1, $48 000 in year 2 and $45 000 in year 3. The cash outflows in each year will be $30 000 in year 1, $35 000 in year 2 and $36 000 in year 3. The cost of capital during this time will be 9%.

**Required**
Calculate the net present value of introducing the new burger.

3.12 Alice Cooper is the owner of Coopers Pty Ltd. Coopers owns a number of chemist shops around Perth. One of its stores is in need of renovation and this will cost $80 000 for painting, carpets, fixtures and fittings and equipment. The non-current assets will be depreciated on the straight-line method over five years and are expected to have a residual value of $8000.

The cash inflows from increased sales are as follows.

| | |
|---|---|
| Year 1 | $45 000 |
| Year 2 | $43 000 |
| Year 3 | $40 000 |
| Year 4 | $38 000 |
| Year 5 | $32 000 |

The cash outflows for expenses for the five-year period are as follows.

| | |
|---|---|
| Year 1 | $18 000 |
| Year 2 | $18 000 |
| Year 3 | $19 000 |
| Year 4 | $21 000 |
| Year 5 | $23 000 |

The cost of capital is 8% over the period of the project.

**Required**
Calculate the net present value of the project.

3.13 Barossa and Hunter are partners in a dance studio business operating in Adelaide. They are considering setting up a dance studio in Hobart for a period of four years as they plan to move there before retiring. The cost of capital is 7% over the period of the project.

The setting up of the dance studio in Hobart will cost $60 000 initially and $40 000 in year 1. Expected fees from the venture will result in a cash inflow of $30 000 in year 1, $35 000 in year 2, $45 000 in year 3 and $58 000 in year 4.

The dance studio will require furniture, equipment and fixtures and fittings, costing $100 000, which will be depreciated on the straight-line method over the project's life. The anticipated residual value of the items is $13 000.

Cash outflows for running the venture are $15 000 in year 1, $14 000 in year 2, $16 000 in year 3 and $15 000 in year 4. The only extra cash outflow is the training cost for new dancers in year 1 of $3000.

**Required**
Calculate the net present value of the new dance studio.

3.14 Harrison and Starr, partners in a music retail business, currently own one shop in Sydney's central business district. They wish to expand and open another store in Melbourne. The initial cost of the new store is $350 000, which will be for furniture, equipment and fixtures and fittings. These will be depreciated on the straight-line method over a period of seven years and will have zero residual value.

Expected cash inflow from sales is likely to be $140 000 per year for seven years. The anticipated cash outflows for the cost of running the store are expected to be $50 000 per year. The cost of capital for the business is 7%.


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**Required**
Calculate the net present value of opening the new store.

3.15 Orbison Pty Ltd is a dry cleaning business operating in the northern suburbs of Perth with a head office in Osborne Park. The dry cleaning equipment needs to be replaced and the initial cost of replacement is $190 000, to be paid in cash. This equipment will be depreciated on the straight-line method over a period of six years and is not expected to have any residual value.

This new equipment item will improve efficiency and reduce the need for one employee. The savings in outflows will be the wages saved of $25 000 per year and other costs saved of $5000 per year. The interest rate during this time is expected to be 7%.

**Required**
Calculate the net present value of the new dry cleaning equipment.

3.16 The following financial information, showing cash flows, relates to the business of Hurn Thompson Pty Ltd for a series of investment projects being considered.

| Investment projects | Year 0 $ | Year 1 $ | Year 2 $ | Year 3 $ | Year 4 $ | Year 5 $ |
|---|---|---|---|---|---|---|
| A | (10 000) | 1 000 | 1 000 | 1 000 | 1 000 | 11 000 |
| B | (10 000) | 2 500 | 2 500 | 2 500 | 2 500 | 2 500 |
| C | (10 000) | 0 | 0 | 0 | 0 | 14 500 |

**Required**
Calculate the net present value for each investment project using a discount rate of 8% and 10% and then rank them.

3.17 The Brooks and Groves specialist sports store is considering two possible sites for a new store. The owners have investigated the cash flows for the venture and after a period of five years they expect the store to be well established. The net cash flows related to the income and expenses for the two options are as follows.

| Project | Year 1 $ | Year 2 $ | Year 3 $ | Year 4 $ | Year 5 $ |
|---|---|---|---|---|---|
| Nedlands store | 80 000 | 80 000 | 80 000 | 80 000 | 100 000 |
| Applecross store | 90 000 | 90 000 | 90 000 | 90 000 | 110 000 |

The Nedlands Store will cost $300 000 to establish and the residual value is expected to be $20 000 in year 5. The Applecross Store will cost $450 000 to set up and its expected residual value will be $30 000 in year 5. The discount rate will be 10%.

**Required**
Calculate the payback period and the net present value of these two options and then rank them.

3.18 Elsie Brandon is a manufacturer of high-quality fashion accessories and she is considering the production of a new range of ladies fashion bags or belts. The items will have a life cycle of six years. The costs of producing these new accessories will require non-current assets as follows.

| | |
|---|---|
| Fashion bags | $45 000 initially and then $10 000 in year 1 |
| Fashion belts | $20 000 initially and then $5000 in year 2 |

The fashion bags assets will have a useful life of six years and a residual value of $3000. The fashion belts assets will have a useful life of six years and a residual value of $1800. The net cash flows for the two options over the useful life of the non-current assets required are as follows.

| | |
|---|---|
| Fashion bags | $19 000 per year |
| Fashion belts | $16 500 per year |

The discount rate will be 8%.

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**Required**
Calculate the payback period and net present value of the two options and then rank them. Which project should be accepted?

3.19 The following financial information relates to the business of Wilkinson Pty Ltd for an investment project being considered.

| | |
|---|---|
| Investment cost | $80 000 |
| Estimated life | 7 years |
| Estimated residual value | $9000 |
| Annual net cash flows | $23 000 |
| Required rate of return | 12% |

**Required**
a Calculate the payback period and net present value.
b If the net cash flows were as follows what would be the payback period and net present value?

| | |
|---|---|
| Year 1 | $24 000 |
| Year 2 | $26 000 |
| Year 3 | $51 000 |
| Year 4 | $80 000 |
| Year 5 | $23 000 |
| Year 6 | $14 000 |
| Year 7 | $10 000 |

3.20 Smith and Weston Pty Ltd are directors in a DVD hire store in Belmont. They are considering setting up a new store in Attadale, which would have a project life of seven years. The initial cost of setting up the store would be $450 000. These non-current assets would have a useful life of seven years, a residual value of $20 000 and be depreciated on the straight-line method. The other project details are as follows.

| | |
|---|---|
| Estimated cash inflows each year from the project | $165 000 |
| Estimated cash outflows# each year from the project | $62 571 |
| Anticipated annual income, from the project, based on accrual accounting | $165 000 |
| Anticipated annual expenses*, from the project, based on accrual accounting | $106 429 |

# Includes payments for company income tax.
* Includes depreciation and ongoing purchase of new DVDs but excludes company income tax.

The discount rate will be 6% and the company income tax rate 30%.

**Required**
Calculate the following:
a payback period
b rate of return on average investment
c net present value.

3.21 Lavender and Thomas are directors of Shelley Ltd, manufacturers of surfing equipment. They are considering replacing machinery at their factory with new technology that would reduce the need for one factory worker. The old machinery has no value and can be disposed of at no cost. The new machinery would also enable extra production of surfboards and the introduction of a new range of boards. There are two options available to them. Option A has


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an initial cost of $300 000. The machinery would be depreciated on the reducing balance method at a rate of 40%. Its useful life would be seven years and residual value $13 997. Option B has an initial cost of $400 000. The machinery would be depreciated on the reducing balance method at a rate of 40%. Its useful life would be seven years and residual value $18 662. The other details concerning the two options are as follows.

| Details | Option A | Option B |
|---|---|---|
| Estimated cash inflows from increased sales | $190 000 per year for years 1 to 4 and $160 000 for years 5 to 7 | $235 000 per year for years 1 to 4 and then $200 000 for years 5 to 7 |
| Estimated savings in wages cash outflows | One employee at $35 000 per year | One employee at $35 000 per year |
| Estimated increased cash outflows for operational expenses, excluding income tax payments | Increases: insurance $7000 per year, repairs and maintenance $17 000 per year for years 1 to 4 and $30 000 for years 5 to 7, rent $10 000 per year and electricity $13 000 per year | Increases: insurance $7500 per year, repairs and maintenance $18 000 per year for years 1 to 4 and $35 000 for years 5 to 7, rent $11 000 per year and electricity $14 500 per year |
| Estimated increased annual income based on accrual accounting | $190 000 per year for years 1 to 4 and $160 000 for years 5 to 7 | $235 000 per year for years 1 to 4 and then $200 000 for years 5 to 7 |
| Estimated increased annual expenses based on accrual accounting, excluding depreciation and company income tax expense | Insurance $7000 per year, repairs and maintenance $17 000 per year for years 1 to 4 and $30 000 for years 5 to 7, rent $10 000 per year and electricity $13 000 per year | Insurance $7500 per year, repairs and maintenance $18 000 per year for years 1 to 4 and $35 000 for years 5 to 7, rent $11 000 per year and electricity $14 500 per year |

The company tax rate is 30% and the cost of capital is 8%.

**Required**

a Calculate the following:
   i payback period
   ii rate of return on average investment
   iii net present value.

b Which option has the higher risk attached to it?

c Which option is more profitable?

d Rank the options based on their net present value. Is this ranking the same as the outcome based on the payback method and the rate of return on average investment?

3.22 Merry's Restaurant, owned by partners Meredith and Sally, has two cafes in Perth both specialising in Italian cuisine. The owners have plans to open a new cafe specialising in either French or Turkish cuisine. They prepared the details below for each option and have presented it to you for analysis.

French cafe

- Initial cost would be $400 000.
- The project life would be six years.
- Non-current assets of $400 000 would be depreciated on the straight-line method. Their residual value would be $14 000.
- Estimated cash inflows from expected sales would be $340 000 per year.
- Annual income, based on accrual accounting, is anticipated to be $340 000.
- Estimated annual expenses plus depreciation total $270 000. There are no other balance day adjustments apart from depreciation and all other expenses are paid in cash.

Turkish cafe

- Initial cost would be $300 000.
- The project life would be seven years.
- Non-current assets of $300 000 would be depreciated on the straight-line method. Their residual value would be $10 000.

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- Estimated cash inflows from expected sales would be $290 000 for years 1 to 5 and then $390 000 per year for years 6 and 7.
- Annual income, based on accrual accounting, is expected to be $290 000 for years 1 to 5 and then $390 000 for years 6 and 7.
- Estimated annual expenses plus depreciation total $250 000. There are no other balance day adjustments apart from depreciation and all other expenses are paid in cash.

The cost of capital is 12%.

**Required**

a Calculate the following:
  i payback period
  ii rate of return on average investment
  iii net present value.

b Which option has the higher risk attached to it?

c Which option is more profitable?

d Rank the options based on their net present value. Is this ranking the same as the outcome based on the payback method and the rate of return on average investment?

3.23 The following financial information, showing net cash flows, relates to the business of Bryant Traders for a series of investment projects being considered.

| Year | Expand the factory $ | Expand the shop $ |
|---|---|---|
| 1 | 250 000 | 150 000 |
| 2 | 200 000 | 150 000 |
| 3 | 180 000 | 170 000 |
| 4 | 160 000 | 250 000 |
| 5 | 150 000 | 220 000 |
| Total | 940 000 | 940 000 |

The cost of capital is 15% and the required initial investment for the projects is $510 000. The $510 000 non-current assets for the factory expansion would have a residual value of $66 096 and be depreciated on the reducing-balance method at 40% per year. The $510 000 in non-current assets for the shop expansion would be depreciated on the straight-line method and will have a residual value of $80 000.

**Required**

a Calculate the payback period and net present value for each investment project and then rank them.

b Recommend which project the business manager should accept and why.

3.24 Essential Hairdressing Salon, owned by Pam French and Dawn Cleese, is considering replacing its equipment. The old equipment has no value and can be disposed of at no cost to the business. There are two options available to them as detailed below.

| Details | Option A | Option B |
|---|---|---|
| Cost of the investment | $160 000 | $150 000 |
| Residual value | $14 000 | $12 000 |
| Useful life | 6 years | 5 years |
| Depreciation method | Straight line | Straight line |
| Estimated incremental cash inflows | $85 000 per year | $80 000 per year |
| Estimated incremental cash outflows | $38 000 per year | $20 000 per year |
| Incremental income based on accrual accounting | $85 000 per year | $80 000 per year |


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| | | |
|---|---|---|
| Incremental expenses (including depreciation) based on accrual accounting | $62 333 per year | $47 600 per year |
| Project life | 6 years | 5 years |
| Cost of capital | 10% | 10% |
| Desired rate of return on average investment | 30% | 30% |
| Desired payback period | 3.5 years | 3.5 years |

A study of the two options reveals that Option A is very environmentally friendly as it uses less energy and would also enable the business to expand in the future to meet demand from new customers. In the long term, the image of the business would be enhanced under this option.

Option B is not as environmentally friendly as it would use more energy compared to Option A. However, Option B would enable the business to keep pace with its competitors as it would produce a higher-quality result than Option A.

**Required**

a Calculate the following for each option:
   i payback period
   ii rate of return on average investment
   iii net present value.

b Based on your calculations, prepare a report to the company directors outlining your recommendations about which option the company should accept, considering both the quantitative and qualitative factors.

3.25 Northern States Ltd is a sound and recording studio specialising in country music. Artists come from within Australia and overseas. Its sales turnover is now approximately $12 000 000 per annum and it makes a profit of about $1 100 000 each year. To expand its operations further, the company directors believe they need to acquire more up-to-date electronic equipment. They believe this would attract more overseas artists and boost their business. There are two options available to the company.

| Details | Option A | Option B |
|---|---|---|
| Cost of the investment | $350 000 | $500 000 |
| Residual value | $19 000 | $24 000 |
| Useful life | 7 years | 8 years |
| Depreciation method | Straight line | Straight line |
| Estimated incremental cash inflows | $350 000 per year for years 1 to 4 and $380 000 for years 5 to 7 | $460 000 per year |
| Estimated incremental cash outflows | $223 814 for years 1 to 4 and $232 814 for years 5 to 7 | $253 150 per year |
| Incremental income based on accrual accounting | $350 000 per year for years 1 to 4 and $380 000 for years 5 to 7 | $460 000 per year |
| Incremental expenses (includes depreciation and company income tax cost) based on accrual accounting | $271 100 per year for years 1 to 4 and $280 100 for years 5 to 7 | $312 650 per year |
| Predetermined payback period required | 3 years | 3 years |
| Desired rate of return on average investment | 35% per year | 35% per year |
| Discount rate | 8% | 8% |
| Project life | 7 years | 8 years |

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An analysis of the two options reveals that Option B is really cutting edge and would satisfy customer needs well into the future. However, it would mean that some employees would lose their jobs and have to be replaced with technicians who know how to use the new equipment. This would result in some cost savings. This option would mean that in the short term, the company would not keep pace with its competitors, as processes are more complicated, but it would be more environmentally friendly than Option A as it has lower energy consumption.

Option A would enable the company to keep up with its competitors in the short term. It would provide a better recording experience for customers and thus bring in more custom than its competitors. In addition, artists prefer this type of equipment as it is familiar to them so they can work efficiently to record an album.

**Required**

a Calculate the following for each option:
   i payback period
   ii rate of return on average investment
   iii net present value.

b Based on your calculations, prepare a report to the company directors outlining your recommendations as to which option the company should accept, considering both the quantitative and qualitative factors.

3.26 The following financial information relates to the business of Hihosilver Pty Ltd for a series of investment projects being considered:

| Investment project | Initial cost of investment $ | Expected net cash flow per year $ | Profit after tax $ | Life of project |
|---|---|---|---|---|
| A | 250 000 | 80 000 | 38 333 | 6 years |
| B | 140 000 | 70 000 | 42 000 | 5 years |
| C | 90 000 | 30 000 | 20 000 | 9 years |
| D | 60 000 | 20 000 | 11 429 | 7 years |

All projects will have a zero residual value.

**Required**

a Calculate the payback period, rate of return on average investment and net present value for each investment project using a discount rate of 12% and then rank them.

b Which project would you recommend and why?

3.27 Fran Laver and Rod Barrasi are directors in a manufacturing business called Global Beauty Ltd, makers of cosmetic products. They wish to expand their operations by introducing a new product onto the market. Market research and development has revealed that they have a choice of two products. However, to manufacture both new products would mean that the company is leveraged too high. The business currently achieves a 40% rate of return on assets from existing products.

Product A would allow the business to break into some new markets. The future possibilities for the business are therefore very good and this would allow them to keep pace with their competitors. However, this product would need to be produced overseas using cheap labour sources, which may attract criticism from government and social activists.

Product B is a high-quality product that would appeal to customers who don't mind paying high prices for quality. It could be produced in Australia and the image of the company would be enhanced through the use of natural products in the manufacturing process.


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An analysis of Product A reveals the following financial information:

- The initial cost would be $2 100 000 for equipment, which would have a useful life of six years, zero residual value and be depreciated on the straight-line method. Based on accrual accounting the unit sales from the product would be as follows.

| | |
|---|---|
| Year 1 | $1 400 000 |
| Year 2 | $1 450 000 |
| Year 3 | $1 470 000 |
| Year 4 | $1 500 000 |
| Year 5 | $1 410 000 |
| Year 6 | $1 410 000 |

- Cash inflows from the product would be as follows.

| | |
|---|---|
| Year 1 | $1 400 000 |
| Year 2 | $1 450 000 |
| Year 3 | $1 470 000 |
| Year 4 | $1 500 000 |
| Year 5 | $1 410 000 |
| Year 6 | $1 410 000 |

- The cash outflows for the product would be as follows.

| | |
|---|---|
| Year 1 | $500 000 |
| Year 2 | $520 000 |
| Year 3 | $530 000 |
| Year 4 | $540 000 |
| Year 5 | $550 000 |
| Year 6 | $550 000 |

- The expenses, based on accrual accounting and excluding depreciation and company income tax, would be as follows.

| | |
|---|---|
| Year 1 | $500 000 |
| Year 2 | $520 000 |
| Year 3 | $530 000 |
| Year 4 | $540 000 |
| Year 5 | $550 000 |
| Year 6 | $550 000 |

An analysis of Product B reveals the following financial information:

- The initial cost would be $2 000 000 for equipment with a useful life of seven years and residual value of zero. The cost would be depreciated on the straight-line method. Based on accrual accounting, the income would be $750 000 in years 1, 2 and 3 and $1 400 000 in years 4 to 7. Cash inflows from the product would be $750 000 in years 1 to 4 and $1 400 000 in years 5 to 7. The cash outflows for the product would be $180 000 in years 1 to 4 and $420 000 in years 5 to 7. The expenses, based on accrual accounting, excluding depreciation and company income tax, are expected to be $180 000 in years 1 to 4 and $420 000 in years 5 to 7.
- The company income tax rate is 30% and the discount rate is 6%. The desired rate of return on average investment is 40% and the predetermined payback period is four years.

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**Required**

a Calculate the following:
   i payback period
   ii rate of return on average investment
   iii net present value.

b Based on your calculations prepare a report to the company directors outlining your recommendations as to which option the company should accept. Consider both the quantitative and qualitative factors.

## Investigation

Select one of the following industries:

- mining
- retail
- entertainment
- banking.

Research your chosen industry on the internet and find a company within that industry. Search its website for its annual report and then answer the following questions:

1 What types of capital expenditures does the business have?

2 What is the value of these capital expenditures in relation to the total assets?

3 What new capital expenditures appear to have been acquired during the past financial year?

4 How do you think these capital expenditures have been funded?

5 What type of factors do you think may have affected the amount of the capital expenditures?

6 Discuss whether you consider these capital expenditures are appropriate, given the circumstances that the company faces.

## Essay

> 'Capital expenditure decisions are very important to the success of any business. The evaluation of the alternatives requires calculated and careful consideration and accounting techniques are very useful in assisting business managers to make appropriate decisions.'

Discuss this statement, outlining in your answer:

- the nature of capital expenditure items
- the importance of capital expenditure items
- an evaluation of the accounting techniques that can be applied to assist business managers in their decision-making process
- a discussion of the qualitative factors that must be considered when making capital investment decisions.

## Ethics case study

Newark Ltd is planning to build a new manufacturing plant. Jenny Frame is the person appointed to head the task force responsible for preparing an analysis of the options available to Newark. Frame's team completes a detailed analysis of three possible types of manufacturing facilities:

- option 1: This is the lowest cost option but it has a higher risk of employee injuries and a greater risk of environmental damage from toxic gases arising from poor venting


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- option 2: This has a higher cost than option 1 but reduces the risk of injury to employees. It still has the potential for environmental damage
- option 3: This is the highest cost option but provides the greatest safety to workers and offers the least danger to the environment.

Jenny submits the results of the analysis to her boss and he thanks her for the fantastic job that she and her team have done. He will make special mention of her efforts in her job evaluation report this year.

Jenny is pleased with her boss's response, but a week later she is disturbed after coming across a copy of a report from her boss to the board. The report focuses on the costs associated with each option and does not mention the risks to the workers and the environment.

Jenny is unsure of what she should do. She could speak to her boss and risk losing the favourable job evaluation (or even her job). Alternatively, she could pretend she never saw the report. She is uncertain as to where her responsibilities end. She is, however, also worried about how she would feel if someone were to be hurt as a result of the company selecting option 1.

Identify and assess Jenny's responsibilities and then suggest a possible course of action.

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# Chapter 4
# INTRODUCTION TO COST ACCOUNTING

## What You Will Learn

After studying this chapter you should be able to:

1 Explain the relationship of costs to products or services and distinguish between direct and indirect costs
2 Identify the behaviour of costs and distinguish between fixed, variable and mixed costs
3 Describe the three cost elements of a product or service: materials, labour and overheads
4 Explain the treatment of costs and distinguish between product and period costs
5 Identify and calculate direct materials, direct labour and overheads
6 Calculate and apply predetermined overhead recovery rates
7 Calculate the unit cost and selling or quotation price for a job, product or service
8 Explain the use of and apply standard costing and variance analysis
9 Explain the concept of mark-up and calculation of the unit price of a product or service

## Introduction

In this chapter we will learn about determining the price of a product or service. This will involve learning about the calculation of the cost of a product or service and the application of mark-up to determine the selling price. This is important to a business so it can assess the profitability of individual products and services. We will look at cost classifications, allocation of costs to products or services and the concept of mark-up. This chapter considers the job order costing process, the application of absorption costing and the use of normal and standard costing to determine the cost of a product or service. Standard costing and variance analysis will also be examined.

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## THE NATURE OF COSTS





A cost is an economic sacrifice of resources for a particular purpose, such as making a product or providing a service. A cost can be something other than an expense. Costs can be classified in several ways according to:

- their relationship to a cost object (i.e. are they a direct or indirect cost?)
- their behaviour in relation to levels of activity (i.e. are they a fixed or variable cost?)
- whether they result in an asset or an expense (i.e. are they a product or period cost?)

A cost object is any object for which we require a value or any object for which costs are measured and assigned. Examples of cost objects are a product, a service, a process, an activity and a customer. Costs can therefore be examined in relationship to a cost object and be classified as direct or indirect, fixed or variable and product or period costs.

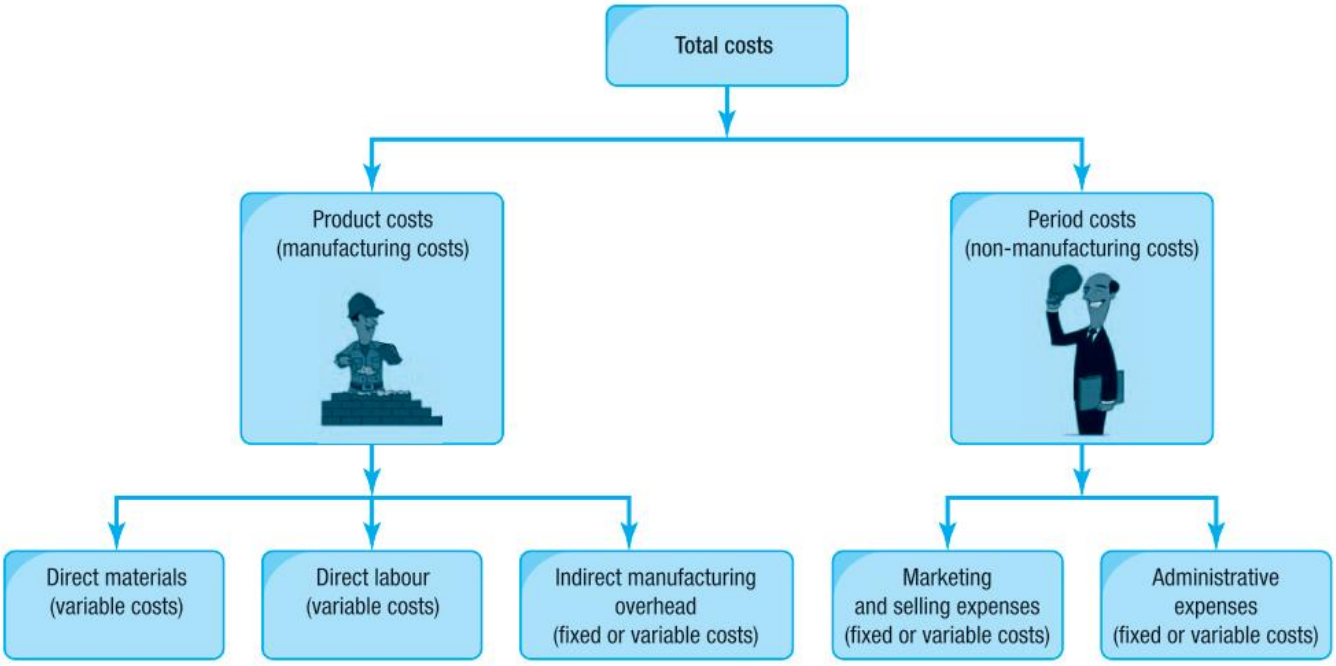



Figure 4.1 Overview of costs

REALITY CHECK 4.1

Joslin Goat and Merv Heffer own a small dairy company called Pemberton Dairy Pty Ltd. They have, until now, only been producers of milk products. However, they now wish to expand their operations and branch out to produce ice-cream, cheese and yoghurt products. They are unsure how to proceed with this venture.

The company has contracted Bert Mersey, who is a business finance and accounting consultant, to provide them with some advice.

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Bert has outlined to Joslin and Merv some of the issues that need to be considered in the development of a new product. The first aspect is the need for detailed market research. The customer's needs and wants must be considered and the business must remember that customer habits and trends change over time.

Apart from the involvement of marketing people, Bert has told the company that design, technical and engineering staff will also need to be involved in the new product design. These people will determine the product requirements, specifications and composition and carry out a product analysis, which aims to improve the item. Bert suggests that the company will need to employ or contract marketing and design, technical and engineering consultants.

In Bert's report to the company he has outlined the many factors that influence the development of a new product or service. Apart from meeting the customer's expectations and specifications, some of the other factors to be taken into consideration are:

- the company's identity and desired image
- materials (e.g. manmade or natural)
- environmental issues (e.g. efficiency and recycling)
- culture (e.g. values and beliefs)
- regulations and laws.

Bert's report also indicates that the industrial production process and the issue of cost will be important. His report outlines that these two factors are often linked – the production process can affect cost and vice versa. He also suggests that the company must decide on the target market for the product as this will affect the selling price that can be charged, which in turn affects the product to be made. Costs need to be covered as the business does not wish to make a loss. Bert has explained in his report the close link between cost and selling price.

What other issues, particularly related to cost, may need to be considered in producing these new products? What types of manufacturing costs would be involved and would they be fixed or variable and direct or indirect costs? What types of period costs may need to be incurred?

To consider any other issues and the types of costs to be incurred in making these types of products check dairy company websites such as Harvey Fresh and Margaret River Dairy Company. Peruse their products and consider how these businesses would go about developing a new product.

- What other issues can you foresee and what types of costs do you think will be involved?
- What do you think the managers of a dairy company would consider?
- What new product would you develop? Discuss.

## Commentary

The business decision to introduce a new product line is a complex and important one. Cost is one of the factors that must be carefully considered. Costs need to be covered so that the business makes a profit, otherwise there is no point in making the product. If costs are too high then this will impact on the price that must be charged, which in turn could mean that consumers will not buy the product. In some cases a business will make a product within a cost constraint, meaning it may be necessary to use certain materials or labour or production processes so that the cost is limited to a budgeted amount.


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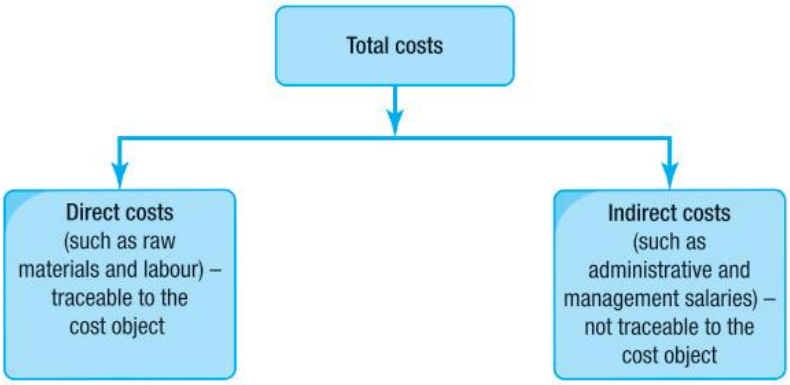



Figure 4.2 Relationship of costs to cost object

## Direct and indirect costs

Some costs are able to be easily traced to a cost object, such as the material used in making a t-shirt. Other costs cannot be traced easily, such as the electricity used in operating machinery to make the t-shirt. Costs are therefore either direct or indirect.

Some costs may be direct in the making of one cost object and be indirect in the making of another cost object. Therefore, the distinction between direct and indirect costs is important as it allows the determination of a cost object to be more accurate.

To determine the cost of a product or service a number of different methods can be used. In this textbook we will only examine one method: job costing systems. When using a job costing system, all costs – both direct and indirect – must be allocated to the job and, traditionally, indirect costs are allocated using a predetermined overhead rate.

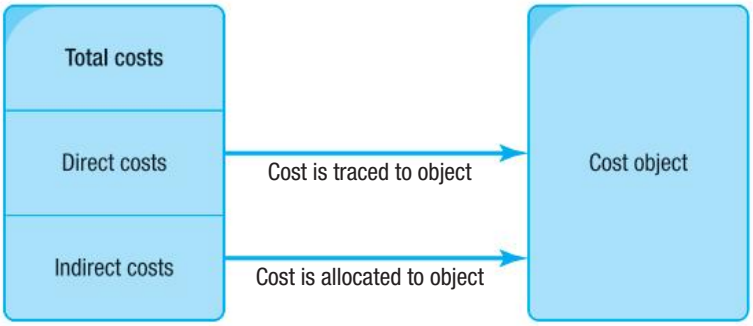



Figure 4.3 How costs are assigned to a cost object

### Direct costs

A direct cost is able to be traced to a product or service with a high degree of accuracy. Directly traceable means that the cost can be physically and easily (i.e. economically and conveniently) traced to the finished product. Direct materials and direct labour are the two most common direct costs for a business.

**Examples of direct costs**

- Raw materials used in making gold rings
- Wages of a mechanic in a car repair business
- Parts and supplies used in a panel beating business
- Cost of bottles used in making wine
- Cost of paint used in making a motorcycle

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## Indirect costs

Indirect costs are not so easily traced to a product or service. These are items that are not incorporated in the product or are too insignificant to make it worth tracing the cost to the finished product.

**Examples of indirect costs**

- Salary of the factory manager
- Local government rates and taxes
- Paint used in making a doll's house
- Glue used in making furniture
- Oil and lubricants used in maintaining factory machinery
- Insurance of the business premises

Key Concept 4.1

**Direct and indirect costs**

- A direct cost is a cost that can be easily tracked down to a cost object, such as a product or service.
- An indirect cost is not easily able to be traced to or identified with a cost object.

# Cost behaviour

The total costs of a business may be divided into fixed costs, variable costs and mixed costs.

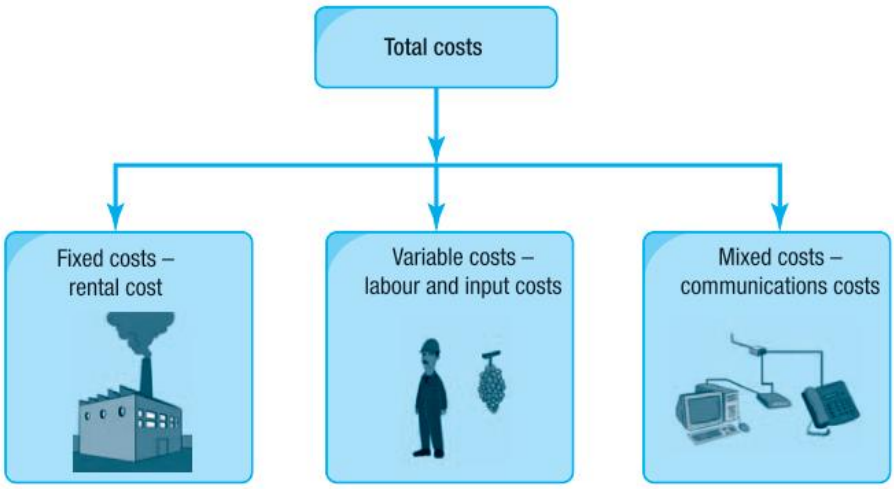



Figure 4.4 Relationship of costs to cost object

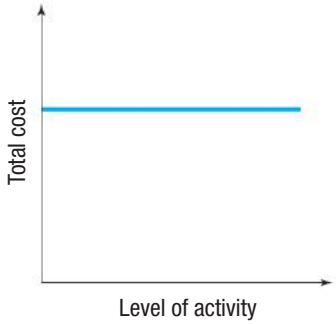



Figure 4.5 Fixed cost behaviour

## Fixed costs

Fixed costs are those that do not change in total when the level of activity changes. For example, the rent of a factory building will be the same in total no matter how many units are produced. However, the unit activity cost (e.g. $40 per unit) will change as the level of units produced increases or decreases. The level of activity may be the level of sales or production.


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**Examples of fixed costs**

- Depreciation of factory machinery
- Office supervisor's salary
- Rent of a shop
- Delivery vehicle insurance

## Variable costs

A variable cost is one that changes in total as the level of activity changes. For example, the cost of raw materials in total will increase as the level of units produced increases. However, the cost (e.g. $30 per unit) does not change. For example, if the variable cost of a direct material – such as wood in making a table – is $100 per item then this cost is the same whether we make one table or a thousand. The total variable costs will increase or decrease in direct relationship to the increase or decrease in the sales or production level.

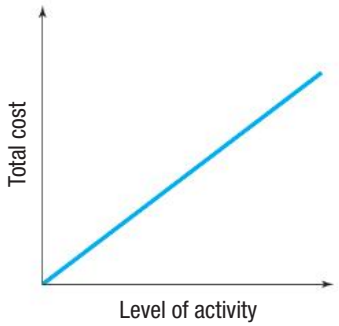


Figure 4.6 Variable cost behaviour

**Examples of variable costs**

- Wages for casual staff to make glassware
- Raw materials used in the manufacture of a computer
- Cost of goods sold
- Commission paid to salespeople

Table 4.1 Comparison of fixed and variable cost behaviour

| Cost | Cost behaviour | |
|---|---|---|
| | Per unit | In total |
| Fixed cost | Cost per unit decreases as the level of activity increases and cost per unit increases as the level of activity decreases | Total cost remains the same as the level of activity increases or decreases |
| Variable cost | The variable cost per unit remains the same as the level of activity increases or decreases | Total cost increases as the level of activity increases and total cost decreases as the level of activity decreases |

## Mixed costs

Some costs are mixed or semi-variable costs. These costs contain both fixed and variable elements. For example, a telephone bill will contain the line rental cost, which is a fixed cost, and the cost of phone calls made, which is a variable cost.

**Examples of mixed costs**

- Telephone bill
- Maintenance costs
- Electricity
- Water rates

### Key Concept 4.2

**Fixed costs, variable costs and mixed costs**

- Fixed costs are those that do not change in total when the level of activity changes.
- Variable costs are those that do change in total when the level of activity changes.
- Mixed costs contain both fixed and variable elements.

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## Cost elements

Businesses can classify their costs into various cost elements, i.e. a group of similar costs. We can distinguish between manufacturing and non-manufacturing costs in the case of a manufacturing business. Furthermore, manufacturing costs can be categorised as direct materials, direct labour and manufacturing overhead. Non-manufacturing businesses have similar categories.




### Manufacturing business

The cost of the finished item will contain three basic costs: direct materials, direct labour and manufacturing overhead costs. Together these are called manufacturing costs. All other costs are non-manufacturing costs.

### Direct materials

Raw materials are what go into the making of a product. For example, in the making of a men's suit the raw materials would be such items as the fabric, lining, buttons and thread.

Raw materials can be either direct materials or indirect materials. Direct materials are those raw materials that are directly traceable to the product being made.

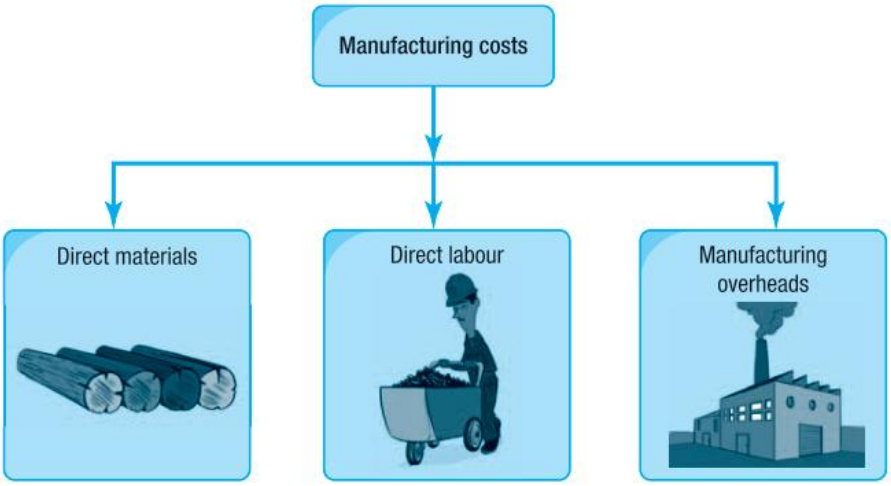



Figure 4.7 Manufacturing cost elements

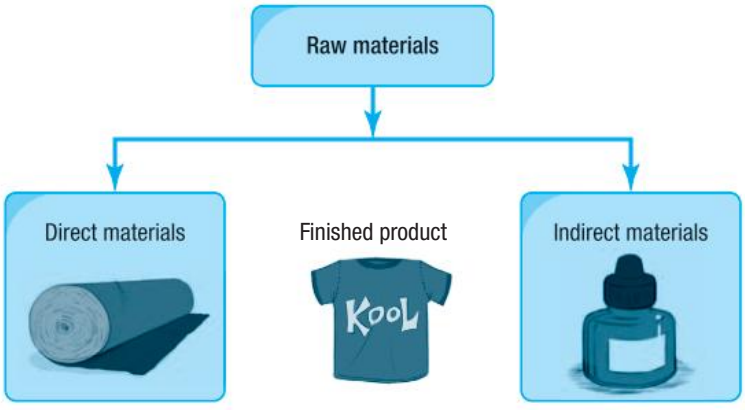



Figure 4.8 Relationship of raw materials to the cost object


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Indirect materials are those raw materials that cannot be traced to a particular unit of production and they are a part of manufacturing overhead.

| | Examples of direct and indirect materials | |
|---|---|---|
| Name of finished product | Direct raw material | Indirect raw material |
| Bottle of wine | Bottle | Strerilant used in cleaning bottles |
| Lounge chair | Wood | Upholstery staples |
| T-shirt | Cotton material | Ink used in printing slogans on shirts |
| Shoes | Leather | Glue |

## Direct labour

The following types of costs that are paid to the employees of the business are labour costs:

- wages
- salaries
- long-service leave
- sick leave
- payroll tax.

These costs are classified as either direct or indirect labour.

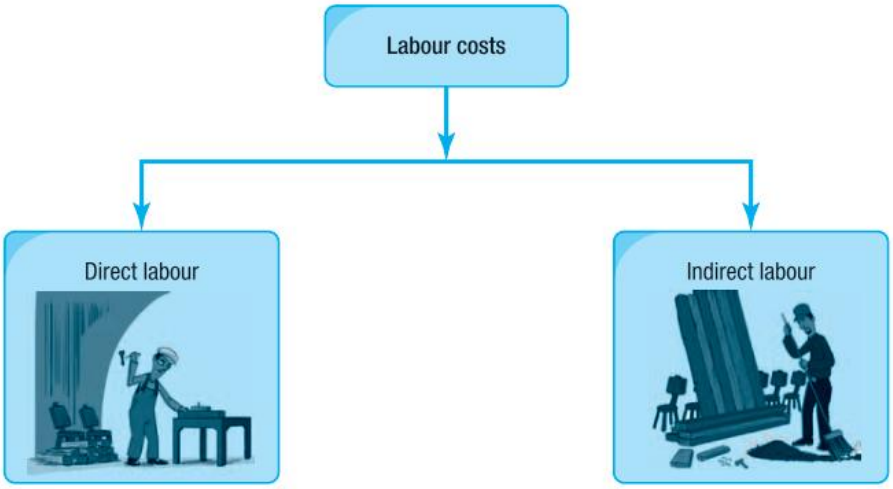



Figure 4.9 Manufacturing labour relationship to cost object

The direct labour cost is the amount paid to the employees that is traceable to the finished product. Indirect labour costs represent the cost of labour paid to workers whose tasks cannot easily be traced to the finished product. These costs are a part of manufacturing overhead.

| Examples of direct labour | Examples of indirect labour |
|---|---|
| • Machine operators in a factory making security screens | • Factory supervisors overseeing the making of beer in a brewery |
| • Panel beaters fixing vehicles | • Material handlers in the factory materials store |
| • Bakers making bread products | • Cleaners who clean the factory floor in a furniture factory |

## Manufacturing overhead

Manufacturing overhead represents costs that are not direct materials or direct labour, but which are still part of the manufacturing process. These costs are indirectly connected to the finished goods and are sometimes called factory overhead.

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**Examples of manufacturing overhead**

- Indirect materials
- Indirect labour
- Electricity, water and gas used in the production of a product
- Depreciation of factory equipment
- Insurance of factory buildings
- Maintenance of factory buildings
- Repairs to equipment used in the manufacturing process

## Further cost classifications

Prime costs are direct manufacturing costs: direct materials and direct labour. Conversion costs are direct labour and manufacturing overhead costs that convert the direct materials into a finished product.

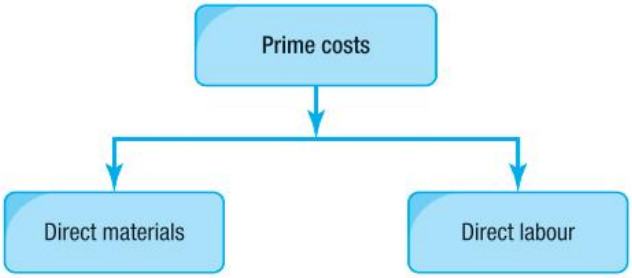



Figure 4.10 Prime costs

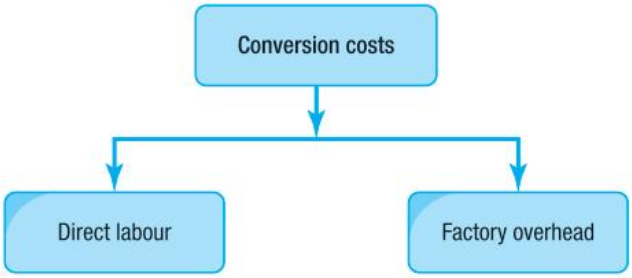



Figure 4.11 Conversion costs

Key Concept 4.3

**Cost elements in a manufacturing business**

A manufacturing business has three cost elements: direct materials, direct labour and manufacturing overhead.

## Non-manufacturing costs

Costs of operating a business that are not incurred in the manufacturing process are called non-manufacturing costs (or period costs). These can be categorised as selling or marketing costs, distribution or transport costs, administration costs and financial costs.

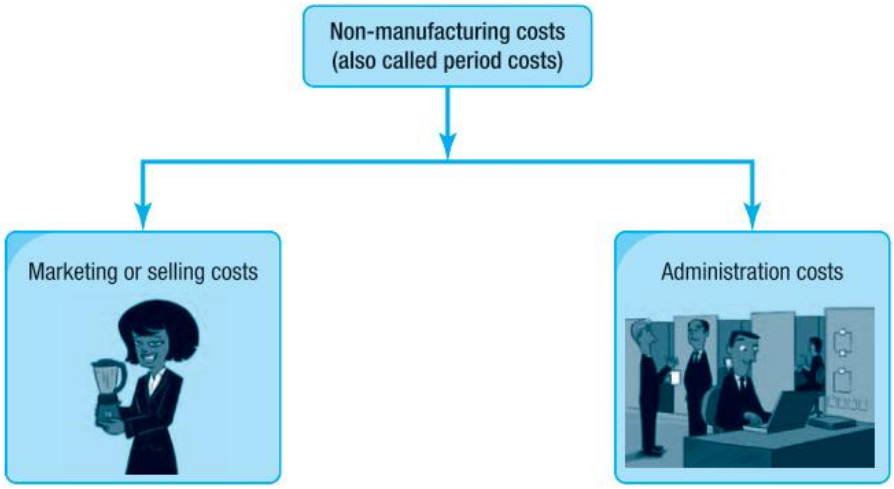



Figure 4.12 Example of non-manufacturing costs



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## Non-manufacturing businesses







Merchandising and service industries also need to determine the cost of the product they sell or service they provide. They can also have direct materials, direct labour and overhead costs. However, there will be differences in the proportional amount of these compared to a manufacturing business. For example, a service business is likely to have a greater proportion of direct labour in the total cost compared to a manufacturing business and its direct materials cost will usually be small. For a merchandising business the cost of direct materials and direct labour will be the largest components of the total cost. Overhead costs can be more difficult to determine for merchandising and service businesses as they may be difficult to trace directly to the service provided or merchandise sold. These costs are sometimes treated as period costs.

## Product and period costs

All costs can be classified according to whether they result in an asset or expense.

### Product costs

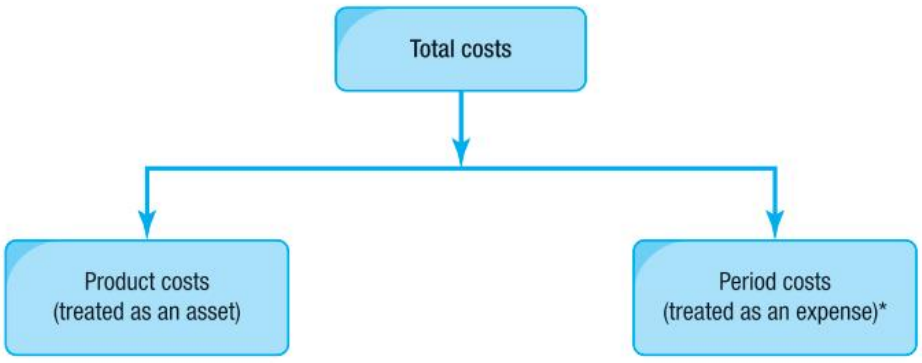
Product costs include all those costs that are attributable to a product. In this textbook we will use absorption costing, which is explained later in this chapter.

Computers are a *product* to an electronics retail store and commercial loans are a *product* to a bank so we can see that a product can be different things to different businesses and it is not just a concept related to manufacturing businesses. Product costs are sometimes called inventoriable costs.

A product cost is recorded as an expense in the period in which the product is sold and this will be recorded as the cost of goods. Before the product is sold the item is an asset, being recorded as finished goods or work in progress in the statement of financial position. The product is an asset because it has future economic benefit to the business.

**Examples of product costs**

- Direct materials used in the making of a surfboard
- Direct labour used in making a diamond ring
- Overheads assigned to the manufacture of a ball gown




* For example, a promotional event where samples are given away.

Figure 4.13 Overview of costs – asset or expense?

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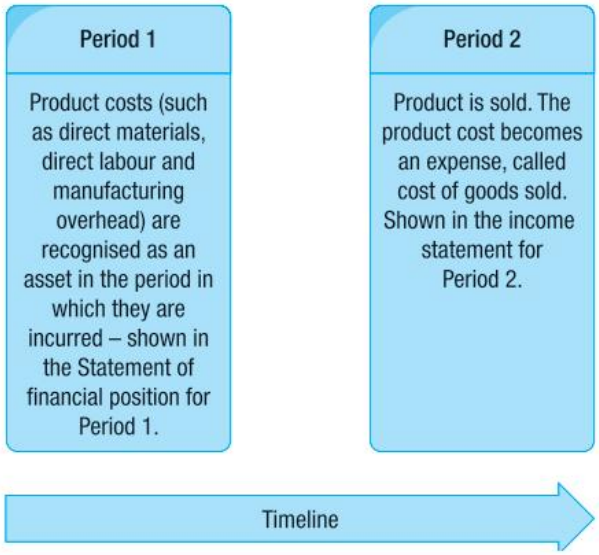



Figure 4.14 Product cost flow timeline

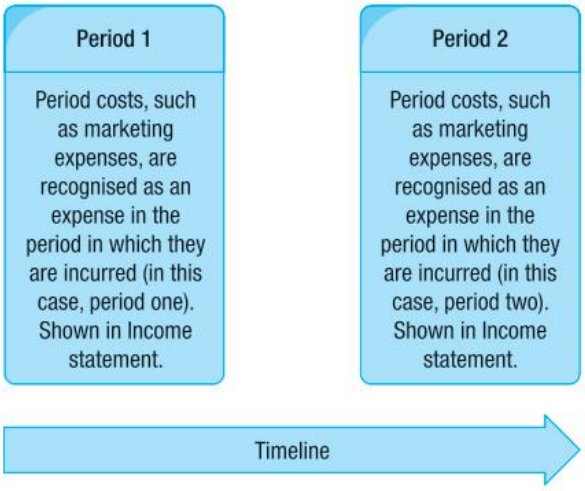



Figure 4.15 Period cost flow timeline

## Period costs

Costs that are not product costs are period costs. Period costs are an expense and therefore shown in the business's Income statement in the period in which they are incurred.

A period cost is a cost that relates to the current accounting period and which does not have a future economic benefit to the business. Period costs are not carried forward with the product until the time of sale.

The distinction between a product and period cost is important to the preparation of financial statements as it affects both inventory valuation and profit determination.

**Examples of period costs**

- Advertising
- Wages paid to sales personnel
- Office rent
- Office contents insurance

Key Concept 4.4

**Product cost and period cost**

- Product costs are costs to do with merchandise acquired or manufactured or a service provided.
- Period costs are costs that are not product costs. They are therefore shown as expenses incurred in the Income statement for the period.

# COST ACCOUNTING

Key Concept 4.5

**Cost accounting**

Cost accounting is the measuring, analysing, recording and reporting on the cost of a product or service.

Cost accounting is useful to both financial and managerial accounting for such purposes as:

- control of costs – comparing actual product costs with planned costs and, if necessary, taking corrective action so that the predetermined targets are met in the future
- planning – using past product costs to estimate future product costs


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- inventory valuation – calculating the value of products that are complete (finished goods) and products that are partially complete (work in progress) at the end of each accounting period for inclusion in the financial statements
- the setting of selling prices – often set with reference to the cost of the product or service
- determining profitability – management can determine if it is worth producing or selling the product or service.





REALITY CHECK 4.2

Thomas Café and Alison Rest own a hotel in Albany called Fawlty's Hotel. Business has not been good in recent years. It has been pointed out to the owners that this is the result of poor financial management and, in particular, their lack of accounting skill and knowledge. They have commissioned an accounting and finance consultant, Sybil Cleese, to analyse their business operations, including their accounting processes.

They have been told by Sybil Cleese to consider making use of cost accounting principles to assist in making the business more profitable.

Sybil has outlined that cost accounting is not only important to manufacturing businesses. It is also used in service businesses and other non-manufacturing firms. It is useful in such organisations as hospitals, dental practices, repair shops and media firms. The 'job' in these businesses is often referred to as something different. In the hotel industry it would perhaps be referred to as 'customer' and cost accounting would be used to determine the cost of a bed per night. Sybil has detailed how cost accounting can be used to track income and expenses and see what influences these costs.

Sybil has also reported that an understanding of cost behaviour is useful in determining prices as it allows a business to see how the price it charges affects profits. Cost estimation is a useful tactic that managers can use to measure performance, reduce costs, decide whether to continue or discontinue a product or service and set prices.

- Do you think that cost accounting has a role to play in managing a service business like a hotel?
- What types of costs do they incur in operating their business and how would they go about setting the price of a room for a night?
- What type of product or service costs (e.g. cost of a bed per night) do you think they need to calculate?

## Commentary

Managers such as Thomas and Alison can use cost accounting information to make informed decisions and to maximise profits. They can see how profit is linked closely with costs and the level of business activity. You will learn more about this in the chapter on cost–volume–profit analysis. Costing can be used to improve the efficiency and effectiveness of business operations through identifying value-added and non-value-added costs. The latter can then be eliminated to make the business more profitable.

To learn more about the types of costs incurred and the required information on product or service costs (e.g. the cost of a bed per night) in operating a hotel, visit the websites of the following or similar companies and locate their services and products and any details on prices charged:

- Hyatt Regency Hotel Perth
- Burswood Resort Hotel Perth
- Best Western Dunsborough Motel
- Nelsons of Bridgetown Resort Motel.

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www.perth.regency.hyatt.com

www.burswood.com.au

www.dunsboroughmotel.com.au

www.nelsonsofbridgetown.com.au

How do you think cost accounting would benefit these hospitality type businesses? Discuss.

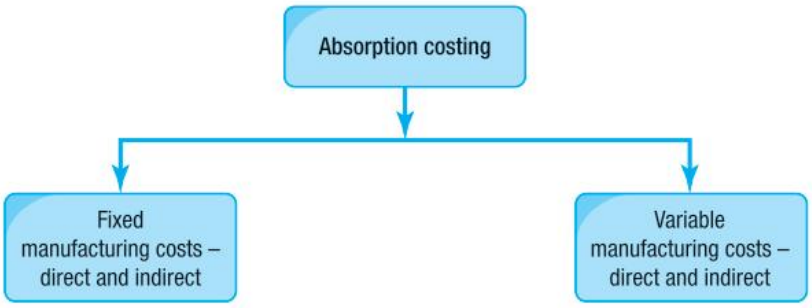
# CALCULATION OF UNIT COST USING JOB ORDER COSTING

The calculation of the unit cost of a product or service can be made using actual costs, normal costs or standard costs. In addition, the type of product or service should be considered and either job order costing or process costing should be used. In allocating costs to job orders or processes, Accounting Standard AASB 102 Inventories allows only *absorption costing* to be used in the preparation of financial statements for external reporting purposes so this is the method we apply in this textbook.

Absorption costing is the method whereby all fixed manufacturing costs and variable manufacturing costs are included in the product cost.








Under absorption costing all costs of manufacturing are included in the cost of the product.

Figure 4.16 Absorption costing

## Job order costing processes

A job order costing system is used when a business creates a single unit or multiple units of a distinct product, makes a product to a customer order or provides a service to meet specific customer requirements.

Each job has its own special characteristics and may be, for example, a single product, a batch of the same product or a service provided to an individual client. In each case the job uses its own specific resources. A batch may be a variety of wine, a type of shirt made for a particular market or a small quantity of invitations printed for an expo. The business may manufacture a number of different unique products in small or large quantities or provide a number of different services to meet client requests. The product being manufactured or service provided is unique and different to the other products being made by the business.

Job order costing is used in both manufacturing and service industries but is rarely used in merchandising firms as the cost of the product is already known. The cost of the merchandise purchased for resale is called *cost of sales* when sold.

Many firms are not purely manufacturing, merchandising or service firms, but a bit of each, as they may make and/or

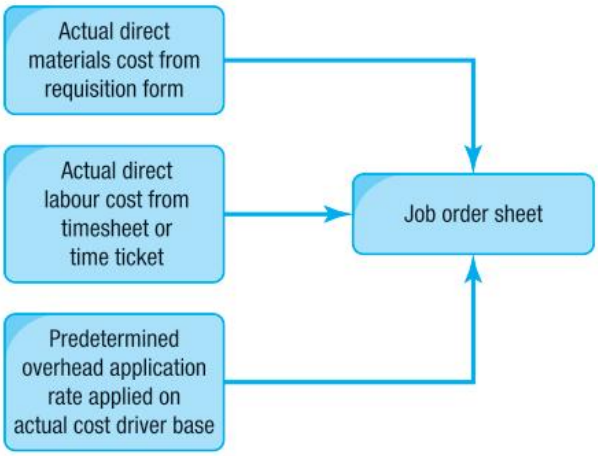



Figure 4.17 The flow of costs in a job order costing system



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sell a product and also provide a service to the customer. For example, a firm may manufacture, sell and install swimming pools or a café may make sandwiches, sell pre-purchased cakes and provide customers with an agreeable venue to eat them in. Job order costing is used in such service industries as accounting firms, legal firms and repair shops.

A job order costing system can be contrasted to a *process costing system* – where a business makes a large volume of an identical product for a long period of time. The business will mass-produce the product or provide a similar service to a large number of customers. It is an ongoing process of making the same product in a very large quantity.

Job order costing records all the costs for each finished job whereby all costs are traced and allocated to the job and the quantity noted. It is possible then to calculate the average cost per unit of the item being made or service provided.

A key component of a job order costing system is the job cost sheet, which is a document that records all the costs associated with the job. Each job will have its own unique number and the job cost sheet records the amounts of direct materials, direct labour and manufacturing overhead charged to the job.

Depending on the size of the business, it may need to use other documents, such as a materials requisition form to record the materials used in the job and an employee timesheet to record the labour used for the job.

Overhead will often be applied at a predetermined rate based on the hours taken to complete the job. A mark-up can then be applied to determine the price to charge the customer. However, this will vary from business to business.

**Examples where job order costing is used**

| Business type | Job |
|---|---|
| Panelbeater | Repair customer's vehicle |
| Computer sales | Building a computer for a customer |
| Doctor | Medical consultation for a patient |
| Dressmaker | Alterations to a ball gown for a client |
| Printing | Produce birthday invitations for a client |
| Travel agent | Custom holiday for a client |

Job number:
Invoice No:

Plumbtech

**Job details**

| Client/Job name: | Location: | |
|---|---|---|
| Contact Name and no: | Billing address: | |
| Time arranged: | Date Booked: | Date attended: |
| Special instructions: | Start time: | Finish time: |
| | Travel: (KM's) | |
| Job Description: | | |

**Materials**

| Order No | Supplier | Materials | Quantity | Cost | Retail |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | Materials total: | |

**Labour**

| Hours | Attendees | Hourly Rate | Cost | Retail |
|---|---|---|---|---|
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | Labour total: | |
| | | | Vehicle: | |
| | | | Sub total: | |
| | | | GST 10% | |
| | | | Grand Total: | |

**Comments/Extras**

Completed:

Date:

Figure 4.18 Sample job cost sheet

**Key Concept 4.6**

**Job order costing system**

Job order costing is the process of recording all the costs of a distinct product or service.

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**Timesheet**

**Sheet Number 12**

Employee name: *Jason Bourne*

Employee number: *56*

Section: Welding

Fortnightly period: *4 May 2010 to 15 May 2010*

| Day | Time started | Time finished | Job number or other category |
|---|---|---|---|
| Monday | *8.00 am* | *10.00 am* | *B58* |
| | *10.00 am* | *12.30 am* | *B59* |
| | *1.00 pm* | *3.00 pm* | *B57* |
| | *3.00 pm* | *5.00 pm* | *B61* |
| | | | |
| Tuesday | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| Wednesday | | | |
| | | | |

Figure 4.19 Sample timesheet

## Actual costing

Actual costing calculates the cost of a product or service using the actual direct materials, actual direct labour and *actual* overheads costs. All costs are applied to the actual quantity. In the case of the actual overhead costs, an actual overhead rate is applied at the end of each accounting period to the product or service to determine the total unit cost.

Only a small number of businesses use actual costing because few organisations can wait until the end of the accounting period to determine the cost of a product or service and therefore the price to charge a customer. For this reason we will not study this system in this textbook.

## Normal costing

Normal costing determines the cost of a product or service with job order costing using actual direct materials, actual direct labour and a *predetermined* overhead rate. These figures are applied to the actual quantity related to a job. The predetermined overhead rate allocates the indirect costs of production to the actual quantity of the product or service produced. The budgeted manufacturing overhead cost is divided by the budgeted allocation base. The budgeted manufacturing overhead cost is usually the cost for a year ahead. The budgeted allocation base is often referred to as a cost driver. A cost driver is a characteristic of a process that causes costs to be incurred (e.g. number of units produced and labour hours or machine hours worked). Different types of cost will have different cost drivers. Under most traditional costing methods, direct labour hours are usually chosen as the budgeted allocation base.

Formula 4.1

**Predetermined overhead rate**

$$\text{Predetermined overhead rate} = \frac{\text{Budgeted manufacturing overhead cost}}{\text{Budgeted allocation base}}$$

This predetermined overhead rate is then allocated to the cost of a job or batch based on the actual amount of the allocation base for that job or batch.



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Key Concept 4.7

**Normal costing**

Normal costing is the system that calculates the cost of a product or service using the actual direct materials, actual direct labour and a predetermined overhead rate.

EXAMPLE:

## Example 4.1

Gnangara Pty Ltd manufactures a small range of non-alcoholic drinks for the Australian market. There are six flavours of drink made: strawberry, blackberry, raspberry, orange, lemon and grapefruit.

The company uses a job order costing system with two direct costs: direct materials and direct manufacturing labour. The indirect manufacturing costs are pooled and are allocated using a predetermined overhead rate based on the cost driver of machine hours. At the end of 2009, the budgeted indirect manufacturing costs for 2010 were as follows.

| | |
|---|---|
| Electricity used in the factory | $28 000 |
| Insurance of the factory and machinery, etc. | $15 000 |
| Machinery repairs | $21 000 |
| Machinery maintenance | $35 000 |
| Indirect labour (excluding factory manager) | $75 000 |
| Indirect materials | $15 000 |
| Depreciation of machinery | $90 000 |
| Rent of factory | $50 000 |
| Salary of the factory manager | $86 000 |
| Other miscellaneous factory costs | $35 000 |
| Total | $450 000 |

The estimated machinery hours during the forthcoming year is 10 500 hours. The company is reviewing the price it charges for its strawberry cool drink. This cool drink is made in a batch three times per year: in February, July and October. After the February batch of 100 000 bottles was made the cost details were as follows.

| Direct materials | $ |
|---|---|
| Spring water | 60 000 |
| Sugar | 40 000 |
| Fruit juice | 50 000 |
| Total | 150 000 |
| Direct manufacturing labour cost | 60 000 |
| Machine hours | 600 hours |

**REQUIRED**

Calculate the total cost of making the February batch of the strawberry cool drink and the cost of making one bottle of this type of drink.

**STEP 1**

Calculate the predetermined overhead rate. Under normal costing we begin by calculating the predetermined overhead rate. This requires us to determine the budgeted total factory overhead manufacturing costs as follows.

$$\text{Predetermined overhead rate} = \frac{\$450\,000 \text{ total budgeted manufacturing overhead cost}}{10\,500 \text{ budgeted machine hours}}$$

Therefore, the predetermined overhead rate is $42.86 (rounded to the nearest cent) per machine hour.

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**STEP 2**

Apply the predetermined overhead rate to the actual activity. This predetermined overhead application rate is applied to the actual machine hours used in making the batch of strawberry drinks. The actual machine hours used to make the strawberry drink (600 hours) is multiplied by the predetermined overhead rate of $42.86 to give a total of $25 716 to be allocated to this job.

**STEP 3**

Calculate the total cost of the batch of the product. The total costs for making the batch of strawberry cool drinks are as follows.

| | |
|---|---|
| Direct materials cost | $150 000 |
| Direct manufacturing labour cost | $60 000 |
| Applied overhead cost | $25 716 |
| Total manufacturing costs | $235 716 |

**STEP 4**

Calculate the product cost per unit. The total cost of making the batch of strawberry cool drink in February is $235 716. Given that in the batch they made 100 000 bottles of this drink, then by dividing the total of $235 716 by 100 000 bottles the cost of making one bottle is $2.36 (rounded to the nearest cent).

Note that, using normal costing, the direct materials and direct manufacturing labour included in the calculation of the cost of the product are actual costs, while the indirect manufacturing overhead cost is derived from a predetermined overhead application rate, which had been estimated.

The cost of $2.36 could then be used to determine whether the firm is charging the correct selling price for this product. The mark-up (see later in this chapter) can be added to the cost to determine the selling price, which should then be compared with the price of competing products. If it is necessary to lower the price to compete, the firm can determine if it will still cover costs and hence whether it is worth making the product.

## Multiple plant-wide predetermined overhead rates

So far we have considered a business that uses only one predetermined manufacturing overhead rate to apply to all items produced. However, in some firms more than one predetermined manufacturing overhead rate can be applied as the business has a number of departments (such as the assembly department and the machining department) that require overhead to be allocated to jobs on a different basis (such as direct labour hours for one department and machine hours for another).

EXAMPLE:

### Example 4.2

Mt Barker Chocolates Pty Ltd makes a range of quality chocolates in batches at various times during the year. The chocolate is made with the involvement of three production departments: the mixing and melting department, the setting and moulding department and the packaging department. The estimated manufacturing overhead costs and allocation base details for the forthcoming year 2011 are as follows.

| Department | Estimated manufacturing overhead | Estimated allocation base |
|---|---|---|
| Mixing and melting department | $55 000 | 3500 machine hours |
| Setting and moulding department | $45 000 | 2400 machine hours |
| Packaging department | $25 000 | 7000 direct labour hours |

Therefore, this business would have three predetermined overhead application rates as follows.

| Department | Predetermined overhead application rate |
|---|---|
| Mixing and melting department | $55 000/3 500 = $15.72 per machine hour |
| Setting and moulding department | $45 000/2 400 = $18.75 per machine hour |
| Packaging department | $25 000/7 000 = $3.57 per direct labour hour |



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During the year the business produced a batch of chocolate that had the following cost details.

| | |
|---|---|
| Direct materials | Mixing and melting department: $4000<br>Setting and moulding department: Nil<br>Packaging department: $1000 |
| Direct labour hours | Mixing and melting department: 25 hours<br>Setting and moulding department: 13 hours<br>Packaging department: 46 hours |
| Direct labour rate | $56.00 per hour to all employees |
| Machine hours | Mixing and melting department: 28 machine hours<br>Setting and moulding department: 36 machine hours<br>Packaging department: 9 hours |
| Number of items made | 4000 bars of luxury chocolate |

**REQUIRED**

a What is the cost of the batch of chocolate?
b What is the cost of one bar of chocolate?

**STEP 1**

Calculate the total direct costs. The total direct costs are determined as follows.

| | |
|---|---|
| Direct materials:<br>Mixing and melting department: $4000 plus Setting and moulding department: Nil plus Packaging department: $1000 equals | $5 000 |
| Direct labour:<br>Mixing and melting department: 25 hours plus Setting and moulding department: 13 hours plus Packaging department: 46 hours equals 84 hours total multiplied by $56.00 per hour equals | $4 704 |
| Total direct costs | $9 704 |

**STEP 2**

Allocate the overhead. Allocating the overhead is done as follows.

| Department | Predetermined overhead application rate | | Actual allocation base | Applied overhead |
|---|---|---|---|---|
| Mixing and melting department | $15.72 per machine hour | multiplied by | 28 machine hours | $440.16 |
| Setting and moulding department | $18.75 per machine hour | multiplied by | 36 machine hours | $675.00 |
| Packaging department | $3.57 per direct labour hour | multiplied by | 46 direct labour hours | $164.22 |
| Total overhead applied | | | | $1 279.38 |

**STEP 3**

Calculate the total cost of the product. The total costs are the direct costs of $9704 plus the applied overhead of $1279.38, which equals $10 983.38.

**STEP 4**

Calculate the unit cost of the product. The cost of one bar of chocolate is found by dividing the total of $10 983.38 by the quantity of 4000 bars. This gives us $2.75 per bar of chocolate.

Where there are a number of departments in the production sector of the business, they may be supported by a number of service departments (such as repairs and maintenance, security and training), which would also be included in the indirect costs. However, it is not within the scope of this textbook to cover this area.

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## Standard costing

A standard cost is a predetermined cost and based on some preconceived benchmark of what is considered appropriate to the making of a product. This may apply to:

- the quantity of input (e.g. how much material should be used in the making of a fashion dress) or
- the price of the input material to be used (e.g. the price of the dress).

The benchmark of the quantity of input is called the standard input and the benchmark price is called the standard price. The total standard cost is the standard price multiplied by the standard quantity. Therefore, the direct materials, direct labour and manufacturing overhead are not actual costs but rather estimates based on a standard cost.

A standard cost is different to a budgeted cost, which may or may not be based on a standard or benchmark. A standard cost is the cost that it should take to produce one unit of a product based on certain efficiencies. However, a budget cost is the total amount required for one aspect of making a product.

A standard cost can be determined based on management judgement and this may be based on:

- what is acceptable or attainable
- historical cost data
- a job, task or product analysis (such as a time and motion study or making use of engineers to dissect a product into its parts).

The standard can be either an *ideal standard* that is based on the concept of perfection or a *practical standard* based on what is attainable.

Key Concept 4.8

**Standard costing**

Standard costing is a system of product costing where the cost of a product is based on standard costs for direct materials, direct labour and manufacturing overheads.

EXAMPLE:

### Example 4.3

Great Fashions Pty Ltd makes a range of quality designer dresses for the Australian market. Each year 12 styles are designed and made for sale through retail shops. In the design phase all costs involved in making the dresses are recorded for future use. Once a design is accepted the costs are reviewed for any changes and the standard cost is determined, based on the efficient operation of the factory. A range of standard sizes is initially manufactured, with the dress being altered to custom fit the customer after a fitting session at the outlet. This cost of custom alteration is allowed for in the cost of each dress.

A new dress called the 'Autumn Glow' evening gown has been designed and accepted for the next autumn season of 2011 in Australia. The standard costs for producing this product are as follows:

- Direct materials:
  - Budget price of polyester cotton per metre: $25, material allowed is 2.5 metres
  - Budget price of satin lining per metre: $10, material allowed is 2.5 metres
  - Budget price of a zip: $5, one zip allowed per dress
- Direct labour:
  - Making the dress – budget wage rate: $25 per hour, three hours is allowed to make one dress
  - Altering the dress – budget wage rate: $30 per hour, half an hour is allowed to alter each dress.

The factory overhead cost, which includes the cost of designing the dresses, indirect manufacturing costs (such as thread, buttons, electricity and insurance) and other product costs associated with the alteration of a dress are estimated to be $500 000 per year. Overheads are allocated to each batch of dresses based on a predetermined overhead


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application rate using direct labour hours as the cost driver. It is expected that in 2011 the direct labour hours total will be 100 000 hours. This assumes efficient operation with very little idle time allowed for.

It is expected that the company will make 2000 of their Autumn Glow evening gowns in 2011.

**REQUIRED**

Calculate the standard cost of making a batch of the Autumn Glow evening gown including the cost to fit the customer.

**STEP 1**

Calculate the standard direct materials cost. In determining the cost of making the Autumn Glow evening gown we must first calculate the standard direct materials cost as follows:

- Polyester cotton material: $25 per metre × 2.5 metres = $62.50 per dress
- Satin lining material: $10 × 2.5 metres = $25 per dress
- Zip material: $5 per dress.

The total direct materials cost is $92.50.

**STEP 2**

Calculate the standard direct manufacturing labour cost. To determine the standard direct manufacturing labour cost the calculation is as follows:

- Making the dress: budget wage rate of $25 per hour × 3 hours = $75 per dress.
- Altering the dress: budget wage rate of $30 per hour × ½ hour = $15 per dress.

Total direct manufacturing labour = $90 per dress.

**STEP 3**

Calculate the predetermined overhead rate. To determine the overhead applied we must first apply the formula to determine the predetermined overhead application rate. Using the formula the result is as follows.

$$\text{Predetermined overhead rate} = \frac{\$500\,000 \text{ total budgeted manufacturing overhead cost}}{100\,000 \text{ budgeted direct manufacturing labour hours}}$$

The predetermined overhead application rate is therefore $5.00 per direct manufacturing labour hour.

**STEP 4**

Calculate the standard manufacturing overhead cost per unit. When this predetermined overhead rate is applied to a job it is multiplied by the standard hours allowed for the product. In this case this is 3.5 direct manufacturing labour hours per dress (3 hours to make the dress and half an hour to alter the dress): 3.5 hours multiplied by $5.00 per direct manufacturing labour hour = $17.50 per dress.

**STEP 5**

Calculate the standard cost of making one unit of the product. The standard cost of making one dress is as follows.

| | |
|---|---|
| Direct materials | $92.50 |
| Direct manufacturing labour | $90.00 |
| Manufacturing overhead | $17.50 |
| Total standard cost to make one dress | $200.00 |

**STEP 6**

Calculate the total standard cost of making one batch of the product. The company produced 2000 Autumn Glow evening gowns and therefore the total cost is estimated to be $400 000.

It should be noted that all the costs included in this calculation are based on budgeted prices or rates at standard inputs. The overhead application rate would be the same under normal costing. However, under standard costing when the product is actually made and the costs are entered into the job costing system, the standard costs are entered. That is, the costs are entered or applied at the standard rate or price using the standard quantities or hours allowed considering the actual outputs produced.

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# Variance analysis

One of the advantages of standard costing is that it enables performance evaluation through the use of variance analysis. In Chapter 2 we prepared static budgets. These are based on the level of output planned at the beginning of the budget period. The difference between static budget amounts and the actual results for the period is called the *static budget variance* (covered in Chapter 2). Variance analysis when using standard costs, however, is the comparison of the actual results compared to the standard amount or value represented in the *flexible budget*. The flexible budget is the standard quantity or hours allowed for actual output multiplied by the standard price or rate.

## Total variance or flexible budget variance

The variance between the actual results and the flexible budget is the total variance or the flexible budget variance. A flexible budget determines costs based on actual output during the budget period. Therefore, this is the standard quantity or hours allowed for output multiplied by the standard price or rate. This is illustrated below.

| *Actual results* | *Flexible budget* |
|---|---|
| Actual quantity or hours of inputs × actual price or rate | Standard quantity or hours allowed for output × standard price or rate |
| Difference equals the total variance or flexible budget variance | |

This flexible budget variance can be further analysed through the following variances detailed below.

## Price or rate variance and quantity or efficiency variance

In relation to standard costs we would usually undertake the variance analysis seen above for direct materials and direct labour. This can be undertaken for an individual product or for the whole business operation. In the case of fixed and variable manufacturing overhead, we only consider the results for the whole business. This is because these costs are not directly traceable to a particular product.

An analysis of this total variance or flexible budget variance can be made for both the quantity and the price. This is done through the determination of the actual quantity or hours of input at the standard price or rate. This is illustrated below.

| *Actual results* | | *Flexible budget* |
|---|---|---|
| Actual quantity or hours of inputs × actual price or rate | Actual quantity or hours of inputs × standard price or rate | Standard quantity or hours allowed for output × standard price or rate |
| Price or rate variance | Quantity or efficiency variance | |
| Difference equals the total variance or flexible budget variance | | |

Therefore, for each of direct materials, direct labour and variable manufacturing overhead, because all are variable costs and vary according to the change in level of activity, we can determine both a price variance and a quantity variance.

## Price or spending variance: fixed manufacturing overhead

In regard to fixed manufacturing overhead, the price or spending variance is the difference between the actual results and the flexible budget. In that case the flexible budget is the same as the actual quantity or hours of input multiplied by the standard rate. This is also the same as the *static budget* figure.

Static budgets take no account of changes in the level of output; they are the budgets planned at the start of the budget period (see Chapter 2). This is because it is assumed that fixed costs do not vary with a change in the level of activity. Therefore, for fixed manufacturing overhead we only calculate the spending variance, being the difference


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between the actual result and flexible budget/actual quantity or hours of inputs multiplied by the standard rate.

## Production volume variance: fixed manufacturing overhead

It is possible to determine a production volume variance for fixed manufacturing overhead. This variance is the difference between the flexible budget, actual quantities or hours of inputs at the standard rate and static budget (remember it assumed that these amounts are all the same as the level of activity does not alter the amount of fixed costs) and the amount of fixed manufacturing overhead allocated at the standard rate to the standard (budgeted) input quantity allowed for actual output.

It should be noted that the total variance or flexible budget variance can be explained by the price or rate variance and the efficiency or quantity variance as seen in Example 4.4 below.

## Summary: price variance (sometimes called a rate or spending variance)

A *price variance* is the difference between the actual quantity of inputs multiplied by the actual price and the actual quantity of inputs multiplied by the standard price. In the case of direct materials, this is called the price variance but in the case of direct labour it is referred to as the rate or direct labour rate variance. For variable manufacturing overhead it is called the spending variance.

## Summary: quantity variance (sometimes called an efficiency variance)

A *quantity variance* is the difference between the actual quantity of inputs multiplied by the standard price and the standard quantity allowed for output multiplied by the standard price. For direct materials this variance is referred to as the quantity variance. In the case of direct labour and variable manufacturing overhead it is called the efficiency variance.

## Interpretation of variance analysis

If the actual cost is greater than the standard cost then the variance is unfavourable, usually denoted by a U. However, if the actual cost is less than the standard cost then the variance is favourable, which is usually denoted by an F. Interpretation of these variances is beyond the scope of this textbook. Variances will merely be interpreted as favourable or unfavourable.

EXAMPLE:

### Example 4.4

Great Fashions Pty Ltd, the firm in Example 4.3, is now reviewing its performance in the manufacturing of the Autumn Glow evening gown. During 2011 it manufactured 2080 gowns to meet demand. Following are the costs at the end of 2011 related to the manufacture of the gown:

- Direct materials used (for simplicity, what was purchased is assumed to have been used):
  - Raw silk: 2.6 metres per dress was required for 2080 dresses; therefore 5408 metres were purchased at $25.50 per metre
  - Satin lining: 2.6 metres per dress was required for 2080 dresses; therefore 5408 metres were purchased at $10.30 per metre
  - Zips: 2100 were required at $4.80 per zip
- Direct manufacturing labour:
  - Making the dress: 2.75 hours per dress was required at the wage rate of $26 per hour.
  - Altering the dress: half an hour per dress was required at the wage rate of $28 per hour.

As indicated previously the total of manufacturing overhead was estimated to be $500 000 for the year and the estimated direct labour hours for the year were 100 000 hours. Of the amount of $500 000, $300 000 is fixed overhead and $200 000 is variable at the level of output being 100 000 direct manufacturing labour hours. The actual results in the case of overheads totals in the year of 2010:

- Variable manufacturing costs incurred: $180 500
- Fixed manufacturing costs incurred: $295 000

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- Direct manufacturing labour hours required during the year: 95 000
- Direct manufacturing labour hours, being the standard hours allowed for actual output and used to apply the manufacturing overhead: 97 000.

**REQUIRED**

a Calculate the following variances for the year 2011 in relation to the Autumn Glow evening gown:
   i Total direct materials polyester cotton variance
   ii Direct materials polyester cotton price variance
   iii Direct materials polyester cotton quantity variance
   iv Total direct manufacturing labour (making the dress) variance
   v Direct manufacturing labour (making the dress) rate variance
   vi Direct manufacturing labour (making the dress) efficiency variance.

b Calculate the following manufacturing overhead variances for the year of 2011 in regards to the Autumn Glow evening gown:
   i Total variable manufacturing overhead variance
   ii Variable manufacturing overhead spending (price) variance
   iii Variable manufacturing overhead efficiency variance
   iv Total spending variance/flexible budget variance for fixed manufacturing overhead
   v Fixed manufacturing spending variance
   vi Fixed manufacturing flexible budget variance
   vii Fixed manufacturing production volume variance.

**STEP 1**

Calculate direct materials polyester cotton variances as follows.

| *Actual results* | | *Flexible budget* |
|---|---|---|
| Actual quantity of inputs × actual price<br>5408 metres (2080 dresses × 2.6 metres) × $25.50 = $137 904 | Actual quantity of inputs × standard price<br>5408 metres × $25.00 = $135 200 | Standard quantity allowed for output × standard price<br>5200 metres (2080 dresses × 2.5 metres) × $25.00 = $130 000 |
| Price variance is $2704 U | | Quantity variance is $5200 U |
| Difference equals the total variance or flexible budget variance, which is $7904 U | | |

**STEP 2**

Calculate direct manufacturing labour (making the dress) variances as follows.

| *Actual results* | | *Flexible budget* |
|---|---|---|
| Actual hours of inputs × actual rate<br>5720 hours (2.75 hours per dress × 2080 dresses) × $26.00 per hour wage rate = $148 720 | Actual hours of inputs × standard rate<br>5720 hours × $25.00 per hour = $143 000 | Standard hours allowed for output × standard rate<br>6240 (2080 dresses × 3 hours per dress) hours × $25.00 per hour = $156 000 |
| Rate variance is $5720 U | | Efficiency variance is $13 000 F |
| Difference equals the total variance or flexible budget variance, which is $7280 F | | |

**STEP 3**

Calculate the variable manufacturing overhead variance as follows.

| *Actual results* | | *Flexible budget* |
|---|---|---|
| Actual hours of inputs × actual rate<br>$180 500 (95 000 hours × $1.90 per hour*) | Actual hours of inputs × standard rate<br>$190 000 (95 000 hours × $2.00 per hour#) | Standard hours allowed for output × standard rate<br>$194 000 (97 000 hours × $2.00 per hour#) |
| Spending variance is $9500 F | | Efficiency variance is $4000 F |
| Difference equals the total variance or static budget variance, which is $13 500 F | | |


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* The actual variable manufacturing overhead rate of $1.90 per direct manufacturing labour hour is found by dividing the $180 500 actual total variable manufacturing overhead by 95 000 actual direct manufacturing labour hours.
# The standard variable manufacturing overhead rate of $2.00 per direct manufacturing labour hour is found by dividing the $200 000 budgeted (standard) total variable manufacturing overhead by the budgeted (standard) direct manufacturing labour hours of 100 000 hours.

Note: If we calculated the variable manufacturing overhead applied under the standard costing system we would have the same result as the flexible budget amount of $194 000. This is because manufacturing overhead is applied based on the standard hours allowed for output.

**STEP 4**

Calculate fixed manufacturing overhead variances as follows.

| *Actual results* | *Budgeted amount* | *Flexible budget* | *Allocated fixed overhead applied* |
|---|---|---|---|
| Actual hours of inputs × actual rate $295 000 | Budgeted amount regardless of output $300 000 | Budgeted amount regardless of output $300 000 | Standard hours allowed for output × standard rate 97 000 × $3.00 per direct labour hour = $291 000 |
| Spending variance is $5000 F | Never calculated | | |
| Difference equals the total variance or flexible budget variance, which is $5000 F | | Production volume variance is $9000 U | |
| Total fixed overhead variance is $4000 U | | | |

Remember that the total of fixed manufacturing overhead for the static budget, flexible budget and actual hours of inputs at the standard rate are all the same as fixed costs and are assumed not to change with the level of activity.

The standard rate for the fixed manufacturing overhead is $3.00 per direct manufacturing labour hour, which is the $300 000 budgeted fixed manufacturing overhead divided by the budgeted direct manufacturing labour hours of 100 000 hours.

# MARK-UP AND CALCULATION OF PRICE

So far in this chapter we have considered the cost of a product or service but the important issue that confronts all businesses is what selling price or quote price they should charge for their product.

## Factors affecting the selling price

The economist or marketing manager would perhaps suggest that the business should charge a selling price that the customer is willing to pay or a price that is competitive in the marketplace. Certainly there are economic factors that affect selling prices. A business must be competitive and it must charge a selling price that customers are willing to pay. In some instances a business must control its costs so it can charge an appropriate selling price according to market forces or economic factors. The accountant will take all these factors into consideration.

## The accountant's perspective using the mark-up concept

From the accountant's perspective it is important to cover costs and to make a profit when selling a product or service. This approach to setting the selling price, is called *cost-based pricing* or *cost-plus pricing*. In this case the selling price is determined using a mark-up. The mark-up is the amount added to the unit cost to determine the selling price and will include a profit margin. This mark-up is usually a percentage of the unit cost of the product.

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Formula 4.2

**Mark-up**

Selling price = Cost + (Mark-up percentage × cost)

The mark-up percentage will be determined considering a number of factors relevant to the business and/or the product or service. These factors include the desired rate of return on investment and competition in the marketplace. The mark-up must be large enough to cover all the business's period costs, such as selling and administration costs. However, it must be remembered that an excessive mark-up may lead customers to avoid the product while an insufficient mark-up may see the business make a loss.

There are various methods that can be used to determine the mark-up, such as cost-plus target rate of return and cost-plus target pricing, but an analysis of these is beyond the scope of this book.

Key Concept 4.9

**Mark-up**

The mark-up is the amount (either in dollars or percentage) added to the unit cost price of a product or service to determine its selling price.

EXAMPLE:

## Example 4.5

Clare Pty Ltd is a maker of wine in the Swan Valley. It has recently produced a new wine, a sauvignon blanc, for the West Australian market. The total costs associated with the product are as follows.

| | |
|---|---|
| Direct materials | $22 500 |
| Direct labour | $15 600 |

The company plans to produce 3000 bottles of this wine.

The total production overheads budgeted for 2010 were $120 000 and it is planned to produce 30 000 bottles of wine during the budgeted year. Overheads are allocated to products on the basis of number of bottles produced, as each wine type requires about the same amount of direct labour and machine time.

The business has considered what its competitors charge, what consumers are willing to pay, its other marketing and administration costs and the desired profit to be made and has set its mark-up as 40% on cost.

**REQUIRED**

Calculate the price to be charged for one bottle of sauvignon blanc wine.

**STEP 1**

Calculate the predetermined overhead application rate for the 2010 year. The formula with the figures would be as follows.

$$\text{Predetermined overhead rate} = \frac{\$120\,000 \text{ total budgeted production overhead cost}}{30\,000 \text{ budgeted bottles of wine to produce}}$$

Therefore, the predetermined overhead rate is $4.00 per bottle.

**STEP 2**

Calculate the total allocated overhead. The total overhead applied to this batch of wine is $4.00 multiplied by 3000 bottles, which gives $12 000.

**STEP 3**

Calculate the total cost, which is as follows.

| | |
|---|---|
| Direct materials | $22 500 |
| Direct labour | $15 600 |
| Allocated production overhead | $12 000 |
| Total production costs | $50 100 |



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**STEP 4**
Calculate the unit cost. Given that 3000 bottles are produced, the unit cost per bottle is $50 100 divided by 3000 bottles, which is $16.70 per bottle.

**STEP 5**
Calculate the selling price. The mark-up is now added to the cost. The formula, with the amounts shown, would therefore be as follows.

$$\text{Selling price} = \$16.70 + (40\% \times \$16.70)$$
$$= \$16.70 + \$6.68$$

This gives a selling price of $23.38 per bottle.

REALITY CHECK 4.3

Goldie Tucker is the managing director of a company that has diversified. It opened up a department store in Busselton about a year ago. Business success has been up and down and so the managing director has requested that an accounting and business consultant, Steve Hawn, look into the problem.

Steve Hawn has prepared a report detailing what he sees as the main issues and what the company must do. His initial comment is that the prices of products in the store seem to be rather high. When Steve questioned Goldie about how their prices were determined she replied that she had little knowledge of this area.

Steve Hawn's report explained that there are many factors that influence the selling price of a product or service. There are internal factors, such as the required return on investment, the profit target for the business, liquidity concerns to consider and the desired market share that the business wants. Steve has outlined that marketing objectives play an important role in setting prices as businesses will set prices to achieve a certain market share or to target a particular market segment.

Steve Hawn has also outlined that there are many external factors that must also be considered. These can include what competitors are charging, the price charged for a similar product or service, what potential customers are willing to pay and also the state of the economy. The report from Steve has described how the *elasticity of demand* must be considered when determining the price of a product or service. This means the extent to which the price of a product or service will affect customer demand. In addition, the report indicates that government regulation can also influence the setting of prices in some cases.

The report emphasises that the cost of buying the products is also very important and Goldie needs to ensure that she is getting the best price possible for her purchases, which may not always have been the case.

## Commentary

A business must cover its costs, otherwise it will not make a profit and its liquidity will be adversely affected. The role of the managerial accountant is very closely linked with the economist, marketer, engineer and many other sections of a business operation. Accounting and finance plays a vital role in the effective management of any business.

To consider the issue of sales prices charged by department stores and what they might consider when determining this price visit the websites of David Jones and Myer and try to find any clues about their pricing policy. Locate their catalogue showing the price of their products.

www.davidjones.com.au

www.myer.com.au

What pricing policy would you develop? Would you use price to differentiate yourself from Myer and David Jones and, if so, how? Discuss.

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## Quotations

The concepts learnt in this chapter are very useful to businesses needing to give quotations to customers or clients. A quotation ('quote') for a product is an estimate given by the producer to the customer before the good or service is provided, on the basis of which the customer will decide whether or not to purchase the product or service. Businesses that need to provide quotes include:

- panelbeaters
- mechanics
- installers of pergolas, blinds and carpets
- dentists (in the case of inserting a crown or tooth implant).

There is no one specific way that businesses will give a quote. Most businesses use a combination of a type of normal costing and mark-up. They would determine the actual cost of direct materials and direct labour (although some estimate of direct materials and labour may be necessary). Overheads would most likely be covered through some predetermined overheads application rate applied to each job quote. Finally a mark-up would be applied once all costs are known or estimated and the final quotation can be given to the customer.

EXAMPLE:

### Example 4.6

Bicton Quality Panel Beaters has been approached by a customer to repair a vehicle damaged in an accident. The actual direct materials required cost will be $800. Direct labour for the job will require three workers each taking two hours to do their part of the job. Each worker is paid at the rate of $65 per hour.

Each year the business determines an overhead rate based on direct labour hours to apply to each job. This covers such costs as electricity, insurance, rent, depreciation of equipment, indirect materials for each job and indirect labour, such as cleaners. The rate for the current year has been determined as $80 per direct labour hour required for each job. The business owner has determined a mark-up, which includes his desired profit margin and covers other costs of marketing and administration. The mark-up is 30% on cost.

**REQUIRED**

Calculate the quote for repairing the vehicle.

**STEP 1**

Calculate the cost of the job. The quote for this job would be determined as follows.

| | |
|---|---|
| Direct materials | $800 |
| Direct labour: 2 hours × 3 workers = 6 hours for the job at $65 per hour | $390 |
| Overheads covered: 6 direct labour hours at $80 per hour | $480 |
| Total costs | $1 670 |

**STEP 2**

Calculate the quote price. The mark-up would be added to give the quote price as follows.

$$\text{Quote price} = \$1670 + (30\% \times \$1670)$$
$$= \$1670 + \$501$$

The quote for the job would be $2171.

## Test your knowledge

1 Distinguish between a direct and indirect cost and give examples to illustrate the difference.

2 Why is the difference between direct and indirect costs important in a costing system?



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3 What factors are likely to affect the classification of a cost as direct or indirect?

4 What is meant by cost behaviour and why is it important to understand cost behaviours in a costing system?

5 Distinguish between fixed costs, variable costs and mixed costs and give examples to explain the difference.

6 Define each of the following and give an example of each for a manufacturing, merchandising and service business: direct materials, direct labour and overheads.

7 What are non-manufacturing costs?

8 Distinguish between a product cost and a period cost.

9 What is cost accounting and how is it useful to the management of a business?

10 Define absorption costing.

11 Describe a job order costing system.

12 What is a predetermined overhead application rate?

13 What is a normal costing system?

14 What is a standard costing system?

15 Explain what is meant by variance analysis.

16 Define the concept of the mark-up.

17 Consider, in a group, the following products and services and make a list of the costs you think would be a part of making the product or providing the service. Determine whether the costs you arrive at are fixed or variable costs, direct or indirect costs and product or period costs.
   a restaurant
   b fast food chicken outlet
   c shoes
   d veggie chips
   e picture framing
   f scented candles.

# Test your understanding

## Topic guide

- Cost classifications: 4.1–4.2
- Calculate unit cost using job cost order system and normal costing (manufacturing): 4.3–4.9
- Calculate unit cost using job cost order system and normal costing (service): 4.10–4.12
- Calculate unit cost using job cost order system and standard costing (service or manufacturing): 4.13–4.18
- Variance analysis: 4.19–4.22
- Calculate unit cost and selling price with mark-up: 4.23–4.25
- Calculating quotes: 4.26–4.28

4.1 For each of the following, indicate whether it is a manufacturing or non-manufacturing cost, direct or indirect cost, fixed or variable cost and product or period cost:
   - clothing factory equipment maintenance
   - wages of vehicle factory assembly workers
   - salaries of marketing staff
   - depreciation of office equipment in a law practice
   - surfboard factory supervisor's salary

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- glue used in the production of chairs
- linen cloth used in the upholstery of a chair
- stationery used in the administration office of an architect
- salary of the business accountant for a chain of jewellery stores
- wages of factory store personnel
- depreciation of factory machinery
- electricity used in a factory brewing beer
- insurance of business delivery vehicles
- varnish paint used in making furniture
- dye used in making t-shirts.

4.2 For each of the following, determine if the cost is a manufacturing or non-manufacturing cost, direct or indirect cost, fixed or variable cost and product or period cost:

- paper used in the making of a textbook
- depreciation of factory machinery
- sales commission paid to sales staff
- wages paid to factory assembly workers
- wages paid to workers making pizzas in a fast food shop
- leather used in making shoes
- salary paid to the business director of a chain of music stores
- wages paid to delivery drivers in a transport company
- wages paid to pizza delivery drivers in a fast food business
- plumbing materials used in a plumbing business
- electricity used in repairing a vehicle in a panelbeating workshop
- oil used by a mechanic in servicing and repairing vehicles
- steel used to make pergolas.

4.3 Vu and Sala own and operate a custom vehicle building business in the suburb of Myaree. They use a job costing system and apply normal costing to absorb all costs into the unit price of a vehicle. Budgeted manufacturing overhead for the current year was $90 000 and the predetermined overhead rate was to be calculated based on direct labour hours, which are estimated to be 4350 hours for the current year.

Job number 56 was built for Teresa Tumble and the cost details recorded on the job cost sheet are as follows.

| | |
|---|---|
| Direct materials | $11 000 |
| Direct labour hours | 600 hours |
| Direct labour rate of pay | $50 per hour |

**Required**

a Calculate the predetermined overhead rate.
b Calculate the total cost of job 56.

4.4 Ian Perkins and Kerin Thorpe own Custom Music Pty Ltd making a small range of high-quality musical instruments, some of which are custom made. They use normal costing and apply job costing procedures to account for customer orders and the making of a batch of musical instruments for sale through retailers. For the 2010 year budgeted factory overhead is as follows.

| | |
|---|---|
| Indirect materials | $78 000 |
| Indirect labour | $64 000 |
| Other overheads | $110 000 |

The business applies overhead on the basis of direct labour hours and for the year of 2010 they estimate that 11 350 direct labour hours will be required to produce


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2000 musical instruments. During 2010 the business receives an order, job 658, from a retail outlet, for 25 musical instruments. The cost details are as follows.

| | |
|---|---|
| Direct materials | $250 000 |
| Direct labour | $70 000 |
| Direct labour hours | 250 hours |

**Required**

a Calculate the predetermined overhead rate.
b Calculate the total cost of job 658.

4.5 Vale Dairy Ltd uses a job costing approach applying normal costing procedures to determine the cost of a batch of its range of seven different types of dairy products made at its Canning Vale plant. Plant overhead is applied to a batch of a product on the basis of machine hours. At the end of 2010 the business has estimated its plant overhead for 2011 as follows.

| | |
|---|---|
| Indirect materials | $83 000 |
| Indirect labour | $67 000 |
| Other plant overhead | $130 000 |

The estimated machine hours required in 2011 is 2150 hours. The business plans to produce over a million bottles of chocolate milk in 2011. Batch number 130 during the year 2011 is the production of 10 000 bottles of its chocolate milk. The direct costs are as follows.

| | |
|---|---|
| Direct materials | $20 000 |
| Direct labour | $3600 |

Batch number 130 took 24 machine hours to produce.

**Required**

a Calculate the predetermined overhead rate.
b Calculate the total cost of batch number 130.
c Calculate the cost of a bottle of chocolate milk for batch 130.

4.6 Environmental Skin Products Pty Ltd makes a range of environmentally friendly skin products for men and women. These include hand lotions, after-shave lotions and soaps. Normal costing is applied to each batch and factory overhead is applied to batches on the basis of machine hours.

At the end of 2010, the estimated factory overhead for 2011 is $154 000 and the estimated machine hours is 2300. It is budgeted that 20 000 products will be made in 2011. During the month of August 2011 two batches were completed and the cost details are as follows.

| Details | Batch 15 (hand lotions) | Batch 16 (after-shave lotion) |
|---|---|---|
| Number produced | 1000 | 1500 |
| Direct materials cost | $15 000 | $32 000 |
| Direct labour hours | 50 hours | 70 hours |
| Direct labour rate | $55.00 per hour | $55.00 per hour |
| Machine hours | 80 hours | 120 hours |

**Required**

a Calculate the predetermined overhead rate.
b Calculate the total cost of batch numbers 15 and 16.
c Calculate the unit cost of the hand lotion and the after-shave lotion.

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4.7 Keely and Wright are partners in a bike manufacturing business in Maddington. They make a range of bikes, including custom-made bikes for mountain-biking enthusiasts. Normal costing is employed, applying factory overhead to each job on the basis of direct labour hours. Factory overhead for 2011 was estimated at $74 000 and direct labour hours at 4000 hours. During the first week of April 2011 three jobs were completed and the cost details are as follows.

| Details | Job number 134 | Job number 135 | Job number 136 |
|---|---|---|---|
| Direct materials cost | $650 | $540 | $720 |
| Direct labour hours | 70 hours | 60 hours | 80 hours |
| Direct labour rate | $63.00 per hour | $63.00 per hour | $63.00 per hour |

**Required**

a Calculate the predetermined overhead rate.
b Calculate the total cost of job numbers 134, 135 and 136.

4.8 Denmark Confectionery Ltd produces a range of confectionery products and determines the cost of each product using job costing techniques and a normal costing system. The business manufactures confectionery involving three departments, the mixing department, cooking department and packaging department. The details concerning each department and its estimated overheads and cost driver for the year ahead of 2011 are as follows as follows.

| Details | Mixing department | Cooking department | Packaging department |
|---|---|---|---|
| Estimated overheads | $35 000 | $56 000 | $25 000 |
| Estimated allocation base (i.e. cost driver) | 600 machine hours | 1000 machine hours | 6300 direct labour hours |

The business makes its products in batches and during the month of July 2011 it made a batch of jelly beans, the details of which are as follows.

| Department | Direct materials | Direct labour | Machine hours |
|---|---|---|---|
| Mixing department: | | 12 hours at $45 per hour | 10 hours |
| Sugar | $2 500 | | |
| Citric acid | $50 | | |
| Gelatine | $80 | | |
| Essence | $60 | | |
| Food colouring | $45 | | |
| Cooking department: | Nil | 25 hours at $55 per hour | 23 hours |
| Packaging department: | | 42 hours at $40 per hour | 18 hours |
| Plastic | $300 | | |
| Paper boxes | $200 | | |

The batch of jelly beans made 1000 packets of jelly beans.

**Required**

a Calculate the predetermined overhead rates for each department.
b Calculate the total cost of the batch of jelly beans.
c Calculate the cost of a packet of jelly beans.

4.9 West Printing Pty Ltd operates in a factory in Welshpool and produces items according to customer demand. These include wedding invitations, birthday invitations, marketing brochures for the corporate sector and a variety of printing needs for sport clubs.


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It accepts both small and large jobs. Some jobs can take up to a week to complete. There are two departments in the firm, the pre-press department and print department. Overhead costs and cost drivers for each of these departments are estimated to be as follows in 2011.

| Department | Estimated overhead costs | Estimated cost drivers |
|---|---|---|
| Pre-press department | $43 000 | 5500 direct labour hours |
| Print department | $67 000 | 2900 machine time |

The workers in the pre-press department are paid $45 per hour and those in the print department are paid $25 per hour. At the end of June 2011 the total cost of incomplete jobs incurred to that time was $5700 on jobs 269, 270 and 271. In the early part of July 2011 job 269 was completed with the costs charged in July 2011 totalling $1000 and the total cost of the job being $2800. Job 270 was completed on 10 July 2011 at a total cost of $4500, of which $2700 was from costs charged before July 2011. The costs charged to job number 271, which was also completed in July 2011, are as follows.

| Department | Direct materials | Direct labour | Machine time |
|---|---|---|---|
| Pre-press department | $90.00 | 18 hours | 2 hours |
| Print department | $1 900.00 | 3 hours | 12 hours |

**Required**

a Calculate the predetermined overhead rates for each department.

b Calculate the total cost of job 271.

4.10 Paul Lennon is the owner of Stylish Hairdressing in Subiaco. He uses a job costing approach applying normal costing to determine the cost of each service that is offered in his salon. He is reviewing the cost of a ladies wash and blow-wave to determine if costs are being covered at the selling price of $40 per customer. The overheads for the business for 2011 are expected to be as follows.

| | |
|---|---|
| Electricity costs incurred | $4 500 |
| Water costs incurred | $1 800 |
| Cleaning costs incurred | $15 000 |
| Repairs and maintenance of equipment | $2 900 |
| Depreciation of equipment | $12 600 |
| Indirect materials used | $35 600 |
| Rent cost incurred | $27 800 |
| Insurance cost incurred | $5 100 |
| Salon manager salary | $67 000 |
| Miscellaneous costs incurred | $16 450 |

Overheads are applied on the basis of direct labour hours and for 2011 the salon will operate with nine hairdressers working seven and a half hours per day, for five days per week, for 52 weeks of the year. Each hairdresser is paid $26.00 per hour. To do a women's wash and blow-wave requires direct materials of $3.50 per customer and it has been estimated that it will take 30 minutes for each women's wash and blow-wave.

**Required**

Calculate the cost of a women's wash and blow-wave.

4.11 The Harrison and Starr legal firm operates in central Fremantle providing commercial law services for the southern districts of Perth. The firm has four partners and employs ten professional lawyers. Of the ten employees, five are considered more senior and experienced than the other five and therefore have a different charge-out rate for services performed.

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Thus there are three lawyer categories: partners, seniors and juniors. A number of lawyers may work on the tasks involved in any one job.

The more experienced a lawyer is, the more overhead they are expected to cover. The overhead is one of the costs included in the charge-out rate for each category of lawyer, the other cost being the direct labour cost of each lawyer. The partners receive a salary of $250 000 each, the seniors a salary of $140 000 each and the juniors a salary of $80 000 each. Each lawyer is expected to charge out 1700 billable hours each year. Clients are charged on billable hours.

For the year 2011 the budgeted total overheads for the firm were estimated at $490 000. This amount was apportioned to the three lawyer categories based on the direct labour total cost of each of these categories. During 2011 the firm worked on a job for Brian Epstein Pty Ltd, which involved one partner charging 30 billable hours, one senior charging 25 billable hours and two juniors who charged a total of 30 hours.

**Required**

a Calculate the charge-out rate for each category of lawyer.
b Calculate the amount to charge Brian Epstein Pty Ltd for the work performed.

4.12 Waugh and Border Pty Ltd is an interstate transport company operating out of Perth. It has two main routes, one to Melbourne via Adelaide and one to Sydney via Adelaide and Canberra. Each driver will do a job going in one direction and then do a different job coming back. All drivers must have two nights rest between jobs and the accommodation for this is paid for by the company and absorbed as a miscellaneous cost.

Each job performed is costed with direct materials – mainly fuel, direct labour, which is the cost of the driver, and overheads. The overheads are to do with maintaining the warehouse and the trucks. For 2011 the budgeted overheads were as follows.

| | |
|---|---|
| Electricity costs incurred | $8 700 |
| Water costs incurred | $2 800 |
| Cleaning costs incurred | $34 000 |
| Repairs and maintenance of equipment | $7 400 |
| Repairs and maintenance of warehouse | $9 600 |
| Depreciation of equipment | $11 000 |
| Depreciation of warehouse | $15 000 |
| Insurance costs incurred | $7 600 |
| Warehouse manager salary | $88 000 |
| Security guards and dogs | $55 000 |
| Miscellaneous costs incurred | $165 000 |

Overheads are charged to a job based on direct labour hours and for 2011 it was estimated that the ten drivers employed would spend 17 000 hours travelling for clients.

Direct materials for each job are the cost of fuel for the truck and food and accommodation for the driver. The direct material of fuel is worked out one month in advance for the forthcoming month. The cost of food and accommodation is determined in advance each year for the forthcoming year. At the end of 2010 the food cost each day in 2011 was determined as $15.00 for breakfast, $15.00 for lunch and $25.00 for dinner. Accommodation for 2011 was $90.00 per night.

The company performed a number of jobs during February 2011, including one for Amber Pty Ltd and one for Lucky Pty Ltd. The fuel price in February is expected to be $1.50 per litre and each truck can hold 150 litres of fuel. This amount of fuel will enable the truck to travel 900 kilometres.

Each driver is paid at the rate of $70.00 per hour for the time they are driving.


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The job for Amber Pty Ltd required the truck to travel 4000 kilometres from Perth to Sydney, which took the driver 5 × 12-hour days. Four nights' accommodation was required for the driver, including four breakfasts, five lunches and four dinner meals.

The job for Lucky Pty Ltd was from Melbourne to Perth. This journey was 3500 kilometres, which took the driver 4.5 × 12-hour days. Four nights' accommodation was required for the driver, including four breakfasts, four lunches and four dinner meals.

**Required**

a Calculate the predetermined overhead rate for 2011.
b Calculate the rate to charge for fuel per kilometre.
c Calculate the total cost of the jobs for Amber Pty Ltd and Lucky Pty Ltd.

4.13 Cotton Shirts Pty Ltd makes a range of ten casual shirt styles in five standard sizes. These shirts are sold through retail shops. In the design phase all costs involved in making the shirts are recorded for future use. The business uses job costing techniques to cost its products and standard costing is applied to absorb all costs.

The business has introduced a new men's t-shirt called the Surf Shirt. They are using standard costing to determine the price of this shirt. As all sizes are charged the same price the costing is done on the average men's size. The standard costs for producing this product are as follows:

- Direct materials:
  - the price of cotton is $7 per metre and the material allowed is 2 metres
  - the price of a button is $0.50 and three buttons are allowed per t-shirt.
- Direct labour:
  - the wage rate is $30 per hour and 30 minutes is allowed to make one t-shirt.

The factory overhead cost, which includes the cost of designing all the shirts and indirect manufacturing costs (such as thread, electricity and insurance) are estimated to be $160 000 per year for the whole factory for the year 2011. Overheads are allocated to each batch of shirts based on a predetermined overhead application rate using direct labour hours as the cost driver. It is expected that in 2011 the direct labour hours total will be 18 000 hours. It is expected that the company will make a batch of 5000 of the new Surf Shirts in May 2011.

**Required**

Calculate the standard cost of making a batch of 5000 Surf Shirts and the cost of making one Surf Shirt.

4.14 Laver Ceramics is a medium-sized business making and selling ceramics from a factory and sales outlet in Canning Vale. The business absorbs all costs using standard costing techniques under a job costing system.

To make a batch of incense burners the following standard costs have been determined:

- Direct materials:
  - 500 kilos of clay at a cost of $8.00 per kilo
  - 300 litres of glaze at a cost of $2.00 per litre
  - 80 litres of paint at $5.00 per litre
  - 200 litres of sealant at $3.50 per litre
- Direct labour:
  - 200 direct labours hours at a cost of $30.00 per hour.

The business expects to make three batches of incense burner and each batch will make 2000 pots. The factory overhead is estimated at the start of the year and for the year ended 31 December 2011 the total overhead was estimated to be $79 000. The overhead is allocated to a batch based on direct labour hours, which are estimated to be 11 520 hours.

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**Required**

Calculate the standard cost of making a batch of incense burners and the cost of making one incense burner.

4.15 Callan Pty Ltd is a medium-sized business producing boutique leather goods for the Australian market. The products are made in the Kimberley region of North Western Australia. These goods are made from crocodile skins. The business absorbs all costs using standard costing techniques under a job costing system.

At present the business makes one style of handbag in two sizes: small and large. The products are made in batches of 400 at a time. To make the small and large bags, the following standard costs have been determined.

| Product | Direct materials to make one item | Direct labour hours to make a batch of 400 items |
|---|---|---|
| Small leather handbag | Crocodile skin: See below for more details<br>Lining: half a metre at $5.00 per metre<br>Studs: six at 30 cents per stud<br>Zip: one at $3.00 per zip<br>Rings: four at 30 cents per ring<br>Latch: one at 80 cents per latch | 300 hours |
| Large leather handbag | Crocodile skin: See below for more details<br>Lining: 1 metre at $5.00 per metre<br>Studs: 12 at 30 cents per stud<br>Zip: one at $3.00 per zip<br>Rings: four at 40 cents per ring<br>Latch: one at $1.00 per latch | 400 hours |

The overheads to run the leather goods factory are expected to total $200 000 in 2011 and the overhead is allocated to batches on the basis of direct labour hours. The direct labour hourly pay rate is $26.00 per hour and it is expected that the budgeted direct labour hours in 2011 will be 5400 hours.

The cost of running the crocodile farm to grow the crocodiles for the leather goods and to cut the leather ready for making the handbags is as follows:

- Farming:
  - direct materials $100 per crocodile
  - direct labour $80 per crocodile
- Slaughter, drying and cutting the skins:
  - direct materials $50 per crocodile
  - direct labour $60 per crocodile.

The overheads to operate the crocodile farm part of the business are expected to be $200 000 in 2011 and overhead is allocated to each crocodile that is farmed and goes to the slaughterhouse. In 2011, 5000 crocodiles are expected to be harvested.

The overhead for the slaughter, drying and cutting section of the business are expected to be $90 000 and overhead is allocated to each crocodile on the basis of each skin. In 2011, 5000 skins are expected to be produced.

Of the 5000 skins produced 3000 will be used to make the small handbags and 2000 to make the large handbags. One skin should yield eight large handbags or 16 small handbags.

**Required**

Calculate the standard cost of making one small handbag and one large handbag.

4.16 Polar Ice-creams Ltd manufactures three different quality styles of ice-creams and each comes in four different flavours. The quality types are connoisseur, supreme and standard.



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The business is a boutique operation catering for a small market in the south-west of Western Australia. The business uses a job costing approach applying standard costs to determine the cost of its various products. All costs are absorbed into the cost of a product. The business estimates its costs at the end of each year for the following year. For the year ended 30 June 2011 the costs were estimated to be as follows.

| | |
|---|---|
| Factory building depreciation | $18 000 |
| Direct materials: Stage 1 Department | $2 010 000 |
| Direct materials: Stage 2 Department | $900 000 |
| Direct materials: Stage 3 Department | $360 000 |
| Electricity incurred (75% factory, 25% office) | $15 000 |
| Factory office costs | $35 000 |
| Company administration | $430 000 |
| Marketing and sales | $89 000 |
| Cleaning costs incurred (75% factory, 25% office) | $26 000 |
| Repairs and maintenance of factory machinery and equipment | $12 000 |
| Repairs and maintenance of factory | $9 500 |
| Depreciation of office equipment | $36 000 |
| Direct labour – Stage 1 Department | $450 000 |
| Direct labour – Stage 2 Department | $360 000 |
| Direct labour – Stage 3 Department | $300 000 |
| Insurance costs incurred (75% factory, 25% office) | $13 500 |
| Factory manager salary | $110 000 |
| Factory security guards and dogs | $54 000 |
| Miscellaneous factory costs incurred | $77 000 |
| Finance costs (75% factory, 25% office) | $19 400 |

Overhead is applied to each batch of ice-cream according to machine time. For the year ended 30 June 2011 the total machine hours are expected to be 3500 hours. During this time they expect to make 1.6 million litres of ice-cream in 2-litre containers; that is, 800 000 2-litre tubs of ice-cream. All manufacturing overhead costs are absorbed through the predetermined overhead rate. Non-manufacturing costs are covered through the mark-up. Overhead is allocated to each department as follows:

- Stage 1 Department: 30%
- Stage 2 Department: 50%
- Stage 3 Department: 20%.

The machinery in each department makes the following quantities of tubs of ice cream per hour:

- Stage 1 Department: 425 per hour
- Stage 2 Department: 500 per hour
- Stage 3 Department: 350 per hour.

The business will make equal amounts of the three different quality types of ice-cream during a financial year. The flavours of the ice-cream make no difference to the cost but the quality does. Each department allocates its costs as follows.

| | |
|---|---|
| Direct materials | 40% connoisseur, 35% supreme and 25% standard |
| Direct labour | 45% connoisseur, 30% supreme and 25% standard |
| Overhead | 40% connoisseur, 32% supreme and 28% standard |

During the year the business will make each type of ice-cream five times.

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To make the supreme ice-cream the following are the standard direct materials and direct labour requirements for the year ended 30 June 2001:

- Direct materials: Stage 1 Department: 1 050 000 litres with 2 litres required per tub
- Direct materials: Stage 2 Department: 1 000 000 grams with 2 grams required per tub
- Direct materials: Stage 3 Department: 256 000 plastic tubs and one is required per tub
- Direct labour: Stage 1 Department: 5400 hours to make 278 tubs per hour
- Direct labour: Stage 2 Department: 4909 hours to make 314 tubs per hour
- Direct labour: Stage 3 Department: 4500 hour to make 100 tubs per hour.

**Required**

a Calculate the predetermined overhead rate to apply for each department.
b Calculate the direct materials total cost incurred in making a tub of supreme quality ice-cream.
c Calculate the direct labour total cost incurred in making a tub of supreme quality ice-cream.
d Calculate the overhead cost per tub.
e Calculate the standard cost of making one two-litre tub of supreme quality ice-cream.

4.17 Polly Plastics Pty Ltd is a maker of a range of plastic home products. It uses standard costing to assess the performance of its operations. One of its products is plastic outdoor deck chairs, which are made in batches of 1000. The standard costs related to this product are:

| | |
|---|---|
| Direct materials (plastic) | One square metre of plastic per outdoor deck chair at $10.00 per square metre |
| Direct manufacturing labour | Half an hour at $18.00 per hour |

During March 2011 the firm made a batch of 1000 plastic outdoor deck chairs and the cost details for direct materials and direct labour were as follows:

- Direct materials: 950 square metres of plastic at $11.00 per square metre at a total cost of $10 450
- Direct manufacturing labour: 550 hours at $18.30 per hour costing $10 065.

**Required**

Calculate the following variances for March in relation to the plastic outdoor deck chairs indicating if the variance is favourable or unfavourable:

a direct materials price variance for the item of material
b direct materials quantity variance for the item of material
c direct labour rate variance
d direct labour efficiency variance.

4.18 Classy Perfumes Pty Ltd is a maker of Aussie perfumes. It uses standard costing to review its performance. During June 2011 it made a batch of 5000 250-millilitre bottles of its spray perfume called Eau Lavender. The details relating to the production of this batch with regards to the direct materials and direct labour were as follows.

| **Direct materials used** | |
|---|---|
| 650 litres of distilled water at $30.00 per litre | $19 500 |
| 380 litres of alcohol at $40.00 per litre | $15 200 |
| 260 litres of lavender essential oil at $60.00 per litre | $15 600 |
| **Direct labour used** | |
| 300 hours at $23.00 per hour | $6900 |

The standard cost to make a bottle of Eau Lavender has been estimated at the end of 2010 to be:

- Direct materials per 250-millilitre bottle as follows.

| | |
|---|---|
| 120-millilitres of distilled water at $29.00 per litre | $3.48 |
| 80-millilitres of alcohol at $41.00 per litre | $3.28 |
| 50-millilitres of lavender essential oil at $61.00 per litre | $3.05 |


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- Direct labour per 250-millilitre bottle: 16 bottles can be produced per hour of direct labour at $23.00 per hour.

**Required**

Calculate the following variances for June in relation to the Eau Lavender indicating if the variance is favourable or unfavourable:

a direct materials price variance for each item of ingredients
b direct materials quantity variance for each item of ingredients
c direct labour rate variance
d direct labour efficiency variance.

4.19 Delicious Desserts is a partnership run by Bron Hayden and Jill Hussey that makes a range of desserts sold through retail outlets. It uses standard costing to cost its products and review performance. All overhead is applied on a direct labour hours basis. The details regarding production for the month of September 2010 were as follows.

| | |
|---|---|
| Fixed manufacturing overhead budgeted | $60 000 |
| Fixed manufacturing overhead actually incurred | $70 000 |
| Standard variable manufacturing overhead rate | $135.00 per direct labour hour |
| Actual production output | 5000 desserts |
| Actual variable overhead | $80 000 |
| Budgeted production output | 5500 desserts |
| Actual direct labour hours | 600 hours |
| Standard quantity of direct labour per dessert | 7.5 minutes per dessert |

**Required**

Calculate the following variances indicating if they are favourable or unfavourable:

a fixed overhead spending variance
b fixed overhead production volume variance
c variable overhead spending variance
d variable overhead efficiency variance.

4.20 Stone and Jagger Pty Ltd is a company that makes a range of entertainment units sold through retail outlets. It uses standard costing to cost its products and review performance. All overhead is applied based on machine hours. The following are the details of the standard costs of production during the month of November 2011.

| | |
|---|---|
| Budgeted production output | 410 entertainment units per month |
| Fixed manufacturing overhead budgeted | $40 000 for the month |
| Standard variable manufacturing overhead rate | $50.00 per machine hour |
| Standard quantity of machine hours | 8 hours per entertainment unit |
| Budgeted machine hours | 3280 hours for the month |

The actual results for November 2011 were as follows.

| | |
|---|---|
| Actual production output | 420 entertainment units for the month |
| Fixed manufacturing overhead actually incurred | $50 000 for the month |
| Actual variable overhead | $165 000 for the month |
| Actual direct labour hours | 3200 hours for the month |
| Actual machine hours | 3465 hours for the month |

**Required**

Calculate the following variances indicating if they are favourable or unfavourable:

a fixed overhead spending variance
b fixed overhead production volume variance

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c variable overhead spending variance
d variable overhead efficiency variance.

4.21 Craftwood Products Pty Ltd is reviewing its performance in the manufacturing of wooden craft products. It uses a standard costing system and reviews its variances at the end of each year. During 2011 it plans to manufacture 3000 craftwood picture frames. The following are the standard costs for 2011 relating to the manufacture of one craftwood picture frame.

| | |
|---|---|
| Direct materials: 30 square centimetres per picture frame at 30 cents per square centimetre | $9.00 |
| Direct labour: 16 minutes per picture frame at $22.00 per hour | $5.50 |
| Variable manufacturing overhead: 28 minutes per picture frame at $8.57 per machine hour (applied rate per machine hour) | $4.00 |
| Fixed manufacturing overhead: 28 minutes per picture frame at $9.64 per machine hour (applied rate per machine hour) | $4.50 |
| Planned machine hours | 1400 |
| Budgeted fixed manufacturing overhead | $13 496 |
| Budgeted variable manufacturing overhead | $11 998 |

During the year 2011 the following actually occurred.

| | |
|---|---|
| Actual production | 3200 craftwood picture frames |
| Direct materials: 31 square centimetres per picture frame at 33 cents per square centimetre | $9.90 |
| Direct labour: 15 minutes per picture frame at $24.00 per hour | $6.00 |
| Variable manufacturing overhead: 30 minutes per picture frame at $8.30 per machine hour | $4.15 |
| Fixed manufacturing overhead: 30 minutes per picture frame at $8.80 per machine hour | $4.40 |
| Actual machine hours | 1600 |
| Actual fixed manufacturing overhead | $14 080 |
| Actual variable manufacturing overhead | $13 280 |

**Required**
Calculate the following variances for the year 2011 in relation to craftwood picture frames:
a direct materials price variance
b direct materials quantity variance
c direct manufacturing labour rate variance
d direct manufacturing labour efficiency variance
e variable manufacturing overhead spending (price) variance
f variable manufacturing overhead efficiency variance
g fixed manufacturing spending variance
h fixed manufacturing production volume variance.

4.22 Becker Sports Equipment is a medium-sized business making and selling sports equipment from a factory and sales outlet in Midland. The business absorbs all costs using standard costing techniques under a job costing system. To make a batch of its gym foam mats the following standard costs have been determined for 2011:

- Direct materials: 3 $m^2$ foam mat at a cost of $200 per $m^2$
- Direct labour: two direct labour hours at a cost of $21.00 per hour
- Machine time: two hours of machine time is required to make each foam mat

The business expects to make a batch of 2500 foam mats in May 2011. The total factory overhead for the year ended 31 December 2011 was estimated to be $109 750, of which $63 750 was fixed overhead and $46 000 was variable overhead based on production


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of 34 000 foam mats for the year. The overheads are allocated to a batch based on machine hours, which are estimated to total 51 000 hours for the year.

At the end of 2011 the business reviewed its performance. The actual results for the production of a batch of gym foam mats in May 2011 were as follows.

| | |
|---|---|
| Actual production | 2300 gym foam mats |
| Actual direct materials used: 7200 $m^2$ of foam mats at a cost of $210 per $m^2$ | $1 512 000 |
| Direct labour used: 4400 direct labour hours at a cost of $22.00 per hour | $96 800 |

The actual result regarding the overheads for the year ended 31 December 2011 was as follows.

| | |
|---|---|
| Actual total overhead | $98 000 |
| Actual fixed overhead incurred | $60 000 |
| Actual variable overhead incurred | $38 000 |
| Actual production of various gym foam mats | 27 000 |
| Actual machine hours used | 50 000 |

**Required**

a Calculate the standard cost of making a batch of gym foam mats and the cost of making one gym foam mat.
b Calculate the standard fixed and variable overhead costs for the year ended 31 December 2011.
c Calculate the following variances regarding the production of the gym foam mats batch in May 2011:
   i direct materials price variance
   ii direct materials quantity variance
   iii direct manufacturing labour rate variance
   iv direct manufacturing labour efficiency variance.
d Calculate the following variances regarding the overheads for the year ended 31 December 2011:
   i variable manufacturing overhead spending (price) variance
   ii variable manufacturing overhead efficiency variance
   iii fixed manufacturing spending variance
   iv fixed manufacturing production volume variance.

4.23 Wagin Pty Ltd is a manufacturer of camping gear in Osborne Park. It has recently produced a new tent for use in harsh outback conditions. The direct total costs associated with the product are direct materials $463 000 and direct labour hours of 370 hours at a total cost of $23 560. The company plans to produce 500 of this type of outback tent, which will require 160 machine hours.

The total production overheads budgeted for 2011 at the end of the previous year were $430 000 and it was planned to produce 65 000 different items of camping products during the budgeted year. The business makes ten different types of camping items. Overheads are allocated to products on the basis of machine time and 4570 machine hours were budgeted for in 2011. The business has set its mark-up as 35% on cost.

**Required**

a Calculate the predetermined overhead rate.
b Calculate the cost of one new outback tent.
c Calculate the price to be charged for one new outback tent.
d What factors do you think the company might have considered in deciding on the mark-up percentage?

4.24 Bradman Billiard Tables Pty Ltd makes and sells billiard tables at its factory in Kwinana. It makes two types of billiard tables: the Model Basic and the Model Luxury. The business

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uses job costing to determine the cost of each type of billiard table and its two models are made in batches each month. The business makes the billiard tables as required depending on customer demand. The business expects customer demand in 2011 for the two models to be as follows: Model Basic 70% and Model Luxury 30%. In total the business expects to sell 1500 billiard tables in 2011.

To make the billiard tables the business has divided its manufacturing operations into two parts, the cutting and assembly department and the finishing department. For the year 2011 the business has estimated the following overheads and cost drivers for each of the two manufacturing departments, given the production output described above.

| Department | Estimated overheads | Estimated allocation base |
|---|---|---|
| Cutting and assembly department | $460 000 | 7200 machine hours being 70% on the Model Basic and 30% on the Model Luxury |
| Finishing department | $250 000 | 3500 direct labour hours being 50% on the Model Basic and 50% on the Model Luxury |

The direct materials and direct labour required by these two departments for the production output outlined above is as follows.

| Department | Direct materials | Direct labour | Direct labour rate |
|---|---|---|---|
| Cutting and assembly department | $890 000<br>60% of the cost is for the Model Basic and 40% for the Model Luxury | 1400 hours<br>50% of the hours is for the Model Basic and 50% is for the Model Luxury | $30.00 per hour |
| Finishing department | $370 000<br>60% of the cost is for the Model Basic and 40% for the Model Luxury | 3500 hours<br>50% of the hours is for the Model Basic and 50% is for the Model Luxury | $35.00 per hour |

The business has considered its desired rate of return on investment and also what its competitors are charging and has set its mark-up as follows.

| | |
|---|---|
| Model Basic | 25% on cost |
| Model Luxury | 30% on cost |

**Required**

a Calculate the predetermined overhead rate for the cutting and assembly department and the finishing department.
b Calculate the cost of making the Model Basic and Model Luxury.
c Calculate the selling price of each model.

4.25 Kemp and Matera Public Accountants is reviewing the cost of preparing a personal income tax return for its clients. It categorises these personal tax returns as basic, standard and difficult. There is some variation in this as, depending on the tax aspects involved, one of two categories of staff members may become involved. The only factor that varies is the time taken to complete the tax return and this factor is accounted for in the direct professional labour rates charged to the client. The firm needs an hourly rate to inform clients of the cost and also a likely total price for the client before work begins.

The firm employs five staff members (called associates) in addition to the two professional partners, Kemp and Matera. The five associates are paid $120 000 per year and the partners are paid $270 000 per year. Each of the seven staff is expected to charge out 1800 hours to clients each year.

Any materials required for a job are considered as part of the overhead costs. The business overheads estimated for the year ended 30 June 2011 are as follows.


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| | |
|---|---|
| Salaries of secretarial staff | $90 000 |
| Electricity | $5 700 |
| Insurance | $3 700 |
| Rent of office space | $40 000 |
| Office supplies | $18 500 |
| Depreciation of office equipment | $19 500 |
| Repairs to equipment | $2 700 |
| Professional requirements costs | $10 000 |
| Miscellaneous costs | $15 500 |

Overheads are charged to a job on the basis of direct labour hours and this is incorporated into the charge-out rate for each of the two categories of professional staff: partners and associates.

The firm calculates an internal charge-out rate for the two categories: partners and associates. This is determined on the basis of covering all overheads equally across all seven staff. Each staff member category must, however, recoup their salary in the charge-out rate but not the bonuses paid.

To complete each of the three types of tax returns will usually require the following mix of professional staff and estimated time to complete.

| Type | Partners' time | Associates' time | Total hours to complete the tax return |
|---|---|---|---|
| Basic personal tax returns | 20% | 80% | 2.5 |
| Standard personal tax returns | 40% | 60% | 5 |
| Difficult personal tax returns | 60% | 40% | 10 |

The professional staff, both associates and partners, may receive bonuses in addition to their basic salary. These bonuses are based on the work they initiate and the complexity of the work. These are paid at the end of each financial year. The bonuses are accounted for in a mark-up, which is charged on each job. The mark-up is 20% on the cost of each job. The cost of each job is based on the charge-out rate.

**Required**

a Calculate the charge-out rate for a partner and an associate.
b Calculate the cost of preparing each of the three types of personal tax returns.
c Calculate the standard hourly rate to charge clients for each of the three types of personal tax returns and the standard total price charged to each client for each of these three categories.

4.26 Scarborough Luxury Vehicle Repairs has been approached by a customer to repair a vehicle damaged in an accident. The 1950s vehicle will require engine repair and panel beating to the body of the car. The actual direct materials required cost would be $1700. Direct labour for the job will require three workers each taking five hours to do their part of the job. Each worker is paid at the rate of $62 per hour.

Each year the business determines an overhead rate based on direct labour hours to apply to each job. This covers such costs as electricity, insurance, rent, depreciation of equipment, indirect materials for each job and indirect labour, such as cleaners. The rate for the current year has been determined as $75 per direct labour hour required for each job. The business owner has determined a mark-up, which covers his desired profit margin and covers other costs of marketing and administration. The mark-up is 25% on cost.

**Required**

Calculate the quote for repairing the vehicle for the customer.

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4.27 Rockingham Patios is owned by Nicole Depp and John Kidman and they make patios to customer demand in the southern suburbs of Perth. Mr Ben Hur has requested a quote to construct a patio at his house in Safety Bay. Although the patios are constructed on-site at the customer's home, much of the patio is prefabricated material that is prepared in the factory and cut to size before being taken to the house to be constructed.

The business has three predetermined overhead rates to cover the three stages of preparing and constructing a patio. These are:

- prefabrication department: $23.00 per machine hour
- cutting department: $18.00 per direct labour hour
- on-site construction department: $3.00 per direct labour hour.

A mark-up of 28% on cost is charged on all jobs. The details of the job for Mr Ben Hur are as follows.

| Department | Direct materials | Direct labour | Machine time |
|---|---|---|---|
| Prefabrication department | $6000 | 4 hours at $45.00 per hour | 10 hours |
| Cutting department | $300 | 8 hours at $55.00 per hour | 3 hours |
| On-site construction department | $500 | 30 hours at $61.00 per hour | Nil |

**Required**

Calculate the quote for making and erecting the patio for the customer.

4.28 Best West Air-Conditioning Pty Ltd is a maker and installer of household air-conditioning, which is installed to customer order and specification. Sales staff visits the customer's premises to measure up for the air-conditioner, which is made at a factory in Osborne Park. All parts required for the basic installation are also made at the factory before being installed at the customer's premises. Some other standard parts required for installation are purchased from an approved contractor and kept in store for use.

The business uses a job costing approach to determining the cost of each model of air-conditioner and its installation for a customer. It also applies standard costing for the manufacture of the air-conditioner and the basic installation package, but uses normal costing for the final installation phase.

The business operates in two parts, a manufacturing department (which has two sections, the air-conditioners section and other parts section) and the installation department. The manufacturing department and its sections make a number of predetermined types of air-conditioners and other basic parts necessary to install and operate the air-conditioners. The installation department visits the customer's premises to measure up for the air-conditioner and then returns to install the item. The installation department may requisition installation parts kept in stock.

The business estimates its required direct materials, direct labour and overheads at the end of each year for the following year so that it can cost out the making of the air-conditioners and installation and determine a price to charge customers.

The business is reviewing its costs for one type of air-conditioner the Model A67, which is the standard installation for a four-bedroom, two-bathroom plus games room-sized home. This review is being done at the end of 2010 when the business estimates its overheads for 2011. The model A67 is expected to be 40% of business production in 2011.

Overheads are divided into three categories, manufacturing air-conditioners, manufacturing other parts and installation. The total overheads for the three sections for 2011 are estimated to be:

- manufacturing department air-conditioners: $530 000
- manufacturing department other parts: $257 000
- installation department: $210 000.

These overheads for the manufacturing department sections will be allocated to a job based on machine hours and the installation department overheads will be allocated based on direct labour hours. The estimates of these cost drivers for 2011 are:



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- manufacturing department air-conditioners: 5000 machine hours
- manufacturing department other parts: 3000 machine hours
- installation department: 30 000 direct labour hours.

The A67 Model will take 35% of the machine hours planned for 2011. The A67 model will require 30% of direct labour time in 2011 as it is a basic model only. The direct materials required by the three departments for Model A67 for 2011 to meet customer demand are expected to be:

- manufacturing department air-conditioning section: $1 958 000
- manufacturing department other parts section: $1 120 000
- installation department: $190 000.

The total direct labour for each department and section is estimated to be:

- manufacturing department air-conditioners section: 9750 hours at $30.00 per hour
- manufacturing department other parts section: 2470 hours at $35.00 per hour
- installation department: 30 000 hours at $35.00 per hour.

The business expects to make and install 2500 air-conditioners in 2011. It determines a cost for the basic air-conditioner Model A67 and a cost for the other parts, called the 'Basic installation package', necessary for Model A67.

The Basic installation package is to cover the costs of the installation department in installing air-conditioners. These costs include a component of direct materials, direct labour and overheads. The installation department, however, charges each customer separately for the direct materials it requires, direct labour needed to install the air-conditioner and the overheads for each job. The business has determined a mark-up of 25% on cost on the Model A67.

Some special parts and direct labour costs are often required when installing an air-conditioner and these costs are in addition to the Basic installation package.

During 2011 the business installed an air-conditioner for Holly Spears and the details are as follows:

- one Model A67 air-conditioner
- one Model A67 other parts package
- other special parts costing $250 required by the installation department
- ten hours of direct labour extra time required by the installation department.

**Required**

a Calculate the cost of making one unit of the Model A67 basic air-conditioner.
b Calculate the cost of making one Basic installation package for the Model A67 air-conditioner.
c Calculate the quote for the job of installing a Model A67 air-conditioner for Holly Spears.

# Investigation

Choose a product or service and then search on the internet for a business that makes this product or service. Using this business website, research as much as you can about the costs involved in this product or service and answer the questions below.

Alternatively, carry out a survey of a number of local businesses to find, for each of them, the information listed below. Produce a report comparing these businesses from the point of view of the aspects of their costing that you have researched.

- What are the costs?
- What type of business is it – manufacturing, merchandising or service?
- Do you think its costs would be mainly direct materials, direct labour or overheads? Explain your reasons.
- Do you think its costs would be mainly fixed or variable? Explain your reasons.
- Do you think the mark-up for this product or service would be large or small? Explain your reasons.

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- What factor do you think would have had the biggest influence in the setting of the selling price of this product or service (e.g. market forces, consumer demand or competitors)?

Report your findings to your class.

## Essay

> 'Cost accounting concepts and job order costing processes are not useful to apply in a small business as they are too complex, too time consuming and costly and do not provide relevant information no matter whether it is in a manufacturing, merchandising or service industry.'

Discuss this statement, providing in your answer:

- an outline of the importance of cost accounting
- an outline of how cost accounting is useful in all types of industries
- an explanation of the job cost order system
- a description of the approaches to costing (i.e. actual costing, normal costing, absorption costing and standard costing) as applied to a job cost order system
- an explanation of the basic cost accounting concepts (i.e. direct and indirect costs, fixed and variable costs, product and period costs) and why these are important to a small business.

## Ethics case study

Digital Electronics Ltd manufactures specialised scientific instruments to customer specifications. It has contracts with government departments, which are on a cost-plus basis. Under this arrangement, the costs are defined as those costs that can be directly traced to the product plus overheads based on a predetermined overhead rate using an appropriate application base. Digital's other customers are in the non-government sector and are on a fixed-cost basis.

During February 2011, the company worked on two main contracts – one with the defence department and the other with Sarich Corporation. The two contracts were quite different, with the contract for the defence department requiring a large number of direct labour hours, while the contract for Sarich was the opposite.

The financial controller of the company has recommended to the general manager of Digital that the most appropriate base for the allocation of overheads is machine hours. The general manager, however, has decided in favour of using direct labour hours to allocate the overheads to both contracts.

### Discuss

a Why do you think the general manager has chosen direct labour hours for the allocation of overheads instead of the machine hours recommended by the financial controller?

b What are the ethical issues involved in this case? Should the financial controller take any further action?



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# Chapter 5

# COST–VOLUME–PROFIT ANALYSIS AND RELEVANT COSTING

## What You Will Learn

After studying this chapter you should be able to:

1 Identify and explain the meaning of variable, fixed and mixed costs
2 Identity and explain the meaning of the break-even point and contribution margin
3 Calculate the contribution margin and break-even point
4 Calculate and explain the safety margin of a product
5 Interpret the results of CVP analysis and understand the effect of various input changes
6 Calculate and interpret decisions using the CVP analysis equation and the contribution margin approach
7 Explain the effects on profit of changes to selling price, volume of production or expenses
8 Use CVP techniques to evaluate and choose between alternative business options

## Introduction

Financial accounting reports the total sales, costs of sales and expenses. This information is useful for external users – such as investors, lenders and suppliers – to make decisions about a company. Internally business owners and managers need detailed product information and careful analysis to make decisions about their business (e.g. whether to buy in or manufacture a product, what volume to produce and what the selling price should be). To do this, they need to calculate the various costs that go into making a product or providing a service. Although the information is based on historical data, decisions also require estimates to be made so that future products and processes can be costed. This evaluation and decision-making process is assisted by the tools of cost–volume–profit (CVP) and differential analysis.

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# MANAGEMENT DECISION-MAKING

Cost–volume–profit (CVP) analysis examines the interrelationships between cost, volume and profit at differing activity levels. Differential analysis is a technique that enables an accountant to evaluate the differences in income and expenses between different alternatives. These tools will assist managers to make informed decisions when evaluating short-term alternatives and plans.

CVP analysis can assist management in making decisions on such short-term issues as:

- what the selling price of a product should be
- how profit changes if any of the variable or the fixed costs change
- how profit changes if the selling price changes
- at what volume of production a business will *break even* (i.e. cover all fixed and variable costs)
- what volume of production a business needs to achieve to make a profit of a set amount
- whether a new product line be introduced
- what the most profitable sales mix is
- what the effect of increasing advertising costs is and whether it will be successful
- what the consequences of producing and selling of two alternative products would be.

Differential analysis can assist management to make short-term decisions, such as:

- whether a business should buy in or produce a particular product or service in-house
- whether a business should take on a special order
- whether a business should stop producing a product line or close down an unprofitable department
- which products to produce within the constraints of limited resource inputs.

To understand the tool of CVP we must first review the concept of cost behaviour (introduced in Chapter 3).

## Cost behaviour

Total costs of production usually fall into two distinct groups: *variable costs* and *fixed costs*, although some costs have elements of both categories and can be called *mixed costs*.

### Variable costs

Costs that change in proportion to the level of production are variable costs. This includes the costs of materials used in the manufacturing process to make each unit, the wages of factory workers per unit and the amount of energy used in production (such as oil, gas or electricity). Other costs relating to making and selling a product include sales commission and transport charges. Some variable costs can be easily identified as related to the production of a certain item from the factory, while others may be more difficult to allocate (such as electricity), unless there are specific meters on relevant machines. Some of the electricity usage may be fixed (e.g. factory lighting) while most will vary according to the volume of production.

Total variable costs rise as the number of units in production increases. For example, if the variable costs are 50 cents per unit, the total variable cost could be shown on a graph, such as in Figure 5.1.

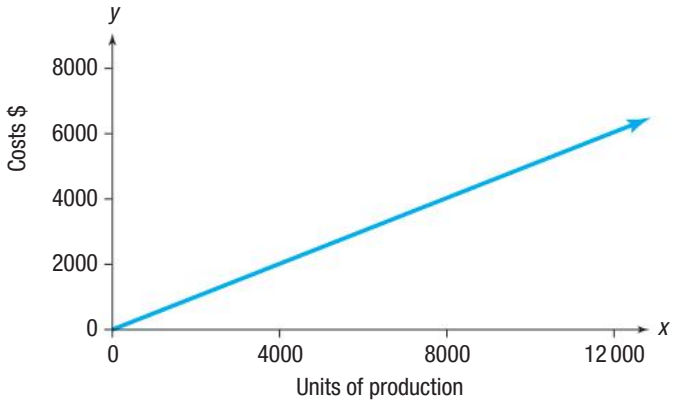



Figure 5.1 Total variable costs rise as the number of units of production increases


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## Fixed costs

Costs that do not change with the level of business activity are called fixed costs. For example, the rent of a shop is usually agreed on between the landlord and tenant and it is not related to the volume or value of sales a business makes. In a manufacturing business the cost of depreciation is based on the expected life of the machine, not on how many units are produced. Other examples of fixed costs include insurance, licences on vehicles, wages of supervisory staff and overheads such as administration and management salaries. However, there is a range limit to some fixed costs. For example, each machine can only produce a maximum number of units. If the volume of production increases beyond that maximum limit an additional machine will be required, which would increase the total fixed costs.

If a factory has a maximum capacity of 10 000 units, but it is only producing 8000 units, any order up to an additional 2000 units would not increase the fixed costs. However, if the organisation received orders to produce an additional 3000 units it would need to buy additional machinery to complete the order, which would involve an increase in fixed costs.

Fixed costs can be plotted on a graph, in which they are represented by a horizontal line, since the costs will not increase over a certain range of outputs. In the example shown in Figure 5.2, the fixed costs of a business are $6000.

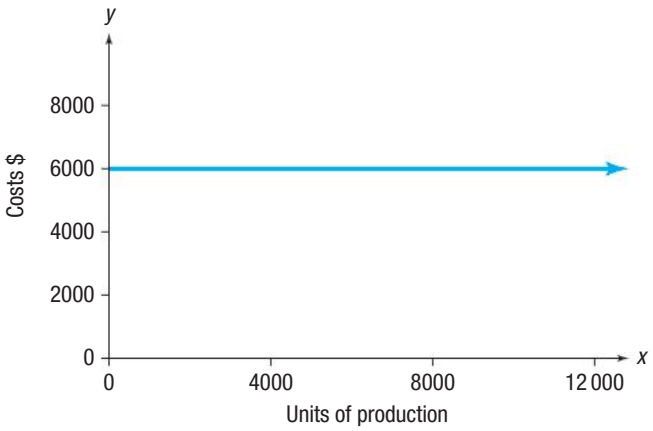



Figure 5.2 Fixed costs are represented by a horizontal line

## Mixed costs

Some costs are a mixture of both fixed and variable costs and the cost accountant will need to try and apportion them between the two types of costs. This will involve an element of estimation, which means that CVP analysis is not an exact calculation.

Mixed costs could include wages where the fixed element is the normal weekly wages of production staff and the variable component is any overtime required.

Electricity to light and air-condition the business premises is relatively fixed, but increased production would increase electricity used by production machines, which is a variable cost.

To calculate the total cost of production, both the fixed and variable costs need to be added together. The two previous graphs can be combined as shown in Figure 5.3.

If the factory produced no units it would still incur the fixed costs of $6000 but it would have nothing to sell. At 8000 units of production the total cost of production is the fixed costs plus the variable costs. These costs can now be expressed on a 'per unit' basis as follows:

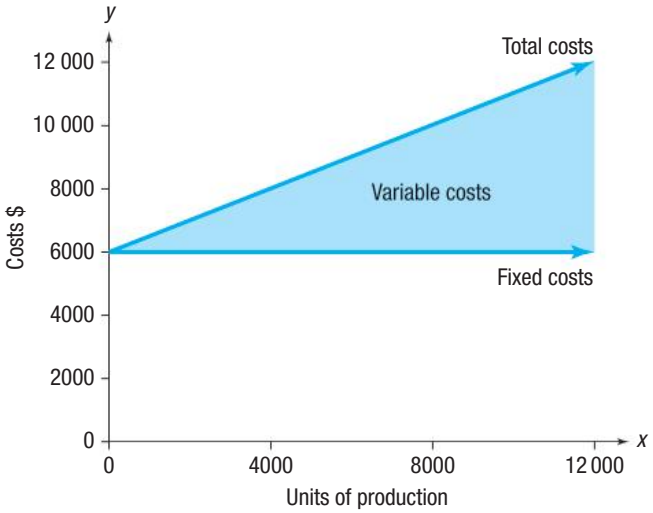



Figure 5.3 Cost of production is the sum of fixed and variable costs

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| | 0 units | 4000 units | 8000 units | 12 000 units |
|---|---|---|---|---|
| Fixed costs $ | 6000 | 6000 | 6000 | 6000 |
| Variable costs $ | 0 | 4000 × 50 cents = 2000 | 8000 × 50 cents = 4000 | 12 000 × 50 cents = 6000 |
| Total costs $ | 0 | 8000 | 10 000 | 12 000 |
| Total cost per unit $ | | 8000/4000 = 2.00 per unit | 10 000/8000 = 1.25 per unit | 12 000/12 000 = 1.00 per unit |




As the number of units produced rises, the total cost of production rises, but the average cost per unit decreases. Management can now set an appropriate selling price to enable a profit per unit to be made. However, the selling price of a product is also influenced by the price of similar products in the market: unless this product can be shown to be better because of quality, features or some other factor, it needs to be priced competitively with similar products. The business would also need to do market research to estimate the expected volume of product they can realistically expect to sell in the market. There is no point in increasing production to lower unit production costs if the additional units produced cannot be sold.

## COST–VOLUME–PROFIT (CVP) ANALYSIS

CVP analysis is used to understand the relationship between profit, sales volume, selling price and costs (fixed and variable).

As long as four of the five amounts are known or can be estimated with accuracy, then the remaining element can be calculated. It is possible to calculate any of the elements from the known components (see Reality Check 5.1, page 172).

Key Concept 5.1

**CVP equation**

$P = (S \times X) - FC - (VC \times X)$

where:

P = estimated profit

S = selling price per product

X = number of units produced and sold

FC = total fixed costs

VC = variable costs per product



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## Break-even point

The break-even point for a product is the volume of production at which the income from the number of units produced and sold (i.e. total sales) is equal to the total costs. This will not produce a profit or a loss but 'break-even'.

To calculate the break-even point the profit is set at zero (0) and we calculate the number of units required. The break-even point can be expressed as a number of units or as a total dollar value of sales.

EXAMPLE:

### Example 5.1

Calculate the break-even point in 'number of units' and in 'sales dollars' given the information below.

| | | |
|---|---|---|
| Selling price per unit | S | $4.50 per unit |
| Number of units produced and sold | X | _____ units |
| Variable costs per product | VC | $2.00 per unit |
| Total fixed costs | FC | $7000 |

To determine this, the CVP equation can be expressed as follows (sales version).

$(S \times X) = P + FC + (VC \times X)$. Profit is taken as 0.

$4.5X = 0 + 7000 + 2X$

$4.5X - 2X = 7000$

$2.5X = 7000$

Therefore, $X = 7000/2.50 = 2800$ units.

The break-even point is therefore 2800 units or total sales of $12 600.

With inflation, the costs of making a product rise and the management must recalculate break-even or profit. These increases may be in the fixed and/or variable costs.

### Example 5.2

Let us suppose that variable costs (e.g. materials used) were to rise by 15% and fixed costs (e.g. rent) were to go up 5%. A new calculation of the break-even point would be made as follows.

| | | |
|---|---|---|
| Selling price per unit | S | $4.50 per unit |
| Number of units produced and sold | X | _____ units |
| Variable costs per product | VC | $2.00 per unit × 115% = $2.30 |
| Total fixed costs | FC | $7000 × 105% = $7350 |

The new calculation is as follows:

$(S \times X) = \text{Profit} + FC + (VC \times X)$

$4.5X = 0 + 7350 + 2.30X$

$4.5X - 2X = 7350$

$2.2X = 7350$

$X = 7350/2.2 = 3341$ units.

The break-even point is therefore 3196 units or sales of $3341 \times \$4.50 = \$15 035$. (As this is based on estimates it would be rounded up to the next whole number.)

Key Concept 5.2

**Break-even point**

The break-even point is level of production at which total sales equal total costs (fixed and variable).

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REALITY CHECK 5.1

To illustrate the application of CVP analysis in decision-making, we will consider the example of Boycott Industries (illustrated in the figure below).

Boycott Industries produces only one product. The following revenues and costs have been estimated for the forthcoming month:

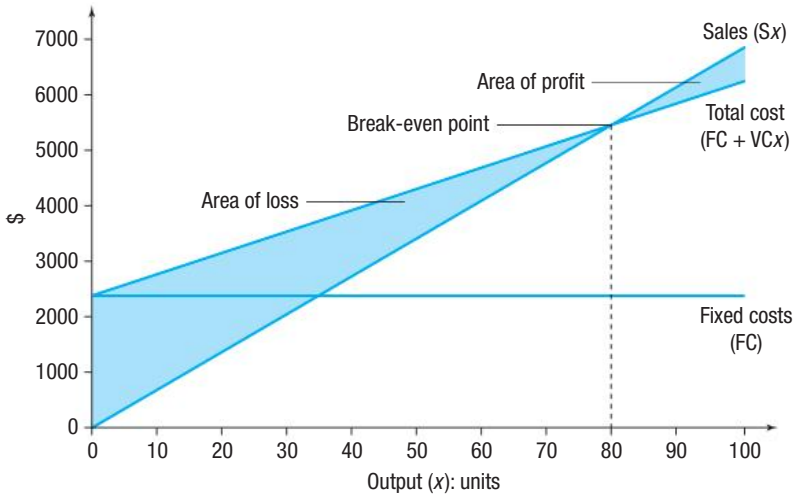



Figure 5.4 Costs and revenues for Boycott Industries

- Selling price: $70 per unit (S)
- Variable costs: $40 per unit (VC)
- Fixed costs: $2400 (FC).

These assumptions are shown in Figure 5.4.

The managers of the firm wish to know the following:

- How many units must be sold to break even?
- How many units must be sold to make a profit of $600?
- Would it be worthwhile to spend $1200 on advertising if this were to increase sales from 520 to 600 units?
- What should the selling price be to make a profit of $15 000 on sales of 120 units?

The answers to these questions can be calculated using CVP analysis as follows.

Using the sales version of the CVP equation and the values given, i.e. S = 70, VC = 40, FC = 2400, P = 0, the calculation is as follows:

$$Sx = VCx + FC + P$$
$$70x = 40x + 2400 + 0$$
$$30x = 2400$$
$$x = 80 \text{ units}$$

Therefore, the break-even point is 80 units. We can check this in the following manner:

| | $ | $ |
|---|---|---|
| Sales (80 units @ $70) | | 5 600 |
| *Less* Costs | | |
| Variable costs (80 units @ $40) | 3 200 | |
| Fixed costs | 2 400 | 5 600 |
| Profit | | 0 |

To work out how many units must be sold to make a profit of $600, P = 600.

SX = VCX + FC + P
70X = 40X + 2400 + 600
30X = 3000
X = 100 units

Therefore, the number of units that must be sold to achieve a profit of $600 is 100.

To work out if it would be worthwhile to spend $1200 on advertising, first determine the profit for X = 520 units. Use the profit version of the CVP equation:

P = SX − (VCX + FC)
P = 70 × 520 − (40 × 520 + 2400)
P = $13 200

Advertising costs will increase fixed costs by $1200 (FC = 3600). The profit for X = 600 units will therefore be as follows:

P = 70 × 600 − (40 × 600 + 3600)
P = $14 400


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Therefore, the profit with advertising is $14 400 compared to $13 200. On this basis, the firm will go ahead and advertise the product because it will generate greater profits.

To calculate the selling price to make a profit of $15 000 on sales of 120 units, P = 15 000 and X = 120. Use the sales version CVP equation:

$$SX = VCX + FC + P$$
$$S \times 120 = 40 \times 120 + 2400 + 15\,000$$
$$120 \times S = 22\,200$$
$$S = 185$$

Therefore, the selling price needs to be $185 per unit.

**Key Concept 5.3**

**Break-even equation**

Zero profit = (Sales revenue) − (Fixed costs + variable costs)

Therefore: sales revenue = fixed costs + variable costs

That is, (S × X) = 0 + FC + VC × X

## Contribution margin

The contribution margin is the selling price of a unit less the direct variable costs per unit. This amount is the financial contribution each unit makes to cover the fixed costs. If the volume of sales is sufficient after the fixed costs have been covered the excess is profit. The contribution margin may be expressed as a dollar amount or as a percentage of the selling price.

The contribution margin may also be expressed as the total contribution of sales towards fixed costs, i.e. sales − total variable costs.

EXAMPLE:

### Example 5.3

Pancho's Pizzas makes Mexican pizzas. Information from its income statement shows the following calculation of the contribution margin.

| | $ | $ | Contribution margin |
|---|---|---|---|
| Sales | | 4.00 | 100% |
| *Less* Direct materials | 1.30 | | 32.5% |
| Packaging | 0.20 | | 5% |
| Direct energy costs | 0.30 | | 7.5% |
| Total variable costs | | 1.80 | 45% |
| Contribution margin | | 2.20 | 55% |

**Key Concept 5.4**

**Contribution margin**

Contribution margin is the contribution that the sale of each unit makes towards covering fixed costs. This is the difference between selling price and variable costs.

## Profit planning and target sales

The CVP formula can be used to make calculations about alternative inputs and outcomes from known amounts. Let us consider Pancho's Pizzas from Example 5.3.

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EXAMPLE:

## Example 5.4

Assume that Pancho's Pizzas makes 10 000 pizzas per period and that the firm's fixed costs (such as rent and depreciation of equipment) are $10 000 per period. Using the information provided we can prepare the following estimates for the period.

| | $ | $ | % | Per unit $ |
|---|---|---|---|---|
| Sales | | 40 000 | 100 | 4.00 |
| *Less* Direct materials | 13 000 | | 32.5 | |
| Packaging | 2 000 | | 5 | |
| Direct energy costs | 3 000 | | 7.5 | |
| Total variable costs | | 18 000 | 45 | 1.80 |
| Contribution margin | | 22 000 | 55 | 2.20 |
| Fixed costs | | 10 000 | 25 | 1.00 |
| Profit | | 12 000 | 30 | 1.20 |

Using this information and the CVP equation, we can answer a variety of questions that will assist Pancho's in its future planning, as detailed below.

### CALCULATING THE BREAK-EVEN POINT

How many pizzas must Pancho's make to break even? Using the formula:

Profit = (S × X) − (VC × X) − FC
0 = (4 × X) − (1.80 × X) − 10 000
X = 10 000/(4 − 1.80)
= 4545.5 pizzas
= 4546 pizzas

(For obvious reasons, such figures should always be rounded up to the nearest whole number.)

### SETTING A TARGET PROFIT

If Pancho's wants to make a profit of $20 000 how many pizzas must it make?
Using the formula:

Profit = (S × X) − (VC × X) − FC
20 000 = (4 × X) − (1.80 × X) − 10 000
X = 30 000/2.20
= 13 637 pizzas

Alternatively, assuming that Pancho's wants to make a profit of 10% of sales, how many pizzas must be sold to achieve this?
Using the formula:

Profit = (S × X) − (VC × X) − FC
0.10 × (4 × X) = (4 × X) − (1.80 × X) − 10 000
0.10 × (4 × X) = (2.20 × X) − 10 000
10 000 = (2.20 × X) − (0.10 × (4 × X))
10 000 = ($2.20 × X) − ($0.40 × X)
10 000 = $1.80 × X
X = 10 000/1.80

Therefore, 5556 pizzas must be sold to achieve a profit of 10% of sales.

### CHANGING THE VARIABLE COSTS

If the variable costs increase by 20%, what is the new break-even point?
Variable costs = $1.80 × 20% = $2.16
Using the formula: Profit = (S × X) − (VC × X) − FC
0 = (4 × X) − (2.16 × X) − 10 000
X = 10 000/1.84
X = 5435 pizzas

If any of the component figures change we can recalculate break-even and profit.


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### CHANGES IN FIXED COSTS

Pancho's Pizzas is considering spending $2000 on advertising, which it expects will increase sales to 12 000 pizzas per period. How many pizzas must it make now to break even? Variable costs and selling price remain unchanged. The fixed cost will increase from $10 000 to $12 000.

Using the formula: Profit = (S × X) − (VC × X) − FC

0 = (4 × X) − (1.80 × X) − 12 000
X = 12 000/2.20
X = 5455 pizzas

If we assume that the sales target of 12 000 is met, the new profit can be calculated as follows:

Profit = (4 × 12 000) − (1.80 × 12 000) − 12 000
Profit = 48 000 − 21 600 − 12 000
Profit = $14 400

On this evidence, the advertising expenditure would be justified, as it would increase profit by $2400.

### CHANGING THE SELLING PRICE

Pancho's believes that decreasing the price of a pizza from $4 to $3.80 might achieve the same increase in sales as the advertising. What is the new break-even point, assuming that the original fixed and variable costs are unchanged?

Using the formula: Profit = (S × X) − (VC × X) − FC

0 = (3.80 × X) − (1.80 × X) − 10 000
X = 10 000/(3.80 − 1.80)
= 5000 pizzas

The profit at the new price can be calculated as follows:

Profit = (3.80 × 12 000) − (1.80 × 12 000) − 10 000
Profit = 45 600 − 21 600 − 10 000
Profit = $14 000

On this evidence, this option is marginally less profitable than increasing advertising.

### DETERMINING THE TARGET SELLING PRICE

Pancho's wants to make a profit of $16 000 and believes that it can sell 12 000 pizzas if it spends $2000 on advertising. Its other fixed costs amount to $10 000 and its variable costs will be $1.80 per unit. What selling price must it charge to achieve this outcome?

Using the formula: Profit = (S × X) − (VC × X) − FC

16 000 = (S × 12 000) − (1.80 × 12 000) − 12 000
16 000 = (S × 12 000) − 21 600 − 12 000
16 000 = 12 000S − 33 600
12 000S = 49 600
S = 49 600/12 000

Selling price = $4.13 per unit

### SETTING TARGET SALES

If Pancho's wants to make a profit of $15 000, set a selling price of $3.90 and keep variable costs at $1.80 per unit, fixed costs at $10 000 per period and spend an additional $2500 on advertising, how many pizzas must it sell?

Using the formula: Profit = (S × X) − (VC × X) − FC

15 000 = (3.90 × X) − (1.80 × X) − 12 500
15 000 = (2.10 × X) − 12 500
2.10 × X = 12 500 + 15 000
2.10 × X = 27 500
X = 27 500/2.10

Target sales volume = 13 096 pizzas

## Contribution margin approach

As mentioned previously the contribution margin is the difference between the selling price and variable cost, per unit or in total.

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We can also determine the break-even point from the contribution margin using the formula:

$$\text{Break-even sales in units} = \frac{\text{Fixed costs}}{\text{Contribution margin per unit}}$$

To use this approach we must first determine the contribution margin per unit. In the case of Pancho's Pizzas this would be $4.00 per unit selling price less $1.80 per unit variable cost. The contribution margin therefore is $2.20 per unit.

Assuming that the only costs are fixed costs of $10 000, the break-even point in sales units is as follows:

$$\text{Break-even sales in units} = \frac{\$10\,000}{\$2.20 \text{ per unit}}$$

The break-even sales in units is 4546 pizzas.
Another useful formula is the contribution margin ratio.

Formula 5.1

**Contribution margin ratio**

$$\text{Contribution margin ratio} = \frac{\text{Contribution margin per unit}}{\text{Selling price per unit}}$$

In the case of Pancho's Pizzas, the contribution margin ratio is as follows:

$$\text{Contribution margin ratio} = \frac{\$2.20 \text{ per unit}}{\$4.00 \text{ per unit}}$$

The contribution margin ratio is 55% or expressed as 0.55.

This formula is useful when determining the break-even point or sales target volume when no selling price is given.

If Pancho's Pizzas had a contribution margin ratio of 52% or 0.52, fixed costs of $14 000 and it wanted to set a target profit of $6500, what would be its break-even point in sales dollars and sales dollars required if it wants to earn its target profit?

Formula 5.2

**Break-even sales dollars**

$$\text{Break-even sales dollars} = \frac{\text{Fixed costs}}{\text{Contribution margin ratio}}$$

In the case of Pancho's Pizzas:

$$\text{Break-even sales dollars} = \frac{\$14\,000}{0.52}$$

Break-even sales dollars are $26 923.10.

The sales dollars to reach the target profit is as follows:

$$\text{Target sales dollars required} = \frac{\text{Fixed costs + profit}}{\text{Contribution margin ratio}}$$

$$\text{Therefore } \frac{\$14\,000 + 6500}{0.52}$$

The sales volume required to reach the target profit is $39 423.10.


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Formula 5.3

**Target given sales dollars given target profit and/or extra fixed costs**

$$\frac{\text{Fixed costs + profit + extra fixed costs}}{\text{Contribution margin ratio}}$$

Formula 5.4

**Break-even equation using the contribution margin approach**

$$\text{Break-even sales in units} = \frac{\text{Fixed costs}}{\text{Contribution margin per unit}}$$

## Margin of safety

The margin of safety of a product or service is the amount by which expected sales are greater than the break-even point. We can then calculate the percentage by which sales might decrease before the product begins to incur a loss. The higher the margin of safety, the better when comparing alternative products.

EXAMPLE:

### Example 5.5

Belmont Bakery has costed two different products but the factory only has the capacity to make one. The management must choose which one to produce.

| | Cakes | Muffins |
|---|---|---|
| Estimated volume | 10 000 | 15 000 |
| Selling price per unit | $10 | $5 |
| *Less* Variable costs | $4 | $2 |
| Contribution margin | $6 | $3 |
| Fixed costs | 20 000 | 20 000 |

$$\text{Profit} = (S \times X) - FC - (VC \times X)$$

**Cakes**

$$\begin{aligned}\text{Profit} &= 10 \times 10\,000 \text{ units} - 20\,000 - (\$4 \times 10\,000 \text{ units}) \\ &= 100\,000 - 20\,000 - 40\,000 \\ &= \$40\,000\end{aligned}$$

**Muffins**

$$\begin{aligned}\text{Profit} &= 5 \times 15\,000 \text{ units} - 20\,000 - (\$2 \times 15\,000 \text{ units}) \\ &= 75\,000 - 20\,000 - 30\,000 \\ &= \$25\,000\end{aligned}$$

From this it can be seen that, at maximum production, cakes will make a significantly better profit than muffins.

**BREAK-EVEN**

**Cakes**

$$\begin{aligned}\text{Profit} &= 10 \times X \text{ units} - 20\,000 - (\$4 \times X \text{ units}) \\ 0 &= 10X - 20\,000 - 4X \\ 6X &= 20\,000 \\ X &= 3333 \text{ units}\end{aligned}$$

**Muffins**

$$\begin{aligned}\text{Profit} &= 5 \times X \text{ units} - 20\,000 - (2 \times X \text{ units}) \\ 0 &= 5X - 20\,000 - 2X \\ 3X &= 20\,000 \\ X &= 6667 \text{ units}\end{aligned}$$

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The break-even point for muffins is higher, both absolutely and proportionately, than that for cakes.

**MARGIN OF SAFETY**

| | | | |
|---|---|---|---|
| Cakes | $\frac{\text{Expected sales volume} - \text{break-even}}{\text{Expected sales volume}}$ | $= \frac{10\,000 - 3333}{10\,000}$ | 66.7% |
| Muffins | $\frac{\text{Expected sales volume} - \text{break-even}}{\text{Expected sales volume}}$ | $= \frac{15\,000 - 6667}{15\,000}$ | 55.6% |

Once again, cakes outperform muffins.

**CONCLUSION**

On all three bases of analysis, the strong indications are that the firm should produce cakes rather than muffins. Of course, any changes to costs, selling prices or market size could alter the situation and the calculations would need to be re-done.

Key Concept 5.5

**Margin of safety**

Margin of safety = Actual or budgeted sales − break-even sales

Formula 5.5

**Margin of safety percentage**

$$\text{Margin of safety percentage} = \frac{\text{Margin of safety in dollars}}{\text{Total actual/budgeted sales}}$$

## Product mixes

Businesses do not sell just one product or service but multiple items. How then do we determine the break-even point or target unit sales in these situations to make meaningful decisions? CVP analysis can also be used when a business makes more than one distinct though similar product (e.g. men's and ladies shoes, iPods and MP3 players, lipstick and eye shadow). Management can use this information to determine which product or service is more profitable and this, in turn, can affect its marketing strategy and other plans for future production.

In these situations we calculate the weighted average contribution margin per unit to assist us to make these decisions. The assumption in these situations is that the sales mix between the products or service does not change.

The sales mix is the proportion of sales made by each product in relation to the total sales. For example, if a business sold two products – a ladies gown and a men's suit – and the total sales for the year was as follows, what would be the sales mix? Total sales are 100 000 items with the ladies gown being 60 000 items and the men's suit being 40 000 items. The sales mix would be:

- Ladies gown − 60 000/100 000 = 60%
- Men's suit − 40 000/100 000 = 40%.

As a result of this, CVP analysis involving multiple products management may change its sales mix in order to maximise its profit.

EXAMPLE:

### Example 5.6

Top Fashions Pty Ltd makes two products, a ladies gown and a men's suit, the details of which are below.

| | Ladies gowns | Men's suits |
|---|---|---|
| Selling price per unit | $400 | $350 |
| Variable costs per unit | $120 | $110 |
| Sales mix | 110 000 items sold each year | 90 000 items sold each year |

Total fixed costs are $256 760 for the year.



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**REQUIRED**

Calculate the break-even point in total units and the number of units of each product that must be sold at the break-even point.

**STEP 1**

To calculate the sales mix, first we must determine the total sales. In this case it is as follows.

- Total sales: 110 000 + 90 000 = 200 000 units
- Each item of sale is then determined as a proportion of the total sales, as seen below.
- Ladies gown: 110 000/200 000 = 55%
- Men's suit: 90 000/200 000 = 45%

The sales mix, therefore, is ladies gowns 55% and men's suits 45%.

**STEP 2**

Calculate the contribution margin (CM) per unit for each product.

Ladies gown: selling price per unit $400 − Variable costs per unit $120 = $280 CM per unit
Men's suit: selling price per unit $350 − Variable costs per unit $110 = $240 CM per unit

**STEP 3**

Calculate the weighted average contribution margin per unit by multiplying the contribution margin per unit for each individual item by the sales mix for that product. The two figures are then added together.

First we determine the weighted contribution margin for each item as follows.

- Ladies gown: $280 CM per unit multiplied by 55% sales mix proportion = $154
- Men's suit: $240 CM per unit multiplied by 45% sales mix proportion = $108

The two amounts are then added together, which gives the weighted average contribution margin of $262 per unit.

**STEP 4**

Calculate the break-even point in units. The formula is the same as for the contribution margin approach, as explained previously, except that we use the weighted average contribution margin per unit instead of the contribution margin per unit. The formula is as follows.

$$\text{Break-even sales in units} = \frac{\text{Fixed costs}}{\text{Weighted average contribution margin}}$$

In our example the calculation is as follows.

$$\text{Break-even sales in units} = \frac{256\,760}{262}$$

Therefore, the break-even point in sales volume is 980 units.

**STEP 5**

Determine the proportion of ladies gowns and men's suits that must be sold at the break-even point by multiplying the break-even point by the sales mix.

- Ladies gowns: 980 (break-even point) × 55% sales mix = 539 units
- Men's suits: 980 (break-even point) × 45% sales mix = 441 units

Therefore, the business must sell 539 ladies gowns and 441 men's suits to break even.

**REQUIRED**

Calculate the volume of sales in total units and the number of units of each product that must be sold to achieve a target profit of $60 520.

**STEP 1**

Calculate the sales units required to reach the target profit. The formula is the same as for the contribution margin approach as explained previously except that we use the weighted average contribution margin. The formula is as follows.

$$\text{Sales in units to reach the target profit} = \frac{\text{Fixed costs + target profit}}{\text{Weighted average contribution margin}}$$

For Top Fashions Pty Ltd the calculation is as follows.

$$\text{Sales in units to reach the target profit} = \frac{256\,760 + 60\,520}{262}$$

Therefore, the sales units required to reach the target profit is 1211 units (rounded up).

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**STEP 2**

Determine the proportion of ladies gowns and men's suits that must be sold to reach the target profit by multiplying the sales volume determined earlier by the sales mix.

- Ladies gowns: 1211 (target units that must be sold) × 55% sales mix = 666 units (rounded)
- Men's suits: 1211 (target units that must be sold) × 45% sales mix = 545 units (rounded)

Therefore, Top Fashions Pty Ltd must sell 666 ladies gowns and 545 men's suits to achieve its profit target of $60 520.

**Formula 5.6**

**Weighted average contribution margin**

Add together the result of the calculation of the following for all products/services.

Weighted average contribution margin = contribution margin per unit × sales mix

REALITY CHECK 5.2

Crystal Pty Ltd is a producer of chocolates making a range of different items for the Western Australian market. The directors are Bud Abbott, Lou Costello and Jerry Lewis. The business has been in operation for about two years and although operations started well for the past year there has been a steady decline in profitability. The directors asked various managers at the business to come forward with plans to overcome this decline in profitability.

The marketing manager proposed a range of measures, including greater advertising, different packaging arrangements, promotional activities and decreasing the price of some products. He also developed a set of sales targets for the forthcoming year.

The production manager suggested changes in the production process to cut variable costs and also made plans to reduce some overheads.

The business employed a firm of consultants with special expertise in the chocolate industry for new product ideas. The consultants came up with a range of new products that they felt would succeed in the Perth market. Their idea was to produce a range of products aimed at the high-quality end of the chocolate market.

The directors were somewhat confused about how to make best use of this wide range of advice and recommendations. In the past they usually followed their gut instinct and this has seldom let them down. However, the complexities of the current situation seemed to require a different approach. They referred the matter to the company accounting manager, who suggested making use of cost–volume–profit (CVP) analysis to assist them in making their decisions. At their request, she prepared a report that applied the principles and techniques of CVP to the product and process alternatives so the directors could decide what would be best for the company. These included:

- an analysis to determine which products would be the most profitable and therefore which products to focus on
- the sales volume targets they needed to reach to maximise profitability
- the sales prices they should set to reach certain profit targets and sales volume targets
- the effect on profit of the proposed efficiencies in the production process.

## Commentary

Many businesses make decisions without first considering the consequences, as they operate without making use of many managerial accounting tools. CVP analysis is a valuable tool that can help determine the business's marketing strategy, what production facilities to purchase, what pricing policy is best and what products to make and sell. It can also be used to measure the performance of different product lines, plan and control operations better and forecast income at differing levels of activity.

Without using CVP analysis what advice would you have given the company directors?



ISBN 9780170182058

# DIFFERENTIAL ANALYSIS

As explained previously, managers must sometimes make decisions that require them to choose between alternative options or, given that a business's resources are limited (especially with regard to financial capital or productive capacity), they may need to choose between two or more alternative means of earning revenue. To evaluate these types of decisions they would use *incremental* or *differential* analysis. Differential analysis is a process that uses *relevant information* to evaluate alternative options available to the business. Relevant information is that which has a bearing on the future and is different for alternative options. Relevant information includes:

- relevant costs
- differential costs
- avoidable costs
- opportunity costs
- relevant income
- differential income.

Relevant information does *not* include:

- unavoidable costs
- sunk costs.

*Relevant costs* are future costs that differ between competing options and *relevant income* is that income that differs between the alternatives.

*Differential costs* are the difference between the relevant costs of two alternative products or services. *Differential income* is the difference between the relevant income of two alternative products or services.

Costs are either avoidable or unavoidable. *Unavoidable costs* are costs the business will incur in the future that will not vary, no matter which of the alternatives are chosen (such as office rent or administration salaries). *Avoidable costs* are those that could be eliminated if a particular course of action is selected or an option is chosen.

A *sunk cost* is a cost that the business has already incurred and it will not be changed, irrespective of the alternatives chosen. This could include, for example, depreciation of the factory building or payment for inventory already purchased.

*Opportunity costs* are the future potential benefits not gained from producing one product by choosing to produce an alternative or by choosing one course of action instead of another option. For example, if a bakery has the capacity to produce either cakes or bread and chooses to produce bread, then the opportunity cost is the profit they would have made if they had made cakes.

Differential analysis can be used to evaluate special orders, make or buy decisions, decide whether to close a department or drop a product line and to assess options where resource constraints may exist.

Key Concept 5.7

**Relevant information**

Relevant information is the future costs and income that relate specifically to each of the alternative options being considered.

## Decisions involving special orders

Management will sometimes be asked to produce a special order for a customer, usually at a price less than the normal selling price. If the number of units in the special order is less than the unused capacity of the production facility then, as long as the selling price of the special order is greater than the variable costs, it will add additional income.

When the number of units in the special order combined with the existing production exceeds the production capacity, the calculations and the decisions become more involved.

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Should the business invest additional funds to increase capacity (fixed costs)? By accepting the special order, the business might have to cut production of some existing products (which will have a higher contribution margin) and may lose loyal existing customers if their orders are not being met. Alternatively, existing customers may want to receive the special price themselves.

EXAMPLE:

## Example 5.7

Parkinson Ltd is a maker of netball hoops. The variable costs of making these items are as follows.

| | |
|---|---|
| Direct materials | $40 per unit |
| Direct labour | $18 per unit |
| Variable factory overhead | $28 per unit |

The fixed costs for the business are $600 000 per year. The factory has a maximum capacity of 10 000 units and currently the business is producing 9000 units. The selling price of each netball hoop is $150.00 per unit.

The business has received an offer from Snow Ltd to produce a one-off special order of 800 basketball hoops for which they are willing to pay $120 per hoop. This would require the business to purchase an additional item of machinery costing $9000 for which the company would have no foreseeable further use after this job was completed. All other costs remain the same. The variable costs for basketball hoops are estimated to be the same as for netball hoops. There is a possibility that the size of the order could be increased to 1200 hoops.

**REQUIRED**

Should the business accept the special order for 800 hoops?

**STEP 1**

Determine whether the business has spare (sometimes called excess or idle) capacity. The maximum capacity is 10 000 units and currently the business produces 9000 units. Therefore, the difference of 1000 units represents spare capacity. As the special order is for only 800 units, there will be no opportunity cost in making the special order.

**STEP 2**

Determine the relevant income and costs involved to calculate the gain or loss on accepting the special order. We should begin by calculating the contribution margin of the special order as follows. The total variable cost per unit is $40 + 18 + 28 = $86 per unit. We then subtract any additional fixed costs and opportunity costs. As indicated previously, there is no opportunity cost in the case.

| | |
|---|---|
| Special-order income | 800 units × $120 = $96 000 |
| Special-order variable costs | 800 units × $86 = $68 800 |
| Contribution margin | $27 200 |
| *Less* Additional fixed costs: machinery purchase | $9 000 |
| Gain on special order | $18 200 |

The business should therefore accept the special order based on the quantitative analysis.

**REQUIRED**

If the special order was for 1200 basketball hoops should the order be accepted?

**STEP 1**

Determine if the business has spare (sometimes called excess or idle) capacity.

As previously stated, spare capacity is currently 1000 units. Because the special order is for 1200 hoops, the business will have to forego production of 200 of its basketball hoops to its normal customers. Therefore, there will be an opportunity cost in making the special order.



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**STEP 2**

Determine the opportunity cost. The opportunity cost is the lost production of its normal sales. We must therefore determine the normal contribution margin amount lost.

The normal contribution margin is: normal selling price $150 per unit – normal variable cost $86 per unit = $64 per unit.

This normal contribution margin is then multiplied by the lost normal production of 200 units. Therefore, 200 × $64 = $12 800. This amount of $12 800 is the opportunity cost.

**STEP 3**

Determine the relevant income and costs involved to calculate the gain or loss on accepting the special order.

| | |
|---|---|
| Special-order income | 1200 units × $120 = $144 000 |
| Special-order variable costs | 1200 units × $86 = $103 200 |
| Contribution margin | $40 800 |
| *Less* Additional fixed costs: machinery cost | $9 000 |
| | 31 800 |
| *Less* Opportunity cost | 12 800 |
| Gain on special order | $19 000 |

The business should therefore accept the special order if it is increased to 1200 units, based purely on the quantitative analysis. However, the business must consider the effect that the lost production of 200 units might have in the future. The regular customers who are unable to purchase the 200 units may take their custom elsewhere. The business may therefore make a short-term gain on the special order but lose future sales to a competitor.

REALITY CHECK 5.3

## KT's Inc.

KT's Inc. manufactures hats. It has a current capacity of 120 000 hats per year. However, it is predicted that, in the forthcoming year, sales through its normal outlets will be only 90 000 hats. A mail-order firm offers to buy 20 000 special hats at $7.50 each.

Accepting this order would not affect regular sales, but it would require the hire of a special machine at a cost of $10 000. The managing director is reluctant to accept the order because $7.50 is below the factory unit cost of $8 per hat.

The following table gives the predicted total profit and the predicted profit per unit, in a traditional costing format, without the special order.

| | *Total* $ | | *Per unit* $ | |
|---|---|---|---|---|
| Sales: 90 000 hats at $10 each | | 900 000 | | 10.00 |
| *Less* **Factory expenses:** | | | | |
| Variable | 540 000 | | 6.00 | |
| Supervision | 90 000 | | 1.00 | |
| Other fixed costs | 90 000 | 720 000 | 1.00 | 8.00 |
| **Gross profit** | | 180 000 | | 2.00 |
| **Selling expenses:** | | | | |
| Variable | 22 500 | | 0.25 | |
| Fixed | 112 500 | 135 000 | 1.25 | 1.50 |
| **Profit** | | 45 000 | | 0.50 |

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The management accountant, in consultation with the production and sales managers, is requested to review the costs of taking on the special order. These are their conclusions:

1 The variable costs of production relate to labour and materials and these will be incurred at the same rates as for the production of the normal production units.
2 There would be a need for additional supervision. However, it is anticipated that four of the current supervisors can cover this requirement if each of them works overtime of five hours per week. Supervisors are paid $10 per hour and overtime is paid at a premium of $2 per hour. There are 48 working weeks in the year. Therefore, the additional costs would be:
   5 hours × $12 per hour × 48 weeks × 4 supervisors = $11 520
3 Other fixed costs are factory rent and the depreciation of plant. It is anticipated that these would remain the same if the order is accepted. However, the hire of the special machine would add $10 000 to fixed costs.
4 The variable sales cost relates to salespersons' commissions and this cost will not be incurred on the special order.
5 The fixed sales expenses relate to the administering of sales. These costs will remain the same, except that a part-time clerk will be required to help with the additional workload, if the special order is accepted, at a salary of $6000 per year.

Using the differential costing approach, we can compare the total profit for the year for KT's Inc. if the order is accepted or rejected, as follows.

| | *Accept $* | *Reject $* | *Differential cost and revenue $* |
|---|---|---|---|
| Sales | 1 050 000 | 900 000 | 150 000 |
| **Factory expenses** | | | |
| Variable costs | 660 000 | 540 000 | 120 000 |
| Supervision | 101 520 | 90 000 | 11 520 |
| Other fixed costs | 90 000 | 90 000 | – |
| Hire of plant | 10 000 | – | 10 000 |
| | 861 520 | 720 000 | 141 520 |
| **Sales expenses** | | | |
| Variable costs | 22 500 | 22 500 | – |
| Fixed costs | 118 500 | 112 500 | 6 000 |
| Total costs | 1 002 520 | 855 000 | 147 520 |
| **Profit** | 47 480 | 45 000 | 2 480 |

### Commentary

From the differential analysis, it can be seen that KT's Inc. will be $2480 better off if the special order is accepted. If the differential analysis of costs and revenues results in a profit, then from a purely quantitative perspective, the order should be accepted.

Note that some of the costs (other fixed costs and variable sales expenses) are the same for both options, so that the calculation could have been simplified somewhat by leaving them out altogether.

## Closing down a product or department

Businesses operate in an ever-changing environment. Sometimes they may need to make a decision to discontinue a product or close down an existing department. The contribution margin concept is the tool used to evaluate these types of decisions.


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EXAMPLE:

## Example 5.8

The local service station's income and expenses can be divided into separate departments as below.

| | Total $ | Fuel $ | Shop $ | Workshop $ |
|---|---|---|---|---|
| Sales | 250 000 | 100 000 | 50 000 | 100 000 |
| *Less* Variable costs | 165 000 | 80 000 | 25 000 | 60 000 |
| Contribution margin | 85 000 | 20 000 | 25 000 | 40 000 |
| *Less* Fixed costs | 60 000 | 20 000 | 20 000 | 20 000 |
| Profit/loss | 25 000 | 0 | 5 000 | 20 000 |

From above it can be seen that while the business overall makes a profit, the selling of fuel just breaks even and the workshop makes most of the total profit. On the basis of this analysis alone the owner/manager might conclude it would be better just to run a workshop and the shop and not bother with providing a fuel service.

To analyse this situation we will consider the contribution margin of the fuel department and the impact of fixed costs. Fixed costs would not normally be reducible as they are often sunk or unavoidable costs. Consequently, without the fuel section the fixed costs must now be allocated to the shop and workshop only, as shown below.

| | Total $ | Shop $ | Workshop $ |
|---|---|---|---|
| Sales | 150 000 | 50 000 | 100 000 |
| *Less* Variable costs | 85 000 | 25 000 | 60 000 |
| Contribution margin | 86 000 | 25 000 | 40 000 |
| *Less* Fixed costs | 60 000 | 30 000 | 30 000 |
| Profit/loss | 5 000 | (5 000) | 10 000 |

The fixed costs of $60 000 must now be allocated over two remaining departments with each now bearing $30 000. Although the contribution margin of the two departments remains the same, this has caused the shop to show a loss of $5000 and the workshop a reduced profit of $10 000 and a fall in overall profit of $20 000, equal to the contribution margin of the fuel department. Shutting down the fuel department is obviously not a good option

In addition to the quantitative analysis the business manager must consider other qualitative factors. For example, not selling fuel would undoubtedly have a significant effect on shop sales and perhaps even workshop income.

## Make or buy decisions

Differential analysis is also a useful tool in evaluating whether to make a part, which is a component in a product, or to buy the part from some other business. For example, a maker of bikes may produce all parts of the bike except for the tyres, which are purchased from a supplier. The bike manufacturer does, however, have the option to make the tyres itself. To assist in evaluating this type of decision we need to determine the relevant costs between the competing options.

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EXAMPLE:

## Example 5.9

Band Ltd manufactures DVDs. It currently also manufactures the DVD cases. The annual cost of making the cases is shown below.

| | |
|---|---|
| Direct materials | $80 000 |
| Direct labour | $55 000 |
| Variable manufacturing overhead | $60 000 |
| Fixed manufacturing overhead | $70 000 |
| Total manufacturing cost | $265 000 |

Currently the business makes 100 000 DVD cases per year. Therefore, the cost of making one DVD case is $2.65. The business has received an offer to supply the DVD cases at a cost of $2.10 per case. If this option is accepted the business has determined that $10 000 of the fixed cost would be eliminated. Management needs to decide whether to continue to make the DVD cases or buy them in from the outside supplier.

There is a possibility that the business could use the released productive capacity to produce another product that would bring in a profit of $15 000 per year. We can analyse the information through incremental analysis as seen below.

| | *Make $* | *Buy $* | *Net profit increase (decrease) $* |
|---|---|---|---|
| Direct materials | 80 000 | – | 80 000 |
| Direct labour | 55 000 | – | 55 000 |
| Variable manufacturing overhead | 60 000 | – | 60 000 |
| Fixed manufacturing overhead | 70 000 | 60 000 | 10 000 |
| Purchase price | | 210 000 | (210 000) |
| Total annual cost | 265 000 | 270 000 | (5 000) |

The elimination of the $10 000 in fixed cost means that to buy the cases the fixed costs would only be $60 000. All variable costs would be eliminated if the business buys in the cases. To buy in the cases would cost $210 000 ($2.10 × 100 000).

Based on this analysis the business should continue to make the DVD cases as it would cost them an additional $5000 to buy them in. However, if the business could use the released productive capacity to produce another product that would bring in a profit of $15 000 per year then this is an opportunity cost that must be taken into account. The last part of our table would need to be amended as follows.

| | *Make $* | *Buy $* | *Net profit increase (decrease) $* |
|---|---|---|---|
| Total annual cost | 265 000 | 270 000 | (5 000) |
| Opportunity cost | 15 000 | – | 15 000 |
| Total cost | 280 000 | 270 000 | 10 000 |

On this basis, the firm should buy in the cases rather than make them.

Management must, however, consider the qualitative issues, such as the loss of employees under the buy option. The business would also want to assess the reliability of the supplier and its capacity to maintain continuity of supply.



ISBN 9780170182058

## Resource restraints and choosing between competing products

A business may have the capacity only to manufacture one product at a time and must be able to choose between two alternative products using CVP analysis. Usually the fixed costs remain the same, so the calculation can be made using the contribution margin approach. In addition, a business's production and sales may sometimes be limited by a factor that affects profitability. This can be a resource constraint, such as limited supplies of labour or raw materials. This would require management to decide between various alternatives.

EXAMPLE:

### Example 5.10

Advance Ltd manufactures two solar-powered Frisbees – Wild One and Bold One. The company has only a limited supply of the skilled labour that is essential in the production process. The following information is available regarding the two products.

| | Wild One | Bold One |
|---|---|---|
| Selling price per unit | $80 | $100 |
| Variable costs per unit | $65 | $82 |
| Labour hours per unit | 3 | 4 |
| Expected annual demand, units | 3000 | 4000 |

The business has a limited supply of labour available of 12000 hours. Management needs to decide how much of each Frisbee to produce in order to maximise profits, bearing in mind the constraints of limited labour supply.

In order to satisfy the market for both products, the following labour hours would be needed.

| | | |
|---|---|---|
| Wild One | 3000 units × 3 hours = | 9000 hours |
| Bold One | 4000 units × 4 hours = | 16000 hours |
| Total hours needed | | 25000 hours |

Clearly, therefore, labour is a constraint in this instance. To analyse the decision we must first determine the contribution margin from each product and determine the contribution margin per unit of the limited constraining resource (labour).

| | Wild One | Bold One |
|---|---|---|
| Contribution margin per unit | $15 | $18 |
| Hours to produce one unit | 3 | 4 |
| Contribution margin per labour hour | $5.00 | $4.50 |

We can see that Wild One has the best contribution margin per labour hour of the limited resource. Therefore, if the business can only make one product it should be Wild One.

| | Wild One | Bold One |
|---|---|---|
| Maximum number of units that can be produced = maximum hours/ hours per unit | 12000/3 = 4000 | 12000/4 = 3000 |
| Profit = contribution margin × number of units | $15 × 4000 = 60000 | $18 × 3000 = 54000 |

The company would make $6000 more profit by devoting its entire capacity to the production of Wild One frisbees. However, the market for Wild One frisbees is only 3000 units, not 4000.

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To produce this amount would require 3 × 3000 = 9000 hours, leaving 3000 hours that should be employed in producing Bold One frisbees. The firm's production may be summarised as follows.

| Product | Hours | Units produced | Profit contribution |
|---|---|---|---|
| Wild One | 9000 | 9000/3 = 3000 units | 3000 × $15 = $45 000 |
| Bold One | 3000 | 3000/4 = 750 units | 750 × $18 = $13 500 |
| Total | 12 000 | 3750 units | $58 500 |

To maximise its profit, the firm should produce 3000 Wild One frisbees and 750 Bold One frisbees.

# QUALITATIVE FACTORS

While cost–volume–profit analysis will provide quantitative answers to product decision-making, management must also consider other factors in making a final decision. These are known as *qualitative factors*. Following are some examples of ways in which qualitative factors can influence decisions.

## Customers

Inclusion or exclusion of a product from the range offered or changes to the quality of the product or after-sales service can affect the demand for a product and customer loyalty. The exclusion of one product from a range because it is uneconomic to produce and sell could affect the demand for other products. For example, a department store, by definition, sells a wide range of products. If it only sold those products with a high contribution margin (e.g. chocolates and cosmetics), it would soon be reduced to a specialty shop only and even the demand for the chocolates and cosmetics would suffer. Supermarkets will accept a much lower contribution margin on basic food than on toiletries or cooking equipment, but they need to sell both in order to retain customer loyalty.

Products manufactured by firms are sometimes interdependent and this interdependence should be considered when a decision is made.

## Employees

Decisions involving the closure of part of a firm, relocation or changes in work procedures require acceptance by employees. If the changes are mishandled, problems between employees and management could lead to inefficiencies and losses.

## Competitors

In a competitive market, decisions by one firm to enhance its competitive advantage might result in retaliation by competitors. For example, the decision to reduce selling prices in order to raise demand will not be successful if all competitors take similar action. All that would happen is that all firms in the market would lower their profits.

A firm might decide to produce an unprofitable product or offer a service at a loss because it would otherwise be leaving the market to its competitors. The firm considers that continued service to customers will eventually positively affect the demand for its other products.

It should be noted here that there are legal restrictions on firms colluding to prevent true competition in the market for goods and services.

## Legal constraints

An opportunity is sometimes influenced by legal requirements. The decision to open a hotel, for example, might be influenced by pending legislation on safety requirements that would result in additional costs that are too complex to estimate.


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## Suppliers

A firm might rely heavily on a good relationship with a particular supplier for the prompt delivery of supplies. Some decisions might affect that relationship.

# Test your knowledge

1 Define each of the following terms and provide examples of the types of costs that would be included:
   a fixed costs
   b variable costs
   c mixed costs.

2 Fred runs a fast food shop making hamburgers. Identify whether the following expenses are fixed or variable costs.

| Type of costs | Variable costs | Fixed costs | Mixed costs |
|---|---|---|---|
| Electricity | | | |
| Packaging | | | |
| Wages – full time | | | |
| Wages – casuals | | | |
| Water | | | |
| Materials purchased | | | |
| Depreciation on equipment | | | |
| Depreciation on office furniture | | | |

3 How is the break-even point calculated and why is it necessary for it to be calculated?

4 What is the difference between the contribution margin and the gross profit? What are the relevant expenses that are included in calculating both amounts?

5 Explain the concept of margin of safety and why it is important in management decision-making.

6 In a manufacturing business what will be the effect on profit and break-even point of the following changes?

| | Profit | Number of units to break even |
|---|---|---|
| Selling price increases | | |
| Fixed costs increase | | |
| Variable costs decrease | | |
| Units of production decrease | | |

7 Apart from the profit contribution, what other factors must a manager consider when making a decision to stop making a product or close a department?

8 A bakery can make both cakes and breads but chooses to make cakes only. What cost factors might influence the bakery to restrict its sales to one product only?

9 Major airlines like Qantas often have alliances with other airlines to transport Qantas passengers on some routes. Why would Qantas not use its own aircraft?

10 Explain what qualitative factors may influence a business to accept or reject a product or service other than profit.

11 If the contribution margin on a special order is positive, explain what might cause a business not to accept the special order.

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# Test your understanding

## Topic guide

- Calculation of cost–volume–profit: 5.1–5.4
- Break-even point calculations: 5.5–5.9, 5.12, 5.13, 5.19–5.21
- Profit planning: 5.5–5.9, 5.12–5.14, 5.25
- Contribution margin calculations: 5.5, 5.9–5.12, 5.19–5.21
- Safety margin: 5.5, 5.11–5.13
- Product mixes: 5.19–5.22
- Make or buy: 5.15–5.17
- Special order: 5.23, 5.24
- Closing down product/department: 5.18, 5.27
- Resource constraints: 5.19, 5.26

5.1 Chris's Candy Factory makes chocolate desserts. The management needs information regarding a new product. Calculate the expected profit, given the following inputs:

| | | |
|---|---|---|
| Selling price per unit | S | $4.50 per unit |
| Number of units produced and sold | X | 4000 units |
| Variable costs per product | VC | $2.00 per unit |
| Total fixed costs | FC | $7000 |
| Estimated profit | P | _____ |

Profit = (S × X) – (VC × X) – FC (profit version of formula).

5.2 If the management of Chris's Candy Factory decided to increase the selling price of the product by 10%, calculate the expected increase in the profit.

| | | |
|---|---|---|
| Selling price per unit | S | $4.50 per unit × 10% |
| Number of units produced and sold | X | 4000 units |
| Variable costs per product | VC | $2.00 per unit |
| Total fixed costs | FC | $7000 |
| Estimated profit | P | _____ |

Profit = (S × X) – (VC × X) – FC (profit version of formula).

5.3 If Chris's Candy Factory wanted to make a profit of $10 000, how many units must it produce and sell?

| | | |
|---|---|---|
| Selling price per unit | S | $4.50 per unit |
| Number of units produced and sold | X | _____ |
| Variable costs per product | VC | $2.00 per unit |
| Total fixed costs | FC | $7000 |
| Estimated profit | P | $10 000 |

Profit = (S × X) – (VC × X) – FC (profit version of formula).

5.4 If the marketing department of Chris's Candy Factory advised that it could sell 1000 units a month and the business wanted to make a profit of $21 800, calculate the selling price per unit.

| | | |
|---|---|---|
| Selling price per unit | S | ? |
| Number of units produced and sold | X | 12 000 units |
| Variable costs per product | VC | $2.00 per unit |
| Total fixed costs | FC | $7000 |
| Required profit | P | $21 800 |

Profit = (S × X) – (VC × X) – FC (profit version of formula)

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5.5 Monte Cristo Pty Ltd makes and sells only one product: an office desk. It sells the office desks for $600 each and the fixed production costs are $670 000 per year. The variable costs per unit are:

Direct materials: $200
Direct labour: $150
Variable factory overhead: $80

Currently the business sells 7000 office desks and the sales commission to each salesperson is 5% of the selling price.

**Required**

a Calculate the contribution margin per unit.
b Calculate the break-even point in number of units.
c Calculate the break-even point in sales dollars.
d What is the current profit made by the business?
e If the business wants to make a profit of $100 000 for the year, how many office desks would it have to sell?
f The marketing manager has suggested that the business spends an extra $40 000 per year on advertising. How many office desks would need to be sold to break even? He suggests that if it increases its advertising, the volume of office desks sold would increase by 5%. What would be the profit? What do you think of the marketing manager's suggestion?
g The production manager has suggested that direct labour can be reduced by 10% per product and that variable factory overhead can be reduced by 5% per product. What would be the new break-even point? She also suggests that by cutting these costs the business should reduce the selling price by 8% and that this will increase the volume of sales by 7%. What would be the new profit for the business? What do you think of the production manager's suggestion?
h What is the margin of safety?

5.6 Mr Potter sells various pottery items at local markets. His fixed expenses (depreciation on the kiln, utilities, tools and portable selling booth) are $5000 per year. The average price for a piece of pottery is $5.50 and the average variable cost (e.g. clay, paints, glazes and price tags) is $3.50 per item.

**Required**

a How many pieces of pottery must Mr Potter sell to just cover his expenses?
b If Mr Potter wants to earn $7000 profit, how many pieces of pottery must he sell? Prepare an income statement (using variable costing) to verify your answer.

5.7 The Green Finger Co. is considering investing in plant to produce a new compost bin. Annual sales of the new bin are estimated to be 4000 units at $21 per unit. The cost of the plant is $160 000 and it is expected to have a ten-year life and a zero residual value. Selling expenses related to the new product are expected to be 2% of sales revenue. The variable costs per unit to manufacture the compost bin are shown below.

| | $ |
|---|---|
| Direct labour | 5.00 |
| Direct materials | 8.25 |
| Variable factory overhead | 1.50 |
| Total variable cost per unit | 14.75 |

**Required**

a Determine the break-even sales per year in units for the new investment.
b What is the expected profit each year from the investment?
c Should the company proceed with the investment? Give reasons for your recommendation.

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5.8 Lim Enterprises Pty Ltd makes and sells a standard computer. For the year ended 30 June 2010, its income and expense details are as follows.

**Lim Enterprises Pty Ltd**
**Income statement for the year ended 30 June 2010**

| | $ |
|---|---|
| Sales (5000 items sold) | 9 750 000 |
| *Less* Variable expenses | 4 900 000 |
| Contribution margin | 4 850 000 |
| *Less* Fixed costs | 1 860 000 |
| Profit | 2 990 000 |

All computers are sold by salespeople. The marketing manager would like to put forward a proposal to pay all salespeople a 5% commission on sales for every item they sell. In addition he would like to increase advertising by $20 000 per year and employ another salesperson paying them $50 000 per year. He believes that these measures together would increase sales volume by 10% over the year.

The production manager also has a proposal to cut costs, both variable and fixed, by 5%. She has suggested that by doing this, sale prices can also be decreased by 5% and that this will lead to an increase in sales volume of 10%.

The managing director wishes to achieve a 5% increase in profits for the forthcoming financial year.

**Required**

As the finance manager, evaluate each alternative by considering the following:

a Calculate the break-even point in units and sales for each proposal based on the 30 June 2010 figures.
b Calculate the margin of safety for each proposal assuming that the results for 30 June 2010 are the budget target. Evaluate the risk of each proposal.
c Calculate the profit to be made under each proposal. Do both proposals meet the managing director's expectations?

5.9 With a sales figure of $500 000, Fidget Ltd reaches the break-even point for widget sales. Fixed costs are $200 000.

**Required**

a What is the contribution margin?
b If variable costs are $6 per widget, what is the selling price?
c If 55 000 widgets are sold, calculate the profit/loss.

5.10 Remember Enterprises manufactures miniature digital diaries. Variable costs are $30 per diary, the price is $45 and fixed costs are $90 000.

**Required**

a What is the contribution margin for one diary?
b How many diaries must Remember Enterprises sell to break even?
c If Remember Enterprises sells 6300 diaries, what is the net profit?

5.11 Burke and Wills Ltd runs a leisure centre and charges clients a one-off amount for a yearly subscription. The annual fee per person is $2000. An analysis of the business costs reveal the following per client.

| | |
|---|---|
| Direct wages of staff | $400 per person |
| Direct materials | $40 per person |
| Variable overhead | $500 per person |
| Variable selling expenses | $200 per person |


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The business has fixed overheads of $200 000 per year. Currently the business is budgeting on 600 clients per year.

**Required**

a Calculate the contribution margin per unit and in total.
b Calculate the break-even point in units and sales dollars.
c What is the current profit made by the business?
d What is the contribution margin ratio?
e The general manager wants to achieve a target sales figure of $1 400 000. How much will the profit increase by if this target is met?
f The marketing manager has suggested that sales would be boosted by reducing the fee by 10% and spending an extra $50 000 on advertising. What level of sales would be needed to break even under this proposal? To earn the same current yearly profit, what level of sales would be needed? What do you think of the marketing manager's suggestion?
g The facilities manager plans to reduce fixed overhead by 10% and cut direct wages by 5%. It is suggested that this will allow for a decrease in the selling price and lead to an increase of 10% in the number of clients per year. What selling price is needed to achieve the current yearly profit? What selling price is needed to see the current profits increase by 10%?
h What is the margin of safety?

5.12 Robinson Caruso Pty Ltd makes one product, a sofa bed, at its factory. It is currently reviewing its operations and a number of suggestions have been put forward. It expects to sell 7000 sofa beds in the budget year period and the selling price last year was $1500 per sofa bed. It has determined the following costs in relation to the sofa bed and its whole business.

| | |
|---|---|
| Direct labour per sofa bed | $200 |
| Direct materials per sofa bed | $300 |
| Variable manufacturing overhead per sofa bed | $400 |
| Variable selling and administration expense per sofa bed | $100 |
| Fixed cost (selling and administration) | $70 000 |
| Fixed cost (manufacturing) | $160 000 |

**Required**

a Calculate the contribution margin per unit and in total.
b Calculate the contribution margin ratio.
c What is the break-even point in units and sales?
d The marketing manager would like to increase advertising by $40 000 per year and she believes that this will increase sales volume by 10%. Is this idea beneficial to the business?
e The production manager has suggested cutting variable manufacturing overhead by 15% and fixed manufacturing costs by $30 000 per year and that the selling price should be reduced by 10%. Is this idea beneficial to the business?
f The managing director would like to know how an increase in sales of $30 000 per year would affect profits.
g What is the margin of safety?

5.13 Clean-it Pty Ltd makes washing machines. With its existing plant capacity the maximum production possible is 1000 units per year. Fixed costs are estimated at $36 000 per annum and the selling price of each machine is $240. Sales for the next year are expected to drop to 800 units. The cost of each washing machine is calculated as follows:

- Direct material cost: $40
- Direct labour cost: 10 hours at $8 per hour.

**Required**

a Calculate:
  i the break-even point
  ii the profit at maximum production
  iii the profit at an estimated sales level of 800 units.

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b Costs alter in the following manner:
- direct materials increase by 20%
- fixed costs come down by $12 000
- direct labour costs increase by $2 per hour.

What will be the new break-even point and the new profit at the estimated sales level of 800 units?

c Calculate the safety margin for the product.

5.14 Cords Pty Ltd manufactures a style of corduroy jeans that it sold last year at $36 a pair. The cost specifications for these jeans were as follows:
Variable cost per pair of jeans:
Materials: $13
Labour: $7
Fixed overheads per month: $52 800

Cords Pty Ltd made a profit of $22 080 each month.

**Required**

a How many pairs of jeans did Cords Pty Ltd sell each month?

b Cords Pty Ltd is now planning next year's operations. The sales director is proposing to boost sales by reducing the selling price to $34 and spending an additional $6000 per month on advertising. She estimates that these actions will enable the company to sell 5800 pairs of jeans each month. Evaluate the sales director's proposals, taking into account the expected impact on profits and the break-even point. State any assumptions you need to make.

c If the managing director of Cords Pty Ltd were to require that next year's profit show a 15% increase over last year's performance, how many pairs of jeans would have to be sold each month:
i assuming that the sales director's policies were adopted?
ii assuming that they were not?

5.15 Ladyjane Pty Ltd makes glass cabinets and its factory is operating at 100% capacity. It currently makes 4000 glass cabinets per year. To make the glass cabinets the costs are as follows per unit:
Direct materials: $300
Direct labour: $600
Variable overhead: $400
Fixed overhead: $200

In the manufacture of the cabinets the firm currently makes the glass component itself. However, it has received an offer to outsource the glass component. The outside supplier would charge $280 per unit to make the glass component and this would provide the business with the following savings:
20% reduction in direct materials
20% reduction in direct labour
20% reduction in variable overhead.

**Required**

a Should the business make or buy the glass component?

b Would your decision be any different if the business could rent out the excess factory floor space created by no longer making the glass component and thereby earn an extra $90 000 per year?

5.16 Topend Pty Ltd makes lounge chairs. One of the components is the wooden frame. Currently the business makes the frames and the costs are as follows:
Direct materials: $200 per frame
Direct labour: $250 per frame
Variable overhead costs: $100 per frame

The business's fixed overhead costs allocated to the wooden frames are $400 000 per year. Currently the business makes 5000 frames per year. The business has received an offer


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to outsource the wooden frames at a cost of $480 per frame. The business would be able to sell some of the equipment used to make the frames and this would reduce depreciation by $80 000 per year.

**Required**

a Should the business make or buy the frames?

b Would your decision be any different if the business could rent out excess factory floor space and thereby earn $40 000 per year?

5.17 Queensland Traders makes refrigerators. One of the parts, the engine, is purchased from overseas. The cost charged by the supplier has been increasing steadily and for the forthcoming year the price charged by the supplier will increase to $300 per fridge. Last year's price was only $250. For the forthcoming year, Queensland Traders have budgeted the following to make 6000 refrigerators.

| | |
|---|---|
| Direct materials | $400 per fridge |
| Direct labour | $200 per fridge |
| Variable manufacturing overhead | $150 per fridge |
| Fixed manufacturing costs | $2 400 000 for the year |
| Variable selling and administration costs | $50 per fridge |
| Fixed selling and administration costs | $800 000 per year |

To make the engine the production manager has estimated the following costs.

| | |
|---|---|
| Direct materials | $80 per engine |
| Direct labour | $30 per engine |
| Variable manufacturing overhead | $50 per engine |
| Increased fixed manufacturing costs | $50 000 for the year |
| Variable selling and administration costs | $5 per fridge |
| Fixed selling and administration costs | $10 000 per year |

In addition to the above, new machinery costing $300 000 will need to be purchased and this will be depreciated at the rate of $30 000 per year.

**Required**

Determine whether the business should continue to buy the engine or make it.

5.18 Torana Pty Ltd is considering the profitability of its three business branches and whether it should close down its Adelaide branch. Sales in Adelaide have been in decline for a number of years. The following data relates to these three products.

| Details | Perth branch $ | Hobart branch $ | Adelaide branch $ | Total $ |
|---|---|---|---|---|
| Sales | 600 000 | 800 000 | 400 000 | 1 800 000 |
| Variable costs: | | | | |
| Manufacturing | (241 000) | (378 500) | (197 500) | (817 000) |
| Selling | (47 600) | (56 700) | (21 400) | (125 700) |
| Fixed costs | (185 000) | (183 000) | (190 000) | 140 000 |
| Profit (Loss) | 126 400 | 181 800 | (8 900) | 299 300 |

Of the fixed costs 70% are allocated based on the rental cost for the factory in each branch. The other 30% are discretionary costs. For the Adelaide branch these would be eliminated if it were closed down.

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**Required**

Comment on whether the business should close down the Adelaide branch.

5.19 Jagger Stones Pty Ltd sells only two products: bedside lamps and standard lounge room lamps. The detail relating to these two products is as follows.

| | Bedside lamp | Standard lounge room lamp |
|---|---|---|
| Selling price per unit | $90 | $120 |
| Direct materials per unit | $30 | $40 |
| Labour cost per unit | $10 | $15 |
| Variable overhead cost per unit | $20 per unit | $30 per unit |
| Anticipated sales volume | 4000 units | 3000 units |
| Machine hours to produce one unit | 1 hour | 1.5 hours |

The fixed overhead cost of manufacturing is $120 000 per year and other costs of running the business are fixed selling and administration costs of $85 000 per year.

**Required**

a Calculate the sales mix.
b Calculate the weighted average unit contribution margin.
c Calculate the break-even point in units given the sales mix above.
d Calculate the contribution per unit of the machine resource.
e If the business had only 7000 machine hours available what should it produce?

5.20 Sharks Ltd makes two clothing products: shorts and dresses. The following information relates to these items. It is considering the introduction of a third new product, a shirt.

| | Shorts | Dresses |
|---|---|---|
| Selling price per unit | $100 | $80 |
| Variable costs per unit | $40 | $35 |
| Anticipated sales volume per year | 5000 units | 4000 units |
| Machine hours to produce one unit | 2 hours | 1 hour |

The total fixed manufacturing overhead cost is $200 000 per year and the fixed selling and administration costs are $110 000 per year.

The introduction of a shirt product would see the following costs.

| | |
|---|---|
| Selling price per unit | $50 |
| Variable costs per unit | $10 |
| Anticipated sales volume per year | 3000 units |
| Labour hours to produce one unit | 0.5 hours |

The business production manager believes that the shirt will provide a good profit margin to the business. However, the introduction of this new product is constrained as the business only has an extra 2000 hours machine time available at its factory.

**Required**

a Calculate the sales mix for the three products.
b Calculate the weighted average unit contribution margin.
c Calculate the break-even point in units, given the sales mix above.
d Calculate the contribution per unit of the machine resource.
e What do you recommend the business produce of the three products?


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5.21 Bulldogs Fremantle Ltd makes two jewellery products: a necklace and bracelet. The following information relates to these items.

| | Necklace | Bracelet |
|---|---|---|
| Selling price per unit | $100 | $80 |
| Variable costs per unit | $40 | $35 |
| Anticipated sales volume per year | 4000 units | 5000 units |
| Labour hours to produce one unit | 3 hours | 2 hours |

The total fixed manufacturing overhead cost is $200 000 per year and the fixed selling and administration costs are $110 000 per year.

**Required**

a Calculate the sales mix.
b Calculate the weighted average unit contribution margin.
c Calculate the break-even point in units given the sales mix above.
d Calculate the contribution per unit of the labour resource.
e If the business had only 20 000 labour hours available what should it produce?

5.22 The Threadbare Clothing Company has to decide whether to produce trousers or skirts. The manager knows that the demand for trousers is 1200 per month at a selling price of $45 each and the demand for skirts is 800 at $60 each. Costs of production are as follows:

| | Trousers | Skirts |
|---|---|---|
| Monthly rent | $550.00 | $550.00 |
| Material per unit | $15.00 | $21.00 |
| Labour hours per unit | 1.25 | 0.75 |
| Selling costs per unit | $0.25 | $0.30 |
| Administration costs | $1000.00 | $1000.00 |
| Labour rate per hour | $8.50 | $8.50 |
| Depreciation on plant | $120.00 | $120.00 |

**Required**

Advise Threadbare's management on whether it is more profitable to produce trousers or skirts, giving the break-even points and the level of profit or loss for each product.

5.23 Snowflake Pty Ltd makes one product, a clothesline. Each item sells for $450 each. The business currently sell 5000 clotheslines per year and its costs based on this amount are as follows.

| | |
|---|---|
| Direct materials | $500 000 |
| Direct labour | $300 000 |
| Variable expenses | $250 000 |

The total fixed costs for the year are $400 000 and the factory can only produce 6000 clotheslines per year.

The business has received a special order for 1000 clotheslines from an overseas company. It has agreed to pay only $350 per clothesline. The business would save $30 per unit in selling costs but would incur an extra $10 per unit in packaging costs to transport the items overseas.

**Required**

a Should the business accept the special order?
b If the special order was for 2000 items would the offer still be acceptable? What other factors may need to be considered in making this decision?

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5.24 Raindrop Ltd produces a netball goal stand and hoop at a selling price of $150 each. These are made at its factory, which has a maximum capacity of 10 000 items per year. Currently the business produces 9000 units per year. The costs to produce the 9000 units are as follows.

| | |
|---|---|
| Direct material per unit | $30 |
| Direct labour per unit | $20 |
| Variable expenses per unit | $40 |
| Fixed costs per unit | $20 |

The business has received a one-off special order for 800 basketball hoop units and the firm making the offer is prepared to pay $100 per unit. The direct material cost of the basketball hoops would be $5 less per unit and other costs would remain the same except that the firm would need to buy in a special equipment item costing $10 000 – a cost that would have to be written off over the special order.

**Required**

a Should the business accept the special order?
b If the special order was for 2000 units should the business accept the order?

5.25 Sory Ltd manufactures a range of television sets. At present, the company is able to sell only 80% of the plant's capacity of its 20-centimetre digital sets. These sets are sold to retailers for $200 per unit. With the present production, Sory sells 100 000 sets and has fixed costs of $7 500 000 and variable costs of $100 per unit.

**Required**

a What is the present profit?
b If Sory reduced its price to retailers to $185 it believes it would be able to operate at 100% capacity. Should Sory take this step?
c Low Price Stores Ltd has offered to purchase 20 000 sets at $175. If Sory accepted this offer, the variable costs on the additional sets would be $95 because there would be no marketing costs. Given that Sory is operating at 80% capacity, which of these three options produces the maximum profit:
   i the present production
   ii reducing the selling price to $185
   iii retaining the existing price of $200 and accepting the special offer to sell 20 000 sets to Low Price Stores?

5.26 XYZ Ltd manufactures two products. On average, it sells 40 000 units of product 1 and 60 000 units of product 2 each year. This year the company has a restricted advertising budget of $50 000, which is only enough to effectively promote one of its products. The marketing department estimates that average sales of product 1 will increase by 20% if it is advertised, while product 2's average sales will increase by 15% if it is advertised. The following data is provided.

| | 1 | 2 |
|---|---|---|
| Selling price per unit | $20 | $30 |
| Variable cost per unit | $10 | $14 |
| Fixed costs ($800 000) per unit based on average sales levels | $5 | $10 |
| Production time per unit (direct labour hours) | 2 | 4 |

**Required**

a Assuming unlimited direct labour hours, which product should be advertised?
b Assuming there are only 336 000 direct labour hours, would this change your decision?


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5.27 Greenacres Pty Ltd has three departments in its business and its financial data is as follows.

| Details | Clothes $ | Toys $ | Food $ | Total $ |
|---|---|---|---|---|
| Sales | 100 000 | 120 000 | 60 000 | 280 000 |
| *Less* Variable costs | 40 000 | 55 000 | 35 000 | 130 000 |
| Contribution margin | 60 000 | 65 000 | 25 000 | 150 000 |
| *Less* Fixed costs (allocated) | 13 000 | 20 000 | 27 000 | 60 000 |
| Profit (Loss) | 47 000 | 45 000 | (2 000) | 90 000 |

Fixed costs are allocated based on the amount of floor space taken by the department. Sales in the food department have been declining and the general manager of the business is considering closing down the food department.

**Required**
Comment on whether the business should close down the food department.

# Investigation

1 Choose a product or service and then search on the internet for a business that makes this product or service. Using this business website, research as much as you can about the costs involved in this product or service.

2 Carry out a survey of a number of local businesses to find, for each of them, the information listed below. Produce a report comparing these businesses from the point of view of the aspects of their costing that you have researched.
   a List some of the fixed and variable costs for each business.
   b Do you think their costs would be mainly fixed or variable? Explain your reasons
   c Give an example of a sunk cost for each type of business.
   d How many different types of products or services does each business sell?
   e For each business, which product or service do you think they sell more of?
   f What resource constraints or capacity constraints do you think they might have now or encounter in the future?
   g What factor(s) (e.g. market forces, consumer demand or competitors) do you think would have the biggest influence on the profit, sales volume, costs and selling price for each business surveyed?

# Essay

'Break-even and contribution margin analysis are not relevant in determining the success of a business as it is the final profit that really counts.'

Comment, in essay format, on this statement discussing in your answer the following:

- the nature of costs and how these can affect business decisions
- the concepts of break-even and contribution margin analysis
- what is relevant information in relation to costs and income and how this affects business decisions
- how break-even and contribution analysis can be used to assist managers to make good business decisions.

# Ethics case study

Rotary Machines Ltd is a company that has been manufacturing a revolutionary new engine for motor vehicles for 10 years. It employs 1000 workers and the economy of Winjarra is completely dependent on Rotary Machines.

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On 10 July 2010 the company won a major contract with the Bolden Motor Company to provide orbital engines for all its cars from 1 January 2011. In order to meet the production requirements, the company would need to make a significant investment in additional manufacturing equipment and employ more workers.

The costs of operating in Winjarra have increased because of higher rates and taxes, as well as wage demands flowing from a strong local trade union. The company would be reluctant to invest significant funds if increases in costs are likely to continue to be a problem.

The company has received an approach from the mayoress of a small city 500 kilometres from Winjarra. The mayoress would like Rotary to move its entire operation to her city and she has offered the following incentives:

- a large parcel of land with no rates and taxes for five years.
- a workforce where the average labour costs are 25% lower than in Winjarra.

In return, Rotary must employ local residents. This move could allow Rotary to avoid the cost pressures in Winjarra, which, in turn, would allow it to compete more effectively in foreign markets.

## Discuss

a Who are the stakeholders in this decision?
b What quantitative and qualitative factors are relevant to this decision.
c Are there any ethical issues for the management of Orbital Machines to consider?


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# Chapter 6
# BUSINESS AND THE COMMUNITY

## What You Will Learn

After studying this chapter you should be able to:

1 Identify the costs and potential income associated with engaging in socially and environmentally responsible practices
2 Discuss the ethical issues encountered in financial dealings between business owners or managers and their employees, clients and investors
3 Explain the concept of insolvency and bankruptcy relating to the financial management of business
4 Outline the importance and impact of legislation dealing with insolvency and bankruptcy, including the order of repayments to creditors

## Introduction

The government and the community have a large impact on the operations of a business. Governments pass legislation that they consider in the best interests of both the community and business. They do so because they wish to protect the rights of various groups and to ensure that other parties adhere to their responsibilities and obligations. The main purpose is to bring about cohesion in society and for the financial markets to operate in an effective and efficient way.

Some individuals and members of the community lobby for change. They will do so either through parliament or directly to a business concerned.

The impact of governments and the community on business operations is seen in many areas, including industrial issues, takeovers and mergers, foreign investment guidelines, health and safety regulations and advertising. We are not able to cover all these areas and since this textbook focuses on the financial management of business operations, we only look at three areas where government and community impact on business operations:

- The effect of social and environmental issues on the financial management of a business. There is a community expectation that businesses will be good corporate citizens. The impact of business on the environment is under scrutiny as governments consider what they can do to deal with climate change. In this chapter we shall explore the costs and potential income for businesses when they engage in socially and environmentally responsible practices. Corporate Social Responsibility (CSR) describes business combining the goals of profitability with their impact on society and environment.
- The importance of ethical practice in business relationships – one of the requirements of a successful business is good ethical practice. We examine some of the ethical dilemmas that confront businesses today.
- Government legislation relating to corporate insolvency and the bankruptcy of individuals as a result of their investment in a business. We examine the concepts of insolvency and bankruptcy and consider the need for legislation relating to these two issues and how it impacts on business financial management.

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# WHO INTERACTS WITH BUSINESS?

Before considering the main aspects of this chapter, we need to identify and analyse the characteristics of the many stakeholders with various interests in business operations and information. Accountants provide financial information to owners and other stakeholders; traditionally this occurs through regular reporting. Stakeholders have always been interested in the financial performance of a business. Increasingly they are concerned about the social and environmental impact of the business, the corporate governance of business operations and the ethical standards displayed by the directors and other business executives. Governments have also become more involved in these aspects as they strive to meet community expectations on such aspects as climate change and performance bonuses.

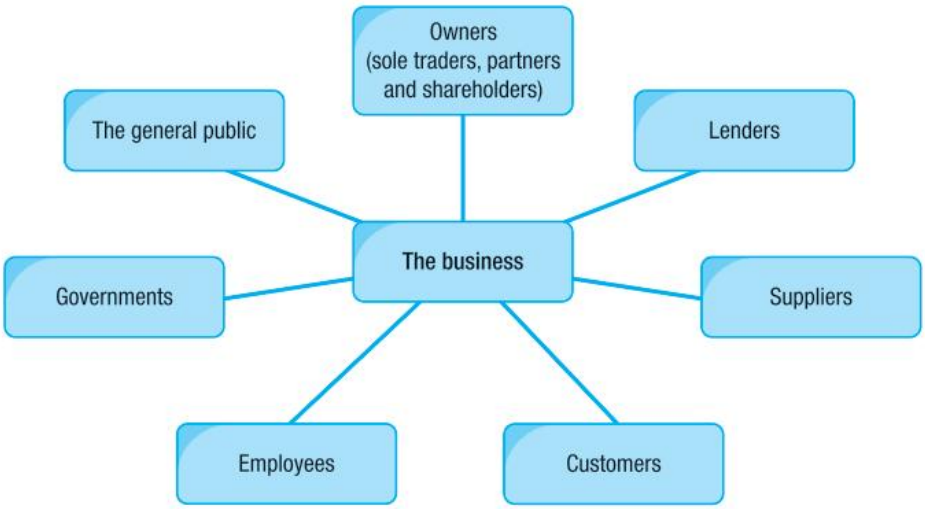



Figure 6.1 Stakeholders in business operations and performance

## Owners and shareholders

Shareholders and business owners need to know how the entity performed and seek assurance about future returns on their investment. Financial accounting is unlikely to provide all the information needed for this judgement for a variety of reasons – in particular, because it is largely, if not exclusively, based on the past. Although there are limitations to the usefulness of the information in annual reports, they are often the only form of report available to an owner/major stakeholder who is not involved in the day-to-day activities of the business. Such users therefore have to base their decisions on this information, despite its inadequacies. For example, a shareholder may use the accounting information contained in the annual report (by comparing the results of the business with those of another business) to decide whether to sell their shares. Shareholders' welfare is the focus of the Australian Shareholders Association. One of its aims is to act as a lobby group for shareholders' rights and interests.

## Lenders

People and organisations lend money in order to earn a return on that money. They are, therefore, interested in whether the entity is making sufficient profit to provide them with their return (usually in the form of interest). This information is normally provided in the income statement. Lenders are also interested in ensuring that the entity will be able to repay the money it has borrowed (extent of risk). Therefore, they need to ascertain what resources an entity controls and what it owes. This information is normally provided in the Statement of financial position (Balance sheet).

## Suppliers of goods and services

Goods can either be supplied on the basis that they are paid for when they are supplied or that they will be paid for at some agreed date in the future. In each case the supplier will


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be interested to know whether the entity is likely to stay in business and whether it is likely to expand or reduce its operations. Both these needs relate to the future. Therefore, they can never be adequately met by information in the annual report because this relates to the past.

### Customers

Like suppliers, customers are interested in an entity's ability to survive and carry on supplying them with goods or services. For example, if you are assembling cars you need to be sure that the suppliers of components you rely on are not about to go bankrupt and that they are likely to remain in business and continue to supply components efficiently and on time. Some of this required information is met, at least partially, by the financial statements.

### Employees

Employees depend on the success of an entity for their wages. Therefore, they are interested in whether the entity is likely to continue. In the long term, an entity needs to be a going concern. The annual reports may assist the employee in assessing the future viability of a business.

### Governments

Governments use accounting information for a number of purposes, the most obvious of which is the levying of taxes. For this purpose it needs to know how much profit has been made. The profit a company reports to shareholders in its Income statement is based on the application of accounting standards and concepts. However, the profit upon which a company is assessed for tax purposes is based on the application of the tax rules and regulations. While these rules are often identical to accounting rules, there are instances where they differ.

In certain cases, the government is both owner and customer (e.g. some state energy commissions) or public watchdog (e.g. the Environmental Protection Authority). It can combine any one of these roles with other roles, such as regulatory authority (e.g. Australian Securities and Investments Commission). For all these purposes governments use accounting information.

### The general public

The general public requires different types of information about entities in both the public and private sectors. Much of this information is not supplied directly by financial statements. For example, the public might be interested in a company's environmental performance or stance on fair trade issues or whether it is an equal opportunity employer.

Key Concept 6.1

**Stakeholders**

Businesses have impacts within the economy, on resources and within society. Stakeholders are those parties that have interests in the various effects businesses may have. The most immediate stakeholders are owners.

## CORPORATE SOCIAL RESPONSIBILITY (CSR)

Traditionally, companies (and, in particular, listed companies) have pursued the maximisation of profit as their major objective. Reporting on their financial performance has been their central focus. The Australian Securities Exchange's best-practice principle number 10 is about the need to recognise the legitimate legal and other obligations to

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all legitimate stakeholders. It could be argued that CSR reporting is one way a company can demonstrate a commitment to this principle.

CSR involves a business making changes to the way it does business – this can include changing its systems, assets, workplace culture, whom it deals with and what it sells. This change can result in costs and benefits to the business and lead to reporting on these matters with the aim of enhancing business reputation, fending off further regulation and reducing 'political' pressure on the business. When a business reports on its economic, social and environmental performance this is referred to as the 'triple bottom line'. (The matter of corporate social disclosure or reporting is dealt with in Chapter 12.)

In the twenty-first century there has been growing concern about the ability of the world's resources to meet the needs of current and future generations. This has been accompanied by an increase in the legislative requirements that protect employees and consumers in the business context. Sustainability and sustainable development are now important issues on the world agenda. But what is actually meant by 'sustainable development'?

**Key Concept 6.2**

**Corporate social responsibility (CSR)**

Corporate social responsibility is the reporting of societal impacts and environmental impacts of business activities – in addition to financial outcomes and linked to ethical values, legal requirements and associated with community expectations.

According to DANTES, sustainability development is:

> ... the concept of meeting the needs of the present without compromising the ability of future generations to meet their needs.
>
> The term was originally applied to natural resource situations, where the long term was the focus. Today, it applies to many disciplines, including economic development, environment, food production, energy and social organisation. Basically, sustainability and sustainable development refer to doing something with the long term in mind.

Source: DANTES, www.dantes.info, 2005.

The following mining company report highlights beneficial links between business activity, the enhancement to workers and local people and better use of resources.

**REALITY CHECK 6.1**

Argyle Diamonds' workforce policy for its mines workers is a good example of CSR:

> Through its localisation policy, Argyle is continuing to divert salary and wage payments from Perth to the East Kimberley. This diversion creates not only immediate economic benefits for the region, but also a whole range of unquantifiable benefits through improving the skills of the workforce and increasing the participation of Indigenous people in the regional economy. Argyle's preference for purchasing goods and services locally also provides a direct boost to the local economy and helps to ensure the ongoing viability of many local businesses.

Source: Argyle Diamonds website, Regional Partnerships page, www.argylediamonds.com.au, 2009.



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### Commentary

Having a local workforce is a cheaper alternative than the 'fly-in, fly-out' workforce (saving travel time and fuel) and it has a number of social benefits for the region, including the large number of Indigenous employees who will spend their income in the local community and build and support social and economic networks.

## Benefits of CSR

Because the practice of providing CSR reports is largely voluntary, it is interesting to consider why reporting entities would incur any costs on these areas. Measuring the benefits of CSR can be difficult and hard to quantify. New technology can result in decreases in costs although sometimes there is a large capital investment and the increased income can take many years to appear.

Other benefits of CSR can be an increased market share as the reputation of a business improves. Some CSR will result in greater efficiencies and therefore cost savings due to new innovations, less waste and less energy use.

Listed below are some more reasons why entities strive towards CSR and produce CSR reports:

- enhances the entity's ability to track its progress against specific targets
- makes it easier for the business to recruit employees
- assists the business to comply with some regulations requirements
- provides a greater awareness of broad social and/or environmental issues throughout the organisation
- allows some products and services to become more profitable
- enables a business to clearly convey the corporate message internally and externally
- improves all-round credibility because of greater transparency
- provides a licence to continue operating the entity's business in the community
- benefits the company's reputation through positive media coverage
- enhances business development opportunities and investor interest in business operations
- helps the business to become more competitive in the marketplace
- enhances staff morale due to greater motivation and productivity.

Some examples of the above benefits being demonstrated are:

- IGA supermarket including photos of local farmers who supply produce
- Westpac Bank scoring highly on the Global Reporting Index (comparison)
- mining companies recording accident-free work periods (safety)
- National Australia Bank aiming to be carbon-emission neutral
- McDonalds' association with Ronald McDonald House (charitable organisation).

Key Concept 6.3

**Benefits of corporate social responsibility**

Benefits of CSR include:

- favourable perceptions of the company among employees, customers and the general community
- compliance with government regulations
- possible future business opportunities through improved products or processes.

## Cost of corporate responsibility

The cost of CSR is perhaps more easy to measure than the benefits. When a business replaces an asset with a new technology that reduces energy usage or greenhouse gas emissions it is easy to determine the cost of the new asset. When a business decides to give money to a telethon or support a local sporting club it is easy to determine the cost of the sponsorship.

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The costs of CSR can not only include the cost of new assets, new technologies and sponsorship and donations but also the need to employ more staff often with specialist skills and knowledge. The cost of producing CSR reports and recording the data on which those reports are based may be quite considerable. Further examples of the cost of CSR is in the move to provide paternity leave to fathers of newborn babies and childcare facilities (or meeting the cost of child care) for employees who have preschool-aged children.

There are a number of reasons why businesses may be reluctant to commit themselves to CSR:

- the business may doubt the advantages it brings to the organisation and the limits it places on the free market goal of profit maximisation
- the business fears loss of competitiveness if competitors are not complying to the same extent (given that CSR reports, for example, are largely voluntary)
- the business believes that customers (and the general public) are not interested in it and it will not lead to increased sales
- the business already has a good reputation for its social and/or environmental performance
- it is too expensive
- it is difficult to gather relevant data and select appropriate indicators for reports
- it could alert social and or environmental regulators to an issue that may have otherwise gone unnoticed.
- there is lack of competition (e.g. monopoly media outlet such as newspaper), which removes the incentive to enhance an organisation's reputation by committing to CSR.

Key Concept 6.4

**Costs of corporate social responsibility**

Costs of CSR include direct costs, such as new processes, additional staff and equipment and the production of CSR reports. Indirect costs include loss of competitiveness.

## ETHICS IN BUSINESS

The word 'ethics' is derived from the ancient Greek *ethikos* (from *ethos* meaning 'custom' or 'usage'). As employed by Aristotle, the term included both the idea of 'character' and that of 'disposition'. The Oxford dictionary identifies morality as a 'concern with character or disposition or the distinction between right and wrong'. From this it would appear that ethics is concerned with moral behaviour and by 'moral' we mean that part of human behaviour that is formed primarily by national culture, parental influence and peer groups. A survey on professional ethics was conducted for CPA Australia by Leung and Cooper in 1994. The 1500 respondents indicated that family upbringing, conduct of peers and practices in accounting was what ethics meant to them.

A review of some of the literature on ethics provides some interesting insights into this important area. Some writers refer to business ethics – which, in itself, suggests that a particular set of ethics exists for business. This is, in fact, untrue as ethics apply to all parts of life and it's ridiculous to think that you discard one set of ethics and adopt another as you enter the office. *Ethics are like your skin: they go everywhere with you.*

Key Concept 6.5

**Ethical behaviour**

Ethical behaviour is concerned with correct behaviour, behaviour deemed to be moral and displaying the distinction between right and wrong. Business ethics are not different from personal ethical behaviour.

While it may be difficult to define ethics, a Dr Michael Josephson, in an essay entitled 'The need for ethics education in accounting' (1992), identified the characteristics of an



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ethical person as being honesty and integrity, fairness, fidelity or loyalty, keeping one's promises, caring for others, responsibility, respect for others and excellence and accountability.

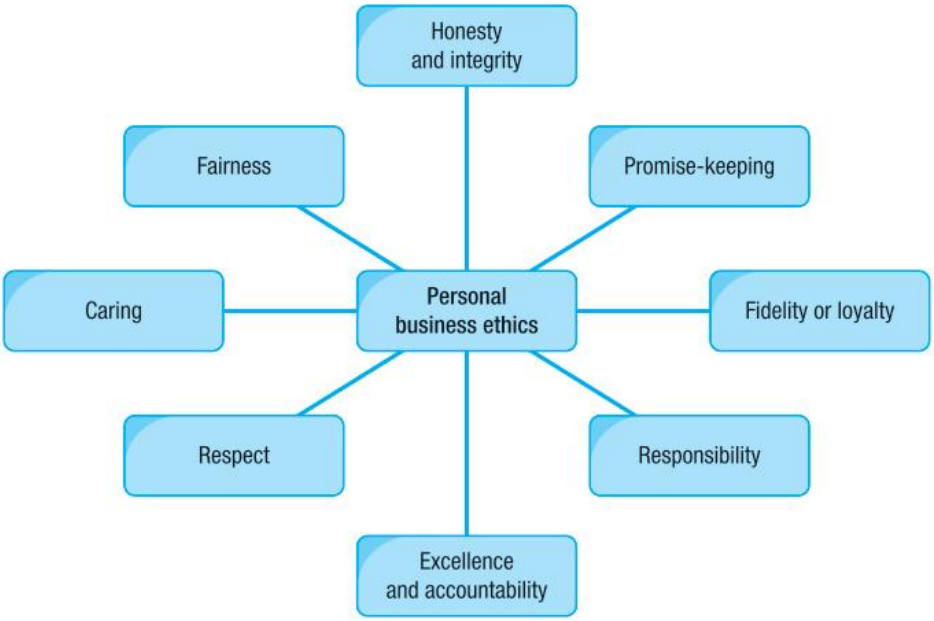



Figure 6.2 Characteristics of an ethical person

## Business problem or ethical issue?

It can be difficult to determine what is an ethical issue. Consider whether each of the following is an ethical issue or just a business problem:

1. A supermarket selling more expensive carry bags that look 'green' without any research to prove environmental benefits
2. A business sponsoring a high-resource-consuming (polluting) sport (such as motor racing) in the name of community wellbeing
3. Beer companies sponsoring sport
4. A large mining company running a promotional campaign, ignoring the rights of a minority group, in the name of regional employment opportunities
5. The fashion industry encouraging young children to wear fashion accessories and cosmetics like adults
6. Executives favouring family members for employment positions (nepotism)
7. Employing younger staff to save money on salaries
8. A company board of directors deciding their own remuneration packages
9. Employees using the company email system for their personal communication
10. Employees using sick leave entitlements to avoid work
11. Businesses using chemical products without due regard to their effect on the environment or employees.

## Why do people act in unethical ways?

Why do people not behave in an ethical manner? Josephson (1992) identified the following five reasons:

1. *self-deception* – to believe somehow that because it is business it does not matter. Phrases such as 'everybody does it' or 'to get along, go along' reflect self-deception. A common example is cheating on one's income tax return on the assumption that everybody else does. Just imagine what the streets of a city would be like if everybody dumped rubbish on the street because 'everybody does it'
2. *self-indulgence* – one defence for unethical behaviour is the assertion that it was done for someone else's benefit when in fact it was for the benefit of the individual who was being unethical
3. *self-protection* – many examples of fraud start from one incident and grow from there. In his book, *Rogue Trader*, Nick Leeson contends that his first illegal trade was done to cover a small error by a colleague. This small error grew to a $16 billion loss

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4 *self-righteousness* – the assertion that one is right no matter what others think. No doubt Bernard Madoff considered he was right! (see Chapter 11)
5 *faulty reasoning* – not correctly estimating the costs of being ethical versus unethical. Generally the costs of being ethical ('I will lose my job') are overestimated while the costs of being unethical ('I won't get caught' or 'I will repay this later') are underestimated.

In his paper 'Why I compromised my professional code of ethics', McKinley L Tabor (1992) recounts the costs to his life of unethical behaviour. The costs included imprisonment, loss of family and friends, loss of respect and other costs, all of which were in excess of what he embezzled from his employer.

## ETHICS AND BUSINESS

What is the relationship between business and ethics? Are ethics good for business? The answer to such a question depends on how we assess what is good for business. If we use short-term profitability then it may be that on some occasions doing what is ethical may not enhance short-term profitability. It may well improve long-term profitability, but if you are not going to be in the company in the long term, what is the incentive to be ethical? This raises issues about the objectives of business. Is there some conflict between the goal of profit maximisation and ethical behaviour?

REALITY CHECK 6.2

### Case Study (a brief overview): Storm Financial Services

A Queensland-based finance business provided advice on share investments by encouraging clients to borrow extensively against their personal assets and invest the resultant cash in shares through the broker, Storm Financial Services. Following is a list of some of the events that took place:

- Storm Financial Services commenced in 2004 developing from an earlier business started in 2000.
- In 2005 Storm Financial took 130 clients on a reward three-week holiday to Alaska on company funds.
- The business expanded in 2007, with $4.5 billion funds and loans under advice (i.e. invested through Storm Financial) with 37 per cent of the amount funded by margin lending (borrowed funds). Typically Storm Financial took an up-front 7 per cent commission on the funds under advice.
- Storm Financial offered higher returns than competing finance firms and was able to rapidly expand its client base. By June 2007 it is estimated that the business had 13000 clients.
- In June 2007 Storm Financial took 400 clients on a three-week visit to Europe and later took other clients on an African safari.
- In November 2007 Storm Financial launched a prospectus to raise capital of $170 million with $43 million to go to the founders of the business. The prospectus fails.
- The share market crashes in October 2008. All the clients are advised to sell all their shares and return assets held to cash. Many clients lose much of their investment and are left with large, unmanageable margin bank loans.
- In October 2008 ASIC investigates after receiving complaints from clients about the advice they received from Storm Financial.
- December 2008: three directors resigned and the remaining two directors resolved to pay themselves $2 million dividend. It is said that these two directors had private jets, luxury mansions and prestigious offices.
- It is claimed that by January 2009 $2.4 billion had been lost from the value of assets under management.
- In January 2009 Storm Financial employees (115) are sacked with the appointment of receivers to handle the affairs of the business.


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- The Financial Planners Association expels Storm Financial from the organisation.
- In March 2009 it is claimed that Storm Financial owes $74 million. The Federal Court orders that Storm Financial be liquidated at the request of ASIC.

Reported in the *Australian Financial Review*, 2 April 2009.

## Commentary

This brief insight into a 'successful' financial planning business in the boom time of recent years fell apart when the high-gearing, high-living, excess-focused activities could not be sustained during the severe recession of 2008 and 2009. Banks, as well as the principals of the business, appear to have been culpable for not considering the potential for failure and its effects. Many small and elderly investors have been left without any assets, with considerable debt and without any prospect of repayment.

Given that Storm Financial employed trained accountants and accessed commercial bank loans, the knowledge of risk and ethical breaches must have been apparent to many people.

- How informed was the corporate regulator (ASIC) of the extent of risk and business failures?
- Was this collapse as a result of greed, ethical failures, poor business practice or just bad luck?

Storm Financial Services provides a case study of ethical and business relationships between:

1 shareholders and management
2 management and employees
3 management and investors (lenders)
4 management and clients
5 management and the regulators.

### Shareholders and management

The major shareholders (directors) seem not to have acted responsibly as managers. There appears to have been a free-wheeling attitude and a lack of prudence in expecting constant high returns and extracting high levels of reward and remuneration from the investment base. It could be said that they lacked care and respect for the clients and ultimately were not fair in their business dealings.

### Management and employees

No doubt the employees took part in the business success. However, professional employees (such as trained accountants, lawyers and financial advisers) could have been expected to exercise quality professional judgement and use their training to detect and report flaws in the business model. Charging excessive fees and commission to vulnerable and perhaps gullible customers was not sustainable. Perhaps the incentives, such as overseas travel, overcame their need to act ethically?

### Management and investors (lending banks)

The major question for the investors was the motive. The business model was based on using funds in a high-turnover, high-fees operation. Many of the clients were made vulnerable by committing their total wealth to what appeared a fail-safe business. When the economic cycle deteriorated the clients lost everything. However, unless the investors are found criminally responsible, their own business situation will probably not be as forlorn as that of the clients. Limited liability will protect the business investors.

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The banks that provided the loans for the share purchasing, based on clients' homes as equity, could have been more caring and accountable. Were their lending practices excellent? Apparently many of the bank branches were acclaimed by their head office for the volume of business they created based on Storm Financial Services' activities.

### Management and clients

The clients were keen to make good in the economic boom. It could be said that the clients were avaricious (greedy). Maybe they were gullible. The clients should have taken greater care, sought more advice and diversified their investments. If the clients were vulnerable and the business managers predatory, it was a disaster waiting to happen. The current outstanding amounts of accounts payable ($74 million) represent a further category of clients (service suppliers) who have been left exposed and who may lose their funds.

### Management and the regulators

Should the Australian Securities and Investment Commission, as the Corporate and Financial Services regulator (see Chapter 8), have taken action earlier to prevent or at least expose the activities of this firm, which eventually brought discredit on the entire financial sector and left many small investors in financial ruin?

## Ethics in practice

Businesses, of course – even if, like companies, they are themselves separate legal entities – are run by people. It is the decisions of those people that determine the ethical behaviour of the business. The following story illustrates the issue of individual ethical decision-making.

REALITY CHECK 6.3

### Making the right decision?

Business or professional ethics is a marrying of the rules of society with the moral principles by which a society is judged. The question of business ethics is well illustrated in this story:

> There was once a very wealthy man who loved his money so much that he did not have many friends. In fact, he had only three friends. First, he had a lawyer friend who helped him structure his transactions to take advantage of other people. Second, he had an accountant friend who helped him count his money. And, third, he had a minister of religion to whom he went every Sunday to confess the fact that he had taken advantage of others during the week. When he got old and was about to die, he called his three friends together and said, 'I have been wealthy all my life and I cannot stand going to the grave poor. I am going to give you each an envelope with $50000 in it. I want you to promise me that when I die you will go to my casket and each deposit the envelope in the casket.' They all promised that they would.
>
> A short time later the rich man died. As the three friends passed by the casket, each deposited an envelope. The casket was sealed and the body was buried. Not long after, the minister developed a guilty conscience; he called the other two and said, 'We have to meet and talk about this.' When they met he said, 'You know, I thought about the poor members of my congregation. I thought about that money rotting down



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there in the grave and I just could not do it. I only put $25 000 in and I kept $25 000 to help the poor.' Then the lawyer said, 'If you really want to know the truth, he had asked me for free legal advice so often that I felt he owed it to me, so I kept $25 000 and only put $25 000 in.'

Finally, the accountant said, 'You know I cannot believe you would do that. I cannot believe you would both be unethical. I want you to know that in my envelope was a cheque for the full $50 000.'

*Source:* WS Albrecht (ed.), *Ethical Issues in the Practice of Accounting,* South-Western, Cincinnati, Ohio, 1992.

There were several choices available to the accountant:

1 He could have put an empty envelope in the grave, as the deceased only asked him to deposit the envelope. This would have been following the letter of the request but not the spirit.
2 He could have done what he did in the story. Here he followed the letter of the request and some would say a small measure of the spirit of the request. Of course, we know the cheque will never be cashed and that the accountant is $50 000 better off. Is the accountant guilty of stealing the money?
3 He could have carried out the deceased's wishes to the full, following the letter and the spirit of the request, i.e. deposited the full $50 000 in cash in the casket.

### Commentary

As a professional person, the accountant was obliged to carry out, in full, the wishes of his client and friend regardless of his personal feelings or beliefs. Business or professional ethics mean just that: clever or smart alternatives are not acceptable.

Remember, one of the characteristics of an ethical person referred to by Josephson (1992) was promise-keeping. All three individuals should not have promised to put the envelope in the casket if, in fact, they knew they could not do it. The lawyer should have asked for his unpaid time to be paid by the wealthy friend. The minister should have asked the friend to consider donating to the church. The accountant did not comply with the spirit of his friend's request and all three acted unethically.

## Codes of behaviour

Given the enormous costs of fraud and embezzlement, the potential gains to society of ethical behaviour are significant. The difficulty is in developing an appropriate code of ethical behaviour, which is adhered to by all people in business. Business or professional behaviour can be governed by sets of rules laid down by the controlling bodies; members of the organisation or profession are expected to follow these rules. In some professions, ethics has come to mean these rules. Professional ethics should be regarded as 'standards of professional conduct'.

As noted earlier, in some way a lack of ethics was responsible for some of the gains made by some of the high-flyers in the late 1990s and early 2000s. However, many individuals and businesses have since paid high costs for being unethical. They include Enron Corporation, Arthur Andersen, Lehman Brothers and Bernard Madoff. There are a range of financial sectors where professionals operate within their industry code of ethics.

### Code of ethics for accountants

Professional accountants, in the many spheres in which they are of service, should always be ethically correct. To this end accounting organisations in most countries have

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developed codes of professional ethics. Accountants employed by businesses should bear their code in mind when carrying out their duties on behalf of the business.

More information on codes of conduct for the professional accounting bodies and other professional finance industry organisations can be found in Chapter 1.

www.charteredaccountants.com.au

Visit the website of the Institute of Chartered Accountants Australia (ICAA) to see the Code of Ethics for Professional Accountants applicable to all ICAA members.

## Australian Securities Exchange Principles

The Australian Securities Exchange (ASX) Corporate Governance Council issued the *Principles of Good Corporate Governance and Best Practice Recommendations* in March 2003 and companies have been expected to comply with them since 2005. They were revised in 2007.

Listed companies are expected to comply with the principles and recommendations and if they don't comply they are expected to explain why (i.e. there is an 'if not, why not, approach').

### The Corporate Governance Principles and Recommendations

Principle 1: Lay solid foundations for management and oversight – establish and disclose the respective roles and responsibilities of board and management.

Principle 2: Structure the board to add value – have a board of an effective composition, size and commitment to adequately discharge its responsibilities and duties.

Principle 3: Promote ethical and responsible decision-making – actively promote ethical and responsible decision-making.

Principle 4: Safeguard integrity in financial reporting – have a structure to independently verify and safeguard the integrity of their financial reporting.

Principle 5: Make timely and balanced disclosure – promote timely and balanced disclosure of all material matters concerning the company.

Principle 6: Respect the rights of the shareholder – respect the rights of shareholders and facilitate the effective exercise of those rights.

Principle 7: Recognise and manage risk – establish a sound system of risk oversight and management of internal control.

Principle 8: Remunerate fairly and responsibly – ensure that the level and composition of remuneration is sufficient and reasonable and that its relationship to performance is clear.

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## Code of conduct for company directors

Corporate reputation is one of the keys to achieving continuing bottom line success. In recent times company directors have been under close scrutiny regarding performance bonuses and 'golden handshakes'. The Australian Institute of Company Directors has a code of conduct for it members to abide by. This is seen on the next page.



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### Australian Institute of Company Director's Code of Conduct

1 The member should act honestly, in good faith and in the best interests of the company as a whole.
2 The member should have a duty to use care and diligence in fulfilling the functions of office and exercising the powers attached to that office.
3 The member should use the powers of office for a proper purpose, in the best interests of the company as a whole.
4 The member should recognise that the primary responsibility is to the company as a whole but may, where appropriate, have regard for the interest of all stakeholders of the company.
5 The member should not make improper use of information acquired as a director.
6 The member should not take improper advantage of the position of director.
7 The member should properly manage any conflict with the interests of the company.
8 The member has an obligation to be independent in judgement and actions and to take all reasonable steps to be satisfied as to the soundness of all decisions taken by the board of directors.
9 Confidential information received by the member in the course of the exercise of directorial duties remains the property of the company from which it was obtained and it is improper to disclose it, or allow it to be disclosed, unless that disclosure has been authorised by that company, or the person from whom the information is provided, or is required by law.
10 The member should not engage in conduct likely to bring discredit upon the company.
11 The member has an obligation, at all times, to comply with the spirit, as well as the letter, of the law and with the principles of this Code.

Source: Australian Institute of Company Directors, National Office, Level 2, 255 George Street, Sydney, NSW 2000, Australia. www.companydirectors.com.au, September 2005.

The above code of ethics would have been a useful document for the directors of Storm Financial Services to have considered and applied more scrupulously.

## Executive payments

Applying points 3, 6 and 10 of the Company Directors' Code of Conduct may provide direction to company remuneration committees on the often-discussed issue of excessive executive remuneration. The Australian Corporations legislation covers aspects of this subject. The law requires changes to payments for company executives to be put to a shareholder vote at the annual general meeting. However, the vote is not binding on the board of directors and usually the board has the support of major shareholders.

The level of executive payments continually increased during the boom time, until the global financial crisis period in 2008–09; once again the issue is in the public forum.

A reference from Telstra's 2008 Annual Report had the two top executives receiving $13 394 523 and $11 782 230 in benefits. (It is compulsory for all public companies to report the highest level of executive remunerations in the annual reports.) Principle 6 from the above code bears scrutiny in relation to the level of executive rewards.

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## Continuing good reputation

Ethics in business is vital to a business's continuing good reputation and success. Without it, a business is unlikely to succeed in the long term in today's global economy as there is too much scrutiny – particularly through the media, government agencies and various community lobby groups.

The *Australian Financial Review* reported (3 April 2009) that the Australian Competition and Consumer Commission had Coca-Cola recant misleading health-related advertisements. The advertisements claimed the propositions that Coca-Cola 'makes you fat', 'rots your teeth' and 'is packed with caffeine' were all myths. Some might say that the legal challenges aided in promoting Coke (any publicity is good publicity), while others could claim that the episode has had a negative effect on Coca-Cola's reputation.

## Types of ethical dilemma

There are many ethical dilemmas faced by those who are given a stewardship role in relation to a reporting entity. Responsible officers can include the company directors, company secretary, auditors, chief financial officer, general manager, chief executive officer and many other top managers in a company.

### Conflict of interest

A conflict of interest occurs when a business owner or employee – usually a manager, accountant or finance officer or director – has competing interests in a decision that must be made. For example:

- A company director (who could be a shareholder) is involved in a board of directors meeting, which is making a decision on whether to invest or acquire assets in another company in which the director has ownership or part-ownership.
- An accountant may be giving advice to two separate clients on an issue and the accountant is aware of information regarding both clients. If given to one client and not the other, this information would give one a competitive advantage. To give advice to one or both clients in this situation could place the other in a less advantageous position.
- A financial consultant may be approached by a client for advice on an investment project or asset in which the financial consultant also has an interest, such as part-ownership.

A conflict of interest is essentially a situation where objectivity and/or independence may not be possible. When a conflict of interest arises the way to deal with it is for the individual to declare the conflict of interest to the group or other person(s) and then not participate in the decision-making process.

### Confidentiality

People in positions of authority and responsibility often have access to confidential information. They may, for example, be aware of contractual relationships, amounts paid for services rendered or goods provided, proposed mergers, negotiations concerning a takeover, client financial affairs or information concerning employees.

Those who have this privileged information should not release it to others to the disadvantage of the company that employs them. For example, the sales manager should not reveal details of a forthcoming promotional campaign to a friend who works for a competitor.

The only time when confidentially can be breached is when there is a legal or professional duty to do so.


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## Making use of financial information for personal gain

In some situations employees, accountants, financial officers, business owners and company directors may, for example, have access to privileged financial information from which they can gain financially. This is commonly called insider trading and it is prohibited under the *Corporations Act 2001* when it relates to financial securities, such as shares, debentures and bonds.

A business owner or manager must disclose to the market, usually via the ASX, all information that may affect the value of such securities as shares, debentures and bonds. When an employee, accountant, financial officer, business owner or company director knows of something that would affect the market price of these securities and does not disclose it so that they can make a financial gain then this is considered insider trading. For example, people within the business may be aware, before it becomes public knowledge, of a major mineral discovery (e.g. an oil strike) by a company, that the company is trading at a loss or that the company is about to take over or merge with another company and subsequently increase or decrease their interest in the securities concerned so as to make a profit or save themselves from a loss at the expense of others.

## Using company assets for personal gain

Employees of a business are often given responsibility for the control of non-current assets or inventory or supplies or cash that belong to the business. A company director, business manager, accountant or finance officer should not use business assets for their own personal gain. Examples of this may range from taking stationery home for personal use, using a company car for a personal holiday or utilising a major non-current asset to assist in home renovation. This is a breach of the duty of care and a lack of honesty and integrity. This does not apply to the use of business assets where these are permitted by the company as a fringe benefit of employment.

## Schemes to evade or reduce taxation

Taxation is a major cost to a business or individual and there is sometimes a temptation to reduce or evade tax altogether. Compliance with the taxation laws is vital to the success of any business.

Taxation *avoidance* is considered to be the reduction of taxation liability within the taxation laws. It may be possible to work within the taxation laws – for example, to structure a business in such a way as to reduce the tax payable or to make the most of allowable tax deductions. It is important in these situations to ensure that full disclosure of relevant information is made to the relevant taxation authority.

Taxation *evasion* is seen as the deliberate attempt by a business or individual to evade paying tax by illegal methods. This usually involves the business or person concealing or falsifying the details that they forward to the relevant taxation authority. This may involve deliberately understating income or overstating expenses or deductions. Tax evasion is a crime and can result in fines or imprisonment. Business managers may seek to justify the manipulation of figures for this purpose on the grounds that it will all be the same in the long run and that it is in the best interests of the shareholders in the meanwhile.

## Manipulation of financial information

Managing a business profitably is not always achievable. People sometimes make poor financial decisions and this can affect shareholders, employees, lenders and suppliers, for example. Business owners and directors may be tempted to hide this information from stakeholders by falsifying records and financial information. Manipulation of financial information – or what is commonly called 'creative accounting' – is the 'window-dressing'

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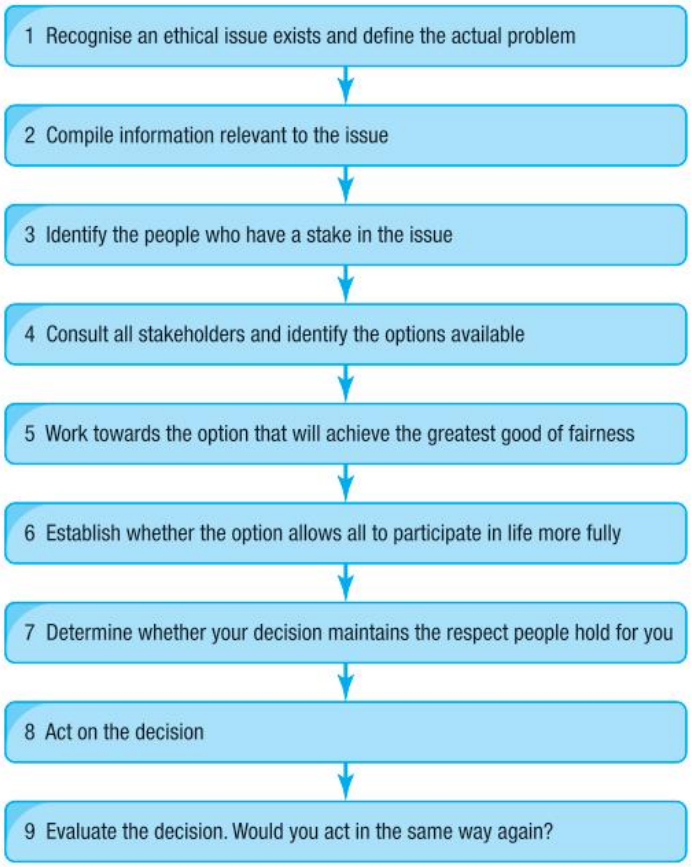



Figure 6.3 A framework for solving ethical dilemmas

of the profit or other financial aspects of a business to achieve some preconceived objective, such as:

- reducing political pressure on the company
- improving the amount of bonus payments given to top management
- attempting to alter the debt-to-equity ratio of the company to improve the possibility of obtaining debt finance for the company.

Depending on the nature of the manipulation, it may be technically within the law. However, is it ethical? Is the manipulation being used to benefit the directors or business owners or managers at the expense of others, such as shareholders or lenders?

REALITY CHECK 6.4

### An ethical dilemma

An ethical dilemma that faced the Western Australian government in 2009 was the decision related to placing an oil- and gas-producing industry at James Price Point on the Kimberley coast, a pristine environment with Indigenous cultural values.

Among other issues, the government had to balance the extinguishing of native land rights to the area against the future financial benefits to the local Indigenous community in terms of employment and royalty income. The government also had to weigh up the likely environmental damage that would be caused by the project against the wealth that it might generate in the future for the people of Western Australia. Although this particular example deals with dilemmas faced by a government, similar problems are frequently confronted by companies.

Review how the matter was decided and explore the extent to which other stakeholders' interests were met or ignored.

## INSOLVENCY AND BANKRUPTCY

Business operators must ensure that their businesses have sufficient profit and cash flow to pay their debts, including creditors and loan repayments, when they are due. If not then they are said to be *insolvent*. A further test of insolvency is whether the total assets of the company are greater than its total liabilities. A *solvent* person or company is able to pay all debts as and when they become due and payable.

If a business becomes insolvent, stakeholders in the business require an orderly process for the settling of affairs and protection of their rights.

The law provides an organised and just process whereby the assets of the business can be sold and the proceeds applied to pay off creditors. This ensures the most equitable outcome for both the creditors and the insolvent entity. It is possible for not-for-profit organisations such as clubs, to become insolvent, but in many cases the amounts involved may be too small to justify formal legal process.


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Insolvency usually occurs due to poor financial management. This may be due to such management practices as:

- overstocking
- lack of or poor budgeting
- poor credit policy resulting in excessively large amounts of accounts receivable
- lack of or poor record-keeping
- excessive debt in relation to equity (i.e. being too highly geared)
- lack of internal control
- poor cash flow due to lack of sales.

Insolvency may also occur because of factors external to the business, such as natural disasters or the collapse of other businesses with which the business trades. Businesses should, if possible, try and spread their risk by operating across a range of products, suppliers and markets, so that the loss of one of these will not necessarily jeopardise their viability.

REALITY CHECK 6.5

Rob the Builder is the only electrical subcontractor working in a town in a Tasmanian foresting area. He has one vehicle to carry his tools and works alone with his apprentice. He gets all his work from one local home construction company. He gets all his building supplies from the local hardware store.

What are the risks to Bob's business and others if:

- he is injured and unable to work
- the local hardware store closes
- the housing construction company becomes insolvent
- the government decides there will be no more forestry
- the area is burnt out due to bushfires
- his vehicle breaks down or his tools are stolen?

If a business is unincorporated then the legal entity responsible – which is the owner or the partners – has unlimited liability to pay any outstanding debts of the business. They will be required to use private assets to fund the business debts. If the owner's private assets are not sufficient, then they will be declared *bankrupt*. If an unincorporated not-for-profit organisation became insolvent then the members may be liable to pay off the debts.

www.itsa.gov.au

Visit the website of the Insolvency and Trustee Service Australia to see the overview of fundamental principles of insolvency for individuals.

If the business is incorporated, such as a company, the liability of shareholders is limited to the unpaid portion of shares they have contracted to buy from the company. If shareholders have fully paid for their shares, only the company's assets are available to help pay outstanding debts.

This is not the case if the shareholder(s) or director(s) have given a personal guarantee of the company's debts. This may then cause the creditors to pursue the guarantor for repayment of the debt. If the insolvent entity is an incorporated club then liquidation principles would still apply; although, unless the amounts involved are substantial and there are significant assets involved, creditors may not be prepared to spend money to pursue legal action.

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## Legislation governing bankruptcy and insolvency

The main principles of modern insolvency laws are to provide for an orderly repayment to creditors. It will also provide, in the case of a company, the orderly winding up of the entity.

The legislation governing bankruptcy of individuals is the *Bankruptcy Act 1966* and that relating to the insolvency of companies is the *Corporations Act 2001*. Both are Federal acts of parliament. The Corporations Act is administered by the Australian Securities and Investments Commission and the Bankruptcy Act by the Insolvency and Trustee Service Australia.

This legislation is important as it protects the rights of creditors as well as business owners. It sets out the rights of creditors and provides them with remedies when a debtor (individual or company) is insolvent or bankrupt. It is also designed to set out the obligations of business owners in the event of insolvency or bankruptcy. These laws set out the process to be followed to ensure fairness and equity to all concerned.

# Bankruptcy

An individual who is unable to pay either private or business debts owing will be declared bankrupt. The *Bankruptcy Act 1966* sets out the detail concerning the process to be followed in the event of this occurring. The person gives up personal control of their assets and finances to a trustee, who is appointed to administer the person's financial affairs. They will sell all realisable assets and use this money to repay creditors. Usually either the person themself or a creditor applies for bankruptcy by lodging a petition and statement of affairs with the Official Receiver in Bankruptcy or with the Federal Court.

The person is required to complete a statement of (financial) affairs listing all known assets and liabilities. The person's debts are frozen. The trustee then controls all the person's assets and other creditors cannot legally independently pursue the bankrupt for repayments. After the trustee has sold assets they will use the funds available to make an orderly repayment of a percentage of each outstanding debt subject to a certain order of repayments. If there are any assets left over once all the creditors have been repaid and all expenses and fees of the trustee have been met, the remaining amount is returned to the bankrupt. After the bankruptcy period has expired the bankrupt is discharged and can resume normal financial affairs.

To allow the bankrupt to continue to live with some decency, some personal property is not taken to satisfy creditors. This includes personal clothing, tools of trade, a motor vehicle to a certain value, life assurance policies, certain property with sentimental value and superannuation payments, although there are certain limitations.



Key Concept 6.6

**Bankruptcy**

Bankruptcy is declared when an individual is unable to pay either private or business debts owing.

REALITY CHECK 6.6

### John Elliott to file for bankruptcy

by Emily Doak

John Elliott was once president of the Liberal Party, head of the Carlton Football Club and worth about $80 million. But he'll file for bankruptcy this week after creditors rejected a repayment offer. It marks the final chapter in the saga of rice milling company Water Wheel and Mr Elliott's grand plans to shake up the rice industry. Mr Elliott told the Country Hour, he'll just have to deal with the ignominy of being a bankrupt, but says, 'I'll be back!'

Source: ABC News, www.abc.net.au, 31 October 2005.

ISBN 9780170182058

## Insolvency for corporations

A company that is unable to meet its financial obligations may involve one or both insolvency processes. The directors are legally responsible to ensure the company is solvent and able to meet its financial obligations. If they allow the company to continue trading after they become aware that it is insolvent, they may be charged with criminal offences under the Corporations Act.

To determine whether a company is insolvent a court will consider such factors as:

- capacity to borrow more
- cash reserves
- assets available to repay debts due
- date debts are due for repayment
- working capital situation
- other sources of funds.

To try to solve a company's financial problems quickly an administrator (an accountant qualified as a liquidator) can be appointed by either a creditor owed money that the company will not or cannot pay or by a majority of the company's directors. The administrator will take over from the directors the running of the company's affairs. This halts all other claims by creditors until the administrator can organise orderly and just distributions of available assets to satisfy the company's debts.

The administrator will call a meeting of all the company's creditors, who are required to submit 'proof of debt' claims against the company. The administrator can continue to operate the company's business if it is considered that the company can trade its way out of its financial problems. This may involve selling off certain assets or entering into a *scheme of arrangement* with creditors whereby they agree to accept a percentage of the debt owing and to forgo the balance.

For example, a company may be trading profitably but because of excessive borrowings or poor cash management cannot pay its liabilities. There could be a number of solutions, including:

- With additional capital the company's debt-to-equity ratio could be reduced, the interest expense reduced and immediate debts paid off.
- If the market value of assets (e.g. land) is greater than the book value, this land could be sold and leased back or smaller premises rented.

However, such measures may take time, while the creditors may be demanding immediate payment. Under administration, the administrator has time to raise the capital or sell the assets and then pay the creditors.

REALITY CHECK 6.7

### Kleenmaid directors defend financial record

The directors of Kleenmaid Appliances have defended their handling of the company's finances.

The Queensland-based firm was placed in voluntary administration last week, leaving 6000 customers with invalid deposits and warranties.

In a statement posted on the internet, Andrew Young says there was no other option but to hand the business over to administrators Deloitte.

'As we work through the process we ask for your patience,' he said.

'We assure you that the process is as painful for us and our team as it is for you.

'However, be assured that we are doing all we can to minimise the impact on all those affected.'

Source: ABC News, www.abc.net.au, 14 April 2009.

- What obligations do the directors have in making the decision to place a company in administration?
- What effect will this have for related parties, such as customers, suppliers, employees and the wider community?

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Key Concept 6.7

**Voluntary administration**

Voluntary administration occurs when an administrator is appointed by either a creditor owed money that the company will not or cannot pay or by a majority of the company directors to seek ways of solving a company's financial problems. This may include the business trading its way out of the liquidity problem.

## Receivership

It is also possible that a *secured creditor* may apply for a receiver to be appointed when it is thought that a company may not be able to repay its debts. A secured creditor is one whose loan is secured against particular assets, which gives them the right to take possession of those assets and sell them to repay amounts owed in the event that the borrower defaults on the loan. The role of the receiver is to sell the assets over which security is held so that the secured creditor is paid the amount owing to them. It is important to note that the receiver only has control of the assets over which the security is held.

Key Concept 6.8

**Receivership**

Receivership is the position of a company when a secured creditor applies to the court for a receiver to be appointed when it is thought that the company may not be able to repay its debts.

If a business goes into liquidation and closes down there may be other individuals, businesses and members of the community who are also affected. For example, if a building company was building a power station and it went into liquidation, then its employees would lose their jobs, subcontractors would lose work (and perhaps, in turn, become insolvent) and the public would have an unfinished power station, which now has to be completed by someone else. Consequently, there may be loss of services to the community and environmental considerations as well.

REALITY CHECK 6.8

### Receivers to reveal fate of ABC Learning Centres

The Federal Government says it will help find alternative arrangements for families that lose childcare places when the fate of 176 ABC Learning centres is revealed today.

The centres have been in the hands of court-appointed receivers since they were deemed unviable after the collapse of ABC Learning.

Deputy Prime Minister Julia Gillard has told Channel Nine the Government will make sure families are looked after.



'I can certainly say that if centres are to close, we would do what we did for the 55 centres that closed before Christmas and that is work with the receiver and with parents to identify nearby childcare opportunities that meet their needs,' she said.



ISBN 9780170182058

Court-appointed receivers PPB have been managing the 241 ABC Learning centres that were deemed financially unviable after the collapse of the childcare giant last November.

They have been able to sell 65 of the centres so far, but last month asked for more time to figure out what to do with the remaining 176 centres.

Source: ABC News, www.abc.net.au, 15 April 2009.

### Commentary

This company was the dominant provider of childcare centres in Australia. As the closure of unviable centres would have such an effect on the local communities, the government felt obliged to help fund the centres until alternative arrangements could be made for new owners to operate them or additional places found for children at other centres.

Do you think it is the responsibility of governments to help insolvent companies if their closure will affect local communities, employees and suppliers?

Key Concept 6.9

**Insolvency**

Insolvency occurs when a business's liabilities are greater than the value of its assets and it is unable to repay its debts as they fall due.

## Liquidation

If, after an examination of the company's financial affairs and the expected market value of the assets, it is considered that it is not viable to continue business operations, a company will be placed in liquidation.

The directors may call a meeting of all the shareholders to vote on a voluntary liquidation. Usually however, this is done by the court. An accountant qualified as a liquidator will be appointed to wind up the company by selling all assets, paying creditors a percentage of the amount owed and dissolving the company by order of the court.

The liquidator has the power to call public meetings of creditors, require directors to attend meetings and explain the company's situation.

The liquidator will examine the role of the directors and may advise ASIC to charge directors with criminal offences under the Corporations Act. This may be for continued trading while the company is insolvent or not complying with other provisions of the Corporations Act. The directors may also face civil suits for compensation from creditors.

REALITY CHECK 6.9

### Alpine creditors vote for liquidation

The director of failed building firm Alpine Constructions has told a meeting of creditors in Adelaide that he did not keep trading while insolvent.

Creditors who are owed more than $14 million have taken a vote to put the company into liquidation.

More than 100 creditors heard administrator Peter Mack say he believed the company had traded while insolvent for about two months this year.

He says it could lead to a substantial claim, a fine and even jail.

'Insolvent trading is a criminal offence,' he said.

Director Robert Papillion denied the claim and told the meeting he had lost everything, including his home.

He said he would have to take legal advice about whether to file for bankruptcy.

Outside the meeting, he offered little further comment.

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'I've made my statement to the creditors and I'm not able to add any more,' he told reporters.

Mr Papillion has agreed to meet the liquidator next week.

Source: ABC News, www.abc.net.au, 16 April 2009.

- Can directors allow their company to continue to operate and try to trade their way out of financial trouble?
- Should a director who appears to have 'lost everything' be further punished by criminal charges?
- Who else may be affected by the liquidation of this company?

Key Concept 6.10

**Liquidation**

Liquidation occurs when a company's affairs are wound up, its assets are sold and converted to cash, its creditors are repaid and the shareholders receive what remains.

## The order of repayments to creditors

Under the Bankruptcy Act and the Corporations Act, the term 'creditors' has a wider meaning than just trade creditors. It includes anyone owed money by the company or person, including employees who may be owed salaries and wages.

The general principle is that all creditors will share equally in the available assets of a bankrupt person or company that goes into liquidation. However, some debts get priority and must be paid first before the balance of the funds is divided among unsecured creditors. The order of repayment is as follows:

- the trustee/liquidator fees and costs of conducting the liquidation
- secured creditors (creditors who have some type of mortgage or charge over certain assets as security for the amount owed)
- outstanding employee wages and superannuation
- outstanding employee leave entitlements (i.e. annual leave, sick leave and long-service leave)
- employee retrenchment pay
- unsecured creditors
- shareholders.

It is extremely unlikely that the shareholders of an insolvent company will receive any return of capital. After all, if the value of the assets exceeded liabilities (which would be necessary for shareholders to have any remaining equity) the company would probably not have been declared insolvent. In most cases, the unsecured creditors can also expect to get little or nothing of what they are owed. At every stage in the order of priority, if the residual amount is insufficient to meet all the debts at that stage, it will be divided among those debts pro rata.

EXAMPLE:

### Example 6.1

Jigripokri Ltd has been wound up as insolvent in terms of the Corporations Act. When the liquidator has realised all the company's assets, the following situation resulted.

| | |
|---|---|
| Cash fund from liquidation | $1 200 000 |
| Administrator/liquidator's expenses | $100 000 |
| Secured creditors | $700 000 |
| Total employee entitlements | $300 000 |
| Unsecured creditors | $400 000 |
| Share capital | $2 000 000 |

ISBN 9780170182058

Once the liquidation costs, the secured creditors and the employees have been paid, the remaining $100000 would be divided equally among the unsecured creditors so that each would get 25 cents for each dollar of debt. The shareholders, needless to say, would receive nothing.

REALITY CHECK 6.10

## Grim news for Alpine creditors

The administrator of debt-laden Adelaide building company Alpine Constructions says unsecured creditors are likely to get little or no financial return.

PPB says investigations have shown that Alpine owes up to $11.5 million to about 200 building companies.

A further $500000 is owed to its employees.

A creditors' meeting will be held on Thursday, where the administrator will recommend liquidation of the company.

Source: ABC News, www.abc.net.au, 15 April 2009.

- Why do you think the administrator has recommended liquidation?
- What will liquidation involve?
- If you were an employee would you be happy with this outcome?

# Test your knowledge

1 List a range of socially responsible activities that Australian businesses have developed as productive business practices.

2 List a range of environmental practices that current businesses have developed in Australia to establish 'good citizen' reputations.

3 Using specific examples, identify the costs and benefits to a business that demonstrates and engages in socially and environmentally responsible behaviours.

4 Identify categories of business stakeholders and for each identify a social or environmental preference that they might expect from a specific business enterprise.

5 Identify an Australian enterprise that has successfully adopted practices to be more socially or environmentally focused. Elaborate on the example, including the motivation for adopting alternative practices.

6 List characteristics of ethical behaviours expected from the accounting profession.

7 Which principles of the ASX Good Governance Code recognise the rights of shareholders and other stakeholders? What might these rights be?

8 Suggest an ethical framework clients might expect in relation to dealing with Australian retail businesses.

9 Explain the concept of insolvency.

10 Explain the concept of bankruptcy.

11 What is the importance and purpose of legislation relating to bankruptcy and insolvency?

12 What is the impact of bankruptcy on an individual?

13 How does bankruptcy impact on creditors owed money by a bankrupt?

14 Give a brief overview of the process of bankruptcy.

15 Why might a company go into voluntary liquidation? What does it mean?

16 Explain the purpose of liquidation.

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17 What are the state of receivership and the role of a receiver?

18 List the order of repayments to creditors in the event of bankruptcy or liquidation.

19 For each of the following state your understanding of the concept and give an example of each to illustrate your answer:
   a conflict of interest
   b insider trading.

20 Distinguish between taxation evasion and taxation avoidance.

21 What is 'creative accounting' and why does it occur?

# Test your understanding

### Bentley Building Company Ltd
### Statement of financial position as at 30 June 2010

| | $ | $ | $ |
|---|---|---|---|
| **Current assets** | | | |
| Cash | 7 490 | | |
| Accounts receivable | 20 000 | | |
| Inventory | 30 000 | | |
| **Total current assets** | | 57 490 | |
| Property plant and equipment (at directors' valuation) | 341 510 | | |
| Investments | 129 000 | | |
| **Total non-current assets** | | 470 510 | |
| **Total assets** | | | 528 000 |
| | | | |
| **Current liabilities** | | | |
| Accounts payable | 31 200 | | |
| GST payable | 6 800 | | |
| Current income tax liability | 19 600 | | |
| **Total current liabilities** | | 57 600 | |
| **Non-current liabilities** | | | |
| Mortgage | 300 000 | | |
| **Total non-current liabilities** | | 300 000 | |
| **Total liabilities** | | | 357 600 |
| **Net assets** | | | 170 400 |
| | | | |
| **Equity** | | | |
| Share capital | | | 58 800 |
| General reserve | | | 8 000 |
| Revaluation reserve | | | 100 000 |
| Retained earnings | | | 3 600 |
| **Total equity** | | | 170 400 |

The company keeps its accounts on a historic cost basis and appears to be solvent.

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The company is being sued by the Australian Taxation Office for overdue payment of GST and income tax due. It has insufficient cash to make the payment. Due to a fall on the stock exchange, the value of the investments has gone down to $55000. As a creditor, the ATO applies to have an administrator appointed. The administrator discovers that many of the accounts receivable have been outstanding for several months and that no provision has been made for bad debts. Much of the inventory is old and worth less than cost. The administrator decides to sell the property to get cash. However, the plant and equipment is old and in poor condition and has not been depreciated properly. The market value of the Property, plant and equipment is estimated to be $240000.

The company now has negative equity and a creditor who is demanding immediate payment. The company is insolvent. After payment of the liquidators and administration expenses, creditors will not be paid the full amount owing.

**Required**

a Should the company be placed in administration to attempt to trade out of its financial difficulties or should it be wound up and the assets liquidated? What other information would you require to help make this decision?
b Should the directors face criminal charges under the Corporations Act for inadequate accounting, fraudulent revaluation and trading while insolvent?
c Who else in the community may be affected by the company being liquidated?

## Investigation

Figures show that corporate fraud or malpractice costs billions of dollars each year, as witnessed with the government bailout of companies like Fannie Mae and Freddie Mac in the United States and ABC Learning Ltd in Australia. Select a recent large corporate failure like ABC Learning Ltd and investigate it to produce a report stating:

a what led to the company's collapse
b what the consequences of the collapse were on the various stakeholders
c what could have been done to avoid the collapse
d what might be done to avoid similar collapses in the future.

## Essay

1 What motivation exists for businesses to engage in socially or environmental focused policies? Discuss.

2 What obligations do businesses have to engage in socially and environmentally responsible behaviours? Discuss.

3 'Legislation relating to business insolvency is important for the protection of investors, creditors and the community.' Discuss this statement in essay format, including in your answer the following:
- an explanation of the concept of insolvency
- an explanation of the difference between the application of the Bankruptcy Act and the Corporations Act
- a brief overview of the impact of the Bankruptcy Act and the Corporations Act on a business that is insolvent
- an overview of the impact on business owners, investors and creditors, including the order of repayments to creditors
- an assessment of the impact of insolvency on the wider community.

4 Would an accounting firm be compromised by completing the annual report of a public company and then being contracted by the same company to give technical advice on investment policies or technology requirements?

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# Ethics case study

Tom has been employed at New Incentives Ltd for six months after recently graduating from university with a degree in accounting. It is his first job after trying to find employment for six months. Tom's boss has asked him for a favour in preparing the income statement for the year. She wants Tom to include in income cash received for services to be provided next year. She also wants him to record as an asset cash paid for advertisements, which were screened on television two weeks before the end of the accounting period. Tom is aware that management is to be paid bonuses based on the net profit for the period.

## Discuss

a How should the transactions be reported according to your understanding of accounting?

b What do you think Tom should do?

c Dr Rushworth Kidder, president of the US-based Institute for Global Ethics, argues that this sort of situation will not happen if companies adopt codes of ethics and create departments responsible for monitoring these codes. Employees must receive training about the codes of ethics and should be required to follow them.

How would this improve ethical conduct and reduce the tensions between business, owners, managers, employees, clients and investors?

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# Chapter 7
# INTRODUCTION TO CORPORATIONS

## What You Will Learn

After studying this chapter you should be able to:

1 State and explain the characteristics of public companies and large and small proprietary companies
2 Compare corporations with unincorporated businesses
3 State the purpose and nature of the *Corporations Act 2001* and outline its impact on the formation and operation of companies
4 Explain the role and function of external auditors
5 Explain the nature of shares and distinguish between bonus share issues and cash share issues
6 Explain the treatment of profit by companies, including the concepts of dividends and reserves
7 Prepare general journal and ledger entries to record the issue of ordinary shares for cash (including accounting for share issue costs) and bonus shares (issued out of reserve)
8 Prepare general journal and ledger entries to record the payment of cash dividends

## Introduction

Incorporation, in the context of this book, is the process of creating a separate legal entity with which to carry on a business. The term is also used to describe the creation as separate entities of other types of organisation; for example, not-for-profit associations such as schools and sporting clubs. In this chapter we mainly focus on companies.

Incorporation is a formal legal process and the resultant 'corporation' or 'company' can only cease to exist as a result of another formal legal process. A company may be seen as an artificial 'person', created by law. Companies were originally created to provide a mechanism where funds could be raised in amounts larger than could be contributed by one individual or a few partners. These days many businesses that do not necessarily have a need for large capital investment will adopt the company form of business organisation in order to obtain the comparative benefits, which are explained later in this chapter.

The process of incorporation is applied to many other organisations that are not businesses, such as sporting clubs, private schools, professional associations and other not-for-profit bodies. Incorporated not-for-profit organisations are very similar to companies in many respects. Large ones – such as the Australian Football League (AFL), Australian Cricket Board (ACB), Fremantle Dockers, Guildford Grammar School and the Chamber of Commerce and Industry – are run and report in much the same manner as businesses of a comparable size in terms of assets, turnover and number of employees.

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## CHARACTERISTICS OF A COMPANY

The essential difference between a company and the two other most common forms of business organisation – the sole trader and the partnership – is that a company exists as a separate entity in law (incorporated), while in the other two cases there is no legal distinction between the owner(s) and the business since the business does not have a separate existence. In other words, it is 'unincorporated'. This important quality of a company underpins most of the differences between corporations and unincorporated businesses and accounts for the principal characteristics of a company.

Companies are defined and regulated by the *Corporations Act 2001*, a federal statute. The effects of the Act are considered in more detail later in this chapter.

There are several different types of corporations, as we shall see later, but they all share the same essential characteristics:

- a separate entity in law formed as a result of a legal process in terms of the Corporations Act
- able to enter into contracts, to sue and be sued and to hold registrable assets (such as land and motor vehicles) in their own name
- continuity of existence – a company will continue to exist until it is brought to an end (wound up) by a formal legal process and deregistered by the Australian Securities and Investments Commission (ASIC)
- the capital or owners' equity is divided into 'shares' – owners ('shareholders') may transfer all or part of their ownership of a company by selling all or some of their shares to someone else
- the ownership and management of the entity are separate: control of operations is delegated by the shareholders to a committee, usually called a 'board of directors', appointed by them at a shareholders' meeting
- limited liability – in the case of companies limited by shares (which is what we will be concerned with in this book), the owners' responsibility for the debts of the business is limited to the amount, if any, that they have agreed to contribute as capital. Once they have fully contributed their capital, they cannot be required to pay anything else towards the settlement of the business's liabilities. Other types of company have the owners' liability limited in other ways
- the internal operations of the company will be governed by a formal set of regulations, either those contained in the various sections of the Corporations Act (the Replaceable Rules) or, if the owners of the company prefer, its own set of rules (known as a constitution) or a combination of the two
- taxed as a separate entity – the company will itself pay tax on its profits at a flat rate (currently 30 per cent)
- government regulation – as previously noted, all companies are subject to government regulation and control under the Corporations Act.

Wesfarmers

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woodside

## ADVANTAGES OF A COMPANY

The above characteristics give the company form of business organisation a number of advantages over other forms.

### Limit of owners' liability

The personal assets of the owner(s) may be put in jeopardy by the failure of their unincorporated business if the business becomes insolvent (unable to pay its debts as they fall due). By forming their business into a corporation, the owner(s) can insulate themselves against the business's losses. Note that lenders to small corporations are well aware of this and will often enhance the security of their loans by requiring the shareholders to guarantee them (i.e. agree to meet the interest or loan repayments if the company cannot do so) or by securing the loans against the assets of the owner(s) (e.g. their home).

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## Capacity to contract in the business name

As an unincorporated business has no legal existence, it cannot enter into contracts or hold assets, such as land, in the business name. Contracts need to be entered into and assets held by the owner(s) personally. This can be inconvenient, especially in the case of a partnership. Land has to be held jointly by the partners. Motor vehicles, which can only be registered in the name of a single person, have to be held by one partner or another. These difficulties can be avoided by incorporation.

## Transfer of ownership

With an unincorporated business, transfer of ownership requires the transfer of all the assets individually, which, if they include land and vehicles, can be complex and expensive. If the business is a corporation, all that is needed is to transfer the shares in the corporation, since the assets are legally held by the corporation itself. It is also much easier to transfer part-ownership of a business by transferring some of the shares, rather than trying to allocate partial ownership of a firm's assets to the new owner(s).

## Continuity of existence

If the owner(s) of an unincorporated business cease(s) to exist, the business dies with them. However, if the business is a company, the ownership will merely pass to the beneficiaries of the owner(s) and the existence of the company itself is not affected.

## Taxation

Company profits are subject to a flat rate of tax, which is generally well below the top marginal rate of tax on the income of individuals. Whether this is an advantage or not, however, will depend on the circumstances of the owner(s) and the magnitude of the company's profits.

## Access to capital

Companies do have – potentially – a larger number of owners than do other types of business. In the case of public companies, they are able to approach the public for funds in the form of equity or loans. This gives incorporated businesses potential access to much greater funding than unincorporated businesses.

Even a private company, which cannot seek funds from the public at large, may find it easier to raise capital from associates of the existing owner(s), since they will know that they have the benefits of limited liability.

Table 7.1 Comparison between companies and unincorporated businesses

| Characteristic | Companies | Sole trader and partnership |
|---|---|---|
| Status in law | Separate legal entity | Has no legal existence apart from the owner(s) |
| Maximum number of owners | • 50 (proprietary company)<br>• Unlimited (public company) | 1 (sole trader)<br>20 (partnership) |
| Liability of owner(s) for business debts | Usually only liable for unpaid capital contributions, if any | Fully liable, personally, for all business debts |
| Costs of formation | Considerable fees and other costs | Negligible |
| Access to capital | • Limited to owner(s) and associates (proprietary)<br>• Unlimited (public) | Limited to owner(s) and associates |
| Taxation | Business profits taxed at company tax rate (30%) | Business profits taxed in the hands of owner(s) |
| Distribution of profits | Distribution (dividends) at directors' discretion | Owner(s) may withdraw as much profit as they wish |
| Government regulation | Some (proprietary) up to considerable (public) government regulation | Little or no government regulation |

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Key Concept 7.1

**Company**

A company is a business organisation set up as a separate legal entity in terms of the *Corporations Act 2001*.

# FORMING A COMPANY

There is a legal process that needs to be completed to set up a corporation. There are four types of company that can be set up under the *Corporations Act 2001*. These are:

- public no-liability company
- unlimited company with share capital
- public company limited by guarantee
- company limited by shares.




The vast majority of companies fall into the last of these categories and these are the types of company we shall focus on in this book.

In order to bring the company into existence, its promoters must complete and submit to the Australian Securities and Investments Commission (ASIC) the relevant Form 201 together with the prescribed fee. The form will include the following information:

- the name of the company – in the case of a proprietary company (see below) this may be the Australian Company Number (ACN) issued in due course by ASIC
- the names of those who have agreed to be the company's initial shareholder(s), director(s) and company secretary (optional in the case of a proprietary company)
- the company's registered office
- the company's principal place of business in Australia (if different from the registered office)
- whether or not the company will be governed by the Replaceable Rules contained in the Corporations Act or whether it will have a constitution, which supplants some or all of the Replaceable Rules.

Before the form can be completed, the promoters of a new company need to decide on the name and obtain the written consent of the first directors, shareholders and company secretary. They also need to decide whether the company needs its own constitution and, if so, arrange for this document to be drawn up. In the case of a public company, the constitution must be lodged with ASIC following registration of the company.

Once ASIC is satisfied that all requisite information has been provided and the form properly completed, they will register the company and issue a Certificate of Registration. From this moment the company exists as a separate legal entity. The process of forming a company can be short-circuited to some extent by buying what is called a 'shelf company' – one that has already been formed and can be purchased from any one of a number of providers of such companies. (Do a search for 'shelf companies' on the internet to find some examples.) The cost involved is likely to be similar, but the process will be shorter and simpler.

REALITY CHECK 7.1

Gladys Green owns a lawn-mowing and gardening service with the registered business name of Glad's Gardening. She runs the business as a sole trader. Recently one of her employees was mowing the lawn of a client when he unfortunately ran over one of the client's prize Chihuahua dogs, recently imported at great expense from Mexico. This client has sued Glad's Gardening for $1 010 000, $10 000 for the cost of the dog and $1 000 000 for the pain and distress caused by seeing her beloved pet killed so horribly.



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Gladys is very sorry for what has happened and concedes that her employee may have been at least partly to blame. However, she points out that there is no way that Glad's Gardening can come up with anything like the sum mentioned: the firm's assets consist of a number of mowers, brush-cutters, wheelbarrows, rakes and other garden tools, several trailers (the employees are expected to provide their own cars) and some office equipment. All this has a book value of about $20 000 and a market value of considerably less, given that most of the assets are fairly old. There is nothing she can do.

### Commentary

Glad's Gardening is an unincorporated business and therefore has no separate existence in law from its owner Gladys Green. Registration of a business name does not confer any separate legal entity. Therefore, any shortfall in the firm's capacity to meet any damages that a court might award will fall to the owner to make good and her own personal assets (such as her home) will be liable to be seized for this purpose.

Had Gladys registered her business as a company, her own assets would not have been jeopardised, no matter how inadequate the firm's assets might turn out to be for meeting its liabilities.

It should be noted that this particular problem could be (and probably was) solved by having public liability insurance, which would have covered Gladys against claims of this sort.

REALITY CHECK 7.2

Mick and Mary Broadacres are a husband and wife running a substantial farm growing grains, sheep and pigs in the central wheat belt of Western Australia. The business is run as a partnership. The farm land and buildings are owned jointly by Mick and Mary and the vehicles (utilities, truck, quad bike, header, etc.) are registered in Mick's name.

Their son Merv has recently qualified from agricultural college and has returned to the farm to work it with his parents. The intention is that he will gradually, over a number of years, take over responsibility and ownership from Mick and Mary.

How suitable is the present organisational structure for what the family plans to do?

### Commentary

The partnership form of business presents some problems in terms of flexibility, especially with regard to the admission of new partners and changing the relative interest of existing partners in the business. While it would be, of course, quite possible to amend the partnership agreement from time to time to accommodate Merv's changing status and assets could be transferred to him, it would be a great deal simpler if the business were to be incorporated, so that changes in ownership and entitlement to share in the profit could be made by the transfer of shares from the parents to their son.

# PUBLIC AND PROPRIETARY COMPANIES

## Distinction between types of limited company

As previously noted in this textbook, we focus on companies limited by shares, of which there are three types:

- small proprietary companies
- large proprietary companies
- public companies.

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According to section 45A of the Corporations Act, a proprietary company is one which:

- has not more than 50 non-employee shareholders
- is not able to invite subscriptions of funds from the public.

The purpose of this sort of company is essentially to provide the owners with the benefits of separate legal entity (e.g. limited liability and continuity of existence) without the need to provide for large fundraising. Such companies are often really just sole traders or partnerships that have been incorporated and, as such, there is very little need for government restrictions and control to protect uninformed investors from exploitation. Consequently, as noted below, there is relatively little legislative interference in the affairs of proprietary companies compared to public companies. Proprietary companies are required to include after their names the words 'Proprietary Limited' or 'Pty Ltd.'

During the reform of companies legislation that occurred during the 1990s, which culminated in the *Corporations Act 2001* (the Act), the view was formed that there were proprietary companies, which, although not calling on the public for funds and having a relatively narrow shareholding, were of sufficient size to make the application of some controls desirable. Such a company may have a substantial number of employees, may have borrowed large amounts from finance institutions and may be capable of making a substantial impact on the community in which it operates. These considerations gave rise to the concept of the large proprietary company, which requires a slightly higher degree of public accountability than a small proprietary company.

The Act defines a large proprietary company as one that, in addition to the general criteria for proprietary companies stated above, exceeds at least two of the following limits:

- gross revenues in the financial year of $25 million
- gross assets at the end of the financial year of at least $12.5 million
- at least 50 full-time (or full-time equivalent) employees.

A company that does not meet at least two of these criteria is a small proprietary company. The difference in the controls placed on the two forms of proprietary company is explained below.

A company that is not able to meet the restrictions of the Act for proprietary companies (in regard to the number of shareholders and the need to approach the public for funds) must be formed as a public company. A public company must have the word 'Limited' or 'Ltd' after its name. There is no limit to the number of shareholders. Most public companies have hundreds or even thousands of shareholders and the vast majority of public companies have their shares and/or other securities listed on the Australian Securities Exchange (ASX), which enables them to raise additional funds relatively easily and makes it simple for the public to buy or sell their shares.

## Incorporated associations

Not-for–profit organisations that wish to become incorporated normally do so in terms of state, rather than Commonwealth, legislation. In Western Australia this occurs under the *Associations Incorporation Act 1987*. As with companies, a formal application must be made, together with a fee and accompanied by specific information. Once satisfied with this, the Commissioner for Associations will issue a certificate of registration and the association becomes a separate legal entity. Incorporated associations must have the word Incorporated or Inc. after their name.

Not-for-profit organisations that operate in more than one state in Australia must apply to be incorporated under the Corporations Act.

Some incorporated associations may meet the criteria for a reporting entity that will require them to comply with some aspects of corporate regulation, including compliance with accounting standards (see Chapter 8).


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# Legislative control of companies

All companies are formed in terms of the Corporations Act; the Act also sets down controls or restrictions to be placed on companies.

## Companies

All companies must:

- notify ASIC of the issue of shares and changes in registered office, principal place of business, directors or company secretary
- have at least one shareholder
- keep an up-to-date register of shareholdings and charges on the company's assets
- pay ASIC an annual fee
- keep proper, systematic and sufficient financial records.

## Proprietary companies

All proprietary companies:

- may raise funds by the issue of securities only from existing shareholders and employees
- must have at least one director, who should be normally resident in Australia
- may, but are not required to, have a company secretary (who can also be a director).

## Small proprietary companies

Small proprietary companies need to produce audited annual financial statements only if requested to do so by shareholders holding at least five per cent of the company's shares or by ASIC.

## Large proprietary companies

All large proprietary companies must produce audited annual financial reports and a directors' report, which must be sent to all shareholders and lodged with ASIC.

## Public companies

All public companies must:

- have at least three directors, of whom at least two must be normally resident in Australia
- hold an annual general meeting (AGM) of members each year within five months of the end of the financial year
- lodge with ASIC a copy of its constitution (if any) and any amendments subsequently made to it
- maintain financial and other records as specified in the Act, including compliance with Australian Accounting Standards
- produce audited annual financial reports and a directors' report, which must be sent to all shareholders and lodged with ASIC.

If listed on the ASX (which most public companies are), public companies must comply with the additional disclosure requirements of the ASX, including, for example, the publication of audited financial reports every six months.

When issuing a prospectus inviting the public to apply for shares or other company securities, the document must comply with the requirements of the Act regarding content and form.

The Act contains numerous provisions for the internal management of companies and their record-keeping. Many of these are mandatory (i.e. compulsory for all companies), some are Replaceable Rules (i.e. can be amended or avoided by the provisions of a company constitution) and a few are mandatory for public companies but replaceable for proprietary companies (e.g. the rules about the appointment of proxies by shareholders to vote on their behalf at shareholders' meetings).

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## Constitution and replaceable rules

The replaceable rules – and therefore the terms of any constitution that may be drawn up to replace them – will broadly cover the following topics:

- the appointment, powers and remuneration of directors
- the procedure for calling and running directors' meetings
- the terms and conditions of office of a company secretary
- the procedure for calling and running general (members') meetings
- shares – different classes, transfer and dividend rights.

REALITY CHECK 7.3

The Broadacres family from Reality check 7.2 have decided to incorporate their farming business.

What sort of company do you think they should establish?

### Commentary

As there is no evidence that the family will need funds beyond what they can contribute themselves or borrow from the bank or other financial institutions, they will not need the fundraising advantages of a public company.

Whether the company will be a large or small proprietary company will depend on its size, but it seems unlikely that the gross revenue of a family farm – even a substantial one – would exceed $25 million per year or that the gross assets would be worth more than $12.5 million. Moreover, the farm would only employ a handful of people – even counting the Broadacres family themselves – so you would not expect it to approach the 50 employees limit. Thus, it is probable that the company would qualify as a small proprietary company.

## Administering companies

As noted above, the owners of a company ('shareholders' or 'members') delegate the control of the business to a committee, usually called the board of directors. In the case of small companies with perhaps only one or two shareholders, the directors and the shareholders may be the same people, so this separation of ownership and control is more apparent than real. The first director(s) is(are) nominated at the time of application for registration. After that, additional directors are appointed by the votes of shareholders at the annual general meeting (AGM). Hence, although the shareholders have surrendered the right to administer the company of which they have part ownership, they retain, at least theoretically, the ultimate control in that they can vote out directors who are not acting in accordance with their wishes.

Meetings of members (called 'general meetings') may be held at any time when called by the directors or a significant proportion (five per cent of voting power) of the shareholders in terms of the company's constitution or the Act. These would normally take place at least once a year as an AGM. Public companies are required to hold an AGM but it is not compulsory for proprietary companies to do so. Apart from the appointment of directors, the agenda of the AGM might include:

- consideration of the company's financial statements and directors' report
- approval of recommendations for final dividends (see below)
- appointment and remuneration of auditors.


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The company secretary, who may also be a director, acts as the assistant to the board, taking minutes of meetings, arranging and circulating the agenda and ensuring that the company meets all its obligations under the Corporations Act.

## Australian Securities Exchange (ASX)

As noted previously, most public companies would want to have their shares and possibly other securities such as debentures, quoted on the ASX. This provides a market on which existing shareholders can easily dispose of their shares and those wishing to become members can buy shares. Without such a market the capacity of companies to raise capital is severely restricted.

The ASX has a detailed set of regulations called the Listing Rules which set down the requirements for a company to have its securities quoted ('listed') and with which listed companies need to comply in order to maintain their listing. As we noted earlier, the disclosure provisions of the Listing Rules now have the force of Law through the Act. The ASX can encourage companies to comply with the Rules by the threat of suspending its securities from quotation. The overall aim of the ASX is to provide a fair, informed and competitive market for securities.



In addition, the ASX Corporate Governance Council has published its 'Principles of Good Corporate Governance and Best Practice Recommendations', with which listed companies are expected to comply. Companies have to pay an initial fee to the ASX to have their securities listed and pay an annual fee to maintain this listing.

## The role of the auditor

Public companies and large proprietary companies are required to have their annual financial statements audited. The auditor, a qualified accountant or a firm of accountants, must have access to all the company's financial records so that it can test the systems and ensure that everything has been properly recorded. The role of the external auditor is controlled by the Corporations Act.

All auditors must become Registered Company Auditors (RCAs) through being registered with ASIC. RCAs must comply with the requirements of the *Corporations Act 2001* and the Auditing Standards as determined by the Auditing and Assurance Standards Board, a federal government statutory body.

The reason for requiring an audit is to ensure that, in the case of entities that may have interested parties who are not in a position themselves to examine the financial records of a business, there is an independent person who is given access to examine the records on their behalf. The auditors are required to satisfy themselves that:

a the company's records have been kept in accordance with the provisions of the Act, with Accounting Standards (where applicable) and with the Framework
b the reports based on those records give a true and fair reflection of the company's financial performance for the period and its financial position at the end of the period.

The auditors prepare a report that must contain, among other items, their opinion on the above and that they have met the independence requirements as set out in the Act. Once satisfied on these two points, the auditors sign a report to that effect, which is

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## Independent auditor's report to the Directors of Megabux Corporation Limited

### Report on the Financial Report

We have audited the financial report of Megabux Corporation Limited, which comprises the statement of financial position as at 30 June 2010, statement of comprehensive income and statement of cash flows for the year ended on that date, a summary of significant accounting policies, other explanatory notes, and the directors' declaration of the consolidated entity comprising the company and the entities it controlled at the year end or from time to time during the financial year.

### Auditor's responsibility

Our responsibility is to express an opinion on the financial report based on our audit. We conducted our audit in accordance with Australian Auditing Standards which require that we comply with relevant ethical requirements relating to auditing engagements and plan and perform the audit to obtain reasonable assurance whether the financial report is free from material misstatement.

### Independence

In conducting our audit we have met the independence requirements of the Corporations Act 2001. We have given to the directors of the company a written Auditor's Independence Declaration, a copy of which is included with the Directors' Report.

### Auditor's opinion

In our opinion:

1 The financial report of Megabux Corporation Limited is in accordance with the Corporations Act 2001 including:
   i Giving a true and fair view of the financial position of Megabux Corporation Limited and the consolidated entity at 30 June 2010 and their performance for the year ended on that date, and
   ii Complying with Australian Accounting Standards (including the Australian Accounting Interpretations) and the Corporations Regulations 2001.
2 The financial report also complies with International Financial Reporting Standards as issued by the International Accounting Standards Board.

### Report on the Remuneration report

We have audited the Remuneration Report included in the directors' report for the year ended 30 June 2010. Our responsibility is to express an opinion on the Remuneration Report, based on our audit conducted in accordance with Australian Accounting Standards.

### Auditor's opinion

In our opinion the Remuneration Report of Megabux Corporation Limited for the year ended 30 June 2010 complies with section 300A of the Corporations Act 2001.

Pesa Pima Tazama

Ivor Gudydea
Partner
Melbourne 1 October 2010

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Figure 7.1 Example of an independent auditor's report



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included with the financial statements and directors' report sent to shareholders. In this case, the auditor's report is unqualified.

If, for any reason, the auditors find themselves unable to report in this way, they will usually bring any deficiencies to the attention of the company's management so that they can be rectified. If this is impossible, or the company neglects to do so, the auditors must state as much in their report (a 'qualified report'). This 'qualified report' may occur in such instances when:

- the financial statements are presented fairly, except for some deficiency or weakness and the affect on the report is material; in this case an 'except for' qualification is issued
- the financial statements are not presented fairly and the deficiency or weakness has a highly material effect on the financial reports; in this case an 'adverse' qualification is issued
- the auditor is unable to form an opinion, perhaps due to a lack of evidence or limit placed on the scope of the audit; in this case the lack of evidence is very material.

Auditors are essentially responsible to the shareholders and they are appointed by them at the AGM, at which time their remuneration is also voted on. In practice, however, the board and senior management of a company usually have a close working relationship with their auditors and it is not uncommon for either or both of the parties to lose sight of the auditors' ultimate responsibility. The Act, however, spells out clearly the need for the auditors to be independent and provides for penalties if this requirement is not met. Moreover, the Act requires the auditors to notify ASIC if they become aware of any perceived breach of the Act or if they have been subjected to any attempt to influence their decisions. Auditors of companies whose accounts are required by the Act to be audited must attend the company's AGM in person or by representative and the shareholders must be given an opportunity to question them. (See the Ethics case study at the end of this chapter.)

REALITY CHECK 7.4

## ABC audit fiasco draws in KPMG

It is believed that accounting firm KPMG has been brought in by ABC Learning Centres Ltd to provide an independent decision after a dispute arose between the childcare centre operator's old auditors, Pritcher Partners, and new auditors Ernst & Young, over how certain items should be treated in ABC's accounts, reported the *Australian Financial Review* newspaper.

In late August, the debt-laden childcare centre operator postponed the release of its 2008 earnings, saying it was working to finalise its full year result and prior period adjustments after reassessing its accounting treatments.

Sources told the paper KPMG was called in around two months ago after Pritcher Partners objected to Ernst & Young's decision to restate past year accounts.

In March last year Pritcher said it planned to resign because of ABC's overseas expansion and Ernst & Young took over the role late last year, auditing the group's accounts for the six months to December 31.

By July this year, Ernst & Young's Brian Long said he wanted to restate the way some items were treated in the accounts, in particular revenue streams.

The paper reported it is believed that KPMG accepted Pritcher's methodology and announced its opinion at a meeting with the ABC board and Ernst & Young in August.

It is understood the debate between the three auditors and ABC continued and it was only at a meeting held last week that ABC finally made a decision as to how its accounts should be treated.

Source: Business Spectator, www.businessspectator.com.au, 4 September 2008.

iSBN 9780170182058

### Commentary

This is an interesting example of a company in deep financial trouble (it subsequently went into receivership) whose management was evidently in conflict with its original auditors and those appointed to replace them.

What do you think is meant by 'income streams' and what is likely to have been the disagreement about them between management and auditors?

Key Concept 7.2

**External auditor**

An external auditor is an independent accountant appointed by the shareholders of a company to review and report to them on the company's financial records and the reports based thereon.

## SHARES

One of the things that distinguishes companies from unincorporated forms of business organisation is that their capital is divided into equal portions called 'shares'. A company's shares serve three purposes as far as the shareholder is concerned:

- they determine the proportion of the profit to which the holder is entitled
- they determine the extent to which the holder can control the company through voting at general meetings
- they afford the holder the opportunity of liquidating some or all of their investment in the company by selling some or all of their shares to somebody else.

Note that many companies have more than one class of shares, each of which may have different rights. The most common and significant of these are usually called 'ordinary shares', which give the holders the right to receive whatever share of the profit ('dividend') the directors may decide on (see more detail below) and the right to attend and vote at all general meetings of the company.

In addition there are what are normally called 'preference shares', whose right to dividend is usually (though not always) confined to a specific rate, but whose right to attend and vote at meetings is invariably confined to voting on resolutions that might directly affect the rights of their class of shares. They do not have the same ownership rights as ordinary shares. Indeed, preference shares have many of the characteristics of a loan security, apart from the fact that they do not require repayment by the company. The only shares that might require repayment are 'redeemable preference shares', which may be repaid, though at the company's, not the shareholder's, option. In this book, unless otherwise stated, we will be concerned with ordinary shares.

Key Concept 7.3

**Company shares**

Company shares are units of owners' equity in a company, which may be bought and sold and which entitle the holder to participate in the decision-making process of the company and to share in its profits.

### Rights of shareholders

Ordinary shareholders in companies have the following rights:

- to participate in the profits of the company in proportion to their shareholding in a manner determined by the directors (see below)



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- to receive due notice of meetings of shareholders ('general meetings'). The periods of notice required are specified by the Act and, although these can be modified to some extent in the company's constitution – particularly in the case of a proprietary company – they will remain such as to give all shareholders reasonable advance knowledge of a meeting so that they can attend if they wish to
- to attend general meetings, participate in discussions and vote on resolutions. Shareholders' influence on decisions at general meetings will be in proportion to their shareholdings: clearly the voting power of individual shareholders in most public companies is insignificant by itself, although they may be able to combine with others to pass a particular resolution, e.g. to appoint a particular person as a director
- to receive a copy of the annual (and, where appropriate, bi-annual) financial reports and the directors' and auditor's reports for the period. Members of small proprietary companies do not automatically have this right but can formally request it if they hold not less than five per cent of the shares in the company
- to dispose of their shares to whom and at whatever price they choose. This right may be restricted in the case of proprietary companies for which there is a replaceable rule that would require shareholders to offer their shares first to the other shareholders.

REALITY CHECK 7.5

Egbert is a shareholder in a family company, Beetroot Holdings Pty Ltd. He holds 100 of the 1000 shares on issue, the remainder being held by his sister and brother-in-law and their daughter, who run the business and comprise the board of directors. The company employs about a dozen people and has gross assets of around $1.2 million.

Egbert feels he is being kept in the dark about the financial affairs of the business. He never sees any financial reports and if there are ever any general meetings held he certainly doesn't get to hear about them. He has not received a dividend for at least two years but when he asks his sister about this, she just tells him that 'times are tough'. What can he do?

### Commentary

Beetroot Holdings falls short of two of the standards for a large proprietary company and it is therefore evidently a small proprietary company. As such, it is not obliged to hold an annual general meeting nor to send audited accounts to the shareholders. However, as the holder of more than five per cent of the ordinary shares, Egbert can request the company to send out audited accounts and he can also call a general meeting, although he must realise that he is always going to be outvoted at any meeting. In any event, though, if general meetings are held, he must be sent due notice of them. However, a scrutiny of the accounts should show whether there are any improprieties in the financial management of the business, which he can, if he does not get satisfaction from the directors, draw to the attention of ASIC who will, if necessary, act to protect his interests. It should be noted that directors are bound by law to act in the interests of all shareholders, not just themselves.

## Issuing shares

When a company is first formed, the founding shareholders will be issued with shares in recognition of their capital contribution to the business. The price per share at which these first shares are issued is quite arbitrary – a convenient figure such as 50 cents or $1 or $2 per share is normally selected.

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EXAMPLE:

## Example 7.1

Bill and Ben have decided to incorporate their business into a proprietary company, Flowerpotmen Pty Ltd. Bill has contributed assets worth $40 000 while Ben's contribution is valued at $60 000. They decide that the shares will be issued at $1 each. Bill will therefore be registered as the holder of 40 000 shares, while Ben will receive 60 000 shares.

A company may subsequently issue additional shares to expand its business, either as a means of purchasing another business or its assets, or for a cash consideration. The price at which these shares are issued will depend on the perceived value of the existing shares in the company, which may be very different from the price at which they were initially issued.

## Example 7.2

Flowerpotmen Pty Ltd has done well. The value of its net assets has increased from $100 000 to $300 000. Bill and Ben have decided to expand by acquiring the business of Ben's cousin, Weed. Her business is valued at $120 000 and will be purchased by the issue of shares to her. Since the value of the company's shares in terms of the assets they represent has increased three-fold, it is decided that Weed will receive 40 000 shares at an issue price of $3 per share. Following this issue the shareholdings in the company will be as follows.

| | |
|---|---|
| Bill | 40 000 shares |
| Ben | 60 000 shares |
| Weed | 40 000 shares |

## Issue of shares by a public company

The fundamental difference between a public company and a proprietary company is that the former may approach the general public for funds. In order to do so, it must publish and make available to all potential investors a comprehensive document called a prospectus, the content of which is prescribed by both the Corporations Act and the ASX Listing Rules. The prospectus – usually an attractive, glossy brochure – is essentially an invitation to subscribe (i.e. apply and pay for) for shares (or other securities, such as debentures) and contains all the information that a potential investor would need to make an informed decision about whether to invest or not. This would include:

- past financial information (statements, auditor's report, etc.)
- future financial information (budgets – what will the money to be raised be used for?)
- personal details of directors and possibly senior managers
- significant existing shareholdings
- relevant expert reports (e.g. market surveys and mining exploration reports)
- the amount that it is proposed to raise and the minimum amount that must be subscribed if the share issue is to be proceeded with
- underwriting arrangements (the underwriter is usually a merchant bank or large stockbroking firm that has agreed, for a fee, to subscribe for any securities not applied for by the public, thereby guaranteeing the success of the issue)
- an application form with details about how much must be paid, to whom and by what date
- how oversubscriptions will be dealt with (i.e. if there are more shares applied for than are available, how the allocation of shares to the various applicants will be done).

www.fido.gov.au

Go to Fido, the ASIC information site and search for 'Guide to reading a prospectus'.

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For an initial issue of shares, the issue price will be arrived at in the same way as mentioned at the start of this section (i.e. a convenient value, such as $1). The price of subsequent issues of shares that are already being traded on the ASX will depend on the market price of those shares. The issue price will be pitched just below what is expected to be the market price of the existing shares at the time.

REALITY CHECK 7.6

Megabux Ltd is a company whose ordinary shares are quoted on the ASX. When the company was first formed some years ago, 4 million shares were issued at a price of $1 each. The company has been successful and profitable in recent years and the market price of its shares in the past few months has fluctuated between $2.80 and $3.50. It is currently trading at around $3.00. The company has decided to raise additional capital by a cash issue of shares. The amount it wishes to raise is $2 million. The directors must decide on the price per share of the new issue.

### Commentary

The directors face a difficult decision. They want to pitch the issue price as close to the market price as possible, but at the same time make the new shares attractive to investors. The difficulty mainly arises from the fact that the directors must fix a price today that will be appropriate in relation to the market price of the company's shares in two or three months time when the issue actually closes. If there is significant change in the company's share price over that period, what seemed a suitable price today might turn out to be too low or too high when the applications are to be made.

The directors may have a very accurate idea of the company's present position and short-term prospects, but the demand for (and therefore the price of) a company's shares depends as much on the market's perception of its future prospects as on its current worth. As the events of 2008 clearly demonstrated, a general slump in investor confidence can have an adverse effect on the share prices of businesses whose actual profitability and prospects have not changed at all.

In this case, the directors may take the view that the company's share price will remain at much the same level as at present and so fix the issue price at, say, $2.90. They will arrange for the risk of a fall in price over the next few months to be covered by having the issue underwritten.

## Rights issue of shares

The most popular form of cash share issue by companies that already have shares in existence is called a 'rights issue'. Existing shareholders are given the right to subscribe for new shares in proportion to their existing shareholding. This enables them to maintain the value of their current interest in the company if they wish. If the issue is 'Renounceable' (which it usually is), shareholders who are unwilling or unable to make an additional investment in the company can sell their right to subscribe to someone else. These rights are themselves a tradable security and will be sold on the market for a price approximating the gap between the issue price of the new shares and the market price of the existing ones.

EXAMPLE:

### Example 7.3

If Megabux Ltd, the company mentioned in Reality check 7.6, decided to raise the funds it needs by a rights issue at a price of $2.90, it would give its existing shareholders the right to apply on the basis of 1 for 5 (i.e. if you currently hold 1000 shares, you will have the right to apply for an additional 200 shares). Overall, the number of new shares issued will be 4 000 000/5 = 800 000 shares, raising a total of $2.90 × 800 000 = $2 320 000.

When taking into account the costs of the issue (prospectus costs, underwriting fee, etc.) this will leave the company with approximately the $2 million it was aiming for. If the rights were traded on the ASX, they would sell for slightly less than the difference between the application price ($2.90) and the current market price of the existing shares. For example, if the market price of the existing shares was $3.05, the market price of the rights might be 13–14 cents.

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## Share issue costs

There have been variations over the years in the treatment of the costs of making a share issue (fees for underwriters, stockbrokers, accountants and other consultants, cost of printing the prospectus, etc.) but the prevailing view now is that they should be shown as a reduction in the value of the share capital. This may be done by debiting such costs directly to the share capital account, or having a separate equity ledger account called 'share issue costs', which will be shown in financial statements as a deduction from the share capital, much as accumulated depreciation is shown as a deduction from the cost of the non-current asset to which it refers.

Note that the initial costs of incorporation (legal fees, registration fee paid to ASIC, etc.), which are sometimes termed *formation expenses* or *preliminary expenses*, will be written off as an expense in the first year of the company's life. Hence, although they will in effect have reduced equity by causing a decrease in the retained earnings, they will not continue to be shown as an item in the equity section of the statement of financial position, as may be the case with the share issue costs.

## Accounting for cash share issues

There are two distinct stages in the recording of share issues:

- the receipt of application moneys from the would-be shareholders
- giving effect to the directors' decision to issue the shares.

When the money is received by the company, it needs to be kept in trust for the applicants since, until the directors' decision to issue them with shares is taken, the money does not yet belong to the company. The money will be debited to a special trust bank account and credited to a liability account called 'Applications, ordinary'. Payments made for the costs of the issue will probably also be debited to a temporary account called 'Issue costs'.

Once the directors have resolved to allot the shares (i.e. allocate the agreed number of shares to each applicant), the applications moneys will be transferred by general journal entry from the 'Applications' to the 'Share capital' account, as will the issue costs.

EXAMPLE:

### Example 7.4

Megabux Ltd made a cash issue of 800 000 shares at a price of $2.90 per share payable in full on application. By 31 October 2010 the issue had been fully subscribed. Issue costs were paid totalling $300 000. At their meeting on 5 November 2010, the directors resolved that the 800 000 shares applied for be allotted. The journal and ledger account entries required are as follows:

**General journal**

| Date | Account debited/credited | Dr | Cr |
|---|---|---|---|
| 31/10/10 | Cash at bank | 2 320 000 | |
| | Applications, ordinary | | 2 320 000 |
| | (Applications for ordinary share issue) | | |
| 31/10/10 | Issue costs | 300 000 | |
| | Cash at bank | | 300 000 |
| | (Payment of costs of share issue) | | |
| 5/11/10 | Applications, ordinary | 2 320 000 | |
| | Share capital, ordinary | | 2 320 000 |
| | (Allotment of 800 000 ordinary shares at $2.90 per share) | | |
| | Share capital, ordinary | 300 000 | |
| | Issue costs | | 300 000 |
| | (Transfer of share issue costs) | | |



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| General ledger<br>Cash at bank | | | | |
|---|---|---|---|---|
| **Date** | **Account debited/credited** | ***Debit*** <br> ***$*** | ***Credit*** <br> ***$*** | ***Balance*** <br> ***$ Dr or Cr*** |
| Oct 31 | Applications, ordinary | 2 320 000 | | 2 320 000 Dr |
| Oct 31 | Issue costs | | 300 000 | 2 020 000 Dr |

| Applications, ordinary | | | | |
|---|---|---|---|---|
| **Date** | **Account debited/credited** | ***Debit*** <br> ***$*** | ***Credit*** <br> ***$*** | ***Balance*** <br> ***$ Dr or Cr*** |
| Oct 31 | Cash at bank | | 2 320 000 | 2 320 000 Cr |
| Nov 5 | Share capital, ordinary | 2 320 000 | | – |

| Issue costs | | | | |
|---|---|---|---|---|
| **Date** | **Account debited/credited** | ***Debit*** <br> ***$*** | ***Credit*** <br> ***$*** | ***Balance*** <br> ***$ Dr or Cr*** |
| Oct 31 | Cash at bank | 300 000 | | 300 000 Dr |
| Nov 5 | Share capital, ordinary | | 300 000 | – |

| Share capital, ordinary | | | | |
|---|---|---|---|---|
| **Date** | **Account debited/credited** | ***Debit*** <br> ***$*** | ***Credit*** <br> ***$*** | ***Balance*** <br> ***$ Dr or Cr*** |
| Oct 31 | Balance | | | 4 000 000 Cr |
| Nov 5 | Applications, ordinary | | 2 320 000 | 6 320 000 Cr |
| Nov 5 | Issue costs | 300 000 | | 6 020 000 Cr |

Note: For simplicity's sake, only one 'bank' account has been used in this example. As previously noted, application monies would be held, prior to allotment, in a separate trust bank account.

## Dealing with profit

Profit is the excess of income over expense for an accounting period. (If expense exceeds income it will, of course, be described as a loss.) The Framework identifies two elements in income: 'revenue' – an inflow of resources resulting from normal trading operations or the investment of surplus assets – and 'gains' – increases in the value of assets. Gains in the value of saleable assets will normally only be recognised when realised (i.e. when the asset is sold at a profit, after deducting any costs of sale), though some assets, notably land, may be revalued in the firm's books and the resultant profit used to enhance equity.

In the case of an unincorporated business, such as a partnership or a sole trader, the profit will be transferred at the end of the accounting period to the owner(s) personal account(s) from which withdrawals may be made at the option of the owner(s).

With a company, however, the decision about how much of the profit will be withdrawn and how much left invested in the business is delegated to the directors. The profit at the end of the accounting period, after deduction of all expenses (including company income tax) is transferred to an account normally called 'Retained earnings'. The directors then decide how much of the balance in this account will be paid out to shareholders as their share of the profit (dividend) and how much will be retained within the business. Profits retained in the company may either be left as a balance in the retained earnings account, which implies that they may be used to pay future dividends

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to shareholders, or they may be transferred to a reserve, which implies that they will be retained within the business for some specific purpose (e.g. asset replacement or debenture redemption reserves) or just to generally build up the company's assets (general reserve). The existence of a reserve does not necessarily denote the presence of a cash fund of that amount within the company for the stated purpose. All it means is that those profits had not been distributed to the shareholders. If the company has revalued assets upwards, such as land, the gain in value will also be credited to a reserve, usually titled 'Asset revaluation reserve'.

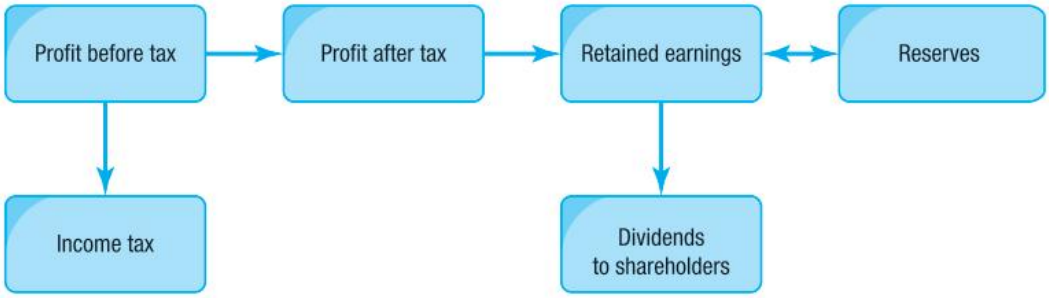



Figure 7.2 Distribution of company profit

EXAMPLE:

## Example 7.5

At the end of the 2009 financial year, Longshot Ltd had retained earnings of $461 000. On 1 October 2009 the company paid the final dividend approved by the shareholders at the 2009 AGM of $250 000 and on 1 January 2010 it paid an interim dividend of $125 000 declared by the directors. The profit for the year ended 30 June 2010 was $455 000 after all expenses, including income tax. The directors have decided to retain $200 000 in a general reserve to provide for future expansion.

A summary of the profit situation may be as follows.

| | $ |
|---|---|
| Balance at end of 2009 year | 461 000 |
| Final dividends paid 2009 | (250 000) |
| Interim dividend paid 2010 | (125 000) |
| Retained profit brought forward | 86 000 |
| Profit for the year after tax | 455 000 |
| Potentially available for dividends | 541 000 |
| Transfer to general reserve | 200 000 |
| Retained earnings, available for dividends | 341 000 |

This information will be contained in the retained earnings ledger account, the balance of which will be listed under the heading of 'equity' in the Statement of financial position.

| Retained earnings account | | | | |
|---|---|---|---|---|
| **Date** | **Account details** | ***Debit*** | ***Credit*** | ***Balance $ Dr or Cr*** |
| 1/7/09 | Balance | | | 461 000 Cr |
| 1/10/09 | Final dividend payable | 250 000 | | 211 000 Cr |
| 1/1/10 | Interim dividend payable | 125 000 | | 86 000 Cr |
| 30/6/10 | Profit and loss summary | | 455 000 | 541 000 Cr |
| | General reserve | 200 000 | | 341 000 Cr |


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Key Concept 7.4

**Reserve**

Reserve is company profits retained within the business for specific or general purposes. A reserve may be created out of retained earnings or by gains in the value of assets.

## Dividends

Once the directors have decided on the total amount of profit to be used for dividends, this will be allocated to the individual shareholders in proportion to their holding. Preference shareholders are entitled to receive their dividend before any payment can be made to the ordinary shareholders (that is why they are called 'preference shares') and the dividend is normally expressed as a percentage of the face value of the share. For example, eight per cent preference shares with a nominal value of $2 each will be entitled to receive an annual dividend, if profits permit it, of 8% × $2 = 16 cents per share. Ordinary share dividends are expressed in terms of $x$ cents per share.

Traditionally, directors would recommend dividends to the AGM where members would be able to approve, reduce, reject but *not* increase the directors' recommendation. Many companies now, however, include a provision in their Constitutions that enables the directors to declare a dividend without shareholder approval. Once a dividend has been declared, whether by the directors (where this is allowed) or at the AGM by the shareholders, the dividend then becomes a payable item (i.e. a liability). Also, recognising that it is perhaps unreasonable to make the shareholders wait until after the end of the year before participating in the company's profit, many companies have a clause in their constitution that gives directors the right to declare one or more 'interim dividends' payable during the course of the year at their discretion. They are generally paid halfway through the financial year.

The accounting entries for dividends may be summarised as follows:

| Action to be recorded | Account to debit | Account to credit |
|---|---|---|
| Dividend declared<br>*(if directors have discretion to declare dividends)* | Dividend declared<br>OR<br>Retained earnings | Dividend payable |
| Dividend paid | Dividend payable | Bank |
| At end of financial year<br>*(no journal entry is required if the dividend was debited to retained earnings when declared)* | Retained earnings | Dividend declared |

Note that even when directors have the right to declare final dividends without reference to shareholders, they will seldom, in practice, be able to do so before the end of the financial year. Thus such dividends will not be shown as a liability nor included in the retained earnings account at the end of the year to which they relate. However, a note regarding the directors' intentions will be included in the notes to the accounts for that year (see Chapter 9).

EXAMPLE:

### Example 7.6

The board of Longshot Ltd (see Example 7.5) met on 31 July 2010 after the year's accounts had been finalised and resolved, as permitted by the company's constitution, that a dividend of 7 cents per share be declared on the company's 4 million ordinary shares. This dividend was paid on 20 August. In addition, as previously mentioned, they had resolved to transfer $200 000 to a general reserve. The dividend calculation is 7 cents × 4 million = $280 000.

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The balance in the cash at bank account prior to the payment of the dividend was $296 500. The accounting entries to give effect to these decisions would be as follows.

**General journal**

| Date | Accounts debited/credited | Dr | Cr |
|---|---|---|---|
| 30/6/10 | Retained earnings | 200 000 | |
| | General reserve | | 200 000 |
| | (Transfer as resolved) | | |
| 31/7/10 | Final dividend declared | 280 000 | |
| | Final dividend payable | | 280 000 |
| | (Final ordinary dividend of 7 cents per share) | | |
| *(Since the directors have the right, in terms of the company's Constitution, to declare a dividend without seeking the approval of shareholders, the dividend could have been debited directly to the retained earnings account, which would make the following journal entry on 31/7/10 unnecessary.)* | | | |
| 31/7/10 | Retained earnings | 280 000 | |
| | Final dividend declared | | 280 000 |
| | (Dividend paid for y/e 30/6/10) | | |
| 20/8/10 | Final dividend payable | 280 000 | |
| | Cash at bank | | 280 000 |
| | (Payment of dividend approved, 7 cents per share) | | |

**General ledger**

**Final dividend declared**

| Date | Account debited/credited | Debit $ | Credit $ | Balance $ Dr or Cr |
|---|---|---|---|---|
| July 31 | Final dividend payable | 280 000 | | 280 000 Dr |
| July 31 | Retained earnings | | 280 000 | |

**Retained earnings**

| Date | Account debited/credited | Debit $ | Credit $ | Balance $ Dr or Cr |
|---|---|---|---|---|
| June 30 | Balance | | | 541 000 Cr |
| June 30 | General reserve | 200 000 | | 341 000 Cr |
| July 31 | Final dividend declared | 280 000 | | 61 000 Cr |

**Final dividend payable**

| Date | Account debited/credited | Debit $ | Credit $ | Balance $ Dr or Cr |
|---|---|---|---|---|
| July 31 | Final dividend declared | | 280 000 | 280 000 Cr |
| Aug 20 | Cash at bank | 280 000 | | – |

**General reserve**

| Date | Account debited/credited | Debit $ | Credit $ | Balance $ Dr or Cr |
|---|---|---|---|---|
| June 30 | Retained earnings | | 200 000 | 200 000 Cr |

**Cash at bank**

| Date | Account debited/credited | Debit $ | Credit $ | Balance $ Dr or Cr |
|---|---|---|---|---|
| Aug 20 | Balance | | | 296 500 Dr |
| Aug 20 | Final dividend payable | | 280 000 | 16 500 Dr |

Suppose that the company's Constitution permitted the declaration of interim dividends by the directors and, at their meeting on 15 January 2011, the board resolved to pay a 1 cent ordinary



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interim dividend. The required entries would be as follows. The amount of the dividend would be 4 million shares × 1 cent = $40 000. It is assumed that the dividend was paid by 31 January 2011.

**General journal**

| Date | Accounts debited/credited | Dr | Cr |
|---|---|---|---|
| 15/1/11 | Retained earnings | 40 000 | |
| | Interim dividend payable | | 40 000 |
| | (Interim dividend 1 cent per share) | | |
| 31/1/11 | Interim dividend payable | 40 000 | |
| | Cash at bank | | 40 000 |
| | (Payment of interim dividend of 1 cent per share) | | |

**Ledger accounts**

**Retained earnings**

| Date 2011 | Account debited/credited | Debit $ | Credit $ | Balance $ Dr or Cr |
|---|---|---|---|---|
| Jan 1 | Balance | | | 61 000 Cr |
| Jan 15 | Interim dividend payable | 40 000 | | 21 000 Cr |

**Interim dividend payable**

| Date 2011 | Account debited/credited | Debit $ | Credit $ | Balance $ Dr or Cr |
|---|---|---|---|---|
| Jan15 | Retained earnings | | 40 000 | 40 000 Cr |
| Jan 31 | Cash at bank | 40 000 | | – |

Key Concept 7.5

**Dividend**

A dividend is the amount decided by the directors to be paid to the shareholders as their share of the company's profit. The dividend is proportional to the member's shareholding.

## Bonus shares

Bonus shares are issued by the company free to existing shareholders in proportion to their shareholdings. The main purpose is normally to consolidate the capital of the company. Shareholders' equity consists of share capital, retained earnings and other reserves and, over the years, the nominal value of the reserves section of the equity may come to greatly exceed the share capital. By converting some of the reserves to share capital, by means of a bonus share issue (sometimes also called, for obvious reasons, a 'capitalisation issue'), this situation can be set right. Bonus shares can be issued out of any reserve and this includes retained earnings. When issued out of retained earnings this is often called a share dividend.

EXAMPLE:

### Example 7.7

Boomtown Ltd was originally incorporated with a share capital of six million 50-cent ordinary shares. At the end of the last financial year on 30 June 2010, the shareholders' equity was summarised as follows.

| | $ |
|---|---|
| Share capital (6 million shares) | 3 000 000 |
| General reserve | 500 000 |

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| | |
|---|---|
| Asset revaluation reserve | 2 000 000 |
| Retained earnings | 300 000 |
| | 5 800 000 |

In order to bring the company's nominal share capital more in line with the actual share value, the directors have decided on 31 July 2010 to make a one-for-two bonus share issue, funded out of the asset revaluation reserve. The nominal share price of the issue will be 50 cents per share. (As all the shareholders are receiving the same number of shares proportionately, the issue price of the bonus shares is not important.) The shareholders' equity following the bonus issue will thus be as follows.

| | $ |
|---|---|
| Share capital (9 million shares) | 4 500 000 |
| General reserve | 500 000 |
| Asset revaluation reserve | 500 000 |
| Retained earnings | 300 000 |
| | 5 800 000 |

Note that the overall value of the shareholders' equity has not changed and in fact, by itself, a bonus issue will have no effect on the value of the shareholders' investment – they will have more shares but each will be worth slightly less. The bonus share issue is 6 000 000/2 = 3 000 000 shares at 50 cents each = $1 500 000. This amount is subtracted from the Asset revaluation reserve and added to the Share capital. If the board were to say, however, that they intended to maintain the same dividend rate on the new capital, this would boost the value of the shares since they would, in effect, be announcing their intention to increase dividends (same rate on a larger number of shares).

The accounting treatment of bonus shares is a simple book entry as follows (using Boomtown Ltd as an example).

**General journal**

| Date | Accounts debited/credited | Dr | Cr |
|---|---|---|---|
| 31/7/10 | Asset revaluation reserve | 1 500 000 | |
| | Share capital, ordinary | | 1 500 000 |
| | (Issue of 3 million bonus shares on a 1-for-2 basis at 50 cents per share) | | |

**General ledger**

**Asset revaluation reserve**

| Date | Account debited/credited | Debit $ | Credit $ | Balance $ Dr or Cr |
|---|---|---|---|---|
| July 1 | Balance | | | 2 000 000 Cr |
| July 31 | Share capital, ordinary | 1 500 000 | | 500 000 Cr |

**Share capital, ordinary**

| Date | Account debited/credited | Debit $ | Credit $ | Balance $ Dr or Cr |
|---|---|---|---|---|
| July 1 | Balance | | | 3 000 000 Cr |
| July 31 | Asset revaluation reserve | | 1 500 000 | 4 500 000 Cr |

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# Test your knowledge

1 List the characteristics of a company.

2 What are the advantages of a company compared to an unincorporated business?

3 Outline the process required to form a company.

4 Outline the differences between a public and a proprietary company.

5 What are the differences between a large and a small proprietary company?

6 Outline the ways in which companies may be subject to external regulation and control.

7 What are the Replaceable Rules?

8 What is the purpose of a company's Constitution and what matters might it deal with?

9 What is the board of directors of a company and how are they appointed?

10 What is the function of the ASX?

11 What is the function of an external auditor of a company and how are they appointed?

12 What are shares and what are the rights of ordinary shareholders?

13 How is the issue price determined for a cash issue of shares?

14 What is the difference between a cash issue and a bonus issue of shares?

15 What are dividends and how are they determined?

16 What is the purpose of the Corporations Act with regards to company formation and operation?

17 Distinguish between a qualified and unqualified audit report.

# Test your understanding

## Topic guide

- Public/proprietary comparison 7.1
- Large/small proprietary company comparison 7.2
- Types of company 7.3
- Limited liability 7.4
- Duties of secretary 7.5
- Ordinary/preference shares comparison 7.6
- Share issues – theory 7.7, 7.8
- Share issues – journals, ledger, theory 7.9, 7.10, 7.11, 7.12, 7.14
- Share issues – equity section 7.13
- Dividend payments 7.15, 7.16, 7.17, 7.18, 7.19, 7.21
- Retained earnings account 7.15, 7.16, 7.17, 7.18, 7.19, 7.21
- Reserves 7.20
- Bonus share issue 7.22, 7.23
- Comprehensive question 7.24

7.1 State whether the following companies are public or proprietary companies in terms of the Corporations Act. Which of them are listed on the ASX? Which of them are small proprietary companies?

- Gundagai Tuckerboxes Pty Ltd
- Sunarise Ltd
- Broken Hill Proprietary Company Ltd

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- Wobbleboard Ltd
- Kangaroo Downs Pastoral Company Pty Ltd
- R Harris & Son Pty Ltd

7.2 For each of the following proprietary companies, state whether you think they are large or small proprietary companies.

| | Company A | Company B | Company C | Company D |
|---|---|---|---|---|
| Total assets | $5 800 000 | $14 200 000 | $12 900 000 | $10 400 000 |
| Total liabilities | $1 200 000 | $5 600 000 | $4 200 000 | $2 100 000 |
| Shareholders' equity | $4 600 000 | $8 600 000 | $8 700 000 | $8 300 000 |
| Net sales for the year | $11 400 000 | $21 500 000 | $26 200 000 | $22 300 000 |
| Total expenses | $8 300 000 | $11 800 000 | $19 100 000 | $14 200 000 |
| Profit before tax | $3 100 000 | $9 700 000 | $7 100 000 | $8 100 000 |
| Number of employees | 65 | 125 | 42 | 85 |

7.3 For each of the following businesses, state which sort of company you think would be suitable, explaining your answers.
a a business to explore for and then mine iron ore
b a business selling fish and chips in a suburban shopping centre
c a building company operating throughout Australia and overseas
d a family business owning a chain of hardware stores in Western Australia.

7.4 Limited liability means:
a the owners of a company only have to contribute a limited amount of capital
b the liability of the owners for the debts of the business is limited
c the business is only permitted by its constitution to borrow a certain amount
d the business is only required to repay a limited proportion of its liabilities.

State which of these alternatives is correct and explain its significance to a company's owners.

7.5 You are the company secretary of a large proprietary company. List the main tasks for which you would be responsible.

7.6 List the essential differences between ordinary shares and preference shares.

7.7 What limitations are there on the issue of shares by a proprietary limited company?

7.8 What would you expect to be included in the prospectus produced by a company inviting subscription for a cash issue of ordinary shares?

7.9 Blueyes Ltd was incorporated on 1 October 2009. On that day the company published a prospectus for the issue of four million ordinary shares at a price of $1 per share, payable in full on application. The issue was fully subscribed by 30 November 2009 and on 10 December the directors allotted the four million shares. On the same day, the company paid $11 000 for costs associated with its incorporation and $98 000 for the publication of the prospectus and other costs associated with the share issue.

**Required**
a The journal entries and ledger accounts needed to record all the events stated above.
b The equity section *only* of the statement of financial position immediately after the events stated above. Notes to the accounts are not required.

7.10 On 1 August 2010 Hihopes Ltd publishes a prospectus for the issue of five million ordinary shares. These are to be issued at a price of $2 per share payable in full on application. The issue is fully subscribed by the closing date for applications of 31 October and on 15 November the directors resolve that the shares be allotted. On 20 November, the company pays $250 000 for various costs associated with the issue.

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**Required**
The journal entries and ledger accounts needed to record the application for and issue of the shares and to deal with the costs of the issue.

7.11 Dambusters Ltd has a share capital of $9 500 000 consisting of eight million ordinary shares. Of these, four million were issued when the company was first formed at an issue price of $1 per share and the remainder three years later at an issue price of $1.50.

**Required**
a How do you explain the difference in the issue prices of the shares?
b Calculate the total amount received from the share issues. How do you explain the difference between this amount and the balance in the share capital account?

7.12 Rubberant Ltd has a share capital of $15 600 000 consisting of 12 million ordinary shares worth $11 700 000 and one million 9% preference shares worth $3 900 000. The company wishes to raise more capital and has decided to make a one-for-four rights issue of ordinary shares at an issue price of $2.10. The issue was fully subscribed on 30 April 2010 and the shares were allotted on 10 May. On the same date the cost of the prospectus ($120 000) and underwriting fees ($100 000) were paid.

**Required**
a What would have been the main factor influencing the directors' decision on the issue price of the new shares?
b The preference shares are not being given the opportunity to participate in the share issue. Do you think that is fair?
c Show the journal entries and ledger accounts needed to record the application for and issue of the shares and to deal with the costs of the issue.

7.13 At the end of the last financial year on 30 June 2010 the equity of Franksong Ltd was as follows.

| | |
|---|---|
| Share capital (ordinary shares) | $8 900 000 |
| Reserves | $1 200 000 |
| Retained earnings | $200 000 |
| | $10 300 000 |

The company has decided to issue another one million ordinary shares at a price of $3.50 per share. The issue was fully subscribed by 30 September 2010 and the shares allotted on 12 October, on which date issue costs of $290 000 were paid.

**Required**
a Show the journal entries and ledger accounts needed to record the application for and issue of the shares and to deal with the costs of the issue.
b Show how the equity section of the company's statement of financial position would appear after the issue of the new shares.

7.14 On 1 January 2010 the directors of Greengrass Ltd declared an interim dividend of 5 cents per share to be paid on the company's five million ordinary shares. The dividend was paid on 10 January.

**Required**
a What would have been necessary for the directors to declare this dividend?
b Show the journal entries needed to record the declaration and payment.
c Show the ledger accounts affected after the payment on 10 January.

7.15 After the accounts had been finalised on 30 June 2010 the balance in the retained earnings account of Heartbeat Holdings Ltd was $680 000. The directors resolved to recommend a final dividend of 10 cents per share amounting to $500 000. At the company's AGM on 3 October 2010, the shareholders approved the directors' recommendation and the dividend was paid on 10 October.

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**Required**

a Show the journal entries needed to deal with the declaration and payment of the dividend.

b Show the retained earnings ledger account after all entries have been made in it.

7.16 The following account balances for Williamtell Ltd appear in the records as at 30 June 2011 before any decisions have been made by the directors at this date.

| | |
|---|---|
| Retained earnings (1 July 2010 opening) | $500 000 Cr |
| General reserve | $100 000 Cr |
| Profit and loss summary (after-tax profit) | $300 000 Cr |

During the year ended 30 June 2011, the following events took place:

- 4 October 2010: final ordinary dividend for the year ended 30 June 2010 of $400 000 declared at AGM
- 30 June 2011: directors decided to transfer $70 000 to the general reserve
- 30 June 2011: directors proposed a final ordinary dividend of 10 cents per share based on 2.5 million shares.

**Required**

a Show the general journal entries to prepare the retained earnings account for the year ended 30 June 2011.

b Prepare the retained earnings account for the year ended 30 June 2011.

7.17 The following account balances for Ivanhoe Ltd appear in the records as at 30 June 2011 before any decisions have been made by the directors at this date.

| | |
|---|---|
| Retained earnings (1 July 2010 opening) | $600 000 Cr |
| General reserve | $200 000 Cr |
| Profit and loss summary (after-tax profit) | $400 000 Cr |

During the year ended 30 June 2011 the following events took place:

- 10 October 2010: final ordinary dividend for the year ended 30 June 2010 of $480 000 was declared at AGM
- 30 June 2011: directors decided to transfer $90 000 to the general reserve
- 30 June 2011: directors proposed a final ordinary dividend of 10 cents per share based on the ordinary capital of 3 000 000 shares.

**Required**

a Show the general journal entries to prepare the retained earnings account for the year ended 30 June 2011.

b Prepare the Retained earnings account for the year ended 30 June 2011.

7.18 The following account balances for Laracroft Ltd appear in the records as at 30 June 2011 before any decisions have been made by the directors at this date:

| | |
|---|---|
| Retained earnings (1 July 2010 opening) | $70 000 Cr |
| General reserve | $100 000 Cr |
| Revaluation reserve | $300 000 Cr |
| Profit and loss summary (after-tax profit) | $50 000 Cr |

During the year ended 30 June 2011 the following events took place:

- 9 October 2010: final ordinary dividend for the year ended 30 June 2010 of 3 cents per share based on 1 000 000 shares was declared at AGM
- 30 June 2011: directors decided to transfer $40 000 from the general reserve
- 30 June 2011: directors proposed a final ordinary dividend of 8 cents per share payable on a total of 1 000 000 shares.

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**Required**

a Prepare the general journal entries to prepare the retained earnings account for the year ended 30 June 2011.

b Prepare the retained earnings account for the year ended 30 June 2011.

7.19 The following account balances for Pimpernel Ltd appear in the records as at 30 June 2011 before any decisions had been made by the directors at this date.

| | |
|---|---|
| Accumulated losses (1 July 2010 opening) | $10 000 Dr |
| Profit and loss summary (after-tax profit) | $90 000 Cr |

During the year ended 30 June 2011 the following events took place:

- 30 June 2011: directors decided to transfer $20 000 from the general reserve
- 30 June 2011: directors proposed a final ordinary dividend of 4 cents per share to be paid on 2 000 000 shares.

**Required**

a Show the general journal entries to prepare the retained earnings account for the year ended 30 June 2011.

b Prepare the retained earnings account for the year ended 30 June 2011.

7.20 The Equity of Beanstalk Publications Ltd was as follows.

| | |
|---|---|
| Share capital | $5 000 000 |
| Retained earnings | $800 000 |
| | $5 800 000 |

The directors resolved on 20 July 2010 to transfer $600 000 from retained earnings to a general reserve.

**Required**

a Show the journal entry necessary to give effect to the directors' decision.

b Show how the equity of the company would appear after the transfer.

c Explain the likely reason for creating the reserve.

7.21 Grimm Brothers Ltd included the following balances in its ledger after the determination of profit at 30 June 2010.

| | |
|---|---|
| Retained earnings | $121 000 Cr |
| Profit and loss | $646 000 Cr |
| Dividend declared | $100 000 Dr |
| Income tax payable | $275 000 Cr |

At their meeting on 20 July 2010, the directors resolved that a final dividend of $300 000 be paid to shareholders (in the terms of the company's constitution this did not need shareholder approval) and that $200 000 be transferred from retained earnings to a general reserve. The dividend was paid on 1 August 2010.

**Required**

a Explain the significance of the balance 'Income tax payable'.

b Show the journal entries needed to finalise the retained earnings account at 30 June 2010.

c Show the retained earnings ledger account after all the entries referred to above have been made in it.

7.22 The directors of Gingerbread Ltd decided on 31 July 2010 to make a bonus issue of one million shares to ordinary shareholders on a one-for-four basis. The shares will be issued at $1 each and will be funded out of the general reserve.

**Required**

a Why do you think the directors might have wanted to do this?

b Show the journal entry needed to give effect to this decision.

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7.23 The Equity of Cinderella Ltd at 30 September 2010 may be summarised as follows.

| | |
|---|---|
| Share capital | $6 000 000 |
| Asset revaluation reserve | $2 000 000 |
| General reserve | $500 000 |
| Retained earnings | $250 000 |
| | $8 750 000 |

On that date the directors resolved to make a one-for-five bonus share issue, funded out of the asset revaluation reserve. The value of the issue will be $1 200 000.

**Required**

a Explain how the asset revaluation reserve would have been created.
b Show the journal entry needed to give effect to the directors' decision.
c Show a summary of the equity after the bonus share issue.

7.24 At the end of the financial year on 30 June 2010 Babesinwood Ltd had the following credit balances in its ledger.

| | |
|---|---|
| Ordinary share capital (5 million shares) | $5 000 000 |
| Preference share capital (500 000 10% shares) | $1 000 000 |
| Retained earnings | $946 000 |
| Asset revaluation reserve | $1 500 000 |
| General reserve | $400 000 |

At their meeting on 3 August, the directors resolved that the preference shareholders be paid their entitlement, that the ordinary shareholders receive a final dividend of 8 cents per share and that a further $400 000 be transferred to the General reserve. The dividends, which did not need shareholder approval, were paid on 20 August. The directors also resolved on 3 August that a bonus issue of ordinary shares on a one-for-five basis at $1 per share be made out of the asset revaluation reserve. The bonus shares did not qualify for the final dividend. On 5 January 2011, the directors resolved to pay an interim ordinary dividend of 3 cents per share, paid on 1 January 2011. The profit after tax for the year ended 30 June 2011 was $750 000.

**Required**

a Show the journal entries needed to give effect to the directors' decisions on 3 August 2010 and 5 January 2011 and the subsequent payment of the dividends.
b Show the journal entries needed to finalise the retained earnings account at 30 June 2011.
c Show the retained earnings account after all the entries mentioned above had been made by 30 June 2011.
d List the shareholders' equity balances after all entries had been made at 30 June 2011.

# Investigation

These tasks may be done as an individual or a group activity.

www.fido.gov.au

1 First read the 'Guide to Reading a Prospectus' produced by ASIC, available on Fido, its information site.

Then obtain prospectuses from at least four recent share issues. Hard copies of prospectuses can be obtained from stockbrokers, the ASX and many banks and many companies publish their prospectuses on the web. (Search for 'Prospectus + Australian companies'). Draw up a table to compare relevant aspects of the issues. These might include:

- nature of the company
- size of the share issue
- purpose of the share issue
- whether the company already has securities listed on the ASX

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- whether or not the issue was underwritten
- arrangements for dealing with oversubscription
- description of expert reports included
- any other important factors that might influence your decision to invest.

Assume that you had $10 000 to invest and all the issues had taken place at the same time. Which company's shares would you have applied for? Justify your decision.

Where the shares are now listed on the ASX, *after* you have carried out your analysis, visit the ASX website to see the current market prices of the shares and compare these with the issue prices.

2 Select an incorporated association with which you are familiar and about which you can find out information. This might be a sporting or other club or association of which someone in your family is a member or a school they attend (if it is a private institution; government schools are a sub-section of the Department of Education and do not have their own legal entity). Find out everything you can about it including:

- membership
- provisions of the association's rules or constitution
- how the association is run and who appoints the managers
- how the association is financed
- any other matters you think relevant.

Compare the information you have discovered with the same aspects of a limited company that you have learned about in this chapter. Discuss and explain any significant differences.

## Essay

1 You and your spouse are the owners of a small retailing business, which you run as a partnership. Your accountant has suggested that it would be beneficial to incorporate your business. What does this mean, how would it be effected and what advantages could you expect from it? Would there be any disadvantages to the proposal?

2 Bluesky Mining Ltd is a nickel producer whose shares are listed on the ASX. Explain what sort of company it is and why this type of company would have been chosen. What sort of controls are placed on the company's financial recording and reporting and how are these enforced? If the company wishes to raise several million dollars to expand its operations, what are its best options and how would it go about them?

## Ethics case study

You are an accountant working for a firm that is engaged as the auditor of a public company, Doublepay Ltd. During the course of your audit of the final accounts you have discovered what you believe to be an anomaly in the valuation of certain assets. The valuations adopted, while probably not actually illegal, are certainly not in accordance with best practice. The effect of the company's actions would be to boost its profit for this year, with a corresponding decrease in profit in the next financial year. When you draw the matter to the attention of your boss, the partner in your firm in charge of the audit, she tells you not to worry about it. She has already had discussions with the company's board and senior management who have explained that it is important to maximise the current profit so that a large share issue planned for early in the new financial year can be as successful as possible. The success of this issue is important for the company and anything done to ensure it is therefore in the interests of all shareholders. Moreover, she points out, it is important for the accounting firm to remain onside with company management or they might lose what is a lucrative appointment.

### Discuss

a Your role as an auditor
b To what extent the action proposed by your boss can be justified
c What you should do.

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# Chapter 8
# REGULATION OF ACCOUNTING FOR CORPORATIONS

## What You Will Learn

After studying this chapter you should be able to:

1 Identify the nature of financial reporting entities
2 Define and explain the purpose of accounting standards as they protect external users of financial reports, assist directors in the discharge of their duties and facilitate capital markets in Australia
3 Explain the purpose and nature of the Financial Reporting Council, Australian Accounting Standards Board, Australian Securities and Investment Commission and Australian Securities Exchange and their role in regulating and influencing the accounting and reporting of companies in Australia
4 Explain the purpose and nature of lobby groups and their influence on the accounting and financing of companies in Australia
5 Explain the form and objectives of general purpose financial reports and their usefulness
6 Explain the role of the International Accounting Standards Board Framework in Australia
7 Explain the nature of the qualitative characteristics of financial information and interpret and evaluate the use of qualitative characteristics in reports
8 Explain the elements of the Framework and evaluate the application of the elements and the recognition criteria of elements
9 Explain the purpose of disclosure in financial reports, in particular in relation to changes in accounting policies and enhancing comparability and understandability

## Introduction

It is assumed that most businesses are operated with the purpose of increasing wealth for the investors. Some businesses are not for profit, though most are focused on profit. Many businesses are legally required to prepare a variety of financial reports. These reports need to be compiled in specific formats, with information prepared using specific meanings for terms and using standard ways to inform stakeholders of common meanings across reports nationally and internationally. Clearly the purpose of financial information in reports is to allow stakeholders to have a historical view of events to date, but more importantly to be able to make quality, informed judgements about the future potential of the business. To ensure that reporting entities conform to the required financial reporting processes, arrangements are in place within Australia to ensure compliance. This chapter will explore reporting processes, particularly for corporations.

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# FINANCIAL REPORTING ENTITIES

Reporting entities have certain features. These features are found in Statement of Accounting Concept One (SAC1) from the Australian Accounting Standards Board (AASB). Reporting entities are those reasonably expected to have users who depend on the entity's general purpose financial reports for information that will be useful to them for making and evaluating decisions about the allocation of scarce resources (SAC 2, paragraph 44).

SAC 1 suggests a number of qualities that would identify a reporting entity:

- separation of management from the bulk of owners and stakeholders
- economic or political importance
- financial significance.

Reporting entities are not necessarily public companies.

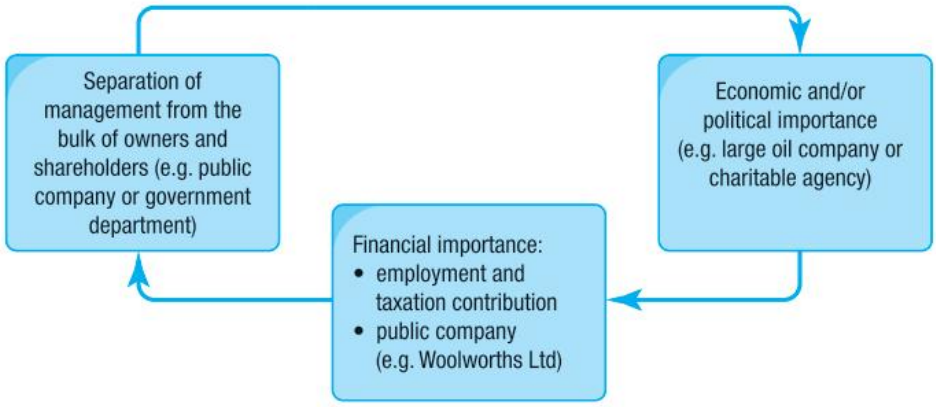



Figure 8.1 Characteristics of reporting entities

**Examples of reporting entities**

- Listed public companies, e.g. National Australia Bank Ltd
- Statutory authorities such as the Water Corporation of Western Australia
- Catholic Education Office
- Royal Flying Doctor Service of Australia
- Australian Red Cross Inc.
- Australian Football League Inc.
- St Vincent de Paul Society (WA) Inc.
- Good Samaritan Industries
- Netball WA Inc.

Managements and governing bodies of reporting entities shall present general purpose financial reports in a manner that assists in discharging their accountability (SAC 2, paragraph 43). General purpose financial reports shall disclose information relevant to the assessment of performance, financial position and financing and investing, including information about compliance (SAC 2, paragraph 44).

Disclosing entities are generally those businesses required by the Corporations legislation to comply with AASB Accounting Standards. Currently, a family proprietary company with relatively low operating revenue and not significant assets (as determined by the *Corporations Act 2001*) would not be a reporting entity for disclosure purposes.

The existence of this differential between small proprietary companies and public companies is based on the assumption that small businesses have a limited number of parties and that they are able to satisfy their immediate need for information. Large proprietary companies, though not disclosing entities, are required to complete general purpose financial reports.

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As you can see from the examples listed earlier, large not-for-profit organisations can be reporting entities. The stakeholders' interest may focus on whether the organisation generated a sufficient surplus to achieve its goals. Not-for-profit organisations acquire members' funds rather than have shareholders equity, thus the members' interests are not financial returns but continued viability for the provision of services. Not-for-profit organisations may be reporting entities if they have significant economic or financial impact on the economy.

From the above definition we note that for a business to be a reporting entity, there must be a demand from users (other than those users who receive special purpose financial reports, such as a bank) for general purpose financial reports. By having a rigorous, national and enforceable process to report financial information on reporting entities, stakeholders have their interests met and protected. With today's technological advances stakeholders can and expect to be informed without delay. Constant disclosure facilitates business and personal decision-making.

## Stakeholders

External stakeholders can be divided into three groups, as follows:

1 resource providers – employees; lenders (those who lend money to the entity, e.g., bankers); creditors; suppliers (those who supply the entity with goods and services); and, in the case of business entities, investors (i.e. shareholders who are the owners of the entity)

2 recipients of goods and services – those who benefit from the provision of goods and services by the reporting entity, i.e. customers

3 parties performing a review or oversight function – government (ASIC) and trade unions and special interest groups acting on behalf of the general public, i.e. Greenpeace.

These groups are normally provided with information by means of published annual reports.

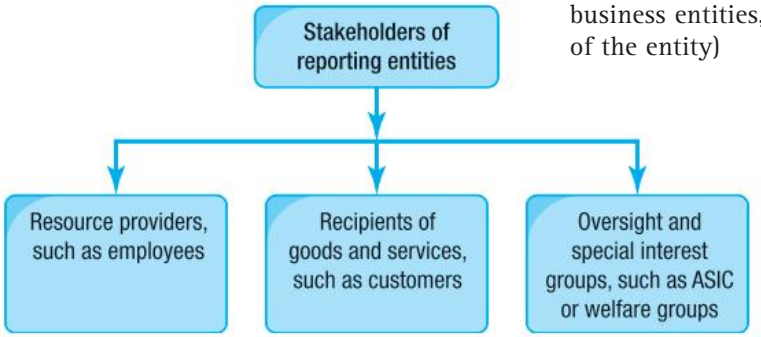



Figure 8.2 Stakeholders

Key Concept 8.1

**Reporting entities**

Reporting entities are those reasonably expected to have users who depend on the entity's general purpose financial reports for information that will be useful to them for making and evaluating decisions about the allocation of scarce resources.

# ACCOUNTING STANDARDS

www.aasb.gov.au

An Australian public company and other reporting entities are required by the Australian Accounting Standard AASB 101 (paragraph 10) to produce for public access a number of financial reports (see later in this chapter). Further, the Corporations Act requires reporting entities to prepare annual financial reports for presentation to users, including a set of financial statements, notes to those statements, directors' declaration, an annual directors' report and an annual external auditor's report. All these reports must comply with Australian Accounting Standards.

Standards are instructions and/or guidelines related to financial reporting issues. Standards were originally prepared within the accounting profession. Today standards are enforceable, or mandated (legally required), processes to be applied by reporting entities.


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Standards have their origin in the Australian setting process but since 2005 reporting entities have been required to apply standards determined by an international setting body based in London. The AASB issues Australian standards to match those issued by the IASB, although they may differ slightly, with more explanation and reference to the Australian *Corporations Act 2001*.

## Purpose of standards

Accounting standards are vitally important to the capital markets in Australia. They provide protection to external users by:

- assisting creditors and investors and other parties to analyse and make informed judgements about entities
- facilitating the provision of financial information
- providing for comparable reports so that users can compare information over time and between entities

They facilitate the Australian capital markets by:

- promoting market efficiency, thus reducing the cost of capital and enabling Australian entities to compete effectively internationally
- ensuring that the capital markets operate effectively through engendering confidence of creditors and investors in financial reports

They assist directors in discharging their obligations by:

- assisting preparers of financial reports by giving them a framework and benchmarks
- facilitating accountability
- promoting accurate reporting

Source: adapted from the Commerce Law Economic Reform Program.

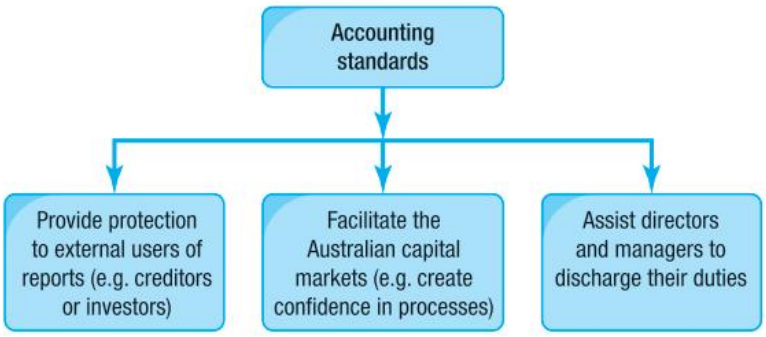



Figure 8.3 Purposes of accounting standards

Key Concept 8.2

**Accounting standards**

Accounting standards are legal guidelines on specific accounting matters that influence the way general purpose financial reports are compiled.

# FINANCIAL REPORTING COUNCIL

The Financial Reporting Council (FRC) is within the portfolio of the Australian Minister for Superannuation and Corporate Law.

www.frc.gov.au

The FRC appoints board members to the AASB for various terms. Members of the FRC have business, legal, government, academic and other interests. The current membership includes representatives from the Business Council of Australia, the G100, the Australian Shareholders Association, the Institute of Chartered Accountants,

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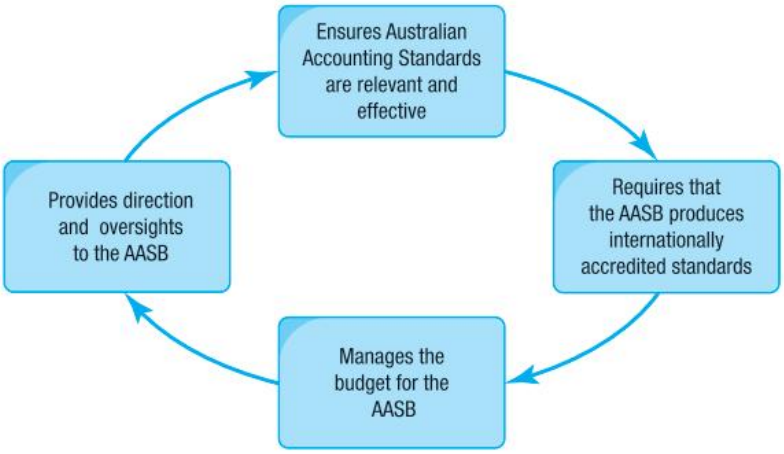



Figure 8.4 Financial Reporting Council responsibilities

the Australian Prudential Regulatory Authority, the Australian Securities Exchange, the New Zealand government, the Australian Institute of Company Directors and Australian state and Federal Governments.

The FRC:

- provides broad strategic direction and advice to the AASB and has oversight of the process for setting accounting standards in Australia
- is responsible for ensuring Australian accounting standards remain relevant and effective in achieving their objectives
- directs the AASB to adopt international best practice in standard setting
- manages the budget for the AASB.

Key Concept 8.3

**Financial Reporting Council (FRC)**

The Financial Reporting Council is an Australian statutory body with appointment capacity of the AASB and budgetary oversight over the AASB. It provides broad strategic direction to the AASB.

# AUSTRALIAN ACCOUNTING STANDARDS BOARD

www.aasb.gov.au

The Australian Accounting Standards Board (AASB) is an independent accounting standards organisation based in Melbourne, Australia.

The board comprises 13 members including the Chairman. The Chairman is appointed by the Australian government (the Minister for Superannuation and Corporate Law). The Chairman of the AASB is accountable to the Minister regarding the operations of the AASB and the office of the AASB.

The other board members are appointed by the FRC. At the time of writing, the board members include representatives from the major accounting partnerships in Australia, Deloittes Touche Tohmatsu, Ernst & Young, Pricewaterhouse Coopers, KPMG, Queensland Treasury, the Department of Defence Canberra, the Macquarie Group, BHP Billiton and the Financial Reporting Standards Board New Zealand.

An observer member from the International Accounting Standards Board (London) attends meetings of the AASB.

## The AASB's purpose

AASB responsibilities, as specified in section 227(1) of the *Australian Securities and Investments Commission Act 2001*, include the following:

- develop a conceptual framework, not having the force of an accounting standard, for the purpose of evaluating proposed accounting standards
- develop and issue accounting standards that have the force of law
- formulate accounting standards for other purposes
- participate and contribute to the development of a single set of accounting standards for worldwide use.

There are approximately 40 AASB Accounting Standards. The standards assist preparers of financial reports to prepare and present specific financial issues in the reports. Examples of topics dealt with by standards include reporting about inventories, non-current assets,


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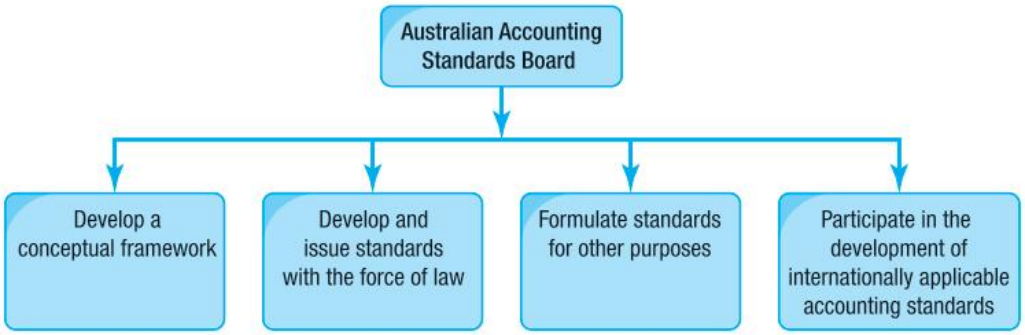



Figure 8.5 Purposes of the Australian Accounting Standards Board

foreign currency changes, income tax and agriculture and construction contracts. The full list of standards is available online.

**Examples of Standards**

- The Standard AASB 116 Property, Plant and Equipment provides insight into accounting for physical assets, such as computers and their networks. This Standard elaborates on how the costs of physical assets are determined and methods to allocate (depreciate) the costs of assets over their productive life and the process to follow when non-current physical assets are de-cognised (disposed of).
- AASB 111 Construction Contracts explains when and how to account for income if construction takes place over more than one accounting period. For example, should income be recorded at the time the contract is signed, at the completion of the contract or periodically during the time the construction is taking place?

## Changing Standards

Standards are often reviewed and revised to represent constantly emerging debates related to changing political and economic understandings of the best way to report information to stakeholders.

### Land under roads

An intriguing topic dealt with in a Standard is AASB 1051 Land Under Roads. This Standard addresses the competing values for land that can be used for transport purposes (roads) and/or alternative uses (such as agriculture). You might investigate this peculiar Australian Standard as to its purpose and broader application.

REALITY CHECK 8.1

### Foster's backs bypass challenge

Foster's Group has declared its support for a legal challenge against a contentious road project threatening the Coonawarra fine wine region (in South Australia). A group of Coonawarra residents filed a legal challenge with the South Australian Supreme Court in order to halt the construction of a bypass proposed to be built around the town of Penola. The road, designed to re-direct logging trucks presently travelling through the centre of town, will cut across prime vineyard sites of four winemakers, including Foster's. Wines from Coonawarra can command a premium based on their geography alone: the key to this is a narrow 20 km zone of reddish 'terra rossa' soil, which produces sensational red wines.

Source: Blair Speedy, *The Australian*, 21 March 2009.

**Commentary**

This news article highlights the problem of competing uses of the space that roads occupy when alternative economic uses can be made of the same space.

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Key Concept 8.4

**Australian Accounting Standards Board (AASB)**

The AASB is committed to developing, in the public interest, a single set of high-quality, understandable accounting standards with international compatibility and requiring transparent and comparable information in general purpose financial statements.

In accordance with the Corporations Act, compliance with the AASB accounting standards and interpretations issued by the Urgent Issues Group (UIG), a sub-committee of the AASB, is mandatory for all companies that are reporting entities. Other jurisdictions, such as state governments, may also choose to adopt AASB standards and make compliance with such standards mandatory.

The Australian Securities and Investments Commission (ASIC) is responsible for enforcing compliance with the Corporations Act.

## Office of the AASB

The office of the AASB provides technical and administrative services, information and advice to the AASB. This office does the day-to-day work associated with the deliberations of the board members. Members of the board will meet, usually monthly, in Melbourne. Board members usually have other employment, e.g. as a university professor or company CEO. They attend meetings and will be provided financial support for their accommodation and travel. The office of the AASB will have paid officials to maintain the services required and research initiated by the AASB members. The operating funds for this office are provided by the Australian Government.

The following diagram shows the relationships between the AASB and other bodies within Australia.

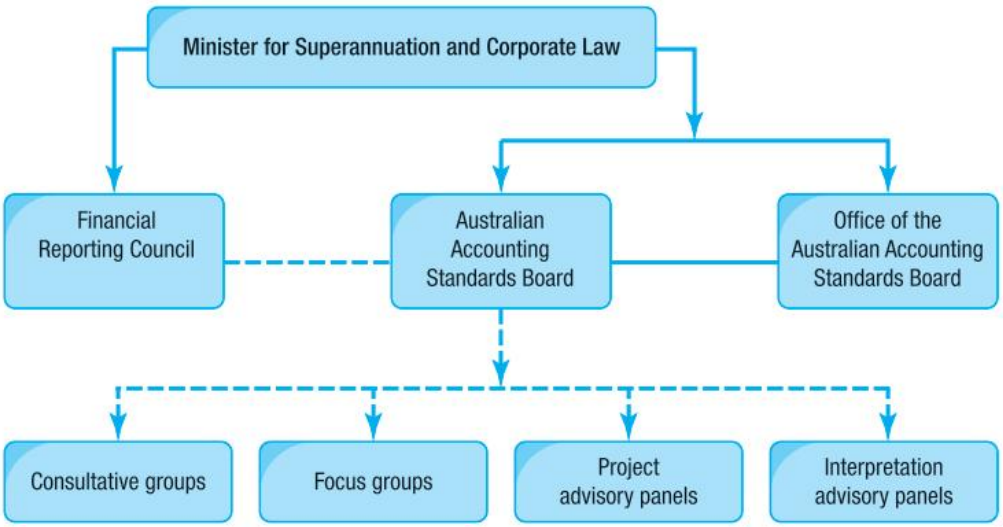



Figure 8.6 Organisational structure of the office of the Australian Accounting Standards Board

# LOBBY GROUPS

The due process employed by the standard setters provides interested parties with an opportunity to lobby the standard setters. Lobbyists attempt to influence the deliberations of the AASB, particularly with reference to standards that are relevant to their industry or interest.

The 'Group of 100' is an association of the chief financial managers from Australia's 100 largest companies. The group is very active in making submissions to the standard


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setters. The Group of 100's agenda for lobbying the standard setters may be in the general interest (e.g. to ensure that financial statements provide useful information) or they may be more narrowly focused on the interests of the companies for which they work. In any event, the impact of their participation in the standard-setting process is that it is recognised as a political process, a fact that needs to be borne in mind by the standard-setting bodies.

Lobbyists may represent members of the following types of organisations:

- Australian Institute of Directors
- Australian Shareholders' Association
- Australian bankers
- Business Council of Australia
- Chambers of Commerce
- CPA Australia
- Conservation Council of Western Australia
- National Farmers Federation
- environment groups
- Global Reporting Initiative
- Group of 100
- Institute of Chartered Accountants in Australia
- Insurance Council of Australia
- Law Council of Australia
- Small Business Association
- superannuation industry
- sustainability groups.

REALITY CHECK 8.2

## What is on the website of stakeholders' groups

www.asa.asn.au

### Australian Shareholders' Association

**Shareholders call for action on excessive executive pay**

Over 90 per cent of shareholders (93.6 per cent) believe that executives of listed companies receive excessive pay, a recent Australian Shareholders' Association (ASA) survey has found.

Source: Australian Shareholders' Association, **www.asa.asn.au**, 12 February 2009.

### Conservation Council WA

www.conservationwa.asn.au

**Government pressure for Kimberley LNG deal driven by politics not public interest**

Environment groups say today's announcement that the Premier's March 31 deadline for Traditional Owner agreement to a massive fossil fuel (LNG) hub near Broome could not be met was an opportunity to rethink the whole process.

Source: The Wilderness Society (WA) Inc., Media Release, www.wilderness.org.au, 1 April 2009.

### Commentary

The two examples reflect the varying interests that lobbyists have that may have an impact on decision-making.

## International Accounting Standards Board (IASB)

www.iasb.org

The International Accounting Standards Board (IASB) is an independent standard-setting board, appointed and overseen by a geographically and professionally diverse group of Trustees of the International Accounting Standards Committee Foundation (IASCF).

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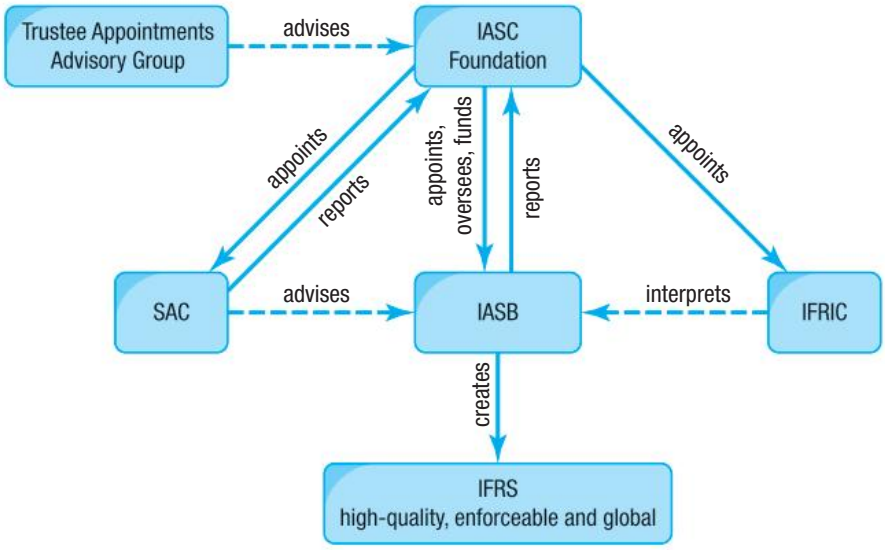



Figure 8.7 International Accounting Standards Board Structure

According to the IASCF constitution, the 14-member board must comprise a group of people representing, within that group, the best available combination of technical skills and background experience of relevant international business and market conditions in order to contribute to the development of high-quality, global accounting standards. The IASB is funded from a diverse range of interests and is based in London.

The goal of the IASB is to provide the world's integrating capital markets with a common language for financial reporting. The IASB:

- produces International Financial Reporting Standards (IFRS)
- has an interpretations committee (International Financial Reporting Interpretations Committee) to offer guidance where divergence in practice occurs
- cooperates with national accounting standard-setters to achieve convergence in accounting standards around the world
- is supported by over a hundred national accounting standard-setting interests.

Australia has been applying international standards since 2005. As a point of interest, the accounting interests of the United States of America remain under the jurisdiction of their own authorities and hence differences of intent and interpretation remain.

Key Concept 8.5

**International Accounting Standards Board (IASB)**

The IASB cooperates with national accounting standard-setters to achieve convergence in accounting standards around the world. The IASB is supported by numerous national accounting standard-setting interests. The goal of the IASB is to provide the world's integrated capital markets with a common language for financial reporting.

## Australian Securities and Investment Commission (ASIC)

www.asic.gov.au

The Australian Securities and Investment Commission (ASIC) is Australia's corporate, markets and financial services regulator. ASIC contributes to Australia's economic reputation and wellbeing by ensuring that Australia's financial markets are fair and transparent and supported by confident and informed investors and consumers.

ASIC is an independent Australian government body. It is set up under and administers the *Australian Securities and Investments Commission Act 2001* (ASIC Act) and carries out most of its work under the Corporations Act.



The ASIC Act requires ASIC to maintain, facilitate and improve the performance of the financial system and entities in it and to:

- promote confident and informed participation by investors and consumers in the financial system
- administer the law effectively and with minimal procedural requirements
- enforce and give effect to the law


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- efficiently and quickly receive, process and store information that is given to them
- make information about companies and other bodies available to the public as soon as practicable.

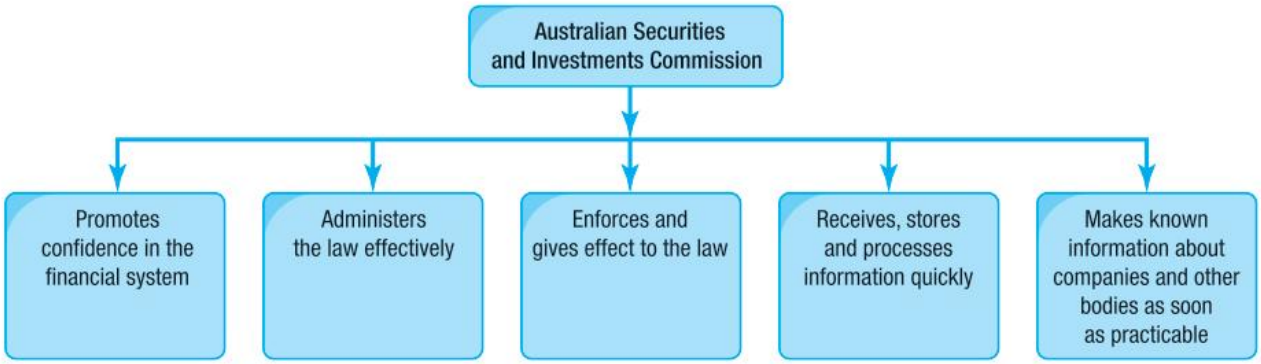



Figure 8.8 Roles of the Australian Securities and Investments Commission

ASIC's priorities are:

- assist and protect retail investors and consumers in the financial economy
- build confidence in the integrity of Australia's capital markets
- facilitate international capital flows and international enforcement
- manage the domestic and international implications of the global financial turmoil
- lift operational effectiveness and service levels for all ASIC stakeholders
- improve services and reduce costs by using new technologies and processes.

ASIC regulates Australian companies, financial markets, financial services organisations and professionals who deal and advise in investments, superannuation, insurance, deposit-taking and credit.

- As the *corporate regulator*, ASIC is responsible for ensuring that company directors and officers carry out their duties honestly, diligently and in the best interests of their company.
- As the *markets regulator*, ASIC assesses how effectively authorised financial markets are complying with their legal obligations to operate fair, orderly and transparent markets, such as the petroleum market. ASIC also advises the Minister about authorising new markets.
- As the *financial services regulator*, ASIC licenses and monitors financial services businesses to ensure that they operate efficiently, honestly and fairly. These businesses typically deal in banking, superannuation, managed funds, shares and company securities, derivatives and insurance.

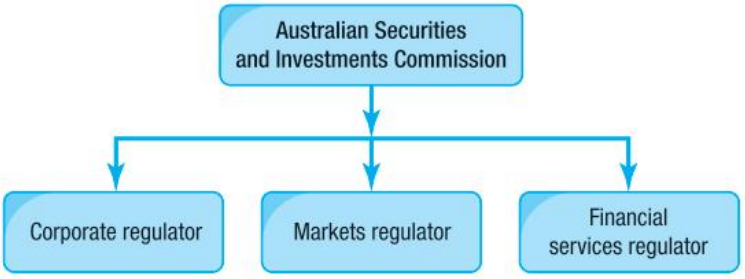



Figure 8.9 Regulation powers of the Australian Securities and Investments Commission

REALITY CHECK 8.3

## ASIC bans broker in rumour crackdown

www.afr.com

by Matthew Drummond and Ashley Midalia

The corporate regulator has taken its first scalp in its crackdown against spreading false market rumours but has also admitted it does not have all the powers needed to combat the behaviour.

The ASIC has banned a broker from Bondi (NSW) for providing financial services for 18 months after finding he wrote and widely distributed an email falsely claiming the Macquarie group was struggling to meet withdrawal of funds request from its cash management trust ...

Source: *Australian Financial Review,* 24 March 2009.

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## Former secretary pleads guilty to insider trading

The former secretary of the Queensland Gas Company has pleaded guilty to insider trading.

Mukesh Panchal, 42, from Hamilton, faced the District Court in Brisbane today.

Panchal has been convicted on his own plea to four counts of purchasing shares while in possession of inside information.

The court heard Panchal was working for the Queensland Gas Company (QGC) last year when he traded more than 400000 shares worth $1.3 million.

Prosecutor Michael Byrne told the court that Panchal used knowledge of a billion dollar deal between QGC and British Gas to profit $300000 before the Australian Securities Exchange could halt QGC shares trading.

Mr Byrne said Panchal knew about the deal because he was the minute taker at the QGC board meetings.

Source: ABC News, www.abc.net.au, 15 April 2009.

### Commentary

Both reports show ASIC as the corporate regulator ensuring that the market has honest and fairly operating service providers. Both prosecutions took place in the Federal Court.

Key Concept 8.6

**Australian Securities and Investment Commission (ASIC)**

ASIC is Australia's corporate, markets and financial services regulator.

## Australian Securities Exchange (ASX)

www.asx.com.au

Public companies in Australia with their shares listed on the stock exchange must comply with the listing requirements of the Australian Securities Exchange (ASX). The Australian Securities Exchange, as it is now known, resulted from the merger of the Australian Stock Exchange and the Sydney Futures Exchange in December 2006. The ASX is a public company providing a marketplace for the buying and selling of shares in public companies and other financial services.

The Listing Rules require listed companies to provide to the ASX:

- half-yearly reports
- a preliminary final statement
- additional details to the annual report
- additional details for mining exploration companies
- any other information that is likely to have an impact on the perceived values of the company's securities; for example, resignation of directors, significant new contracts or mineral discoveries.

If companies do not comply with these Listing Rules, they are likely to be delisted so that their shares can no longer be traded on the stock exchange. As an interim measure, the company may be 'suspended' (i.e. the quotation of its securities temporarily withdrawn until compliance has occurred).

The Stock Exchange Automatic Trading System (SEATS) provides an electronic trading environment supporting the constant disclosure of decisions and developments within every listed company. This supports the ability of stakeholders to be informed.

The ASX constantly provides updates of information about listed companies readily accessible to all. The constant disclosure assists investors to determine investment decisions. Check the ASX website to see the sort of data that is available.

Key Concept 8.7

**Australian Stock Exchange (ASX)**

The ASX is a public company providing a marketplace for the buying and selling of shares in public companies and other financial services.



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# THE FRAMEWORK

Within financial reports, common terms have emerged and have widespread understanding. For example, the term 'asset' is extensively used in accounting language. Other similar and frequently used terms (such as 'income', 'liabilities' and 'expenses') have acquired a unique flavour and application.

The International Accounting Standards Board has a conceptual framework for the Preparation and Presentation of Financial Reports ('the Framework'), the purpose of which is to define key terms and principles to ensure common understanding and application across international settings.

The AASB applies the International Framework but, as at 2005, there were some variations in approach, with the AASB retaining some remnants of its own conceptual framework. The AASB includes Statement of Accounting Concept One (SAC1), identifying a reporting entity, and SAC2, identifying the objectives of general purpose financial reporting.

## Objectives

The Framework sets out the concepts that underlie the preparation and presentation of financial statements for external users.

### Understanding the role of a conceptual framework

The purpose of the conceptual framework is outlined below.

#### Fewer accounting standards

A conceptual framework will enable the resolution of accounting problems without the need to issue an accounting standard on every occasion. This should result in fewer accounting standards and help to minimise what some see as the problem of 'standards overload'. This problem is concerned with the time and costs involved in preparing general purpose financial reports that must comply with a large number of accounting standards.

#### More consistent accounting standards

Some accounting standards will still be required; however, because they conform to the appropriate framework, they will be more consistent with each other.

#### Improved communication

There is already improved communication among accountants and between the standard-setting bodies and their constituents as a result of the various conceptual framework projects. All parties are now using common definitions for items such as assets, liabilities, income, expenses and equity.

#### Defence against politicisation

A set of concise and well-defined concepts should enhance the credibility of financial reporting and enable the standard-setting bodies to defend particular accounting standards on the basis that they are consistent with the appropriate framework. The setting of accounting standards will always be a political process, to some extent. However, a conceptual framework should serve to reduce the ability of lobby groups to influence the standard-setting process to achieve self-serving objectives that are not in the public interest.

## AASB Framework

As of 2005, the AASB Framework covers a number of assumptions, specific terms and element definitions. These terms and their explanations are found on the AASB website. Many of the more significant ones are mentioned below.

www.aasb.com.au

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Key Concept 8.8

**AASB Framework**

The Framework identifies and describes the concepts that underlie the preparation and presentation of financial statements for external users.

www.iasb.org

You may like to visit the IASB website and investigate the current developments in relation to the Framework. Much of the current international Framework is being or has been recently reshaped. It will be valuable to identify the key assumptions and terms that are under review.

# QUALITATIVE CHARACTERISTICS OF FINANCIAL INFORMATION

What qualities should financial information possess to be included in general purpose financial reports? Paragraph 24 of the AASB Framework identifies the four principal qualitative characteristics as relevance, reliability, comparability and understandability.

## Relevance

Information is *relevant* when it influences investors' decisions about the allocation of scarce resources. The Framework says that information should assist users in helping them to evaluate past, present and future events and confirm or correct their past evaluations. For information to be relevant it must have a predictive and confirmatory role and these two aspects are interrelated. Relevance is enhanced in the way information is displayed and through what is disclosed.

## Reliability

Information is *reliable* when the information can be depended on to represent faithfully, without bias and with minimal error, the transactions it is supposed to represent. Some information, such as forecasts of future profits, may be relevant but cannot be measured with an acceptable degree of reliability to be included in general purpose financial reports. Conversely, some information may be reliable, such as the historical cost of an asset 20 years ago, but is it of relevance to users?

## Comparability and understandability

The AASB Framework also requires that the relevant and reliable information be presented in such a way that it is both *comparable* and *understandable* to the users of general purpose financial reports.

When analysing financial statements, it is useful to compare the general purpose financial reports of different entities and across each accounting period. The information should be understandable to users who have a reasonable knowledge of accounting and who are able interpret the information in financial statements. Such a user is sometimes described as a sophisticated user. For those users not in such a position it is assumed that they would seek professional advice for understandability.

## Materiality

In addition to being relevant and reliable, information must also pass the *materiality* test. This essentially means that if the information is not likely to adversely affect the user's decision, the information is 'immaterial' and need not be separately disclosed in the general purpose financial report. In other words, we can ignore the detail for decision-making purposes. An example here is a grouping of various non-current assets. A business with separate accounts for furniture, computers and vehicles can group the total



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balances for reporting purposes. It is not necessary to report these items separately as the stakeholders can gain a good sense of the asset capacity of the business from the grouped information. Rounding large numbers to thousands or millions is a question of material judgement. Rounding numbers may add to clarity by avoiding clutter. Materiality is part of the understanding of relevance.

## Substance over form

Paragraph 35 of the AASB Framework introduces the concept of *substance over form*. Financial statements should report the substance and economic reality of a transaction and not merely its legal form. For example, A purports to sell an item to B but at the same time enters an arrangement with B whereby A guarantees to purchase the item back from B in one month. Furthermore, A continues to use and enjoy the benefits from the item. The form of the transaction suggests a sale, but the substance of the arrangement is that A is borrowing money from B and using the item as collateral and no sale should be recognised by A. The objective of companies that enter into transactions of this type may be to increase reported profits and so mask the underlying problems.

## Prudence

Paragraph 37 of the AASB Framework requires preparers to exercise *prudence* in the preparation of financial statements. This means that in dealing with the inevitable uncertainties that entities are confronted with in some transactions, caution must be exercised so that assets or income are not overstated and expenses or liabilities are not understated. This is supposedly different from conservatism in that there should be no deliberate overstatement of assets or income nor understatement of expenses or liabilities.

## Timeliness and cost benefit

The AASB Framework states that the provision of relevant and reliable information is subject to the constraints of *timeliness* and a balance between *benefit* and *cost*. General purpose financial reports should be prepared on a timely basis. It is of no use to a punter in 2009 to be told which horse won the 2002 Melbourne Cup. The same applies to financial information about a reporting entity. However, for large organisations there is inevitably a delay of two to three months from the balance date until the release of the audited financial reports. Of course, users do have recourse to other information more immediately available on public companies. The Australian Securities Exchange pursues a continuous disclosure strategy, thus providing stakeholders with frequent updates on reporting entities.

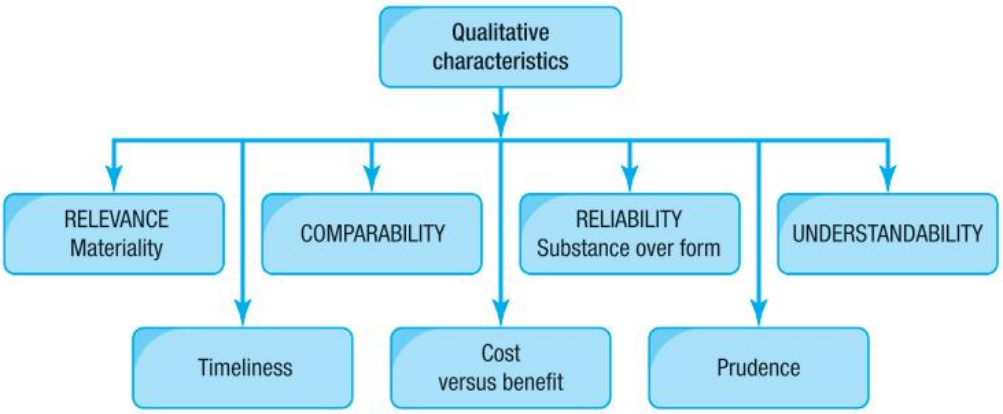



Figure 8.10 Qualitative characteristics of financial information

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The balance between benefits and costs is problematic and requires the exercise of judgement. The intent is that entities should not be required to provide information if the costs of providing the information are expected to exceed any benefits that may flow from the provision of such information. One of the problems is that often those who enjoy the benefits do not incur the costs. However, it is a general guide to standard setters that they should consider the costs and benefits to entities before imposing additional reporting obligations on them.

Key Concept 8.9

**Key qualitative concepts**

There are four key qualitative concepts described within the 'Framework' provided by the International Accounting Standards Board. They are **reliability, relevance, comparability** and **understandability.**

# GENERAL PURPOSE FINANCIAL REPORTS

An Australian public company and other reporting entities are required by the Australian accounting standard AASB 101 Presentation of Financial Statements (paragraph 10), to produce for public access the following general purpose financial reports:

i a Statement of financial position as at the end of the period
ii a Statement of comprehensive income for a period
iii a Statement of changes in equity for a period
iv a Statement of cash flows for a period
v notes, comprising a summary of significant accounting policies and other explanatory notes.

The standard requires each report to have an attached set of notes to provide explanation and disclosure.




Figure 8.11 General purpose financial reports – AASB 101 Presentation of Financial Statements

## Statement of financial position (balance sheet)

The purpose of a Statement of financial position is to communicate information about the financial position of an entity at a particular point in time. If the items contained in it are summarised and classified in an appropriate manner it can give information about the financial strength of the entity and indicate the relative liquidity of its assets. It also gives information about the liabilities of the entity; that is, what economic resources the entity is obliged to provide to other entities as a result of past transactions. The combination of this information can assist the user to evaluate the financial position of the entity. It is an important statement when assessing the going concern of an entity. Key features of a Statement of financial position are total assets, total liabilities, net assets and shareholders equity (see the Balance sheet in Wesfarmers Ltd Annual Report 2008 page 18).


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## Statement of comprehensive income

Unlike a balance sheet, which communicates information about a point in time, the Income statement relates to a period of time. In terms of published reports, the period is normally one year, although most businesses of any size produce an Income statement more regularly – usually quarterly and often monthly.

The Income statement informs readers whether a business is profitable or not. We have all heard the expression, 'What is the bottom line?' The bottom line is the amount of profit made by a project or business. By comparing that profit with how much wealth is needed to produce it, you can decide whether or not to invest in a business. Other factors that also need to be taken into account, in order to decide whether the return (as measured by the Income statement) is adequate, are the risks involved and your own judgement of future prospects.

Accounting standard AASB 118 Revenue deals with that component of income arising from the ordinary activities of the entity. It is more common to talk about an entity's revenue rather than income as it is the major source of income for nearly all entities in a normal operating year. Income includes revenue that arises from the entity's ordinary operations and other gains. An example of a gain is when land or investments are re-valued or sold at a higher valuation than cost, given that such transactions do not arise from the ordinary operations of a business (see the Income statement in Wesfarmers Ltd Annual Report 2008, page 17).

## Statement of cash flows

The main purpose of the Statement of cash flows (AASB 107 Cash Flow Statements) is to provide information about the cash receipts and cash payments for an entity during an accounting period. It is cash and not profits that an entity must use to pay its bills. It is possible for a firm to be profitable and yet have insufficient cash to meet its current obligations. The balance sheet shows the assets an entity has at a particular point in time and how these assets are financed. The Income statement shows how much profit the entity has earned during the accounting period. Both these statements are based on accrual accounting and not cash accounting. These statements cannot be used to answer the following types of questions:

- Did the entity's operations produce sufficient cash to meet dividend payments?
- Did the entity issue shares or increase liabilities during the year and, if so, what happened to the proceeds?
- Did the entity purchase any new assets during the year and, if so, how did the entity pay for these new assets?

The cash flow statement is intended to provide answers to these and other questions (see the cash flow statement in Wesfarmers Ltd Annual Report 2008, Appendix 1, www.wesresources.com.au, page 72).

## Statement of changes in equity (SOCE)

One of the important changes as a result of the adoption of International Financial Reporting Standards (IFRSs) in Australia is the requirement for all reporting entities to now present a Statement of changes in equity (AASB 101, paragraph 106).

The purpose of the SOCE is to report all changes to equity that are taken directly to the equity section of the balance sheet, together with the profit or loss for the period. It enables users to observe the overall change in equity during a period.

In addition to the revaluation of assets, there are other gains and losses (in relation to other assets and liabilities) that IFRSs require be recognised directly in equity and not in the income statement. An example of gains or losses are the movements in foreign currency exchanges (see the Statement of recognised income in Wesfarmers Ltd Annual Report 2008, Appendix 1, www.wesresources.com.au, page 73).

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Chapters 9 to 11 deal in detail with the purpose and production of these statements and the analysis and the interpretation of the information they contain.

## Notes

Notes to reports elaborate on the detail found in the four general purpose financial reports. Each note is usually associated with a particular accounting standard. For example, depreciable assets are reported within the understandings provided in the standard AASB 116 Property, Plant and Equipment.

Notes are part of the disclosure requirements of AASB 101 Presentation of Accounting Statements and AASB 108 Accounting Policies, Changes in Accounting Estimates and Errors.

# DEFINITION AND RECOGNITION OF THE ELEMENTS OF REPORTS

The Framework establishes the definitions and recognition criteria for assets, liabilities, income, expenses and equity.

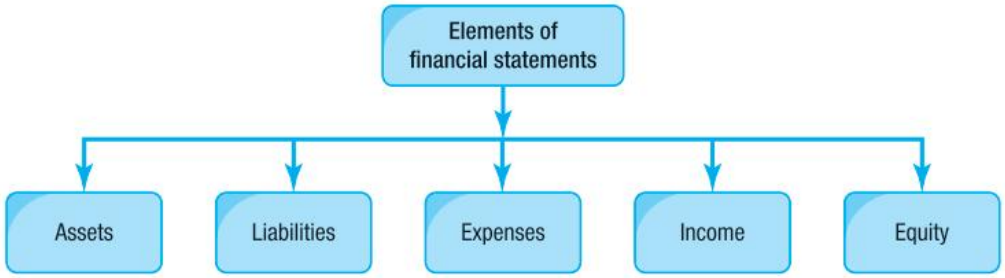



Figure 8.12 Elements of financial statements

## Assets

An asset is a resource controlled by the entity as a result of past events and from which future economic benefits are expected to flow to the entity. An asset is recognised in the balance sheet only when it is probable that the future economic benefits will flow to the entity; it must be possible to reliably measure the cost or other value of such benefits. Typical assets would be inventory, accounts receivable, buildings and machinery. Inventory meets the criteria for assets, in that inventory can be sold for cash at a given value, which in turn can be applied to purchasing future economic benefits. Machinery has the capacity to assist in generating net revenue.

The essential characteristics of an asset from the above definition are as follows.

### Future economic benefits

This is the essence of assets and relates to the scarce capacity to provide benefits to the entities that use them. It does not depend on physical form.

### Control

The entity must have the capacity to control the future economic benefits. While control often arises from legally enforceable rights, the absence of legal ownership does not automatically deny the existence of control. An example of this is a non-cancellable lease, where the lessee has control over the economic benefits embodied in the goods but the lessor maintains legal title to the goods. Thus, the lessor can resume possession of the goods, but only if the lessee is unable to meet the lease payments.


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## Past events

The present ability to control future economic benefits of assets is based on past events. A decision at balance date to buy a new machine next year does not itself create an asset. However, if the entity has entered into an irrevocable contract to acquire the machine then a right might have been obtained and an asset created as a result of the contract. The signing of the contract is, in effect, the past event.

REALITY CHECK 8.4

### Man Utd takes a beating

by James Doran

MORE than £25 million was cut from the market value of Manchester United yesterday as the row over the abolition of transfer fees continues to dog the world's biggest football club.

Shares in the club tumbled 9.75 pence to 392 pence, one of the biggest losers in the FTSE 250 index, as European Commission plans to scrap lucrative transfer fees were digested by the market.

Manchester United is worth £750 million on the stock market with an estimated £200 million attributed to the value of players. If the new rules are enforced it is feared that the club could lose all of that value.

United shares are now well adrift of a record 412.5 pence, struck in April, when the company was dubbed the world's first £1 billion football club.

Yesterday Manchester United opened its first merchandising store in Singapore – operated by FJ Benjamin Holdings, a luxury brands and retail firm – and outlined plans to open other stores across South-East Asia.

Source: *The Times*, 2 September 2000.

**Commentary**

The article raises the interesting question of whether a football player is an asset. The £200 million attributed to the value of Manchester United's players is based on transfer payments. Consider whether, in this case, the definition of an asset is satisfied. Manchester United controls the services of a player because of the contract it has with him. The future economic benefits relate to the value of the player's services and his resale value by way of the transfer payment when he moves to another club. If transfer payments are outlawed by the European Commission, then a significant component of the future economic benefits is removed. Of course, the value of the playing services remains. The past event would be the signing of the contract. An injured player may be controlled but ceases to provide a measurable benefit.

## Recognition criteria of an asset

Before being recorded on the balance sheet, an item that meets the definition of an asset must also satisfy the recognition criteria. It must be probable that the future economic benefits will flow to the entity and there must be a cost or other value that can be reliably measured.

In the Manchester United example, the transfer payment would be an amount that could be used to report the value of the player. The probability of the economic benefits flowing to the club depends on a number of issues, including a player's age, risk of injury, performance on the field and so on.

A work of art (sculpture) donated to a business meets the asset criteria. The future economic benefit may reside in its resale value or the amount of admirers it brings to the business ultimately to remain as customers.

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Software would be deemed an asset with its capacity to provide future services and have a measurable value determined by the current income pattern from sales and the way previous software has returned revenue.

A company logo such as that of Coca-Cola would be considered an asset although the recognition criteria are problematic.

What do you think might be difficulties in assessing recognition criteria of such an asset?

In the case of a mining company, when the mine operation is a going concern company mining equipment would represent future economic benefits and be recorded as assets. Should the mine close with loss of markets, the same mining equipment would have a different future benefit (as scrap metal) and the difference written off should be treated as an expense.

Key Concept 8.10

**Asset**

An asset is a resource controlled by the entity as a result of past events and from which future economic benefits are expected to flow to the entity. An asset is recognised in the balance sheet only when it is probable that the future economic benefits will flow to the entity and it must be possible to reliably measure the cost or other value of such benefits.

## Liabilities

Liabilities are defined as a present obligation of the entity arising from past events, the settlement of which is expected to result in an outflow from the entity of resources embodying economic benefits. As is the case with assets, an item that meets the definition of a liability must also satisfy the criteria for recognition (paragraph 91) before being admitted to the balance sheet. It must be probable that settlement of the liability will be required and the amount required can be reliably measured. Loans and accounts payable are typical examples of liabilities. Both have known values and will cause an outflow in the future.

### Present obligation

This means that a transaction or event in the past has created an obligation that has not yet been satisfied. As with assets, the word 'legal' is not used in the definition of a liability. The view adopted is that legal obligations alone do not give rise to liabilities. There may be other social or moral reasons that create a present obligation. For example, an entity may decide to rectify faults in one of its products, even though the warranty period has expired. The entity is not legally obliged to rectify the faults, but the decision to do so imposes an obligation on the entity and the sacrifices required to honour the obligation constitute a liability.

### Outflow of economic benefits

The obligation must result in the entity having to sacrifice economic benefits in the future to discharge the obligation.

### Past events

As only present obligations are liabilities and these could only have arisen from past events, it follows that a past event is an essential element of a liability.



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Key Concept 8.11

**Liabilities**

Liabilities are defined as a present obligation of the entity arising from past events, the settlement of which is expected to result in an outflow from the entity of resources embodying economic benefits. A liability is recognised in the balance sheet only when it is probable that settlement of the liability will be required and it is possible to reliably measure the amount required.

Should a business create a provision for employees who might be affected by unknown chemical exposure in the workplace? What would be the problem in determining an amount as a liability?

## Equity

According to the AASB Framework, equity is the residual interest in the assets of the entity after deducting all its liabilities; thus equity is assets minus liabilities. It is a residual definition whereby the identification of equity is dependent on the recognition of assets and liabilities. Consequently, unlike the other four elements of financial statements, the definition of equity does not require recognition criteria.

Key Concept 8.12

**Equity**

Equity is the residual interest in the assets of the entity after deducting all its liabilities.

## Expenses

Expenses are decreases in economic benefits during the accounting period in the form of outflows, depletions of assets or incurrence of liabilities that result in decreases in equity other than those relating to distributions to equity participants. An expense is recognised in the Income statement only when it is probable that the decrease in economic benefits has occurred and the amount can be reliably measured.

Key Concept 8.13

**Expenses**

Expenses are decreases in economic benefits during the accounting period that result in decreases in equity other than those relating to distributions to equity participants.

It is worthwhile looking at some examples of expenses, such as those listed in the following table.

**Examples of expenses**

- Payment of wages, which normally involves a monetary sacrifice
- Use of electricity, which normally involves incurring a liability to pay at the end of a quarter
- Purchase of a machine, which normally incurs a monetary sacrifice or a liability
- Purchase of goods for resale, which normally incurs a monetary sacrifice or a liability.

Although all the examples can be seen to fit our definition of expenses, they are not necessarily expenses of the period. For example, the machinery is likely to last more than one period so it cannot be seen as an expired cost. Similarly, the goods bought for resale may not be sold during the period and therefore they cannot be seen as an expense of the period. The benefit has not expired because we will be able to sell those goods at some time in the future. There are other situations where the point at which a cost is incurred and the point at which the benefit arises do not coincide.

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There are basically three possible situations that we need to consider. These are where:

1 Costs of one period are expenses of that period. For example, the cost of business telephone calls made during the period are an expense of that period.
2 Costs of an earlier period are expenses of this period. For example, stock purchased in the previous period but not used up in that period will become an expense when it is used in the current period.
3 Costs of this period are expenses of subsequent periods. For example, an annual insurance premium paid during the period will have a part of the cost that does not relate to that period but will be taken as an expense during the subsequent period(s) to which it relates.

REALITY CHECK 8.5

## Accountants wary of expense chestnuts

by Fiona Buffini

Booking expenses as assets to boost profit and cash flow is not a new accounting trick or one unknown to corporate Australia.

Calling expenses assets and putting them on the balance sheet was an 'old chestnut', accountants said yesterday, in light of the $US3.8 billion ($6.6 billion) restatement by US telco giant WorldCom.

Even without the fraud alleged in the case, classifying assets required everyday judgements and could be problematic, compounded by the absence of an Australian accounting standard on intangible assets. While most accounting calls do not result in a scandal, there have been recent differences of opinion.

Failed telco One.Tel capitalised $110 million in advertising and staff costs until the Australian Securities and Investments Commission objected, citing the company for breaches of the accounting standards and corporations law.

In April 2000, One.Tel agreed to write off the amounts and ASIC said it would closely examine accounting treatments for the capitalisation of expenses by so-called new economy companies.

The issue of subscriber acquisition costs in the telco industry was referred to the Australian Accounting Standards Board's Urgent Issues Group, which released a nine-page abstract last October.

Bruce Porter, UIG member and Deloitte technical partner, said calling expenses assets when they were really expenses was an 'old chestnut'.

'It's a basic accounting matter; you have assets, liabilities, expenses and revenues and you need to make appropriate decisions about where they lie.'

John Shanahan of Spencer & Co said asset recognition was based on concepts requiring future economic benefit, control and measurement.

The concepts have not stopped companies trying to capitalise advertising, training, fireworks, roadshows and dubious management ideas as assets in the past.

Other controversial areas were mining exploration and research and development, Mr Shanahan said.

'R&D is a major area and the basic rule is you can't capitalise research but you can capitalise development costs, if recoverable beyond any reasonable doubt that's a tough call. [sic]

'A lot of people capitalising development costs probably aren't sure they're beyond doubt.'

Asset recognition would become increasingly controversial with growth of intangible assets common in service industries.

'It's harder to determine what is the asset when you can't see it churning out widgets,' Mr Porter said.

While there is an international accounting rule on intangibles, Australia has yet to adopt it, despite the push for global standards.

Source: *Australian Financial Review*, 27 June 2002.


ISBN 9780170182058

**Commentary**

The article demonstrates the impact of classifying items as assets instead of expenses. The article indicates that, even without the WorldCom example with alleged deliberate falsification of items, the classification of costs as either assets or expenses has been a difficult issue for accountants for many years.

Why do you think One.Tel tried to treat $110 million of expenses as assets?

# Income

Income consists of *revenue* and *gains*. Revenue is the gross inflows of economic benefits during the period arising in the course of the *ordinary activities* (e.g. sale of goods) of an entity. A gain, net of expenses, is evident, for example, when land is revalued upward. This outcome increases equity in the same way that revenue does.

Key Concept 8.14

**Income**

Income is increases in economic benefits during the accounting period in the form of inflows or enhancements of assets or decreases of liabilities that result in increases in equity, other than those relating to contributions from equity participants. Income is recognised in the Income statement only when it is probable that the inflow or other enhancement has occurred and the amount can be reliably measured.

# Revenue

As we have noted, revenue is a sub-set of income. It would normally be synonymous with sales or fees. However, there may also be increases in economic benefits as a result of interest on investments, or rent on property. Whether this is included with other revenue or shown as a separate item under the heading of 'Income' will depend on the relative significance of the amount and the nature of the business.

Key Concept 8.15

**Revenue**

Revenue is the gross inflows of economic benefits during the period arising in the course of the ordinary activities of an entity when those inflows result in increases in equity, other than those relating to contributions from equity participants.

## Recognition of income

The problem of when to recognise revenue is very important because the income statement is based upon the revenue and other gains for a period and the expenses for that period. The application of the recognition criteria set out in Key Concept 8.14 is, in practice, often a matter of judgement rather than fact. Each case obviously needs to be judged on its merits. Consider when the appropriate time for revenue recognition might be for the following businesses:

- a supplier of components to Ford Motors
- an iron ore mine where all output is bought by a Chinese steel mill at a fixed price
- the Boeing Corporation, manufacturing aeroplanes for sale to the world's airlines

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In the case of the component manufacturer and the iron ore mine, one could argue that, because they have a firm contract at a known price, income should be recognised as soon as the components or the iron ore have been produced. As to the aircraft manufacturer, it would depend whether the firm is manufacturing to order or in expectation of future sales. Where a present contract exists, one would need to ask what the possibility and likelihood is of the buyer repudiating the contract; for example, in the case of falling demand for steel or air travel.

It is because the recognition of income is problematic and potentially so significant in the assessment of a firm's performance and future prospects that regulatory authorities are so concerned with its specification and will examine published reports to ensure that they are meeting the requirements of the Framework and Accounting Standards.

## MEASUREMENT OF THE ELEMENTS OF FINANCIAL STATEMENTS

One of the recognition criteria outlined in the Framework is that an element must have a cost or other value that can be reliably measured. Relevant measurement of assets is problematic and yet it is very significant in the accounting process.

The bases of measurement outlined in the Framework are historical cost, current cost, realisable value and present value.

### Historical cost

The Framework states that while historical cost is the most common measurement method, it is normally used in combination with other measurement bases. Historical cost is the measurement given to an asset when it is acquired by the amount of cash or cash equivalent exchanged. (For example, when a vehicle is purchased on invoice for $50 000, that would be deemed the historical cost.)

### Current cost

Current cost refers to the amount of cash or cash equivalent that would be exchanged at the point of transaction for the same or equivalent asset. For example, the vehicle previously recorded at historical cost six months later may have a different value and, if exchanged, the new valuation would be current cost.

### Realisable (settlement) value

Realisable or settlement value is that amount of exchangeable asset obtainable by selling the asset in a market situation.

### Present value

Present value is the discounted net cash flows or savings in outflows that are expected to occur through the asset's use.

### Fair value

Fair value is added as it is a method of measurement that is now used in many accounting standards. Fair value is a revaluation process commencing from cost basis. It represents an arm's-length contract, giving an item a market value on a particular day as a going-concern valuation.


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Table 8.1 Terms used in measurement determination

| Measurement | Examples | Comment |
|---|---|---|
| Historical cost | Equipment, land, building and inventory | Cost allocation or revaluation to determine current valuation or fair value<br>Commonly applied term |
| Current cost | Replacing a current asset with a replacement to be used in the same capacity | Amount of cash or cash equivalent necessary to replace the asset |
| Realisable value | Historical cost valuation of inventory items may be higher than resale value, thus the inventory needs to be revalued to current disposal value | The amount of cash that could be obtained at the time of sale by an arm's-length contract in the normal course of business<br>Standard requirement for valuation of inventories |
| Present value | Future commitment such as leave entitlement to employees | The amount of the future commitment expressed in today's valuation |
| Fair value | Non-current depreciable assets | Valuation likely to be received at a point during its useful life may vary from the carrying amount valuation<br>Increasing use of this term |

Key Concept 8.16

**Valuing assets**

There are different ways to value assets. Measurement methods include historical cost, current cost, realisable (settlement) value, present value and fair value.

# PURPOSE OF DISCLOSURE

Disclosure is the principle that reporting entities, such as public companies, should reveal in their published reports all information needed for the users of these reports to make informed decisions about those entities, particularly in relation to investing or lending. There are different choices available in accounting methods and therefore it is necessary to provide users with information about the accounting methods chosen by an entity and when they change their choice.

Disclosure may be manifested in a number of ways:

- The financial statements themselves must be accurate, complete and free of any misleading information ('the truth, the whole truth and nothing but the truth').
- Accounting Standards and/or the Corporations Act will, in some cases, require specific disclosure, such as interest paid within a Statement of cash flows or separating revenue from gains as forms of income.
- Accounting Standards require reports to be presented in such a way as to facilitate their comparability and understandability. This will include disclosing changes necessitated by the dynamic business environment in which companies operate. For example, AASB 108 permits entities to change accounting policies only if required to do so by Australian Accounting Standards, or if to do so will enhance the reliability and relevance of the entity's reports. The nature and effect of any such change must be revealed in the reports so that users can compare them with an earlier period when different accounting policies were followed. For example, a change in the allocation of depreciation from fixed cost to diminishing balance would require reporting in the form of a note such as:

> During the year, the company altered the allocation cost for depreciation on all non-current physical assets to the diminishing balance method. The impact of this was to increase the depreciation expense by 25 per cent in the current financial year.

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## Corporate social disclosure

With the increasing complexity in accounting and reporting in the modern global financial world and the ever-greater demands by the investing public for information on different aspects of companies' performance, the principle of disclosure has a greater significance than ever before (see Chapter 12).

# Test your knowledge

1 Discuss the various influences on external financial reporting for companies in Australia.

2 What is a conceptual framework of accounting?

3 In your own words, define a reporting entity.

4 Discuss who uses general purpose financial reports and why they require such reports, contrasting the different formats of the reports for profit and not-for-profit organisations.

5 Discuss the difference between control and ownership in terms of the definition of an asset.

6 What is your understanding of the term 'prudence'?

7 You are asked to explain the following terms to a non-accounting student. In doing so, do not simply refer to the official definition. Use your own words to express your understanding of the terms:
   a an asset
   b a liability
   c equity
   d an expense
   e income.

8 Give three examples of a liability. Show how your examples meet the qualitative criteria and the recognition criteria.

9 Give three examples of an asset from a business of which you are familiar. How do your examples meet the recognition criteria?

10 Discuss the circumstances where it is possible for financial information to be 'reliable and irrelevant' and/or 'unreliable and relevant'.

11 What external general purpose financial reports does the Australian Corporations legislation require of reporting entities?

12 What is the purpose of the Conceptual Framework for the presentation of external general purpose financial reports?

13 Using the required definitions of elements of general purpose financial reports, distinguish between assets and expenses, applying the recognition requirements.

14 Explain, using the Framework definitions, why equity is not considered a liability.

15 Describe the significance of the recognition criteria of financial elements as contrasted to the definition of the elements.

16 Explain the purpose of accounting standards and how they achieve their intended purpose.

17 Why is disclosure an important aspect in financial reporting and how does the information in company annual reports, along with the notes to the financial statements, assist in this?

18 Explain the benefits and limitations of the general purpose financial reports in company annual reports from the perspective of both company directors and shareholders/investors/lenders.

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19 In a notebook or in Excel, match the following terms with the appropriate descriptions. These can then be used for revision.

a Australian Accounting Standards Board
b accounting standards
c assets
d Australian Corporations legislation
e Australian Securities Exchange
f comparability
g Conceptual Framework
h cost versus benefits
i expense
j equity
k faithful representation
l Financial Reporting Council
m general purpose financial reports
n income
o International Accounting Standards Board
p lobby groups
q liability
r materiality
s neutral
t relevance
u stakeholders
v timeliness
w understandability

i Internal and external users of financial information provided by reporting entities
ii A statement documenting mandated methods or policies to be applied in the generating of general purpose financial reports
iii Financial reports intended to meet the information needs of users who are personally unable to access the preparation of reports
iv An Australian government body with broad strategic direction over the operation and financing of the Australian Accounting Standards Board
v An independent body required to formulate a conceptual framework for accounting financial reporting and to generate standards within an international context
vi An independent international organisation whose goal is to provide the world's integrating capital markets with a common language for financial reporting
vii Groups intending to influence the formulation of policy and legislation
viii An act of the Australian Federal Parliament regulating the formation, operation and cessation of Australian companies
ix A public company providing services to do with market shares and other securities with a role in promoting continuous disclosure of financial information from listed companies
x A theory for determining the information to be provided in financial reports
xi Financial information with qualities that assist users in making timely decisions of an economic nature, related to predictions of past, present and/or future events, and/or confirming or correcting their past evaluations
xii Observers able to reach agreement on information said to be free from bias
xiii Usefulness of information allowing users to compare an entity over time, as well as entities between each other, given consistency in methodology and/or descriptions of changes in accounting policies applied
xiv Information presented without material error or bias, and the assumption that the measurement methods applied to generate this information are without material error or bias

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xv The assumption that users have levels of expertise to understand complex data and, if not, will seek professional help
xvi Information being current and not having lost its capacity to influence decisions
xvii A quality of information such that its omission or misstatement has the potential to affect the ability of users to make sound economic decisions, including scale, aggregation and relativity
xviii The concept that useful financial information is costly to produce and the benefits must be judged against the resources applied to generate such information
xix A present economic resource that an entity has an enforceable right to use and limit others' access to it
xx An enforceable economic obligation of a third party against the entity
xxi The residual interest in the assets of an entity after deducting all liabilities
xxii Revenue and gains by an entity during an accounting period other than those from equity participants that enhance assets or decrease liabilities
xxiii Decreases during an accounting period of economic benefits through outflows of assets or increases in liabilities other than those related to equity participants

# Test your understanding

## Topic guide

- Definition of elements of financial reports: 8.1–8.4
- Standard-setting process: 8.5, 8.6, 8.9–8.11
- Recognition of income, expense, asset liability: 8.7, 8.12
- Regulation of proprietary/public companies: 8.8

8.1 ABC Ltd is being sued by a client for $100000. The company's legal advisers say that there is only a 35% chance of an unfavourable outcome. At the end of the financial year, the case has still to go to court. Should the $100000 be reported as a liability?

8.2 Do you believe an Australian star football player should be recognised as an asset on an AFL club balance sheet? What about a key player who plays for the local district hockey club?

8.3 Answer the following questions:
a Why is inventory an asset?
b Why is a mortgage a liability?
c Why are wages an expense?
d Why are fees received income?

8.4 With increased competition in the airline industry, most of the major airlines are offering 'frequent traveller' specials where travellers can receive free flights, upgrades from economy to first or business class, or free accommodation packages. Some airlines have been trying to gain more market share by giving double-kilometres credit for each flight. How should the airlines account for frequent flyer points that have been issued to travellers but not, as yet, redeemed? Are they a liability?

8.5 Why do you think individual companies or companies from various industrial or mining sectors take an active interest in the standard-setting process of accounting?

8.6 Given that general purpose financial reports are aimed at providing 'information useful to users for making and evaluating decisions about the allocation of scarce resources', discuss to what extent these users are represented in the standard-setting process.

8.7 Consider each of the following and explain your answer:
- Major overhaul of heavy machinery that has extended its useful life and increased its revenue-earning capacity – should it be recognised as an expense or an asset?

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- Research and development costs in the production of a new type of ice-cream – should it be recognised as an expense or an asset?
- A deposit received from a customer for the printing of a large batch of marketing brochures next month – should it be recognised as income and when?
- Providing for employee long-service leave entitlements – should it be recognised as a liability?

8.8 Discuss and explain the different reporting requirements for public and private companies. Why do you think some private companies are exempted from regulatory standards?

8.9 Examine the following cases for Ruliable Ltd and indicate whether you believe the company should recognise a liability:

a Potential costs due to the discovery of a possible defect related to one of its products. It is probable that claims will be made and the costs can be reliably estimated.

b Ruliable has filed a lawsuit this year against another company. It is probable that the proceeds from the claim will be received by Ruliable next year.

c The company has a policy whereby they overhaul their major machinery every five years. This has been its practice for the last 25 years. At the balance date, the machinery had been overhauled three years previously.

8.10 Go to the website of the International Accounting Standards Board and select from 'Projects' a proposed future standard that is currently under development. What aspect of reporting is it dealing with, what will be its effect on company reporting and why do you think the IASB may have thought it necessary to develop it?

www.iasb.org

8.11 'The Conceptual Framework approach to setting accounting standards is not about defining ideal accounting practices but about legitimising current practice, maintaining social and economic status and staving off attempts by the government to control standard-setting.' Discuss.

8.12 Explain how you would recognise the following situations by reference to the Framework definitions of elements and applicable recognition criteria:

- A valuable artwork has been donated to your company for display in the main foyer.
- A recognised gold ore body in your mining lease, valued at $10 million, has recently been permanently flooded.
- A company has goods held on consignment for another entity in the warehouse.
- Mining equipment is no longer required on a company mine site as the contracts for the ore have been cancelled.
- Your company provides three-year warranties for your products. This year sales of $2 million have been recorded. How should potential warranty claims on these sales be managed in the accounts?
- Your company board of management usually donates $100000 each year to Telethon. To date no decision has been made about any contribution this year. Should the accountant anticipate a payment for this year? Is this viewed as a liability?
- Your company has acted as a guarantor to the sum of $1 million for a bank loan to a spare parts supplier firm, an ancillary company, requiring refinancing. International pressure has placed the spare parts firm's profitability at risk, although its gearing level is low. Should this guarantee be reported as a liability?
- A building firm was contracted to build a bridge over three accounting periods. Two-thirds of the fee was to be received on the first day of the contract and the last third on the last day of construction three years later. Construction proceeded evenly over the three years and was completed on time. How should the revenue be reported?
- A mining company is obliged to replace natural vegetation over the mine-site area at the end of mining, after 15 years of mining operation. The current value of the re-vegetation is anticipated to be $20 million. How should this matter be reported?

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- Members of the Subiaco Football Club are confused when they observe that the balance sheet has no reference to or inclusion of their star players (or, in fact, any players) as assets.
- A residential development company incurred significant costs in two years of purchase of land and the development costs of 200 residential building lots. A recession period slowed the sale of any lots in the third year. In the fifth year, the initial value of the estate halved and the company sold all the lots below cost to release the investment capital. Plot how these developments would have been reported in the general purpose financial reports over the five years.
- A mining company took over a rival firm. The ore body had an agreed value in the purchase process. Two years later the ore is considered to be worth three times the original value. What processes should occur to verify the value of the ore and how would this increase in value of the firm be recognised?
- Your school spent $5000 on a range of small office equipment for various locations across the school. Most of the items were valued individually at less than $200 each. Provide an explanation of the application of relevance and materiality in the ways these items should be reported.

## Investigation

1 Explore the current membership of the Financial Reporting Council. Explain the interests that these members would represent in Australian financial reporting and decision-making. Nominate two alternative organisations that could participate in the FRC, justify their inclusion on the Council and highlight the focus these appointments would bring to the FRC.

2 Search the website of the Australian Accounting Standards Board and explain the relevance of the current organisations represented in the membership of the AASB. Examine the priorities of the Board in its role setting accounting standards in Australia.

www.aasb.com.au

3 AASB 118 and the Framework require that all income should be recognised in an entity's financial reports and measured at fair value. Provide examples and an explanation of income both as revenue (gross amounts) and gains (net of expenses) and the determination of fair value.

4 Choose a large not-for-profit reporting entity and a public company and locate their websites. From each entity's website, investigate the following and make a comparison of your research:
- Do they have shareholders? Do they have members?
- Do they report a profit?
- How is each entity governed?
- What is different and what is similar about their financial statements?
- Do they have an AGM?

## Essay

1 Discuss the regulatory process in Australia in relation to accounting standard-setting and the relative importance of the International Accounting Standards Board to the setting of Australian standards. In your answer outline the role of the FRC and AASB and the important part played by the Federal Government.

2 Discuss the objectives of general purpose external financial reporting and how the information in such reports meets the need of users. Include in your answer an explanation of the purpose of each of the general purpose financial reports.

3 From the current Framework discuss and evaluate the importance of the qualitative characteristics of financial information to be included in general purpose external financial reports. Do you consider that they make these reports any more useful to their users?

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4 'Accounting standards are important to the users of financial statements in that they disclose, in company annual reports, information that is needed by these users.' Discuss this statement, including in your answer the following:
   - the purpose of accounting standards
   - the purpose of disclosure in financial statements
   - your opinion as to whether accounting standards and disclosure make financial statements more useful to their users (refer to specific standards).

## Ethics case study

Michael P Cockley is a young accountant who has just commenced practising in the Perth suburb of Nedlands. He is, at present, trying to build up his practice, which specialises in giving taxation advice and preparing clients' taxation returns. One of Michael's clients is Leslie Raby, a rather testy ex-navy officer. Captain Raby has only just come to Michael after falling out with another accountant. Amanda Trefrey, the former accountant, merely mentioned that there had been 'personality clashes and communication problems'. Michael, in perusing Raby's taxation assessment, notices that it differs materially from his estimate and the difference is very much in his client's favour. In checking Raby's file, it becomes clear to Michael that the Australian Taxation Office has made an error. Further, there is a strong likelihood that this error will result in a permanent advantage to his client. Raby's tax return was a full and proper disclosure and has been correctly prepared. An error has been made by the Taxation Office and it is unlikely that the error will ever be discovered. In discussions with his client, it becomes apparent to Michael that Raby is aware of the error and the monetary gains that will accrue to him if this error is overlooked.

### Discuss

a What should Michael do under the circumstances?
b Is the 'oversight' any different from stealing if nothing is said about the client standing to benefit from the error made by the government department and keeping the money?
c What responsibility does Michael have? Should he act independently of Mr Raby's wishes?

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# Chapter 9
# COMPANY FINANCIAL REPORTS – PART 1

## What You Will Learn

After studying this chapter you should be able to:

1 Explain the nature and purpose of the following company financial reports: Statement of comprehensive income, Statement of financial position (Balance sheet) and Statement of changes in equity
2 From given information, prepare the following reports for a public corporation: Statement of comprehensive income (including balance day adjustments), Statement of financial position (including balance day adjustments) and Statement of changes in equity
3 Identify the ethical constraints placed on company reporting

## Introduction

As we learned earlier in this book, not all companies are required to produce regular financial reports, although most business owners and managers would do so anyway as good management practice. The main type of organisation that is required by law to produce reports is the public company and, unless stated otherwise, everything we have to say about financial reporting in Chapters 9 and 10 will refer to reporting by public companies.

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## USERS OF FINANCIAL REPORTS

Paragraph 9 of the Framework identifies the users of external financial reports as follows:

- present and potential future shareholders and their advisors
- the company's employees
- lenders
- suppliers and other trade creditors
- customers
- governments and their agencies
- the general public, including community groups (such as environmentalists and civil rights organisations).

In a sense, the news media, which will report and interpret financial reports for the benefit of the other users, could be seen as forming a user group of their own, since their existence depends in part on the reports commented on in their articles and programs. The basis of the interest of these various users in the financial results of the company has been mentioned already in Chapter 1.

As outlined in Chapter 8, the objectives and characteristics of external financial reports are regulated by:

- the *Corporations Act 2001*
- the Framework
- Australian Accounting Standards and interpretations thereof issued by the Australian Accounting Standards Board (AASB)
- the Australian Securities Exchange (ASX) Listing Rules (for listed public companies).

What must these external reports consist of? The Corporations Act specifies the following statements to be included in a company's financial report:

- Profit and loss (income) statement
- Balance sheet
- Statement of cash flows.

In addition, accounting standards require the production of a Statement of changes in equity, which provides an important link between the first two statements. There must also be notes on specified aspects of the company's operations and position, and there needs to be discussion and analysis to assist users in interpreting the reports, either contained in the notes or in the directors' report, which, together with the auditor's report, completes the annual report, which must be published and sent to shareholders. As noted previously, listed companies are required by both the Listing Rules and the Act to produce interim reports, normally half-yearly, which must contain, in a slightly more condensed form, the same statements as the annual report. It is recognised that most users of financial reports, particularly public company shareholders, are not trained and expert accountants, so the trend has been to make the reports themselves concise and easy to understand, with much of the detail being contained elsewhere (for example, in accompanying notes) where it can be accessed by those who wish to do so. The guiding principle of the annual and interim reports is that they should present a true and fair view of the operations and position of the company.




Accounting terminology, like language in general, is a dynamic field and the Profit and loss (income) statement and the Balance sheet are now referred to in the relevant Standard (AASB 101 Presentation of Financial Statements) as the Statement of comprehensive income and the Statement of financial position respectively. While the Accounting Standard does not require these terms to be used and therefore some companies may continue to use the old names for the reports, we will henceforth in this book use the new terminology.

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# STATEMENT OF COMPREHENSIVE INCOME

'Comprehensive income' is defined in AASB 101 as the change in equity of the business during a period resulting from transactions or events other than the contribution or withdrawal of capital by the owners. These changes may come about, first through a profit or loss on trading operations (revenue less expenses plus other income, such as interest or rent) or, second, through a gain or loss in the value of certain assets. These gains or losses might occur through:

- revaluation of non-current assets (most often land)
- gains or losses on foreign currency transactions (obviously only applicable if the entity has international transactions). These will not be dealt with in this textbook apart from being presented in the example opposite
- increases or decreases in the value of certain financial assets and liabilities as defined in AASB 101 (e.g. loans, deposits or receivables). These will not be dealt with in this textbook apart from being presented in the example opposite.

These two elements of comprehensive income must be shown separately in the company's statement(s). Companies have the option of producing a single Comprehensive income statement showing all details of comprehensive income, or two statements, the first an Income statement detailing the trading revenue and expense and the second showing the profit or loss derived from the Income statement and the other gains or losses, to produce a Statement of comprehensive income for the period. If the 'single-statement' approach is used, which the AASB favours, details of income and expense may be included in the statement itself or these items may be summarised in the statement and detailed in accompanying notes.

Key Concept 9.1

**Statement of comprehensive income**

The Statement of comprehensive income is a financial statement that details the total comprehensive income of a company for a given period representing the change in equity over that period, other than changes resulting from transactions with owners in their capacity as owners. This comprises all income (revenue and gains) and expenses, including income tax payable.

The Standard (AASB 101) does not prescribe a format for the Statement of comprehensive income, although the accompanying implementation guidance notes do give a number of alternative layouts. The example given opposite employs a layout, somewhat simplified, that would be acceptable in terms of including all the detail that is required to be included. Some features of this example are:

- 'other income' and 'expenses' are listed separately in notes. We will cover some of the notes to the Statement of comprehensive income but it is beyond the scope of this textbook to cover all the possible notes that may be found in a company annual report. The Standards (AASB 101 and 118) do specify the income that must be disclosed and require expenses to be classified by function or nature
- comparative figures for the previous financial year are also included. If, for any reason (such as a change in accounting policy) the previous figures are not strictly comparable, this fact must be disclosed and explained in the notes to the accounts
- figures are rounded off to the nearest $1000 for greater simplicity and clarity
- income tax expense arising from trading operations and from other comprehensive income must be shown separately. In this textbook we will not deal with issues relating to tax effect accounting. For simplicity we will assume that the profit before income tax is the taxable income and, consequently, the income tax expense and income tax payable for the year will be the same amount
- the Statement of comprehensive income, which forms part of the company's annual report, will have analysis appended to it relating the profit results to the share capital (e.g. 'Earnings per share'). This aspect of the report is dealt with in Chapter 11.


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EXAMPLE:

## Example 9.1

Mayfareladee Ltd
Statement of comprehensive income for the year ended 30 June 2010

| | Notes | 2010 $'000 | 2009 $'000 |
|---|---|---|---|
| Revenue | | 4650 | 4120 |
| Cost of sales | | (2430) | (1960) |
| **Gross profit** | | 2220 | 2160 |
| Other income | 1 | 101 | 123 |
| Expenses (excluding finance costs) | 2 | (850) | (680) |
| Finance costs | | (124) | (68) |
| **Profit before income tax** | | 1347 | 1535 |
| Income tax expense | | (404) | (460) |
| **PROFIT FOR THE PERIOD** | | 943 | 1075 |
| **Other comprehensive income** | | | |
| Gains on asset revaluations | | 600 | 300 |
| Foreign exchange differences | | 75 | (50) |
| Gains (losses) on available-for-sale financial assets | | 43 | (28) |
| Income tax on other comprehensive income | | (87) | (20) |
| **Other comprehensive income for the period, net of income tax** | | 631 | 202 |
| **TOTAL COMPREHENSIVE INCOME FOR THE PERIOD** | | 1574 | 1277 |

**NOTES**

| | | |
|---|---|---|
| **1 Other income** | | |
| Interest | – | 28 |
| Rent | 101 | 95 |
| | 101 | 123 |
| **2 Expenses** | | |
| Selling and distribution | 175 | 160 |
| Administration | 601 | 482 |
| Other expenses | 74 | 38 |
| | 850 | 680 |

A 'two-statement' version of the Statement of comprehensive income might look something like this.

Mayfareladee Ltd
Income statement for the year ended 30 June 2010

| | 2010 $'000 | 2009 $'000 |
|---|---|---|
| Revenue | 4650 | 4120 |
| Cost of sales | (2430) | (1960) |
| **Gross profit** | 2220 | 2160 |
| Other income – rent | 101 | 95 |
| – interest | – | 28 |

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| | | |
|---|---|---|
| Selling and distribution expenses | (175) | (160) |
| Administration expenses | (601) | (482) |
| Other expenses | (74) | (38) |
| **Profit from continuing operations** | 1 471 | 1 603 |
| Finance costs | (124) | (68) |
| **Profit before income tax** | 1 347 | 1 535 |
| Income tax expense | (404) | (460) |
| **Profit for the period** | 943 | 1 075 |

Mayfareladee Ltd
Statement of comprehensive income for the year ended 30 June 2010

| | *2010 $'000* | *2009 $'000* |
|---|---|---|
| **Profit for the period** | 943 | 1 075 |
| **Other comprehensive income** | | |
| Gains on asset revaluations | 600 | 300 |
| Foreign exchange differences | 75 | (50) |
| Gains (losses) on available-for-sale financial assets | 43 | (28) |
| Income tax on other comprehensive income | (87) | (20) |
| **Other comprehensive income for the period, net of income tax** | 631 | 202 |
| **Total comprehensive income for the period** | **1 574** | 1 277 |

This report will enable users to make judgements about the profitability of the company, identify the main elements affecting it and perhaps, by comparison with the previous year, identify trends that will assist decisions about continuing or future investment in the company. What does the information in this statement tell you about the profitability of Mayfareladee Ltd?

The Statement of comprehensive income may be derived from balances in the company's ledger and/or the Income statement produced for internal purposes.

## Example 9.2

The ledger of Harrison Holdings Ltd at 30 June 2010 contained the following balances.

| | *Dr $'000* | *Cr $'000* |
|---|---|---|
| Advertising and promotion | 234 | |
| Cost of sales | 5130 | |
| Depreciation of office equipment | 24 | |
| Depreciation of sales vehicles | | 72 |
| Discount allowed | 36 | |
| Insurance | 138 | |
| Interest expense | 49 | |
| Office wages/salaries | 780 | |
| Rent expense | 149 | |
| Rent revenue | | 60 |
| Sales commissions | 128 | |
| Sales wages/salaries | 925 | |
| Sales | | 8760 |
| Sundry office expenses | 102 | |

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## ADDITIONAL INFORMATION

The company revalued non-current assets during the year by a total of $250 000.
The company has determined its income tax expense to be $324 000.
The company classifies its expenses on a functional basis as follows:

- selling and distribution
- financial
- office and general.

## REQUIRED

A Statement of comprehensive income for the year ended 30 June 2010.

## STEP 1

Classify the expenses.

| | $'000 |
|---|---|
| **Selling and distribution** | |
| Advertising and promotion | 234 |
| Depreciation of sales vehicles | 72 |
| Sales commissions | 128 |
| Sales wages/salaries | 925 |
| | 1359 |
| **Finance** | |
| Discount allowed | 36 |
| Interest expense | 49 |
| | 85 |
| **Office and general** | |
| Depreciation of office equipment | 24 |
| Insurance | 138 |
| Office wages/salaries | 780 |
| Rent expense | 149 |
| Sundry office expenses | 102 |
| | 1193 |

## STEP 2

Draw up the statement.

Harrison Holdings Ltd
Statement of comprehensive income for the year ended 30 June 2010

| | Notes | $'000 |
|---|---|---|
| Revenue | | 8760 |
| Cost of sales | | (5130) |
| **Gross profit** | | 3630 |
| Other income | 1 | 60 |
| Expenses (excluding finance costs) | 2 | (2552) |
| Finance costs | | (85) |
| **Profit before income tax** | | 1053 |
| Income tax expense | | (324) |
| **PROFIT FOR THE PERIOD** | | 729 |
| **Other comprehensive income** | | |
| Gains on asset revaluations | | 250 |
| **Other comprehensive income for the period, net of income tax** | | 250 |
| **TOTAL COMPREHENSIVE INCOME FOR THE PERIOD** | | **979** |

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**NOTES**

| | |
|---|---|
| 1 Other income | |
| Rent | 60 |
| 2 Expenses | |
| Selling and distribution | 1359 |
| Administration | 1193 |
| | 2552 |

## Example 9.3

Using the following statement and other information provided, produce a Statement of comprehensive income for the company for the year in question.

Dover Ltd
Internal income statement for the year ended 30 June 2010

| | $ | $ | $ |
|---|---|---|---|
| **Income** | | | |
| Sales | | | 2356400 |
| *Less* Sales returns | | | 12000 |
| | | | 2344400 |
| Cost of sales | | | (986200) |
| Gross profit | | | 1358200 |
| Other income: | | | |
| Gain on sale of asset | | 23000 | |
| Discount received | | 11250 | 34250 |
| Total income | | | 1392450 |
| **Expenses** | | | |
| **Selling and distribution** | | | |
| Advertising | 68000 | | |
| Cartage outwards | 132150 | | |
| Sales salaries | 345040 | 545190 | |
| **Office and general** | | | |
| Insurance | 53000 | | |
| Occupancy costs | 72000 | | |
| Office salaries | 293130 | | |
| Sundry office expenses | 81000 | 499130 | |
| **Financial expenses** | | | |
| Interest | 28000 | | |
| Discount allowed | 15130 | | |
| Bad and doubtful debts | 8900 | 52030 | |
| Total expenses | | | 1096350 |
| Profit before income tax | | | 296100 |
| Income tax expense | | | (89000) |
| **Profit** | | | 207100 |

**ADDITIONAL INFORMATION**

The company revalued its property during the year, increasing its value by $300000.

The information contained in the Income statement can now, in summarised form, be transferred to a Statement of comprehensive income. Notes will be included detailing Other income and expenses. The figures are rounded off to the nearest $1000.


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Dover Ltd
Statement of comprehensive income for the year ended 30 June 2010

| | Notes | $'000 |
|---|---|---|
| Revenue | | 2344 |
| Cost of sales | | (986) |
| **Gross profit** | | 1358 |
| Other income | 1 | 34 |
| Expenses (excluding finance costs) | 2 | (1044) |
| Finance costs | | (52) |
| **Profit before income tax** | | 296 |
| Income tax expense | | (89) |
| **PROFIT FOR THE PERIOD** | | 207 |
| **Other comprehensive income** | | |
| Gains on asset revaluations | | 300 |
| **Other comprehensive income for the period, net of income tax** | | 300 |
| **TOTAL COMPREHENSIVE INCOME FOR THE PERIOD** | | **507** |

**NOTES**

| | |
|---|---|
| 1 Other income | |
| Gain on sale of asset | 23 |
| Discount received | 11 |
| | 34 |
| 2 Expenses | |
| Selling and distribution | 545 |
| Office and general | 499 |
| | 1044 |

What other information would need to be included in this statement for an external report to be sent to shareholders?

# STATEMENT OF FINANCIAL POSITION

The Statement of financial position (also known as the Balance sheet) lists the assets, liabilities and resultant equity of the company. It thus enables users to evaluate the stability, liquidity and value of the company. By classifying the assets and liabilities, those who read the report are enabled to form a judgement about the firm's capacity to meet its obligations as they fall due (liquidity) and a comparison of external debt and owners' equity (leverage or gearing), will facilitate judgements about the vulnerability of the firm to future falls in return or increases in financing costs. The analysis of financial statements is dealt with in Chapter 11.

As with the Statement of comprehensive income, AASB 101 does not prescribe a format for the Statement of financial position, giving companies some latitude in presentation, including the title. Again, the Implementation Guidance offers examples of layouts that would satisfy the disclosure requirements of the Standard and one of these, somewhat simplified, is used in the following example. AASB 101 requires assets and liabilities to be classified as current or non-current. What order to place them in, under each category, is made in the case of assets according to their nature and liquidity or the function of the assets within the entity and, in the case of liabilities, according to their amount, nature and timing.

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EXAMPLE:

## Example 9.4

Doolittle Holloway Ltd
Statement of financial position as at 30 June 2010

| | Notes | 2010 $'000 | 2009 $'000 |
|---|---|---|---|
| **ASSETS** | | | |
| **Non-current assets** | | | |
| Property, plant and equipment | 1 | 960 | 940 |
| Goodwill | | 200 | 250 |
| Other intangible assets | | 55 | 55 |
| Available-for-sale financial assets | | 220 | 200 |
| | | 1435 | 1445 |
| **Current assets** | | | |
| Inventories | | 206 | 192 |
| Trade receivables | | 101 | 87 |
| Other current assets | | 56 | 54 |
| Cash and cash equivalents | | 130 | 183 |
| | | 493 | 516 |
| **Total assets** | | 1928 | 1961 |
| **EQUITY AND LIABILITIES** | | | |
| **Equity** | | | |
| Share capital | 2 | 1000 | 1000 |
| Retained earnings | | 262 | 258 |
| Other components of equity | 3 | 240 | 300 |
| **Total equity** | | 1502 | 1558 |
| **Non-current liabilities** | | | |
| Long-term borrowings | | 150 | 200 |
| **Current liabilities** | | | |
| Trade and other payables | | 130 | 95 |
| Short-term borrowings | | 50 | – |
| Current tax payable | | 96 | 108 |
| | | 276 | 203 |
| **Total liabilities** | | 426 | 403 |
| **Total equity and liabilities** | | 1928 | 1961 |

**NOTES**

| | | |
|---|---|---|
| **1 Property, plant and equipment** | | |
| Land | 600 | 500 |
| Buildings | 600 | 600 |
| Accumulated depreciation | (300) | (250) |
| | 300 | 350 |
| Plant and equipment | 140 | 120 |
| Accumulated depreciation | (80) | (30) |
| | 60 | 90 |
| Property, plant and equipment: net book value | 960 | 940 |

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| | | |
|---|---|---|
| **2 Share capital** | | |
| 2 million ordinary shares issued at 50 cents, fully paid | 1000 | 1000 |
| **3 Other components of equity** | | |
| General reserve | 140 | 200 |
| Asset replacement reserve | 100 | 100 |
| | 240 | 300 |

**POINTS TO NOTE**

The presentation suggested in this example does differ in some respects from the traditional form of Balance sheet often used in internal reports. Differences include:

- title of the statement
- arrangement of Assets and Liabilities – Non-current before Current
- current assets listed in reverse order of liquidity
- to simplify the statement and make it easier for users to read and understand, much detail is included in Notes to the accounts, only a summary or total being incorporated in the statement itself. Only three of these notes are shown in this example, but in a real statement there would be far more. We will also cover the note concerning dividends (see below) but, as previously stated, it is beyond the scope of this textbook to cover all the possible notes that could be in the annual report of a company
- equivalent figures for the previous year are included for the sake of comparison.

Available-for-sale financial assets are investments made by the company. These may be investments in such items as shares in other companies, debentures, managed funds, unsecured notes or deposits on the short-term money market. Each may either be a current asset or non-current asset.

In addition to the notes shown above, there will be a note in the accounts dealing with dividends. These dividends could have been paid during the current financial year (being last financial year's final dividends paid or an interim dividend paid in the current financial year) a proposed final dividend relating to the current financial year, which has been recommended by the directors, or a declared final dividend payable relating to the current financial year. Depending on the company's constitution, dividends may be declared by the directors or recommended by the directors and approved, and therefore declared, by the shareholders at the annual general meeting. When the directors have the power to declare the dividend it may be done before or after the end of the current financial year. When it is declared before the end of the financial year and this is not usually the case, the dividend payable becomes a legal liability and therefore should be shown in the current year's financial statement as a current liability. Where the dividend is declared after balance day, either by the directors or shareholders, there is not a strict liability at the balance date because, at that date, the decision (by directors or shareholders) in relation to the dividend had not yet been taken. However, there is a contingent liability (i.e. a liability that will arise if a certain event takes place – in this case the directors' and/or shareholders' resolution) and this needs to be recognised in the notes to the accounts. An interim dividend is a dividend that has been declared by the directors and paid during the current financial year. Dividends may be paid in cash or shares. In this textbook we will only deal with cash dividends. For the sake of simplicity in this textbook we shall not deal with final dividends declared before the end of the current financial year, i.e. dividends payable at balance day of the current financial year.

## Example 9.5

Let us suppose that the Directors of Doolittle Holloway Ltd had decided to recommend to shareholders a dividend of 10 cents per share for the year ended 30 June 2010. This fact might be recorded in the notes to the accounts as follows.

4 Final dividend

The directors have recommended a final dividend of 10 cents per share (2009 10 cents per share). The effect of this would be as follows.

| | *2010* $ | *2009* $ |
|---|---|---|
| Final dividend | 200000 | 200000 |

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What factors do you think the directors might have considered in their decision to recommend a final dividend of 10 cents per share (availability of profit, availability of cash, etc.)?

## Details of share capital and reserves

The Statement of financial position itself will show only one figure for Share capital. However, the relevant note will give details of all the various types of capital that may be on issue. In the example above, there was only one sort of shares, but if there were more than one they might be shown as follows.

| | $'000 |
|---|---|
| **Equity** | |
| Share capital | 6700 |
| Retained earnings | 300 |
| Other components of equity | 500 |
| | 7500 |

**NOTES**

| | $'000 |
|---|---|
| **2 Share capital** | |
| 2 million ordinary shares issued at $1 fully paid | 2000 |
| 1 million ordinary shares issued at $2.20 fully paid | 2200 |
| 500 000 11% Preference shares issued at $5 fully paid | 2500 |
| | 6700 |
| **3 Other components of equity** | |
| General reserve | 200 |
| Revaluation reserve | 300 |
| | 500 |

Similarly, as shown in the example above, the individual reserves will be shown separately in the note and in total only in the Statement itself. A reserve is an amount of equity other than share capital. This may include retained earnings, which are the surplus profits after tax not distributed to shareholders by way of a dividend or transferred to a reserve. Other reserves may be such items as:

- Revaluation reserve – created when an asset, usually a non-current asset such as land, is revalued
- General reserve – a reserve set aside from profits for no specific purpose
- Asset replacement reserve – a reserve set aside from the profits for the specific purpose of the replacement of assets.

A company may have other specific reserves in addition to the asset replacement reserve.

Reserves may be used to fund a bonus share issue. This is explained in Chapter 7 and in more detail below. Dividends may only be paid out of profits and for this purpose gains contained in the asset revaluation reserve are considered part of profit. Transfers to or from the reserves are possible, although by definition an increase in the asset revaluation reserve can only come about as a result of the gain in the value of an asset. The note regarding reserves will not detail movements in the reserves during the year: this is presented in the Statement of changes in equity.


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Key Concept 9.2

**Statement of financial position**

The Statement of financial position is a classified financial statement that details the assets, liabilities and equity of a financial entity at a point in time. The Statement contains information that is summarised for ease of understanding, additional details being included in notes.

The information needed to prepare the Statement of financial position may be derived from a post-profit-determination trial balance or from the internal balance sheet prepared for management. The former method is demonstrated in the following example.

EXAMPLE:

## Example 9.6

The following is a post-profit-determination trial balance of the ledger of Colpickering Ltd at the end of the financial year at 30 June 2010.

| | Dr $ | Cr $ |
|---|---|---|
| Accounts payable | | 134000 |
| Accounts receivable | 108000 | |
| Accrued wages | | 19000 |
| Accumulated depreciation, buildings | | 320000 |
| Accumulated depreciation, fixtures and fittings | | 69000 |
| Buildings, at cost | 2200000 | |
| Cash at bank | 76000 | |
| Cash in hand | 2000 | |
| Debenture interest payable | | 18000 |
| Debentures (2015) | | 400000 |
| Fixtures and fittings, at cost | 206000 | |
| General reserve | | 100000 |
| Goodwill | 500000 | |
| GST payable | | 46000 |
| Income tax payable | | 138000 |
| Inventory | 297000 | |
| Land, at fair value | 1200000 | |
| Long-term lease | 120000 | |
| Prepaid insurance | 16000 | |
| Allowance for doubtful debts | | 2000 |
| Retained earnings | | 244000 |
| Revaluation reserve | | 300000 |
| Share capital | | 3000000 |
| Share issue costs | 65000 | |
| | **4790000** | **4790000** |

Before proceeding to draw up the Statement of financial position, the following points should be noted:

- Share capital consists of 3 million ordinary shares issued at $1.00
- The directors, as permitted in the company's constitution, have declared, after 30 June 2010, a final ordinary dividend of 5 cents per share. As this was declared after the end of the financial year, it will not constitute a liability at 30 June 2010 and will therefore not appear in the Statement of financial position as a deduction from Retained earnings or as a current liability at that date. The final ordinary dividend for the previous year ended 30 June 2009 of $150000, at the rate of 5 cents per ordinary share, was declared on 3 October 2009 and paid on 4 November 2009.

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- GST payable, although technically taxation, will be included in payables, not the current tax liability, which relates only to income tax.
- The long-term lease is an intangible asset.
- The debentures, being repayable in 2015, constitute a non-current liability. However, the debenture interest owing, which must presumably be paid very soon, is a current debt.
- For simplicity's sake, the comparative figures for the previous year have not been provided here. In a real company report these would need to be included.
- Non current assets other than land and buildings will be grouped together and referred to as Plant and equipment.

The various accounts will be added together, where necessary, as follows:

- Cash and cash equivalents: 76 000 1 2 000 5 78 000
- Trade receivables: 108 000 – 2 000 5 106 000
- Property, plant and equipment: 2 200 000 1 206 000 1 1 200 000 2 320 000 2 69 000 5 3 217 000
- Share capital: 3 000 000 2 65 000 5 2 935 000
- Other components of equity: 300 000 1 100 000 5 400 000
- Trade and other payables: 134 000 + 19 000 + 18 000 + 46 000 = 217 000.

These totals and the other balances will now be used to produce the Statement of financial position.

Note that the Retained earnings account balance does not change. This is because the dividends declared 3 October have already been taken out of the Retained earnings account and the current year's dividend, as noted above, will not take effect until after 30 June 2010.

Colpickering Ltd
Statement of financial position as at 30 June 2010

| | Notes | $'000 |
|---|---|---|
| **ASSETS** | | |
| **Non-current assets** | | |
| Property, plant and equipment | 1 | 3217 |
| Goodwill | | 500 |
| Other intangible assets | | 120 |
| | | 3837 |
| **Current assets** | | |
| Inventories | | 297 |
| Trade receivables | | 106 |
| Other current assets | | 16 |
| Cash and cash equivalents | | 78 |
| | | 497 |
| **Total assets** | | 4334 |
| **EQUITY AND LIABILITIES** | | |
| **Equity** | | |
| Share capital | 2 | 2935 |
| Retained earnings | | 244 |
| Other components of equity | 3 | 400 |
| **Total equity** | | 3579 |
| **Non-current liabilities** | | |
| Long-term borrowings | | 400 |
| **Current liabilities** | | |
| Trade and other payables | | 217 |
| Short-term borrowings | | – |
| Current tax payable | | 138 |
| | | 355 |
| **Total liabilities** | | 755 |
| **Total equity and liabilities** | | 4334 |

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**NOTES**

| | |
|---|---|
| 1 Property, plant and equipment | |
| Land, at fair value | 1200 |
| Buildings, at cost | 2200 |
| Accumulated depreciation | (320) |
| | 1880 |
| Plant and equipment, at cost | 206 |
| Accumulated depreciation | (69) |
| | 137 |
| Property, plant and equipment: net book value | 3217 |
| 2 Share capital | |
| 3 million ordinary shares issued at $1, fully paid | 2935 |
| 3 Other components of equity | |
| General reserve | 100 |
| Revaluation reserve | 300 |
| | 400 |
| 4 Dividend | |

The final ordinary dividend for the year ended 30 June 2009 of $150 000, being 5 cents per ordinary share, was paid during the current financial year ended 30 June 2010.

The directors have declared a final ordinary dividend, after 30 June 2010, on the ordinary shares of 5 cents per share. This will require a payment of $150 000 but has not been provided for in the current year's liabilities.

Use the information provided to draw up a Balance sheet for internal use. Why do you think this might be more useful to the company's managers than the external Statement of financial position?

The use of an internal balance sheet as the basis for the preparation of the Statement of financial position is illustrated below.

EXAMPLE:

## Example 9.7

Ascot Ltd
Balance sheet as at 30 June 2010 (for internal use)

| | $ | $ |
|---|---|---|
| **Current assets** | | |
| Cash at bank | | 21 400 |
| Deposit at call | | 50 000 |
| Accounts receivable | 365 400 | |
| *Less* Allowance for doubtful debts | 7300 | 358 100 |
| Inventories | | 246 700 |
| Prepaid expenses | | 11 400 |
| **Total current assets** | | 687 600 |
| **Non-current assets** | | |

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| | | |
|---|---|---|
| Land, at fair value | | 1 300 000 |
| Buildings, at cost | 987 000 | |
| *Less* Accumulated depreciation | 123 000 | 864 000 |
| Vehicles, at cost | 196 000 | |
| *Less* Accumulated depreciation | 67 000 | 129 000 |
| Furniture and equipment, at cost | 83 000 | |
| *Less* Accumulated depreciation | 15 000 | 68 000 |
| Investments (government bonds 2014) | | 200 000 |
| Goodwill | | 300 000 |
| Cost of patents | | 32 000 |
| **Total non-current assets** | | 2 893 000 |
| **TOTAL ASSETS** | | 3 580 600 |
| **Current liabilities** | | |
| Accounts payable | | 211 300 |
| Debenture interest payable | | 16 000 |
| Accrued expenses | | 29 600 |
| GST payable | | 11 800 |
| Current income tax liability | | 113 000 |
| **Total current liabilities** | | 381 700 |
| **Non-current liabilities** | | |
| Debentures (maturing 2017) | | 400 000 |
| **Total non-current liabilities** | | 400 000 |
| **TOTAL LIABILITIES** | | 781 700 |
| **NET ASSETS** | | 2 798 900 |
| **Equity** | | |
| Share capital: | | |
| Ordinary shares 3 million, issued at 50 cents fully paid | | 1 500 000 |
| Preference shares 9% 200 000. Issued at $2 fully paid | | 400 000 |
| Total share capital | | 1 900 000 |
| Reserves: | | |
| General reserve | 100 000 | |
| Asset revaluation reserve | 400 000 | |
| Retained earnings | 398 900 | 898 900 |
| **TOTAL EQUITY** | | 2 798 900 |

## ADDITIONAL INFORMATION

- Patent costs are the costs of acquiring or developing the exclusive right to a certain product or process. They are treated as an intangible asset.
- The directors have recommended that the preference shareholders should receive their dividend entitlement and that ordinary shareholders should receive a dividend of 10 cents per share. The final dividends recommended for the year ended 30 June 2009 being the preference shareholders' dividend entitlement totalling $36 000 and the ordinary shareholders' dividend of 10 cents per share, totalling $30 000, were declared and paid during the year ended 30 June 2010.

This data can now be used to produce a Statement of financial position for the company's external report as follows. The figures are rounded off to the nearest $1000.


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Ascot Ltd
Statement of financial position as at 30 June 2010

| | Notes | $'000 |
|---|---|---|
| **ASSETS** | | |
| **Non-current assets** | | |
| Property, plant and equipment | 1 | 2361 |
| Goodwill | | 300 |
| Other intangible assets | | 32 |
| Available-for-sale financial assets | | 200 |
| | | 2893 |
| **Current assets** | | |
| Inventories | | 247 |
| Trade receivables | | 358 |
| Other current assets | | 11 |
| Cash and cash equivalents | | 71 |
| | | 687 |
| **Total assets** | | 3580 |
| **EQUITY AND LIABILITIES** | | |
| **Equity** | | |
| Share capital | 2 | 1900 |
| Retained earnings | | 399 |
| Other components of equity | 3 | 500 |
| **Total equity** | | 2799 |
| **Non-current liabilities** | | |
| Long-term borrowings | | 400 |
| **Current liabilities** | | |
| Trade and other payables *(211 + 16 + 29 + 11)* | | 268 |
| Current tax payable | | 113 |
| | | 381 |
| **Total liabilities** | | 781 |
| **Total equity and liabilities** | | 3580 |

## NOTES

| | |
|---|---|
| 1 Property, plant and equipment | |
| Land, at fair value | 1300 |
| Buildings, at cost | 987 |
| Accumulated depreciation | (123) |
| | 864 |
| Plant and equipment, at cost *(196 + 83)* | 279 |
| Accumulated depreciation *(67 + 15)* | (82) |
| | 197 |
| Property, plant and equipment: net book value | 2361 |
| 2 Share capital | |
| 3 million ordinary shares issued at 50 c., fully paid | 1500 |
| 200 000 9% preference shares issued at $2, fully paid | 400 |
| | 1900 |

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| | |
|---|---|
| 3 Other components of equity | |
| General reserve | 100 |
| Revaluation reserve | 400 |
| | 500 |
| 4 Dividends | |
| The following final dividends were declared and paid during the year ended 30 June 2010: | |
| Preference shares, as per entitlement *(9% × $400 000)* | 36 |
| Ordinary shares, 10 cents per share *(10 × 3 000 000)* | 300 |
| | 336 |
| The directors have recommended final dividends for the year ended 30 June 2010 as follows: | |
| Preference shares, as per entitlement *(9% × $400 000)* | 36 |
| Ordinary shares, 10 cents per share *(10 × 3 000 000)* | 300 |
| | 336 |

## STATEMENT OF CHANGES IN EQUITY

The third statement required to be included in the financial reports of a public company is the Statement of changes in equity. The purpose of this statement is to detail and explain the changes in the overall equity of the business over the year in question – how and why has the owners' interest in the business changed? The statement is required to show the changes over the period in the three elements that make up the equity, i.e. share capital, retained earnings and other components of equity. In the case of the 'other components' the changes in each of these components (i.e. the various different reserves) need to be shown separately.

As with the other reports, the standard does not prescribe the format but the Implementation Guidance suggests a tabular layout, a simplified version of which is shown in the example below. The previously more commonly used narrative layout is also included for the purpose of comparison.

EXAMPLE:

### Example 9.8

Pearce Trading Ltd
Statement of changes in equity for year ended 30 June 2010
(Implementation Guidance model)

| | *Share capital $'000* | *Retained earnings $'000* | *Revaluation surplus $'000* | *General reserve $'000* | *Total equity $'000* |
|---|---|---|---|---|---|
| **Balance at 30 June 2009** | **5 500** | **180** | **800** | **600** | **7 080** |
| **Changes in equity for the year:** | | | | | |
| Issue of share capital | 2 000 | | | | 2 000 |
| Share issue costs | (200) | | | | (200) |
| Dividends | | (420) | | | (420) |
| Total comprehensive income for the year | | 680 | 400 | | 1 080 |
| Transfer to general reserve | | (200) | | 200 | |
| **Balance at 30 June 2010** | **7 300** | **240** | **1 200** | **800** | **9 540** |


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Pearce Trading Ltd
Statement of changes in equity for year ended 30 June 2010
(alternative format)

| | $'000 |
|---|---|
| Profit for the year | 680 |
| Gain on revaluation of assets | 400 |
| Comprehensive income for the year | **1080** |
| **SHARE CAPITAL** | |
| Balance at start of year | 5500 |
| Issue of share capital | 2000 |
| Share issue costs | (200) |
| Balance at end of year | **7300** |
| **OTHER COMPONENTS OF EQUITY** | |
| **Revaluation reserve** | |
| Balance at start of year | 800 |
| Gain on revaluation | 400 |
| Balance at end of year | **1200** |
| **General reserve** | |
| Balance at start of year | 600 |
| Transfers from Retained earnings | 200 |
| Balance at end of year | **800** |
| **Total – other components of equity** | **2000** |
| **RETAINED EARNINGS** | |
| Balance at start of year | 180 |
| Profit for the period | 680 |
| Transfers from Retained earnings | (200) |
| Dividends paid | (420) |
| Balance at end of year | **240** |

The authors are of the view that the first alternative form of presentation is preferable for its conciseness and clarity and this will be used henceforth in this chapter. However, it must be emphasised that either form is acceptable.

The information needed to prepare the Statement of changes in equity can be derived from the Statement of comprehensive income for the period and the Balance sheets or Statements of financial position at the start and end of the period.

EXAMPLE:

## Example 9.9

Summaries of certain financial reports for Eynsford-Hill Securities Ltd are given below from which to produce a Statement of changes in equity for the year in question.

Eynsford-Hill Securities Ltd
Statements of financial position at 30 June (summarised)

| | 2009 $'000 | 2010 $'000 | Ref no. |
|---|---|---|---|
| **Non-current assets** | 3500 | 4500 | |
| **Current assets** | 700 | 1050 | |
| **Total assets** | **4200** | **5550** | |

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| | | | |
|---|---|---|---|
| **Equity** | | | |
| Share capital | 3000 | 4000 | 1 |
| Share issue costs | – | (180) | 2 |
| Retained earnings | 430 | 365 | 3 |
| Revaluation reserve | 300 | 500 | 4 |
| General reserve | 200 | 400 | 5 |
| **Total equity** | 3930 | 5085 | |
| **Non-current liabilities** | – | 200 | |
| **Current liabilities** | 270 | 265 | |
| **Total liabilities** | 270 | 465 | |
| **Total liabilities and equity** | **4200** | **5550** | |

Eynsford-Hill Securities Ltd
Statement of comprehensive income for year ended 30 June 2010 (summarised)

| | *$'000* | *Ref no.* |
|---|---|---|
| Profit for the year | 730 | |
| Gains in asset revaluations | 200 | |
| Total comprehensive income for the year | **930** | 6 |

Eynsford-Hill Securities Ltd
Statement of changes in equity for year ended 30 June 2010

| | *Share capital $'000* | *Retained earnings $'000* | *Revaluation surplus $'000* | *General reserve $'000* | *Total equity $'000* | *Ref. no.* |
|---|---|---|---|---|---|---|
| **Balance at 30 June 2009** | **3000** | **430** | **300** | **200** | **3930** | 1–5 |
| **Changes in equity for the year:** | | | | | | |
| Issue of share capital | 1000 | | | | 1000 | 1 |
| Share issue costs | (180) | | | | (180) | 2 |
| Dividends | | (595) | | | (595) | |
| **Total comprehensive income for the year** | | 730 | 200 | | 930 | 6 |
| Transfer to general reserve | | (200) | | 200 | | 5 |
| **Balance at 30 June 2010** | **3820** | **365** | **500** | **400** | **5085** | 1–5 |

The reference numbers in the right-hand column do not form part of the statements. They merely, for the purpose of instruction, link the figures in the Statement of changes in equity with their sources in the other statements. The only item not directly obtainable from these statements is the dividends paid during the year. Very often the information provided will include details of dividends paid (final dividends from the previous year plus interim dividends for this year) but, if it does not, the figure can be easily calculated from the Retained earnings balances.

In this example, 430 − *x* (dividends paid) + 730 − 200 = 365.

Therefore, *x* = 430 + 730 − 200 − 365 = 595.

Although it would be more usual to derive the Statement of changes in equity from the other reports, either internal or external, it could be done from the Trial balance. A simple example of this is given opposite.


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EXAMPLE:

## Example 9.10

Streetbefore Holdings Ltd
Trial balance – summarised (post profit-determination) at 30 June 2010.

| | $ | $ |
|---|---|---|
| Cash and cash equivalents | 102 000 | |
| Receivables | 58 000 | |
| Inventories | 146 000 | |
| Non-current assets (net book value) | 3 300 000 | |
| Intangibles | 250 000 | |
| Trade and other creditors | | 111 000 |
| Income tax payable | | 153 000 |
| Interim dividend | 180 000 | |
| Debentures | | 600 000 |
| Revaluation of assets reserve | | 300 000 |
| General reserve | | 150 000 |
| Share capital | | 2 200 000 |
| Share issue costs | 67 000 | |
| Retained earnings | | 79 000 |
| Profit and loss (Profit for the year) | | 510 000 |
| | **4 103 000** | **4 103 000** |

### ADDITIONAL INFORMATION

- Assets were revalued upwards by $300 000.
- Share capital of $1 200 000 was issued for cash during the year. The Share issue costs all relate to this issue.
- The directors have resolved to transfer $100 000 to a general reserve. This will be done with effect from 30 June 2010.
- Apart from the Interim dividend not yet debited to Retained earnings, the company paid no dividends during the year.

### REQUIRED

Prepare a Statement of changes in equity for the company for the year ended 30 June 2010.

Streetbefore Holdings Ltd
Statement of changes in equity for year ended 30 June 2010

| | *Share capital $'000* | *Retained earnings $'000* | *Revaluation surplus $'000* | *General reserve $'000* | *Total equity $'000* |
|---|---|---|---|---|---|
| **Balance at 30 June 2009** | **1 000** | **79** | **–** | **150** | **1 229** |
| **Changes in equity for the year:** | | | | | |
| Issue of share capital | 1 200 | | | | 1 200 |
| Share issue costs | (67) | | | | (67) |
| Dividends | | (180) | | | (180) |
| Total comprehensive income for the year | | 510 | 300 | | 810 |
| Transfer to general reserve | | (100) | | 100 | – |
| **Balance at 30 June 2010** | **2 133** | **309** | **300** | **250** | **2 992** |

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Note that the opening balances for Share capital and Revaluation reserve are not given, but can be calculated back from the closing balance and the known transactions during the year.
Share capital: 2 200 000 – 1 200 000 (issued during year) = 1 000 000
Revaluation reserve: 300 000 – 300 000 (revaluation during year) = nil

Key Concept 9.3

**Statement of changes in equity**
The Statement of changes in equity is a financial statement that details and explains the changes during the period in the three elements that make up a company's equity: share capital, retained earnings and other components (reserves).

## Bonus share issues

As noted in Chapter 7, the directors of a company may decide to effect a transfer from reserves (including retained earnings) to share capital by means of a free issue of shares to shareholders pro rata their current shareholdings. While this has no effect on the amount of the total equity, it will affect its makeup and should be shown in the Statement of changes in equity.

Let us suppose that the directors of Pearce Trading Ltd (Example 9.8) had resolved to make a bonus issue amounting to $750 000 to be funded out of the revaluation reserve. This might be shown as follows:

Pearce Trading Ltd
Statement of changes in equity for year ended 30 June 2010

| | *Share capital $'000* | *Retained earnings $'000* | *Revaluation surplus $'000* | *General reserve $'000* | *Total equity $'000* |
|---|---|---|---|---|---|
| **Balance at 30 June 2009** | **5 500** | **180** | **800** | **600** | **7 080** |
| **Changes in equity for the year:** | | | | | |
| Issue of share capital | 2 000 | | | | 2 000 |
| Share issue costs | (200) | | | | (200) |
| **Bonus share issue** | **750** | | **(750)** | | |
| Dividends | | (420) | | | (420) |
| Total comprehensive income for the year | | 680 | 400 | | 1 080 |
| Transfer to general reserve | | (200) | | 200 | |
| **Balance at 30 June 2010** | **8 050** | **240** | **450** | **800** | **9 540** |

# FINANCIAL STATEMENTS AND BALANCE DAY ADJUSTMENTS

The trial balances and internal reports used in the examples above contain balances arrived after balance day adjustments for accruals, prepayments, depreciation, doubtful debts and the like. While it is not the purpose of this textbook to give exhaustive detail on such adjustments, we will review the main adjustments to show how the figures to be used in the company's external statements may be arrived at. If you wish to do further revision of this topic, we would refer you to *Nelson Accounting and Finance 2A, 2B* (especially Chapters 7 to 9). For the purpose of simplicity, taxable income is deemed to be profit before tax. Therefore, the tax rate will be multiplied by the profit before tax to determine the income tax expense and current tax payable.


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EXAMPLE:

## Example 9.11

The unadjusted trial balance of Batman Ltd for the year ended 30 June 2010 is shown below.

Batman Ltd
Trial balance as at 30 June 2010

| | Debit $ | Credit $ |
|---|---|---|
| Share capital | | 500 000 |
| General reserve | | 80 000 |
| Retained earnings | | 200 000 |
| Prepaid shop rent | 10 000 | |
| Shop rent expense | 2 000 | |
| Other selling and distribution expenses | 20 000 | |
| Interest revenue | | 6 000 |
| Accumulated depreciation on plant and equipment | | 25 000 |
| Plant and equipment | 500 000 | |
| Administration salaries expenses | 15 000 | |
| Other General and administration expenses | 12 000 | |
| Receivables | 35 000 | |
| Cash | 80 000 | |
| Allowance for doubtful debts | | 300 |
| Inventory | 40 000 | |
| Interest expense | 15 000 | |
| Other financial expenses | 6 000 | |
| Sales | | 350 000 |
| Accounts payable | | 38 000 |
| Long-term borrowings | | 300 000 |
| Long-term investments | 90 000 | |
| Cost of sales | 120 000 | |
| Unearned service fees | | 40 000 |
| Service fees revenue | | 60 000 |
| Land | 600 000 | |
| Revaluation reserve | | 100 000 |
| Warehouse | 200 000 | |
| Accumulated depreciation on warehouse | | 44 000 |
| Gain on sale of plant and equipment | | 1 700 |
| | 1 745 000 | 1 745 000 |

### ADDITIONAL INFORMATION AS AT 30 JUNE 2010

- The company uses the perpetual inventory method
- Income tax is at the rate of 30% applied on the profit before tax
- Administration salaries owing $3000
- Prepaid shop rent expired $7000
- Unearned fees are now only $12 000
- Interest revenue accrued $500

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- The Warehouse is depreciated using the straight-line method. Its residual value was estimated to be $40 000 and its estimated useful life 20 years
- The Plant and equipment was depreciated using the reducing-balance method at the rate of 15% per annum
- The allowance for doubtful debts was to be set at 5% of accounts receivable

**REQUIRED**

Prepare an adjusted Trial balance to take account of the balance day adjustments required at 30 June 2010 according to the additional information provided.

- Shop rent: $2000 + $7000 expired (previously prepaid) = $9000
- Prepaid shop rent: $10 000 − $7000 expired = $3000
- Interest revenue: $6000 + $500 (accrued/owing) = $6500
- Accrued interest revenue: $500
- Depreciation on plant and equipment: $500 000 cost − $25 000 accumulated depreciation = $475 000 × 15% rate = $71 250
- Accrued depreciation on plant and equipment: $25 000 + $71 250 = $96 250
- Administration salaries expense: $15 000 + $3000 accrued/owing = $18 000
- Accrued salaries expense: $3000
- Services fees revenue: $60 000 + $28 000 ($40 000 previously unearned − $12 000 now unearned) = $88 000
- Unearned service fees revenue: $12 000
- Allowance for doubtful debts: $35 000 × 5% = $1750
- Doubtful debts expense: Allowance for doubtful debts closing balance of $1750 − $300 Cr opening balance = $1450
- Depreciation on warehouse: $200 000 cost − $40 000 residual value = $160 000/20 years = $8000
- Accumulated depreciation on warehouse: $44 000 + $8000 = $52 000
- Profit before tax is calculated as 6500 + 350 000 + 88 000 + 1700 − 9000 − 20 000 − 71 250 − 18 000 − 12 000 − 1450 − 15 000 − 6000 − 120 000 − 8000 = 165 500
- Income tax = profit before income tax $165 500 × 30% rate = $49 650

Batman Ltd
Trial balance as at 30 June 2010 after balance day adjustments

| | Debit $ | Credit $ |
|---|---|---|
| Share capital | | 500 000 |
| General reserve | | 80 000 |
| Retained earnings | | 200 000 |
| Prepaid shop rent | 3000 | |
| Shop rent expense | 9000 | |
| Other selling and distribution expenses | 20 000 | |
| Interest revenue | | 6500 |
| Accrued interest revenue | 500 | |
| Depreciation on plant and equipment | 71 250 | |
| Accumulated depreciation on plant and equipment | | 96 250 |
| Plant and equipment | 500 000 | |
| Administration salaries expenses | 18 000 | |
| Accrued administration salaries | | 3000 |
| Other General and administration expenses | 12 000 | |
| Receivables | 35 000 | |
| Cash | 80 000 | |


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| | | |
|---|---|---|
| Allowance for doubtful debts | | 1750 |
| Doubtful debts expense | 1450 | |
| Inventory | 40000 | |
| Interest expense | 15000 | |
| Other financial expenses | 6000 | |
| Sales | | 350000 |
| Accounts payable | | 38000 |
| Long-term borrowings | | 300000 |
| Long-term investments | 90000 | |
| Cost of sales | 120000 | |
| Unearned service fees | | 12000 |
| Service fees revenue | | 88000 |
| Land | 600000 | |
| Revaluation reserve | | 100000 |
| Warehouse | 200000 | |
| Accumulated depreciation on warehouse | | 52000 |
| Depreciation on warehouse | 8000 | |
| Gain on sale of plant and equipment | | 1700 |
| Income tax expense | 49650 | |
| Income tax payable | | 49650 |
| | 1878850 | 1878850 |

The information in this Trial balance, summarised where necessary, can now be used to produce the Statement of comprehensive income, Statement of financial position and Statement of changes in equity for the company for the year ended, or as at, 30 June 2010.

## ETHICAL ISSUES

Most people would accept that ethical behaviour – acting fairly and honestly with consideration and respect for the interests of others – is in the long-term interest of businesses. Businesses that are seen to be acting unethically in relation to their shareholders, employees, customers or the community at large, may incur notoriety that will have an adverse impact on their sales. A good example of this is the Swiss company Nestlé, which was perceived by many to be acting unethically by encouraging mothers in developing countries to use powdered formula milk for their babies rather than relying on breast-feeding, which was generally healthier and undoubtedly much cheaper. The company's products were the subject of an organised boycott by consumer groups in a number of developed countries and, although difficult to quantify, there is little doubt that the company lost significant sales worldwide. Closer to home, service stations that raise their prices by extraordinary amounts or fail to lower prices despite falls in the world oil price are often subject to a backlash from consumers who see them as acting unfairly to exploit their market position.

One of the problems with ethical behaviour is that there is no universally accepted set of ethical rules. The professional accounting bodies and other professional associations have their own codes of conduct for their members, which emphasise the need for qualities such as integrity, honesty, objectivity and competence in their work practices (see Chapters 1 and 6). However, there is not a single set of ethical standards applicable to all and perhaps there never can be, given the diversity and changing nature of our society.

As far as business reporting is concerned, it is probably fair to say that, to a great extent, the community's expectations in relation to ethical behaviour are enshrined in the controls

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imposed through the Act, the Accounting Standards and Framework and the ASX Listing Rules. However, these cannot cover every eventuality and, in any case, as with any set of regulations, it is possible to comply with the letter of the law without observing its spirit. An example of this would be where the Directors have used their discretion in a way that is unreasonable in order to create a false impression of the company's financial position.

**REALITY CHECK 9.1**

AASB 101 permits liabilities repayable within 12 months to be shown as non-current liabilities if there exists a facility to roll it over, i.e. renew the loan so it would be repayable in more than 12 months time. Dodgy Ltd has a substantial loan outstanding, which, at the time it was taken out, included in its terms the capacity to roll it over for an additional 12 months, provided the bank was satisfied with the company's viability at the time of the roll-over, which is due to occur in nine months time. Although the directors have not received any formal notification from the bank in regard to this loan, they have a shrewd suspicion that the bank will decline to roll over the loan, based on the company's recent performance and the general deterioration of market conditions. To show the loan as a current liability would have a substantial adverse effect on the company's apparent short-term viability, as revealed by the current ratio. The directors therefore decide that the loan should be shown as a non-current liability because they do, theoretically, have the capacity to renew it and have no firm indications that they will not be able to exercise this option.

Discuss whether the directors' action is ethical.

## Test your knowledge

1 List the groups regarded as external users of financial reports.
2 State three ways in which external financial reports are regulated.
3 What are 'interim reports'?
4 Define comprehensive income and state the three categories of such income.
5 Outline the structure and purpose of a Statement of comprehensive income.
6 Outline the structure and purpose of a Statement of financial position.
7 What is the purpose of the Notes to the accounts of public companies?
8 What is the purpose of including the previous year's figures in the external financial reports of a company?
9 Why are the final dividends for the year not normally included in the Equity or Liabilities sections of the Statement of financial position of the company for that year?
10 Outline the structure and purpose of a Statement of changes in equity.
11 What are the sources of information for the production of a Statement of changes in equity?
12 State and briefly explain the three elements of equity.
13 What are the two ways in which company reserves may come about?
14 In what ways may equity be increased?
15 How are the costs of share issues treated in a company's accounts?

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# Test your understanding

## Topic guide

- Statement of comprehensive income:
  - Theory: 9.1
  - From adjusted trial balance: 9.2, 9.3
  - From internal income statement: 9.4, 9.5
- Statement of financial position:
  - Theory: 9.6
  - Non-current assets, equity sections only: 9.7
  - Complete statement: 9.8–9.11
- Statement of changes in equity:
  - Theory: 9.12
  - Complete statement: 9.13–9.16
- Balance day adjustments:
  - Adjust trial balance: 9.17, 9.18
- Statements of comprehensive income, financial position and changes in equity, with balance day adjustments: 9.19, 9.20

9.1 What are the two forms permitted by the Accounting Standards of reporting comprehensive income?

9.2 Learner & Low Ltd provided the following information:

### Learner & Low Ltd
### Trial balance (after balance day adjustments) at 30 June 2010 (extract)

| | $ | $ |
|---|---|---|
| Advertising | 96 000 | |
| Agency commission | | 9 000 |
| Cost of sales | 889 000 | |
| Depreciation of office equipment | 4 800 | |
| Depreciation of sales vehicles | 22 100 | |
| Insurance | 39 000 | |
| Interest expense | 12 000 | |
| Interest revenue | | 18 000 |
| Postage, stationery and communications | 53 400 | |
| Rent expense | 84 000 | |
| Salaries and wages – office | 196 200 | |
| Salaries and wages – sales | 367 000 | |
| Sales | | 2 160 700 |
| Vehicles expenses (sales vehicles) | 43 500 | |

**Additional information**

- The company revalued non-current assets during the year by a total of $200 000.
- The company will provide $114 000 for income tax, none of which relates to Other comprehensive income.
- The company classifies its expenses on a functional basis as 'Selling and distribution', 'Financial expenses' and 'Other expenses'.

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**Required**

a Show a Statement of comprehensive income for the company for the year ended 30 June 2010, with accompanying notes detailing 'Other income' and the classification of expenses.

b What appears to be the basis for the income tax provision? Why does none of it apply to 'Other comprehensive income'?

9.3 Wimpole Worldwide Consultants Ltd has provided you with the following information at the end of its last financial year on 30 June 2010.

## Extract from Trial balance (after balance day adjustments) at 30 June 2010

| | $ | $ |
|---|---|---|
| Bad debts | 29000 | |
| Consultants' salaries | 2435800 | |
| Consultants' travel expenses | 213000 | |
| Depreciation of office equipment | 14000 | |
| Discount allowed | 17500 | |
| Fees | | 4780000 |
| General office expenses | 248000 | |
| Insurance – consultants | 102000 | |
| Insurance – general | 78000 | |
| Interest revenue | | 25600 |
| Revaluation reserve | | 46000 |
| Office wages and salaries | 342100 | |

**Additional information**

- The company had revalued land upwards by $46000 during the current financial year.
- Provide for income tax at 30% of the profit for the period. It is assumed that there will be no taxation liability relating to 'Other comprehensive income'.
- The company classifies its expenses on the following basis:
  - consultancy
  - general office expenses
  - finance expenses.

**Required**

Draw up a Statement of comprehensive income for Wimpole Worldwide Consultants Ltd for the year ended 30 June 2010. Include notes for 'Other income' and 'Expenses'.

9.4 Attila Ltd provided you with the following internal income statement for the year ended 31 December 2009.

## Attila Ltd
## Income statement for year ended 31 December 2009

| | $ | $ | $ |
|---|---|---|---|
| Sales | | | 9678000 |
| *Less* Sales returns | | | 126000 |
| | | | 9552000 |
| *Less* Cost of sales | | | 6674000 |
| Gross profit | | | 2878000 |
| *Add* Other income: Agency commission | | 98000 | |
| Rent | | 24000 | 122000 |
| Total income | | | 3000000 |



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| | | | |
|---|---|---|---|
| *Less* **Expenses** | | | |
| **Selling and distribution** | | | |
| Advertising and promotion | 135000 | | |
| Sales commissions | 267000 | | |
| Sales wages | 673000 | 1075000 | |
| **Finance expense** | | | |
| Interest | 22000 | | |
| Discount allowed | 198000 | | |
| Bad debts | 32100 | 252100 | |
| **General expenses** | | | |
| Rental costs | 156000 | | |
| Vehicle expenses | 79000 | | |
| Insurance | 212000 | | |
| Sundry office costs | 111800 | 558800 | 1885900 |
| Profit before income tax | | | 1114100 |
| Income tax expense | | | 334200 |
| **Profit** | | | **779900** |

During the year the company revalued its land holdings upwards by $500000. For the purpose of this statement, this did not result in any additional tax liability.

**Required**

Prepare a Statement of comprehensive income for Attila Ltd for the year ended 31 December 2009.

9.5 Use the following internal income statement for Genghis Khan Engineering Ltd to produce a Statement of comprehensive income for the company for the year ended 30 June 2010.

## Genghis Khan Engineering Ltd
## Income statement for the year ended 30 June 2010

| | $ | $ | $ |
|---|---|---|---|
| Fees revenue | | | 2764000 |
| Add Other income: | | | |
| Interest revenue | | 29800 | |
| Rent revenue | | 48000 | 77800 |
| Total income | | | 2841500 |
| *Less* **Expenses** | | | |
| **Consultancy** | | | |
| Salaries | 1365000 | | |
| Insurance | 245000 | | |
| Sundry expenses | 300000 | 1910000 | |
| **Asset management** | | | |
| Occupancy costs | 258000 | | |
| Interest expense | 15000 | | |
| Sundry expenses | 45700 | 318700 | |
| **General administration** | | | |
| Wages and salaries | 201500 | | |
| Insurance | 34400 | | |
| Sundry expenses | 38100 | 274000 | 2502700 |
| Profit before income tax | | | 338800 |
| Income tax expense | | | 101640 |
| **Profit** | | | 237160 |

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During the year the company's office building was revalued, resulting in an increase of $350000 in the revaluation reserve. There is no tax liability associated with this revaluation.

9.6 Outline the main differences between an internal Balance sheet and an external Statement of financial position.

9.7 The following is an extract from the Trial balance of a company at the end of the last financial year:

| | Dr $ | Cr $ |
|---|---|---|
| Accrued depreciation, vehicles | | 108000 |
| Accrued depreciation, fixtures and fittings | | 78000 |
| Accrued depreciation, buildings | | 467000 |
| Goodwill | 800000 | |
| Patents | 120000 | |
| Vehicles, at cost | 278000 | |
| Fixtures and fittings, at cost | 293000 | |
| Buildings, at cost | 2693000 | |
| Land, at valuation | 4500000 | |
| Ordinary share capital | | 5800000 |
| Preference share capital | | 1500000 |
| Debentures | | 1000000 |
| General reserve | | 250000 |
| Asset replacement reserve | | 400000 |
| Asset revaluation reserve | | 600000 |
| Retained earnings | | 308000 |
| Share issue costs | 275000 | |

**Required**

a Show the section in the company's Statement of financial position at that date for 'Non-current assets'

b Show the section in the company's Statement of financial position at that date for 'Equity'.

c Explain the difference between the 'Asset replacement reserve' and the 'Asset revaluation reserve'.

9.8 Mughal Manufacturing Ltd has provided you with the following Trial balance after the determination of profit for the last financial year, which ended on 31 March 2010.

### Mughal Manufacturing Ltd
### Trial balance as at 31 March 2010

| | Dr $ | Cr $ |
|---|---|---|
| Accounts payable | | 419000 |
| Accounts receivable | 356000 | |
| Accrued expense | | 33000 |
| Accumulated depreciation, buildings | | 711000 |
| Accumulated depreciation, vehicles | | 94000 |
| Buildings, at cost | 3100000 | |
| Cash at bank | 68000 | |
| Deposit on call | 40000 | |



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| | | |
|---|---|---|
| General reserve | | 400000 |
| Goodwill | 200000 | |
| GST payable | | 79000 |
| Income tax payable | | 364000 |
| Interest payable | | 25000 |
| Inventories – work in process | 213000 | |
| Inventories – finished goods | 457000 | |
| Inventories – raw materials | 134000 | |
| Land, at valuation | 2000000 | |
| Mortgage (2013) | | 500000 |
| Prepayments | 4000 | |
| Allowance for doubtful debts | | 7000 |
| Retained earnings | | 623000 |
| Revaluation reserve | | 800000 |
| Share capital – 12% preference shares issued at $2 | | 1000000 |
| Share capital – ordinary share issued at 50 cents | | 2000000 |
| Share issue costs (ordinary) | 102000 | |
| Vehicles | 381000 | |
| | 7055000 | 7055000 |

The directors have recommended that the preference shareholders should receive their dividend entitlement and that ordinary shareholders should receive a dividend of 7 cents per share. During the year ended 31 March 2010 the final dividends for the year ended 31 March 2009 were declared and paid – the preference shareholders received their dividend entitlement and the ordinary shareholders received a dividend of 6 cents per share.

**Required**

a Draw up a Statement of financial position for the company as at 31 March 2010, including notes for Property, plant and equipment, Share capital, Other components of equity and Final dividends.

b On the basis of the information you have been given, can you see any problem with the dividends that the directors have proposed?

9.9 Use the information given below to draw up a Statement of financial position for Alexander Services Ltd at 30 June 2010, including notes for Property, plant and equipment, Share capital, Other components of equity and Final dividends.

## Alexander Services Ltd
## Trial balance as at 30 June 2010

| | Dr $ | Cr $ |
|---|---|---|
| Trade creditors | | 14000 |
| Accounts receivable | 493450 | |
| Accrued wages | | 27000 |
| Accrued interest | | 11750 |
| Accumulated depreciation, fixtures and fittings | | 11900 |
| Accumulated depreciation, vehicles | | 33000 |
| Fixtures and fittings, at cost | 48000 | |
| Cash at bank | | 11000 |
| Cash in hand | 1000 | |

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| | | |
|---|---|---|
| General reserve | | 200000 |
| Investment in listed shares | 200000 | |
| Goodwill | 600000 | |
| Long-term lease | 160000 | |
| GST payable | | 21000 |
| Income tax payable | | 98000 |
| Stock of office supplies | 11000 | |
| Debentures (March 2011) | | 200000 |
| Prepaid insurance | 51000 | |
| Allowance for doubtful debts | | 4800 |
| Retained earnings | | 89000 |
| Debenture repayment reserve | | 155000 |
| Share capital – 8% preference shares issued at $5 | | 400000 |
| Share capital – ordinary share issued at $1 | | 500000 |
| Share issue costs (ordinary) | 52000 | |
| Vehicles | 264000 | |
| Fees received in advance | | 104000 |
| | **1880450** | **1880450** |

The Directors have resolved to recommend that the preference shareholders be paid their entitlement for the year ended 30 June 2010, but that no dividend be recommended for ordinary shareholders. During the year ended 30 June 2010 the preference shareholders' dividend entitlement for the year ended 30 June 2009 was declared and paid. There was no ordinary dividend declared in relation to the year ended 30 June 2009.

Why do you think that the directors may have decided not to pay an ordinary dividend for the year ended 30 June 2010?

9.10 The following Balance sheet was drawn up for internal use.

### Visigoth Ltd
### Balance sheet as at 30 June 2010

| | $ | $ |
|---|---|---|
| **Current assets** | | |
| Cash at bank | | 42700 |
| Cash on hand | | 2000 |
| Accounts receivable | 49000 | |
| *Less* Allowance for doubtful debts | (980) | 48020 |
| Inventories | | 78600 |
| Prepaid insurance | | 6000 |
| Total current assets | | 177320 |
| **Non-current assets** | | |
| Land and buildings, at cost | 845000 | |
| *Less* Accumulated depreciation | 67000 | 778000 |
| Plant and equipment, at cost | 188000 | |
| *Less* Accumulated depreciation | 34000 | 154000 |
| Office furniture, at cost | 12000 | |
| *Less* Accumulated depreciation | 4000 | 8000 |
| Term deposit (2011) | | 30000 |
| Goodwill | | 100000 |


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| | | |
|---|---|---|
| Patents | | 20000 |
| **Total non-current assets** | | 1090000 |
| **TOTAL ASSETS** | | 1267320 |
| **Current liabilities** | | |
| Trade creditors | | 63000 |
| Accrued interest | | 12000 |
| Accrued wages | | 15800 |
| GST payable | | 13800 |
| Current income tax liability | | 61000 |
| **Total current liabilities** | | 165600 |
| **Non-current liabilities** | | |
| Long-term loan | | 160000 |
| **Total non-current liabilities** | | 160000 |
| **TOTAL LIABILITIES** | | 325600 |
| **NET ASSETS** | | **941720** |
| **Equity** | | |
| Share capital: | | |
| Ordinary shares 1 million, issued at 20 cents, fully paid | | 200000 |
| Ordinary shares 500000 issued at 80 cents, fully paid | | 400000 |
| Share issue costs | | (29000) |
| Total share capital | | 571000 |
| Reserves: | | |
| General reserve | 50000 | |
| Asset replacement reserve | 100000 | |
| Retained earnings | 220720 | 370720 |
| **TOTAL EQUITY** | | **941720** |

The directors resolved at their meeting on 31 July 2010 to declare a final ordinary dividend of 12 cents per share for the year ended 30 June 2010. During the current financial year an ordinary dividend of 7 cents per share for the year ended 30 June 2009 was declared and paid.

**Required**

a Draw up a Statement of financial position for the company as at 30 June 2010, including notes for Property, plant and equipment, Share capital, Other components of equity and Final dividends.

b Explain the difference between the issue prices of the two sets of ordinary shares.

9.11 Vandals Ltd has provided you with the following Balance sheet that was drawn up for internal use at the end of the last financial year on 31 December 2009.

## Vandals Ltd
## Balance sheet as at 31 December 2009

| | $ | $ |
|---|---|---|
| **Current assets** | | |
| Cash on hand | | 1000 |
| Cash at bank | | 6000 |
| Accounts receivable | 296000 | |
| *Less* Allowance for doubtful debts | (5900) | 290100 |
| Accrued interest | | 4000 |

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| | | |
|---|---|---|
| Accrued commission | | 12800 |
| Prepaid expenses | | 38000 |
| **Total current assets** | | 351900 |
| **Non-current assets** | | |
| Motor vehicles, at cost | 221000 | |
| *Less* Accumulated depreciation | 42000 | 179000 |
| Furniture and equipment, at cost | 48000 | |
| *Less* Accumulated depreciation | 9000 | 39000 |
| Computer system, at cost | 59000 | |
| *Less* Accumulated depreciation | 18000 | 41000 |
| Government bonds (2012) | | 200000 |
| Goodwill | | 300000 |
| Long-term lease | | 120000 |
| **Total non-current assets** | | 879000 |
| **TOTAL ASSETS** | | 1230900 |
| **Current liabilities** | | |
| Accrued interest | | 6000 |
| Accrued expenses | | 21600 |
| Fees received in advance | | 38000 |
| GST payable | | 10200 |
| Current income tax liability | | 72000 |
| **Total current liabilities** | | 147800 |
| **Non-current liabilities** | | |
| Debentures | | 100000 |
| **Total non-current liabilities** | | 100000 |
| **TOTAL LIABILITIES** | | 247800 |
| **NET ASSETS** | | **983100** |
| **Equity** | | |
| Share capital: | | |
| Ordinary shares 500000 issued at $1, fully paid | | 500000 |
| 11% preference shares 50000 issued at $4, fully paid | | 200000 |
| Share issue costs | | (37000) |
| Total share capital | | 663000 |
| Reserves: | | |
| General reserve | 80000 | |
| Debenture repayment reserve | 60000 | |
| Retained earnings | 180100 | 320100 |
| **TOTAL EQUITY** | | **983100** |

At their meeting after the end of the year, the directors declared the following final dividends:

- preference shares: their entitlement
- ordinary shares: 15 cents per share.

During the year ended 30 June 2009 the final dividends for the year ended 30 June 2008 were paid as follows:

- preference shares: their entitlement
- ordinary shares: 15 cents per share.

There have been no changes in share capital in the past two years.



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**Required**

a Draw up a Statement of financial position for the company as at 31 December 2009, including notes for Property, plant and equipment, Share capital, Other components of equity and Final dividends.

b The income tax provision seems to indicate a greater profit for the year than the balance in the retained earnings account ($72000/30% = $24000). Assuming the calculation of tax payable is correct, suggest two possible explanations for the position.

9.12 What information might an investor obtain from the Statement of changes in equity for a company that would not be obtainable from the other financial reports?

9.13 A Trial balance drawn up after the determination of profit for the year ended 30 June 2010 is given below.

## Pygmalion Ltd
## Trial balance – summarised

| | $ | $ |
|---|---|---|
| Cash and cash equivalents | 76 000 | |
| Receivables | 94 000 | |
| Inventories | 88 000 | |
| Non-current assets (net book value) | 2 650 000 | |
| Intangibles | 400 000 | |
| Trade and other creditors | | 72 000 |
| Income tax payable | | 83 000 |
| Debentures | | 200 000 |
| Revaluation of assets reserve | | 500 000 |
| General reserve | | 90 000 |
| Share capital | | 1 800 000 |
| Share issue costs | 26 000 | |
| Retained earnings | | 79 000 |
| Profit and loss (profit for the year) | | 510 000 |
| | 3 334 000 | 3 334 000 |

**Additional information**

- Final dividends for the previous financial year totalling $120000 were paid during the year and have been debited to Retained earnings.
- Assets were revalued upwards during the year by $200000.
- The directors have decided to make a transfer of $60000 to the general reserve.
- The directors have resolved to recommend a final dividend for the year of $270000.

**Required**

a Prepare a Statement of changes in equity for Pygmalion Ltd for the year ended 30 June 2010.

b Explain your treatment of the dividends for both years.

9.14 The following external reports were prepared at the end of the financial year for Liddulbittaluck Ltd on 31 March 2011.

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## Liddulbittaluck Ltd
## Statement of financial position as at 31 March 2011

| | $'000 |
|---|---|
| **Non-current assets** | |
| Property, plant and equipment | 6260 |
| Intangibles | 90 |
| Investments | 250 |
| | 6600 |
| **Current assets** | |
| Trade receivables | 80 |
| Inventories | 124 |
| Cash and cash equivalents | 8 |
| | 212 |
| **Total assets** | 6812 |
| **Equity** | |
| Share capital | 4600 |
| Share issue costs | (67) |
| Retained earnings | 98 |
| Revaluation reserve | 600 |
| Debenture repayment reserve | 350 |
| General reserve | 100 |
| **Total equity** | 5681 |
| **Non-current liabilities** | |
| Borrowings | 800 |
| **Current liabilities** | |
| Trade and other payables | 151 |
| Short-term borrowings | 180 |
| Income tax payable | – |
| | 331 |
| **Total liabilities** | 1131 |
| **Total liabilities and equity** | 6812 |

## Liddulbittaluck Ltd
## Statement of comprehensive income for year ended 31 March 2011 (abridged)

| | $'000 |
|---|---|
| Revenue | 5096 |
| Cost of sales | 3834 |
| **Gross profit** | 1262 |
| Other income | 81 |
| Expenses (excluding finance costs) | (1348) |
| Finance costs | (120) |
| **Profit (loss) before income tax** | (125) |
| Income tax expense | – |
| **Profit (loss) for the period** | (125) |
| **Other comprehensive income** | |
| Gains on asset revaluations | 427 |
| **Other comprehensive income for the period, net of income tax** | 427 |
| **Total comprehensive income for the period** | 302 |

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**Additional information**

- During the year the company paid final dividends for the 2010 financial year totalling $240 000.
- $200 000 was transferred from the General reserve into Retained earnings.
- The company made a cash share issue during the year, which raised $1 200 000. The share issue costs shown in the preceding statement relate to this issue.

**Required**

a Prepare a Statement of changes in equity for Liddulbittaluck Ltd for the year ended 31 March 2011.

b Why do you think the directors decided to transfer $200 000 from the general reserve?

9.15 Dreary Line Productions has provided you with the following financial reports prepared at the end of the year on 30 June 2010.

## Dreany Line Productions
## Statement of financial position as at 30 June 2010

| | $'000 |
|---|---|
| **Non-current assets** | |
| Property, plant and equipment | 5678 |
| Intangibles | 1 000 |
| Investments | 500 |
| | 7178 |
| **Current assets** | |
| Inventories | 842 |
| Trade receivables | 567 |
| Accrued expenses | 104 |
| Cash and cash equivalents | 387 |
| | 1900 |
| **Total assets** | **9078** |
| **Equity** | |
| Share capital | 5200 |
| Share issue costs | (124) |
| Retained earnings | 772 |
| Revaluation reserve | 800 |
| Debenture redemption reserve | 260 |
| General reserve | 380 |
| **Total equity** | 7288 |
| **Non-current liabilities** | |
| Borrowings | 1000 |
| **Current liabilities** | |
| Trade and other payables | 350 |
| Revenue in advance | 120 |
| Income tax payable | 320 |
| | 790 |
| **Total liabilities** | 1790 |
| **Total liabilities and equity** | 9078 |

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## Dreany Line Productions
## Statement of comprehensive income for year ended 30 June 2010 (abridged)

| | $'000 |
|---|---|
| Revenue | 4307 |
| Cost of sales | (2456) |
| **Gross profit** | 1851 |
| Other income | 212 |
| Expenses (excluding finance costs) | (943) |
| Finance costs | (120) |
| **Profit before income tax** | 1000 |
| Income tax expense | 300 |
| **PROFIT FOR THE PERIOD** | 700 |
| **Other comprehensive income** | |
| Gains on asset revaluations | 640 |
| **Other comprehensive income for the period, net of income tax** | 640 |
| **TOTAL COMPREHENSIVE INCOME FOR THE PERIOD** | 1340 |

**Additional information**

- An interim dividend of $200000 was paid in January 2010 and debited to Retained earnings.
- A cash issue of shares during the year raised $800000. The share issue costs relate to this issue.
- During the year, the Directors transferred $200000 from Retained earnings to general reserve.

**Required**

a Prepare a Statement of changes in equity for Dreary Line Productions Ltd for the year ended 30 June 2010.

b Why do you think the directors would have transferred profits from Retained earnings to the general reserve?

9.16 The following external reports were prepared at the end of the financial year for this company on 31 December 2009.

## Bernardshaw Trading Ltd
## Statement of financial position as at 31 December

| | $'000 |
|---|---|
| **Non-current assets** | |
| Property, plant and equipment | 3230 |
| Intangibles | 150 |
| Investments | 500 |
| | 3880 |
| **Current assets** | |
| Trade receivables | 92 |
| Cash and cash equivalents | 131 |
| | 223 |
| **Total assets** | 4103 |
| **Equity** | |
| Share capital | 2500 |
| Share issue costs | (86) |


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| | |
|---|---|
| Retained earnings | 489 |
| Revaluation reserve | 100 |
| Asset replacement reserve | 200 |
| General reserve | 250 |
| **Total equity** | 3453 |
| **Non-current liabilities** | |
| Borrowings | 250 |
| Current liabilities | |
| Trade and other payables | 163 |
| Short-term borrowings | 50 |
| Income tax payable | 187 |
| | 400 |
| **Total liabilities** | 650 |
| **Total liabilities and equity** | 4103 |

## Bernardshaw Trading Ltd
## Statement of comprehensive income for year ended 31 December (abridged)

| | $'000 |
|---|---|
| Revenue | 3621 |
| Cost of sales | 1970 |
| **Gross profit** | 1651 |
| Other income | 42 |
| Expenses (excluding finance costs) | (981) |
| Finance costs | (88) |
| **Profit before income tax** | 624 |
| Income tax expense | (187) |
| **PROFIT FOR THE PERIOD** | 437 |
| **Other comprehensive income** | |
| Gains on asset revaluations | 369 |
| Income tax on other comprehensive income | – |
| **Other comprehensive income for the period, net of income tax** | 369 |
| **TOTAL COMPREHENSIVE INCOME FOR THE PERIOD** | 806 |

**Additional information**

- During the year the company paid the final dividends for the 2008 financial year totalling $320000.
- The company made a cash share issue during the year, which raised $500000. The share issue costs in the Equity section relate to this issue. In addition, the directors made a bonus share issue of $1000000 funded out of the revaluation reserve.

**Required**

a Prepare a Statement of changes in equity for Bernardshaw Trading Ltd for the year ended 31 December 2009.

b If you were a potential investor, which aspects of the Statement of changes in equity do you think would be most useful in assisting your decision as to whether or not to invest in the company? Explain your answer.

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9.17 The unadjusted trial balance of Robertburns Scott Ltd for the year ended 30 June 2010 is shown below.

## Robertburns Scott Ltd
## Trial balance as at 30 June 2010

| | Debit $ | Credit $ |
|---|---|---|
| Inventory | 65 000 | |
| Interest expense | 30 000 | |
| Other financial expenses | 11 000 | |
| Sales | | 560 000 |
| Accounts payable | | 50 000 |
| Mortgage (due 2018) | | 350 000 |
| Long-term investments | 90 000 | |
| Cost of sales | 240 000 | |
| Unearned service fees | | 65 000 |
| Service fees revenue | | 80 000 |
| Plant | 460 000 | |
| Accumulated depreciation on plant | | 34 000 |
| Loss on sale of equipment | 1 500 | |
| Share capital | | 800 000 |
| General reserve | | 80 000 |
| Retained earnings | | 120 000 |
| Prepaid shop insurance | 10 000 | |
| Shop insurance | 6 000 | |
| Other selling and distribution expenses | 75 000 | |
| Interest revenue | | 2 000 |
| Accumulated depreciation on equipment | | 66 100 |
| Equipment | 890 000 | |
| Allowance for doubtful debts | | 900 |
| Electricity expense | 13 200 | |
| Share issue costs | 800 | |
| Other general and administration expenses | 86 000 | |
| Receivables | 80 000 | |
| Cash | 149 500 | |
| | 2 208 000 | 2 208 000 |

**Additional information**

- The company uses the perpetual inventory method.
- Income tax is at the rate of 30% applied on the profit before tax.
- Unearned service fees is $42 000.
- Interest revenue accrued is $700.
- Electricity owing is $1500.
- Prepaid shop insurance expired is $4000.
- The allowance for doubtful debts was to be set at 4% of accounts receivable.



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- The equipment is depreciated using the straight-line method. Its residual value was estimated to be $70 000 and its estimated useful life ten years
- The plant was depreciated using the reducing balance method at the rate of 20% per annum.

**Required**

Prepare an adjusted Trial balance for Robertburns Scott Ltd as at 30 June 2010.

9.18 The unadjusted Trial balance of Lawsonpoet Ltd for the year ended 30 June 2010 is shown below.

## Lawsonpoet Ltd
## Trial balance as at 30 June 2010

| | Debit $ | Credit $ |
|---|---|---|
| Unearned rent revenue | | 10000 |
| Rent revenue | | 6500 |
| Machinery | 395000 | |
| Accumulated depreciation on machinery | | 56000 |
| Loss on sale of equipment | 3000 | |
| Share capital | | 700000 |
| General reserve | | 100000 |
| Accumulated losses | 27300 | |
| Prepaid general insurance | 7600 | |
| General insurance | 4600 | |
| Other selling and distribution expenses | 155000 | |
| Commission revenue | | 11000 |
| Materials supplies | 45000 | |
| Interest expense | 28000 | |
| Other financial expenses | 12000 | |
| Fees revenue | | 599000 |
| Accounts payable | | 69800 |
| Mortgage (due 2019) | | 170000 |
| Allowance for doubtful debts | | 1200 |
| Managed funds investment | 50000 | |
| Accumulated depreciation on shop equipment | | 47000 |
| Shop equipment | 680000 | |
| Utilities expense | 14000 | |
| Other general and administration expenses | 186000 | |
| Receivables | 98000 | |
| Cash | 65000 | |
| | 1770500 | 1770500 |

**Additional information as at 30 June 2010**

- The company uses the perpetual inventory method.
- Income tax is at the rate of 30% applied on the profit before tax.
- Unearned rent revenue is assessed at $7000.

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- Commission revenue owing is $2100.
- Utilities expense owing is $1900.
- Prepaid general insurance expired is $6000.
- A bad debt of $600 is to be written off.
- The allowance for doubtful debts was to be set at 3% of accounts receivable.
- The shop equipment is depreciated using the straight-line method. Its residual value was estimated to be $80000 and its estimated useful life 12 years.
- The machinery is depreciated using the reducing balance method at the rate of 18% per annum.

**Required**
Prepare an adjusted Trial balance for Lawsonpoet Ltd as at 30 June 2010.

9.19 The unadjusted Trial balance of Patterson Matilda Ltd for the year ended 30 June 2010 is shown below.

## Patterson Matilda Ltd
## Trial balance as at 30 June 2010

| | Debit $ | Credit $ |
|---|---|---|
| Accumulated depreciation on shop equipment | | 256000 |
| Shop equipment | 1200000 | |
| Utilities expense | 11900 | |
| Other general and administration expenses | 129000 | |
| Receivables | 169000 | |
| Overdraft | | 73000 |
| Cost of sales | 1278000 | |
| General reserve | | 580000 |
| Retained earnings | | 126000 |
| Prepaid rent | 26000 | |
| Rent expense | 16400 | |
| Other selling and distribution expenses | 95000 | |
| Commission revenue | | 16000 |
| Inventory | 384000 | |
| Interest expense | 31000 | |
| Other financial expenses | 13500 | |
| Sales | | 2105000 |
| Accounts payable | | 76000 |
| Unsecured notes (due 2017) | | 206000 |
| Allowance for doubtful debts | | 1800 |
| Unearned service fees revenue | | 67000 |
| Service fees revenue | | 45000 |
| Machinery | 2408000 | |
| Accumulated depreciation on machinery | | 207000 |
| Proceeds on sale of machinery | | 3000 |
| Share capital (2000000 ordinary $1 shares fully paid) | | 2000000 |
| | 5761800 | 5761800 |

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**Events occurring during the year ended 30 June 2010**
For the year ended 30 June 2009 the directors' proposed dividend of 4 cents per share based on 2000000 shares was declared at the AGM on 5 October 2009 and paid on 9 November 2009.

**Additional information as at 30 June 2010**
- The company uses the perpetual inventory method.
- Income tax is at the rate of 30% applied on the profit before tax.
- Unearned service fees revenue now earned is $60000.
- Commission revenue owing is $10000.
- Utilities expense owing is $2200.
- Prepaid rent expired is $20000.
- A bad debt of $900 was written off.
- The allowance for doubtful debts was to be set at 5% of accounts receivable.
- The shop equipment is depreciated using the straight-line method. Its residual value was estimated to be $100000 and its estimated useful life ten years.
- The machinery is depreciated using the reducing balance method at the rate of 15% per annum.
- Machinery was sold for $3000 cash on 30 June 2010. Its original cost was $50000 and accumulated depreciation on 30 June 2010 was $48000. Only the receipt of the proceeds had been recorded when the preceding Trial balance was produced.

**Directors' decisions as at 30 June 2010**
- Transfer $100000 from the general reserve to retained earnings.
- Recommend a dividend of 2 cents per share based on 2000000 ordinary shares. This would need to be ratified by the shareholders at the AGM in September 2010.

**Required**
a Prepare a Classified statement of comprehensive income for Patterson Matilda Ltd for the year ended 30 June 2010 in accordance with the requirements of AASB 101.
b Prepare the Statement of changes in equity for Patterson Matilda Ltd for the year ended 30 June 2010 in accordance with the requirements of AASB 101.
c Prepare a Classified statement of financial position for Patterson Matilda Ltd as at 30 June 2010 in accordance with the requirements of AASB 101.

9.20 The unadjusted Trial balance of Sherbet-Howzat Ltd for the year ended 30 June 2010 is shown below.

## Sherbet-Howzat Ltd
## Trial balance as at 30 June 2010

| | Debit $ | Credit $ |
|---|---|---|
| Land | 750000 | |
| Cash | 120000 | |
| Cost of sales | 480000 | |
| Cash management trust | 50000 | |
| Prepaid general insurance | 15000 | |
| General insurance expense | 12000 | |
| Other selling and distribution expenses | 59000 | |
| Interest revenue | | 4200 |
| Shares in Coldchisel Ltd | 90000 | |
| Debentures (due 2016) | | 800000 |
| Unearned rent revenue | | 34000 |

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| | | |
|---|---|---|
| Rent revenue | | 16500 |
| Plant and equipment | 660000 | |
| Share capital (2 million ordinary issued at 50 cents, fully paid) | | 1000000 |
| Dividend declared | 60000 | |
| Buildings | 480000 | |
| Water and rates expense | 8750 | |
| Other general and administration expenses | 37500 | |
| Receivables | 56000 | |
| Share issue costs | 2450 | |
| Preliminary expenses | 3000 | |
| Inventory | 71000 | |
| Interest expense | 18000 | |
| Other financial expenses | 12000 | |
| Sales | | 1090000 |
| Accounts payable | | 40000 |
| | 2984700 | 2984700 |

**Events occurring during the year ended 30 June 2010**

- The company began operations on 1 July 2009 with the allotment of shares and payment of preliminary expenses and share issue costs.
- The directors declared an interim dividend on 1 January 2010 of 3 cents per share based on 2000000 shares and this was paid on 3 February 2010.

**Additional information as at 30 June 2010**

- The company uses the perpetual inventory method.
- Income tax is at the rate of 30% of the profit before tax.
- Unearned rent revenue now earned is $28000.
- Interest revenue owing is $2600.
- Dividends revenue accrued is $4500.
- Water and rates expense accrued is $1900.
- Prepaid general insurance expired is $11000.
- A bad debt of $500 was written off.
- The allowance for doubtful debts was to be set at 2% of accounts receivable.
- The buildings are depreciated using the straight-line method. Their residual value was estimated to be $50000 and their estimated useful life 20 years.
- The plant and equipment are depreciated using the reducing-balance method at the rate of 20% per annum.

**Directors' decisions as at 30 June 2010**

- Transfer $50000 to the general reserve from retained profits.
- Recommend a dividend of 4 cents per share based on 2000000 ordinary shares. This would need to be ratified by the shareholders at the AGM in September 2010.
- Revalue the land upwards by $100000.

**Required**

a Prepare a Classified statement of comprehensive income for Sherbet-Howzat Ltd for the year ended 30 June 2010 in accordance with the requirements of AASB 101.

b Prepare the Statement of changes in equity for Sherbet-Howzat Ltd for the year ended 30 June 2010 in accordance with the requirements of AASB 101.

c Prepare a Classified statement of financial position for Sherbet-Howzat Ltd as at 30 June 2010 in accordance with the requirements of AASB 101.


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# Investigation

(These tasks may be done as an individual or a group activity.)

1 Obtain recent (published after 1 January 2009) annual reports for at least two public listed companies. Choose companies that are not all in the same sort of industry. Produce a report in a written or electronic (e.g. PowerPoint) form analysing and comparing the reports from the point of view of:
- completeness of information
- ease of understanding.

a To what extent do the reports vary according to the type of industry the company operates in?
b Briefly analyse and compare the companies' performance over the period covered by the reports.
c If you were an investor looking for a long-term investment, which company would you choose and why?

2 Obtain recent annual reports from:
- one or more incorporated not-for-profit organisations (e.g. major sports franchises, charity organisations or professional associations)
- one or more public listed companies.

a Prepare a presentation in written or electronic form comparing the reports from the two different types of entity from the points of view of:
  - form
  - content.

b Who do you think are the stakeholders in each case, i.e. for whose information are the reports being produced? What effect does this have on the form and content of the reports?

# Essay

You are the principal shareholder in a proprietary company that is proposing to become a public company so that it can raise funds from the public to finance a massive expansion program. One of the consequences of this change will be a substantial increase in the company's statutory reporting requirements.

a Why do you think that the reporting requirements for such a company are greater?
b List the financial reports that the company will be required to produce and outline their purpose.

# Ethics case study

The managing director of Flashman Ltd, a listed public company, has drawn up a code of conduct for senior management. One of the clauses of this code reads as follows:

> In preparing the company's external financial reports, every effort must always be made to place the company's stability and profitability in the best possible light, while complying with the constraints placed upon us by the law and the ASX Listing Rules.

## Discuss

a What do you think might be the effect of compliance with this instruction?
b Discuss the arguments for and against this instruction from the viewpoint of the company's management and the various users of its reports.

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# Chapter 10

# COMPANY FINANCIAL REPORTS – PART 2

## What You Will Learn

After studying this chapter you should be able to:

1 Explain the nature and purpose of a Statement of cash flows
2 Explain the classifications of cash flow activities
3 Define and explain the concept of cash
4 From given information, prepare a Statement of cash flows
5 Interpret movements in cash flow items contained in the Statement of cash flows

## Introduction

This chapter continues to explore the general purpose financial reports that must be prepared by a reporting entity. It is vital for an external user to be able to assess the liquidity and solvency of an entity so that they can make an informed decision about their investment. We will investigate this purpose in more detail in this chapter and also consider the nature and format of a Statement of cash flows. Of particular interest will be the three classifications of cash flows: operating, investing and financing activities. This chapter will explain these classifications and show how a Statement of cash flows is prepared for a reporting entity. A Statement of cash flows is very useful in assessing whether an entity can pay its debts as they fall due. It is also valuable in showing how the entity's financial structure has changed. We explain how to interpret a Statement of cash flows so that external users can make decisions about how to allocate their scarce resources.

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# PURPOSE OF STATEMENTS OF CASH FLOWS

The Statement of cash flows is particularly useful in assessing the liquidity and solvency of an entity. The users of financial information will assess the ability of an entity to generate cash flows and their amount and timing. This is important in assessing the ability of an entity to meet its financial commitments as they fall due. The other financial statements produced by an entity are based on accrual accounting and enable users to assess financial performance and financial position. However, as they are not based on cash accounting principles they do not enable a user to assess the cash flows of an entity, which is what a Statement of cash flows focuses on.

According to accounting standard AASB 107 Cash Flow Statements, a Statement of cash flows is useful to users in evaluating an entity's:

- changes in net assets
- financial structure
- amounts and timing of cash flows
- ability to generate cash flows in the future
- past performance in managing cash flows.

The Statement of cash flows is therefore useful when used in conjunction with the other financial statements in determining whether the entity can meet the challenges and take advantage of the opportunities it encounters. In particular, it will assist in checking the accuracy of past assessments of future cash flows and in examining the relationship between profitability and net cash flows.

Profitability is based on accrual accounting and the difference between income and expenses. Net cash flows are the difference between cash inflows and cash outflows and this is very important in assessing liquidity and solvency. This information is useful in determining whether the entity can finance its operations, how its financial structure may have changed, how this change has affected its financial leverage and how this, in turn, might affect its ability to obtain external finance.



Key Concept 10.1

**Purpose of a Statement of cash flows**

The purpose of a Statement of cash flows is to enable the users to:

- evaluate the changes in the net assets of an entity
- evaluate the financial structure of an entity
- evaluate the ability of an entity to adapt to changing circumstances and opportunities
- assess the ability of an entity to generate cash flows
- assess the present value of future cash flows of different entities
- compare the operating performance of different entities
- predict future cash flows
- check the accuracy of past assessments of future cash flows
- examine the relationship between profitability and net cash flows.

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REALITY CHECK 10.1

## Cash Flow Statement from Just Group Annual Report 2008

Cash flow statement
for the financial period ended 26 July 2008

| | Notes | Consolidate | | The company | |
|---|---|---|---|---|---|
| | | 52 weeks ended 26 July 2008 $'000 | 52 weeks ended 28 July 2007 $'000 | 52 weeks ended 26 July 2008 $'000 | 52 weeks ended 28 July 2007 $'000 |
| **Cash flows from operating activities** | | | | | |
| Cash receipts in the course of operations | | 817 848 | 759 862 | 187 | 144 |
| Cash payments in the course of operations | | (693 164) | (640 797) | (32 246) | (30 393) |
| Income taxes (paid)/refunded | | (27 087) | (25 787) | (948) | 1 034 |
| Interest received | | 1 417 | 1 577 | 697 | 1 247 |
| Borrowing costs paid | | (13 288) | (5 095) | (10 761) | (3 999) |
| **Net cash inflow/(outflow) from operating activities** | 28(b) | 85 726 | 89 760 | (43 071) | (31 967) |
| **Cash flows from investing activities** | | | | | |
| Dividends received | | – | 2 436 | – | – |
| Payment for investments | | – | (2 169) | – | – |
| Proceeds from sale of plant and equipment | | 171 | 317 | 141 | 113 |
| Advances to related parties | | – | – | (615 583) | (494 117) |
| Repayment of advances to related parties | | – | – | 698 744 | 605 735 |
| Proceeds from disposal of available-for-sale investments | | – | 19 500 | – | – |
| Acquisition of subsidiary | 23 | (24 333) | – | – | – |
| Payment for trademarks | | (341) | – | (341) | – |
| Advances to associate | | (1 164) | (1 256) | – | – |
| Payment for plant and equipment and leasehold premiums | | (33 070) | (26 933) | (4 470) | (2 565) |
| **Net cash inflow/(outflow) from investing activities** | | (58 737) | (8 105) | 78 491 | 109 166 |
| **Cash flows from financing activities** | | | | | |
| Dividends paid | 21 | (41 273) | (37 656) | (41 273) | (37 656) |
| Share buy-back | | – | (65 735) | – | (65 735) |
| Proceeds from borrowings | | 20 000 | 39 916 | 20 000 | 39 916 |
| Repayment of borrowings | | (20 000) | – | (20 000) | – |
| Lease payments | | (200) | (30) | (174) | (26) |
| **Net cash inflow/(outflow) from financing activities** | | (41 473) | (63 505) | (41 447) | (63 501) |
| **Net increase/(decrease) in cash held** | | (14 484) | 18 150 | (6 027) | 13 698 |
| Cash at the beginning of the financial period | | 38 134 | 19 984 | 24 107 | 10 409 |
| **Cash at the end of the financial period** | 28 (a) | 23 650 | 38 134 | 18 080 | 24 107 |

The above cash flow statement should be read in conjunction with the accompanying notes.

Source: Just Group Annual Report 2008, www.justgroup.com.au, page 8.

### What does this Statement of cash flows tell an investor or lender?

This Statement of cash flows provides information for an investor or lender to evaluate the liquidity and solvency of the company, assess its ability to generate cash flow, see how the financial structure has changed and see the relationship between profitability and net cash flows.


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### How is this financial statement different from an Income statement and Statement of financial position?

You will note that all the amounts shown under each category are cash amounts – either cash inflows (receipts of cash) or cash outflows (payments of cash). The amounts shown are not based on accrual accounting. The Statement of cash flows provides information to external users on the cash flows related to the assets, liabilities, equity, income and expenses of the company.

### Why are operating, investing and financing activities important?

They enable external users to assess the company's main revenue-generating activities, how its financial structure has changed and what changes have occurred in its capital investments.

## Nature and format of a Statement of cash flows

A Statement of cash flows is a financial statement that is required from all reporting entities in Australia. Accounting Standard AASB 107 Cash Flow Statements indicates that a Statement of cash flows is a report that shows cash flows – classified by operating, investing and financing activities – during a financial period.

EXAMPLE:

### Example 10.1

Kilpatrick Ltd
Statement of cash flows for the year ending 30 June 2010

| | $ | $ |
|---|---|---|
| **Cash flows from operating activities** | | |
| Cash receipts from customers | X | |
| Cash receipts from fees, royalties and commissions | X | |
| Cash paid to suppliers and employees | (X) | |
| Cash generated from operations | X | |
| Interest paid | (X) | |
| Income taxes paid | (X) | |
| Net cash used in operating activities | | X |
| **Cash flows from investing activities** | | |
| Purchase of investments | (X) | |
| Purchase of property, plant and equipment | (X) | |
| Proceeds from the sale of investments, or property, plant and equipment | X | |
| Interest received | X | |
| Dividends received | X | |
| Net cash used in investing activities | | (X) |
| **Cash flows from financing activities** | | |
| Proceeds from the issue of share capital | X | |
| Proceeds from long-term borrowings | X | |
| Repayment of borrowings | (X) | |
| Dividends paid | (X) | |
| Net cash used in financing activities | | X |
| Net increase (decrease) in cash and cash equivalents during the period | | X |
| Cash and cash equivalents at the beginning of the period | | X |
| Cash and cash equivalents at the end of the period | | X |

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## Classification of cash flows

The categories of cash flows mentioned earlier are considered useful in analysing the performance of an entity and its liquidity and solvency. It should be noted that cash inflows are shown as positive items while cash outflows are shown as negative items in brackets.

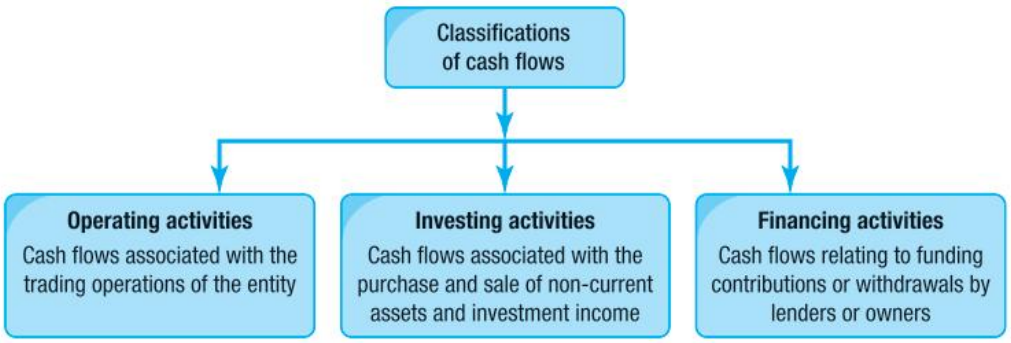



Figure 10.1 Classifications of cash flows

### Operating activities

Operating activities relate to the major purpose and function of the business, such as the sale of goods and services and the necessary purchase of goods and services to enable these main revenue-earning activities to occur. These cash flows are generally the result of income and expense transactions and events reported in the Statement of comprehensive income. Operating activities are important for assessing whether the business can generate enough cash flow to maintain its operations, repay loans, pay dividends and purchase resources without having to borrow funds or seek further capital injections into the business.

**Cash flows from operating activities**

Cash inflows:
- Cash receipts from the sale of goods and services
- Cash receipts from fees and commissions

Cash outflows:
- Cash payments to suppliers for goods and services
- Cash payments to employees
- Cash payments or refunds of income taxes
- Cash payments for other expenses
- Cash payments to lenders for interest

Key Concept 10.2

**Operating activities**

Operating activities are those cash flows that relate to the revenue-producing activities of the entity that are not investing or financing activities.

### Investing activities

Cash flows from investing activities are reflected in the changes in the non-current assets in the Statement of financial position. Analysis of these cash flows is considered important in assessing the ability of the entity to use its major resources to generate future cash flows.


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**Cash flows from investing activities**

Cash inflows:
- Cash receipts from the sale of property, plant and equipment
- Cash receipts from the sale of investments, such as shares and debentures in other entities
- Interest received
- Dividends received

Cash outflows:
- Cash payments to acquire property, plant and equipment
- Cash payments to acquire investments, such as shares and debentures in other entities

Key Concept 10.3

**Investing activities**

Investing activities are those cash flows relating to the purchase and sale of property, plant and equipment and other investments not included in cash equivalents.

## Financing activities

Cash flows from financing activities are reflected in changes in the non-current liabilities and equity of an entity. Analysis of these cash flows is considered important as they show the change in the financial structure of an entity and are useful in predicting the future claims on cash flows by the providers of capital and non-current liabilities of the entity.

**Cash flows from financing activities**

Cash inflows:
- Cash receipts from issuing shares
- Cash receipts from issuing debentures and unsecured notes
- Cash received from borrowings

Cash outflows:
- Cash paid to owners to acquire or redeem shares
- Repayment of borrowings
- Payment of dividends to shareholders

Key Concept 10.4

**Financing activities**

Financing activities are those cash flows that result in changes in the amount of the contributed equity and borrowings of the entity.

## Specific disclosures

AASB 107 Cash Flow Statements specifies those cash flow items that must be disclosed separately and these are:

- interest received
- dividends received
- interest paid
- dividends paid
- income tax paid.

Interest paid and dividends and interest received may be shown as operating activities. However, interest paid may alternatively be classified as a financing activity and dividends and interest received may be shown as investing activities. Dividends paid may be classified as either an operating activity or a financing activity. There is no consensus on how these must be shown in the Statement of cash flows. Income taxes paid would normally be classified as an operating activity.

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### Direct or indirect method

The reporting of cash flows from operating activities can be achieved using either the direct method or indirect method. The direct method is the technique that entities are encouraged to use according to the accounting standard in Australia. This is the approach used in this textbook. The direct method requires an entity to report the gross amount of the major classes of cash receipts and cash payments. Under the indirect method, the profit or loss of the entity is adjusted for the effect of non-cash items (e.g. depreciation, accrued expenses and prepaid expenses) so that a cash-based profit is determined.

## Cash and cash equivalents

Accounting standard AASB 107 Cash Flow Statement defines the terms cash and cash equivalents.

Key Concept 10.5

**Cash and cash equivalents**

- Cash is defined as cash on hand and demand deposits.
- Cash equivalents are short-term, highly liquid investments that are readily convertible to known amounts of cash and are subject to an insignificant risk of changes in value.



### Cash flow

A cash flow is defined in the standard as an inflow and outflow of cash and cash equivalents. The standard also states that the components of cash and cash equivalents must be disclosed in the Statement of cash flows and that any movement in an item of cash or cash equivalents cannot be reported as a cash flow.

### Cash on hand

Cash on hand are the notes and coins held on the business premises.

### Demand deposits

Demand deposits are the amounts held at financial institutions that the business can withdraw at any time and will not have been deposited for any specific period of time.

### Cash equivalents

Cash equivalents are further described in the standard as an amount held for the purpose of meeting short-term cash commitments rather than for investment purposes or other purposes. They are highly liquid investments that are readily convertible into cash and are subject to an insignificant risk of change in value. It is considered that such highly liquid investments would have a short-term maturity of three months or less from the date of acquisition. Examples of cash equivalents are:

- bank and non-bank bills
- commercial bills on the short-term money market.

The standard also indicates that a bank overdraft is considered part of cash equivalents because in Australia they are repayable on demand and an integral part of the cash management of business operations.


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## Preparing a Statement of cash flows

The preparation of a Statement of cash flows can be made through obtaining the required detail on cash inflows and cash outflows from the cash records of the company. This information is then summarised and presented in the Statement of cash flows. Alternatively, the statement can be derived from an analysis of the financial statements of the company. Whichever approach is used, the cash flow information presented is the same.

Under the latter method we will use the comparative Statements of financial position, Income statement or Statement of comprehensive income and Statement of changes in equity for a company to prepare the Statement of cash flows. Sometimes other additional information will be given in addition to the financial statements to enable the cash flows to be determined. To determine the cash flow from a particular item we may need to reconstruct ledger accounts or undertake some kind of calculation. Where a Statement of changes in equity is not given, we will reconstruct the Retained earnings account.

EXAMPLE:

### Example 10.2

The following financial information relates to Ghent Ltd. In this example we will ignore GST.

Ghent Ltd
Statement of financial position as at 30 June

| | 2010 | | 2011 | |
|---|---|---|---|---|
| | $ | $ | $ | $ |
| **Assets** | | | | |
| Cash | | 8 850 | | 23 815 |
| Accounts receivable | | 129 000 | | 126 000 |
| Inventory | | 46 500 | | 60 000 |
| Stock of supplies – Stationery | | 300 | | 400 |
| Land, at cost | | 240 000 | | 240 000 |
| Buildings, at cost | 165 000 | | 165 000 | |
| *Less* Accumulated depreciation | 38 700 | 126 300 | 51 200 | 113 800 |
| Motor vehicles | 150 000 | | 214 000 | |
| *Less* Accumulated depreciation | 35 000 | 115 000 | 49 000 | 165 000 |
| **Total assets** | | 665 950 | | 729 015 |
| **Liabilities** | | | | |
| Accounts payable | | 31 650 | | 24 000 |
| Current income tax liability | | 38 000 | | 14 715 |
| Mortgage loan payable (due 2017) | | 140 000 | | 120 000 |
| **Total liabilities** | | 209 650 | | 158 715 |
| **Net assets** | | 456 300 | | 570 300 |
| **Equity** | | | | |
| Share capital | | 400 000 | | 500 000 |
| General reserve | | 30 000 | | 30 000 |
| Retained earnings | | 26 300 | | 40 300 |
| **Total equity** | | 456 300 | | 570 300 |

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Ghent Ltd
Income statement for the year ended 30 June 2011

| | $ | $ | $ |
|---|---|---|---|
| **Revenue** | | | |
| Credit sales | | 406 000 | |
| *Less* Sales returns | | 9 800 | 396 200 |
| *Less* **Cost of sales** | | | 134 500 |
| **Gross profit** | | | 261 700 |
| *Add* **Other income** | | | |
| Interest revenue | | 800 | |
| | | | 800 |
| | | | 262 500 |
| *Less* **Other expenses** | | | |
| **Selling and distribution** | | | |
| Motor vehicle expenses | 16 500 | | |
| Sales salaries | 56 000 | | |
| Depreciation on motor vehicles | 14 000 | | |
| | | 86 500 | |
| **General and administration** | | | |
| Insurance | 6 050 | | |
| Depreciation on buildings | 12 500 | | |
| Stationery supplies expense | 350 | | |
| Salaries and wages | 72 400 | | |
| Other administration expenses | 25 150 | | |
| | | 116 450 | |
| **Financial** | | | |
| Interest expense | 10 500 | | |
| | | 10 500 | |
| **Total other expenses** | | | 213 450 |
| **Profit before income tax** | | | 49 050 |
| *Less* Income tax expense | | | 14 715 |
| **Profit** | | | 34 335 |

Ghent Ltd
Statement of changes in equity for the year ended 30 June 2011

| | *Share capital* $ | *General reserve* $ | *Revaluation reserve* $ | *Retained earnings* $ | *Total equity* $ |
|---|---|---|---|---|---|
| Balance as at 1 July 2010 | **400 000** | **30 000** | **0** | **26 300** | **456 300** |
| Changes in equity for the year: | | | | | |
| Total comprehensive income for the period | | | 0 | 34 335 | 34 335 |
| Dividends declared – Ordinary | | | | (20 335) | (20 335) |
| Transfer to general reserve | | 0 | | 0 | 0 |
| Issue of share capital | 100 000 | | | | 100 000 |
| Balance as at 30 June 2011 | **500 000** | **30 000** | **0** | **40 300** | **570 300** |


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### ADDITIONAL INFORMATION

- There were no non-current assets sold during the year.
- The increase in motor vehicles represents a purchase paid for in cash.
- The ordinary shares issued during the current year were for cash.
- Dividends declared were paid in cash during the current year.

### REQUIRED

Prepare a Statement of cash flows for Ghent Ltd for the year ended 30 June 2011.

### STEP 1

The first step is to determine the cash flows from operating activities. This is mainly:

- cash receipts from customers
- payments to suppliers and employees
- interest paid
- income taxes paid.

The financial statements have been prepared using accrual accounting so it will be necessary for us to account for this to find the cash amount for some items.

### STEP 2

The credit sales need to be adjusted as it is an accrual-based amount. This requires us to determine how much cash was received from the Accounts receivables and this can be done by reconstructing the Accounts receivable account as seen below.

| Accounts receivable | | | | | |
|---|---|---|---|---|---|
| **Date** | **Account details** | ***Debit*** **$** | ***Credit*** **$** | ***Balance*** **$** | |
| 1/7/10 | Balance | | | 129 000 | Dr |
| 30/6/11 | Credit sales | 406 000 | | 535 000 | Dr |
| | Sales returns | | 9 800 | 525 200 | Dr |
| | **Cash** | | **399 200** | 126 000 | Dr |

The amounts shown in this account are obtained as follows:

- $129 000 Dr opening balance comes from the Statement of financial position as at 30 June 2010.
- Credit sales ($406 000) and Sales returns ($9800) both come from the current year's Income statement.
- The closing balance figure of $126 000 Dr comes from the Statement of financial position as at 30 June 2011.
- The missing figure of $399 200 is found by working backwards and represents the cash received from Accounts receivable.

## An alternate way to calculate cash amounts

It is possible to find the amount of cash received or paid – or any other amount, in fact; this can be done without the use of ledger accounts. For example, determining the cash received from Accounts receivable can be done, as seen below, by using a simple mathematical approach. However, in this textbook we will use the reconstruction of ledger accounts to find the required amount.

| | |
|---|---|
| Receipts $399 200 from Accounts receivable equals: | Credit sales $406 000 (from the current year's Income statement) |
| | *Add* the opening balance $129 000 Dr in the Accounts receivable account (from the Statement of financial position as at 30 June 2010) |
| | *Less* the closing balance $126 000 Dr in the Accounts receivable account (from the Statement of financial position as at 30 June 2011) |
| | *Less* Sales returns $9800 (from the current year's income statement) |

### CASH PAYMENTS FROM OPERATIONS

The cash payments from operations will require us to consider what we have paid for inventory, paid to our employees and paid for other expenses.

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**STEP 1**

Determine the total amount of purchases of inventory made during the year. This figure can be obtained by reconstructing the Inventories account as follows.

| Inventories | | | | | |
|---|---|---|---|---|---|
| **Date** | **Account details** | ***Debit*** | ***Credit*** | ***Balance*** | |
| 1/7/10 | Balance | | | 46 500 | Dr |
| 30/6/11 | Accounts payable (Purchases) | **148 000** | | 194 500 | Dr |
| | Cost of sales | | 134 500 | 60 000 | Dr |

- The opening balance of $46 500 Dr is obtained from the Statement of financial position as at 30 June 2010.
- The cost of sales figure ($134 500) is found in the current year's Income statement.
- The closing balance of $60 000 Dr is obtained from the Statement of financial position as at 30 June 2011.
- The missing figure of $148 000 is the amount of inventory purchased on Accounts payable and is found by working backwards in the account.

**STEP 2**

We can now determine the amount of cash paid to creditors for inventory by reconstructing the Accounts payable account as seen below.

| Accounts payable | | | | | |
|---|---|---|---|---|---|
| **Date** | **Account details** | ***Debit*** | ***Credit*** | ***Balance*** | |
| 1/7/10 | Balance | | | 31 650 | Cr |
| 30/6/11 | Inventories (Purchases) | | 148 000 | 179 650 | Cr |
| | **Cash** | **155 650** | | 24 000 | Cr |

The amounts shown in this account are obtained as follows:

- The opening balance of $31 650 Cr is obtained from the Statement of financial position as at 30 June 2010.
- The amount of $148 000 for the inventories is the amount determined in the Inventories account.
- The closing balance of $24 000 Cr is found in the Statement of financial position as at 30 June 2011.
- The missing figure of $155 650 is the amount paid to suppliers of purchases and is found by working backwards in the account. This amount will now be added to the List of payments to suppliers and employees, which is shown further on in this example.

## Payments for other expenses

Our next task is to account for those expenses that have been adjusted by balance day adjustments. This will require us to reconstruct accounts where the Statement of financial position shows an accrued or prepaid item such as Stock of supplies stationery in our example. Where no accrual or prepayment is found it can be assumed that the amount shown in the current year's income statement is a cash-based amount.

The necessary account reconstruction for Stock of supplies stationery is shown below.

| Stock of Supplies – Stationery | | | | | |
|---|---|---|---|---|---|
| **Date** | **Account details** | ***Debit*** | ***Credit*** | ***Balance*** | |
| 1/7/10 | Balance | | | 300 | Dr |
| 30/6/11 | **Cash** | **450** | | 750 | Dr |
| | Stationery supplies expense | | 350 | 400 | Dr |



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The amounts shown in this account are obtained as follows:

- The opening balance of $300 Dr is located from the Statement of financial position as at 30 June 2010.
- The expense amount Stationery supplies expense $350 is obtained from the current year's Income statement.
- The closing balance for Stock of supplies stationery $400 Dr is found in the Statement of financial position as at 30 June 2011.
- We can now work backwards to determine the missing amount, which is the cash paid for the Stock of supplies stationery ($450). This represents the amount paid to the suppliers of this item. This amount can now be added to the List of payments to suppliers and employees.

The other expenses – being Salaries and wages $72 400, Other administration expenses $25 150, Insurance $6050, Motor vehicle expenses $16 500 and Sales salaries $56 000 – require no account reconstruction as there are no balance day adjustments that relate to them in the Statement of financial position. The depreciation figures in the income statement are not cash amounts and will therefore not be shown in the Statement of cash flows.

| List of payments to suppliers and employees | $ |
|---|---|
| Accounts payable | 155 650 |
| Insurance | 6 050 |
| Salaries and wages | 72 400 |
| Stationery supplies expense | 450 |
| Motor vehicle expenses | 16 500 |
| Sales salaries | 56 000 |
| Other administration expenses | 25 150 |
| Total payments to suppliers and employees | 332 200 |

This total figure of $332 200 will now be shown under operating activities in the Statement of cash flows.

## Payments for interest

The amount of $10 500 for interest expense in the income statement for the year ended 30 June 2011 does not require any adjustment as there are no balance day adjustments affecting this item.

## Payments for income taxes

It is assumed that the income tax paid is the same as the income tax liability. Therefore, the amount of income taxes paid ($38 000), which appears in the Statement of cash flows under operating activities, is the income tax liability from the previous year, shown in the Statement of financial position as at 30 June 2010.

## Net cash used in operating activities

The cash inflows and outflows can now be totalled. In our example the result is net cash from operating activities of $18 500.

## Cash flows from investing activities

Determining the cash flows involves an analysis of the non-current assets of the business.

## Acquisition of non-current assets

There has been an increase of $64 000 in Motor vehicles from 30 June 2010 to 30 June 2011 as shown in the Comparative statements of financial position. This amount represents a cash purchase of Motor vehicles and is indicated in the additional information, which states that all additional non-current assets purchased were paid for in cash. Therefore, the amount of $64 000 can be shown in the Statement of cash flows under investing activities as an outflow of cash. There has been no change in Land and buildings.

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### Interest received

Interest received is to be shown under investing activities and, in this example, the amount of $800 shown in the Income statement will be shown in the Statement of cash flows as an inflow as there are no balance day adjustments affecting this item.

### Net cash used in investing activities

The cash inflows and outflows can now be totalled, which, in our example results in a Net cash used in investing activities of $63 200 (negative).

### Cash flows from financing activities

The financing activities section of the Statement of cash flows relates to changes in Equity and Non-current liabilities between two Statements of financial position.

### Cash inflows and outflows from changes in non-current liabilities

From our example we note that there has been a change between the two Statements of financial position in the amount for Mortgage loan payable. The decrease in the Mortgage loan payable of $20 000 is a cash outflow to be shown in the Statement of cash flows.

### Cash inflows and outflows in equity

In our example we are given a Statement of changes in equity and, using this report plus the additional information, we can determine the non-cash transactions and also the cash transactions relating to Equity that need to be placed in the Statement of cash flows. The following two items are the only amounts that require inclusion in the Statement of cash flows.

***Dividends paid:*** The dividends paid of $20 335 will either be Interim dividends in the current financial year or Final dividends from the previous financial year, which were declared and paid after the end of the previous financial year. This will be shown as a cash outflow in the financing section of the Statement of cash flows.

***Receipts from the issue of shares:*** The Issue of ordinary shares of $100 000 will be a cash inflow in the financing section of the Statement of cash flows.

### Net cash used in financing activities

Once again, all the cash flows can be totalled. In our example the result is a Net cash used in financing activities of $59 665.

### Net increase or decrease in cash held

The net increase or decrease in cash held during the year is determined by adding up the result of the three sections of the Statement of cash flows. In this example the result was a net cash inflow of $14 965, which led to a net increase in cash held during the year of that amount.

### Cash and cash equivalents balances at the beginning and end of the financial year

The final step in the preparation of the Statement of cash flows is to determine the balance of cash and cash equivalents at the beginning of the financial year and the end of the year and to see that the ending balance agrees with the amount shown in the Statement of financial position.

### Cash balance at the beginning of the financial year

The amount of cash and cash equivalents at the beginning of the year is the sum of the following items found in the Statement of financial position as at 30 June 2010. This amount of $8850 is added to the amount of the Net increase in cash held during the year and this gives the amount of the Cash and cash equivalents balance at the end of the financial year of $23 815.



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### Cash balance at the end of the financial year

This figure of $23 815 must equal the amount for Cash shown in the Statement of financial position as at 30 June 2011.

### Completed Statement of cash flows

The Statement of cash flows is now complete as seen below.

Ghent Ltd
Statement of cash flows for the year ended 30 June 2011

| | $ | $ |
|---|---|---|
| **Cash flows from operating activities** | | |
| Cash receipts from customers | 399 200 | |
| Cash paid to suppliers and employees | (332 200) | |
| Cash generated from operations | 67 000 | |
| Interest paid | (10 500) | |
| Income taxes paid | (38 000) | |
| Net cash used in operating activities | | 18 500 |
| **Cash flows from investing activities** | | |
| Interest received | 800 | |
| Purchase of motor vehicles | (64 000) | |
| Net cash used in investing activities | | (63 200) |
| **Cash flows from financing activities** | | |
| Issue of shares | 100 000 | |
| Repayment of mortgage | (20 000) | |
| Dividends paid | (20 335) | |
| Net cash used in financing activities | | 59 665 |
| **Net increase in cash held during the year** | | 14 965 |
| **Cash and cash equivalents balance at beginning of year** | | 8 850 |
| **Cash and cash equivalents balance at end of year** | | 23 815 |

## DERIVING CASH FLOWS FROM ACCRUAL REPORTS

Where there have been balance day adjustments there will be a difference between the income and expense items shown in the Income statement and the cash flows relating to those items. It will therefore be necessary to reconstruct the relevant accounts to calculate those cash flows. In the previous example, we needed to do this for payments to accounts payable, receipts from accounts receivable and purchases of stationery.

Similarly, where there have been cash acquisitions and disposals of non-current assets during the year, it may be necessary to reconstruct those accounts and the related depreciation accounts to calculate the cash flows relating to the acquisitions and/or disposals. The following example shows the preparation of the Statement of cash flows for which these various reconstructions are required.

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EXAMPLE:

## Example 10.3

The following information relates to T Woods Ltd. We will ignore GST in this example.

T Woods Ltd
Statement of financial position as at 30 June 2011

| | 2010 | | 2011 | |
|---|---|---|---|---|
| | $ | $ | $ | $ |
| **Current assets** | | | | |
| Cash | | 19 000 | | 32 140 |
| Petty cash | | 1 400 | | 1 400 |
| Commercial bills (due 90 days) | | 50 000 | | 60 000 |
| Deposits at call | | 65 000 | | 70 240 |
| Accounts receivable | 35 000 | | 39 000 | |
| *Less* Allowance for doubtful debts | 700 | 34 300 | 780 | 38 220 |
| Inventory | | 120 000 | | 110 000 |
| Prepaid expense – Insurance | | 500 | | 800 |
| Stock of supplies – Advertising flyers | | 900 | | 1 000 |
| Interest income receivable | | 600 | | 700 |
| Total current assets | | 291 700 | | 314 500 |
| **Non-current assets** | | | | |
| Shares in G Norman Ltd | | 60 000 | | 83 000 |
| Land, at fair value | | 550 000 | | 600 000 |
| Buildings, at cost | 300 000 | | 300 000 | |
| *Less* Accumulated depreciation | 75 000 | 225 000 | 89 058 | 210 942 |
| Plant and equipment | 180 000 | | 200 000 | |
| *Less* Accumulated depreciation | 54 000 | 126 000 | 18 000 | 182 000 |
| Intangible assets | | 30 000 | | 30 000 |
| Total non-current assets | | 991 000 | | 1 105 942 |
| Total assets | | 1 282 700 | | 1 420 442 |
| **Current liabilities** | | | | |
| Accounts payable | | 31 000 | | 36 000 |
| Accrued expenses – Administration salaries and wages | | 800 | | 1 150 |
| Unearned income – Rent | | 700 | | 750 |
| Current income tax liability | | 15 200 | | 43 422 |
| Total current liabilities | | 47 700 | | 81 322 |
| **Non-current liabilities** | | | | |
| Mortgage loan payable (due November 2017) | | 200 000 | | 300 000 |
| Debentures (due May 2015) | | 200 000 | | 0 |
| Unsecured notes (due August 2014) | | 80 000 | | 80 000 |
| Total non-current liabilities | | 480 000 | | 380 000 |
| Total liabilities | | 527 700 | | 461 322 |
| Net assets | | 755 000 | | 959 120 |



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| | | | | |
|---|---|---|---|---|
| **Equity** | | | | |
| Share capital | | 590 000 | | 690 000 |
| General reserve | | 80 000 | | 130 000 |
| Revaluation reserve | | 60 000 | | 110 000 |
| Retained earnings | | 25 000 | | 29 120 |
| **Total equity** | | 755 000 | | 959 120 |

T Woods Ltd
Income statement for the year ended 30 June 2011

| | $ | $ | $ |
|---|---|---|---|
| **Revenue** | | | |
| Cash sales | 200 000 | | |
| Credit sales | 381 000 | 581 000 | |
| *Less* Sales returns | | 10 000 | 571 000 |
| *Less* Cost of sales | | | 211 000 |
| Gross profit | | | 360 000 |
| *Add* **Other income** | | | |
| Interest revenue | | 2 500 | |
| Gain on sale of plant and equipment | | 6 500 | |
| Rental income | | 12 000 | |
| Dividends income | | 4 500 | |
| Discount received | | 1 200 | 26 700 |
| | | | 386 700 |
| *Less* **Other expenses** | | | |
| **Selling and distribution** | | | |
| Marketing promotional expenses | 9 000 | | |
| Sales salaries | 55 000 | | |
| Advertising supplies expense | 2 000 | | |
| | | 66 000 | |
| **General and administration** | | | |
| Insurance | 5 000 | | |
| Depreciation on buildings | 14 058 | | |
| Depreciation on plant and equipment | 17 000 | | |
| Salaries and wages | 80 000 | | |
| Audit fees | 6 000 | | |
| Directors' fees | 8 000 | | |
| Other administration expenses | 8 500 | | |
| | | 138 558 | |
| **Financial** | | | |
| Interest expense | 30 000 | | |
| Doubtful debts | 6 000 | | |
| Discount allowed | 1 400 | | |
| | | 37 400 | |
| **Total other expenses** | | | 241 958 |
| **Profit before income tax** | | | 144 742 |
| *Less* **Income tax expense** | | | 43 422 |
| **Profit** | | | 101 320 |

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T Woods Ltd
Statement of comprehensive income for the year ended 30 June 2011

| | $ |
|---|---|
| Profit for the period | 101 320 |
| Other comprehensive income | |
| Revaluation of land | 50 000 |
| **Total comprehensive income for the period** | 151 320 |

T Woods Ltd
Statement of changes in equity for the year ended 30 June 2011

| | Share capital $ | Retained earnings $ | Revaluation surplus $ | General reserve $ | Total equity $ |
|---|---|---|---|---|---|
| Balance at 30/6/10 | **590 000** | **25 000** | **60 000** | **80 000** | **755 000** |
| Changes in equity for the year: | | | | | |
| Issue of share capital | 100 100 | | | | 100 100 |
| Share issue costs | (100) | | | | (100) |
| Dividends paid | | (47 200) | | | (47 200) |
| Total comprehensive income | | 101 320 | 50 000 | | 151 320 |
| Transfer to general reserve | | (50 000) | | 50 000 | – |
| Balance at 30/6/11 | **690 000** | **29 120** | **110 000** | **130 000** | **959 120** |

## ADDITIONAL INFORMATION

- Plant and equipment was sold for cash during the year and its original cost was $100 000.
- All additional non-current assets purchased were paid for in cash.
- The ordinary shares issued and the share issue costs paid during the current year were for cash.
- A new mortgage loan was received in cash.
- The debentures redeemed during the year were paid in cash.
- Dividends declared were paid in cash during the current year.
- Land was revalued upwards during the year by $50 000.

## CASH FLOWS FROM OPERATING ACTIVITIES

The first step is to determine the cash flows from operating activities. These will, in the main, be cash receipts from customers, payments to suppliers and employees, interest paid and income taxes paid. As the financial statements have been prepared using accrual accounting we need to account for this in order to find the cash amount for some items. Some items, such as depreciation, which are not cash amounts, will need to be excluded altogether.

## CASH RECEIPTS FROM CUSTOMERS

In the example, we have cash sales, which are already a cash-based item and therefore do not need to be adjusted to the accrual basis. However, the Credit sales needs to be adjusted as it is an accrual-based amount. Rental income will also need to be adjusted as there is unearned rental income in the Statement of financial position.

## CASH SALES

The cash sales of $200 000, shown in the current year's Income Statement, could be included in the Accounts receivable account or it could be added to the receipts from Accounts receivable. In this example we will add it later to the receipts from Accounts receivables to give a total of receipts from customers.

## CREDIT SALES (RECEIPTS FROM DEBTORS)

The Accounts receivable account needs to be reconstructed to convert the accrued figure of credit sales to a cash-based amount, as shown opposite.

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| Accounts receivable | | | | | |
|---|---|---|---|---|---|
| **Date** | **Account details** | ***Debit*** | ***Credit*** | ***Balance*** | |
| 1/7/10 | Balance | | | 35 000 | Dr |
| 30/6/11 | Credit sales | 381 000 | | 406 000 | Dr |
| | Sales returns | | 10 000 | 404 000 | Dr |
| | Discount allowed | | 1 400 | 398 680 | Dr |
| | Allowance for doubtful debts (bad debts) | | 5 920 | 398 680 | Dr |
| | **Cash** | | **359 680** | 39 000 | Dr |

The amounts shown in this account are obtained as follows:

- The $35 000 Dr Opening balance comes from the Statement of financial position as at 30 June 2010. It should be noted that the gross amount of Accounts receivables is used and not the net amount, which has the Allowance for doubtful debts taken out.
- Credit sales $381 000, Sales returns $10 000 and Discount allowed $1400 all come from the current year's Income statement.
- The $5920 for bad debts is found through the reconstruction of the Allowance for doubtful debts account as seen below. This is necessary because in this example we have Doubtful debts shown in the income statement and Allowance for doubtful debts in the Statement of financial position. We cannot use the amount of $6000 shown in the Income statement as this is the adjustment figure for the allowance for doubtful debts.
- The Closing balance figure of $39 000 Dr comes from the Statement of financial position as at 30 June 2011. Again the gross amount of $39 000 is used.
- The missing figure of $359 680 is found by working backwards and represents the cash received from accounts receivable.

The Allowance for doubtful debts account is reconstructed as follows.

| Allowance for doubtful debts | | | | | |
|---|---|---|---|---|---|
| **Date** | **Account details** | ***Debit*** | ***Credit*** | ***Balance*** | |
| 1/7/10 | Balance | | | 700 | Cr |
| 30/6/11 | **Bad debt (Accounts receivable)** | **5 920** | | 5 220 | Dr |
| | Doubtful debts | | 6 000 | 780 | Cr |

The amounts shown in this account are obtained as follows:

- The opening balance of $700 Cr comes from the Statement of financial position as at 30 June 2010.
- The Doubtful debts amount of $6000 comes from the current year's Income statement.
- The closing balance figure of $780 Cr comes from the Statement of financial position as at 30 June 2011.
- The missing figure of $5920 is the Bad debts amount, which is found by working backwards. This amount can now be shown in the Accounts receivable account as seen above.

The cash received from Accounts receivable of $359 680 and the cash sales of $200 000 can be added together to give total cash receipts from customers of $559 680. This is shown in the Statement of cash flows further on in this example.

## Cash receipts from other revenue

Next we need to determine the cash received from the rental income. This is found by reconstructing the Unearned rent rental income account as seen below, as in this example Unearned rent rental income is shown in the Statement of financial position.

| Unearned rent rental income | | | | | |
|---|---|---|---|---|---|
| **Date** | **Account details** | ***Debit*** | ***Credit*** | ***Balance*** | |
| 1/7/10 | Balance | | | 700 | Cr |
| 30/6/11 | **Cash** | | **12 050** | 12 750 | Cr |
| | Rent rental income | 12 000 | | 750 | Cr |

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The amounts shown in this account are obtained as follows:

- The opening balance of $700 Cr comes from the Statement of financial position as at 30 June 2010.
- The Rent rental income amount of $12 000 is found in the current year's Income statement.
- The closing balance of $750 Cr comes from the Statement of financial position as at 30 June 2011.
- The missing figure of $12 050, which is the cash amount of rent rental received, is determined by working backwards.

## Cash receipts from operations

Under the cash receipts from operations category we have receipts from customers and receipts from other revenue. We have determined the following amounts.

| | |
|---|---|
| Cash sales | $200 000 |
| *Add* Receipts from accounts receivable | $359 680 |
| Receipts from customers | $559 680 |
| *Add* Rental income received | $12 050 |
| Total cash receipts from operations | $571 730 |

The total of $571 730 can now be shown as an inflow under operating activities in the Statement of cash flows as seen further on in this example.

## Cash payments from operations

The cash payments from operations will require us to consider what we have paid for inventory, paid to our employees and paid for other expenses.

### PURCHASES OF INVENTORY

Our first step is to determine the total amount of purchases of inventory made during the year. This figure can be obtained by reconstructing the Inventories account as follows.

| Inventories | | | | | |
|---|---|---|---|---|---|
| **Date** | **Account details** | ***Debit*** | ***Credit*** | ***Balance*** | |
| 1/7/10 | Balance | | | 120 000 | Dr |
| 30/6/11 | **Accounts payable** | **201 000** | | 321 000 | Dr |
| | Cost of sales | | 211 000 | 110 000 | Dr |

The amounts shown in this account are obtained as follows:

- The opening balance of $120 000 Dr is obtained from the Statement of financial position as at 30 June 2010.
- The Cost of sales amount of $211 000 is located in the current year's Income statement.
- The closing balance of $110 000 Dr is found in the Statement of financial position as at 30 June 2011.
- The missing figure of $201 000 is determined by working backwards. This amount represents the total of purchases of inventories on credit (Accounts payable) made during the current year.

This amount of $201 000, however, is still an accrual-based figure as it is or includes credit purchases and will now be used in the reconstruction of the Accounts payable account, as seen below, to determine the cash paid to suppliers of purchases.

| Accounts payable | | | | | |
|---|---|---|---|---|---|
| **Date** | **Account details** | ***Debit*** | ***Credit*** | ***Balance*** | |
| 1/7/10 | Balance | | | 31 000 | Cr |
| 30/6/11 | Inventories | | 201 000 | 232 000 | Cr |
| | Discount received | 1 200 | | 230 800 | Cr |
| | **Cash** | **194 800** | | 36 000 | Cr |

The amounts shown in this account are obtained as follows:

- The opening balance of $31 000 Cr is obtained from the Statement of financial position as at 30 June 2010.



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- The discount received, a non-cash item, of $1200 comes from the current year's Income statement.
- The amount of $201 000 is the amount determined in the Inventories account.
- The closing balance of $36 000 Cr is found in the Statement of financial position as at 30 June 2011.
- The missing figure of $194 800 is the amount paid to suppliers of purchases and is found by working backwards in the account. This amount will now be added to the List of payments to suppliers and employees, which is shown further on in this example.

### PAYMENTS TO SUPPLIERS OF LABOUR

The amount paid to Sales salaries does not require converting to a cash-based amount as there are no accrued or prepaid items in the Statement of financial position relating to this item. The Sales salaries amount of $55 000 is a cash-based amount and can now be included in the Payments to employees.

However, the Administration salaries and wages expense is an accrual-based amount as the Statement of financial position shows Accrued administration salaries and wages expenses. We will now reconstruct the required account to determine the amount paid out for Administration salaries and wages.

| Administration salaries and wages expense | | | | | |
|---|---|---|---|---|---|
| **Date** | **Account details** | ***Debit*** | ***Credit*** | ***Balance*** | |
| 30/6/11 | **Cash** | **78 850** | | 78 850 | Dr |
| | Accrued administration salaries and wages | 1 150 | | 80 000 | Dr |
| | Profit and loss summary | | 80 000 | 0 | |

The amounts shown in this account are obtained as follows:

- The amount of $80 000 is found in the current year's Income statement and it represents the Profit and loss summary account accrued-based expense amount. This is what must be adjusted to determine the cash-based amount for this item.
- The Accrued administration salaries and wages figure of $1150 is the amount shown in the Statement of financial position as at 30 June 2011.
- The closing balance is zero because expense accounts are always closed off at the end of the financial year.
- The missing amount of $78 850 is the cash paid out for Administration salaries and wages and is determined by working backwards.

However, to this amount of $78 850 must be added the previous year's accrual of $800, which would have been paid during the year. This gives a total payment for Administration salaries and wages of $79 650.

The total amount paid to employees is, therefore, Administration salaries and wages $79 650 plus the Sales salaries $55 000, to give a total of $134 650.

### PAYMENTS FOR OTHER EXPENSES

Our next task is to account for other accrual-based expenses. This will require us to reconstruct accounts where the Statement of financial position shows an accrued or prepaid item, such as, in this example, Prepaid expense – Insurance and Stock of supplies – advertising flyers. Where no accrual or prepayment is found it can be assumed that the amount shown in the current year's Income statement is a cash-based amount. The necessary account reconstructions are shown below for each of these items.

| Prepaid expense – Insurance | | | | | |
|---|---|---|---|---|---|
| **Date** | **Account details** | ***Debit*** | ***Credit*** | ***Balance*** | |
| 1/7/10 | Balance | | | 500 | Dr |
| 30/6/11 | **Cash** | **5 300** | | 5 800 | Dr |
| | Insurance expense | | 5 000 | 800 | Dr |

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| Stock of supplies – Advertising flyers | | | | | |
|---|---|---|---|---|---|
| **Date** | **Account details** | ***Debit*** | ***Credit*** | ***Balance*** | |
| 1/7/10 | Balance | | | 900 | Dr |
| 30/6/11 | **Cash** | **2100** | | 3000 | Dr |
| | Advertising supplies expense | | 2000 | 1000 | Dr |

The amounts shown in this account are obtained as follows:

- The opening balance in the Prepaid expense – Insurance account of $500 Dr and Stock of supplies – Advertising flyers account of $900 Dr are located from the Statement of financial position as at 30 June 2010.
- The expense amount, Insurance expense $5000 and Advertising supplies expense $2000 are obtained from the current year's Income statement.
- The closing balance figures, Prepaid expense – Insurance $800 Dr and Stock of supplies – Advertising flyers $1000 Dr are found in the Statement of financial position as at 30 June 2011.
- In both these accounts we can now work backwards to determine the missing amount, which is the cash paid for that particular item. In the case of Prepaid expense – Insurance it is $5300 and for Stock of supplies – Advertising flyers it is $2100 and these represent the amounts paid to the suppliers of these items. These amounts will now be added to the List of payments to suppliers and employees.

The other expenses – Audit fees $6000, Directors' fees $8000, Other administration expenses $8500 and Marketing promotional expenses $9000 – required no account reconstruction as there are no balance day adjustments that relate to them in the Statement of financial position.

### TOTAL PAYMENTS TO SUPPLIERS AND EMPLOYEES

The List of payments to suppliers and employees is as follows.

| List of payments to suppliers and employees | $ |
|---|---|
| Accounts payable | 194800 |
| Insurance | 5300 |
| Administration salaries and wages | 79650 |
| Advertising supplies expense | 2100 |
| Marketing and promotional expenses | 9000 |
| Sales salaries | 55000 |
| Audit fees | 6000 |
| Directors' fees | 8000 |
| Other administration expenses | 8500 |
| Total payments to suppliers and employees | 368350 |

This total figure of $368350 will now be shown under operating activities in the Statement of cash flows. Note that doubtful debts and depreciation are excluded, being non-cash items and interest and income tax expenses are required to be shown as separate items.

### PAYMENTS FOR INTEREST

The amount of $30000 for interest expense in the income statement for the year ended 30 June 2011 does not require any adjustment as there are no balance day adjustments affecting this item.

### PAYMENTS FOR INCOME TAXES

It is assumed that the income tax paid is the same as the income tax liability. Therefore, the amount of income taxes paid ($15200), which appears in the Statement of cash flows under operating activities, is the income tax liability from the previous year, shown in the Statement of financial position as at 30 June 2010.

### NET CASH USED IN OPERATING ACTIVITIES

The cash inflows and outflows can now be totalled. In our example the result is Net cash from operating activities of $148180.


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### CASH FLOWS FROM INVESTING ACTIVITIES

To determine the cash flows will involve an analysis of the non-current assets of the business.

### REVALUATION OF NON-CURRENT ASSETS

The Statement of change in equity shows that the increase in the value of land was a result of revaluation of land during the current year, which is not a cash flow.

### ACQUISITION AND DISPOSAL OF NON-CURRENT ASSETS

There has been an increase of $23 000 in shares in G Norman Ltd from 30 June 2010 to 30 June 2011. As there are no revaluations of shares indicated in the current year's Statement of changes in equity and no sales of shares in G Norman Ltd we can assume that this increase of $23 000 is the cash purchase of shares. This is also supported by the additional information, which indicates that all additional non-current assets purchased were paid for in cash. Therefore the amount of $23 000 can be shown in the Statement of cash flows under investing activities as an outflow of cash.

The change in plant and equipment from 30 June 2010 to 30 June 2011 cannot be used in the Statement of cash flows, as the additional information in the question and also the Gain on sale of plant and equipment shown in the current year's Income statement shows that there was a sale of plant during the year. Therefore, we must reconstruct the following accounts to determine the cash proceeds on the sale of plant and equipment and the cash purchase of plant and equipment as follows.

**Plant and equipment**

| Date | Account details | *Debit* | *Credit* | *Balance* | |
|---|---|---|---|---|---|
| 1/7/10 | Balance | | | 180 000 | Dr |
| 30/6/11 | **Cash (Purchase)** | **120 000** | | 300 000 | Dr |
| | Sale of plant and equipment | | 100 000 | 200 000 | Dr |

The amounts shown in this account are obtained as follows:

- The opening balance of $180 000 Dr is obtained from the Statement of financial position as at 30 June 2010.
- The amount of $100 000 for the Sale of plant and equipment comes from the additional information given in the question.
- The closing balance of $200 000 Dr is found in the Statement of financial position as at 30 June 2011.
- We are then able to work backwards to determine the missing figure of $120 000, which is the cash payment for the purchase of new plant and equipment to be shown as a cash outflow in the Statement of cash flows.

To determine cash proceeds on the sale of plant and equipment we must reconstruct both the Accumulated depreciation of plant and equipment and Sale of plant and equipment accounts as seen below.

**Sale of plant and equipment**

| Date | Account details | *Debit* | *Credit* | *Balance* | |
|---|---|---|---|---|---|
| 30/6/11 | Plant and equipment | 100 000 | | 100 000 | Dr |
| | **Cash proceeds from sale of plant and equipment** | | 53 500 | 46 500 | Dr |
| | Accumulated depreciation on plant and equipment | | **53 000** | 6 500 | Cr |
| | Gain on Sale of plant and equipment | 6 500 | | 0 | |

The amounts shown in this account are obtained as follows:

- The $100 000 Dr in the Sale of plant and equipment account is the other half of the credit entry found in the Plant and equipment account. In this question this amount of $100 000 is given to us in the additional information in the question.

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- The Gain on Sale of plant and equipment of $6500 is found from the current year's Income statement and this is shown as a debit entry as the credit entry is in the Gain on Sale of plant and equipment account.
- The amount of $53 000 is obtained by reconstructing the Accumulated depreciation on plant and equipment account as seen below.
- The Sale of plant and equipment account will always have a zero balance in it as the balance, which represents a Gain or Loss on sale of asset, is transferred to an account with that title.
- We can now work backwards to calculate the missing figure of $53 500, which is the Cash proceeds from the sale of plant and equipment. The additional information indicates that the plant and equipment were sold for cash and so this amount will be shown as a cash inflow under investing activities.

To determine the Accumulated depreciation on plant and equipment amount of $53 000 we must reconstruct this account as seen below.

| Accumulated depreciation on plant and equipment | | | | | |
|---|---|---|---|---|---|
| **Date** | **Account details** | ***Debit*** | ***Credit*** | ***Balance*** | |
| 1/7/10 | Balance | | | 54 000 | Cr |
| 30/6/11 | Depreciation of plant and equipment | | 17 000 | 71 000 | Cr |
| | **Sale of plant and equipment** | **53 000** | | 18 000 | Cr |

The amounts shown in this account are obtained as follows:

- The opening balance of $54 000 Cr is found in the Statement of financial position as at 30 June 2010.
- The Deprecation of plant and equipment amount of $17 000 is obtained from the current year's Income statement.
- The closing balance of $18 000 Cr is found in the Statement of financial position as at 30 June 2011.
- Working backwards the missing figure of $53 000 is the Accumulated depreciation on plant and equipment sold, which appears as a credit entry in the Sale of plant and equipment account earlier.

### INTEREST RECEIVED

Interest received is to be shown under investing activities and in this example there is Interest revenue receivables in the Statement of financial position. Therefore, we need to reconstruct the ledger account for Interest revenue receivables to determine the cash received from this item as follows.

| Interest revenue receivable | | | | | |
|---|---|---|---|---|---|
| **Date** | **Account details** | ***Debit*** | ***Credit*** | ***Balance*** | |
| 1/7/10 | Balance | | | 600 | Dr |
| 30/6/11 | **Cash** | | **2 400** | 1 800 | Cr |
| | Interest revenue | 2 500 | | 700 | Dr |

The amounts shown in this account are obtained as follows:

- The opening balance of $600 Dr in the Interest revenue receivable account is found in the Statement of financial position as at 30 June 2010.
- The Interest revenue of $2500 is obtained from the current year's Income statement.
- The closing balance of $700 Dr is located in the Statement of financial position as at 30 June 2011.
- We can now determine the Interest received of $2400 by working backwards and this amount will be shown as a cash inflow in the Statement of cash flows.

### DIVIDENDS RECEIVED

As there are no accrued or prepaid amounts relating to this item in the Statement of financial position the amount of $4500 shown in the current year's Income statement can be shown in the Statement of cash flows.

### NET CASH USED IN INVESTING ACTIVITIES

The cash inflows and outflows can now be totalled, which, in our example results in a Net cash used in investing activities of $82 600 (negative).


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## CASH FLOWS FROM FINANCING ACTIVITIES

The financing activities section of the Statement of cash flows relates to changes in Equity and Non-current liabilities between two Statements of financial position. However, some of the changes may be due to non-cash transactions, such as revaluations, transfers to and from reserves, dividends not paid in cash and shares issued in exchange for the purchase of non-current assets. If a Statement of changes in equity is not provided, it may be necessary to reconstruct the Retained earnings ledger account.

## CASH INFLOWS AND OUTFLOWS FROM CHANGES IN NON-CURRENT LIABILITIES

From our example we note that there has been a change between the two Statements of financial position in the amounts for Mortgage loan payable and Debentures. The increase in the Mortgage loan payable of $100 000 is a cash inflow from taking a new loan commitment and the decrease in Debentures of $200 000 is the redemption of this existing commitment and is therefore a cash outflow. The additional information in the question confirms the amounts as cash flows.

## CASH INFLOWS AND OUTFLOWS IN EQUITY

In our example, we are given a Statement of changes in equity and from the additional information we can determine the non-cash transactions and also the cash transactions relating to Equity that need to be placed in the Statement of cash flows. However, we will also reconstruct the Retained earnings account to show how this can be done.

Neither the transfers to the general reserve nor the revaluation of land are cash transactions and will therefore not be placed in the Statement of cash flows. For the purpose of this textbook the only 'other comprehensive income' that will be dealt with in the examples and questions on the Statement of cash flows will be the gains on revaluation of the non-current assets property, plant and equipment.

The items that are cash transactions are the Issue of ordinary shares of $100 000 (net amount) and the Dividends declared and paid of $47 200.

### *Dividends paid*

The dividends declared and paid of $47 200 will either be Interim dividends relating to the current financial year or Final dividends from the previous financial year that were declared and paid after the end of the previous financial year. This amount will be shown as a cash outflow in the financing section of the Statement of cash flows.

### *Receipts from the issue of shares*

The Issue of ordinary shares of $100 000 (receipt of $100 100 from the share issue less the share issue costs of $100) will be a cash inflow in the financing section of the Statement of cash flows.

### *Reconstruction of Retained earnings account*

If we had not been given a Statement of changes in equity we may have needed to reconstruct the Retained earnings account to determine a missing required cash amount. We may have had to find the cash dividends declared and paid. The Retained earnings account would appear as follows.

| Retained earnings | | | | | |
|---|---|---|---|---|---|
| **Date** | **Account details** | ***Debit*** | ***Credit*** | ***Balance*** | |
| 1/7/10 | Balance | | | 25 000 | Cr |
| 30/6/11 | Profit and loss summary | | 94 320 | 119 320 | Cr |
| | General reserve | 50 000 | | 69 320 | Cr |
| | Dividends | 47 200 | | 22 120 | Cr |

The amounts shown in this account are obtained as follows:

- The opening balance of $25 000 Cr is obtained from the Statement of financial position as at 30 June 2010.
- The Profit and loss amount of $94 320 comes from the current year's Income statement.
- The $50 000 transfer to General reserve comes from the increase in General reserve between the two Statement of financial position figures of $80 000 as at 30 June 2010 and $130 000 as at 30 June 2011.
- The closing balance of $22 120 is found in the Statement of financial position as at 30 June 2011.
- The missing figure of $47 200, which is found by working backwards in this account, is the Dividends declared and paid.

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### NET CASH USED IN FINANCING ACTIVITIES

Once again, all the flows can be totalled. In our example the result is a Net cash used in financing activities of $47 200.

### NET INCREASE OR DECREASE IN CASH HELD

The net increase or decrease in cash held during the year is determined by adding up the result of the three sections of the Statement of cash flows. In this example the result was a net inflow of $18 380, which led to a Net increase in cash held during the year of that amount.

### CASH AND CASH EQUIVALENTS BALANCES AT THE BEGINNING AND END OF THE YEAR

The final step in the preparation of the Statement of cash flows is to determine the balance of cash and cash equivalents at the beginning of the year and end of the year and to see that the ending balance agrees with the amount shown in the Statement of financial position.

### CASH BALANCE AT THE BEGINNING OF THE FINANCIAL YEAR

The amount of cash and cash equivalents at the beginning of the year is the sum of the following items found in the Statement of financial position as at 30 June 2010.

| | |
|---|---|
| Cash | $19 000 |
| Petty cash | 1 400 |
| Commercial bills | 50 000 |
| Deposits at call | 65 000 |
| | 135 400 |

This amount of $135 400 is added to the amount of the Net cash increase in cash held during the year of $18 380 and this gives the amount of the Cash and cash equivalents balance at the end of the year of $153 780.

### CASH BALANCE AT THE END OF THE FINANCIAL YEAR

This figure of $153 780 must equal the amounts shown in the Statement of financial position as at 30 June 2011 for the Cash and cash equivalents, as seen below:

| | |
|---|---|
| Cash | $22 140 |
| Petty cash | 1 400 |
| Commercial bills | 60 000 |
| Deposits at call | 70 240 |
| | 153 780 |

## Completed Statement of cash flows

The Statement of cash flows is now complete, as seen below.

T Woods Ltd
Statement of cash flows for the year ended 30 June 2011

| | $ | $ |
|---|---|---|
| Cash flows from operating activities | | |
| Cash receipts from customers | 508 680 | |
| Cash receipts from other revenue | 12 050 | |
| Cash paid to suppliers and employees | (327 350) | |
| Cash generated from operations | 193 380 | |
| Interest paid | (30 000) | |
| Income taxes paid | (15 200) | |
| Net cash from operating activities | | 148 180 |


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| | | |
|---|---|---|
| Cash flows from investing activities | | |
| Proceeds from sale of plant and equipment | 53 500 | |
| Dividends received | 4 500 | |
| Interest received | 2 400 | |
| Purchase of plant and equipment | (120 000) | |
| Purchase of shares | (23 000) | |
| Net cash used in investing activities | | (82 600) |
| Cash flows from financing activities | | |
| Issue of shares | 100 000 | |
| Proceeds from borrowings | 100 000 | |
| Dividends paid | (47 200) | |
| Repayment of borrowings | (200 000) | |
| Net cash used in financing activities | | (47 200) |
| Net increase in cash held during the year | | 18 380 |
| Cash and cash equivalents balance at beginning of year | | 135 400 |
| Cash and cash equivalents balance at end of year | | 153 780 |

## Interpreting a Statement of cash flows

As explained previously in this chapter, a Statement of cash flows serves a very useful purpose to the users of financial statements. It can assist them to analyse a company and answer such questions as:

- How was the purchase of non-current assets financed?
- How did the business use its cash flows from operating activities?
- How did the company pay a dividend when it made a loss?
- Was the company able to repay any debt?

When analysing a Statement of cash flows the following steps may be used to prepare an answer.

### Step 1

State and detail the change that has occurred in the starting balance and ending balance of cash and cash equivalents for the period. Some of the questions that you could answer are:

- Did the balance increase or decrease and what changes occurred in the components of this item?
- Is the change a positive or negative result for the business?

### Step 2

State the net cash inflow or outflow for each of the operating, investing and financing activities for the period, examine the link between each classification and explain your conclusions as to what has occurred. Some of the questions that you could answer are:

- Was there a net cash inflow or outflow for each of the operating, investing and financing activities?
- How do you think the net cash inflow or outflow for operating activities was used? Was it used to purchase assets, repay debt or reward the owners?
- Is the net cash flow from operating activities reflected in the profit or loss for the period?

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- Is the net cash flow from operating activities sufficient to pay the dividends?
- How do you think the net cash inflow or outflow for financing activities was used? Was it used in investing activities to purchase assets?
- How do you think the net cash inflow or outflow for investing activities was used? Was it used in operating or financial activities?

### Step 3

Examine and explain the change that has occurred within each of the operating, investing and financing activities classifications. Some of the questions that you could answer are:

- What was the largest item in each of the categories of operating, investing and financing activities?
- Did the company repay debt during the period?
- Did the firm purchase or sell non-current assets?
- How was the purchase of non-current assets paid for?
- Are the sales of the business reflected in the cash inflow from customers?
- Did the company issue shares during the period?
- What were the proceeds of new shares used for?

### Step 4

Finally, draw an overall conclusion as to whether the company situation has improved or not and make any recommendations for the future. Some of the questions that you could answer are:

- Should the company have paid its dividend?
- Should the company have purchased all the non-current assets it did?
- Were the purchased non-current assets financed in an appropriate way, e.g. with long-term debt?
- Should the company consider repaying more debt in the future?
- Does the company need to improve the performance of its major operating activities?

EXAMPLE:

## Example 10.4

We will use the Statement of cash flows for T Woods Ltd prepared previously.

### Report on T Woods Pty Ltd

The Cash and cash equivalents balance for T Woods Ltd has improved during the past year from a balance of $134 500 as at 30 June 2010 to $153 780 as at 30 June 2011. This was due to a net increase in cash held during the year ended 30 June 2011 of $18 380. With the exception of Petty cash, each component of Cash and cash equivalents has increased, with the major change being in Commercial bills that have increased by $10 000. Overall, the cash position of the company appears to be satisfactory.

The reason for the Net increase in cash held during the year of $18 380 was due to the Net Cash flows from operating activities of $148 180 exceeding the cash outflows of the other two categories of activity. This situation appears to be satisfactory and the positive amount of $148 180 reflects a positive outcome from the profit-generating activities of the company.

Analysis of Net cash outflow from investing activities of $82 600 shows that the company's major activity was the purchase of plant and equipment of $120 000 during the year. The company sold some plant and equipment for $53 500 and it would therefore seem that the financing of this capital expenditure and the additional investment in G Norman Ltd has been funded by cash inflows from operating activities. These investing activities and their related financing seem most appropriate.

Analysis of the Net cash flows from financing activities reveals there has also been a financial restructure of the company with the repayment of debentures of $200 000 funded by the issuing of ordinary shares of $100 000 and an increased mortgage of $100 000. This situation should result in


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a decrease in interest payments, which is a positive outcome of this restructure. The dividend paid of $47 200 is in line with the profit-making activities of the company. The profit was $94 320 for the current year and it appears to have been funded by the cash inflows from operating activities. This situation is very satisfactory.

Overall, the liquidity position of the company appears to be satisfactory. It appears able to meet its commitments as they fall due, and the lower gearing of the company is a positive trend for its future financial stability.

# Test your knowledge

1 How is a Statement of cash flows useful in assessing the investing and financing decisions made by a business entity?

2 What are the sources of information for the production of a Statement of cash flows?

3 Why are the cash flows from operating activities so important when assessing the performance of a business entity?

4 Define and explain, using examples, each of the following cash flow classifications:
   a operating activities
   b investing activities
   c financing activities.

5 Which cash flow items must be disclosed separately in a Statement of cash flows?

6 Define 'cash' according to Accounting Standard AASB 107.

7 What is meant by 'cash on hand' according to Accounting Standard AASB 107?

8 What is meant by 'cash equivalents' according to Accounting Standard AASB 107?

9 List at least four transactions that would not be included in a Statement of cash flows.

# Test your understanding

## Topic guide

- Full statement, simple reconstructions: 10.1, 10.2
- Account reconstruction exercises – accounts payable and accounts receivable: 10.3, 10.4
- Account reconstruction exercises – accruals and prepayments: 10.5, 10.6
- Account reconstruction exercises – asset disposal: 10.9
- Account reconstruction exercises – retained earning: 10.13
- Cash flow statement – operating activities only: 10.4, 10.7, 10.20
- Cash flow statement – investing activities only: 10.10, 10.11
- Cash flow statement – financing activities only: 10.14, 10.15
- Full statement with reconstructions: 10.8, 10.12, 10.16, 10.17, 10.18, 10.19
- Full statement with reconstructions: 10.21, 10.22

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10.1 The following information relates to the internal reports of Penny Lane Ltd.

## Penny Lane Ltd
## Statement of financial position as at 30 June

| | 2010 $ | 2011 $ |
|---|---|---|
| **Assets** | | |
| Cash | 41 400 | 80 220 |
| Inventory | 38 000 | 45 000 |
| Land, at cost | 330 000 | 330 000 |
| Buildings (at net book value) | 105 200 | 93 800 |
| Equipment (at net book value) | 77 000 | 65 500 |
| Intangible assets | 14 000 | 14 000 |
| **Total assets** | 605 600 | 628 520 |
| | | |
| **Liabilities** | | |
| Short-term loan | 22 000 | 26 400 |
| Current income tax liability | 18 600 | 21 120 |
| Mortgage loan payable (due April 2017) | 136 000 | 126 000 |
| **Total liabilities** | 176 600 | 173 520 |
| **Net assets** | 429 000 | 455 000 |
| | | |
| **Equity** | | |
| Share capital | 340 000 | 340 000 |
| General reserve | 50 000 | 50 000 |
| Retained earnings | 39 000 | 65 000 |
| **Total equity** | 429 000 | 455 000 |

## Penny Lane Ltd
## Income statement for the year ended 30 June 2011 (summarised)

| | $ | $ |
|---|---|---|
| **Revenue** | | |
| Sales | | 410 000 |
| *Less* **Cost of sales** | | 165 000 |
| **Gross profit** | | 245 000 |
| *Add* **Other income** | | |
| Interest revenue | | 2 500 |
| | | 247 500 |
| *Less* **Other expenses** | | |
| Depreciation on – equipment | 11 500 | |
| Depreciation on – buildings | 11 400 | |
| Interest expense | 11 800 | |
| Other expenses | 142 400 | |
| **Total other expenses** | | 177 100 |
| **Profit before income tax** | | 70 400 |
| *Less* Income tax expense | | 21 120 |
| **Profit** | | 49 280 |


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**Additional information**

- Dividends declared totalling $23 280 relating to the previous financial year were paid in cash during the current financial year.
- The short-term loan in the Statement of financial position is not regarded as part of Cash holdings.
- No non-current assets were bought or sold during the current financial year.

**Required**

a Prepare a Statement of cash flows for the year ended 30 June 2011 for Penny Lane Ltd.
b Explain your treatment of Depreciation expense in the Statement of cash flows.
c Comment briefly on the changes in the company's cash position and the reasons for this.

10.2 The following details are extracted from the internal financial reports of Forrest Ltd.

## Forrest Ltd
## Statement of financial position as at 30 June

| | 2010 $ | 2011 $ |
|---|---|---|
| **Current assets** | | |
| Cash | 21 500 | 22 600 |
| Inventory | 128 000 | 132 000 |
| **Total current assets** | 149 500 | 154 600 |
| **Non-current assets** | | |
| Property, plant and equipment (net book value) | 516 000 | 495 500 |
| Investments | 100 000 | 203 500 |
| Intangibles | 100 000 | 100 000 |
| **Total non-current assets** | 716 000 | 799 000 |
| **Total assets** | 865 500 | 953 600 |
| **Current liabilities** | | |
| Income tax payable | 8 500 | 26 100 |
| Short-term borrowings | 26 000 | 31 000 |
| **Total current liabilities** | 34 500 | 57 100 |
| **Non-current liabilities** | | |
| Long-term borrowings | 250 000 | 300 000 |
| **Total liabilities** | 284 500 | 357 100 |
| **Net assets** | 581 000 | 596 500 |
| | | |
| **Equity** | | |
| Share capital | 510 000 | 510 000 |
| General reserve | 50 000 | 50 000 |
| Retained earnings | 21 000 | 36 500 |
| **Total equity** | 581 000 | 596 500 |

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## Forrest Ltd
## Income statement for the year ended 30 June 2011

| | $ | $ |
|---|---|---|
| **Revenue** | | |
| Sales | | 360 000 |
| *Less* **Cost of sales** | | 105 000 |
| **Gross profit** | | 255 000 |
| *Less* **Other expenses** | | |
| Depreciation expense (PPE) | 20 500 | |
| Interest expense | 30 000 | |
| Other expenses | 117 500 | |
| **Total other expenses** | | 168 000 |
| **Profit before income tax** | | 87 000 |
| *Less* Income tax expense | | 26 100 |
| **Profit** | | 60 900 |

**Additional information**

- No non-current assets were bought or sold during the current financial year.
- Dividends totalling $45 400 were paid in cash during the current year.

**Required**

a Prepare the Statement of cash flows for the year ended 30 June 2011 for Forrest Ltd.
b Comment briefly on the changes in the company's cash position and the reasons for this.

10.3 From each of the following sets of information, calculate the cash paid to accounts payable and received from accounts receivable and state where these cash flows would appear in the Statement of cash flows for 2010. The figures given are ledger account balances at the end of the financial year.

a

| | 2009 $ | 2010 $ |
|---|---|---|
| Accounts payable | 58 700 | 61 200 |
| Accounts receivable | 94 000 | 98 500 |
| Cost of sales | 422 100 | 419 600 |
| Inventory | 39 000 | 42 300 |
| Sales | 842 000 | 798 000 |

b

| | 2009 $ | 2010 $ |
|---|---|---|
| Accounts payable | 39 800 | 27 600 |
| Accounts receivable | 43 000 | 42 900 |
| Cost of sales | 402 000 | 396 000 |
| Discount allowed | 2 800 | 6 700 |
| Discount received | 8 200 | 6 300 |
| Inventory | 47 900 | 44 100 |
| Sales | 996 000 | 965 000 |


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c

| | 2009 $ | 2010 $ |
|---|---|---|
| Accounts payable | 38 000 | 40 200 |
| Accounts receivable | 36 000 | 58 000 |
| Bad debts | 900 | 2 500 |
| Cost of sales | 281 000 | 302 000 |
| Discount allowed | 4 000 | 3 800 |
| Discount received | 6 100 | 7 300 |
| Inventory | 24 600 | 30 500 |
| Sales | 398 000 | 413 000 |
| Sales returns | 1 800 | 3 200 |

10.4 The following extracts of financial information relate to Kennedy Ltd.

## Kennedy Ltd
## Statement of financial position as at 30 June (extract)

| | 2010 $ | 2011 $ |
|---|---|---|
| **Current assets** | | |
| Cash | 33 000 | 36 500 |
| Accounts receivable | 99 000 | 143 000 |
| Inventory | 42 500 | 47 890 |
| | 174 500 | 227 390 |
| **Current liabilities** | | |
| Accounts payable | 30 920 | 37 410 |
| Current income tax liability | 21 450 | 10 341 |
| **Total current liabilities** | 52 370 | 47 751 |
| **Equity** | | |
| Share capital | 368 000 | 368 000 |
| General reserve | 60 000 | 60 000 |
| Retained earnings | 33 900 | 37 800 |
| **Total equity** | 461 900 | 465 800 |

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## Kennedy Ltd
## Income statement for the year ended 30 June 2011

| | $ | $ |
|---|---|---|
| **Revenue** | | |
| Credit sales | 389 000 | |
| *Less* Sales returns | 12 000 | 377 000 |
| *Less* **Cost of sales** | | 159 000 |
| **Gross profit** | | 218 000 |
| *Add* **Other income** | | |
| Interest revenue | | 3 200 |
| | | 221 200 |
| *Less* **Other expenses** | | |
| Interest expense | 7 890 | |
| **Discount allowed** | 2 870 | |
| Depreciation expense | 11 500 | |
| Other expenses | 164 470 | |
| **Total other expenses** | | 186 730 |
| **Profit before income tax** | | 34 470 |
| *Less* Income tax expense | | 10 341 |
| **Profit** | | 24 129 |

**Required**

Prepare the Cash flows from operating activities section of the Statement of cash flows for Kennedy Ltd for the year ended 30 June 2011.

10.5 From both of the following sets of information, calculate the cash paid for expenses and received from revenue and state where these cash flows would appear in the Statement of cash flows for 2010. The figures given are ledger account balances at the end of the financial year.

a

| | 2009 $ | 2010 $ |
|---|---|---|
| Accrued commission revenue | 21 800 | 26 400 |
| Accrued wages | 11 800 | 8 900 |
| Commission revenue | 311 000 | 317 000 |
| Wages expense | 125 000 | 130 000 |

b

| | 2009 $ | 2010 $ |
|---|---|---|
| Accrued electricity | 1 250 | 1 400 |
| Accrued interest revenue | 900 | 650 |
| Electricity expense | 14 900 | 16 200 |
| Interest revenue | 3 600 | 2 800 |


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10.6 From both of the following sets of information, calculate the cash paid for expenses and received from revenue and state where these cash flows would appear in the Statement of cash flows for 2010. You are also to calculate the bad debts written off. The figures given are ledger account balances at the end of the financial year.

a

| | 2009 $ | 2010 $ |
|---|---|---|
| Doubtful debts expense | 5100 | 6300 |
| Fees in advance | 13400 | 12000 |
| Fees revenue | 697000 | 723000 |
| Insurance expense | 36000 | 40000 |
| Prepaid insurance | 16800 | 11200 |
| Allowance for doubtful debts | 5600 | 6200 |

b

| | 2009 $ | 2010 $ |
|---|---|---|
| Doubtful debts expense | 600 | 900 |
| Prepaid rent | 6000 | 4000 |
| Allowance for doubtful debts | 800 | 1200 |
| Rent expense | 72000 | 84000 |
| Rent revenue in advance | 2400 | 2640 |
| Rent revenue | 14400 | 16800 |
| Stationery expense | 7500 | 7800 |
| Stock of stationery | 1300 | 1800 |

10.7 The following information has been extracted from the financial records of Harndorf Ltd.

## Harndorf Ltd
## Statement of financial position as at 30 June (extract)

| | 2010 $ | 2011 $ |
|---|---|---|
| **Current assets** | | |
| Cash | 58000 | 47500 |
| Accounts receivable | 146000 | 158000 |
| Inventory | 65000 | 72000 |
| Prepaid expense – Insurance | 600 | 700 |
| Stock of supplies – Stationery | 650 | 710 |
| **Total current assets** | 270250 | 278910 |
| | | |
| **Current liabilities** | | |
| Accounts payable | 46520 | 52690 |
| Accrued expenses – Office salaries | 2000 | 2500 |
| Current income tax liability | 38000 | 3387 |
| **Total current liabilities** | 86420 | 58577 |

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## Harndorf Ltd
## Income statement for the year ended 30 June 2011

| | $ | $ |
|---|---|---|
| **Revenue** | | |
| Credit sales | 389 000 | |
| *Less* Sales returns | 11 000 | 378 000 |
| *Less* **Cost of sales** | | 134 500 |
| **Gross profit** | | 243 500 |
| *Add* **Other income** | | |
| Interest revenue | 2 650 | |
| Discount received | 9 740 | 12 390 |
| | | 255 890 |
| *Less* **Other expenses** | | |
| Selling and distribution | 80 000 | |
| Insurance | 6 420 | |
| Depreciation | 26 500 | |
| Stationery expense | 4 100 | |
| Office salaries | 78 500 | |
| Interest expense | 10 560 | |
| Other expenses | 29 620 | |
| Discount allowed | 8 900 | |
| **Total other expenses** | | 244 600 |
| **Profit before income tax** | | 11 290 |
| *Less* Income tax expense | | 3 387 |
| **Profit** | | 7 903 |

**Required**

Prepare the Cash flows from operating activities section of the Statement of cash flows for Harndorf Ltd for the year ended 30 June 2011.

10.8 The following financial information relates to Monroe Ltd.

## Monroe Ltd
## Statement of financial position as at 30 June

| | 2010 $ | | 2011 $ | |
|---|---|---|---|---|
| **Current assets** | | | | |
| Cash | | 16 800 | | 0 |
| Accounts receivable | 70 000 | | 149 500 | |
| *Less* Allowance for doubtful debts | 2 000 | 68 000 | 3 500 | 146 000 |
| Inventory | | 180 000 | | 233 000 |
| Stock of supplies – Advertising | | 1 200 | | 850 |
| **Total current assets** | | 266 000 | | 379 850 |
| | | | | |
| **Non-current assets** | | | | |
| Land, at cost | | 130 000 | | 130 000 |
| Buildings, at cost | 135 000 | | 135 000 | |
| *Less* Accumulated depreciation | 68 000 | 67 000 | 80 000 | 55 000 |



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| | | | | |
|---|---|---|---|---|
| Plant and equipment | 153 000 | | 303 000 | |
| *Less* Accumulated depreciation | 87 000 | 66 000 | 80 000 | 223 000 |
| **Total non-current assets** | | 263 000 | | 408 000 |
| **Total assets** | | 529 000 | | 787 850 |
| | | | | |
| **Current liabilities** | | | | |
| Bank overdraft | | 0 | | 11 441 |
| Accounts payable | | 41 200 | | 49 290 |
| Accrued expenses – Office administration salaries | | 7 620 | | 9 620 |
| Current income tax liability | | 18 000 | | 20 499 |
| **Total current liabilities** | | 66 820 | | 90 850 |
| | | | | |
| **Non-current liabilities** | | | | |
| Mortgage loan payable (due May 2017) | | 86 000 | | 139 000 |
| Unsecured notes (due September 2018) | | 0 | | 50 000 |
| **Total non-current liabilities** | | 86 000 | | 189 000 |
| **Total liabilities** | | 152 820 | | 279 850 |
| **Net assets** | | 376 180 | | 508 000 |
| | | | | |
| **Equity** | | | | |
| Share capital | | 300 000 | | 399 400 |
| General reserve | | 60 000 | | 70 000 |
| Retained earnings | | 16 180 | | 38 600 |
| **Total equity** | | 376 180 | | 508 000 |

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## Monroe Ltd
## Income statement for the year ended 30 June 2011

| | $ | $ | $ |
|---|---|---|---|
| **Revenue** | | | |
| Cash sales | 250 000 | | |
| Credit sales | 360 000 | 610 000 | |
| *Less* Sales returns | | 12 000 | 598 000 |
| *Less* **Cost of sales** | | | 173 500 |
| **Gross profit** | | | 424 500 |
| *Add* **Other income** | | | |
| Interest revenue | | 1 300 | |
| Gain on sale of plant and equipment | | 5 700 | |
| | | | 7 000 |
| | | | 431 500 |
| *Less* **Other expenses** | | | |
| **Selling and distribution** | | | |
| Distribution expenses | 29 000 | | |
| Sales salaries and wages | 72 000 | | |
| Advertising supplies expense | 24 300 | | |
| | | 125 300 | |
| **General and administration** | | | |
| Insurance | 6 500 | | |
| Depreciation on buildings | 12 000 | | |
| Depreciation on plant and equipment | 32 000 | | |
| Office administration salaries | 97 600 | | |
| Occupancy expenses | 34 200 | | |
| Directors' and auditor's fees | 9 870 | | |
| Other administration expenses | 29 600 | | |
| | | 221 770 | |
| **Financial** | | | |
| Interest expense | 10 300 | | |
| Doubtful debts | 3 000 | | |
| Discount allowed | 2 800 | | |
| | | 16 100 | |
| **Total Other expenses** | | | 363 170 |
| **Profit before income tax** | | | 68 330 |
| *Less* Income tax expense | | | 20 499 |
| **Profit** | | | 47 831 |

## Monroe Ltd
## Statement of comprehensive income for the year ended 30 June 2011

| | $ |
|---|---|
| **Profit for the period** | 47 831 |
| **Other comprehensive income:** | |
| Revaluation of land | 0 |
| **Total comprehensive income for the period** | 47 831 |


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**Additional information**

- $10 000 was transferred from Retained earnings to the General reserve on 30 June 2011.
- Plant and equipment was sold for cash during the year and its original cost was $50 000.
- All additional non-current assets purchased were paid for in cash.
- The ordinary shares issued during the current year were for cash and also the share issue costs of $600.
- Dividends were paid in cash during the current financial year.

**Required**

a Prepare the Statement of cash flows for the year ended 30 June 2011.
b How do you think the net cash inflow or outflow for financing activities was used? Was it used in investing activities to purchase assets?
c How do you think the net cash inflow or outflow from operating activities was used?

10.9 From each of the following sets of information, calculate the depreciation expense for the year, cash paid for the purchase of assets and cash received from the sale of assets. State where these cash flows would appear in the Statement of cash flows for 2010.

a

| | 2009 $ | 2010 $ |
|---|---|---|
| Accumulated depreciation, plant and equipment | 89 000 | 87 000 |
| Depreciation of plant and equipment | 22 000 | 24 000 |
| Gain on sale of asset | 7 500 | 4 000 |
| Plant and equipment, at cost | 298 000 | 303 000 |

**Additional information**

Plant and equipment that had originally cost $30 000 was sold for cash and replacement plant and equipment was purchased for cash during the current year.

b

| | 2009 $ | 2010 $ |
|---|---|---|
| Accumulated depreciation, vehicles | 48 000 | 41 000 |
| Depreciation of vehicles | 10 000 | 12 000 |
| Gain (Loss) on sale of asset | 2 000 | (3 000) |
| Vehicles, at cost | 135 000 | 143 000 |

**Additional information**

A vehicle that had originally cost $28 000 was sold for cash and a replacement vehicle was purchased for cash during the current year.

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10.10 The following information is extracted from the internal reports of Frost Ltd.

## Frost Ltd
## Statement of financial position as at 30 June (extract)

| | 2010 $ | | 2011 $ | |
|---|---|---|---|---|
| **Total current assets** | | 138 400 | | 149 540 |
| **Non-current assets** | | | | |
| Land, at cost | | 550 000 | | 550 000 |
| Buildings, at cost | 250 000 | | 300 000 | |
| *Less* Accumulated depreciation | 63 000 | 187 000 | 25 000 | 275 000 |
| Delivery vehicles, at cost | 165 000 | | 210 000 | |
| *Less* Accumulated depreciation | 45 000 | 120 000 | 30 000 | 180 000 |
| Intangible assets | | 30 000 | | 30 000 |
| **Total non-current assets** | | 887 000 | | 1 035 000 |
| **Total assets** | | 1 025 400 | | 1 184 540 |

## Frost Ltd
## Income statement for the year ended 30 June 2011 (extract)

| | $ | $ |
|---|---|---|
| **Gross profit** | | 280 000 |
| *Add* **Other income** | | |
| Interest revenue | 2 800 | |
| Gain on sale of plant and equipment | 15 000 | 17 800 |
| | | 297 800 |
| *Less* **Other expenses** | | |
| Depreciation on delivery vehicles | | 24 750 |
| Other expenses | | 217 200 |
| **Total other expenses** | | 241 950 |
| **Profit before income tax** | | 55 850 |
| *Less* Income tax expense | | 16 755 |
| **Profit** | | 39 095 |

**Additional information**

- A delivery vehicle was sold for cash during the year and its original cost was $40 000.
- All additional non-current assets purchased were paid for in cash.

**Required**

Prepare the Cash flows from investing activities section only of the Statement of cash flows for the year ended 30 June 2011 for Frost Ltd.



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10.11 The following information is extracted from the internal reports of J Wayne Ltd.

## J Wayne Ltd
## Statement of financial position as at 30 June (extract)

| | 2010 $ | | 2011 $ | |
|---|---|---|---|---|
| **Non-current assets** | | | | |
| Shares in Wright Ltd | | 53 000 | | 75 000 |
| | | | | |
| Motor vehicles, at cost | 300 000 | | 300 000 | |
| *Less* Accumulated depreciation | 75 000 | 225 000 | 90 000 | 210 000 |
| Fixtures and fittings | 180 000 | | 200 000 | |
| *Less* Accumulated depreciation | 54 000 | 126 000 | 18 000 | 182 000 |
| Total non-current assets | | 404 000 | | 467 000 |

## J Wayne Ltd
## Income statement for the year ended 30 June 2011 (extract)

| | $ | $ |
|---|---|---|
| **Gross profit** | | 261 000 |
| *Add* **Other income** | | |
| Interest revenue | 1 000 | |
| Rental income | 13 000 | |
| Dividends income | 3 890 | 17 890 |
| | | 278 890 |
| *Less* **Other expenses** | | |
| Depreciation on fixtures and fittings | 17 000 | |
| Other expenses | 186 100 | |
| Loss on sale of fixtures and fittings | 3 500 | |
| Interest expense | 11 300 | |
| **Total other expenses** | | 217 900 |
| **Profit before income tax** | | 60 990 |
| *Less* Income tax expense | | 18 297 |
| **Profit** | | 42 693 |

**Additional information**

- Fixtures and fittings originally costing $65 000 were sold for cash during the current financial year.
- All additional non-current assets purchased were paid for in cash.

**Required**

Prepare the Cash flows from investing activities section only of the Statement of cash flows for the year ended 30 June 2011 for J Wayne Ltd.

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10.12 The following information has been extracted from the internal reports of Holiday Hotel Ltd.

## Holiday Hotel Ltd
## Statement of financial position as at 30 June

| | 2010 $ | | 2011 $ | |
|---|---|---|---|---|
| **Current assets** | | | | |
| Cash | | 70 900 | | 80 700 |
| Petty cash | | 1 200 | | 1 200 |
| Commercial bills (due 90 days) | | 50 000 | | 27 000 |
| Accounts receivable | 15 000 | | 20 000 | |
| *Less* Allowance for doubtful debts | 1 000 | 14 000 | 2 000 | 18 000 |
| Inventory | | 88 000 | | 129 000 |
| Prepaid expense – Insurance | | 500 | | 0 |
| **Total current assets** | | 224 600 | | 255 900 |
| | | | | |
| **Non-current assets** | | | | |
| Land, at fair value | | 200 000 | | 270 000 |
| Buildings, at cost | 175 000 | | 175 000 | |
| *Less* Accumulated depreciation | 63 000 | 112 000 | 75 000 | 100 000 |
| Plant and equipment | 198 000 | | 398 000 | |
| *Less* Accumulated depreciation | 81 000 | 117 000 | 56 000 | 342 000 |
| **Total non-current assets** | | 429 000 | | 712 000 |
| **Total assets** | | 653 600 | | 967 900 |
| | | | | |
| **Current liabilities** | | | | |
| Accounts payable | | 31 200 | | 36 200 |
| Accrued expenses – Administration salaries | | 6 800 | | 7 700 |
| Unearned income – Rent | | 0 | | 1 200 |
| Current income tax liability | | 19 600 | | 44 100 |
| **Total current liabilities** | | 57 600 | | 89 200 |
| | | | | |
| **Non-current liabilities** | | | | |
| Mortgage loan payable (due December 2018) | | 130 000 | | 170 000 |
| **Total non-current liabilities** | | 130 000 | | 170 000 |
| **Total liabilities** | | 187 600 | | 259 200 |
| **Net assets** | | 466 000 | | 708 700 |
| | | | | |
| **Equity** | | | | |
| Share capital | | 350 000 | | 449 800 |
| General reserve | | 80 000 | | 120 000 |
| Revaluation reserve | | 0 | | 70 000 |
| Retained earnings | | 36 000 | | 68 900 |
| **Total equity** | | 466 000 | | 708 700 |



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## Holiday Hotel Ltd
## Income statement for the year ended 30 June 2011

| | $ | $ | $ |
|---|---|---|---|
| **Revenue** | | | |
| Credit sales | | | 698 000 |
| *Less* **Cost of sales** | | | 156 000 |
| **Gross profit** | | | 542 000 |
| *Add* **Other income** | | | |
| Interest revenue | | 10 500 | |
| Gain on sale of plant and equipment | | 4 700 | |
| Rental income | | 18 600 | 33 800 |
| | | | 575 800 |
| *Less* **Other expenses** | | | |
| **Selling and distribution** | | | |
| Selling expenses | 56 000 | | |
| Sales salaries and commissions | 112 000 | | |
| Transport expense | 39 800 | | |
| | | 207 800 | |
| **General and administration** | | | |
| Insurance expense | 5 300 | | |
| Depreciation on buildings | 12 000 | | |
| Depreciation on plant and equipment | 19 100 | | |
| Administration salaries | 105 000 | | |
| Occupancy expenses | 21 300 | | |
| Directors' and auditor's fees | 9 800 | | |
| Other administration expenses | 31 000 | | |
| | | 203 500 | |
| **Financial** | | | |
| Doubtful debts | 2 000 | | |
| Interest expense | 15 500 | 17 500 | |
| **Total other expenses** | | | 428 800 |
| **Profit before income tax** | | | 147 000 |
| *Less* Income tax expense | | | 44 100 |
| **Profit** | | | 102 900 |

## Holiday Hotel Ltd
## Statement of comprehensive income for the year ended 30 June 2011

| | $ |
|---|---|
| **Profit for the period** | 102 900 |
| **Other comprehensive income:** | |
| Revaluation of land | 70 000 |
| **Total comprehensive income for the period** | 172 900 |

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## Holiday Hotel Ltd
## Statement of changes in equity for the year ended 30 June 2011

| | Share capital $ | Retained earnings $ | Revaluation reserve $ | General reserve $ | Total equity $ |
|---|---|---|---|---|---|
| Balance at 30/6/10 | **350 000** | **36 000** | **0** | **80 000** | **466 000** |
| Changes in equity for the year: | | | | | |
| Issue of share capital | 100 000 | | | | 100 000 |
| Share issue costs | (200) | | | | (200) |
| Dividends paid | | (30 000) | | | (30 000) |
| Total comprehensive income | | 102 900 | 70 000 | | 172 900 |
| Transfer to general reserve | | (40 000) | | 40 000 | – |
| Balance at 30/6/11 | **449 800** | **68 900** | **70 000** | **120 000** | **708 700** |

**Additional information**

- Plant and equipment was traded in during the year. The trade-in received was $45 600. The plant and equipment originally cost $85 000.
- All additional non-current assets purchased were paid for in cash.
- The ordinary shares issued during the current year were for cash and the share issue costs were also paid in cash.
- Dividends declared in relation to the previous financial year and interim dividend relating to the current financial year were paid in cash during the current year.

**Required**

a Prepare the Statement of cash flows for the year ended 30 June 2011 for Holiday Hotel Ltd.
b Should the company have paid its dividend?
c Was the purchase of non-current assets financed in an appropriate way (e.g. with long-term debt)?
d Should the company consider repaying more debt in the future?
e Does the company need to improve the performance of its major operating activities?

10.13 From each of the following sets of information, calculate the cash paid in dividends. State where this cash flow would appear in the Statement of cash flows for 2010.

a

| | 2009 $ | 2010 $ |
|---|---|---|
| General reserve | 300 000 | 400 000 |
| Profit and loss (profit for the year after tax) | 264 000 | 396 000 |
| Retained earnings | 283 000 | 314 000 |

A cash dividend was paid during the current year.

b

| | 2009 $ | 2010 $ |
|---|---|---|
| General reserve | 100 000 | 250 000 |
| Profit and loss (Profit for the year after tax) | 570 000 | 410 000 |
| Retained earnings | 401 000 | 365 000 |

A cash dividend was paid during the current year.


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10.14 The following information is extracted from the internal reports of Larwood Ltd.

## Larwood Ltd
## Statement of financial position as at 30 June (extract)

| | 2010 $ | 2011 $ |
|---|---|---|
| **Total non-current assets** | 705 000 | 680 900 |
| **Non-current liabilities** | | |
| Mortgage loan payable (due April 2015) | 200 000 | 140 000 |
| Debentures (due October 2016) | 100 000 | 100 000 |
| Unsecured notes (due June 2017 ) | 60 000 | 60 000 |
| **Total non-current liabilities** | 360 000 | 300 000 |
| **Equity** | | |
| Share capital | 450 000 | 450 000 |
| General reserve | 75 000 | 85 000 |
| Retained earnings | 56 400 | 61 999 |
| **Total equity** | 581 400 | 596 999 |

**Additional information**

- Profit after tax for the year was $32 269.
- Dividends declared in relation to the previous financial year were paid in cash during the current financial year.

**Required**

Prepare the Cash flows from financing activities section only of the Statement of cash flows for the year ended 30 June 2011 for Larwood Ltd.

10.15 The following information is extracted from the internal reports of Melbourne Ltd.

## Melbourne Ltd
## Statement of financial position as at 30 June (extract)

| | 2010 $ | 2011 $ |
|---|---|---|
| **Total non-current assets** | 354 000 | 542 000 |
| **Non-current liabilities** | | |
| Mortgage loan payable (due June 2016) | 125 000 | 205 000 |
| Debentures | 145 000 | 0 |
| Unsecured notes (due May 2017 ) | 40 000 | 90 000 |
| **Total non-current liabilities** | 310 000 | 295 000 |
| **Equity** | | |
| Share capital | 320 000 | 449 700 |
| General reserve | 105 000 | 65 000 |
| Revaluation reserve | 0 | 100 000 |
| Retained earnings | 23 000 | 20 300 |
| **Total equity** | 448 000 | 635 000 |

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## Melbourne Ltd
## Statement of comprehensive income for the year ended 30 June 2011

| | $ |
|---|---|
| **Profit for the period** | 33 495 |
| **Other comprehensive income:** | |
| Revaluations | 100 000 |
| **Total comprehensive income for the period** | 133 495 |

**Additional information**

- The shares issued during the current year were for cash and the share issue costs of $300 were also paid in cash.
- The debentures redeemed during the year were paid in cash.
- Unsecured notes were issued during the year for cash.
- Dividends declared relating to the previous financial year were paid in cash during the current financial year.

**Required**

Prepare the Cash flows from financing activities section only of the Statement of cash flows for the year ended 30 June 2011 for Melbourne Ltd.

10.16 The following financial information relates to Silver Star Ltd.

## Silver Star Ltd
## Statement of financial position as at 30 June

| | 2010 $ | | 2011 $ | |
|---|---|---|---|---|
| **Assets** | | | | |
| Cash | | 42 000 | | 51 000 |
| Accounts receivable | | 33 500 | | 18 900 |
| Prepaid expense – Rent | | 6 200 | | 7 250 |
| Stock of supplies | | 269 000 | | 281 500 |
| Shares in Goldie Ltd | | 45 000 | | 75 000 |
| Office equipment, at cost | 166 000 | | 166 000 | |
| *Less* Accumulated depreciation | 28 000 | 138 000 | 39 000 | 127 000 |
| Delivery vehicles (at cost) | 189 000 | | 243 000 | |
| *Less* Accumulated depreciation | 105 000 | 84 000 | 64 500 | 178 500 |
| **Total assets** | | 617 700 | | 739 150 |
| | | | | |
| **Liabilities** | | | | |
| Accounts payable | | 27 100 | | 53 300 |
| Current income tax liability | | 27 000 | | 30 450 |
| Mortgage loan payable (due December 2018) | | 75 000 | | 105 000 |
| Debentures (due September 2017) | | 100 000 | | 50 000 |
| **Total liabilities** | | 229 100 | | 238 750 |
| **Net assets** | | 388 600 | | 500 400 |
| | | | | |
| **Equity** | | | | |
| Share capital | | 300 000 | | 399 600 |

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| | | | | |
|---|---|---|---|---|
| General reserve | | 40 000 | | 70 000 |
| Retained earnings | | 48 600 | | 30 800 |
| **Total equity** | | 388 600 | | 500 400 |

## Silver Star Ltd
## Income statement for the year ended 30 June 2011

| | $ | $ | $ |
|---|---|---|---|
| **Revenue** | | | |
| Cash fees | | 579 000 | |
| Credit fees | | 102 000 | 681 000 |
| *Add* **Other income** | | | |
| Interest revenue | | 4 100 | |
| Dividends income | | 8 600 | 12 700 |
| | | | 693 700 |
| *Less* **Other expenses** | | | |
| **Selling and distribution** | | | |
| Delivery vehicle expenses | 86 000 | | |
| Sales salaries | 67 000 | | |
| Supplies expense | 193 000 | | |
| Depreciation on delivery vehicles | 20 500 | | |
| Loss on sale of delivery vehicle | 8 000 | 374 000 | |
| **General and administration** | | | |
| Rent | 56 000 | | |
| Depreciation on office equipment | 11 000 | | |
| Administration salaries | 85 000 | | |
| Rates and government charges | 9 700 | | |
| Directors' and auditor's fees | 12 700 | | |
| Other general expenses | 23 800 | 198 200 | |
| **Financial** | | | |
| Interest expense | 16 900 | | |
| Discount allowed | 2 600 | 19 500 | |
| **Total other expenses** | | | 592 200 |
| **Profit before income tax** | | | 101 500 |
| *Less* Income tax expense | | | 30 450 |
| **Profit** | | | 71 050 |

**Additional information**

- A delivery vehicle was sold for cash during the year and its original cost was $100 000.
- All additional non-current assets purchased were paid for in cash.
- All supplies are purchased on credit.
- The ordinary shares issued during the current year were for cash and the share issue costs of $400 were also paid in cash.
- The debentures redeemed during the year were paid in cash.
- Dividends declared from the previous financial year were paid in cash during the current financial year.

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**Required**

a Prepare the Statement of cash flows for Silver Star Ltd for the year ended 30 June 2011.
b How do you think the net cash inflow or outflow for financing activities was used?
c How do you think the net cash inflow or outflow for investing activities was used or financed?

10.17 The following financial information relates to the internal reports of Strawberry Fields Ltd.

## Strawberry Fields Ltd
## Statement of financial position as at 30 June

| | 2010 $ | | 2011 $ | |
|---|---|---|---|---|
| **Current assets** | | | | |
| Cash | | 0 | | 19 160 |
| Petty cash | | 1 000 | | 1 000 |
| Accounts receivable | 128 500 | | 141 476 | |
| *Less* Allowance for doubtful debts | 670 | 127 830 | 720 | 140 756 |
| Inventory | | 111 520 | | 120 000 |
| Prepaid expense – Insurance | | 0 | | 350 |
| Interest income receivable | | 460 | | 100 |
| **Total current assets** | | 240 810 | | 281 366 |
| | | | | |
| **Non-current assets** | | | | |
| Shares in Grace Ltd | | 50 000 | | 50 000 |
| Land, at fair value | | 200 000 | | 200 000 |
| Warehouse buildings, at cost | 196 000 | | 196 000 | |
| *Less* Accumulated depreciation | 56 200 | 139 800 | 68 500 | 127 500 |
| Machinery and equipment | 189 600 | | 295 000 | |
| *Less* Accumulated depreciation | 59 800 | 129 800 | 32 000 | 263 000 |
| **Total non-current assets** | | 519 600 | | 640 500 |
| **Total assets** | | 760 410 | | 921 866 |
| | | | | |
| **Current liabilities** | | | | |
| Bank overdraft | | 16 260 | | 0 |
| Accounts payable | | 38 900 | | 42 300 |
| Accrued expenses – Administration salaries | | 6 150 | | 6 800 |
| Current income tax liability | | 28 900 | | 11 766 |
| **Total current liabilities** | | 90 210 | | 60 866 |
| | | | | |
| **Non-current liabilities** | | | | |
| Mortgage loan payable (due December 2018) | | 150 000 | | 260 000 |
| Unsecured notes (due November 2016 ) | | 0 | | 80 000 |
| **Total non-current liabilities** | | 150 000 | | 340 000 |
| **Total liabilities** | | 240 210 | | 400 866 |
| **Net assets** | | 520 200 | | 521 000 |
| | | | | |


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| | | | | |
|---|---|---|---|---|
| **Equity** | | | | |
| Share capital | | 400 000 | | 400 000 |
| General reserve | | 60 000 | | 60 000 |
| Revaluation reserve | | 50 000 | | 50 000 |
| Retained earnings | | 10 200 | | 11 000 |
| **Total equity** | | 520 200 | | 521 000 |

## Strawberry Fields Ltd
## Income statement for the year ended 30 June 2011

| | $ | $ | $ |
|---|---|---|---|
| **Revenue** | | | |
| Credit sales | | | 680 000 |
| *Less* **Cost of sales** | | | 165 000 |
| **Gross profit** | | | 515 000 |
| *Add* **Other income** | | | |
| Interest revenue | | 190 | |
| Gain on sale of machinery and equipment | | 11 000 | |
| Dividends income | | 3 500 | |
| Discount received | | 3 600 | 18 290 |
| | | | 533 290 |
| *Less* **Other expenses** | | | |
| **Selling and distribution** | | | |
| Selling expenses | 23 600 | | |
| Sales wages | 110 000 | | |
| Distribution expense | 68 900 | | |
| | | 202 500 | |
| **General and administration** | | | |
| Insurance expense | 6 520 | | |
| Depreciation on warehouse buildings | 12 300 | | |
| Depreciation on machinery and equipment | 16 980 | | |
| Administration salaries | 120 000 | | |
| Maintenance expenses | 38 900 | | |
| Directors' and auditor's fees | 15 600 | | |
| Other general operational expenses | 58 900 | | |
| | | 269 200 | |
| **Financial** | | | |
| Interest expense | 16 870 | | |
| Doubtful debts | 1 650 | | |
| Discount allowed | 3 850 | | |
| | | 22 370 | |
| **Total other expenses** | | | 494 070 |
| **Profit before income tax** | | | 39 220 |
| *Less* Income tax expense | | | 11 766 |
| **Profit** | | | 27 454 |

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### Strawberry Fields Ltd
### Statement of comprehensive income for the year ended 30 June 2011

| | $ |
|---|---|
| Profit for the period | 27 454 |
| Other comprehensive income | |
| Revaluation of land | 0 |
| Total comprehensive income for the period | 27 454 |

### Strawberry Fields Ltd
### Statement of changes in equity for the year ended 30 June 2011

| | Share capital $ | Retained earnings $ | Revaluation reserve $ | General reserve $ | Total equity $ |
|---|---|---|---|---|---|
| **Balance at 30/6/10** | **400 000** | **10 200** | **50 000** | **60 000** | **520 200** |
| **Changes in equity for the year:** | | | | | |
| Issue of share capital | | | | | |
| Share issue costs | | | | | |
| Dividends paid | | (26 654) | | | (26 654) |
| Total comprehensive income | | 27 454 | | | 27 454 |
| Transfer to general reserve | | | | | |
| **Balance at 30/6/11** | **400 000** | **11 000** | **50 000** | **60 000** | **521 000** |

**Additional information**

- Machinery and equipment was traded in during the year. The trade-in received was $51 220.
- The unsecured notes were issued for cash during the year.
- Dividends declared relating to the previous financial year were paid in cash during the current financial year.

**Required**

a Prepare the Statement of cash flows for Strawberry Fields Ltd for the year ended 30 June 2011.

b Comment on the Statement of cash flows with regards to Strawberry Fields Ltd.

10.18 The following financial information relates to the internal reports of Stones Ltd.

### Stones Ltd
### Statement of financial position as at 30 June

| | 2010 $ | | 2011 $ | |
|---|---|---|---|---|
| **Assets** | | | | |
| Cash | | 32 000 | | 32 000 |
| Petty cash | | 1 500 | | 1 500 |
| Commercial bills (due 30 days) | | 20 000 | | 20 000 |
| Deposits at call | | 10 000 | | 100 000 |
| Accounts receivable | | 32 600 | | 27 500 |
| Prepaid expense – Insurance | | 5 000 | | 6 000 |
| Stock of supplies | | 150 800 | | 156 560 |
| Interest income receivable | | 0 | | 500 |
| Land, at fair value | | 100 000 | | 150 000 |



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| | | | | |
|---|---|---|---|---|
| Buildings, at cost | 105 000 | | 105 000 | |
| *Less* Accumulated depreciation | 37 000 | 68 000 | 49 000 | 56 000 |
| Plant and equipment | 160 000 | | 200 000 | |
| *Less* Accumulated depreciation | 80 000 | 80 000 | 55 000 | 145 000 |
| **Total assets** | | 499 900 | | 695 060 |
| **Liabilities** | | | | |
| Accounts payable | | 29 600 | | 47 000 |
| Unearned income – Rent rental | | 600 | | 0 |
| Current income tax liability | | 17 600 | | 27 660 |
| Mortgage loan payable (due December 2018) | | 100 000 | | 80 000 |
| Debentures (due September 2017) | | 0 | | 90 000 |
| **Total liabilities** | | 147 800 | | 244 660 |
| **Net assets** | | 352 100 | | 450 400 |
| **Equity** | | | | |
| Share capital | | 250 000 | | 299 900 |
| General reserve | | 60 000 | | 70 000 |
| Revaluation reserve | | 0 | | 50 000 |
| Retained earnings | | 42 100 | | 30 500 |
| **Total equity** | | 352 100 | | 450 400 |

## Stones Ltd
## Income statement for the year ended 30 June 2011

| | $ | $ | $ |
|---|---|---|---|
| **Revenue** | | | |
| Cash fees | | 385 000 | |
| Credit fees | | 275 000 | |
| | | | 660 000 |
| *Add* **Other income** | | | |
| Interest revenue | | 13 200 | |
| Rental income | | 15 600 | 28 800 |
| | | | 688 800 |
| *Less* **Other expenses** | | | |
| **Selling and distribution** | | | |
| Distribution expenses | 86 000 | | |
| Sales salaries | 98 000 | | |
| Supplies expense | 206 000 | 390 000 | |
| **General and administration** | | | |
| Insurance | 9 000 | | |
| Depreciation on buildings | 12 000 | | |
| Depreciation on plant and equipment | 16 500 | | |
| Administration salaries | 96 000 | | |
| Occupancy expenses | 18 900 | | |
| Directors' and auditor's fees | 13 000 | | |
| Other general expenses | 25 000 | | |
| Loss on sale of plant and equipment | 6 000 | 196 400 | |

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| | | | |
|---|---|---|---|
| **Financial** | | | |
| Interest expense | | 10 200 | |
| **Total other expenses** | | | 596 600 |
| **Profit before income tax** | | | 92 200 |
| *Less* Income tax expense | | | 27 660 |
| **Profit** | | | 64 540 |

## Stones Ltd
## Statement of comprehensive income for the year ended 30 June 2011

| | $ |
|---|---|
| **Profit for the period** | 64 540 |
| **Other comprehensive income** | |
| Revaluation of land | 50 000 |
| **Total comprehensive income for the period** | 114 540 |

## Stones Ltd
## Statement of changes in equity for the year ended 30 June 2011

| | Share capital $ | Retained earnings $ | Revaluation reserve $ | General reserve $ | Total equity $ |
|---|---|---|---|---|---|
| **Balance at 30/6/10** | **250 000** | **42 100** | **0** | **60 000** | **352 100** |
| Changes in equity for the year: | | | | | |
| Issue of share capital | 50 000 | | | | 50 000 |
| Share issue costs | (100) | | | | (100) |
| Dividends paid | | (66 140) | | | (66 140) |
| Total comprehensive income | | 64 540 | 50 000 | | 114 540 |
| Transfer to general reserve | | (10 000) | | 10 000 | – |
| **Balance at 30/6/11** | **299 900** | **30 500** | **50 000** | **70 000** | **450 400** |

**Additional information**

- New plant and equipment worth $130 000 was purchased and paid for in cash during the current financial year.
- All additional non-current assets purchased were paid for in cash.
- All supplies are purchased on credit.
- The ordinary shares issued during the current financial year were for cash and the share issue costs of $100 were also paid in cash.
- The debentures issued during the current financial year were for cash.
- Dividends declared related to the previous financial year and interim dividends for the current financial year were paid in cash during the current financial year.

**Required**

a Prepare the Statement of cash flows for Stones Ltd for the year ended 30 June 2011.
b How do you think the net cash inflow or outflow for operating activities was used? Was it used in investing activities or financing activities? Was it used to repay debt?
c Is the net cash flow from operating activities reflected in the profit or loss for the period?
d Is the net cash flow from operating activities sufficient to pay the dividends?
e How do you think the net cash inflow or outflow for financing activities was used? Was it used in investing activities to purchase assets?
f How do you think the net cash inflow or outflow for investing activities was used or financed? Was it used or financed from operating activities?


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10.19 The following financial information has been extracted from the internal reports of Credence Ltd.

## Credence Ltd
## Statement of financial position as at 30 June

| | 2010 $ | | 2011 $ | |
|---|---|---|---|---|
| **Current assets** | | | | |
| Cash | | 63 200 | | 35 000 |
| Petty cash | | 1 000 | | 1 000 |
| Commercial bills (due 21 days) | | 30 000 | | 40 000 |
| Deposits at call | | 20 000 | | 20 000 |
| Inventory | | 85 000 | | 70 000 |
| Interest income receivable | | 700 | | 500 |
| **Total current assets** | | 199 900 | | 166 500 |
| **Non-current assets** | | | | |
| Land, at fair value | | 250 000 | | 350 000 |
| Buildings, at cost | 110 000 | | 110 000 | |
| *Less* Accumulated depreciation | 45 000 | 65 000 | 58 000 | 52 000 |
| Plant and equipment | 178 000 | | 228 000 | |
| *Less* Accumulated depreciation | 78 000 | 100 000 | 49 000 | 179 000 |
| **Total non-current assets** | | 415 000 | | 581 000 |
| **Total assets** | | 614 900 | | 747 500 |
| **Current liabilities** | | | | |
| Accounts payable | | 35 300 | | 55 900 |
| Unearned income – Rent | | 800 | | 1 200 |
| Current income tax liability | | 26 800 | | 0 |
| **Total current liabilities** | | 62 900 | | 57 100 |
| **Non-current liabilities** | | | | |
| Mortgage loan payable (due December 2018) | | 60 000 | | 120 000 |
| Debentures (due September 2017) | | 100 000 | | 50 000 |
| **Total non-current liabilities** | | 160 000 | | 170 000 |
| **Total liabilities** | | 222 900 | | 227 100 |
| **Net assets** | | 392 000 | | 520 400 |
| | | | | |
| **Equity** | | | | |
| Share capital | | 300 000 | | 349 900 |
| General reserve | | 70 000 | | 40 000 |
| Revaluation reserve | | 0 | | 100 000 |
| Retained earnings | | 22 000 | | 30 500 |
| **Total equity** | | 392 000 | | 520 400 |

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## Credence Ltd
## Income statement for the year ended 30 June 2011

| | $ | $ | $ |
|---|---|---|---|
| **Revenue** | | | |
| Cash sales | | | 498 000 |
| *Less* **Cost of sales** | | | 153 000 |
| **Gross profit** | | | 345 000 |
| *Add* **Other income** | | | |
| Interest revenue | | 12 500 | |
| Gain on sale of plant and equipment | | 3 500 | |
| Rental income | | 16 800 | |
| | | | 32 800 |
| | | | 377 800 |
| *Less* **Other expenses** | | | |
| **Selling and distribution** | | | |
| Selling expenses | 63 000 | | |
| Sales salaries and commissions | 103 000 | | |
| Distribution expense | 28 000 | | |
| | | 194 000 | |
| **General and administration** | | | |
| Insurance | 8 600 | | |
| Depreciation on buildings | 13 000 | | |
| Depreciation on plant and equipment | 18 500 | | |
| Administration salaries | 67 500 | | |
| Occupancy expenses | 18 900 | | |
| Directors' and auditor's fees | 10 500 | | |
| Other office expenses | 31 000 | | |
| | | 168 000 | |
| **Financial** | | | |
| Interest expense | | 16 500 | |
| | | | |
| **Total other expenses** | | | 378 500 |
| **Loss before income tax** | | | 700 |
| *Less* Income tax expense | | | 0 |
| **Loss** | | | 700 |

## Credence Ltd
## Statement of comprehensive income for the year ended 30 June 2011

| | $ |
|---|---|
| **Loss for the period** | 700 |
| **Other comprehensive income** | |
| Revaluation of land | 100 000 |
| **Total comprehensive income for the period** | 99 300 |


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## Credence Ltd
## Statement of changes in equity for the year ended 30 June 2011

| | Share capital $ | Retained earnings $ | Revaluation reserve $ | General reserve $ | Total equity $ |
|---|---|---|---|---|---|
| **Balance at 30/6/10** | **300 000** | **22 000** | **0** | **70 000** | **392 000** |
| **Changes in equity for the year:** | | | | | |
| Issue of share capital | 50 000 | | | | 50 000 |
| Share issue costs | (200) | | | | (200) |
| Dividends paid | | (20 700) | | | (20 700) |
| Total comprehensive income | | (700) | 100 000 | | 99 300 |
| Transfer from general reserve | | 30 000 | | (30 000) | – |
| **Balance at 30/6/11** | **349 900** | **30 600** | **100 000** | **40 000** | **520 400** |

**Additional information**

- Plant and equipment was sold for cash of $16 000 during the current financial year.
- All additional non-current assets purchased were paid for in cash.
- All supplies were purchased on credit.
- The ordinary shares issued during the current financial year were for cash and also the share issue costs of $200 paid in cash.
- The debentures redeemed during the current financial year were paid in cash.
- Dividends declared relating to the previous financial year were paid in cash during the current financial year.

**Required**

a Prepare the Statement of cash flows for Credence Ltd for the year ended 30 June 2011.
b How do you think the net cash inflow or outflow from operating activities was used? Was it used in investing activities or financing activities? Was it used to repay debt?
c Is the net cash flow from operating activities reflected in the profit or loss for the period?
d Is the net cash flow from operating activities sufficient to pay the dividends?
e How do you think the net cash inflow or outflow from financing activities was used? Was it used in investing activities to purchase assets?
f How do you think the net cash inflow or outflow from investing activities was used or financed? Was it used or financed from operating activities?

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10.20 The following information is extracted from the internal reports of Esperance Ltd.

## Esperance Ltd
## Statement of financial position as at 30 June (extract)

| | 2010 $ | 2011 $ |
|---|---|---|
| **Current assets** | | |
| Cash | 19 000 | 22 140 |
| Accounts receivable | 27 600 | 34 900 |
| Inventory | 67 000 | 72 000 |
| Prepaid expense – Rent | 400 | 450 |
| Interest income receivable | 540 | 610 |
| **Total current assets** | 114 540 | 130 100 |
| | | |
| **Current liabilities** | | |
| Accounts payable | 17 600 | 18 200 |
| Accrued expenses – Administration salaries and wages | 4 740 | 6 760 |
| Current income tax liability | 19 800 | 6 297 |
| **Total current liabilities** | 42 140 | 31 257 |
| **Equity** | | |
| Share capital | 210 000 | 210 000 |
| General reserve | 40 000 | 40 000 |
| Retained earnings | 26 800 | 37 500 |
| **Total equity** | 276 800 | 287 500 |

## Esperance Ltd
## Income statement for the year ended 30 June 2011

| | $ | $ | $ |
|---|---|---|---|
| **Revenue** | | | |
| Cash sales | | 178 000 | |
| Credit sales | | 203 000 | 381 000 |
| *Less* **Cost of sales** | | | 132 000 |
| **Gross profit** | | | 249 000 |
| *Add* **Other income** | | | |
| Interest revenue | | | 3 600 |
| | | | 252 600 |
| *Less* **Other expenses** | | | |
| **Selling and distribution** | | | |
| Marketing promotional expenses | 6 540 | | |
| Sales salaries | 35 800 | | |
| Advertising supplies expense | 2 670 | | |
| | | 45 010 | |
| **General and administration** | | | |
| Rent expense | 34 500 | | |
| Depreciation on plant and equipment | 24 500 | | |
| Administration salaries and wages | 92 000 | | |
| Other administration expenses | 16 500 | | |


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| | | | | |
|---|---|---|---|---|
| Loss on sale of plant and equipment | | 5 700 | | |
| | | | 173 200 | |
| **Financial** | | | | |
| Interest expense | | 13 400 | | |
| | | | 13 400 | |
| **Total other expenses** | | | | 231 610 |
| **Profit before income tax** | | | | 20 990 |
| *Less* Income tax expense | | | | 6 297 |
| **Profit** | | | | 14 693 |

**Required**

Prepare the Cash flows from operating activities section only of the Statement of cash flows for the year ended 30 June 2011 for Esperance Ltd.

10.21 The following financial information relates to the internal reports of Grove Country Ltd.

## Grove Country Ltd
## Statement of financial position as at 30 June

| | 2010 $ | | 2011 $ | |
|---|---|---|---|---|
| **Current assets** | | | | |
| Cash | | 26 800 | | 39 284 |
| Petty cash | | 1 300 | | 1 300 |
| Commercial bills (due 60 days) | | 40 000 | | 20 000 |
| Deposits at call | | 10 000 | | 20 000 |
| Accounts receivable | 46 500 | | 58 161 | |
| *Less* Allowance for doubtful debts | 530 | 45 970 | 950 | 57 211 |
| Inventory | | 78 600 | | 86 300 |
| Prepaid expense – Insurance | | 600 | | 500 |
| Interest income receivable | | 560 | | 896 |
| **Total current assets** | | 203 830 | | 225 491 |
| **Non-current assets** | | | | |
| Shares in Goldie Ltd | | 60 000 | | 70 000 |
| Land, at fair value | | 230 000 | | 290 000 |
| Buildings, at fair value | 150 000 | | 150 000 | |
| *Less* Accumulated depreciation | 46 000 | 104 000 | 58 000 | 92 000 |
| Machinery and equipment | 168 000 | | 238 000 | |
| *Less* Accumulated depreciation | 95 000 | 73 000 | 56 000 | 182 000 |
| **Total non-current assets** | | 467 000 | | 634 000 |
| **Total assets** | | 670 830 | | 859 491 |
| **Current liabilities** | | | | |
| Accounts payable | | 38 500 | | 46 000 |
| Accrued expenses – Administration salaries | | 6 830 | | 7 730 |
| Current income tax liability | | 28 500 | | 25 761 |
| **Total current liabilities** | | 73 830 | | 79 491 |

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| | | | | |
|---|---|---|---|---|
| **Non-current liabilities** | | | | |
| Mortgage loan payable (due May 2018) | | 150 000 | | 120 000 |
| Debentures (due July 2017) | | 0 | | 50 000 |
| **Total non-current liabilities** | | 150 000 | | 170 000 |
| **Total liabilities** | | 223 830 | | 249 491 |
| **Net assets** | | 447 000 | | 610 000 |
| **Equity** | | | | |
| Share capital | | 291 000 | | 390 800 |
| General reserve | | 68 000 | | 98 000 |
| Revaluation reserve | | 50 000 | | 110 000 |
| Retained earnings | | 38 000 | | 11 200 |
| **Total equity** | | 447 000 | | 610 000 |

## Grove Country Ltd
## Income statement for the year ended 30 June 2011

| | $ | $ | $ |
|---|---|---|---|
| **Revenue** | | | |
| Cash sales | 194 000 | | |
| Credit sales | 389 600 | 583 600 | |
| *Less* Sales returns | | 8 600 | 575 000 |
| *Less* **Cost of sales** | | | 138 500 |
| **Gross profit** | | | 436 500 |
| *Add* **Other income** | | | |
| Interest revenue | | 8 520 | |
| Gain on sale of machinery and equipment | | 3 780 | |
| Dividends income | | 12 600 | |
| Discount received | | 6 000 | 30 900 |
| | | | 467 400 |
| *Less* **Other expenses** | | | |
| **Selling and distribution** | | | |
| Selling and marketing expenses | 46 300 | | |
| Sales wages | 86 300 | | |
| Transport expense | 28 630 | | |
| | | 161 230 | |
| **General and administration** | | | |
| Insurance expense | 6 980 | | |
| Depreciation on buildings | 12 000 | | |
| Depreciation on machinery and equipment | 21 000 | | |
| Administration salaries | 98 300 | | |
| Rates and government charges | 16 500 | | |
| Directors' and auditor's fees | 12 100 | | |
| Other administration expenses | 38 570 | | |
| | | 205 450 | |
| **Financial** | | | |
| Interest expense | 11 200 | | |
| Doubtful debts | 2 650 | | |


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| | | | |
|---|---|---|---|
| Discount allowed | 1 000 | | |
| | | 14 850 | |
| **Total other expenses** | | | 381 530 |
| **Profit before income tax** | | | 85 870 |
| *Less* Income tax expense | | | 25 761 |
| **Profit** | | | 60 109 |

## Grove Country Ltd
## Statement of comprehensive income for the year ended 30 June 2011

| | $ |
|---|---|
| **Profit for the period** | 60 109 |
| **Other comprehensive income** | |
| Revaluation of land | 60 000 |
| **Total comprehensive income for the period** | 120 109 |

**Additional information**

- Machinery and equipment was sold during the current financial year and its original cost was 84 000.
- All additional non-current assets purchased were paid for in cash.
- The ordinary shares issued during the current financial year were for cash as were the share issue costs of $200 paid in cash.
- The debentures issued during the current financial year were for cash.
- Dividends declared relating to the previous financial year were paid in cash during the current financial year.

**Required**

a Prepare the Statement of cash flows for Grove Country Ltd for the year ended 30 June 2011.
b Comment on the Statement of cash flows with regards to Grove Country Ltd.

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10.22 The following information relates to the internal reports of Bee Gee Ltd.

## Bee Gee Ltd
## Statement of financial position as at 30 June

| | 2010 $ | | 2011 $ | |
|---|---|---|---|---|
| **Current assets** | | | | |
| Cash | | 13 460 | | 11 841 |
| Petty cash | | 800 | | 800 |
| Commercial bills (due 60 days) | | 20 000 | | 0 |
| Deposits at call | | 35 000 | | 0 |
| Accounts receivable | 53 900 | | 78 900 | |
| *Less* Allowance for doubtful debts | 650 | 53 250 | 760 | 78 140 |
| Inventory | | 87 500 | | 140 021 |
| Prepaid expense – Insurance | | 560 | | 650 |
| Interest income receivable | | 230 | | 450 |
| **Total current assets** | | 210 800 | | 231 902 |
| **Non-current assets** | | | | |
| Land, at fair value | | 260 000 | | 310 000 |
| Buildings, at cost | 165 000 | | 165 000 | |
| *Less* Accumulated depreciation | 58 100 | 106 900 | 69 500 | 95 500 |
| Machinery and equipment | 168 000 | | 288 000 | |
| *Less* Accumulated depreciation | 86 000 | 82 000 | 48 000 | 240 000 |
| **Total non-current assets** | | 448 900 | | 645 500 |
| **Total assets** | | 659 700 | | 877 402 |
| | | | | |
| **Current liabilities** | | | | |
| Accounts payable | | 48 900 | | 68 900 |
| Accrued expenses – Administration salaries | | 5 800 | | 6 900 |
| Unearned income – Rent rental | | 0 | | 500 |
| Current income tax liability | | 22 000 | | 28 602 |
| **Total current liabilities** | | 76 700 | | 104 902 |
| | | | | |
| **Non-current liabilities** | | | | |
| Mortgage loan payable (due May 2018) | | 140 000 | | 190 000 |
| Debentures (due July 2017) | | 0 | | 70 000 |
| **Total non-current liabilities** | | 140 000 | | 260 000 |
| **Total liabilities** | | 216 700 | | 364 902 |
| **Net assets** | | 443 000 | | 512 500 |
| | | | | |
| **Equity** | | | | |
| Share capital | | 310 000 | | 310 000 |
| General reserve | | 70 000 | | 90 000 |
| Revaluation reserve | | 50 000 | | 100 000 |
| Retained earnings | | 13 000 | | 12 500 |
| **Total equity** | | 443 000 | | 512 500 |



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## Bee Gee Ltd
## Income statement for the year ended 30 June 2011

| | $ | $ | $ |
|---|---|---|---|
| **Revenue** | | | |
| Cash sales | 286 000 | | |
| Credit sales | 328 000 | 614 000 | |
| *Less* Sales returns | | 6 700 | 607 300 |
| *Less* **Cost of sales** | | | 138 500 |
| **Gross profit** | | | 468 800 |
| *Add* **Other income** | | | |
| Interest revenue | | 2 100 | |
| Gain on sale of machinery and equipment | | 19 500 | |
| Rental income | | 12 000 | |
| Discount received | | 3 200 | 36 800 |
| | | | 505 600 |
| *Less* **Other expenses** | | | |
| **Selling and distribution** | | | |
| Selling and marketing expenses | 38 700 | | |
| Sales wages | 74 200 | | |
| Distribution expense | 19 800 | | |
| | | 132 700 | |
| **General and administration** | | | |
| Insurance expense | 6 230 | | |
| Depreciation on buildings | 11 400 | | |
| Depreciation on machinery and equipment | 26 800 | | |
| Administration salaries | 132 000 | | |
| Rates and government charges | 18 760 | | |
| Directors' and auditor's fees | 15 850 | | |
| Other administration expenses | 45 200 | | |
| | | 256 240 | |
| **Financial** | | | |
| Interest expense | 16 400 | | |
| Doubtful debts | 3 520 | | |
| Discount allowed | 1 400 | | |
| | | 21 320 | |
| **Total other expenses** | | | 410 260 |
| **Profit before income tax** | | | 95 340 |
| *Less* Income tax expense | | | 28 602 |
| **Profit** | | | 66 738 |

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Bee Gee Ltd
Statement of comprehensive income for the year ended 30 June 2011

| | $ |
|---|---|
| **Profit for the period** | 66 738 |
| **Other comprehensive income** | |
| Revaluation of land | 50 000 |
| **Total comprehensive income for the period** | 116 738 |

Bee Gee Ltd
Statement of changes in equity for the year ended 30 June 2011

| | Share capital $ | General reserve $ | Revaluation reserve $ | Retained earnings $ | Total equity $ |
|---|---|---|---|---|---|
| **Balance as at 1 July 2010** | **310 000** | **70 000** | **50 000** | **13 000** | **443 000** |
| Changes in equity for the year: | | | | | |
| Total comprehensive income for the period | | | 50 000 | 66 738 | 116 738 |
| Dividends declared – Ordinary | | | | (47 238) | (47 238) |
| Transfer to general reserve | | 20 000 | | (20 000) | |
| Issue of share capital | 0 | | | | 0 |
| **Balance as at 30 June 2011** | **310 000** | **90 000** | **100 000** | **12 500** | **512 500** |

**Additional information**

- Machinery and equipment was sold during the current financial year. Its original cost was $79 000.
- All additional non-current assets purchased were paid for in cash.
- The debentures issued during the current financial year were for cash.
- Dividends declared relating to the previous financial year were paid in cash during the current financial year.

**Required**

a Prepare the Statement of cash flows for Bee Gee Ltd for the year ended 30 June 2011.
b Comment on the Statement of cash flows with regards to Bee Gee Ltd.

# Investigation

*(This task may be done as an individual or group activity.)*
Select one of the following industries and use the internet to find a company within that industry (perhaps one that you are familiar with):

- transport
- retail
- tourism and leisure
- telecommunications.

Search its website for its annual report and then answer the following questions:

a What was the total net cash from (used in) operating activities for the current year?
b What were the components of cash and cash equivalents for the current year?
c What was the net increase/decrease in cash and cash equivalents during the current period?
d What was the main cash inflow and cash outflow under investing activities during the current year?
e What was the main cash inflow and cash outflow under financing activities during the current year?
f How do you consider the net cash flows from (used in) operating activities were used (obtained from) during the current year?

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g How do you consider the net cash flows from (used in) investing activities were used (obtained from) during the current year?
h How do you consider the net cash flows from (used in) financing activities were used (obtained from) during the current year?
i Comment on the company's overall cash flows and cash position during the current year.

## Essay

> 'The Statement of financial position and Statement of comprehensive income are the most important accounting reports that users need in assessing the financial results of a business entity. They show the financial position, which is important to lenders and creditors in determining the risk attached to their investment, whether they will get their money back and the business's profitability – which is of great interest to shareholders in determining the size of their dividend each year. These reports are more important than the Statement of cash flows, which only analyses cash flows and assesses the liquidity and solvency of a business.'

Carefully analyse this statement and discuss whether it is correct or not. Include in your answer the following:

a The purpose of Statement of cash flows, including why cash flows from operating, investing and financing activities are so important in assessing the performance of a business entity.
b How a Statement of cash flows differs from a Statement of financial position and Statement of comprehensive income in its preparation, presentation and purpose.

## Ethics case study

Buddy Holly Ltd is a wholesaler and retailer of fashion, surf and recreational clothing with five outlets in Perth. The business owns each retail store but rents the warehouse building.

The Chief Accountant for the company, Mr B Bopper, has completed the draft Statement of cash flows for the year ended 30 June 2010, and the Managing Director, Patsy Cline, is very disturbed that the Net cash flows from operating activities is less than $500 000. The amount for the year ended 30 June 2010 has been determined to be $480 000. Patsy is concerned because the loan covenant with the Richie Valens Bank requires that the company cannot borrow any further money nor pay a dividend to the shareholders unless the amount from operating activities is above $500 000. The managing director knows that the board of directors is keen to expand by borrowing a further $800 000 from the bank and to also pay the usual annual dividend of 10 cents per share.

Ms Cline asks Mr B Bopper to 'see what can be done' to rectify this situation and to tell no-one. The Managing Director has suggested that a payment of $30 000, being the annual lease payment for the warehouse in Perth, be 'reclassified' as a payment for the purchase of property, plant and equipment. Mr B Bopper looks closely at the suggestion but is not happy to make the change as the payment is an annual payment and, in his opinion, is an expense. He is also convinced that the auditors would not approve of this change. He reports back to the Managing Director who suggests that the tax invoice for the lease payment be altered so that no hint of a lease payment is found. She now suggests that the invoice be altered to show the purchase of $30 000 worth of equipment from the lease company. Mr B Bopper is very unhappy with this situation.

**Required**

a Who are the stakeholders in this case?
b Explain what the ethical problem is for Mr B Bopper.
c What are the consequences for Mr B Bopper if he does nothing about this issue and adheres to the request of the Managing Director?
d In this case, whose interests have been overlooked?
e What is perhaps wrong with what the Managing Director is suggesting?
f What alternatives are available to Mr B Bopper?
g What would you suggest that Mr B Bopper do in this case?

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# Chapter 11
# ANALYSING CORPORATE FINANCIAL STATEMENTS

## What You Will Learn

After studying this chapter you should be able to:

1 Discuss the information needs of various users in relation to the analysis of financial statements
2 Identity possible sources of external and internal information
3 Explain the significance of profitability and risk in the analysis of financial statements
4 Identify and apply trend analysis
5 Identify the issues to be considered when choosing a benchmark for ratio analysis
6 Prepare and interpret various ratios that can be used to assess liquidity, efficiency, profitability and leverage
7 Prepare and interpret various ratios that can be used to evaluate market investments
8 Explain the limitations of financial statement analysis

## Introduction

In previous chapters we considered the way accounting information is produced and what the components of financial statements mean. In this chapter we consider the statements themselves and, more specifically, the ways in which they can be analysed. This chapter is not intended to be comprehensive in its approach to financial analysis, but will offer some guidelines on the subject and provide students with some basic tools of analysis.

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# USERS' INFORMATION NEEDS

It is important to consider the needs of the person for whom the analysis is being undertaken – the user group. We use this approach to establish the form of analysis most appropriate to their needs.

## Investors

Among the resource providers are the investors. We discussed investors earlier as if they were a homogeneous group with similar needs. In fact, there are different types of investors. For sole traders and partnerships, the investor is the owner or partner. The equivalent of this type of investor in a company is the ordinary shareholder. All these investors will be referred to from now on as equity investors. We need to establish what members of this group have in common and what distinguishes the equity investor in a large company from their equivalent in a sole trader.

In general, equity investors take on all the risks associated with ownership and are entitled to any rewards after other prior claims have been met. For a sole trader, the equity investor (i.e. the owner) is also likely to be heavily involved in the management and day-to-day running of the business. Where there is direct involvement, the owner's information needs are the same as those of managers. In the case of larger organisations, such as large private companies and all public companies, there is likely to be a separation of ownership and management. For large businesses, the final accounts meet the information needs of the shareholders, who are, in the main, properly characterised by the term 'absentee owners'.

In general, the smaller the organisation and the greater the direct involvement of the owners in the day-to-day running of the business, the more detail that is required in the accounts. However, the information required to meet the needs of equity investors is broadly the same, irrespective of the type of ownership involved. The needs of this group of users can be met with information about the following:

- profitability, especially future profitability
- management efficiency; for example, are assets being utilised efficiently?
- return on their investment
  - within the firm
  - compared with alternatives
- risk being taken
  - financial risk
  - commercial risk
- returns to owners
  - dividends
  - drawings (and so on).

### Preference shareholders

Investors in some companies are able to purchase shares known as preference shares (discussed in Chapter 7). These shares are generally seen as less risky than ordinary shares and, therefore, normally earn a smaller return. Although it is difficult to generalise about the differences between these shares and ordinary shares (this varies from share to share), normally preference shareholders are entitled to a fixed rate of dividend and to repayment before ordinary shareholders in the event of the business being wound up. Because of the nature of these shares, preference shareholders are likely to be interested in:

- profitability, mainly future profitability
- the net realisable value of the assets
- the extent to which their dividends are covered by profit.

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If we compare the needs of these two groups of investors, we see that preference shareholders are more likely to be interested in the extent to which profit is safe, rather than in the growth of the business. This is because, in most cases, only ordinary shareholders benefit from such growth. The preference shareholders' return is in the form of a dividend at a fixed rate, irrespective of the profits that are made.

Preference shares can either be in the form of equity or debt depending on their characteristics. Redeemable preference shares, which have a fixed redemption date, are regarded as debt and dividends paid on such shares are classified as interest. Therefore, this type of preference share is similar to a long-term loan. Non-redeemable preference shares are repaid only if the business ceases to exist and sufficient funds are available. Therefore, such shares are similar to ordinary shares and are classified as equity.

## Lenders

Lenders can be conveniently subdivided into three sub-groups: short-term creditors, medium-term lenders and long-term lenders. (These types of debt finance were discussed in Chapter 1.) These different types of lenders have broadly the same needs for information. It is the emphasis that changes, depending on whether the loan is short term or long term.

### Short-term creditors

Short-term creditors are normally trade creditors, i.e. those who supply the business with goods on credit. Their areas of interest are:

- short-term liquidity or solvency
- the net realisable value of the assets
- profitability and future growth
- risk (financial and commercial).

### Medium-term lenders

Medium-term lenders are usually banks and other financial institutions. Their areas of interest are:

- profitability (future profits providing cash for repayment of loans)
- security and the nature of the security
- financial stability.

### Long-term lenders

Long-term lenders have the same needs as medium-term lenders, unless they are secured lenders. A secured lender is someone who has a legal charge over the assets of the business and can claim those assets if the business does not repay or service the loan in accordance with the lending agreement. The charge may be a fixed charge over a specific asset, such as land, or it may be a floating charge over all the assets in general but none specifically. A fixed charge gives the holder the right to seize that asset if the business defaults on its loan payments. The lender can then sell the asset to recoup the amount owed. A floating charge gives the holder a higher priority in liquidation than an unsecured creditor, but not the right to seize any specific asset.

In the case of secured lenders, the areas of interest are as follows:

- risk, especially financial risk
- security (net realisable value of specific assets)
- interest cover (how well their interest is covered by the profits being made).


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## Employees

Employees are interested in judging their job security and assessing whether their wages are relatively fair. The collapse of Ansett airlines in 2001 highlighted the status of other employee entitlements, such as long-service leave, if an entity goes into liquidation. This is another reason why employees have a vital interest in the financial health of their employer. Their areas of interest are:

- profitability – average profits per employee for the purposes of productivity bargaining
- liquidity – future trends in profit.

There has been considerable debate over the extent to which these needs are met by conventional accounts and whether a value-added statement would meet these needs better.

## Analysts

Many investors rely upon the advice of analysts. Analysts may be employed in a number of different types of organisations, such as superannuation funds, investment banks, stockbroking firms and large companies. Analysts have a wide-ranging interest in all types of information about an entity – in a similar way to the investor/ownership group.

## Auditors

Auditors are not normally seen as users of accounting information. However, in order to carry out an audit efficiently, an analysis of accounts is frequently carried out. (The audit function was discussed in Chapter 7.) For the purposes of planning and carrying out their audit, the auditors are interested in:

- trends in sales, profit, costs and so on
- variations from the norm
- accounting policies.

## Managers

It is difficult to describe the needs of managers because they vary greatly from situation to situation. They require all of the above information, because they are likely to be judged on their performance by outside investors or lenders. In addition, they require detailed information on the performance of the business, as a whole and of its parts, to enable them to manage the business on a day-to-day basis. This information includes such items as profitability by major product, costs per product and changes in sales or component mix. (The information needs of management are discussed in many of the other chapters of this book.)




## Common information needs

The needs of the users listed above are not intended to be comprehensive. We have tried to give a 'flavour' of the different information required by the various groups and to indicate that some of this will not be provided by the annual accounts. We need to establish what, if any, are common information needs and what other factors need to be considered. The information needs of the various user groups may be roughly summarised as follows.

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| | Investors | Lenders | Employees | Analysts | Auditors | Managers |
|---|---|---|---|---|---|---|
| Profitability | x | x | x | x | | x |
| Growth potential | x | | | x | | x |
| Return on investment | x | | | x | | |
| Risk | x | x | x | x | x | x |
| Liquidity | x | x | x | x | | x |
| Management efficiency | x | | x | x | x | x |

Some common information needs that can be readily identified are profitability, liquidity and risk. The problem is how these are measured and how to judge good or bad performance. Before going on to discuss these specific issues in detail, let us first examine more closely the common information needs and look at the context in which the financial analysis is to be carried out.

The most obvious information that all these groups want is information about the profitability of the business. This can be divided into two components: past profitability and future profitability. Another factor that is common to several groups is the requirement for information about financial risk and liquidity. Another theme that emerges is the return on the investment in the business. This has associated measures, such as the riskiness of the return (dividend cover or interest cover). There are also information needs that are specific to particular user groups. A good example of these is the security measures used by lenders.

Key Concept 11.1

**Information needs of users**

Users of financial information vary in what they require from financial reports. General financial reports may not always provide the specific information of a particular user group.

# INFORMATION AVAILABLE FOR FINANCIAL DECISION-MAKING

The information available for users to make decisions about investing, lending and so on can come from a number of sources, such as:

- company websites
- financial advisors, such as brokers
- financial magazines and the daily media coverage on TV, in newspapers and online
- Australian Securities Exchange (ASX) data
- a company's annual report, which includes financial statements.

We will consider the latter two sources in more detail.

## Australian Securities Exchange (ASX) data

The Australian Securities Exchange (ASX) provides investors, shareholders, lenders, suppliers and all stakeholders in a company with a vast amount of information to assist them in their decision-making process. The ASX provides educational programs designed to assist users to make full use of all the information available. The ASX provides, for example:

- company profiles
- details on indices
- share price information
- market statistics, including the most traded shares, historical market statistics and initial and secondary capital raised
- share appraisal forms, including an investor's toolkit



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The detail provided through the company profiles includes such information as:

- the delayed and closing share price
- details about the company, such as its industry group (Global Industry Classification Standard or GICS), internet address, registered office and official listing date
- names of directors, senior management and company secretary
- principal business activities
- announcements to the ASX
- share price history chart
- dividends declared and paid.

Indices according to the ASX website are measures in the movement in value of the market or various sectors of the market. They provide a broad outline as to how the market is performing. Investors can use these indices to assess the market as a whole or sectors of the market. The ASX provides indices for each GICS sector as well as such indices as the All Ordinaries Index, the S&P/ASX 200 Index and the S&P/ASX Industrial/Resources Indices.

The information provided on share prices is detailed, historical and current each day. Below is an example of one type of information available on the ASX website.

Table 11.1 ASX Delayed share price information for Wesfarmers Ltd on 28 April 2009

| Code | Last | % Chg | Bid | Offer | Open | High | Low | Vol. |
|---|---|---|---|---|---|---|---|---|
| WES | 21.500 | 1.42% | 21.450 | 21.510 | 21.600 | 21.750 | 20.910 | 1 567 902 |

| Key | |
|---|---|
| Code | A unique code used by the Australian Securities Exchange (ASX) for trading, clearing and settlement purposes. |
| Last | The last sale price delayed by at least 20 minutes. |
| % Chg | The change in the current value from that of the previous day's close and the percentage change in the current value from that of the previous day's close expressed as a percentage. |
| Bid | The buying price delayed by at least 20 minutes. |
| Offer | The selling price delayed by at least 20 minutes. |
| Open | The price at which the first trade in the security took place today. |
| High | The highest traded price for the security for today. |
| Low | The lowest traded price for the security today. |
| Vol. | The number of securities traded on and off market so far today. |

## Company annual reports

The *Corporations Act 2001* and the ASX Listing Rules require that all listed public companies prepare an annual financial report to shareholders. They require this annual report to contain:

- the financial statements for the year
- a directors' declaration about the financial statements and notes that they give a true and fair view of the company's results, that they have been prepared in accordance with accounting standards and that the company is solvent
- the notes to the financial statements
- the directors' report, which must also contain details regarding remuneration of directors' and senior executives as well as a review of operations
- a corporate governance statement
- an audit report on the financial statements.

The financial statements that must be included in the annual report are:

- Statement of comprehensive income

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- Statement of financial position
- Statement of cash flows
- Statement of changes in equity
- Consolidated financial statements as required by an accounting standard.

The corporate governance statement is a description of the governance structure in place within the company. It should contain the members of the important committees, such as the audit committee.

An annual report will usually contain such details as a description of its business operations, strategies for future success, a review of past performance and how the company can improve its operations. There should be a section on performance highlights giving details on its key performance indicators and significant highlights of performance. The highlights section may contain a statistical summary of key financial statement items and financial and non-financial performance indicators.

The annual report should also contain statements from the chairman of the board of directors and chief executive officer regarding the company's performance, details about who is in charge of the company (that is, who are the senior executives) and information that is of key importance to the shareholders, such as key dates and contact details for further information.

It is also common for the annual report to contain a corporate social responsibility or sustainability report, which gives a summary of the key social and environmental performance details of the company.

The purpose of an annual report is therefore to:

- report primarily on the company's financial performance and position and to show how it has achieved its main financial function and purpose. The annual report should be an effective accountability document and allow the directors to report on their stewardship responsibilities
- contain details regarding the company's social and environmental obligations. The annual report should demonstrate that the company has fulfilled all its legal, social and environmental obligations
- include all those matters that are of importance to the shareholders in making decisions regarding their continued investment in the company. It should provide all users with unbiased information about the company's operations. It should outline the goals and objectives of the company and its future directions.

The information in the annual report can be useful to investors, lenders and all stakeholders in making decisions about the company, such as whether to buy or sell shares in the company.

## KEY PERFORMANCE INDICATORS

Businesses may report, internally and externally, other measures of business activity called 'key performance indicators' (KPIs) or 'benchmarks'. These can be financial or non-financial quantifiable measures and they assist the company to evaluate how successful it has been in achieving its goals, usually its long-term goals. Each business will have different KPIs depending on their nature and strategies. The philosophy behind the use of KPIs is:

- reducing costs
- motivating employees by the way they are measured
- ensuring success through measurement.

Some KPIs may be required by specific state or federal laws or stock exchange Listing Rules and will be readily available. Others are not always available to the general public. These may include labour statistics, occupational health and welfare information, environmental and other social information.

If the information is positive, companies may make it well known. If the information is not positive it may be harder to obtain it – or receive it in time to be useful in decision-making. (For examples of this sort of reporting, see Chapter 12.)


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The annual reports of companies will usually include some detail on its KPIs. This information may be explicitly detailed and highlighted or simply contained within the director's report or other information within the annual report. Companies may include in their annual report a section on performance highlights, which will contain information relating to their KPIs. This will often link in with the company's goals, objectives and strategies.

Some examples of financial KPIs found in annual reports are share prices, price–earnings ratios, earnings per share, sales growth, sales figures and operating cash flow. Examples of non-financial performance indicators may be market share, turnover of employees, sick days taken, greenhouse gas emissions and customer satisfaction ratings. Companies may also present information using graphs, tables and charts.

Although businesses have statutory obligations to report information, they like to report good news, so may use a variety of ways to selectively present information. This may include diagrams, pictures or graphs. As there is no accounting or reporting standards for the presentation of this type of information, it may be difficult to assess and compare.

## ANALYSIS AND INTERPRETATION OF FINANCIAL STATEMENTS

We will examine how common needs can be analysed in some detail after we have established the context in which the analysis should take place.

EXAMPLE:

### Example 11.1

Balance sheets and additional information follow for Joyco Ltd. We will use this information in the various ratios that are examined in the following pages.

Joyco Ltd, Balance sheets at 30 June

| | 2014 $ | 2015 $ | 2016 $ |
|---|---|---|---|
| **Current assets** | | | |
| Cash | 364 700 | 292 720 | 123 790 |
| Inventories | 1 328 550 | 1 408 000 | 1 692 000 |
| Accounts receivable | 521 000 | 669 280 | 1 184 210 |
| Total current assets | 2 214 250 | 2 370 000 | 3 000 000 |
| **Non-current assets** | | | |
| Property, plant and equipment | 3 354 480 | 3 639 670 | 7 239 744 |
| Goodwill, at cost | 2 000 000 | 2 000 000 | 2 000 000 |
| Total non-current assets | 5 354 480 | 5 639 670 | 9 239 744 |
| **Total assets** | 7 568 730 | 8 009 670 | 12 239 744 |
| ***Current liabilities*** | | | |
| Payables | 355 700 | 360 000 | 544 620 |
| Current tax liability | 500 000 | 500 000 | 800 000 |
| Provision for dividend | 130 000 | 430 000 | 672 000 |
| Total current liabilities | 985 700 | 1 290 000 | 2 016 620 |
| *Non-current liabilities* | | | |
| Debentures | 683 030 | 903 370 | 2 999 020 |
| Mortgages | 500 000 | 400 000 | 1 000 000 |
| Total non-current liabilities | 1 183 030 | 1 303 370 | 3 999 020 |
| **Total liabilities** | 2 168 730 | 2 593 370 | 6 015 640 |
| Net assets | 5 400 000 | 5 416 300 | 6 224 104 |

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| | | | |
|---|---|---|---|
| **Owners' equity** | | | |
| 8% preference shares | 500 000 | 500 000 | 1 200 000 |
| Ordinary shares ($1) | 4 000 000 | 4 000 000 | 4 000 000 |
| Retained earnings | 900 000 | 916 300 | 1 024 104 |
| **Total owners' equity** | 5 400 000 | 5 416 300 | 6 244 104 |

Additional information from Joyco Ltd's financial statements

| | | 2004 $ | 2005 $ | 2006 $ |
|---|---|---|---|---|
| i | Annual sales | | | |
| | Credit | 2 605 000 | 3 011 760 | 4 500 000 |
| | Cash | 120 000 | 142 600 | 1 500 000 |
| | Total sales | 2 725 000 | 3 154 360 | 6 000 000 |
| ii | Cost of sales | 1 662 250 | 1 861 070 | 3 720 000 |
| | Profit before income tax | 962 500 | 962 500 | 1 579 804 |
| iii | Profit (after tax at 50%) | 463 250 | 473 150 | 789 902 |
| iv | Interest expense | 94 642 | 104 269 | 399 902 |
| | Preference dividend | 40 000 | 40 000 | 96 000 |
| | Ordinary dividends | 90 000 | 390 000 | 576 000 |
| v | Share price | $1.50 | $1.52 | $2.08 |

# PREPARING RATIOS

## Liquidity ratios

Liquidity ratios assist in assessing the business's ability to meet its financial commitments in both the short and long term.

### The working capital/current ratio

The working capital ratio measures the capacity of the business to be able to pay its short-term debts over the next 12 months using its current assets. The current ratio can be improved by paying off debtors just before the balance date. The ideal ratio is greater than 1:1 but preferably less than approximately 2:1. The items that make up current assets (cash, accounts receivable, surplus inventory and prepayments) do not directly earn any income. If the ratio is more than 2:1, although the business would be very liquid, it indicates a 'lost opportunity' to invest more of the surplus current assets in income-earning investments.

This ratio will show an improvement when the cash at bank or accounts receivable or inventory increase and the accounts payable decline. An improving trend in this ratio may indicate stronger liquidity or inefficient use of assets. A deteriorating result will occur when the cash at bank declines, accounts receivable decreases, inventory is reduced or accounts payable increase. A declining result may suggest poorer liquidity or more efficient use of assets.

To improve this ratio a business could increase the rate at which its debtors repay the amount owed, improve its stock turnover or repay its creditors faster to take advantage of discounts available.


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An indicated, an excessively high current ratio can mean inefficient use of resources as the result may be due to:

- a large amount of cash in a bank account earning a low interest rate
- a high amount of accounts receivable not collected, which can mean more bad debts and an opportunity cost as the business is losing out on what it could do if it had the money (and not the debtor)
- a large amount of inventory, which may represent stock that cannot be sold. This means extra cost to hold this inventory and a loss on that stock (which cannot be sold).

| Formula | 2005 | 2006 |
|---|---|---|
| $\frac{\text{Current assets}}{\text{Current liabilities}}$ | $\frac{2\,370\,000 \times 100}{1\,290\,000} = 183\%$ | $\frac{3\,000\,000 \times 100}{2\,016\,620} = 148\%$ |

For our company, Joyco Ltd, this means for every $1.00 of liabilities the business has $1.48 (1.83) in assets to pay the amount. The liquidity has decreased as the rate of increase in current liabilities is greater than the rate of increase in Current assets. Although the ratio has decreased there are still adequate liquid assets to meet known liabilities due in the next 12 months.

Formula 11.1

**Working capital/current ratio**

$$\frac{\text{Current assets}}{\text{Current liabilities}}$$

The working capital ratio shows short-term debt-paying ability. It answers the question of whether the business can meet its debts as they fall due in the normal course of business.

## The quick asset ratio

The *quick asset ratio* is also known as the *liquid* or *acid test ratio*. This is a modified form of the current ratio.

It measures the capacity of the business to be able to pay its liabilities in the short term, usually in the next month or two, using quickly available assets. From the current assets, inventory and prepayments are excluded. As stock is sold, it will be replaced by new stock and it is therefore difficult in the short term to reduce the overall amount. Prepayments are excluded because although a current asset, the money has already been paid out and is therefore not available to help pay liabilities. The bank overdraft is excluded from the total current liabilities because, under a normal agreement with a bank, as long as the business keeps under the maximum limit, it does not have to be repaid in the next one to three months.

| Formula | 2005 | 2006 |
|---|---|---|
| $\frac{\text{Current assets} - \text{stock and prepayments}}{\text{Current liabilities} - \text{bank overdraft}}$ | $\frac{962\,000 \times 100}{1\,290\,000} = 74.5\%$ | $\frac{1\,308\,000 \times 100}{2\,016\,620} = 64\%$ |

The business has only 64 cents liquid current assets for every $1.00 in immediate current liabilities. This means that the business does not have sufficient 'quick' assets to pay these liabilities and will quickly need to organise short-term finance or make arrangements with creditors. The ratio has decreased from the first year to the second indicating the business's liquidity is decreasing, which is not good. An inability to pay debts as they fall due carries the risk of one of the creditors suing the company for repayment. This may cause other creditors to take similar action and lead to the company

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being forced into receivership. Under the Corporations Act, directors of companies that continue to trade after the company is deemed to be insolvent are liable to be charged with a criminal offence (see Chapter 6).

Key Concept 11.2

**Importance of liquidity**

Liquidity is the capacity of a firm to generate the cash needed to meet its financial obligations as they fall due. Without adequate liquidity, a firm may fail.

# Leverage ratios

Leverage or 'gearing' describes the extent to which a business has funded its operations from borrowed funds rather than equity. A business can obtain only so much equity finance and therefore will borrow funds from external sources so as to increase or lever-up the returns to the shareholders. This is done by using the borrowed funds to acquire more assets, which will earn profits.

## Debt to equity ratio

The debt to equity ratio measures how the business has funded its assets by comparing the total liabilities to the amount of contributed equity. This ratio measures the gearing: the more the company relies on borrowed funds, the less financially safe it is. Like an individual buying a house or a car, the more deposit that is paid the easier it is to pay off the loan. If the income decreases or the costs of borrowing increase this will put added pressure on the business's financial stability. Funding a business only by capital would only allow the business to expand slowly and it may miss profitable opportunities. Borrowing money to fund business expansion is financially acceptable – the risk is in borrowing too much. If a company's liabilities exceed its equity, it starts to become highly geared. Some companies have liabilities as high as 95 per cent of assets with only 5 per cent of equity, but these are highly risky financially. (See the section dealing with sources of finance in Chapter 1.)

When this ratio increases it can be due to increased borrowings through such items as debentures and mortgages. Large dividend payouts could also see this ratio increase. A reduction in this ratio may be due to paying off loans and share issues and also increased profits or retaining more profits within the business.

An increase in this ratio may indicate that the business has borrowed to expand its operations and hopefully this may lead to growth in business sales and higher profits. However, it also says that there is a higher risk of failure due to increased interest payments.

A declining trend can suggest that the business's future growth may be slow, as a lack of borrowed funds could suggest very little plans to expand. The downward trend, however, does lead to a lower risk of failure as there will be smaller interest payments.

| *Formula* | *2005* | *2006* |
|---|---|---|
| $\frac{\text{Total liabilities}}{\text{Equity (end)}}$ | $\frac{2\,593\,370 \times 100}{5\,416\,300} = 47\%$ | $\frac{6\,015\,640 \times 100}{6\,224\,104} = 96\%$ |

Joyco Ltd's debt to equity ratio has doubled, which is not good. This has been caused by total liabilities increasing by more than double, while equity has only increased by a relatively small amount. This will lead to more interest expense and, therefore, lower profit. Although this company is still not highly geared, the increase in gearing is not a good trend.

Key Concept 11.3

**Debt as a form of funding**

For businesses to operate and grow they need funding, not all of which is possible from equity capital. Borrowing money for business purposes is financially responsible, however, excessive debt may lead to loss of liquidity and profitability.



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Formula 11.2

**Debt to equity ratio**

$$\frac{\text{Total liabilities}}{\text{Equity (end)}}$$

The debt to equity ratio assesses the long-term financial stability of the business and shows the relationship between debt financing and equity financing.

# Profitability

## Profit (margin) ratio

The profit (margin) ratio measures the amount of profit as a percentage of net sales. This ratio is considered to be more informative than the amount of operating profit as it is a measure by which we can compare two different accounting periods or businesses of very different sizes. This shows the capacity of a business to control all costs (cost of sales and expenses) compared to its net sales.

The profit (margin) ratio will increase when there is an increase in the business gross profit margins (perhaps due to an increased mark-up) or the better control of operating expenses. The ratio will show a decline due to a reduced gross profit margin or a slacking of control over operating expenses.

To improve the profit (margin) ratio a business could increase its average selling price or attempt to decrease its average cost price for inventory. Further strategies would be to increase the amount of sales and better control operating costs.

| *Formula* | *2005* | *2006* |
|---|---|---|
| $\frac{\text{Profit (after income tax)} \times 100}{\text{Net revenues}}$ | $\frac{473\,150 \times 100}{3\,154\,360} = 15\%$ | $\frac{789\,902 \times 100}{6\,000\,000} = 13.2\%$ |

The profit (margin) ratio for Joyco Ltd is decreasing, which means the business is earning less profit per sales dollar, even though sales are increasing. This is not good and has been caused by expenses increasing at a faster rate than the increase in revenues.

Formula 11.3

**Profit margin ratio/net profit margin ratio**

$$\frac{\text{Profit (after income tax)} \times 100}{\text{Net revenues}}$$

The profit margin ratio shows the profit produced by each dollar of sales/revenue after payment of interest.

## Rate of return on assets ratio

The rate of return on assets ratio measures the profit of the business as a percentage of total assets. It shows how effective the use of these assets has been in earning profit. If the rate of return on assets is greater than the rate of interest on a loan, then it may be worthwhile to borrow funds to expand the business operations. See the explanation on the gearing ratio opposite.

The rate of return on assets ratio will increase if there is an increase in sales or a reduction in expenses or total assets. A reduction in this ratio could be due to reduced sales, increased expenses or an increase in total assets.

To increase the rate of return on assets ratio result a business could work to improve its sales growth and better control its expenses. This will lead to improvements in profits. A further strategy is to make better use of non-current assets: any asset that is not productive should be sold or worked harder.

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| Formula | 2005 | 2006 |
|---|---|---|
| $\frac{\text{Profit}}{\text{Average total assets}}$ | $\frac{1\,066\,769 \times 100}{7\,789\,200} = 13.69\%$ | $\frac{1\,979\,706 \times 100}{10\,124\,707} = 19.55\%$ |

The profit is usually the profit before income tax and interest expense. In this case, for the year 2005 this is $962 500 (profit before income tax) + 104 269 (interest expense), which equals $1 066 769. For the year 2006 this is calculated as $1 579 804 (profit before income tax) + $399 903 (interest expense), which equals $1 979 706.

The average total assets in this case are the opening total assets plus the closing total assets for each year, divided by 2. Therefore the average total assets for 2005 is (7 568 730 + 8 009 670) divided by 2 and the average total assets for 2006 is (8 009 670 + 12 239 744) divided by 2.

For Joyco Ltd, the rate of return on assets is increasing, which is good. It means the operating profit is increasing at a greater rate than the rate of increase in total assets.

Formula 11.4

**Rate of return on assets ratio**

$$\frac{\text{Profit}}{\text{Average total assets}}$$

Shows the overall earning power of total assets before any payments to equity or debt providers.

## Times interest earned ratio

The times interest earned ratio relates the profit before income tax and interest to the finance costs. The more times interest earned is covered by profit, the greater the capacity of the business to meet its finance costs and the financially safer that business will be. Lenders may be more willing to lend and may charge a lower rate of interest on loans if the ratio is higher.

The times interest earned ratio may increase due to increased levels of debt and thus increased interest payments. Increases in interest rates will also see this ratio increase. A reduction in this ratio could be due to reduced levels of debt resulting in lower interest payments. Reduced interest rates will also see this ratio decline.

A declining result suggests that the business has less capacity to meet its future interest payments and therefore there is a greater risk of failure. When the result improves this means that the business capacity to meet future interest payments has improved.

| Formula | 2005 | 2006 |
|---|---|---|
| $\frac{\text{Profit before income tax + finance costs expensed}}{\text{Financed costs (expense and capitalised)}}$ | $\frac{1\,050\,569}{104\,269} = 10 \text{ times}$ | $\frac{1\,979\,706}{399\,902} = 4.95 \text{ times}$ |

For the year 2005 the amount of $1 050 569 is determined as profit before tax of $962 500 + interest of $104 269. For the year 2006 the amount of $1 979 706 is calculated as profit before tax of $1 579 804 + 399 902.

For Joyco Ltd, the times interest earned ratio has decreased substantially, which means the rate of increase in finance costs is greater than the rate of increase in the adjusted profit. This is a highly undesirable trend, which may be explained if we look at the leverage ratio, which indicated a much greater reliance on borrowed funds.

Formula 11.5

**Times interest earned ratio/interest coverage ratio**

$$\frac{\text{Profit before income tax + finance costs expensed}}{\text{Financed costs (expense and capitalised)}}$$

Shows the protection of lenders from a default on interest payments.



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Key Concept 11.4

**Profitability as a measure of business success**

Profitability ratios allow the user to compare different businesses or time periods as a useful tool for investment decisions, assessing the size and security of returns for equity investors and lenders.

# Efficiency ratios

## Debtors' collection period ratio

The debtors' collection period ratio measures the effectiveness of the business in collecting amounts owing from debtors, expressed in 'number of days'. Most businesses would have a debtors' collection policy of 30 days. For some businesses the period may be less (e.g. most credit card companies require payment in 15 days).

The debtors' collection period will increase following an increase in credit sales or a relaxation in the firm's credit policy terms. This ratio will decline when there is a reduction in sales, or a tightening of credit policy terms.

A deterioration in this ratio can be due to a poor credit policy. This may indicate a lack of credit checking or poor collection procedures. To improve the result the business can adopt credit checks (if not done already), issue reminder letters to overdue accounts, make follow-up phone calls to overdue accounts, offer discounts for prompt payment and charge interest on overdue accounts.

| *Formula* | *2005* | *2006* |
|---|---|---|
| $\frac{\text{Average debtors} \times 365}{\text{Net credit sales}}$ | $\frac{595\,140 \times 365}{3\,011\,760} = 72.1$ days | $\frac{926\,745 \times 365}{4\,500\,000} = 75.2$ days |

For Joyco Ltd, this means the number of days on average that it takes this business to collect money from creditors is more than 70 days, or 2.5 months, and has deteriorated slightly over the past two years. This poor collection rate is adding to the liquidity problem.

Formula 11.6

**The debtors' collection period/accounts receivable collection period**

$$\frac{\text{Average debtors} \times 365}{\text{Net credit sales}}$$

Shows the time taken to collect debtors' accounts.

## Inventory/stock turnover ratio

The inventory ratio measures the effectiveness of the business in managing its inventory by measuring the average number of times per year the inventory is 'turned over' – bought and sold. It is clearly a function of both the amount of stock and the average amount kept in stock.

A slow inventory turnover indicates that the business may be overstocked, or that it is holding obsolete and perhaps deteriorating stock. This ratio is affected by external factors, such as delivery times and fluctuating consumer demand. A slow stock turnover will impact on the business's profit cash flow and working capital. Too much stock will mean extra cost of holding stock.

To improve the stock turnover ratio the business must work to increase its cost of sales and reduce its average stock held. The business should look at selling off its obsolete and deteriorating stock and other slow-moving items, and obtaining bulk discounts where possible. It must, however, be remembered that if stock levels are too low then there is the potential for loss of sales as the business cannot meet consumer demand.

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| Formula | 2005 | 2006 |
|---|---|---|
| $\frac{\text{Cost of sales}}{\text{Cost of average inventory}}$ | $\frac{1\,861\,070}{1\,368\,275} = 1.3$ times | $\frac{3\,720\,000}{1\,550\,000} = 2.4$ times |

Average inventory for most questions will be the opening inventory plus the closing inventory divided by two. In this example for 2005 the cost of average inventory is determined as 1 328 550 + 1 408 000 divided by 2 = $1 368 275. For 2006 the figure is 1 408 000 + 1 692 000 divided by 2 = $1 550 000.

This means that Joyco Ltd turns over its inventory very slowly, which may be adding to its liquidity problems. Inventory unsold is not earning the business any profits and is taking up space and funds. It needs to be warehoused, looked after and insured and may be deteriorating. However, whether this level of stock turnover is acceptable or not will depend on the nature of the business. A business selling spare parts for vintage cars, for example, might well turn over its stock only once or twice per year. Comparison would need to be made with other firms in the same type of industry. The fact that the stock turnover has significantly improved over the two years is a positive indicator.

Formula 11.7

**Inventory turnover ratio/stock turnover ratio**

$$\frac{\text{Cost of sales}}{\text{Cost of average inventory}}$$

Shows how often the average inventory is replaced each year and therefore indicates the effectiveness of investments in inventories.

Key Concept 11.5

**Efficiency as a measure of business success**

The main aim of business is to use its assets as efficiently as possible to increase the owner's investment. Efficiency ratios allow the user to compare different businesses or time periods as a measure of how effective the business has been in utilising its assets. These lead to improvements in profitability and liquidity.

# Market ratios

## Earnings-per-share ratio

The earnings-per-share ratio measures profit available to ordinary shareholders expressed as an amount per share. Investors are looking for the highest earnings per share possible. In the ratios quoted in the newspapers, the profit used is the last year's reported profit, which may not be the same as expected earnings this financial year.

The earnings-per-share ratio is usually considered to be the one factor that has the largest impact on a company's share price. This ratio is affected by changes in the profit of the business as well as the amount of interest expense. An increase in profits will see an improved result, whereas a decrease in profits will lead to a poor result. Therefore, to improve this ratio the business must improve its profitability. However, it must be remembered that an improvement in this ratio is not necessarily a positive sign. The improved earnings per share may be due to the use of leverage rather than improved business operations, so a closer analysis is always required. The increased result may not always translate into increased dividends. It may be best to look for the company that has been able to generate improved earnings per share rather than the one that has the smaller amount of equity.

| Formula | 2005 | 2006 |
|---|---|---|
| $\frac{\text{Profit (after income tax)} - \text{preference dividends}}{\text{Weighted average number of ordinary shares issued}}$ | $\frac{(473\,150 - 40\,000)}{4\,000\,000} = 10.8$ cents | $\frac{(789\,902 - 96\,000)}{4\,000\,000} = 17.3$ cents |

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The weighted average number of ordinary shares is found by first determining the number of shares at the beginning and end of each year. This information may be given but can also be determined by dividing the share capital by the issue price. Once these amounts are determined, the two figures (that is, the opening and closing number of shares for each year) are added together and then divided by two. In this case, the share capital for each year is $4 000 000 and the issue price is $1.00. Therefore the number of shares at the beginning and end of each year is 4 000 000 shares.

Joyco Ltd's earnings-per-share ratio has increased because the profit available to ordinary shareholders has increased while the number of ordinary shares has remained the same. This is good and would influence investors to buy ordinary shares in this company.

Formula 11.8

**Earnings-per-share ratio**

$$\frac{\text{Profit (after income tax)} - \text{preference dividends}}{\text{Weighted average number of ordinary shares issued}}$$

Shows the profit earned on each ordinary share and is used to facilitate comparison of earnings between companies.

## Price/earnings ratio

The price/earnings ratio measures the amount the investors on the stock market are prepared to pay for each dollar of profit. Investors on the stock market who have higher expectations of a company are prepared to increase the market price. If a company has a higher price/earnings ratio, investors are expecting the company's profits – and therefore its value – to grow. In the ratios quoted in the newspapers the profit used is the last year's reported profit, which may not be the same as expected earnings this financial year. The market price depends on investors' perception of future earnings. Although these perceptions are naturally based partly on past profit performance, there are many other factors that may affect the share price. Consequently, the price/earnings ratio must be used with caution in assessing a company's worth as an investment.

This ratio will show an increase when the share price of the company increases, given that the earnings per share is constant. However, this means that there is an increased risk to the investor as they have to pay more for each $1.00 of earnings per share.

| *Formula* | *2005* | *2006* |
|---|---|---|
| $\frac{\text{Market price per ordinary share}}{\text{Earnings per ordinary shares}}$ | $\frac{1.52}{0.108} = 14.07$ times | $\frac{2.08}{0.173} = 12.02$ times |

Joyco Ltd's price/earnings ratio has decreased because the market price has increased at a lesser rate than the increase in the earnings per share. On the face of it this is not a desirable trend, although it may suggest an unrealised potential lift in the share price, which could be attractive to investors.

Formula 11.9

**Price/earnings ratio**

$$\frac{\text{Market price per ordinary share}}{\text{Earnings per ordinary shares}}$$

Shows the amount the market will pay for $1.00 of profit.

## Dividend yield ratio

The dividend yield ratio measures the current return to an investor on buying a share on the stock market. The higher the yield the more attractive the company is to an investor.

This ratio is important to investors who want to receive a high stable dividend return on their investment. It gives them some indication of the cash flow they will obtain for each

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dollar invested. Assuming the share price is stable, this ratio will show an increase when there is an increase in dividends declared and paid. This ratio is useful to investors in comparing their return to other investments, such as depositing their funds in a bank to receive interest. Investors can compare the dividend yield with the interest rate offered by the bank.

| Formula | 2005 | 2006 |
|---|---|---|
| $\frac{\text{Annual dividend per ordinary shares}}{\text{Market price per ordinary shares}}$ | $\frac{0.0975 \times 100}{1.52} = 6.4\%$ | $\frac{0.144 \times 100}{2.08} = 6.9\%$ |

The annual dividend per ordinary share may be given in some instances. If not this amount can usually be calculated as the total ordinary dividend divided by the number of ordinary shares. For 2005 this is $390 000 divided by 4 000 000 ordinary shares, which gives 9.75 cents per share, and for 2006 the figure is $576 000 divided by 4 000 000, which gives 14.4 cents per share.

For Joyco Ltd, the dividend yield has increased, which means the dividend per ordinary share has increased at a greater rate than the increase in the market price per share. Stock market investors look for companies with greater dividend yields, so this increase is good. However, stock market prices fluctuate for all sorts of reasons that may not just relate to the performance of this company. In the ratios quoted in the newspapers the dividend used is the last year's dividends paid, which may not be the same as expected dividends this financial year, while the market price is adjusted to the daily quote on the stock market. As was the case with the price/earnings ratio, the dividend yield ratio should be used with caution.

Formula 11.10

**Dividend yield ratio**

$$\frac{\text{Annual dividend per ordinary shares}}{\text{Market price per ordinary shares}}$$

Shows the current yield on dividends.

Key Concept 11.6

**Market ratios as a measure of business success**

To make informed decisions to invest or sell listed investments, investors measure a company's performance against other investments using standard ratios regularly reported in the media. These market ratios allow a reliable comparison between alternative investments.

# INTERPRETATION OF RATIOS

In interpreting the results of ratios, students need to compare the ratio with another result or standard to interpret its value. It could be one or more of the following:

- the budget for the same accounting period
- the results for the same business for a previous accounting period
- the results for a similar business for the same period
- average ratios for that type of business (industry average), preferably in the same time period.

Students need to identify not only if the ratio has increased or decreased when compared with one of the above but also to explain if this change is 'good' or bad'.

| Ratio group | Ratio | 'A very simple explanation' |
|---|---|---|
| Liquidity ratios | Working capital/current | The bigger the more liquid. Should be above 100% (If the ratio is bigger than 200% the business may be missing investment opportunities) |
| | Quick asset | The bigger the more liquid. Should be above 100%, (as above) |



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| | | |
|---|---|---|
| Leverage ratios | Debt to equity | The smaller the safer financially |
| Efficiency ratios | Debtors' collection | The least number of days the better |
| | Inventory/stock turnover | The greater number of times the better |
| Profitability ratios | Profit margin | The bigger the better |
| | Rate of return on assets | The bigger the better |
| | Times interest earned | The bigger the better |
| Market ratios | Earnings-per-share | The bigger the better |
| | Price/earnings | The lower the better |
| | Dividend yield | The bigger the better |

If you are asked for an explanation as to why the ratio has changed, you should look at the rate of change in the numerator and at the rate of change in the denominator.

$$\frac{\text{Numerator}}{\text{Denominator}}$$

For example:

| | Year 1 | Year 2 | Change in $ | % change |
|---|---|---|---|---|
| Gross profit | 50 000 | 60 000 | 10 000 | 20% |
| Net sales | 150 000 | 175 000 | 15 000 | 17% |
| Gross profit ratio | 33% | 34.3% | | |

The gross profit ratio has increased, which is good. This is because the **rate** of increase in gross profit is larger than the rate of increase in net sales, even though net sales have increased by a greater amount in dollars than gross profit.

This would be caused by the change (increase) in the cost of sales being relatively less than the change (increase) in net sales. This may be because the average sale price per unit has increased, the business has been able to obtain a better average purchase price per unit or has been able to manage its inventory better.

Although Year 12 students will calculate and interpret the ratios one by one, in reality they are all interrelated, as they come from the same set of financial reports. Therefore, a change in one ratio can affect a change in other ratios as well. For example, changes in the expense ratio cause a change in the profit ratio.

## TREND ANALYSIS

Ratios can often be useful as they allow examination of one set of data to enable the evaluation of the position of a business at some point in time, but they may be even more valuable when used to analyse a series of data. By calculating the ratio for several years up to the present, small changes may be detected that indicate a movement in the firm's profitability or stability. These can possibly predict future changes before they become a serious problem. This process is sometimes called *trend analysis*. A simple example is given below.

EXAMPLE:

### Example 11.2

A study of the annual reports of the Catalogue Timber Co. Ltd for the past five years has revealed the following information.

| | 2005 $'000 | 2006 $'000 | 2007 $'000 | 2008 $'000 | 2009 $'000 |
|---|---|---|---|---|---|
| Current assets | 6 432 | 7 818 | 8 032 | 8 114 | 8 451 |
| Current liabilities | 3 202 | 3 958 | 4 367 | 4 734 | 5 392 |

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The data can be used to calculate the current ratio for the firm over the five-year period.

| Current ratio | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|
| $\frac{\text{Current assets}}{\text{Current liabilities}}$ | $\frac{6432}{3202} = 2.01 : 1$ | $\frac{7818}{3958} = 1.98 : 1$ | $\frac{8032}{4367} = 1.84 : 1$ | $\frac{8114}{4734} = 1.71 : 1$ | $\frac{8451}{5392} = 1.57 : 1$ |

Examination of this analysis indicates that there has been a steady decline in the current ratio over the past five years, which means a steady erosion of the firm's stability. At a figure of 1.57 : 1, the firm's current position is by no means critical, but if this trend were to continue into the future, trouble might not be too far away. Steps should be taken to identify reasons for the decline and, if possible, to reverse the trend.

## LIMITATIONS IN ASSESSING PERFORMANCE AND FINANCIAL POSITION

Ratios are only as good as the underlying figures used in their calculation. If the accounting reports have not been prepared properly or there have been differences in accounting methods then the ratios will also be inaccurate. Consequently, people who use the ratio results in their decision-making may not make the best decision.

When using ratios to assess business performance and position it is important to remember the following limitations in using this approach to financial analysis:

1 Ratios may need to be calculated for a number of years before a trend becomes apparent. Like any statistical analysis, the smaller the sample size the greater the standard deviation possible.

2 Ratios need to be compared to an industry-wide standard to be further evaluated. These standards may not always be readily available. A company may have improved its ratios compared to a previous year or its budget, or even to another business but may still be not as good as the average of its industry. The Australian Bureau of Statistics and industry associations produce industry statistics for their members and others. For example, service stations who are members of the Motor Trades Association or doctors as members of the Australian Medical Association can get industry-wide averages to use for comparison.

3 Ratios do not identify the causes of problems. A change in a particular ratio (e.g. a decline in gross margin) may have a number of different explanations that the external user of the report may be unable to identify. For example, a building company that has a small number of large contracts can have its profit vary if the number of contracts varies from one year to the next. Multiplex Ltd, a successful builder, had a major cost overrun on the Wembley Stadium contract in London, which is not normal for this company. This affected their results in the years in which the contract was being worked on.

4 Most media-reported market ratios use data from the previous year in calculating certain ratios. For example, the calculation of price/earnings ratio or dividend yield ratio will use the last available profit published and dividend paid, while the market price is updated daily. This can lead to incorrect interpretations of the published ratios as future profits or dividends may not be the same as the previous period.

5 The market price of listed company shares varies because of many factors not related to a specific company. This may be because of government policy, economic factors or the actions of similar companies. In a stock market downturn, a company's profit (and its dividend) may increase but its share price will still go down in line with the general market trend.

6 General purpose financial reports (and the relevant ratios) are produced some time after the end of the financial period. To be useful, financial information needs to be available


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quickly. The more time that elapses between when the transactions happened and when the results are available, the less valuable the information is for future decision-making. For example, the Corporations Act requires an annual report to be submitted to ASIC within six months of the balance date. By the time the public can see this information it may be seven months later. The ASX Listing Requirements require four reports per year, to be submitted several months after the end of each quarter.

7 Companies can sometimes manipulate data at the balance date (e.g. run down creditors to an unrealistic level) to create a false impression when the ratios are calculated. This is known as window dressing, which can make the figures look better than they really are.

In addition to the above limitations the following must be considered in relation to the financial information upon which they are based.

## Lack of comparability between entities

It is not always possible to compare ratios between companies as different accounting policies may have been chosen that will affect ratio calculations. The preparation of financial statements involves, in some cases, non-comparable accounting methods and estimates.

The choice of accounting methods will cause variations in different businesses's statements, and these differences in accounting policies could be in regards to such items as:

- cash or accrual accounting
- balance day adjustments
- different methods of inventory valuation
- different depreciation methods (straight line or reducing balance) or rates of depreciation.
- historic or fair value accounting – most figures on reports would be at the historic cost values, but some may have been adjusted to at valuation, i.e. the fair value
- different balance date – Australia uses 30 June as end of its financial year, but other countries use a different date for the end of their financial year.

## Lack of disclosure

The financial statements of a company are, in many respects, a summary of the events and transactions that have occurred over a period of time. In addition, these financial statements provide an overall view of the company's results rather than giving specific and detailed information. This is overcome, to some extent, by the extra information provided in the notes to the financial statements and in the annual report. However, the reporting is somewhat selective in reporting economic events and involves estimates and choices in accounting methods. These estimates and choices in accounting methods are not always disclosed in the annual report or notes to the financial accounts. If only some of the information is in the reports, it makes it difficult to calculate some ratios. This lack of disclosure is particularly evident when the information is not good. Companies like to project 'good news', so if information shows the company in a bad light, it will only provide what is required by law or the ASX.

For example, public companies are not required to show the details of individual expenses in their annual accounting reports. Therefore, it may be difficult to calculate some ratios.

## Historical cost accounting

Financial statements have been prepared based on the historical cost accounting concept. There are some exceptions to this when assets and liabilities may be valued based on fair value, net present value or net realisable value.

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Historical cost accounting is widely used, easily understood and is a reliable approach as it is based on factual evidence. However, the other side to this is the question of whether it is relevant. Historical cost accounting is not a good basis for assessing the performance of an entity. The criticism of historical cost accounting is that it does not give the real value or profit of the business as it is not based on appropriate measurement values for the elements of financial statements.

Some of the reasons for this are:

- It does not show the current value of assets, particularly non-current assets.
- It does not calculate the loss of value of monetary assets in times of inflation.
- It overstates profits in times of inflation.
- Depreciation under historical cost accounting is based on cost allocations and not the current value of the asset.

Therefore, when undertaking financial analysis of a company, the user will be basing their decision on information that is not necessarily relevant. Relevant information for decision-making purposes should relate to the future and not the past. Historical cost accounting means that users are basing their decisions on financial information that is not necessarily up-to-date in regards to the value of the elements shown in the financial statements.

# Test your knowledge

1 Identify the main user groups and their common needs in terms of financial analysis.

2 What factors do we need to take into account in order to put a financial analysis in context?

3 What ratios would you use to measure a company's liquidity?

4 What ratios would you use to measure a company's profitability?

5 What ratios would you use to measure a company's management effectiveness?

6 What ratios would you use to measure the relative attractiveness as an investment of a company's shares?

7 How would you measure financial risk in the short and long term?

8 What are the limitations to analysis that are inherent in the accounting data we are using?

9 Explain the relevance of sources external and internal to the business in the analysis of financial statements.

10 When comparing similar firms, what steps need to be taken to make the comparisons meaningful?

11 Consider each of the following and explain how this outcome is possible:
   - A business has a high current ratio and/or quick ratio but has difficulty paying its debts/expenses.
   - A business has a high profit margin but has difficulty paying its debts/expenses.

# Test your understanding

## Topic guide

*Many exercises involve several concepts and ratios, but the following is a general guide to the main points of emphasis in each exercise.*

- Debtors' collection period: 11.1–11.6, 11.10, 11.14
- Return on assets: 11.1–11.3, 11.7, 11.10
- Inventory/stock turnover: 11.2, 11.3 11.6, 11.10, 11.12, 11.14



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- Profit margin: 11.3, 11.4, 11.10
- Current ratio: 11.4–11.6, 11.10, 11.11, 11.13–11.15
- Quick asset ratio: 11.5, 11.6, 11.10, 11.11, 11.13, 11.14
- Debt/equity: 11.5–11.7, 11.13, 11.14
- Market ratios: 11.7, 11.8, 11.13
- Times interest earned ratio: 11.7–11.10, 11.14
- Comprehensive exercise (profitability and stability): 11.19
- Comprehensive exercise (profitability and stability and market ratios): 11.19

11.1 Bathurst and Bertie are owners and directors in Bendigo Suppliers Pty Ltd and the following data relates to their business. They seek your advice to improve their operations.

### Statement of financial position as at 30 June (extract)

| | 2008 $ | 2009 $ | 2010 $ |
|---|---|---|---|
| Cash | 7000 | 12000 | 18000 |
| Receivables | 87000 | 73000 | 67000 |
| Inventories | 80000 | 91000 | 105000 |
| Total current assets | 195000 | 198000 | 197000 |
| Total non-current assets | 370000 | 420000 | 460000 |

### Income statement for the year ended 30 June

| | 2009 $ | 2010 $ |
|---|---|---|
| Sales (credit) | 750 000 | 690000 |
| *Less* Cost of sales | 385000 | 354000 |
| Gross profit | 365000 | 336000 |
| *Less* Operating expenses | 120000 | 80000 |
| Profit before tax | 245000 | 256000 |
| *Less* Income tax | 70000 | 75000 |
| Profit after tax | 175000 | 181000 |

**Required**

a Calculate the following ratios for the years ended 30 June 2009 and 2010:
   i debtors' collection period
   ii rate of return on assets.

b Is the trend for the year ended 30 June 2010 a positive or negative trend?

11.2 Band and Brother are owners and directors in Essy Company Pty Ltd and the following data relates to their business. They seek your advice to improve their operations. They have provided you with the results for the years ended 30 June 2008 and 2009 and also their budget predictions for 2010.

### Statement of financial position as at 30 June (extract)

| | 2008 (actual) $ | 2009 (actual) $ | 2010 (budget) $ |
|---|---|---|---|
| Cash | 25000 | 18000 | 7000 |
| Receivables | 67000 | 75000 | 91000 |
| Inventories | 81000 | 72000 | 60000 |
| Total current assets | 185000 | 176000 | 172000 |
| Total non-current assets | 420000 | 420000 | 420000 |

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### Income statement for the year ended 30 June

| | 2009 (actual) $ | 2010 (budget) $ |
|---|---|---|
| Sales | 680 000 | 760 000 |
| *Less* Cost of sales | 289 000 | 350 000 |
| Gross profit | 391 000 | 410 000 |
| *Less* Operating expenses | 102 000 | 140 000 |
| Profit before tax | 289 000 | 270 000 |
| *Less* Income tax | 80 000 | 72 000 |
| Profit after tax | 209 000 | 198 000 |

**Required**

a Calculate the following ratios for the years ended 30 June 2009 and 2010:
   i debtors' collection (60% of all sales are on credit)
   ii inventory/stock turnover.

b Is the performance of the business expected to improve or deteriorate from the year ended 30 June 2009 to 2010? What needs to be done to improve the performance of the business?

c Using the rate of return on assets as a key performance indicator how would you assess the performance of the management of the company?

11.3 Haley and Lewis Pty Ltd are considering taking over another business called Rockin Company Pty Ltd and the following data relates to these two businesses. They seek your advice on the Rockin Company Pty Ltd business. They have given you the performance of both companies for the past two years.

### Statement of financial position as at 30 June (extract)

| | Haley and Lewis Pty Ltd | | Rockin Company Pty Ltd | |
|---|---|---|---|---|
| | 2009 $ | 2010 $ | 2009 $ | 2010 $ |
| Cash | 54 000 | 68 000 | 23 000 | 15 000 |
| Receivables | 84 000 | 76 000 | 40 000 | 56 000 |
| Inventories | 46 000 | 55 000 | 38 000 | 30 000 |
| Total current assets | 201 000 | 218 000 | 110 000 | 108 000 |
| Total non-current assets | 580 000 | 610 000 | 380 000 | 340 000 |

### Income statement for the year ended 30 June

| | Haley and Lewis Pty Ltd | Rockin Company Pty Ltd |
|---|---|---|
| | 2010 $ | 2010 $ |
| Sales (credit) | 720 000 | 340 000 |
| *Less* Cost of sales | 300 000 | 140 000 |
| Gross profit | 420 000 | 200 000 |
| *Less* Operating expenses | 130 000 | 90 000 |
| Profit before tax | 290 000 | 110 000 |
| *Less* Income tax | 80 000 | 30 000 |
| Profit after tax | 210 000 | 80 000 |

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**Required**

a Calculate the following ratios for each business for the year ended 30 June 2010:
   i debtors' collection period
   ii inventory/stock turnover
   iii profit margin
   iv rate of return on assets.

b Compare the performance of the businesses, based on these ratios. Do you think Haley and Lewis Pty Ltd should take over Rockin Company Pty Ltd?

11.4 The following financial information relates to Hurst Jenkins Pty Ltd. An investor is interested in buying some shares in the business and seeks your advice.

### Statement of financial position as at 30 June (extract)

| | 2008 $ | 2009 $ | 2010 $ |
|---|---|---|---|
| Cash | 35 000 | 48 000 | 67 000 |
| Receivables | 87 000 | 95 000 | 107 000 |
| Inventories | 41 000 | 32 000 | 20 000 |
| Marketable securities | 20 000 | 25 000 | 30 000 |
| Prepayments | 5 000 | 4 000 | 6 000 |
| Total current assets | 188 000 | 204 000 | 230 000 |
| | | | |
| Accounts payable | 34 000 | 38 000 | 52 500 |
| Accrued expenses | 8 000 | 9 000 | 7 500 |
| Current tax liability | 47 000 | 55 000 | 30 000 |
| GST payable | 41 000 | 38 000 | 35 000 |
| Total current liabilities | 130 000 | 140 000 | 125 000 |

### Income statement for the year ended 30 June

| | 2009 $ | 2010 $ |
|---|---|---|
| Sales | 470 000 | 350 000 |
| *Less* Cost of sales | 169 000 | 145 000 |
| Gross profit | 301 000 | 205 000 |
| *Less* Operating expenses | 102 000 | 85 000 |
| Profit before tax | 199 000 | 120 000 |
| *Less* Income tax | 55 000 | 30 000 |
| Profit after tax | 144 000 | 90 000 |

**Required**

a Calculate the following ratios for the business for the years ended 30 June 2009 and 2010:
   i working capital/current
   ii debtors' collection period.

b Is the trend from 2009 to 2010 positive or negative?

c If you were a supplier, would you extend credit to this company and, if so, what assurances would you want in order to reduce your risk factor?

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11.5 The following financial information relates to Kidd Lark Pty Ltd. A lender, who has been asked to give a long-term loan of $100 000 to the business, has sought your advice.

## Statement of financial position as at 30 June (extract)

| | 2008 $ | 2009 $ | 2010 $ |
|---|---|---|---|
| Cash | 52 000 | 38 000 | 14 000 |
| Receivables | 49 000 | 58 000 | 67 000 |
| Inventories | 53 000 | 46 000 | 39 000 |
| Marketable securities | 20 000 | 15 000 | 10 000 |
| Prepayments | 2 900 | 3 100 | 2 200 |
| Total current assets | 176 900 | 160 100 | 132 200 |
| | | | |
| Accounts payable | 59 500 | 86 300 | 65 500 |
| Accrued expenses | 9 500 | 8 700 | 6 500 |
| Current tax liability | 35 000 | 22 000 | 21 000 |
| GST payable | 31 000 | 28 000 | 45 000 |
| Total current liabilities | 135 000 | 145 000 | 138 000 |
| | | | |
| Non-current liabilities | 110 000 | 130 000 | 165 000 |
| Equity | 600 000 | 580 000 | 550 000 |

## Income statement for the year ended 30 June

| | 2009 $ | 2010 $ |
|---|---|---|
| Sales | 690 000 | 750 000 |
| *Less* Cost of sales | 470 000 | 540 000 |
| Gross profit | 220 000 | 210 000 |
| *Less* Operating expenses | 140 000 | 134 000 |
| Profit before tax | 80 000 | 76 000 |
| *Less* Income tax | 22 000 | 21 000 |
| Profit after tax | 58 000 | 55 000 |

**Required**

a Calculate the following ratios for the business for the years ended 30 June 2009 and 2010:
   i working capital/current
   ii quick asset
   iii debtors' collection period
   iv debt to equity ratio.

b Comment on the liquidity and leverage of the business. What is the trend?

c What do you think might have led to the positive or negative trend in the following ratios:
   i working capital/current
   ii quick asset
   iii debtors' collection period
   iv debt to equity ratio.

d If you were a lender/banker would you extend a loan to this company and, if so, what assurances would you want in order to reduce your risk factor?



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11.6 Price Rankin Pty Ltd is interested in taking over Marr-Newport Pty Ltd. The following financial information relates to both businesses. Price Rankin Pty Ltd has sought your advice. Both firms are in the retail industry.

## Statement of financial position as at 30 June (extract)

| | Marr-Newport Pty Ltd | | Price Rankin Pty Ltd | |
|---|---|---|---|---|
| | 2009 $ | 2010 $ | 2009 $ | 2010 $ |
| Cash (overdraft) | 0 | 0 | 13 000 | 29 000 |
| Receivables | 146 500 | 175 900 | 152 400 | 125 500 |
| Inventories | 48 000 | 35 000 | 39 000 | 45 000 |
| Prepayments | 6 500 | 7 100 | 5 600 | 8 500 |
| Total current assets | 201 000 | 218 000 | 210 000 | 208 000 |
| Total non-current assets | 580 000 | 610 000 | 380 000 | 340 000 |
| | | | | |
| Accounts payable | 13 000 | 19 000 | 145 000 | 132 000 |
| Bank overdraft | 30 000 | 40 000 | 0 | 0 |
| Current tax liability | 50 000 | 80 000 | 42 000 | 30 000 |
| Accrued expenses | 25 000 | 28 000 | 15 000 | 18 000 |
| Short-term commercial bill | 70 000 | 60 000 | 0 | 0 |
| Total current liabilities | 190 000 | 230 000 | 220 000 | 200 000 |
| | | | | |
| Non-current liabilities | 75 000 | 60 000 | 170 000 | 230 000 |
| Equity | 200 000 | 180 000 | 200 000 | 118 000 |

## Income statement for the year ended 30 June

| | Marr-Newport Pty Ltd | Price Rankin Pty Ltd |
|---|---|---|
| | 2010 $ | 2010 $ |
| Sales (credit) | 336 000 | 434 000 |
| *Less* Cost of sales | 130 000 | 214 000 |
| Gross profit | 206 000 | 220 000 |
| *Less* Operating expenses | 80 000 | 105 000 |
| Profit before tax | 126 000 | 115 000 |
| *Less* Income tax | 42 000 | 30 000 |
| Profit after tax | 84 000 | 85 000 |

**Required**

a Calculate the following ratios for both businesses for the years ended 30 June 2009 and 2010:
   i working capital/current
   ii quick asset
   iii debtors' collection period
   iv inventory/stock turnover
   v debt to equity ratio.

b Comment on the liquidity and leverage of each business.

c What would you advise the business of Price Rankin Pty Ltd with regards to taking over Marr-Newport Pty Ltd?

d Comment on the business performance, given the following industry benchmarks:
   i working capital/current 1.80 : 1.00
   ii quick asset 1.20 : 1.00

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iii debtors' collection period: 45 days
iv inventory/stock turnover: 10 times
v debt to equity ratio: 60%.

11.7 The following financial information relates to Spence-Tout Ltd, a company that has approached the bank of which you are manager seeking a mortgage loan of $300 000.

| Details | 2008 $ | 2009 $ | 2010 $ |
|---|---|---|---|
| Share capital – issue price $1.00 each | 500 000 | 500 000 | 600 000 |
| Total equity | 850 000 | 890 000 | 920 000 |
| Total liabilities | 240 000 | 260 000 | 270 000 |
| Net profit after tax | 190 000 | 230 000 | 245 000 |
| Dividends declared for the financial year | 50 000 | 60 000 | 75 000 |
| Interest expense | 12 000 | 11 000 | 10 500 |
| Income tax expense | 60 000 | 75 000 | 80 000 |
| Market price of shares | 3.50 | 3.70 | 3.80 |
| Number of ordinary shares | 500 000 | 500 000 | 600 000 |

**Required**

a Calculate the following ratios for the business for the years ended 30 June 2009 and 2010:
   i times interest earned
   ii debt to equity ratio
   iii earnings per share
   iv rate of return on assets.

b Is the trend for the year ended 30 June 2010 a positive or negative trend?

c What do you think might have led to the positive or negative trend in the:
   i times interest earned
   ii debt to equity ratio
   iii earnings per share
   iv rate of return on assets.

d Would you lend the money to the business? Is it a good investment?

e What other information would you want to know before lending it the money?

11.8 You are a financial advisor. The following financial information for the years ended 30 June 2009 and 2010 relates to Glassen-Harden Ltd, a company in which one of your clients is interested in buying shares.

| Details | 2008 $ | 2009 $ | 2010 $ |
|---|---|---|---|
| Share capital – issue price $2.00 each | 2 000 000 | 2 600 000 | 3 200 000 |
| Total equity | 2 840 000 | 3 400 000 | 3 900 000 |
| Total liabilities | 1 220 000 | 1 280 000 | 1 340 000 |
| Net profit after tax | 280 000 | 260 000 | 250 000 |
| Dividends declared for the financial year | 200 000 | 208 000 | 192 000 |
| Interest expense | 97 600 | 99 600 | 110 000 |
| Income tax expense | 91 000 | 82 000 | 75 000 |
| Market price of shares | 10.50 | 9.70 | 8.80 |
| Number of ordinary shares | 1 000 000 | 1 300 000 | 1 600 000 |


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**Required**

a Calculate the following ratios for the business for the years ended 30 June 2009 and 2010:
   i times interest earned
   ii earnings per share
   iii price/earnings
   iv dividend yield.

b Comment on the financial risk and returns to shareholders for this company. Is it a good investment?

c What other information would you want to know before investing?

d Comment on the company performance given the following industry benchmarks:
   i times interest earned: 6 times
   ii earnings per share: 20 cents per share
   iii price/earnings: 6.8
   iv dividend yield: 7.2%.

11.9 The following financial information for the years ended 30 June 2009 and 2010 relates to the businesses of Holland-Lamb Ltd and Rudder-Shaw Ltd. An investor seeks your advice about which company to invest in.

| Details | Holland-Lamb Ltd | | Rudder-Shaw Ltd | |
|---|---|---|---|---|
| | 2009 $ | 2010 $ | 2009 $ | 2010 $ |
| Share capital | 3 500 000 | 3 500 000 | 4 500 000 | 5 400 000 |
| Total equity | 4 100 000 | 4 000 000 | 5 000 000 | 6 200 000 |
| Total liabilities | 850 000 | 900 000 | 3 200 000 | 3 600 000 |
| Net profit after tax | 680 000 | 640 000 | 890 000 | 960 000 |
| Dividends declared for the financial year | 50 000 | 45 000 | 100 000 | 165 000 |
| Interest expense | 68 000 | 76 000 | 256 000 | 275 000 |
| Income tax expense | 180 000 | 195 000 | 275 000 | 296 000 |
| Market price of shares | 8.90 | 8.00 | 9.50 | 11.50 |
| Number of ordinary shares | 1 000 000 | 1 000 000 | 1 000 000 | 1 500 000 |

**Required**

a Calculate the following ratios for the business for the years ended 30 June 2009 and 2010:
   i times interest earned
   ii debt to equity
   iii earnings per share
   iv price/earnings
   v dividend yield.

b Which company has the stronger financial position?

c Which company has the better returns to shareholders?

d What would you advise the investor?

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11.10 The following financial data has been provided by Donaldson Ltd. The company directors have been concerned about the profitability and liquidity of the company.

| | 30 June 2011 $ | 30 June 2012 $ |
|---|---|---|
| Sales | 1 000 000 | 1 400 000 |
| Cost of sales | 460 000 | 480 000 |
| All other expenses, excluding interest expense | 148 000 | 162 000 |
| Interest expense | 16 000 | 12 000 |
| Income tax expense | 85 000 | 93 000 |
| Cash at bank | 162 000 | 100 000 |
| Inventory | 86 000 | 108 000 |
| Accounts receivable (net) | 53 000 | 85 000 |
| Total non-current assets (net) | 1 000 000 | 1 400 000 |
| Accounts payable | 43 000 | 134 000 |
| Total non-current liabilities | 475 000 | 356 000 |
| Share capital | 560 000 | 912 000 |
| Reserves | 72 000 | 95 000 |
| Retained earnings | 151 000 | 176 000 |

**Notes**

- Inventory as at 1 July 2010: $73 000
- Accounts receivable (net) as at 1 July 2010: $46 000
- Total non-current assets as at 1 July 2010: $700 000
- Total shareholders' equity as at 1 July 2010: $610 000
- Cash at bank: $80 000

**Additional information**

The industry benchmarks as at 30 June 2012 are as follows:

- debtors' collection period: 45 days
- inventory/stock turnover: 10 times
- working capital/current 1.4:1
- quick asset 1.1:1
- profit margin: 12%
- rate of return on assets: 14%
- times interest earned: 11 times.

**Required**

a Calculate the following ratios for the year ended 30 June 2011 and 30 June 2012:
   i debtors' collection
   ii inventory/stock turnover
   iii working capital/current
   iv quick asset
   v profit margin
   vi rate of return on assets
   vii times interest earned.

b Comment on the performance of the company in relation to its profitability, management efficiency practices and liquidity. What advice would you give the directors?

c What do you think might have led to the positive or negative trend in the:
   i profit margin
   ii inventory turnover
   iii accounts receivable turnover
   iv rate of return on assets ratio.


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11.11 Skippy Ltd reported the following current assets and current liabilities at the end of 2009 and 2010.

| | 2010 $ | 2009 $ |
|---|---|---|
| Cash | 311 | 1928 |
| Marketable securities | 83 | 955 |
| Debtors | 2453 | 2150 |
| Inventories | 1016 | 732 |
| Prepaid expenses | 499 | 486 |
| Short-term borrowings | 3921 | – |
| Creditors | 3870 | 3617 |
| Income taxes payable | 123 | 640 |

a Determine, for both years, (rounding to two decimal points) the:
  i current ratio
  ii acid-test (quick asset) ratio.

b What conclusions can you draw from this data.

11.12 Phantom Ltd reported the following information.

| | 2009 $ | 2008 $ |
|---|---|---|
| Sales | 3600000 | 3900000 |
| Beginning inventories | 310000 | 290000 |
| Cost of sales | 2010000 | 2400000 |
| Ending inventories | 360000 | 310000 |

a Determine, for each year, (rounding to two decimal points):
  i inventory turnover
  ii inventory turnover in days.

b What conclusions can be drawn from this data concerning inventories?

11.13 The following financial data relates to Ludlum Ltd and Nexis Ltd. An investor is considering buying shares in one of these companies and seeks your advice.

| | Ludlum Ltd 30 June 2011 $ | Nexis Ltd 30 June 2011 $ |
|---|---|---|
| Sales | 1700000 | 1800000 |
| Cost of sales | 640000 | 690000 |
| All other expenses, excluding interest expense | 185000 | 187000 |
| Interest expense | 16000 | 14000 |
| Income tax expense | 95000 | 123000 |
| Cash at bank | 68000 | 3000 |
| Inventory | 66000 | 78000 |
| Accounts receivable (net) | 63000 | 75000 |
| Total non-current assets (net) | 2100000 | 2560000 |
| Accounts payable | 357000 | 482000 |
| Total non-current liabilities | 475000 | 556000 |
| Share capital | 1030000 | 1183000 |
| Reserves | 105000 | 145000 |
| Retained earnings | 330000 | 350000 |

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**Notes**

**Ludlum Ltd**

- Inventory as at 1 July 2010: $85 000
- Accounts receivable (net) as at 1 July 2010: $96 000
- Total non-current assets as at 1 July 2010: $1 000 000
- Total shareholders' equity as at 1 July 2010: $900 000

**Nexis Ltd**

- Inventory as at 1 July 2010: $94 000
- Accounts receivable (net) as at 1 July 2010: $63 000
- Total non-current assets as at 1 July 2010: $2 300 000
- Total shareholders' equity as at 1 July 2010: $1 300 000

**Additional information**

**Ludlum Ltd**

- Number of shares: 30 June 2010 – 450 000 ordinary shares; 30 June 2011 – 515 000 ordinary shares
- Dividends declared and paid: 30 June 2010 – $65 000; 30 June 2011 – $89 000
- Average market price: 30 June 2010 – $10.10 per share; 30 June 2011 – $9.20 per share

**Nexis Ltd**

- Number of shares: 30 June 2010 – 186 600 ordinary shares; 30 June 2011 – 236 600 ordinary shares
- Dividends declared and paid: 30 June 2010 – $43 000; 30 June 2011 – $58 000
- Average market price: 30 June 2010 – $7.30 per share; 30 June 2011 – $8.50 per share

**Required**

a Calculate the following ratios for the years ended 30 June 2011 and 30 June 2012:
   i earnings per share
   ii price/earnings
   iii dividend yield
   iv debt to equity
   v working capital/current
   vi quick asset.

b Comment on the performance of the company in relation to its liquidity, market returns and leverage. What advice would you give the investor?

c Given the results for the business, can the investor make an informed decision? If not, what additional information is necessary for the investor to make a more informed decision?

d Given the results of the business, explain how it can improve the following ratios:
   i earnings per share
   ii price/earnings
   iii debt to equity
   iv working capital/current
   v quick asset.

11.14 The following financial data relates to Holden Ltd. The company banker is concerned about the company operations. The company has asked the banker for a further loan of $200 000.

| | 30 June 2011 $ | 30 June 2012 $ |
|---|---|---|
| Sales | 2 500 000 | 2 000 000 |
| Cost of sales | 1 340 000 | 1 170 000 |
| All other expenses, excluding interest expense | 342 000 | 363 000 |
| Interest expense | 46 000 | 65 000 |



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| | | |
|---|---|---|
| Income tax expense | 275 000 | 343 000 |
| Cash at bank | 88 000 | 52 000 |
| Inventory | 246 000 | 298 000 |
| Accounts receivable (net) | 143 000 | 165 000 |
| Total non-current assets (net) | 2 500 000 | 2 760 000 |
| Accounts payable | 137 000 | 242 000 |
| Total non-current liabilities | 1 471 000 | 1 650 000 |
| Share capital | 1 160 000 | 1 160 000 |
| Reserves | 65 000 | 65 000 |
| Retained earnings | 144 000 | 158 000 |

**Notes**

- Inventory as at 1 July 2010: $223 000
- Accounts receivable (net) as at 1 July 2010: $126 000
- Total non-current assets as at 1 July 2010: $2 000 000
- Total shareholders' equity as at 1 July 2010: $1 400 000

**Other available data: Industry benchmarks as at 30 June 2012**

- Debt to equity: 80%
- Working capital/current 1.1:1
- Quick asset 1:1
- Times interest earned: 9 times
- Debtors' collection: 43 days
- Inventory/stock turnover: 7 times

**Required**

a Calculate the following ratios for the years ended 30 June 2011 and 30 June 2012:
   i debt to equity
   ii working capital/current
   iii quick asset
   iv times interest earned
   v debtors' collection
   vi inventory/stock turnover.

b Comment on the performance of the company in relation to its liquidity, management efficiency practices and leverage. What advice would you give the banker?

c Given the results for the business, can the lender make an informed decision? If not, what additional information is necessary for the lender to make a more informed decision?

d Given the results of the business, explain how it can improve its:
   i debt to equity
   ii working capital/current
   iii quick asset
   iv times interest earned
   v debtors' collection
   vi inventory/stock turnover.

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11.15 Following is a simplified balance sheet for Gomer Ltd.

## Gomer Ltd
## Balance sheet at 30 June 2010

| | $ |
|---|---|
| **Current assets** | |
| Bank | 12 000 |
| Inventory | 7 500 |
| Debtors | 5 000 |
| Total current assets | 24 500 |
| **Non-current assets** | |
| Land and buildings | 100 000 |
| Total non-current assets | 100 000 |
| Total assets | 124 500 |
| **Liabilities** | |
| Current liabilities | |
| Creditors | 20 000 |
| Total liabilities | 20 000 |
| Net assets | 104 500 |
| **Equity** | |
| Share capital | 100 000 |
| Retained profits | 4 500 |
| Total equity | 104 500 |

The present current ratio is 1.225 : 1. The company has been told by its bank to increase its current ratio to 1.5 : 1. Given the balance sheet, what simple step does the company have to take to achieve the required current ratio?

11.16 As an analyst, you have extracted the following information from the accounts of Romeo Construction Co. Ltd.

## Romeo Construction Co. Ltd
## Income statements for the years ended 30 June

| | 2009 $ | 2010 $ | 2011 $ |
|---|---|---|---|
| Sales | 60 000 | 54 000 | 75 000 |
| *Less* Expenses | | | |
| Material | 22 500 | 21 000 | 35 813 |
| Labour | 15 000 | 13 500 | 18 000 |
| Production expenses | 7 500 | 6 000 | 6 750 |
| Administrative expenses | 7 500 | 7 500 | 8 250 |
| Finance expenses | 1 500 | 1 500 | 1 500 |
| | 54 000 | 49 500 | 70 313 |
| Net profit | 6 000 | 4 500 | 4 687 |


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### Romeo Construction Co. Ltd
### Balance sheet as at 30 June

| | 2009 $ | 2010 $ | 2011 $ |
|---|---|---|---|
| Work in progress | 60 000 | 52 500 | 67 500 |
| Non-current assets | 30 000 | 37 500 | 37 500 |
| | 90 000 | 90 000 | 105 000 |
| Bank overdraft | 15 000 | 18 000 | 12 000 |
| Other current liabilities | 15 000 | 12 000 | 18 000 |
| Shareholder funds | 60 000 | 60 000 | 75 000 |
| | 90 000 | 90 000 | 105 000 |

**Required**

a Calculate the appropriate ratios and comment on the profitability of the business.
b Calculate the appropriate ratios and comment on the financial situation of the business.
c What action do you suggest for the forthcoming year?

11.17 You have been given the following financial information for Bigboy Catering Ltd.

### Bigboy Catering Ltd
### Income statement for years ending 31 December

| | 2007 $ | 2008 $ | 2009 $ | 2010 $ |
|---|---|---|---|---|
| Sales (net) | 87 000 | 78 000 | 85 000 | 90 000 |
| Food and beverage expenses | 50 000 | 51 000 | 49 000 | 51 000 |
| Wages | 22 000 | 21 000 | 23 000 | 23 500 |
| Finance expenses | 1 000 | 2 000 | 1 500 | 1 000 |
| Taxation | 500 | 0 | 0 | 2 000 |
| Other operating expenses | 10 000 | 12 000 | 13 500 | 9 500 |

### Bigboy Catering Ltd
### Balance sheet as at 31 December

| | 2007 $ | 2008 $ | 2009 $ | 2010 $ |
|---|---|---|---|---|
| Cash at bank | 500 | 0 | 0 | 3 000 |
| Inventory | 17 500 | 19 000 | 16 500 | 21 000 |
| Non-current assets | 125 000 | 123 000 | 121 000 | 119 000 |
| Bank overdraft | 0 | 1 000 | 13 500 | 0 |
| Creditors | 28 000 | 32 000 | 17 000 | 13 000 |
| Issued shares | 100 000 | 100 000 | 100 000 | 120 000 |
| Retained earnings | 15 000 | 9 000 | 7 000 | 10 000 |

**Required**

a Calculate the appropriate ratios and comment on the profitability of the business.
b Calculate the appropriate ratios and comment on the financial situation of the business.
c What would be your advice to the company after viewing the figures for 2010?

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11.18 The balance sheets and selected information are given below for Katrina Ltd and Catherine Ltd for the year ended 30 June 2011.

## Katrina Ltd and Catherine Ltd
## Balance sheets for year ended 30 June 2011

| | Katrina Ltd | | Catherine Ltd | |
|---|---|---|---|---|
| **Assets** | | | | |
| *Current assets* | | | | |
| Cash at bank | 80 000 | | 220 000 | |
| Marketable securities | 8 000 | | 190 000 | |
| Accounts receivable (net) | 100 000 | | 130 000 | |
| Merchandise inventory | 560 000 | | 300 000 | |
| Total current assets | | 748 000 | | 840 000 |
| *Non-current assets* | | | | |
| Property, plant and equipment (net) | 1 200 000 | | 1 280 000 | |
| Intangibles | 6 000 | | | – |
| Total non-current assets | | 1 206 000 | | 1 280 000 |
| **Total assets** | | 1 954 000 | | 2 120 000 |
| **Liabilities and shareholders' equity** | | | | |
| *Current liabilities* | | 180 000 | | 310 000 |
| Non-current liabilities | | 340 000 | | 330 000 |
| Paid-up capital ($10 value) | | 1 300 000 | | 1 300 000 |
| Retained profits | | 134 000 | | 180 000 |
| **Total liabilities and shareholders' equity** | | 1 954 000 | | 2 120 000 |
| **Other information** | | | | |
| Accounts receivable, 1 July 2010 | 130 000 | | 110 000 | |
| Merchandise inventory, 1 July 2010 | 520 000 | | 420 000 | |
| 2010–11 Sales: | | | | |
| Cash | 852 000 | | 400 000 | |
| Credit | 1 100 000 | | 1 500 000 | |
| 2010–11 Cost of sales | 1 200 000 | | 1 100 000 | |
| 2010–11 Net profit | 310 000 | | 400 000 | |
| 2010–11 Interest expense | 60 000 | | 40 000 | |
| Total shareholders' equity, 1 July 2010 | 1 334 000 | | 1 380 000 | |
| Total assets, 1 July 2011 | 1 854 000 | | 2 020 000 | |
| Tax rate: 30% | 1 854 000 | | 2 020 000 | |

**Required**

a Calculate the current ratio, quick ratio, inventory turnover, debtors' turnover and average debtors collected for each company.

b Which company do you think has a better liquid position? Why?



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c Calculate, for each company, the rate of return on total assets and profit margin after tax. Which company has the higher rate of return on assets? Why?
d Calculate, for each company, the rate of return on ordinary shareholders' equity, asset turnover, net profit margin and financial leverage ratios. Which company has the higher return on equity? Why?
e Which company is using leverage more effectively to increase the rate of return to ordinary shareholders? Explain.
f How do you think Katrina Ltd and Catherine Ltd could improve their liquid ratios by rearranging some of the classifications of assets and liabilities?

11.19 Following are the summarised accounts of Pear Ltd for the past five years. These form the basis for the questions that follow.

## Pear Ltd
## Summarised balance sheets of Pear Ltd

| | 2006 $'000 | 2007 $'000 | 2008 $'000 | 2009 $'000 | 2010 $'000 |
|---|---|---|---|---|---|
| **Non-current assets** | | | | | |
| Intangible non-current assets | 5247 | 5220 | 7305 | 9969 | 10674 |
| Tangible assets | 20175 | 23130 | 43920 | 43740 | 69255 |
| | 25422 | 28350 | 51225 | 53709 | 79929 |
| **Current assets** | | | | | |
| Inventory | 20031 | 23034 | 53091 | 74823 | 99606 |
| Debtors | 17589 | 24693 | 60270 | 48987 | 66768 |
| Bank and cash | 4698 | 6801 | 7839 | 3273 | 9747 |
| | 42318 | 54528 | 121200 | 127083 | 176121 |
| **Current liabilities** | | | | | |
| Creditors | 16197 | 24588 | 55659 | 41130 | 72831 |
| Taxation | 459 | 768 | 4302 | 2712 | 3444 |
| Dividends | 801 | 1812 | 3339 | 3738 | 3672 |
| Bank loans and overdraft | 10581 | 4026 | 18180 | 29316 | 37638 |
| | 28038 | 31194 | 81480 | 76896 | 117585 |
| Net current assets | 14280 | 23334 | 39720 | 50187 | 58536 |
| Total assets *Less* current liabilities | 39702 | 51684 | 90945 | 103896 | 138465 |
| **Non-current liabilities** | | | | | |
| Loans | 14793 | 15477 | 35241 | 35430 | 67844 |
| | 24909 | 36207 | 55704 | 68466 | 70621 |
| **Represented by** | | | | | |
| Ordinary share capital | 5160 | 10359 | 17994 | 18039 | 19464 |
| Retained profits | 19749 | 25848 | 30975 | 43692 | 41734 |
| Revaluation reserve | | | 6735 | 6735 | 9423 |
| | 24909 | 36207 | 55704 | 68466 | 70621 |

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**Notes**

i During 2008 and 2010 some of the freehold properties were revalued.
ii Loans amounting to $22 million were repaid during 2010.
iii No non-current assets were disposed of during the year.

## Summarised income statements of Pear Ltd

| | 2006 $'000 | 2007 $'000 | 2008 $'000 | 2009 $'000 | 2010 $'000 |
|---|---|---|---|---|---|
| **Sales** | 93 930 | 116 232 | 259 470 | 278 340 | 372 753 |
| Cost of sales | 65 751 | 82 525 | 197 197 | 208 775 | 294 475 |
| Gross profit | 28 179 | 33 707 | 62 273 | 69 585 | 78 278 |
| Operating expenses | 17 022 | 21 398 | 36 830 | 35 130 | 59 881 |
| Net profit before interest and tax | 11 157 | 12 309 | 25 443 | 34 455 | 18 397 |
| Interest | 2 727 | 2 652 | 7 707 | 10 167 | 14 082 |
| Net profit after interest and before tax | 8 430 | 9 657 | 17 736 | 24 288 | 4 315 |
| Taxation | 2 517 | 1 746 | 9 270 | 7 833 | 2 601 |
| Net profit after tax | 5 913 | 7 911 | 8 466 | 16 455 | 1 714 |

## Statements of changes in equity for Pear Ltd

| | Share capital $'000 | Retained profits $'000 | Asset revaluation reserve $'000 | Total $'000 |
|---|---|---|---|---|
| **Balance at 1 July 2005** | 5 160 | 14 637 | 0 | 19 797 |
| **Net income recognised directly in equity** | | | | 0 |
| Profit or loss for the year (from the Income statement) | | 5 913 | | 5 913 |
| **Total recognised income and expense for the period** | | | | 5 913 |
| Dividends | | (801) | | (801) |
| **Balance at 30 June 2006** | 5 160 | 19 749 | | 24 909 |
| **Net income recognised directly in equity** | | | | 0 |
| Profit or loss for the year (from the Income statement) | | 7 911 | | 7 911 |
| **Total recognised income and expense for the period** | | | | 7 911 |
| Dividends | | (1 812) | | (1 812) |
| Issued shares | 5 199 | | | 5 199 |
| **Balance at 30 June 2007** | 10 359 | 25 848 | | 36 207 |
| Asset revaluation | | | 6 735 | 6 735 |
| **Net income recognised directly in equity** | | | | 6 735 |
| Profit or loss for the year (from the Income statement) | | 8 466 | | 8 466 |
| **Total recognised income and expense for the period** | | | | 15 201 |

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| | | | | |
|---|---|---|---|---|
| Dividends | | (3339) | | (3339) |
| Issued shares | 7635 | | | 7635 |
| **Balance at 30 June 2008** | 17994 | 30975 | | 55704 |
| **Net income recognised directly in equity** | | | | 0 |
| Profit or loss for the year (from the Income statement) | | 16455 | | 16455 |
| **Total recognised income and expense for the period** | | | | 16455 |
| Dividends | | (3738) | | (3738) |
| Issued shares | 45 | | | 45 |
| **Balance at 30 June 2009** | 18039 | 43692 | | 68466 |
| Asset revaluation | | | 2688 | 2688 |
| **Net income recognised directly in equity** | | | | 2688 |
| Profit or loss for the year (from the Income statement) | | 1714 | | 1714 |
| **Total recognised income and expense for the period** | | | | 4402 |
| Dividends | | (3672) | | (3672) |
| Issued shares | 1425 | | | 1425 |
| **Balance at 30 June 2010** | 19464 | 41734 | | 70621 |

**Required**

a Using whatever form of analysis you consider appropriate, analyse and comment on the financial performance and financial position of Pear Ltd.
b What are the limitations of your analysis?
c Given the performance of the company as seen from the ratio analysis, what key performance indicator information would you seek from the data available through the company's annual report before investing, lending or supplying credit in the company?

# Investigation

Select one of the following industries and use the internet to find a company within that industry (perhaps one that you are familiar with):

- media
- retail
- tourism and leisure
- food and household goods.

Using the company's website information, its annual report and the information on the company at the website of the ASX, answer the following questions:

www.asx.com.au

a What are the company's main activities and its core operations?
b What performance indicators or measures have the directors used in their annual report?
c Based on these performance indicators or measures what have the directors said about the company?
d What type of audit report (for example, qualified or unqualified) has been given by the audit firm?
e Has there been a change in accounting policy this financial year?
f Who were the main shareholders?
g Who were the company directors and what remuneration did they receive?
h What were the company's earnings per share?

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i Does the company control any other companies?
j Is the company a parent company or is it controlled by another company?
k What is the company's closing current share price?
l What is the registered office of the company?
m Who is the company secretary?
n What dividend rate was paid in the past year?
o What is the current volume of shares traded?
p What is the ASX code for this company?
q What is the company's principal business activity?

## Essay

> Annual reports are only useful if you apply ratio analysis to understand them and then you can really see if the company is successful or not. The market information produced by the Australian Securities Exchange is more useful than an annual report.

Discuss this statement in essay format, including in your answer the following:

- the purpose of an annual report
- how ratios can assist users to make investment decisions
- why ratio analysis must be used with caution by investors and lenders
- how the ASX financial information can assist users to make investment decisions.

## Ethics case study

Allandale Ltd is a company that builds small luxury boats and employs 500 people. The company has been operating for ten years. Two years ago, the company underwent a major expansion of its boat-building facilities because of increased demand for its boats from overseas buyers. To do this it borrowed $20 million through a mortgage loan with a major bank.

The loan agreement contains the following clauses:

i Allandale is to maintain a current ratio of at least 2:1
ii the after-tax return on assets must be at least 10%.

If the company fails to meet either ratio in any year, the $20 million is immediately repayable.

Last year the government removed a 10% tariff on small luxury boats and the company has had difficulty competing in overseas markets. Consequently, the company has had to reduce its profit margin in order to compete against suppliers from other countries.

Tom Lyons is the accountant of Allandale Ltd and he has completed the preliminary financial results for the current year. Based on these results, the current ratio is 2.1 : 1 and the return on assets is 11%. However, Tom has some concerns about the following items:

i One boat that was still unsold at year-end is recorded in the balance sheet at $500 000. However, Tom is certain that the most it could be sold for is $350 000.
ii An overseas customer who owes the company $1 million has recently informed Allandale Ltd that they are in severe financial trouble and will only be able to pay half the amount owing. The balance in the provision for doubtful debts is only $300 000.

If Tom recognises the decline in the net realisable value of $150 000 and the $200 000 uncollectable account in excess of the provision, the company's current ratio will fall to 1.6 : 1 and the return on assets to 2%. This would result in a call for immediate repayment of the $20 million loan. In turn, this would force the company into bankruptcy and Tom and his best friends will lose their jobs.

### Discuss

a What are the ethical problems Tom faces?
b What should Tom do?

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# Chapter 12
# CORPORATE SOCIAL DISCLOSURE

## What You Will Learn

After studying this chapter you should be able to:

1 Define corporate social disclosure
2 Explain the extent, nature and usefulness of corporate social disclosure
3 Explain the challenges for accountants in producing social and environmental information
4 Identify the uses made of corporate social disclosure by reporting entities and other stakeholders
5 Evaluate the extent of corporate social disclosure made by Australian companies.

## Introduction

Accountants are stereotyped as number crunchers, counting the cash, reporting the profit and presenting the balance sheet. Today, corporate social responsibility adds new dimensions and challenges to this profession.

In this chapter we will explore the extent, nature and usefulness of corporate social disclosure. Companies have many stakeholders who are not just investors and lenders. They include local communities, governments and employees; those who have a vested interest in companies and who are not necessarily interested in just the 'bottom line' (profitability and security of investment).

This area of corporate social disclosure is relatively new and so there are many aspects still being debated among accountants and company directors. We will consider what is currently available to guide and direct reporting entities in this area and examine the movement toward broader disclosure.

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## DEFINING CORPORATE SOCIAL DISCLOSURE

Corporate social responsibility (CSR), which we looked at in Chapter 6, is about how a company goes about its business operations while ensuring that they have an acceptable impact on the community. It is about the social, environmental and ethical behaviours that society will tolerate, given the diverse expectations of a range of stakeholders.

The reporting responsibilities of a company have traditionally been in the area of accountability for financial performance, and directors have seen themselves as stewards of the financial interests of the entity. This is still true and very important. However, all business activity has social and environmental costs and benefits – not just financial costs and benefits. Company directors are now under scrutiny and community pressure to consider these social and environmental aspects.

Accountability can nowadays be extended to include not just the traditional stakeholders, who have a financial interest, but also those who have an interest in social and environmental costs and benefits. In addition, many traditional users of financial information (such as investors and lenders) now have an increasing interest in CSR and the impacts of business behaviours.

CSR incorporates the concept of *sustainability*. Sustainability is about ensuring that decisions, especially those with an impact on the environment, ensure a future for the businesses, the societies within which they operate and the individuals and families affected by them. A term often used in this area is 'triple bottom line'. The triple bottom line refers to a company presenting financial statements on its *financial performance*, as well as reporting on the *business's social impacts* and its *impact on the physical environment*. The most dramatic and often controversial aspect of the triple bottom line theme in recent times is the issue of global warming.

Corporate social disclosure is about reporting on the success or otherwise of the business's efforts to contribute to economic development while improving the quality of life for its workforce, its employees' families and society at large. It reflects the relationship between the company, the community and environment. Some companies – such as mining companies – have certain mandatory reporting obligations and conditions (such as restoring the land to its original condition after they have finished mining operations). However, such mandatory obligations only apply in certain industries and, in general, most companies providing information about social and environmental issues do so on a voluntary basis – although, as we shall see, this is likely to change.

## THE NATURE OF CORPORATE SOCIAL DISCLOSURE

As seen in Chapter 8, accountants report within a legal framework, evident within corporation legislation and including standards developed by the Australian Accounting Standards Board (AASB) and International Accounting Standards Board (IASB).

Current evidence suggests that new frameworks may emerge that will require reporting entities to expand their formal reports to embrace more social and environmental measures of accountability.

REALITY CHECK 12.1

### Federal Court allows McArthur River diversion to proceed

by Ashley Tindall

On June 13 the Federal Court in Darwin, Australia delivered a blow to the spirits of the Gudanji, Yanyuwa, Garrawa and Mara peoples. In a decision that has been awaited since last August, the Court upheld the Government's decision to allow Swiss-based Xstrata Corporation to pursue a $110 million mine expansion project at the McArthur River. This expansion plan includes a 5.5 kilometre diversion of the river, which would allow Xstrata to tap a large deposit of zinc, a mineral that is skyrocketing in value on the world market, in great part due to Chinese demand. Since July 2007 the mining company has been forging ahead with the construction of the diversion canal



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anticipating this decision. Opponents of the diversion plan continue to charge that the diversion of the river will destroy sacred sites and have deleterious environmental effects on the fisheries and mangroves downstream.

The Gudanji and Yanyuwa people of Borroloola, have been persistent in their opposition to the diversion as moving the river would cut their rainbow serpent and turtle dreamings and forever damage the community spirit of the people. They also fear that Xstrata's subsidiary, McArthur River Mining (MRM) has dug up burial grounds and removed bones from the site ...

Source: Sacred Land Film Project, 26 June 2008, www.sacredland.org.

**Commentary**

This situation is the classic conflict between business activity for the pursuit of economic activity and the social and environmental interests of a range of stakeholders.

# Corporate social responsibility reports

## Economic component

The economic component of corporate social reports includes the more traditional financial data and, for this reason, it is likely to contain more quantitative data than the other two components.

## Social component

The social component includes disclosures about social issues, such as the diversity of the entity's employees, treatment of minorities, its health and safety record, employment conditions for employees (such as the provision of training and education), community activities (such as involvement with and support for local community projects) and support for developing countries. Companies often find themselves at the centre of political issues that do not place them in a good light (for example, criticism of Nike's 'sweat shop' production operations in Asian countries).



## Environmental component

The environmental component includes disclosures about many issues associated with the environment and the entity's activities within this area. These may include issues to do with air, water, land, natural resources, flora, fauna and human health (e.g. greenhouse gas emissions, water contamination and workers' safety). Companies may report on their impact on the environment and how they are contributing to sustainable development.

Many companies still do not know what corporate social disclosure is. It is a relatively new field with few agreed guidelines available.




Figure 12.1 Corporate social responsibility reporting contents

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Key Concept 12.1

**Corporate social disclosure**

Corporate social disclosure refers to the publication of economic, environmental and social information in an integrated report. It is about how a company reports on its performance in its relationship between itself and the community and environment.

REALITY CHECK 12.2

## Ethics are popular, not always practised

by Leon Gettler

Corporate social responsibility (CSR) might be moving into the mainstream but businesses are still struggling to understand it, according to a KPMG global study. The report, by KPMG's global sustainability services, found that 52 per cent of the world's 250 biggest companies issued separate reports on CSR, compared with 45 per cent in 2002, suggesting that CSR was becoming a mainstream issue.

The survey, which included data from the top 100 companies in 16 countries including Australia, also found that while the majority of companies still issued separate CSR reports, more were included in annual reports. KPMG also found there had been a significant shift from focusing on the environment to overall sustainability reporting that included social, ethical, environmental and economic aspects.

However, the study also identified serious gaps in the reports suggesting corporations were having trouble matching the rhetoric. Sixty-one per cent of the reports, for example, included a section on corporate governance and 53 per cent identified the link between corporate responsibility and corporate governance.

Most reports, however, failed to spell out exactly how governance policies were implemented. While 18 per cent of reports included policies for bribery or corruption, few elaborated on how these commitments were put into practice.

Nearly two-thirds of the companies discussed social policies and expressed their commitment to these issues, but details remained sketchy. Generally, social policy issues were confined to one or more of four areas: core labour standards, working conditions, community involvement and philanthropy.

Similarly, supply-chain issues were mentioned in 80 per cent of cases with almost 70 per cent citing a supplier declaration where, for example, the supplier had to comply with a code of conduct set down by the company.

However, the same companies seemed to have difficulty ensuring that their suppliers were actually complying. Only 16 per cent reported they conducted supplier audits to see how well the codes were being implemented.

'The results suggest that the content of supply-chain reporting is still immature in terms of the depth of issues discussed,' the report said. 'The fact that a minority of companies report on supplier audit could be an indication of the difficulties companies face with accounting for supplier performance and that companies have more developmental work to do before they can prove they 'walk the talk' in the supply chain.'

While more companies in the industrialised world depicted themselves as embracing corporate social responsibility, only 25 per cent could canvass the economic impact of their core business operations on society.

Fair trade was mentioned by only 6 per cent of companies. This, however, was limited mostly to initiatives aimed at promoting fair-trade awareness among employees by, for example, providing them with fair-trade-certified food in cafeterias. Little attention was paid to the difficult issues of fair competition in terms of competition issues and procedures for selecting suppliers.

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> The top countries in terms of CSR reporting are Japan, where 80 per cent of the top 100 report and Britain (71 per cent). Australia came 11th with 23 per cent.
>
> Source: *Sydney Morning Herald*, www.smh.com.au, 7 July 2005.

**Commentary**

The report indicates that a movement toward more diverse disclosure in annual reports is occurring worldwide. While the mandated (i.e. compulsory) reports are the financial ones, reporting entities are beginning to include statements on social and environment matters. The pressures for this type of 'sustainability' reporting are varied and complex.

## Corporate social disclosure in Australia

In Australia, corporate social disclosure is mainly voluntary and there is a great deal of variety in how companies report in this area. An Urgent Issues Group (a committee of the AASB) abstract from 1995, indicated that those companies in the extractive industry must report on the amount of their restoration responsibilities shown as a liability and by what accounting method they arrived at this figure. The Corporations Act also requires companies that are subject to the requirements of a Commonwealth, state or territorial law relating to environmental regulation to report through the company's annual report on the details of the company's performance in relation to this.

Companies, under the Corporations Act, must report a true and fair view of the company's performance – this could be construed to include social and environmental performance. In addition, material contingent liabilities must be reported and these could be in relation to environmental issues (e.g. mining land restoration after the mining is complete).

There is no particular set of rules, therefore, as to how corporate social disclosure should occur. Currently corporate social disclosure can take many forms. Companies may disclose information through their annual report, website, newsletters or press releases.

## Forms of corporate social disclosure

### Inventory approach

Under the inventory approach the company will provide a list of its achievements during the past year. This list may include what it has done to reduce pollution and protect the environment. It may have acquired new technologies designed to reduce greenhouse gases or restoration of an area of land that had been denigrated. The list may give details of its donations to community groups or support for such things as educational programs. Furthermore, it may be a list that details such activities as:

- how it has reduced its energy or water consumption
- how it has disposed of waste material or cut down the production of waste material
- what it has done to improve the welfare of its employees through such things as providing child care
- what it has done to improve its products and services so that they are more environmentally friendly. Companies may want to disclose their product safety measures.

### The target-based or program management approach

Under the target based or program management approach the company will report on whether it has met some pre-determined specific environmental or social targets or goals. The company will list its achievements against these targets or goals. These targets may, for example, relate to the reduction of greenhouse gases, employing more Indigenous people, reducing energy consumption or looking at the balance of men and women in managerial positions.

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### Achievement against social indicators

Another approach to corporate social disclosure is for companies to show how they measure against a social indicator, such as its health and safety record, number of work-related injuries, the gender balance of people in executive positions or net employment creation.

### Cost approach

With the cost method the company details the cost of each of its achievements. There is seldom, however, any attempt to quantify the benefits or effectiveness of such activities.

### Cost benefit approach

Under the cost benefit approach both the cost and benefit of each activity is given. Ideally under this method the reported profit is adjusted to take account of these costs and benefits.

Key Concept 12.2

**Approaches to corporate social disclosure**

Some of the more common approaches to corporate social disclosure are:

- inventory approach
- program management approach
- achievement against a social indicator
- cost approach
- cost benefit approach.

## Access to company CSR reports

The company's shareholders will receive the CSR report as part of the information sent out to them by the company. Other interested persons can usually easily access a company's CSR report from the company's website. A useful and accessible set of comparisons can be found by looking at the major Australian banks' current reporting on social and environmental issues. The banks generally have an inventory approach addressing common topical issues.

Table 12.1 CSR reporting by major Australian banks (2008)

| Bank | Annual report 2008 | CSR reports | Comments |
|---|---|---|---|
| ANZ | General purpose financial reports | Corporate Responsibility Review (36 pages) | Reference to GRI Index |
| Commonwealth Bank of Australia | General purpose financial reports | Included in GPFR | Sustainability policy included in GPFR |
| National Australia Bank | General purpose financial reports | Corporate Responsibility Review (28 pages) | Corporate Responsibility Review 2008 |
| Westpac | General purpose financial reports | Stakeholders' Impact Report (53 pages) | Reference to GRI Framework, Separate report |

Table 12.2 Social and environmental topics in annual reports of major Australian banks (2008)

| Bank | Social | Environmental |
|---|---|---|
| ANZ | • Financial literacy<br>• Volunteering<br>• Indigenous communities | • Reducing carbon footprint<br>• Supply chain management<br>• Energy Efficiency Office<br>• Carbon disclosure project |

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| | | |
|---|---|---|
| Commonwealth Bank of Australia | • Community Awards<br>• Health and Welfare<br>• Sport<br>• Arts<br>• Indigenous Australians | • Greenhouse gas emission<br>• Partnering to support the environment |
| National Australia Bank | • Volunteering<br>• Education<br>• Indigenous Australians | • Carbon neutral program |
| Westpac | • Juvenile Diabetes Foundation<br>• Skill-based volunteering<br>• Indigenous communities<br>• Talking ATMs<br>• Responsible investments | • Environmental footprint<br>• Climate change: carbon and water<br>• Sustainable business practices<br>• Great paper challenge<br>• Procurement of car fleet |

REALITY CHECK 12.3

Accessing the websites of the four big Australian banks (ANZ, Commonwealth Bank Group, National Australia Bank and Westpac) provides a wealth of approaches to 'doing' business.

Westpac in 2009 had seven major principles for 'Doing Business'. The seven principles focused on:

- a Code of Conduct
- governance and ethical practice
- employees
- customers
- the environment
- community
- suppliers.

ANZ (on their website September 2009) centred their Stakeholder Engagement Principles on six 'Cs':

- congruence
- consultative
- collaborative
- creative
- communicate
- commitment.

www.anz.com.au

www.cba.com.au

www.nba.com.au

www.westpac.com.au

The Commonwealth Bank of Australia and the National Australia Bank similarly document their vision and strategic objectives and their current activities to engage with the broadest set of stakeholders.

Each of the four banks has an apparent central concern for 'sustainability'. This corporate banking interest in sustainability is a recent phenomenon and such large corporate entities could be constructive leaders in shaping important policies that affect Australia.

## Commentary

You may wish to explore other company websites to compare and contrast with the banks, the extent of sustainability reporting.

How do we know that companies are complying with their own sustainability principles? To what extent are the policies resourced?

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## The Global Reporting Initiative (GRI)

The most widely cited benchmark in the determination of what should be included in a CSR report is the Global Reporting Initiative (GRI), an institution based in the Netherlands. The GRI was established through the United Nations Environment Program with the objective of enhancing the quality, rigour and utility of sustainability reporting. In 2002, the GRI released the *Sustainability Reporting Guidelines*. The guidelines contain both core indicators and additional indicators.

The ten principles upon which the GRI guidelines are based are:

- transparency – the preparation process should be open and clear to all
- inclusiveness – stakeholders should be engaged in the development of reports
- auditability – information should be capable of verification by an external party
- completeness – the CSR report should include all material information
- relevance –information should be significant enough to warrant reporting
- sustainability context – the CSR report should attempt to place information in a larger context of ecological or social limits
- accuracy – there should be a low margin of error
- neutrality – the selection of what is reported should be free from bias
- comparability – consistency in the preparation of the report should be maintained
- clarity – the report should be meaningful to as wide a range of users as possible
- timeliness – reports should be available on a regular basis so that information is not meaningless.

Key Concept 12.3

**Global Reporting Initiative**

The Global Reporting Initiative (GRI) is the most widely cited benchmark in the determination of what should be included in a CSR report.

Under the GRI, each of the three areas (economic, environmental and social) is detailed and if there are applicable measurement methods these are also specified.

### Economic

The headings in the financial area are customers (sales); suppliers (cost of sales); employees (salaries and wages); providers of capital (dividends); public sector (taxes and subsidies); and any indirect economic benefits, such as attracting investment into the region.

### Environmental

The headings in the environmental area include materials; energy; water; biodiversity; emissions, effluents and waste; suppliers, products and services; compliance; and transport.

### Social

The headings in the social area are employment; labour management/relations; health and safety; training and education; diversity and opportunity; strategy and management; non-discrimination; freedom of association and collective bargaining; child labour; forced and compulsory labour; disciplinary procedures; security practices; Indigenous rights; community; bribery and corruption; political contributions; competition and pricing; customer health and safety; and products and services.


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## Recent GRI initiatives in Australia

The following article gives some indication of the recent developments in CSR in Australia as a result of the GRI.

REALITY CHECK 12.4

### Global Reporting Initiative establishes new Australian base at St James Ethics Centre

The Global Reporting Initiative (GRI) and St James Ethics Centre (the Centre) have today signed an agreement to establish an Australian base for GRI.

GRI is the developer of the world's most widely used sustainability reporting guidelines – the G3 guidelines – that allow companies and other organisations to make meaningful public transparent disclosure on their economic, environmental and social performance. Over 1600 organisations globally use the guidelines as the framework through which to disclose their sustainability performance.

'In the broader context of market meltdown and climate change concerns the importance of trusted, responsible, sustainable and transparent business practice has never been greater,' says Dr Simon Longstaff, Executive Director, St James Ethics Centre.

Australia is already a regional leader – it is currently in the top five countries globally in terms of the number of sustainability reports produced by organisations based there.

'Australia has much to contribute in this space, says Rosemary Sainty, Head Responsible Business Practice at the Centre, 'and we are keen to see Australia further grow as a trusted regional hub for business.'

GRI is a network organisation. In developing relevant guidance for the disclosure of sustainability performance it brings together businesses, NGOs and Civil Society Organisations, academics, trade unions and other labour organisations and other stakeholders. In having a permanent Australian base GRI seeks to further engage a wide group of such stakeholders in the region.

'With this collaboration with the SJEC, we hope to strengthen and broaden the active and dynamic community in Australia that create, read and use sustainability reports,' said Leontien Plugge, Network Relations Manager at GRI.

GRI chose to partner with St James Ethics Centre due to its strong links with key players in regional corporate responsibility and sustainability, including its trusteeship of the Corporate Responsibility Index (CRI) – an initiative of Business in the Community (UK) and its longstanding partnership with the National Business Leader's Forum on Sustainable Development.

GRI and the St James Ethics Centre are grateful to the Australian Federal Government, through Treasury for funding the collaboration as part of the broader Responsible Business Practice funded project.

GRI and the Centre are also delighted to announce that Australia's largest accounting body, CPA Australia, will assist in the resourcing of a position in the newly founded GRI base as part of its commitment to the corporate responsibility agenda.

Its Chief Executive Officer Geoff Rankin says 'As a member of the GRI, CPA Australia strongly supports its approach to sustainable business practice. We are delighted to provide seed funding to help the St James Ethics Centre get an Australian base up and running.'

### St James Ethics Centre (Sydney)

www.ethics.org.au

St James Ethics Centre is a fully independent not-for-profit organisation. In 2007 the Centre received funding from the Australian Federal Government (through Treasury) to expand the number of companies in Australia that are actively engaged in identifying and adopting more responsible business practices.

ISBN 9780170182058

www.globalreporting.org

### The Global Reporting Initiative (Amsterdam)

The GRI vision is that reporting on economic, environmental and social performance by all organisations becomes as routine and comparable as financial reporting. The GRI framework is the most widely used sustainability-reporting framework in the world.

Source: St James Ethics Centre, Sydney, Media release, www.ethics.org.au, 17 October 2008.

Key Concept 12.4

**Development of CSR framework**

Various important agencies have together made a commitment to shape a direction on sustainable business practices. The Global Reporting Initiative organisation, St James Ethics Centre and CPA Australia, supported by Australian government funding, are involved.

## The extent of corporate social disclosure

Stakeholders and users of annual reports are demanding more and more information about a company's social and environmental impacts. Companies now accept that they have more stakeholders and therefore more responsibilities, including social and environmental issues. In addition, it is becoming more common for corporate social disclosure to be audited or checked. It also seems that corporate reporting is more likely to occur in reaction to an environmental issue, disaster or community debate and this seems to be driven by the company in an attempt to make itself appear a good corporate citizen.

www.corporate-responsibility.com.au

### Corporate Responsibility Index

A recent development in the field of corporate social disclosure has been the Corporate Responsibility Index (available online). It is a business tool initiated by Business in the Community in Britain and sponsored by some of Australia's leading newspapers, Ernst & Young and St James Ethics Centre.

The CRI was developed to provide a systematic process for companies to identify their non-financial risk. By providing benchmarks for companies committed to identifying and managing their impact on society and the environment it would allow business to improve their corporate responsibility in line with their business strategies.

Feedback on the CRI after 2007 indicated that Australian companies are in the forefront of international performance in corporate social responsibility. A similar report by PricewaterhouseCoopers in 2009 showed that more than 50 per cent of Australian CEOs believe they have insufficient information about the impact of climate change on business and desire more detail about carbon constraint.

Key Concept 12.5

**Format and extent of reporting CSR in Australia**

Reporting CSR is currently not mandated in Australia. Some companies produce a separate report, many companies choose to disclose environmental and social information in the annual report and many companies still disclose very little information about social and environmental matters.

## EXTENT OF CORPORATE SOCIAL DISCLOSURE

Companies tend to report the good things they have done in relation to social, environmental and ethical issues, but they don't report the negative impacts of their operations. Companies that have been prosecuted for environmental breaches are less likely to report that they have been prosecuted. However, companies that have been the subject of an environmental incident are more likely to engage in social and environmental disclosures after the event has taken place.

ISBN 9780170182058

Recent research has shown that an increasing number of companies is reporting on social and environmental issues in their annual reports. However, there is also evidence that in some cases inaccurate information is being reported. This can cause some readers to support companies that are not necessarily doing the right thing. It may be that, just as independent accountants (auditors) are required by the Corporations Act to investigate and report on an entity's financial systems and reports, so some kind of mechanism needs to be devised to assure stakeholders of the validity of information contained in corporate social reports.

# THE PURPOSE OF CORPORATE SOCIAL DISCLOSURE

## Reporting entities

Given that, in most cases, corporate social disclosure is voluntary and there are no specific guidelines, why are more and more companies reporting on this area of company performance?

- Pre-emptive strike against environmental/social interest groups: The company may attempt to manage those interest groups that can have an impact on the company. These groups are often very powerful and influential.
- Good public relations: The company wants to be seen as a good corporate citizen. It is concerned about its image in society and its relationship with its stakeholders. It sees that it is important to keep these groups onside and to meet their expectations.
- Forestall government interference: If a company does not meet the expectations of its stakeholders then it is possible that the government may step in to regulate the company's operations. The company is trying to stave off the introduction of more stringent requirements through self-regulation.
- Financial benefit: Some company managers may see that by reporting on social and environmental issues a company can increase its wealth. The company sees that if it is seen in a good light then this may attract certain financial benefits – investment, suppliers, employees, customers and so on.

Some company managers perceive that they are accountable for more than just the financial performance of the entity. They understand that even though CSR is problematic, it is better to have some idea as to how the company is performing in this area than to have no idea at all. In this way managers can make more informed decisions on company investments, projects and products. Other company managers may see that CSR is an opportunity to differentiate their product and thus obtain some market advantage.

## Other stakeholders

The usefulness of corporate social disclosure information is the subject of much debate and research. The research seems to indicate that some user groups have taken into consideration the social and environmental disclosures made by companies in their annual reports and that these disclosures have been of assistance when they have been making decisions about investing or lending. The annual report seems to be the single most important source of information that users consider in their decision-making process. CSR reports, whether integrated in annual reports or published separately, can help investors decide the extent to which the company is showing itself capable of meeting the challenges of a changing natural and social environment and therefore its likely future success or even survival.

Further studies are also indicating that increasing numbers of investors do consider environmental issues important in their decision-making process, in the sense of wishing to promote desirable practices (just as many people buy 'fair trade' products, such as tea or coffee, to encourage ethical treatment of workers in the countries in which they are produced). Also more fund managers and institutional investors are increasingly likely to consider social and environmental issues when making investment decisions. A consequence of this is that companies that are able to show a positive outcome in social and environmental issues are more likely to see their share price improve.

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An increasing number of companies are asking suppliers for details of their records on social, environmental and ethical issues before accepting them as one of their suppliers.

In the fields of insurance and banking some institutions are more likely to charge a higher fee to those companies that do not meet benchmark requirements regarding social and environmental issues.

Governments may use a company's record on social or environmental matters, as described in CSR reports, to assist its decision-making in the granting of licenses, mining rights, exploration permits or the like. For example, if a company is able to show from its regular CSR reports that it has a history of acting for the benefit of the community in the area in which it operates, statements contained in a project proposal about its intentions in this regard will have greater credibility.

All of this begs the question of the extent to which current CSR reporting practices do, in fact, encourage organisations to behave in an environmentally and socially responsible way and inform their stakeholders of the extent to which they have (or have not) done so.

## Sustainability

If we focus, for the moment, on the sustainability of the individual firm rather than the sustainability of the whole community or the planet, this raises the question of the extent to which the firm has an obligation to measure and report on its own capacity to survive in the future. The 'going concern' principle requires the firm to prepare financial accounts on the assumption that it will continue in business indefinitely. But what if this is not likely to be the case? There are some obvious examples of this – a mining company set up to exploit a particular deposit will only last until the deposit is mined out. Some examples are less obvious: carbon emission controls may eventually raise the costs of a business that is a big carbon producer to a point where it is no longer viable. The predicted climate changes resulting from global warming might similarly affect the viability of some businesses in agriculture, for example. The question is, what responsibility does the company have to evaluate these possible constraints on its future wellbeing and report the results of that evaluation to its stakeholders?

REALITY CHECK 12.5

### Overfishing to 'wipe out bluefin tuna in three years'

Overfishing will wipe out the breeding population of Atlantic blue fin tuna in three years unless catches are dramatically reduced, conservation group WWF says.

As European fishing fleets prepare to begin the two month Mediterranean fishing season ... WWF says its analysis showed the bluefin tuna of spawning age – those aged four years and older – will have disappeared by 2012 at current rates.

'For years people have been asking when the collapse of this fishery will happen and now we have the answer,' said Sergi Tudela, Head of the Fisheries at WWF Mediterranean ...

Source: ABC News, www.abc.net.au, 14 April 2009.

### Commentary

This is an all too familiar report on resource depletion typical of a worldwide phenomenon.

1 In this report, what businesses may not be 'going concerns' as a result of this forecast, and what responsibility do they have to their shareholders and other stakeholders?
2 What impacts will this prediction have on communities and what does it say about attitudes toward sustainability by the owners/users of resources?
3 Who should be more informed and outspoken about such matters?


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## Future challenges

Such a dynamic area will undoubtedly pose many challenges for accountants and managers. These could include:

- The costs of corporate social disclosure are more easily absorbed by a large company than by small- and medium-sized companies and this will be a challenge in the future for the legislators to provide a framework that is equitably applicable to all.
- The move towards mandatory corporate social disclosure (currently mostly voluntary), seems inevitable, whether through accounting standards and/or directly via legislation setting down agreed criteria and reporting frameworks.
- Companies need to establish credibility through reporting on social and environmental issues via audit processes for accountability (currently there is little or no independent checking of CSR reports).
- Changes are constantly occurring in the economic environment shaped by movements in technology and socio-political culture.
- Companies feel increasing pressure – nationally and globally – from such issues as atmospheric and water pollution, depletion of resources (especially hydrocarbons and water) and the effects of climate change.
- Technological developments in communication will affect the ways that companies report to their stakeholders and the demands that those stakeholders will place upon companies for up-to-date information.

# Test your knowledge

1 What is meant by corporate social responsibility?

2 What is the triple bottom line?

3 What are the three areas for corporate social disclosure?

4 Why do companies engage in corporate social disclosure?

5 What corporate social disclosure is required by companies in Australia?

6 Identify some of the types of information that are reported by Australian companies under the area of corporate social responsibility in the following areas:
   a social reporting
   b environmental reporting.

7 Who are the stakeholders of a company?

8 Corporate social disclosure, sustainable reporting and/or triple bottom line reporting are synonymous terms. Broadly identify the expected content of such reporting in the business context.

# Test your understanding

## Topic guide

- Responsibility for corporate social disclosure: 12.1, 12.10
- Need for corporate social disclosure: 12.2, 12.6, 12.8
- Ethical aspects of corporate social disclosure: 12.3, 12.5
- Community attitude to corporate social disclosure: 12.4
- Company commitment to corporate social disclosure: 12.7
- Nature of corporate social disclosure: 12.9
- Problems with corporate social disclosure: 12.11
- Assessment of corporate social disclosure: 12.12

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*The following questions may be answered in the form of essays or 'dot point' reports. They may also be used as topics for discussion in groups or as class debates.*

12.1 'Accountants report on numbers that are both reliable (faithful representations) and relevant and should not have to elaborate on social or environmental practices of the entity.' Discuss this statement.

12.2 'Corporate social disclosure is optional and should remain so.' Discuss this statement.

12.3 'Business entities become good citizens when they report in a corporate responsible manner.' Elaborate on this statement.

12.4 'Stakeholders are tending to favour more and diverse information and are less satisfied with a limited bottom-line perspective.' Discuss this proposition with consideration of a range of stakeholders in different business contexts.

12.5 'Ethical financial reporting practices are inseparable from socially responsible reporting.' Do you agree with this statement?

12.6 Australian public companies are competing for the moral high ground in the diverse ways they volunteer social and environmental reporting as an adjunct to the mandated general purpose financial reports. Explain with reference to examples.

12.7 'Australian companies provide a fraction of their resources to sustainable social and environmental reporting.' Elaborate on this statement.

12.8 'Stakeholders other than shareholders drive the movements towards public business reporting on sustainable practices.' Explain this statement.

12.9 'Acceptable sustainable reporting should be premised in a framework that includes relevance, inclusivity, completeness, transparency, neutrality, comparability, clarity, timeliness and auditability.' Elaborate on this statement.

12.10 'Accountants do not need to resist or promote corporate social disclosure. They are required simply to follow the laws on reporting!' Respond to this statement.

12.11 Australians believe in a 'fair go' and they also care for the environment. If these observations are valid why is reporting on the triple bottom line problematic?

12.12 Examine the pattern of reporting in a socially responsible manner by reference to a sample of Australian public companies and comparing their annual reports on this content over the past several years.

# Investigation

www.westpac.com.au

1 Visit the Westpac website and review the 2009 'Stakeholder Impact Report' and answer the following questions:
   a What CSR indicators does Westpac report against?
   b How did the bank determine the Australian stakeholder indicators?
   c What does Westpac mean by Socially Responsible Investment products?
   d How does Westpac assist staff with community work and involvement?
   e In 2004 Westpac stated:

> Our institutional lending and investment criteria include detailed analysis of customer, industry, country and facility risk. We take into account the quality of management, including perceptions of their integrity and ethics.


ISBN 9780170182058

Critically review this claim. What additional information would you like to see to support this claim?

2 Identify two Australian public companies that appear to be leaders in sustainable reporting and two companies that are less inclined to go beyond the mandated requirements. In your investigation suggest why the chosen companies have reported to their stakeholders with varying emphases.

3 Access the AASB website and the IASB website and explore any current developments in sustainability issues that could result in the formation of standards. Write a report explaining these and showing how they might affect the reporting by Australian corporations.

4 Investigate the Global Reporting Initiative and write a report explaining the current links between the GRI and the accounting profession, legislators and other stakeholders in Australia.

## Essay

1 Following are two definitions of triple bottom line (TBL) reporting:

> In the purest sense, the concept of TBL reporting refers to the publication of economic, environmental and social information in an integrated manner that reflects activities and outcomes across these three dimensions of a company's performance.
>
> Source: Group of 100, 2003

> The external reporting on the economic, social and environmental performance and impacts of an entity can have four potential purposes:
> - to improve the efficient operation of entities in achieving their legal purpose (e.g. highlighting areas of an entity's negative economic, social and environmental impacts and also increasing transparency and strengthening accountability for users)
> - to help meet the preferences of present and future investors, consumers, employees, creditors, suppliers and insurers
> - to inform stakeholders with no direct ownership, investment or consumption interests and/or
> - as a significant public policy tool to maximise human welfare over time.
>
> Source: Institute of Chartered Accountants New Zealand, 2002

a Compare and contrast the two definitions.
b Critically evaluate both definitions.

2 Consider the arguments for and against the two proposals to deal with environmental reporting that are discussed in the article below. Which approach do you support? Elaborate.

### Public show and tell is the way to incentivise directors and their companies to behave nicely

by Ian Ramsay

**Two models have emerged to ensure directors are socially responsible. Disclosure of company practices is the superior option, writes Ian Ramsay.**

There is enormous interest in the role of company directors in implementing corporate social responsibility (CSR). There are many reasons for this, including the growing

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power and influence of companies in our daily lives, privatisations that have led to companies taking over what were government functions and the significant controversy created by James Hardie in its dealings with those who contracted asbestos-related diseases as a result of contact with James Hardie products.

According to commentators, companies should engage in socially responsible activities because such activity can increase sales and market share, increase appeal to investors, strengthen the brand position of the company and increase the company's ability to attract, motivate and retain employees.

But how do we go about ensuring that company directors do engage in socially responsible activities? Two alternatives have recently been highlighted by two separate inquiries dealing with CSR and company directors. The inquiries are being conducted by the Corporations and Markets Advisory Committee (the federal government's main corporate law reform advisory body) and the parliamentary Joint Committee on Corporations and Financial Services.

The terms of reference for both inquiries focus on two approaches to directors and CSR. The first is to change the law of directors' duties to require directors to take into account the interests of stakeholders other than shareholders when making corporate decisions. The second focuses on company disclosure of CSR practices. It does not mandate that directors adopt certain practices but requires disclosure of what the company does with a view to ensuring that those practices are debated and evaluated outside the company.

A number of potential problems arise from changing the law of directors' duties to allow or require directors to prioritise non-shareholder interests over the interests of shareholders. This approach may make directors less accountable, may be inconsistent with other parts of our corporate law and would result in vesting additional discretions and powers in the Australian Securities and Investments Commission and the courts when it is not clear they would want these additional discretions or whether it is an appropriate role for them.

The disclosure approach has grown in importance and we have seen significant changes in disclosure of CSR practices. The 2005 KPMG international survey of CSR reporting, which examined the CSR reporting of the world's largest corporations (about 1600 of them), found CSR reporting had increased steadily since 1993 and substantially in the past three years. The type of CSR reporting had also changed significantly, from purely environmental reporting until 1999 to sustainability (social, environmental and economic) reporting.

A prominent example of the disclosure approach to CSR is the recent British requirement for listed companies to publish an annual Operating and Financial Review (OFR), in which they must identify and disclose material social and environmental matters. Earlier this year, Britain's Accounting Standards Board issued a reporting standard on the OFR.

A critical issue is ensuring that any disclosure does accurately reflect the actual practices of the company. However, the approach has several advantages. Such disclosure can generate wide-ranging and important debate on the value of particular practices. It has the flexibility to promote different practices to suit the wide variety of circumstances companies operate in. Disclosure also helps shareholders and other stakeholders monitor CSR practices and can help companies build stronger relationships with stakeholders. Directors may also benefit from learning about the CSR practices of other companies and disclosure should create a climate in which directors reflect on their company's CSR practices in order to determine if they are appropriate.

Source: *Australasian Business Intelligence*, 21 July 2005.



iSBN 9780170182058

# Ethics case study

Xplosiva Australia Ltd is a successful mining company upstream from a large regional farming community. The mining company accesses the local river for water and waste discharge. Occasionally excess residual mining run-off enters the river. Some of the native bird habitats have been disrupted and one species of local crustacean is threatened by the changing water content. A parent's group has been raising concerns about the health of their children, who swim in the river, some with apparent adverse effects.

## Discuss

a As the financial accountant for the company how would you shape company policy as a local 'citizen'?
b How would this matter be reported in the annual company reports?
c Consider your responses in light of the ethical and/or legal reporting requirements and in the context of the sustainability of the business.

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# Glossary

**Absorption costing (full costing)**
the method whereby the cost of inventories is determined so as to include the appropriate share of both variable and ȧxed costs, the latter being allocated on the basis of normal operating capacity (AASB 102)

**Accounting standard**
a regulation produced by the Australian Accounting Standards Board (AASB) specifying the accounting

**Accrual**
accounting whereby income and expenses are identiȧed with a speciȧc period without regard to receipt or payment of cash

**Annual general meeting (AGM)**
the meeting held each year of the shareholders of public (and some proprietary) companies to receive the annual report and ȧnancial statements, approve recommended dividends, and appoint directors and auditors

**Annuity**
a cash Ąow which is constant each period

**Assets**
resources controlled by an entity as a result of past events and from which future economic beneȧts are expected to Ąow to the entity. These may be current (to be used up or turned into cash within 12 months) or non-current (any asset that is not current)

**Audit**
the process of formally reviewing accounting systems and the reports they produce. May be external (carried out by someone outside the business) or internal (carried out by the business's employees)

**Auditor**
an independent accountant employed to review and report on a ȧrm's accounting systems and the ȧnancial statements produced

**Australian Accounting Standards Board (AASB)**
a statutory body with a range of responsibilities including the development of a conceptual framework and the development of standards within an international context

**Australian Securities and Investment Commission (ASIC)**
the statutory authority with its own legislation required to enforce the Corporations Legislation of Australia

**Australian Securities Exchange (ASX)**
a public company providing ȧnancial services related to the marketing and listing of public companies in Australia

**Avoidable costs**
costs that are speciȧc to one of the options and can be 'avoided' or will not occur if the alternative option is taken up

**Bankruptcy**
the situation where an individual is insolvent (see 'Insolvency')

**Board of directors**
the committee appointed by the shareholders of a company to run it on their behalf

**Bonus shares**
shares issued free of charge to shareholders in proportion to their shareholdings, funded out of reserves

**Breakeven point**
the volume of production where the total variable cost plus the ȧxed costs equal the selling price

**Budget**
a short or long-term plan of action for the future operating activities of a business expressed in monetary terms

**Capital budget**
proposed investment strategy over the long-term for the purchase or disposal of non-current assets and liabilities

**Cash budget**
a plan usually for the immediate short-term future on all the movements of receipts and payments of all kinds in a business – income, capital and equity

**Cash equivalents**
amount held for the purpose of meeting short-term cash commitments rather than for investment or other purposes

**Cash flow**
an inĄow or outĄow of cash and cash equivalents

**Cash on hand**
notes and coins held on the business premises

**Cash or cash equivalents**
highly liquid assets capable of being turned into cash at very short notice without loss of value in the normal course of business

**Company**
an incorporated business formed by a legal process in terms of the Corporations Act and having a separate legal identity

**Comparability**
a qualitative preparation feature of ȧnancial information presented by reporting entities as elaborated in the conceptual framework

**Conceptual framework**
a statement as a preface to standards providing concepts or general ideas which determine how reports are prepared for general users

**Constitution**
a set of internal rules for the management of a company

**Contribution margin**
sales income less variable costs per unit

**Control**
a process whereby a business exerts inĄuence over decision-making throughout an action from planning to completion to ensure that the business objectives are attained

**Conversion costs**
those costs, direct labour and manufacturing overhead costs that convert the direct materials into a ȧnished product

**Coordination**
strategies to link all relevant personnel and information to maximise decision-making in achieving business goals

**Corporate governance**
mechanisms such as the Board of Directors and audit committees which exist to provide some assurance to the shareholders that the management of a company is accountable for their actions and to minimise agency costs in respect of their management

**Corporate responsibility index**
a systematic approach to managing, measuring and reporting on the various impacts that businesses have on society and the environment

**Corporate social disclosure**
reporting that provides information about the extent to which a company has been able to meet its corporate social responsibilities with particular emphasis on social, environmental and ethical behaviours

**Corporate social responsibility**
the reporting of societal impacts and environmental impacts of business activities in addition to ȧnancial outcomes, linked to ethical values and legal requirements associated with community expectations

**Corporations Act**
Commonwealth legislation enacted in 2001 related to the formation, operation and liquidation of incorporated bodies in Australia

**Cost accounting**
the measuring, analysing, recording and reporting on the cost of a product or service

**Cost centre**
a business unit, function or activity which can be held responsible for certain costs

**Cost leadership**
a strategy focusing on making a product or service the least expensive and therefore potentially the most competitive of its kind in the market

**Cost of capital**
the weighted average cost of ȧnance used for a project

**Cost v benefit**
ȧnancial accounting is resource demanding and relevant ȧnancial information is critical for good decision-making by the users. Quality information is costly to generate, however, the beneȧts are evident

**Creditors (accounts payable)**
amounts owed by the ȧrm to suppliers of stock

**Current cost**
the market cost of replacing an asset


ISBN 9780170182058

**Debentures**
loan securities issued by a company, repayable at a certain date, bearing a fixed rate of interest (may be listed on the ASX and traded in the same way as shares)

**Debtors (accounts receivable)**
amounts owed to the firm by customers who have purchased goods or services on credit

**Debtors collection schedule**
a worksheet identifying the pattern of usual payments from trade debtors over the life term of each debtor

**Demand deposits**
amounts held at financial institutions that the business can withdraw at any time and will not have been deposited for any specific period of time

**Differential income**
the difference between the relative income to be earned from two different alternatives

**Differentiation**
a marketing strategy based on emphasising the qualities of a product which make it different and superior to its competition

**Direct cost**
costs that can be traced to a product or service with a high degree of accuracy

**Direct labour**
the amount paid to the employees which is traceable to the finished product

**Direct materials**
raw materials that are directly traceable to the product being made

**Disclosure**
the principle that reporting entities should reveal in their published reports all information needed for the users of these reports to make informed decisions about those entities particularly in relation to choices they have made related to the accounting methods selected or changed

**Discounting**
the conversion of a future value to its present value

**Dividend**
the share of a company's profit paid out to each shareholder

**Efficiency ratios**
ratios that measure the effectiveness of management (e.g. debtors' collection period, inventory turnover)

**Entity**
an accounting activity (business) that may also be a legal entity

**Equity**
the difference between the assets and liabilities of an entity, representing the value of the owners' investment in the business

**Ethics**
a set of moral principles or rules for behaviour

**Expense budget**
that segment of an operational budget focused on operating expenses such as selling or administration

**Expenses**
decrease in economic benefits during the accounting period in the form of outflows or depletions of assets or incurring of liabilities that result in decreases in equity, other than payments to the owner(s)

**Fair value**
a judgement expressed in the conceptual framework related to the valuation of an asset

**Faithful representation**
a qualitative preparation feature of financial information presented by reporting entities, focusing on evidence and objectivity

**Financial accounting**
provision of financial information to external parties such as investors, lenders and governments, to assist them in the making of economic decisions about the business

**Financial performance**
the assessment of budget outcomes applying financial analysis tools such as liquidity or profitability measures used to improve business outcomes, motivate, reward or challenge personnel

**Financial Reporting Council**
an Australian statutory body having budgetary oversight of the AASB

**Financing activities**
cash flows that result in changes in the amount of the contributed equity and borrowings of the entity

**Fixed costs**
costs incurred that remain constant irrespective of the volume of production

**Framework (The)**
the Framework for the Preparation and Presentation of Financial Reports, a conceptual outline developed by the International Accounting Standards Board guiding the purpose and content of general purpose financial reports.

**Future economic benefit**
One of the conditions that determines the definition of an asset

**Gains**
An aspect of the definition of income as found in the standard being an inflow of economic benefit not being revenue

**Gearing**
the relationship between owner's equity and borrowings – relatively high borrowings means high gearing, and the reverse

**General meeting**
a meeting of the shareholders of a company called to enable them to make decisions on matters relating to the company (see 'Annual general meeting')

**General purpose financial reports (GPFR)**
financial reports whose users rely on them as their main or sole source of information in making economic decisions about the entity producing the report

**Global reporting initiative**
an initiative undertaken by a not-for-profit organisation to build sustainable corporate socially responsible behaviours

**Going concern**
the assumption that a business has an ongoing future without intention to significantly scale back its activity or liquidate. This definition has an important influence on the way a balance sheet has meaning

**Highly liquid investments**
investments that are readily convertible into cash and are subject to an insignificant risk of change in value

**Historic cost**
the recognition of costs based on the original transaction

**Horizontal analysis**
a technique used to analyse line items in the different (usually subsequent) accounting periods

**Implementation guidance**
supplementary notes issued by the International or Australian Accounting Standards authorities amplifying or explaining accounting standards

**Income**
revenue and gains resulting in an increase in economic benefits during the accounting period in the form of inflows or enhancements of assets or decreases of liabilities that result in increases in equity, other than those relating to contributions from the owner(s)

**Incorporated association**
a non-for-profit organisation that has incorporated in terms of the relevant state legislation

**Indirect costs (overhead costs)**
costs that cannot be easily and conveniently identified with a particular product

**Indirect labour**
the cost of labour paid to those whose task cannot easily be traced to the finished product being made

**Indirect materials**
those raw materials that cannot be traced to a particular unit of production and are a part of manufacturing overhead

**Insolvency**
the situation where a business's liabilities are greater than the value of its assets and it is unable to repay its debts as they fall due

**Interim dividend**
a dividend payable to shareholders during the course of the financial year at the discretion of the director(s) as permitted by the company's constitution

**International Accounting Standards Board (IASB)**
an independent organisation based in London largely responsible for developing international accounting standards

**International Financial Reporting Interpretations Committee (IFRIC)**
when standards do not cover particular contentious accounting matters IFRIC has the authority to make interpretations

**International Financial Reporting Standard (IFRS)**
a standard as produced by the IASB

ISBN 9780170182058

**Investing activities**
cash ꝏows relating to the purchase and sale of property, plant and equipment and other investments not included in cash equivalents

**Investment centre**
a business unit where the manager not only has control over the proꝺts of the unit but also has some discretion as to the amount of investment undertaken by the unit

**Job order costing system**
a system used when a business creates a single unit or multiple units of a distinct product, makes a product to customer order or provides a service to meet speciꝺc customer requirements

**Leverage (gearing)**
the relationship between owner's equity and borrowings – relatively high borrowings means high leverage or gearing, and the reverse. Usually measured by the debt/equity ratio

**Liability**
present obligations of the entity resulting from past events, the settlement of which is expected to result in an outꝏow from the entity of resources embodying economic beneꝺts. These may be current (an obligation that must be met within 12 months) or non-current (an obligation that must be met in more than 12 months' time)

**Limited liability**
the principle that the liability of the shareholders for the ꝺrm's debts is limited to the amount, if any, unpaid on their shares

**Liquidation**
the process of selling or converting a business's assets into cash, usually as part of a winding-up of operations (see 'Winding-up')

**Liquidity**
the ability of a business to satisfy its short-term debt obligations by maintaining adequate cash reserves

**Lobby group**
an independent group formed to exert inꝏuence over legislation

**Management accounting**
provision of ꝺnancial information to internal managers to assist with control and improvement of the performance of the business

**Manufacturing business**
a business that earns most of its revenue by converting raw materials or components into products that are sold to customers

**Manufacturing overheads**
costs that are part of the manufacturing process other than direct materials or direct labour

**Market ratios**
ratios that relate a company's market share price to aspects of its performance such as price/earnings ratio or dividend yield

**Mark-up**
the amount (either in dollars or percentage) added to the unit cost price of a product or service to determine its selling price

**Master budget**
the budgeted income statement and the budgeted balance sheet together with all the functional documents that contribute to these two key insights into the future situation of the total business. These documents would include sales, production, purchases, operating expenses budgets, cash budgets and capital expenditure budgets

**Materiality**
a quality of relevance focusing on aggregation and rounding

**Mixed costs (semi-variable)**
costs that contain elements of both ꝺxed and variable costs

**Mutually exclusive projects**
the choice that must be made between two projects, where the acceptance of one will result in the rejection of another

**Net present value**
the ꝺgure that results from discounting all the cash inꝏows and cash outꝏows of a project at the minimum discount rate of return and then adding and subtracting the resultant present values

**Neutrality**
lack of bias or subjectivity being part of the deꝺnition of reliability

**Non-financial performance**
quantitative outcome measurements that are important to the success of a business (other than ꝺnancial analysis) such as customer satisfaction, units produced on time or employee morale

**Normal costing**
the costing system which determines the cost of a product or service using actual direct materials, actual direct labour and a predetermined overhead rate

**Operating activities**
cash ꝏows that relate to the revenue producing activities of the entity that are not investing or ꝺnancing activities

**Opportunity costs**
the opportunity or beneꝺt not obtained by taking up one option and therefore not being able to take up the alternative option

**Participative budgeting**
budgets that have allowed personnel within units and cost centres of the business to contribute their expertise and knowledge and to interact in the shaping of the relevant budget with higher levels of management

**Payback period**
the period of time it takes for the cash ꝏows from an investment to exceed the initial cost of the investment

**Performance report**
a document that identiꝺes and analyses variances between budgeted and actual outcomes to enable problems to be rectiꝺed and assist in formulating future budgets

**Period cost**
costs that relate to the current accounting period (and are not product costs) which are treated as an expense as they do not have a future economic beneꝺt to the business

**Philanthropy**
acts of charity on a large scale usually associated with business or the wealthy

**Preference shares**
shares with a ꝺxed dividend and very limited voting rights whose owners have preference over ordinary shareholders in the payment of dividends and (in some cases) return of capital in the winding-up of a business

**Present value**
the present day value of a future amount

**Price variance**
the difference between the actual quantity of inputs multiplied by actual price and the actual quantity multiplied by the standard price

**Prime costs**
costs that are direct manufacturing costs which are direct materials and direct labour

**Product cost**
the cost of producing an item (becomes an expense when the item is sold)

**Production budget**
the budget developed by manufacturing businesses to identify the cost elements of raw materials, labour and overhead cost in the production of units

**Profit centre**
a business unit responsible for both costs and income

**Profit/loss**
excess/shortfall of income over expenditure during an accounting period – the amount by which the owner's equity has grown or decreased over that period other than by capital contributions or withdrawals

**Profitability**
a measure of how well the business has utilised the available assets to gain a return on the equity invested

**Proprietary company**
a company with not more than 50 non-employee shareholders, which may not approach the public for funds (has the words *Proprietary Limited* after its name)

**Prudence**
a quality of reliability found in the framework that requires the preparers of reports to avoid undue optimism in evaluations and assessments

**Public company**
a company with unlimited shareholding permitted to approach the public for funds (has the word *Limited* after its name)

**Public liability insurance**
an insurance policy taken out to indemnify a business or person against claims made by the public for loss or injury caused by negligence, defective products or accidents for which the insured may be wholly or partly responsible

**Quantity variance**
the difference between the actual quantity of inputs multiplied by the standard price and the standard quantity allowed for output multiplied by the standard price

**Quotation**
an estimate given by the producer to the customer before the good or service is


ISBN 9780170182058

provided on the basis of which the customer will decide whether or not to purchase the product or service

**Raw materials**
materials used in the making of a product which can be either direct or indirect materials

**Realisable value**
that future beneȧt gained from an arm's length transaction related to an asset at the current time

**Receivership**
the position of a company when a secured creditor applies to the court for a receiver to be appointed to take possession of the secured assets and sell them for the beneȧt of the creditors

**Redeemable preference shares**
shares that may be bought back by the company if it so chooses

**Relevance**
a qualitative preparation feature of ȧnancial information presented by reporting entities that the information prepared must be of value to users in their decision-making

**Relevant costs**
when two alternative courses of action are being evaluated, relevant costs are expected costs to be incurred in the future which differ between the
two options

**Reliability**
a qualitative preparation feature of ȧnancial information presented by reporting entities with such information being unbiased, factual, objective and complete

**Replaceable rules**
rules for the internal management of companies contained within the Corporations Act, which can be overridden by provisions in a company's constitution

**Reporting entity**
an entity having users who rely on its reports as their main or sole source of information for decision-making about that entity. It is obliged to comply with accounting standards

**Reserves**
part of the equity of a company consisting of proȧts or gains retained within the company

**Responsibility accounting**
an approach used to monitor performance whereby personnel in an organisation who incur expenditure and generate income are identiȧed and made responsible for these costs and income

**Revenue**
an element of the deȧnition of income arising from the trading activities of a business as contrasted to gains

**Safety margin**
the excess of expected sales volume over breakeven volume

**Sales budget**
a revenue budget focusing on the products an organisation anticipates will be sold

**Secured debt**
loans that give the lender the right to take possession of speciȧc assets in the event of loan default (ȧxed charge) or to take priority in beneȧting from the sale of the debtor's general assets (Ąoating charge)

**Service business**
a business that earns most of its revenue by providing a service to customers

**Shareholder**
person or entity owning legal divisions or proportions of the equity of a company described as shares

**Shares**
units of ownership in a company

**Shelf company**
a company formed, usually by a ȧrm of accountants or lawyers, which can be sold to anyone wishing to incorporate their business

**Solvency**
a person or company is able to pay all debts as and when they fall due

**Stakeholder**
a person, entity or organisation with legitimate interest in the ȧnancial general purpose reports

**Standard costing**
the costing system which determines the cost of a product or service based on standard costs for direct materials, direct labour and manufacturing overheads

**Statement of accounting concept**
a term applicable to aspects of the current Australian Framework

**Statement of changes in equity**
a ȧnancial statement showing how the elements of equity, share capital, retained earnings and other components have changed over a period

**Statement of comprehensive income**
a ȧnancial statement summarising the revenue, gains and expenses for a period, together with the associated income tax incurred

**Statement of financial position**
a classiȧed statement showing the assets, liabilities and equity of a business (also called a balance sheet)

**Stock (inventory)**
goods purchased by a merchandising ȧrm for the purpose of resale at a proȧt

**Sunk costs**
costs which have already been incurred and are therefore not relevant in decision-making

**Sustainability**
business practices that permit continuing business prosperity in the context of people and place

**Term deposit**
an amount of money deposited into a ȧnancial institution for a ȧxed period of time earning a set rate of interest

**Timeliness**
a qualitative preparation feature of ȧnancial information presented by reporting entities that the information should be available in time for it to be useful

**Trading (merchandising) business**
a business that earns most of its revenue by reselling stock at a proȧt

**Trend analysis**
used to analyse items over several accounting periods that can then be extrapolated to predict future trends

**Triple bottom line**
corporate social disclosure reporting that attends to ȧnancial measures and more qualitative measures and impacts of the business related to social and environmental interactions

**Unavoidable costs**
costs that have already been incurred (sunk costs) or will not differ between the alternative options

**Understandability**
a qualitative preparation feature of ȧnancial information presented by reporting entities that information should be capable of being understood by the users of the reports, assuming that the users have a reasonable level of expertise

**Variable costs**
costs that vary in direct proportion to the volume of production

**Variance analysis**
the comparison of the actual results compared to the standard amount

**Voluntary administration**
situation where an administrator (an accountant qualiȧed as a liquidator) is appointed by either a creditor owed money that the company will not or cannot pay, or a majority of the company directors, to take over the running of the company to try to solve its ȧnancial problems

**Winding-up**
the process whereby a company's assets are liquidated, its creditors repaid, any remaining balance returned to shareholders, the company's affairs are brought to a conclusion, and the company ceases to exist in law

iSBN 9780170182058

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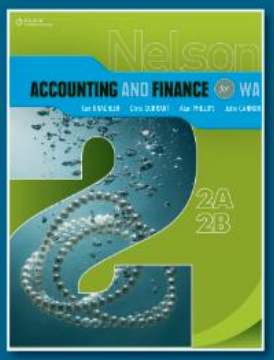


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ISBN: 978-0170182058
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