Macmillan

VCE Accounting

Units 1 & 2

5th edition

Neville Box

Edited by Keith King

CPA AUSTRALIA

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Foreword

VCE Accounting Units 1 & 2, fifth edition, continues the tradition of a student-friendly textbook written for Victorian students studying VCE Accounting. It has been updated and improved to meet the needs of the revised VCAA Course of Study 2012–2016.

This book is written in a very accessible style for VCE students and follows a step-by-step approach in presenting the course. The sequence of text is logical and balanced in the allocation of time.

VCE Accounting Units 1 & 2 is packaged with an access code for the book's website which provides templates for students to model their work on. These templates satisfy the requirements of the Accounting Examination panel and assist students to understand accounting records and reports. If they wish, better students can progress ahead and all students can exercise self-direction from the challenging, yet manageable tasks. Excellent case studies, theory questions, Internet activities and graduated exercises promote student learning.

The links between practical and theoretical tasks are clear, encouraging a wide range of skills in the application of accounting knowledge. The summary questions at the end of each chapter offer excellent examination preparation, and are a comprehensive way for students to summarise each chapter. The theory and practical questions focus student understanding on the key knowledge and skills required in the area of study relating to that chapter.

The clear explanation of all activities is the strongest feature of this textbook, ensuring that it is suitable for the range of abilities we find in the accounting classroom.

This is an excellent text and I strongly recommend it to you.

Keith King
Editor

Introduction

VCE Accounting Units 1 & 2, fifth edition, is an introductory text in single entry accounting, for both service and trading businesses. This text concentrates on the areas of study as defined for Units 1 & 2 of the Victorian Certificate of Education (VCE) Accounting course, 2012–2016. The first half of the text relates to recording and reporting of financial events for service type businesses. The second half covers the accounting needs of businesses involved in trading activities and is based on the perpetual inventory system. Prior knowledge of Accounting is not required to complete the material covered in this text.

Features

At the end of each chapter:

- a **glossary of key terms** lists new terms introduced in the chapter. Accounting uses many specialist terms and it is vital that students use the terms appropriately, particularly in final examinations
- **summary questions** highlight the major theoretical concepts introduced in each chapter. Students can complete questions progressively as they work through the chapter, preparing summaries as they go
- **practical exercises** challenge students as they become progressively more difficult. Teachers may recommend that students complete every exercise in a chapter, or select specific exercises. Ideally, all exercises should be attempted to ensure thorough coverage of the material.

Some chapters also contain:

- **Case studies** revising topics covered in a series of chapters and testing for greater understanding of the accounting system. Case studies may be used as revision material, as homework exercises or as part of a folio of exercises.
- **Internet activities** supplementing and complementing the core material presented in the book. Teachers and students are encouraged to use the internet in Accounting to access up-to-date information and to stimulate interest in the world of business.

OneStopDigital

This new fifth edition of *VCE Accounting Units 1 & 2* includes *Microsoft Excel*® templates for many of the practical exercises in the text. The exercises supported by these templates are indicated in the text by an icon next to the question number. In the 2012–2016 VCE study design all students are required to complete some of their school-assessed coursework using ICT, so teachers and students are encouraged to use these templates as part of their assessment.

Feedback

Neville Box, the author of this text, is happy to receive feedback about the book or to answer questions from colleagues in the teaching profession. Email: **box.neville.n@edumail.vic.gov.au**

CPA passport program

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A special thank you once again to Keith King, my consulting editor for this text. It is always reassuring to have someone as experienced as Keith watching over my work. I feel privileged to have been given the opportunity to work with Keith over many years on the Macmillan series. Thank you, Keith, for your guidance, your advice and for your continued support.

Having moved on from St Joseph's College, North Melbourne after thirty years of service, I express my sincere gratitude to the many people I have known in the St Joseph's community. Thank you and farewell. May you all continue to *Let Your Light Shine* and may the memories live on. The writing of this text started in my last year at St Joseph's and has been completed in my first year at my new 'home', Victoria University Secondary College. Thank you to my new Principal, Genevieve Simson, for your encouragement and support with this new text. Victoria University is an exciting new venture in education and I feel privileged to be part of it as it strives to become a significant provider of education in Melbourne.

Neville Box
Victoria University Secondary College
March 2011

Dedication

To my two favourites, Andrew and Michelle–thank you for your ongoing support.
And to Therese, thank you for everything.

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UNIT 1

Establishing and operating a small business

Chapter 1

Accounting for small business

OBJECTIVES

At the completion of this chapter, you should be able to:

- explain the concept of small business
- describe the role of accounting in the small business sector
- distinguish between financial data and financial information
- explain the link between accounting and financial information
- make a list of a variety of users of accounting
- state the purpose of the Statements of Accounting Concepts (SACs)
- describe the four key qualitative characteristics of accounting
- outline generally accepted accounting principles.

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1.1 The concept of small business

Small businesses have an important role to play in the Australian economy. They can be found in virtually every suburb or country town. Small businesses strive to satisfy a demand by consumers for goods and/or services in a specific area. But what exactly is a small business? A strict definition is almost impossible. However, a small business usually has the following distinguishing features:

- A small business is usually a sole proprietorship (one owner) or a partnership business (a few owners).
- The owner is usually the manager of the business.
- Most of the finances required by the business are contributed by the owner(s).
- The turnover of the business is relatively small.
- The business has few, if any, employees.
- The firm tends to be a local business.
- The market share achieved by the business is relatively small.

However, a small business may not have all of the above characteristics. A small business may be registered as a company. Some small businesses employ 10 or 20 people and may be heavily financed by loans from banks or other financial institutions. It is important to realise that there is not a clear-cut point at which a 'small business' becomes a 'big business'. However, the features listed above do provide a description of a typical small business. This text concentrates on accounting for small businesses and will relate to typical small businesses such as local milk bars, plumbers, clothing stores, dentists and the like.

1.2 The role of accounting in the small business sector

Due to the limited resources of the typical small business, such organisations do not usually employ their own financial experts on a full-time basis. However, not all business owners have the necessary background to deal with such financial matters as the Goods and Services Tax (GST), income tax deductions, cash management, and the recording of business transactions. Therefore there is often a need for 'outside' assistance for the average small business owner. Such assistance may be gained through consultation with a qualified accountant. Such an accountant would usually be a member of either the **Australian Society of Certified Practising Accountants** (that is, a CPA) or the **Institute of Chartered Accountants in Australia** (that is, a CA). These accountants can provide a wide range of financial advice, including advice on matters such as:

- evaluation of future prospects for a potential business
- design of an accounting system for a small business
- computerised accounting packages
- taxation, including payroll tax, income tax, the GST and Business Activity Statements (BAS)
- how to determine the selling prices of goods being sold
- how to control transactions made on credit
- how to manage the inventory of the business (that is, the goods that are sold by a trading firm)
- the types of financial records that should be kept by the business
- sources of finance for small businesses
- investment opportunities for small businesses
- budgeting, or planning for the future of the business.

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Small business owners may also decide to consult with financial advisers other than accountants. Banks, for example, often provide advice to small business owners as part of an overall package of business finance. Government departments also support small businesses because they play an important role in the Australian economy. State governments have websites that provide resources to assist small business owners with financial advice. For Victorian business people, the state government website is <www.vic.gov.au>, with a specific link to small business (refer to <www.business.vic.gov.au>).

1.3 Financial data and financial information

It is important to be able to distinguish between financial data and financial information. *Data* refers to a collection of raw facts; *information* is data put into a meaningful form for a particular use. In accounting, data will often be recorded on business documents. These documents will then be used to make entries in a recording system. Such documents will be used in relation to a particular part of the accounting system and the end result should be some type of meaningful information. Consider the business document in figure 1.1, which is a receipt issued by the firm Central Sports.

Figure 1.1 Cash receipt

CENTRAL SPORTS	DATE:	2/2/15
ABN 21 219 192 222		
RECEIVED FROM: David Semini		
THE SUM OF: Thirty-three dollars		
Cash sale	$	30
GST	$	3
FOR: 2 × cricket balls		
TOTAL RECEIVED	$	33

This receipt contains raw data or facts about one business transaction. It states quite clearly that the business trading as Central Sports has received $33, including $3 GST. However, when these facts have been processed and entered into an accounting record, they become even more meaningful. For example, at the end of a week's trading, the manager of Central Sports can determine the total of such receipts and come up with a weekly summary of the cash sales made by the business. The total cash sales over a week's trading is a simple example of financial information that originates from raw data on business documents.

1.4 Financial information and accounting

A well-designed accounting system will provide the owner with information about such things as sales levels, profit margins, debts owed to the business and debts owed by the business. In order to make effective decisions, the owner must be able to collect the required data, sort and classify it, and summarise it into a useful form. These steps make up the basic accounting process and are shown in the diagram in figure 1.2.

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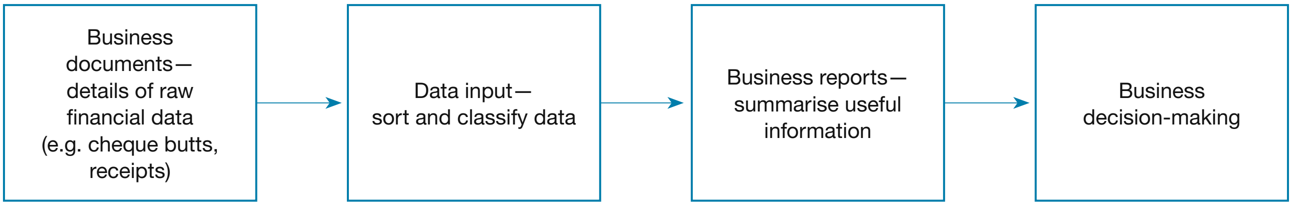
Figure 1.2 The accounting process



This diagram clearly shows the importance of having accurate financial information when making decisions. Such decisions will often be made as the end product of the accounting process and therefore can only be as good as the information provided. If the financial information is inaccurate, or if it is not available when required, decisions by management may have a drastic impact on the performance of the business. However, if the information is always accurate and produced on time, the likelihood of making sound management decisions is greatly improved. The role that financial information plays in the success of a small business should not be underestimated.

Other users of accounting reports

In addition to the owner of the business, there may be other parties interested in the financial information generated by an accounting system. Such parties would include:

- *management,* when the owner is not also the manager
- *banks,* to evaluate the finances of the business
- *other lenders,* to assess if the business is a 'good risk'
- *suppliers,* to assess the ability of the business to repay credit accounts
- *government departments,* for example, to assess the owner's tax liability
- *potential owners,* to evaluate the potential of the business
- *employees,* to evaluate the potential for improved conditions such as wage increases.

In order to satisfy all these users of financial information, the accounting system must be not only accurate but also flexible. The owner and/or manager may have more frequent demands on the accounting system and may use financial information for a variety of reasons. However, periodically the owner may have to provide specific information for some of the other users listed above. Many of these applications of accounting information will be covered in later chapters in this text.

1.5 Statements of accounting concepts

The 1990s witnessed the development of four general **statements of accounting concepts**, commonly referred to as SACs. After years of research by the accounting profession, it was decided that a general framework of accounting should be established. Within this conceptual framework a set of rules has been written for all accountants to follow. This ensures that all members of the profession are working in compliance with the same set of rules and regulations. Originally, the four statements of accounting concepts were:

SAC1: Definition of the reporting entity
SAC2: Objective of general purpose financial reporting
SAC3: Qualitative characteristics of financial information
SAC4: Definition and recognition of the elements of financial statements.

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In 2005 the accounting profession moved to adopt a set of International Accounting Standards (see below) and this had an immediate impact on the SACs. The biggest change has been that SACs 3 and 4 are no longer in existence. The most important parts of these two SACs have been absorbed into SACs 1 and 2. Although a detailed knowledge of the SACs is not required for secondary students of Accounting, it is important to understand that the SACs provide the basic conceptual framework for accounting in Australia. In subsequent chapters in this text the SACs may be referred to, especially with definitions of terms as set out in SAC2 (refer chapter 2).

SAC2 also includes the important characteristics of financial information and therefore provides a useful introduction to this course. In this Statement, four qualitative characteristics of accounting are outlined. A brief description of each of these follows.

Comparability: Quite often, accountants compare the results achieved by a business in one year to those of previous years. It is valuable to be able to compare such results before making business decisions. In order to make such comparisons, accounting methods must be consistent from one year to the next, or else comparisons become difficult or even impossible. By maintaining a consistent approach, accountants can make valid comparisons and so satisfy the demands of comparability.

Relevance: Accountants have a general responsibility to ensure that all relevant information is included in accounting reports. If a particular item is omitted from a report, and this influences the decision-making of an individual in relation to the business, it would be deemed to be relevant. As there may be a number of different people using the one accounting report, the onus is on the accountant to ensure that all relevant details are made available to all users.

In order to decide whether an item is relevant or not, the **materiality test** may be applied. Materiality is not a separate qualitative characteristic of accounting. Information is said to be of material importance if its omission could influence the decision-maker of the user of accounting. Thus, materiality is said to provide a threshold test to help accountants decide if an item is significant enough to be reported as a relevant item. For example, it is quite common to exclude cents in accounting reports and simply round off to the nearest dollar. This is allowed under the materiality test, as decisions by individuals are unlikely to be affected by the omission of cents in a report that covers thousands of dollars of business transactions. (It is common practice for large companies to round off to the nearest thousand dollars in their annual financial reports.)

Reliability: Since different people make a range of business decisions based on accounting reports, it is absolutely crucial that the information in those reports is reliable. Accounting reports should be free of bias and personal opinion as much as possible and should be based on data that can be checked, or verified, by independent people.

Understandability: Accounting reports are often quite complex and contain specialised terminology. This concept refers to reports being prepared in such a fashion that non-accountants are able to understand their meaning. It is important to prepare financial reports so that as many users as possible can have a basic understanding of what the report is trying to show.

The four *qualitative characteristics* outlined above are an attempt by the accounting profession to ensure that the reports prepared by accountants are useful to a range of users. The SACs specify the qualities that are seen as desirable; all accountants, when preparing their financial reports, should strive to embody these qualities.

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1.6 Accounting principles

In addition to the formal SACs, there are several *accounting principles* that have become generally accepted over time. Some of these now have backing in the form of the official SACs. Where appropriate, the links between the two have been stated below.

Entity: One of the most important rules in accounting is the accounting entity principle. This principle states that the transactions of the business must be kept separate from the personal transactions of the owner. This means that only financial transactions made in the name of the business are taken into account when preparing records or reports for that business. This is done in order to allow an evaluation of the performance of the actual business, as distinct from personal income or wealth. Therefore, when a small business is created, a new body or entity comes into existence as far as accounting is concerned. Consider the case of a sports store owner who had the following financial transactions:

1. Bought 10 cricket bats to be resold in the shop $900
2. Paid insurance on the family home $400
3. Paid for insurance of shop $600.

By applying the entity rule, only two of the above three transactions can be deemed relevant to the sports store entity. The insurance on the family home is seen as private, or personal, expenditure and should not be recorded in the books of the business. It should be noted that this treatment complies with the concept of *relevance* (refer SAC2), as the personal transaction has no relevance to the books of the business.

When a new business is being started, a separate bank account in the name of the business should be opened. Office stationery pre-printed with the business name should also be used for all business transactions. These simple steps make it easier to distinguish between personal and business transactions and ensure that the entity principle is followed.

Reporting period: This principle allows accountants to divide the life of a business into particular periods of time, which are known as *reporting periods*. The accountant determines a starting and finishing point and thus the duration of the reporting period. Some businesses have a reporting period of a month, others use three months and some use a year. There is no minimum period but the maximum is one year, due to the demands of the Taxation Office to assess all businesses or their owners for income tax. It is important to determine a reporting period, as the performance of the business can then be measured over this time and, if necessary, decisions made to improve its performance. The concept of *relevance* (refer SAC2) ties in with the reporting period principle, as only information relevant to that one particular period should be reported at that time. Items not relevant to that period should be entered in other reports for other reporting periods.

Consistency: This principle demands that consistent accounting methods be applied from one reporting period to the next. If consistent methods are applied, the demands of *comparability* (SAC2) can be met. From time to time it may be necessary to change a particular accounting method. This is, of course, allowed; however, it is also important to disclose this fact as it may influence the user of the report. That is, a change of accounting method is *relevant* information to a user and therefore it should be stated in the report that this has occurred.

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Historical cost: This is a rule followed by accountants in regard to the original cost being recorded for any item purchased by the business. Adjustments are not usually made in subsequent reporting periods if there is inflation and the cost of the particular item has increased. The historical cost of an item is said to be both *relevant* and *reliable*, as it will be stated on a business document such as a cheque or receipt when the item is purchased. (The historical cost principle is also mentioned in chapter 2 in relation to a financial report known as a balance sheet.)

Monetary unit: This principle is used in accounting to allow financial events to be measured, recorded and reported in dollar terms, but this may be varied overseas, depending on the currency used in the country in which the report is being prepared.

Conservatism: Traditionally, accountants have shown a tendency to be cautious when preparing reports. Conservative attitudes meant that losses would be allowed for when they were expected to occur, while gains would only be recognised if they were certain to happen. Therefore, conservatism causes accountants to be on the safe side when making estimates or valuations.

Going concern: This principle deems that a business will continue as a 'going concern' for an indefinite period. That is, the business is assumed to go on forever. By following this rule, accountants can report long-term assets in a balance sheet (covered in chapter 2). The going concern principle also allows accountants to cater for transactions that overlap over two consecutive reporting periods, as is the case with many credit transactions.

› GLOSSARY OF TERMS

Australian Society of Certified Practising Accountants one of the two major professional accounting bodies in Australia; its members are commonly known as CPAs.

comparability a qualitative characteristic of accounting that requires financial reports be prepared in a consistent manner so that they may be compared from one reporting period to the next.

conservatism principle a cautious approach to accounting, with a tendency to stay on the 'safe side'.

consistency principle a requirement that accounting methods be applied consistently from one reporting period to the next.

entity principle a requirement that all relevant items be reported for a business entity, thereby excluding any personal transactions of the owner.

going concern principle the assumption that a business will continue to operate indefinitely into the future.

historical cost principle a requirement that the original cost of an item (at the time it was purchased) be recorded.

Institute of Chartered Accountants in Australia one of the two major professional accounting bodies in Australia; its members are commonly known as CAs.

materiality test a test to help decide if an item is significant enough to be relevant to the users of an accounting report.

monetary unit principle the measurement of financial events in monetary terms which, in Australia, means measurement in dollars.

relevance a qualitative characteristic of accounting that requires all relevant information to be disclosed in general purpose accounting reports.

reliability a qualitative characteristic of accounting that emphasises the need to be able to check accounting information against business documents.

reporting period principle a period of time over which financial events are recorded and reported.

Statements of accounting concepts (SACs) a set of rules and regulations that provide a general framework of acceptable accounting procedures.

understandability a qualitative characteristic of accounting that requires accounting information to be presented in a simplified, understandable fashion.

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Summary questions

1. Explain what is meant by the term 'small business'.
2. State four features that distinguish a small business from other forms of business.
3. Name four businesses in your own local area that you think could be described as small businesses.
4. 'I don't need to see accountants. I know my business better than any outsider does!' Do you agree with this business owner's approach? Give reasons for your answer.
5. List five reasons why a small business owner should consult with a qualified accountant.
6. Explain the difference between financial data and financial information.
7. Comment on the following statement: 'Management decision-making can only be as good as the information on which it is based.'
8. **a** Make a list of the major users of accounting information.

   b Do all of these users have the same needs? Explain your answer fully, using examples.
9. What is a SAC? What is the purpose of the SACs?
10. Write a brief description for each of the following qualitative characteristics of accounting: relevance, reliability and comparability.
11. Justify the need for accountants to follow the qualitative characteristic of understandability.
12. How is materiality used in relation to relevance? Explain your answer.
13. Explain what is meant by the entity principle.
14. Shane Clarke receives income from three sources. He receives a salary as a full-time teacher, and is also the owner of a clothing store and a furniture shop. Explain how the entity principle affects Shane's situation.
15. Explain how the entity principle ties in with the qualitative characteristic of relevance.
16. What is a reporting period? What is its purpose?
17. What is the minimum and maximum length of a reporting period? Explain your answer fully.
18. Describe the link between the principle of historical cost and the qualitative characteristic of reliability.
19. What is expected of accountants in order to satisfy the consistency principle? Why should this principle be followed?
20. Explain what the term 'historical cost' means.
21. What do accountants assume about the life of a business? Explain why they do this.
22. When preparing reports, accountants are said to be 'conservative'. Explain what the conservatism principle means in relation to accounting reports.

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Practical exercises

[Exercise 1.1] The owner of Harvey's Electricals, Norman Harvey, is trying to plan the future operations of his business. In the next month he is expecting to have sales of between $40 000 and $50 000.

a If Harvey applied a conservative attitude to his planning, how much should he record as his estimate of sales?

b Explain how your answer to part **a** above has followed the conservatism principle.

c Refer to the information provided by Harvey. Has he followed the monetary unit principle? Explain your answer fully.

[Exercise 1.2] Jen Quick owns and manages a small business in Melbourne. She is trying to make a list of all the items used by her in the day-to-day operations of the firm. So far she has come up with the following:

Item	*Value*
Car—Holden Commodore	$40 000 (estimated current market value)
Computer (3 years old)	$2 000 (cost of a new machine)
Machines (imported)	100 000 Japanese Yen

In regard to the three items listed above, comment on the valuation methods used by Quick, with reference to any qualitative characteristics and/or accounting principles that may have been breached.

[Exercise 1.3] Consider each of the following circumstances as separate incidents. For each case, state the qualitative characteristics of accounting and/or accounting principles that apply and, if they have been breached, explain what should have been done in the given circumstances.

a The owner of North Art Supplies, Jacqui Cunningham, has been operating her business for the last four years. During this time Jacqui has determined the profit of the firm on only two occasions. Her justification for this is that, as she runs the business by herself, she just doesn't seem to get around to it!

b Michael Cao is the owner of Bayside Beds. He does not enjoy keeping records for his business and has just prepared a profit report based on his own personal estimates of his transactions for the year.

c Peluso's Pet Store has been owned and managed by Robert Peluso for the last 10 years. Over this time he has used the same accounting methods when determining his annual profit or loss.

d Liz Costa is the proprietor of two businesses. She owns Metro Music as well as Trendy Take-Aways. To keep things simple, she operates only one bank account. Costa uses this account for personal banking as well as for the receipts and payments for the two businesses.

e Ben Stern has had trouble keeping track of all his business documents. In order to prepare financial reports, Stern has sometimes stated an item's original cost based on what he thinks he paid for it. At other times, Stern has found out what the same item would cost today if he bought a new one and simply used this figure for his reports.

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f Cathy Tran owns the Frankston Toy Shop. During a lunch break recently she found a dress on sale for $100 that she just had to have. As she was a little short of cash, she grabbed $100 from the cash register of the toy shop. She didn't see any need to record this amount as, after all, the money in the till was really her money.

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Chapter 2

Balance sheets for small business

OBJECTIVES

At the completion of this chapter, you should be able to:

- describe the purpose of preparing a balance sheet
- define assets, liabilities and owner's equity as per SAC2
- state the accounting equation in two forms
- prepare T-form and narrative-form balance sheets
- prepare a classified balance sheet for a small business
- explain the concept of liquidity
- calculate a working capital ratio for a small business
- comment on a firm's liquidity using data from a balance sheet
- explain the two-fold effect of a transaction on a balance sheet
- outline the role of the historical cost principle in relation to balance sheets.

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2.1 The role of the balance sheet

The **balance sheet** is an accounting report that shows the financial position of an entity at a given point in time. There are three main sections to this report. These are defined in SAC2 as follows:

Assets: are future economic benefits controlled by a business entity as a result of past transactions. The assets of a business may include items such as cash at bank, debtors and display equipment. In the case of cash at bank the economic benefit is clearly evident. Debtors are customers who owe money for goods or services provided on a credit basis and therefore are a promise of a future benefit for a business. An asset such as display equipment is said to have future value because the equipment is used to display goods for sale and therefore assists a business to earn its future income.

Liabilities: are obligations of economic sacrifice that a business is presently obliged to make to other entities. That is, a business may have obligations to other firms and/or other individuals. Such obligations may be to creditors (for goods purchased on credit), to banks or to other lenders.

Owner's equity: this is the residual interest in the assets of an entity after deduction of its liabilities. That is, an owner's equity in a business is equal to the total value of its assets less any obligations it may have to its liabilities. The owner's equity may therefore be described as the 'net worth' of the business to the owner.

Keeping in mind the *entity* principle and the qualitative characteristic of *relevance*, only assets and liabilities that are relevant to the business should be included in the balance sheet. The personal assets of an owner have no relevance to the books of the business. The net worth of the business to the owner is calculated by using the **accounting equation**. Every balance sheet is based on this equation, which states that:

Assets = Liabilities + Owner's equity

or, to calculate the net worth of a business:

Owner's equity = Assets – Liabilities

The accounting equation will hold true in every balance sheet, whether it is a statement for a private individual, a small business or a large company such as Woolworths, National Bank or BHP Billiton.

2.2 The T-form balance sheet

To demonstrate a basic **T-form balance sheet** for a small business, the following details are provided:

The Williamstown Wool Shop is owned by Rae Gibbs. On 30 June 2015 the business had the following economic resources: Cash at bank \$4000, Stock of wool \$30 000, Amounts owing by customers (debtors) \$5200, Shop fittings \$18 000, Knitting machine \$2800.

The business also had the following obligations: Amounts owing to wool suppliers (creditors) \$3000, Loan from bank (due for repayment 1/7/2017) \$20 000.

Using the above data, a T-form balance sheet could be prepared as shown in figure 2.1.

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Figure 2.1 T-form balance sheet

Williamstown Wool Shop: balance sheet as at 30 June 2015

Assets	*$*	*Liabilities*	*$*	*$*
Cash at bank	4 000	Creditors	3 000	
Debtors	5 200	Bank loan (due 1/7/17)	20 000	23 000
Stock of wool	30 000			
Shop fittings	18 000	*Owner's equity*		
Knitting machine	2 800	Capital		37 000
Total assets	60 000	Total equities		60 000

This balance sheet shows the resources controlled by the wool shop (a total of $60 000), the obligations or debts owed by the shop (totalling $23 000) and the net worth of the business to the proprietor ($37 000) on 30 June 2015. The accounting equation for the Williamstown Wool Shop is therefore:

Assets = Liabilities + Owner's equity

$60 000 = $23 000 + $37 000

The term 'equities' in the above report means anyone with a legal claim on the assets of the business. There are two types of claims: external and internal. External equities are those from outside the business; that is, liabilities. The internal claim is the owner's claim to the assets; in this case Gibbs' net worth of $37 000.

2.3 The narrative-form balance sheet

Some users of balance sheets prefer the information to be set out in the **narrative form**. This format tends to emphasise the owner's equity (that is, the net worth) as the key figure in the report. Using the data stated above for the Williamstown Wool Shop, the statement could be rewritten in the narrative form, as shown in figure 2.2.

The narrative-form statement, highlighting net worth, uses the accounting equation:

Owner's equity = Assets – Liabilities

$37 000 = $60 000 – $23 000

Figure 2.2 Narrative-form balance sheet

Williamstown Wool Shop: balance sheet as at 30 June 2015

Owner's equity	*$*	*$*
Capital		37 000
Is represented by:		
Assets		
Cash at bank	4 000	
Debtors	5 200	
Stock of wool	30 000	
Shop fittings	18 000	
Knitting machine	2 800	60 000
less Liabilities		
Creditors	3 000	
Bank loan (due 1/7/17)	20 000	23 000
Net assets		37 000

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2.4 Classified balance sheets

It is normal practice to classify the items shown in a balance sheet in order to provide more information about a business. Assets are normally classified according to how liquid they are—that is, how easily they can be turned into cash. Assets that are expected to be turned into cash (or used up) within the next 12 months are known as **current assets**. This classification would include assets such as cash on hand, cash at bank, short-term investment accounts (for example, a 3-month term deposit), stock and debtors. Assets that are expected to be owned for a period greater than 12 months are referred to as **non-current assets**. These long-term assets are purchased by businesses to help earn revenue over an extended period of time. Examples of non-current assets are vehicles, machinery, computers and the business premises. It is normal for a business to have a combination of both current and non-current assets.

Liabilities are usually classified on the basis of urgency; that is, how soon the future obligation has to be met. The '12 month rule' is also used for liabilities. **Current liabilities** are those obligations or sacrifices that have to be made within the next 12 months, whereas **non-current liabilities** are obligations to be met over a period greater than 12 months. Current liabilities would include obligations such as bank overdrafts, creditors and short-term loans (up to one year). Non-current liabilities are longer-term loans and mortgage loans, which may be over 20 or 25 years! Referring to the case of the Williamstown Wool Shop (see figure 2.1), the balance sheet in the classified version would appear as shown in figure 2.3.

Figure 2.3 Classified balance sheet

Williamstown Wool Shop: balance sheet as at 30 June 2015

Current assets	$	$	*Current liabilities*	$	$
Cash at bank	4 000		Creditors	3 000	
Debtors	5 200		Bank loan*	10 000	13 000
Stock of wool	30 000	39 200	Non-current liabilities		
			Bank loan*		10 000
Non-current assets					
Shop fittings	18 000		*Owner's equity*		
Knitting machine	2 800	20 800	Capital		37 000
Total assets		60 000	Total equities		60 000

* Liabilities listed as non-current can be broken down into two parts. The portion of the debt due for repayment within the next year (if known) can be listed under current liabilities. The remainder of the debt would then be shown as a non-current liability.

The classified statement provides an owner or manager with valuable information about the business. In the balance sheet shown in figure 2.3, the owner can see that more than half of the firm's assets ($39 200) are liquid assets. On the other side of the report the current liabilities are only $13 000. As current assets are economic resources expected to be turned into cash within the next year, and current liabilities are obligations due for payment within the next year, these two items can be compared to each other to calculate a firm's **working capital**. Therefore the calculation for the wool shop would be as follows:

Working capital = Current assets – Current liabilities

= $39 200 – $13 000 = $26 200

This working capital figure can be used to measure a firm's **liquidity**. The liquidity of a business is the ability of the firm to meet its short-term obligations as they fall due. That is, it indicates whether or not the business will be able to pay its short-term liabilities on time. A positive working capital like that shown above shows that the firm is unlikely to have problems meeting its debts. However, if current liabilities exceed current assets, this could be an indicator that liquidity problems may soon arise. The information concerning working capital can also be expressed as a ratio:

$$\text{Working capital ratio} = \frac{\text{Current assets}}{\text{Current liabilities}}$$

$$= \frac{\$39\,200}{\$13\,000}$$

$$= 3.0154{:}1 \text{ or } 301.5\%$$

This ratio indicates that, for every $1 of current liabilities, the firm has $3.02 of current assets, which would generally be accepted as a most satisfactory liquidity position. There is not a universally acceptable rate for a **working capital ratio**. At this stage you should realise that if it is below 1:1 or 100%, liquidity problems may be a possibility, as this would indicate that current liabilities exceed current assets. The use of such calculations will be explored in greater depth later in this text.

2.5 Financial transactions and the balance sheet

Each time a business has a transaction with another entity there is a two-fold effect on the balance sheet. That is, two items in the report will change in value. To demonstrate this, a new statement has been prepared to show the changes that occur after each transaction:

July 1 John Barker invested $20 000 to commence trading as Perfect Printers. The first requirement of the balance sheet is to show the economic resources controlled by the firm. Cash at bank is listed under the heading of Assets as $20 000. The second item represents the owner's equity in the business for Barker, the proprietor. 'Capital' is a term used to represent the economic resources contributed by an owner to a business. In this example, Barker has made a capital contribution of $20 000 to start his business. Therefore the statement would be as follows.

Perfect Printers: balance sheet as at 1 July 2015

Assets	*$*	*Owner's equity*	*$*
Cash at bank	20 000	Capital—Barker	20 000
	20 000		20 000

July 2 Bought office furniture for $5000 cash. This causes a reduction in cash at bank with a corresponding increase in the asset 'Office furniture'.

Perfect Printers: balance sheet as at 2 July 2015

Assets	*$*	*Owner's equity*	*$*
Cash at bank	15 000	Capital—Barker	20 000
Office furniture	5 000		
	20 000		20 000

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July 3 Purchased a delivery van on credit from Top Autos for $10 000. The asset 'Delivery van' increases, but as it was purchased on credit the future obligation to Top Autos must be created as a liability.

Perfect Printers: balance sheet as at 3 July 2015

Assets	*$*	*Liabilities*	*$*
Cash at bank	15 000	Creditor—Top Autos	10 000
Office furniture	5 000	*Owner's equity*	
Delivery van	10 000	Capital—Barker	20 000
	30 000		30 000

July 4 Barker made a cash payment of $1 000 to Top Autos. The asset 'Cash at bank' must be decreased by $1 000 and the obligation to Top Autos will also decrease by $1 000.

Perfect Printers: balance sheet as at 4 July 2015

Assets	*$*	*Liabilities*	*$*
Cash at bank	14 000	Creditors—Top Autos	9 000
Office furniture	5 000	*Owner's equity*	
Delivery van	10 000	Capital—Barker	20 000
	29 000		29 000

It should be noted that, in every one of the balance sheets shown above, the accounting equation holds true. That is, the total of assets is always equal to the total of liabilities plus owner's equity. Also, it should be obvious that a business will not prepare a new balance sheet after each and every transaction, but it is important to have an appreciation of how a transaction can affect the report. As further topics are introduced in this text, you should keep in mind the two-fold effect on the balance sheet of all business transactions. This rule will hold true for all entities, from the smallest business to the largest company.

2.6 The historical cost principle and balance sheets

When a balance sheet is being prepared, assets are recorded at their original purchase price, which is also known as the historical cost. Under the historical cost principle, adjustments are not usually made for inflation and the original cost of an asset is kept on the books until the asset is sold. Business documents play an important role in the historical cost principle. Documents such as cheques and receipts contain the data relating to the original, or historical, cost of assets. Such business documents provide the reliable evidence of a transaction and therefore help accountants comply with the demands of reliability as outlined in SAC2.

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› GLOSSARY OF TERMS

accounting equation the equation of Assets = Liabilities + Owner's equity (A = L + OE). This equation provides the format of a balance sheet. It may also be presented as Owner's equity = Assets – Liabilities (OE = A – L).

assets items controlled by a business entity that have future economic benefits.

balance sheet an accounting report that states the financial position of a business at one particular point in time. This statement reports on assets, liabilities and owner's equity as at one date.

current assets assets expected or intended to be used up or turned into cash within the next 12 months.

current liabilities obligations of economic sacrifice due for payment within the next 12 months.

liabilities obligations of economic sacrifices of a business entity.

liquidity the ability of a business to meet its obligations as they fall due.

narrative-form balance sheet a report prepared in a vertical fashion down the page, usually done so as to highlight the owner's equity in the business.

non-current assets assets of a long-term nature, usually controlled by a business entity for a period greater than 12 months.

non-current liabilities obligations of a business of a long-term nature, usually due for payment over a period greater than 12 months.

owner's equity the residual interest an owner has in a business entity. Owner's equity is found by deducting liabilities from assets.

T-form balance sheet a report divided into two distinct sides, with assets stated on one side of the report and liabilities and owner's equity appearing on the other side.

working capital the result of deducting the current liabilities of a business from the current assets of that business (Working capital = CA – CL).

working capital ratio the result of dividing current assets by current liabilities (Working capital ratio = CA/CL).

Summary questions

1. What is the purpose of a balance sheet?
2. Define the terms 'assets' and 'liabilities'.
3. State the accounting equation in two different forms.
4. Explain the advantages of preparing a classified balance sheet.
5. Distinguish between:
   - **a** current assets and non-current assets
   - **b** current liabilities and non-current liabilities.
6. A business owner is unsure how to classify a term deposit of $10 000. A friend has told him that it could be classified as either a current or a non-current asset. Is this possible? Explain your answer.
7. The proprietor of a hardware store has a loan from the National Bank. The total amount outstanding is $32 000. Of this amount, $18 000 is expected to be paid within the next year, with the remainder to be paid in the following 12 months. How should this loan be treated in a classified balance sheet?

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8. State three examples of current assets and three examples of non-current assets for a furniture retailer.
9. Describe the two types of equity that can be shown on a balance sheet.
10. **a** Explain how working capital is calculated.
    b What does working capital measure?
11. A business has a working capital ratio of 2:1. What does this mean?
12. Explain the difference between working capital and the working capital ratio.
13. Explain what is meant by transactions having a two-fold effect on a balance sheet. Use an example to help explain your answer.
14. What do accountants mean by the term 'historical cost'?

Practical exercises

[Exercise 2.1]

Calculate the missing information in each of the following situations:

a Assets $80 000, Liabilities $15 000, Owner's equity $?

b Liabilities $40 000, Owner's equity $75 000, Assets $?

c Owner's equity $50 000, Assets $95 000, Liabilities $?

[Exercise 2.2]

The following information relates to McColgan's Meats, a small business owned by Ken McColgan, as at 31 July 2015:

> Stock of meat $28 000, Creditors $1500, Family home $540 000, Debtors $1 400, Cash at bank $1 200, Refrigeration equipment $22 000, Shop equipment $18 000, Business loan from bank $30 000, Cash on hand $200.

You are required to:

a calculate the owner's equity for McColgan, using the accounting equation

b prepare a T-form balance sheet as at 31 July 2015

c redraft the balance sheet in narrative form

d explain your treatment of the item 'Family home'.

[Exercise 2.3]

Anne Forsyth is the proprietor of Accurate Word Processing and has supplied the following information concerning her business as at 31 August 2015:

> Business bank account $1 200, Personal bank account $12 000, Creditor—Ace Stationery $1 230, Computer equipment $7 000, Debtors $1320, Loan from bank (due 31/12/2016) $5000, Loan from parents (due 1/6/2016) $1000, Photocopier $16 000, Office furniture $5 200, Capital $?

You are required to:

a calculate Forsyth's capital using the accounting equation

b explain how you have applied the entity principle in your answer to part **a**

c prepare a classified balance sheet as at 31 August 2015.

[Exercise 2.4]

A small business has current assets of $6400 and current liabilities of $4800.

a Calculate the firm's working capital.

b Explain what is meant by the term 'liquidity'.

c Write a brief comment on this firm's liquidity, with reference to part **a** above.

[Exercise 2.5]

Business A has current assets of $25000 and Business B has current assets of $44000. Which firm has the better liquidity? Explain your answer fully.

[Exercise 2.6]

Nick Papadopoulos is the owner of Nick's Pizza Restaurant. He has supplied you with the following information regarding his business:

> Premises $620000, Mortgage loan from bank $480000, Stock of food and drinks $12500, Creditors $11500, Bank overdraft $1200, Cash on hand $100, Furniture $4900, Fittings $16500, Refrigeration equipment $18000, Capital $179300.

You are required to:

a prepare a classified balance sheet as at 30 September 2015

b calculate the firm's working capital and its working capital ratio, and write a brief comment on its liquidity.

[Exercise 2.7]

Suburban Lawn Mowing is owned and operated by Rachael Elwood. The following information is available regarding her business as at 31 October 2015:

> Vehicle $28000, Mowing equipment $3200, Trailer $2600, Cash on hand $100, Cash at bank $2600, Loan from Easy Finance Co. $12000 (repayable at $2000 per year), Creditor—Mobil $300, Stock of fuel $100, Debtors $750.

You are required to:

a prepare a classified balance sheet as at 31 October 2015

b explain your treatment of the loan from Easy Finance Co.

c calculate the firm's working capital and working capital ratio

d comment on the firm's liquidity by referring to your calculations in part **c** above.

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[Exercise 2.8] Ted Cowell had the following transactions in his first week of trading as TC Plumbing:

2015	
Aug 1	He banked $30 000 to commence business
2	He borrowed $10 000 from the National Bank
3	He bought a truck from Geelong Ford for $25 000 cash
4	He bought plumbing materials on credit from General Plumbing Supplies for $1 200

a Prepare a balance sheet after each of the above transactions has occurred; that is, four separate balance sheets.

b State the accounting equation for each of the statements prepared in part **a** above.

[Exercise 2.9] Michelle Clarke decided to operate a small business under the name of Suburban Steam Cleaning. The transactions below occurred in her first week's trading:

2015	
Sep 1	She deposited $10 000 in a separate bank account in the firm's name
2	She bought cleaning equipment for $2 000 cash
3	She purchased an office desk on credit from Rose Office Furniture for $500
4	She borrowed $5 000 from ELC Finance Co.
5	She withdrew $1 000 from the business for personal use

Prepare a balance sheet and an accounting equation after each of the above transactions.

[Exercise 2.10] The following report was prepared for an existing business:

F. Serratore—Dentist: balance sheet as at 30 September 2015

Current assets	$	$	*Current liabilities*	$	$
Cash at bank	3 000		Creditors	800	
Debtors	2 000		Loan EZ Finance	12 000	12 800
Stock of supplies	500	5 500			
Non-current assets					
Furniture	14 000		*Owner's equity*		
Equipment	36 000	50 000	Capital—Serratore		42 700
		$55 500			$55 500

The following transactions occurred during October 2015. You are required to prepare a new balance sheet after each of these transactions.

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Oct 1	Purchased new equipment for cash at a cost of $1 500
2	Debtors paid $1 000 of the amounts owing
3	Bought supplies on credit for $400
4	Paid $2 000 off the loan from EZ Finance
5	Owner contributed an additional $5 000 as capital

[Exercise 2.11] E. Truong, the proprietor of Glenroy Gifts, has provided the following statement:

Glenroy Gifts: balance sheet as at 31 March 2015

Current assets	$	$	*Current liabilities*	$	$
Cash at bank	6 000		Creditors	3 400	
Debtors	4 000		Loan	6 000	9 400
Stock	35 000	45 000			
Non-current assets					
Display equipment	14 000		*Owner's equity*		
Computer	6 000	20 000	Capital—Truong		55 600
		$65 000			$65 000

The following transactions occurred during April 2015:

Apr 1	Purchased a fax machine on credit from Ace Communications at a cost of $950
2	Paid creditors $400
3	Bought stock for cash $800
4	Paid $500 to Ace Communications
5	The owner withdrew $1 000 for personal use.

You are required to prepare a new balance sheet after each of these transactions.

INTERNET activity

Visit the websites of the following banks, all of which are registered as public companies. Your task will be to locate the balance sheet from the latest annual report of each bank and extract the information detailed below.

Commonwealth Bank	**<www.commbank.com.au>**
National Australia Bank	**<www.nab.com.au>**
ANZ Bank	**<www.anz.com.au>**
Westpac Bank	**<www.westpac.com.au>**

If details cannot be found for any of the banks, try the Australian Securities Exchange website below:

Australian Securities Exchange **<www.asx.com.au>**

a For each bank, state the date on which its reporting period ends each year.

b From the balance sheets, state the total assets figure for each bank.

c List the four banks in order, according to the value of their total assets.

d Comment briefly on your findings.

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Chapter 3

Single entry accounting for small business

OBJECTIVES

At the completion of this chapter, you should be able to:

- define single entry accounting
- justify single entry accounting for small business
- explain the role of cash journals in single entry accounting
- identify various business documents used by small business
- describe a basic accounting system for a small business
- identify the information flows which occur between businesses
- explain the role of computers in small business accounting.

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3.1 Single entry accounting

Given the characteristics of a typical small business as described earlier in this text, it is unlikely that such a business would be able to afford the full-time employment of an accountant. It is also unreasonable to expect every small business owner or manager to have an accounting background, let alone accounting qualifications. Under these circumstances there is a need for a simple, yet effective, accounting system that will provide the financial information required by all users.

Single entry accounting is used by many small businesses to satisfy their accounting needs. As its name implies, one entry is made in the accounting records for each business transaction that occurs. Single entry accounting is a relatively simple procedure and can be maintained at very little cost. One does not need an accounting background in order to run a single entry system. And, most importantly, a single entry accounting system will supply the information required by the government for taxation purposes.

3.2 Cash journals

The most important part of a single entry accounting system consists of two records known as **cash journals**. These cash journals can be of simple design, but are usually multi-column records that show details of all cash receipts and cash payments over a period of time. Using the Coburg Car Wash as an example, the owner can design the cash journals to suit the needs of his particular business. Figure 3.1 is an example of a *cash receipts journal* set up for this business.

Figure 3.1 Cash receipts journal

Date	Details	Receipt number	Bank $	Fees—wash $	Fees—wash and wax $	Sundries $	GST $
Jan 2	Cash fees	651	33	30			3
3	Cash fees	652	33	30			3
4	Cash fees	653–4	66	60			6
4	Interest received	–	50			50	
5	Cash fees	655–6	77	30	40		7
6	Capital	–	5 000			5 000	
7	Cash fees	657	44		40		4
	Totals		5 303	150	80	5 050	23

The columns to be used in a cash receipts journal will depend on the needs of the individual business. What is suitable for a car wash would probably not be suitable for a chemist. The columns should be used for regular, or frequently occurring, items. In the above example, the business obviously receives cash for washing cars, as well as for washing and waxing vehicles. Such events would be expected to occur frequently (possibly daily) and therefore special columns for these have been provided. However, interest received (refer 4 January) would usually be an infrequent event and therefore does not require a special column. Similarly, the receipt of capital from the owner on 6 January has not been included in a special column. Such items have been included in the Sundries column, which is used for details of the less frequent

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receipts experienced by a business. As a total is easily calculated for a given period, a summary of frequent receipts or payments (e.g. fees from washing cars) is readily available at the bottom of the record. Cash journals are ideal records for computer spreadsheets, as the transactions can be automatically added up during a period to give progressive totals for all columns. Figure 3.1 provides examples of how, for each business transaction, there is a single entry made in the cash journal; therefore, this is called single entry accounting.

At this stage you should also note in figure 3.1 that the business owner has recorded receiving the goods and services tax (GST) on a number of occasions. This tax has been received every time the business received a fee for washing and/or waxing the customers' cars. This tax, fixed at 10% of the fee collected by the business, should always be recorded in a separate column, as it has to be passed on to the government at a later stage.

A second cash journal may be designed to record the cash payments of a small business. Figure 3.2 below shows a multi-column *cash payments journal* designed to meet the needs of the Coburg Car Wash.

Figure 3.2 Cash payments journal

Date	Details	Chq. no.	Bank $	Wages $	Drawings $	Advertising $	Sundries $	GST $
Jan 2	Drawings	101	500		500			
4	Advertising	102	440			400		40
5	Wages	103	100	100				
6	Insurance	104	880				800	80
6	Stationery	105	55				50	5
7	Drawings	106	600		600			
7	Wages	107	120	120				
	Totals		2695	220	1100	400	850	125

As was the case with cash receipts, if a business pays GST on any of its cash payments, this must be recorded separately. Special columns can be used for cash payments in a similar fashion to that shown earlier for cash receipts. Therefore, in the above example, special columns have been provided for wages, drawings and advertising, indicating that this owner must be expecting these payments to occur on a frequent basis. If any other type of payment is made by the owner, these items are simply recorded in the Sundries column. (Refer to 6 January, when insurance and stationery were both paid.)

These two cash journals are the essence of single entry accounting. When a financial event takes place, such as a receipt or a payment, one single entry is made in one of these two records. Thus single entry accounting is simple in its nature and, because of this, is a very popular accounting system with small business owners. However, it can be expanded to deal with more complex situations. Some of these situations will be explored later in this text, but at this stage it is important to appreciate the two cash records used and their relationship to basic business documents, which are introduced next.

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3.3 Business documents

Source documents are simply business documents used to provide evidence of financial transactions. They hold the raw data of transactions, which is used to create business records. That is, they are the source of financial information—hence the name 'source documents'. It is important to be able to identify business documents and to explain the purpose of each one. The entire accounting system relies on the correct identification and recording of data shown on business documents. The most common source documents for a small business are:

1. **Cheque butt:** it is common business practice to make all payments by cheque. The cheque butt provides all details required about cash payments and should always be completed immediately a cheque is written out. Figure 3.3 illustrates a typical cheque butt.

   This cheque butt provides all the necessary details to make an entry in the firm's cash payments journal. The reason for the payment can be entered in the Details column (in this case, insurance) and the amount would be shown in either the Insurance column or the Sundries column. The document number (8145) should always be entered for future reference in case of any queries.

Figure 3.3 Cheque butt

DATE: *6 / 1 / 15*
PAYEE: *AAMI*
FOR: *Car insurance*
BAL B/F: $
THIS CHQ: $ *880*
(inc. GST $80)
BAL C/F: $
NO. 8145

2. **Receipt:** this document is used to verify that the business has received cash. Some small business owners still use handwritten receipts, but most now have computerised cash registers that generate detailed receipts. (The barcode system used by supermarkets is a very good example of this.) In either case, it is important to have a copy of the document once a receipt is given to the customer. This is one simple method of ensuring that the money received ends up in the till at the end of the day! The takings should always be checked against the total receipts issued to cut down on the likelihood of fraud or theft taking place. Figure 3.4 shows two common forms of receipt.

Figure 3.4 Receipts

a Handwritten receipt

COBURG CAR WASH ABN 74 548 860 008
707 SYDNEY ROAD RECEIPT NO: 657
COBURG 3058 DATE: *7 / 1 / 15*
RECEIVED FROM: *S. Earle*
THE AMOUNT OF: *Forty-four dollars*
FOR: *Wash & wax* $ *40*
Plus GST (10%) $ *4*
TOTAL RECEIVED $ *44*
SIGNED: *G. TEE*

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b Computer-generated receipt

COBURG CAR WASH	
ABN 74 548 860 008	
Date: 7/1/15	
1 Wash & wax	$40
+ GST	$ 4
Total	$44
Rec'd	$50
Change	$ 6
Receipt 657	With thanks

Regardless of the type of receipt used, there are several key pieces of data that need to be accurately recorded; namely the receipt number, the date of the receipt, the amount received, what the cash was received for and the amount of GST actually received from the customer. When a business sells goods or provides a service for cash, it is not necessary to record the customer's name, although some businesses choose to do so. Both of the receipts in figure 3.4 include a number labelled 'ABN'. This is the abbreviation for 'Australian business number'. The ABN is an official number, which a business needs for a number of purposes, including in order to be registered for the GST. A unique ABN is issued to each registered business in Australia. Using the ABN, the taxation office can keep track of all GST transactions. The ABN should be printed on all documents issued by the business.

3 **Invoice:** a **sales invoice** is issued to a customer when a credit sale is made. Also, a business owner will receive a **purchase invoice** when a credit purchase is made from one of their suppliers. Details are vital for such transactions, as the invoice is the evidence of a sale with a promise to pay at a later date. If credit is extended to customers, there is always some risk of 'slow payers' or 'non-payers' and therefore it is vital to have all details documented in case of queries about the amount owing. Figure 3.5 demonstrates a typical sales invoice.

Figure 3.5 **Sales invoice**

COBURG CAR WASH
707 SYDNEY ROAD
COBURG 3058

ABN 74 548 860 008
TAX INVOICE: 162
DATE: 14/2/15

A/C NAME: THOMASTOWN TAXI COMPANY

DETAILS:			
WASH AND WAX FIVE VEHICLES	5 ×	$40	$200
PLUS GST (10%)	5 ×	$4	$20
TOTAL OF THIS INVOICE			$220

SIGNED: G. TEE   CREDIT TERMS: STRICTLY 30 DAYS

The invoice is used to provide full details of goods or services sold on credit. Once again, a document number is used for future reference. When providing credit, it is important to inform the customer of the credit terms you are prepared to extend. And, most importantly, a copy of the invoice must be kept and filed to ensure that the customer keeps the promise of paying the invoice price some time in the future. Unlike a cash receipt, it is crucial when writing out an invoice to take note of the name of the customer. This is essential so that an owner can keep track of all the credit customers and how much each of them owes at a particular date. Otherwise, it may be impossible to track down the overdue accounts and it may prove very costly to the business if payment never occurs at all. Therefore, invoices play a vital role for businesses that sell on credit and it is essential that they be completed accurately.

4 **Credit note:** this document is issued when goods have been returned due to being faulty or damaged, or to being the wrong size, wrong brand or even an incorrect colour. A credit note has a negative effect against an invoiced amount owing. That is, if we sold to a customer \$100 worth of goods and, due to a faulty product, they returned \$20 worth, the \$20 comes off the \$100 owing, leaving the customer to pay \$80. Figure 3.6 shows a credit note received from Don's Detergents, a supplier of cleaning products to Coburg Car Wash.

Figure 3.6 Credit note

DON'S DETERGENTS	CREDIT NOTE 76
1901 BELL STREET	
PASCOE VALE 3044	DATE: 3/3/15
CREDIT: COBURG CAR WASH	
REASON: DAMAGED CONTAINERS—LEAKING LIDS	
CREDIT ALLOWED: 2 × \$15 = \$30	

As with each of the other documents, the credit note also has a reference number for future reference. Details of claims should be kept, as they may indicate customer dissatisfaction with a particular brand or product.

Other business documents

These include:

- **Purchase order:** some businesses use a formal document to place orders with their suppliers. Others simply order by telephone or order through the supplier's sales representative. The advantage of a formal order book is that the firm has a record of goods ordered and this can be cross-checked against goods actually delivered at a later stage. An order form includes such information as a description of the goods required and the quantity, size range and colour, and it is also advisable to include a desired delivery date. Purchase orders do not result in an entry in accounting records, as they may be altered or the order may not be fulfilled.
- **Delivery docket:** goods delivered by a supplier will usually be accompanied by a delivery docket. The purchaser is normally required to sign one copy to acknowledge that the delivery has occurred. The details of a delivery docket will include a description of the goods and the quantity supplied. Prices of goods are not usually included on a delivery docket. Delivery dockets can be checked against an order form (if used). The details of delivery dockets are not recorded in the accounting system, as the dollar amount of the transaction is not usually shown on this document.

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- **Statement of account:** when businesses are buying goods on credit, returning goods and paying amounts owing on a continuous basis, it is important to have a regular summary of all these transactions. A monthly statement is used by businesses to inform their customers of all transactions over the preceding month. When a statement is received, all invoices, credit notes and cheque payments should be checked to ensure that they have all been accurately recorded. The final figure on a monthly statement is the current amount owing. Figure 3.7 shows a typical monthly statement of account, in this case issued by Don's Detergents to Coburg Car Wash.

Figure 3.7 Statement of account

DON'S DETERGENTS
1901 BELL STREET
PASCOE VALE 3044

STATEMENT OF ACCOUNT FOR: COBURG CAR WASH
707 SYDNEY ROAD
COBURG 3058

FOR: MARCH 2015

Date	Details	Debit $	Credit $	Balance $
Mar 1	Previous balance owing			1 200
2	Sale—Invoice 1512	300		1 500
3	Return—Credit note 76		30	1 470
11	Sale—Invoice 1522	330		1 800
21	Payment—thank you		1 200	600
28	Sale—Invoice 1534	400		1 000

FINAL BALANCE OWING $1 000
DATE OF ISSUE: 31/3/15

CREDIT TERMS: STRICTLY 30 DAYS

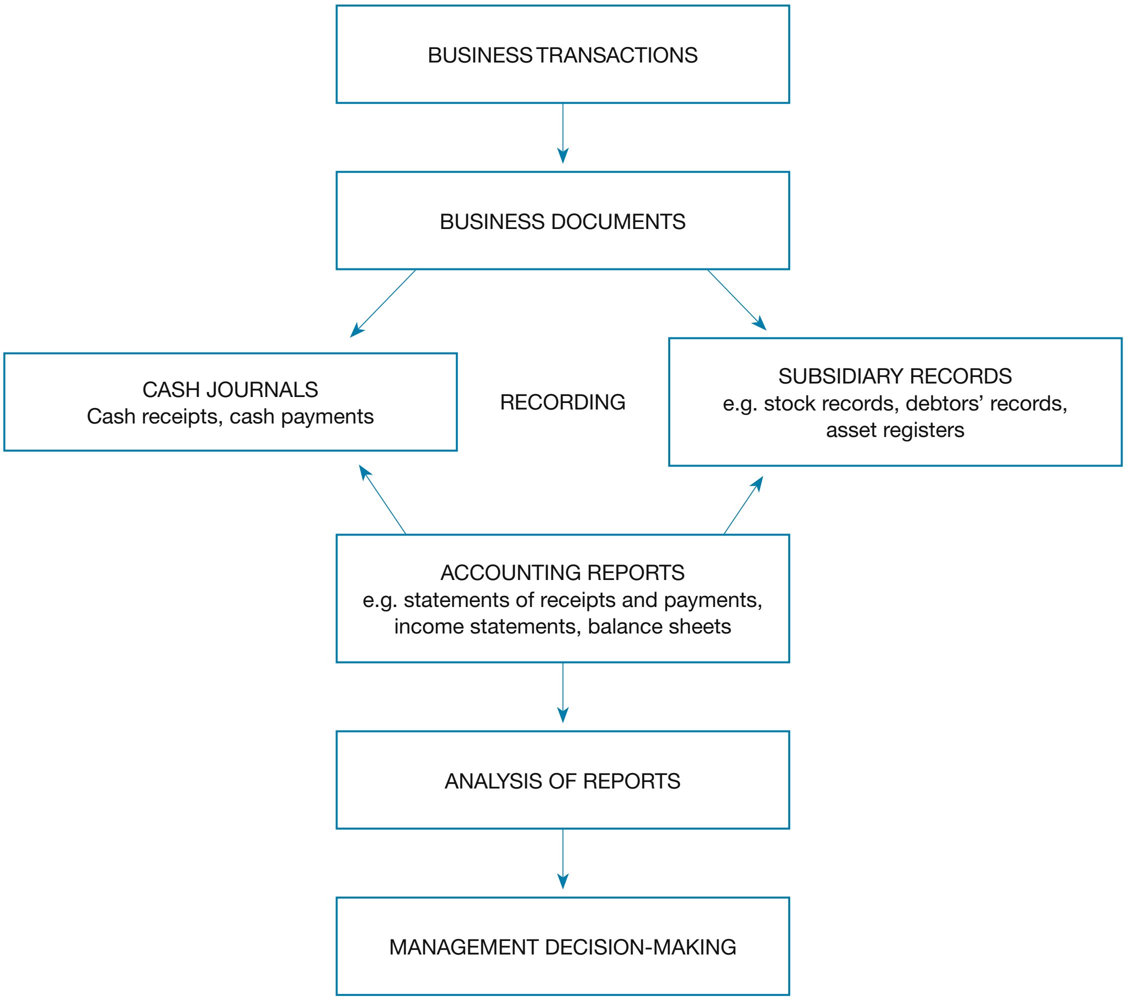
This document provides a neat summary of all transactions between the two businesses over the previous month. You should note how the balance has been increased on the three occasions that a sale has been made by Don's Detergents to Coburg Car Wash (2, 11 and 28 March). When goods were returned on 3 March, the credit note issued had the effect of decreasing the balance owing by $30. Finally, when a cash payment of $1 200 was made on 21 March, the account was also decreased. The balance owing at the end of the month is also clearly shown on the statement of account. Once this document has been received by Coburg Car Wash, all entries should be checked carefully to ensure that they are accurate. Once all entries have been checked as reliable, then payment can be made by Coburg Car Wash to Don's Detergents.

The design of business documents is important. They must provide the information required by the owner or manager of the business. Having designed them appropriately, a business must then complete them accurately for all transactions. If this is achieved, the accounting system then has the task of using the source documents to generate the required financial information for management decision-making.

3.4 Designing an accounting system for a small business

The business documents and the multi-column cash journals shown in this chapter make up the basic accounting system used by many small businesses. The role of the accounting system is to cater for the flow of information and produce the required reports for management and/or the owner. It is important at this stage to gain an overview of a typical accounting system for a small business. As specialist topics are introduced in later chapters, it is important that you are able to see how they fit into the overall scheme of things. A flowchart is an ideal method of demonstrating the flow of information through the accounting system. Figure 3.8 represents a typical accounting system based on single entry accounting.

Figure 3.8 Flowchart: single entry accounting system



3.5 Flows of information

An accounting system records information concerning business transactions between two separate entities. Business documents record details of these financial transactions and are used to transmit information from one entity to the other. Accounting records are the end product of these flows of information and therefore it is important to have an appreciation of such flows.

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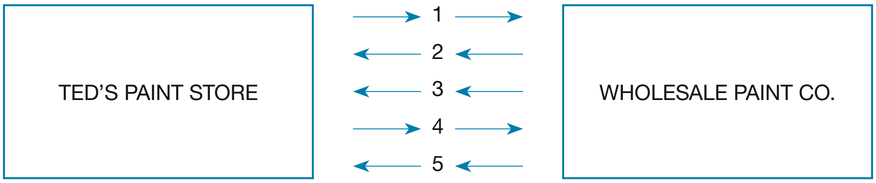
Consider figure 3.9, which shows the exchange of documents between two firms, one selling goods to the other.

Figure 3.9 **Document flow diagram**



Flow #1: Ted's Paint Store sends a formal order form to the Wholesale Paint Company providing details of goods required.

Flow #2: With the delivery of the goods ordered, a delivery docket is given to Ted's Paint Store for signing.

Flow #3: Having confirmed the delivery of the goods, the Wholesale Paint Company sends out an invoice giving details of all prices of goods supplied.

Flow #4: Having checked the details of the invoice, Ted's Paint Shop sends a cheque to the supplier.

Flow #5: A statement of account is issued by the supplier, showing a summary of all transactions for the current month.

Note: quite often flows 4 and 5 will occur in the reverse order!

The flow diagram in figure 3.9 gives an example of the document flows between businesses. It must be kept in mind that this diagram does not represent every situation. For example, if a firm returned faulty goods and a credit note was issued, one additional flow would be created. Also, it is usual to retain a copy of all business documents issued. The copies are kept for future reference in case of queries and, in some cases, to record the vital information required for the accounting records.

3.6 Computers and accounting

Computers have an important role to play in accounting and in small business generally. No longer is it necessary to record business transactions manually in daily record books. Commercial accounting packages can be purchased at a relatively low price and, with guidance from an accountant, many small business owners can record their daily transactions independently. Using such packages, they can then refer the details to their accountant periodically and seek advice as required. Examples of the use of computer programs in business include:

- detailed accounting packages, e.g. *QuickBooks®*, *Mind Your Own Business®*
- financial spreadsheet packages, e.g. *Microsoft Excel®*
- word-processing packages for business letters etc., e.g. *Microsoft Word®*
- databases for customer records, mailing lists etc., e.g. *Microsoft Access®*.

Computers have huge benefits when used to record and store large volumes of data, as is required for accounting purposes. There are four main advantages in computerised accounting:

1. The storage of data is reliable and convenient through the use of compact devices such as disks, tapes and USB memory sticks.
2. Computerised records are extremely accurate, with built-in checking procedures.
3. The processing of data by computers is much quicker than a manual processing system.

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4 Computers are very cost effective compared with employing staff to record all details manually.

Before purchasing a computer package for business purposes, a small business owner should compare the costs of setting up a system with the expected benefits of being 'computerised'. As with all accounting decisions, the needs of the business should determine if a computer is necessary and, if so, the types of software that should be purchased.

GLOSSARY OF TERMS

cash journal a multi-column record used to record the daily receipts or payments of cash.

cheque butt a document used to verify the details of cash payments made by a business by cheque.

credit note a document issued by a business to verify that goods have been returned due to being faulty, damaged or supplied to the wrong specification.

delivery docket a document that may come with goods when they are being delivered. The docket specifies the number and description of the goods being delivered.

invoice a document used to verify that either a credit sale or a credit purchase has taken place.

purchase invoice a document issued by a supplier to a business when a credit purchase has been made.

purchase order a document used to confirm a request to a supplier to provide goods or services of a specific description.

receipt a document used to verify the receipt of cash by a business.

sales invoice a document provided by a business to a debtor when a credit sale has been made.

single entry accounting a simple method of accounting based on the use of cash journals, which are used to record receipts and payments.

source documents business documents such as receipts, cheques and invoices that are used as the source of financial information.

statement of account a document that is issued monthly and used by a business to inform its customers of all transactions over the previous month.

Summary questions

1 Describe what is involved in a single entry accounting system.

2 a What is the purpose of a cash journal?

b State the two source documents used for entries in the cash journals.

3 Why are business documents referred to as 'source documents'?

4 State four common business documents and describe the purpose of each one.

5 Explain the circumstances under which a credit note would be issued.

6 Describe the role of a delivery docket, and explain why cost prices are not usually included on such documents.

7 What is the purpose of a statement of account?

8 'Computers are a vital part of accounting.' Do you agree? Discuss.

9 Describe three different types of computer software packages that would be useful to a small business owner.

Practical exercises

[Exercise 3.1] The following document was received by the owner of Mal's Mowing:

VICTA MOWERS
MAIN ROAD
MOUNT WAVERLEY 3149

ABN 78 463 529 976

NO. 1897

SOLD TO: MAL'S MOWING

DATE: 1/4/15

Quantity	Description	Per unit	Total
20	15 cm mower blades	$5.00	$100.00
	GST (10%)		$10.00
	Total		$110.00

TERMS: STRICTLY 30 DAYS

a What is the name of this document?

b Would Mal's Mowing receive the original document or a copy? Explain your answer.

c Describe the purpose of this document.

d What does 'Terms: Strictly 30 days' mean?

e In a balance sheet prepared for Mal's Mowing, under what heading would you be likely to find Victa Mowers?

[Exercise 3.2] The following document was found in the offices of Mal's Mowing:

MAL'S MOWING
CENTRAL AVENUE
CAULFIELD 3162

ABN 83 128 473 008
NO. AB7223
DATE: 31/5/15

ACCOUNT NAME: BARRY & MORELLO—CPAS
15 DANDENONG ROAD
MALVERN 3144

Description of services provided	Charge
Maintenance of grounds—March 2015	$200.00
GST (10%)	$20.00
Total charge	$220.00

TERMS: STRICTLY 14 DAYS

a What is the name of this business document?

b Who would receive the original of the document?

c Who would keep a copy of this document?

d Describe the business transaction that is evidenced by this source document.

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[Exercise 3.3] The owner of Complete Computer Repairs received the following document:

ABC COMPUTERS
100 MULLERS ROAD
DONCASTER 3108

ABN 15 369 192 816
NO. B7543
DATE: 23/3/15

CREDIT: COMPLETE COMPUTER REPAIRS
12 BERRY STREET
CARLTON 3053

REASON: INCORRECT SPECIFICATION – 8 GB ORDERED

Quantity	Description	Cost	Total
10	4 gb USB memory sticks	$5	$50
	GST		$5
	Total credit granted		$55

a What is the name of this business document?

b Describe the business transaction that is evidenced by this document.

c Would Complete Computer Repairs have the original or a copy of this document? Explain your answer.

d Under what balance sheet classification would you expect to find ABC Computers in a report prepared for Complete Computer Repairs? Explain your answer fully.

[Exercise 3.4] The following document was received by Bruce McLaverty, the proprietor of Domestic Steam Cleaning:

ACE MACHINERY REPAIRS & PARTS
25 MAIN ROAD
KEW 3101

ABN 57 673 246 434

TO: DOMESTIC STEAM CLEANING
2 FAIRWAY DRIVE
NORTH PARKVILLE 3052

DATE OF ISSUE: 31/3/15

Date	Details	Debit $	Credit $	Balance $
Mar 1	Balance past due			500
6	Invoice 32765	80		580
10	Invoice 32772	200		780
12	Credit note 534		50	730
21	Payment—thank you		500	230
30	Invoice 32781	120		350

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a State the name of the supplier of goods involved in this document.

b What is the name of this business document?

c Explain the purpose of this document.

d Explain the transactions that occurred on 10 March, 12 March and 21 March.

e Refer to figure 3.9 shown earlier in this chapter. Prepare a similar diagram, which shows the flow of documents between the two businesses named above. Your diagram should include all documents listed above, plus any others that may have been used.

[Exercise 3.5] Tania Ponting is the owner of Home Tutoring Services and she has the following document in her possession.

HOME TUTORING SERVICES ABN 22 223 128 607

747 AIRPORT DRIVE
FLEMINGTON 3031

NO: 194
DATE: 24 / 2 / 15

RECEIVED FROM: R. Bennow

THE AMOUNT OF: Sixty-six dollars

FOR: Double lesson $ 60

Plus GST (10%) $ 6

TOTAL RECEIVED $ 66

SIGNED: T. Ponting

a State the name of the above document.

b Describe the transaction that has been evidenced by the above business document.

c Would Ponting have a copy of this document or the original? Explain your answer fully.

d Explain the role that documents play in relation to satisfying the qualitative characteristics of accounting.

e What is an ABN? Explain why a business owner should register for an ABN.

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CASE STUDY

BRENDAN STILL has just decided to establish a small business, trading under the name Bayside D.J. Services. His business plan includes providing music for school events as well as for private parties. Still specialises in the latest music trends and he wants to make enough money to be able to live on the profits of his new business venture. However, he is uncertain about everything he has to do in relation to accounting for his business. A friend has advised Still to make sure that he has copies of all documents used on a regular basis. He expects that most of his clients will pay cash, but some credit accounts may be offered to friends and regular customers.

Still has been involved with local bands for a number of years and has built up a list of contacts in the music industry. These contacts include several music companies that provide bulk sales of recorded music. Still expects to be provided with trade credit terms of 30 days by all suppliers. He is unsure what credit terms to offer to his potential credit customers. Still is confident of doing well in the music business, because he has always been interested in music and is always up with the latest trends. To assist him with his business planning, Still has asked you to provide advice on the following.

a Make a list of the business documents that Still will probably need in order to operate his business efficiently. Make a brief note next to each document listed to explain its purpose in Still's business.

b Which of the business documents you listed in part **a** will run in sequential order according to their document numbers? Explain why this is so.

c Explain why multiple copies are made of business documents when they are created.

d If Still does give credit to his friends and regular customers, what credit terms do you think he should offer? Justify your answer.

e Make a list of the assets and liabilities that you would expect to find in a balance sheet prepared for Bayside D.J. Services (dollar values are not required).

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Chapter 4

Establishing a small business

OBJECTIVES

At the completion of this chapter, you should be able to:

- define various types of small business operations
- classify small businesses according to the nature of their operation
- explain what is meant by a franchise
- describe the advantages and disadvantages of operating a franchise
- list various reasons why people go into business
- describe the reasons for success and failure of small businesses
- explain the role of feasibility studies for small business.

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4.1 Types of small business operations

Small businesses can be classified by either the nature of the operation or the type of ownership structure that has been established. The nature of the operation refers to the type of activity in which the firm conducts its business. There are three broad headings by which to classify a small business. Figure 4.1 shows these three main groups:

Figure 4.1 Types of business operations

Trading firms	Service firms	Manufacturing firms
Selling goods, wholesale or retail	Providing services to individuals and other businesses	Physical production of goods

Trading firms include any businesses that buy goods and resell them, usually at a higher price. Businesses such as milk bars, clothing stores and supermarkets would fall under this heading.

Service firms do not sell goods. They provide a service to their customers, for which they charge a fee. This classification includes businesses such as accountants, plumbers and lawyers.

Manufacturing firms are involved in the actual physical construction of goods. Such firms usually buy a variety of raw materials and manufacture a finished product. This classification would include firms such as Ford, Kellogg's and Bluescope Steel.

It should be noted that some businesses do not fall neatly under any one of these headings. Many firms are actually a combination of two or more of these classifications. For example, a petrol station is a trading firm because it sells petrol, oil and other products. However, it may also provide services such as car-washing, engine-tuning and car repairs. Therefore a petrol station could be classified as a trading/service firm.

4.2 Operating a business as a franchise

An individual who is thinking of starting up a small business will typically consider the type of business to be established and the form of business ownership to be adopted: that is, **sole proprietor**, **partnership** or **company**. One further decision must be made: whether to operate as an independent business or to be part of a franchise operation. A **franchise** business is one in which the entity operates as part of a group of businesses. This group, or family of businesses, works under a common set of rules. In many cases, businesses operating as franchise members look exactly the same as other members because their operating rules are extremely rigid. A business owner (the **franchisee**) must apply to be a member and usually pays a substantial fee to the **franchisor** to become a member of the group. The head of the group (the franchisor) may be a registered company—a structure well beyond the definition of a small business used in this text.

Consider this list of some of the better-known franchise organisations:

- Bakers Delight
- Gloria Jean's
- McDonald's
- Subway.
- Donut King
- Jim's Mowing
- Red Rooster

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These popular business organisations are both well known and instantly recognisable. The McDonald's organisation is the classic case of franchising in Australia—if not the world! Its restaurants are basically the same across the country, selling the same range of products and at the same prices. Bakers Delight and Subway follow a set style of presentation in all their stores and sell virtually the same products at their various locations. The same can be said about most other franchise operations. Small business owners are often keen to join a franchise group because of the many benefits experienced by franchise owners. Operating a business as a franchise has the following advantages:

- *There is an established brand name*, which is already known to customers.
- *There is a better chance of success than there is for businesses started from scratch.*
- *There are opportunities for mass advertising (including television).* Mass advertising may not be affordable for a single, independent small business. All franchise members benefit from centralised advertising.
- *Some franchise groups find customers for their business owners.* That is, customers contact head office, which then issues work to a franchise member in the customer's area. This is usually restricted to businesses that offer services such as lawn-mowing, steam-cleaning and vehicle services.
- *Decision-making is made by experienced management people in the head office.* Some small business owners lack such experience.
- *There is access to bulk buying.* Franchise members all receive their goods at a competitive price because the franchise group can purchase all the items together.

Although there are many benefits in operating a business as a franchise, there are also some drawbacks:

- *There are establishment fees.* Business owners are usually required to pay a fee to become a member of a franchise group. Such fees may be quite substantial, particularly if the franchise group already has many successful members.
- *There are ongoing membership fees.* Some franchise members are required to pay a regular fee to remain part of the franchise family. These fees are payable regardless of whether the business is improving or deteriorating.
- *There is a lack of control over the business.* As all franchise members have to follow a set of established rules, a small business owner may feel restricted in terms of the decisions they can make at the local level. This varies from one franchise to another, but the rules are sometimes extremely rigid. Some franchise members have absolutely no say in the range of products that they can sell, the prices that must be charged, or the special promotions that will be offered at a particular time.
- *There is a lack of individuality.* Many franchise businesses are basically clones of one another. Many small business owners have a need to be independent and run their businesses in their

own way. Such individuals are probably not suited to running a franchise, as it is essential for all franchise members to accept the rules of the family group.

As with all small business proposals, a prospective franchisee should weigh up the advantages and disadvantages of joining a franchise organisation. The costs of joining a well-known franchise may be extremely high, but the likelihood of business success will often improve when a business is part of a franchise. The lack of choice as an owner may be restrictive, but a recognisable brand name is a significant advantage. Therefore it may simply be a matter of personal choice (and sometimes a matter of finances) whether a small business is established as an independent firm or as part of a franchise family.

4.3 Why do people go into small business?

There is no single reason why individuals decide to start their own business. However, many business owners cite similar reasons for such a decision. These include:

- a desire to be independent
- being unhappy working for an employer
- the challenge of creating a successful business
- freedom of working hours
- new market opportunities
- a profit motive: the opportunity to make a lot more money than could be earned as an employee.

The chance of creating a profitable business venture is usually the driving force behind a person's decision to go into business. In an economy based on free enterprise, this dream is vitally important to keeping the small business sector alive. There will always be individuals willing to take a risk and invest their personal savings if there is a chance to earn large profits. Unfortunately for many business owners, the opportunity of being self-employed looks so attractive that the benefits of working for someone else are often ignored. A cost–benefit analysis should always be done before commencing a business. Figure 4.2 shows the typical results of the costs and benefits of going into business rather than working for an employer.

Figure 4.2 Costs and benefits of owning a business

Benefits of going into business	Costs of going into business
1 Independence 2 Extra income (hopefully!) 3 Freedom 4 Capital gains	1 Loss of secure employment 2 Loss of regular income 3 Loss of holidays/benefits 4 Risk of losing personal savings 5 Added responsibility

As can be seen from the above table, the desire to be a small business owner must be very high if an individual is going to ignore the benefits of being an employee. It becomes a basic personal choice whether to be a risk-taker and possibly earn more money, or accept employment from someone else and accept a regular (and possibly lower) income.

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4.4 Reasons for success and failure of small businesses

There is no single reason why some business owners prove to be highly successful while others go bankrupt. However, a successful business owner usually has some, if not all, of the following attributes:

- a willingness to work hard
- an enthusiastic approach to the business
- sufficient managerial skills
- sufficient 'people skills' to deal with customers
- a positive outlook generally
- a willingness to learn from mistakes.

As well as the personal attributes of the owner, other external factors can also determine whether a business will be a success. These factors include considerations such as:

- Is the market for our products likely to expand or contract?
- What competition is there now, and likely to be in the future?
- Will our suppliers continue in business in the future?
- Will government decisions affect the future of our business? (For example, will taxes and tariffs affect the demand for many products?)

When a small business fails to achieve the owner's dream of being successful, there are generally several factors that have caused the failure. One of the most common causes is *insufficient starting capital*. Many owners put in enough cash to buy the required assets to start the business. However, they often underestimate how long it takes for a business to establish itself. Most new businesses fail to make a profit in the first year of trading and quite often they simply run out of cash while trying to get established.

Poor management skills are another common cause of failure. It is wrong to assume that everyone knows how to control stock, debtors and employees. There are many specialist skills to be learned and not every owner adjusts to these demands. Added to this is the general problem of keeping control over the firm's running costs. And all of this has to happen when the owner is busy trying to generate income for the business!

Insufficient professional advice is another cause of business failure. Some individuals consult accountants or other advisers when they start a business, but then develop a feeling of independence. 'I know what I'm doing' is a common claim. Unfortunately, it is not always true.

Unrealistic predictions have led to many business failures. People see an opportunity to start a business and get carried away with the possibilities. The possibility of failure is quite often not considered. Quite often it's a case of trying to 'cash in' on a booming market. Unfortunately, it sometimes seems that everyone has had the same idea! In the early 1980s, video hire shops were opening every week. It was a new and exciting market, but something had to give. Many of those that opened during that decade are no longer with us. The same thing has happened with computer shops in the 1990s. Many new firms started, but many have since disappeared. Potential owners must try to keep a realistic approach to their predictions for business. Gathering opinions from professionals as well as friends and family should give a final summation that is both realistic and informed.

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4.5 The role of feasibility studies

Before an individual decides to go into business, a feasibility study should be carried out to evaluate all possibilities of the proposal. Conducting a **feasibility study** is simply doing one's homework before making the commitment to own and manage a business. A full feasibility study would usually involve consultation with professionals such as accountants, lawyers and bankers. Areas to be covered by the study should include:

1. *Type of business*
   - Service
   - Trading
   - Combination of service and trading
2. *Form of ownership*
   - Sole trader
   - Partnership
   - Company
3. *Nature of business*
   - Franchise member
   - Independent business
4. *Legal requirements*
   - State government regulations
   - Local council laws
   - Others (e.g. Department of Health)
5. *Building requirements*
   - Location
   - Competition
   - Single shop or regional centre?
   - Lease or buy?
6. *Stock requirements (if a trading firm)*
   - Suppliers
   - Local or imported products?
   - Make goods or buy them?
   - Complementary products (e.g. shirts, ties)
   - Range of products (e.g. quantity, variety)
7. *Finance requirements*
   - Capital required
   - Loans required
   - Sources of finance
8. *Accounting requirements*
   - Record-keeping
   - Computer requirements
   - Professional advice
   - GST requirements
9. *Future possibilities*
   - Future demand for product or service?
   - Likelihood of a profitable venture?

The objective of a feasibility study is to produce a report that informs the potential business owner of all items to be considered before a final decision is made. It doesn't guarantee success, but a well-informed individual is more likely to make a better decision.

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› GLOSSARY OF TERMS

company a business, owned by multiple shareholders, which is a separate legal entity established through being incorporated.

feasibility study an investigation into the requirements that have to be met in order to establish a particular small business. The study should consider potential problems and the probability of success and failure.

franchise this is created when a business owner agrees to run the business as a member of a group, with all franchise members operating as similar businesses and being obliged to follow a set of established rules.

franchisee a business owner who has agreed to be part of a franchise group.

franchisor the parent business in a franchise group. The franchisor establishes the rules of the franchise group and usually receives a fee from all franchise members.

manufacturing firm a business that uses raw materials to make products, which are then sold to customers.

partnership a business co-owned by several individuals.

service firm a business that earns its revenues from providing services to its customers.

sole proprietorship (or **sole trader**) a business owned by a single person.

trading firm a business that earns its revenue from buying and selling goods.

Summary questions

1. Explain what is meant by the terms 'trading firm', 'service firm' and 'manufacturing firm'.
2. State four examples for each of the three types of firms listed in question 1.
3. Name two types of businesses that could be referred to as both trading and service firms. Explain your answer.
4. State the three main forms of business ownership.
5. For each of the following businesses, state the form of business ownership you would recommend as the most suitable. Give reasons for your answers.
   a. Lawn-mowing service
   b. Take-away food shop
   c. Restaurant
   d. House builder
   e. Vehicle manufacturer.
6. What is a franchise business? Explain this term fully.
7. State and explain three advantages and three disadvantages of operating a business as part of a franchise operation.
8. Make a list of the main reasons you think people go into small business.
9. Comment on the following statement made by a prospective small business owner: 'I'm going to invest in a mobile phone shop. Then I'll be able to sit back and rake in the profits!'
10. Compile a profile of the perfect small business owner who is sure to be a success. What do you consider to be the three most important characteristics of a successful business person?
11. State, and explain, the most common causes of business failure.
12. What is a feasibility study? What is its purpose?

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Practical exercises

[Exercise 4.1] Visit your local shopping centre and locate three small businesses. Interview the business owner (or manager) of each and prepare a table to show your answers to the following questions:

- **a** What is the name of the business?
- **b** What is the form of ownership?
- **c** What is the type of business activity (trading/service/manufacturing)?
- **d** What were the motives for going into small business?
- **e** What does the owner (or manager) believe are the three most important characteristics of a successful business owner?

[Exercise 4.2] You are considering building new premises on a vacant block of land and intend to start a new business as a motor mechanic.

- **a** Make a list of the items to be considered as part of a feasibility study for this project.
- **b** Prepare a balance sheet for your new business and list all assets and liabilities that are likely to exist for such a business (dollar amounts are not required).

[Exercise 4.3] You have inherited $70 000 from a rich aunt and have decided to go into business. As so many people lead busy lives these days, you have decided to offer a range of home services such as lawn-mowing, ironing and gardening.

- **a** What factors should be considered before you set up your business?
- **b** What form of ownership should the business take? Explain your answer.
- **c** State three reasons why you could make a success of this business.
- **d** State three possible reasons why this business could fail in the first couple of years.

[Exercise 4.4] Jimmy Flynn has been offered an opportunity to take over an established business that specialises in window-cleaning for business properties. At the moment Flynn works for a large bank and earns $60 000 per annum. He is 30 years of age and has a mortgage loan of $190 000 on his small suburban home. Flynn also owes $10 000 on a personal loan that was used to finance his car. The current owner of the business is a good friend and has agreed to sell the business for $240 000, payable in three instalments of $80 000 over the next three years. According to the current owner, the business has earned a profit of $100 000 each year for the last two years. This sounds very attractive to Flynn, as it exceeds his current income and therefore he is very keen to resign from the bank and buy his friend's business. He has asked for your assistance in regard to this decision.

- **a** Make a list of the things Flynn should check before going any further with the decision.
- **b** State the reasons that support Flynn deciding to buy the business.
- **c** State the reasons Flynn may decide to stay in his job with the bank.
- **d** What's your decision? Make a recommendation to Flynn and explain why you believe he should stay with the bank or buy the business.

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INTERNET activity 1

Visit at least three of the following websites, which are maintained by well-known franchise organisations in Australia:

Bakers Delight	**<www.bakersdelight.com.au>**
Donut King	**<www.donutking.com.au>**
McDonald's	**<www.mcdonalds.com.au>**
SportsCo	**<www.sportsco.com.au>**
Video Ezy	**<www.videoezy.com.au>**

Your task is to gain as much information as possible in order to answer the following questions:

a State the name of the franchise organisation.

b In what year was the organisation established?

c How many franchise stores are there within the family group?

d Make a list of any specific benefits that are stated for franchisees.

e State the obligations of the franchisee in this organisation.

f State the obligations of the franchisor in this organisation.

INTERNET activity 2

The cost of setting up a franchise organisation is an important consideration for prospective business owners. Some franchise operators require a minimum amount of cash before allowing an individual to join the franchise group. They may also specify the amount of investment required in order to buy into a franchise. The following website provides some interesting material in relation to franchises:

<www.franchise.org>

Using the A–Z index provided on this website, research five of the following companies to answer the questions that follow.

- The Athlete's Foot (listed under 'T')
- Burger King Corporation
- KFC Corporation
- McDonald's Corporation
- Blockbuster, Inc.
- Jenny Craig International, Inc.
- Kwik Kopy Business Centers
- Taco Bell Corporation.

Required:

a What year was the franchise operation established?

b How many franchise stores are in the family group?

c How many stores are company owned?

d How much start-up cash is required?

e What is the investment required to buy into this franchise group?

(Hint: prepare a table to summarise your research of your five companies. List the names of the franchises down the left-hand side of the table and the answers to the five questions across the top of the page.)

Note: this website is American, so the values are stated in US dollars. You may need to convert these amounts to Australian dollars as an additional activity. Check with your teacher for guidance.

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Chapter 5

Recording and reporting cash flows

OBJECTIVES

At the completion of this chapter, you should be able to:

- distinguish between cash receipts and cash payments
- list a variety of receipts and payments for a small business
- record transactions in cash receipts and cash payments journals
- design multi-column records to suit the needs of a small business
- prepare a statement of receipts and payments from a firm's cash records.

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5.1 Cash receipts and cash payments

In an organised accounting system, financial transactions are classified so that similar transactions are grouped together. Such classification breaks down large volumes of data into special groups to allow easier recording and processing. The first of these groups is **cash receipts**. A business may receive money from a variety of sources, including:

- selling goods for cash
- providing services for cash
- receiving interest on investments
- collecting money owed by debtors
- borrowing from banks and other institutions
- selling unwanted assets for cash
- the owner contributing cash as capital (which, under the entity principle, is also a cash receipt).

A firm may also experience a variety of **cash payments**. Consider the following different types of cash outflows:

- buying goods for cash
- paying for services in cash (for example, wages)
- paying interest on loans
- paying creditors amounts owing
- repayments of loans
- purchasing non-current assets for cash
- the owner withdrawing cash from the business.

As can be seen from the above lists, cash transactions may vary in nature, but they are expected to occur many times in the day-to-day operations of a business. It is vitally important that all cash receipts and payments be recorded accurately. This chapter introduces the techniques used to record and report such cash flows.

5.2 Recording cash receipts

The aim of accounting records is to create a history of the details included on business documents. In the area of receipts, the objective is to record all relevant details of cash received over a given period.

A **cash receipts journal** records all cash receipts, regardless of their source. A journal is also known as a day book, because it records details of transactions on a daily basis. A basic cash receipts journal for Stephen O'Brien, Cabinetmaker, is shown in figure 5.1.

This cash receipts journal serves its purpose, as it records all cash received by the business.

The details column notes the nature of each of the receipt transactions. The receipt number column notes the number of the source document in case of queries in the future. The total cash received should then be recorded in the amount banked column. The other columns are then used to break down the amount of cash received into the cash received for the business and the GST collected (if relevant). Note that there is no GST received on 1 September (on the capital contributed by the owner) or on 15 September (on the loan taken out from the bank). When this business has completed a job for a customer, the amount of cash received should be stated on the original source document and this is simply copied into the column provided for amount received. The GST received from customers, calculated at 10% of the fee charged, should also be recorded on the original receipts and this should be recorded in a separate column in the

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Figure 5.1 Cash receipts journal

S. O'Brien, Cabinetmaker: cash receipts journal (basic version)

Date	Details	Receipt no.	Amount banked $	Amount received $	GST received $
Sep 1	Capital		9 000	9 000	
3	Kitchen cupboards	1001	660	600	60
5	Video cabinet	1002	209	190	19
9	Video cabinet	1003	209	190	19
11	Student desk	1004	275	250	25
12	Video cabinet	1005	220	200	20
13	Student desk	1006	275	250	25
14	Kitchen cupboards	1007	605	550	55
15	Loan—National Bank	–	3 000	3 000	
18	Student desk	1008	330	300	30
21	Kitchen cupboards	1009	869	790	79
24	Student desk	1010	308	280	28
28	Video cabinet	1011	242	220	22
30	Student desk	1012	308	280	28
30	Totals		16 510	16 100	410

receipts journal. It is always wise to check that the total of amount received and GST received is equal to the amount recorded in the amount banked column. In the above example, $16 100 + $410 = $16 510. If this is done at the end of each month, recording errors can be identified before going any further. Such internal checks should be built into every accounting system to help achieve the demands of *reliability*, as demanded by SAC2.

A business that has many cash customers in a day's trading may simply issue a cash register receipt when a sale is made or a service provided (for example, a car wash). As a receipt number may not be available for every transaction, the entry in the cash journal may simply be 'CRS', which is an abbreviation for 'cash register summary'. Once the tapes are removed from cash registers at the end of a day's trading, such a summary is used as the source document for the day's receipts.

5.3 Multi-column cash receipts journals

Although the basic receipts journal shown in figure 5.1 serves its purpose, a **multi-column journal** is often more beneficial. Such a journal consists of a series of special columns that summarise the most frequent transactions of the business. The special columns used will depend on the type of business under consideration. A cabinetmaker will not use the same columns as an accountant or a clothing store, as the source of the receipts would be different in their basic nature. The special columns should be used for repetitive or frequent transactions, with the infrequent receipts being entered in the Sundry receipts column. For example, transactions such as a receipt from a loan would not occur frequently and therefore would not warrant a special column. Thus the journal for Stephen O'Brien could be redesigned as a *multi-column cash receipts journal*, as shown in figure 5.2.

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Figure 5.2 Multi-column cash receipts journal

S. O'Brien, Cabinetmaker: cash receipts journal (multi-column version)

Date	Details	Rec. no.	Amount banked $	Fees received			Sundry receipts $	GST received $
				Kitchen cupboards $	Video cabinets $	Student desks $		
Sep 1	Capital		9000				9000	
3	Kitchen cupboards	1001	660	600				60
5	Video cabinet	1002	209		190			19
9	Video cabinet	1003	209		190			19
11	Student desk	1004	275			250		25
12	Video cabinet	1005	220		200			20
13	Student desk	1006	275			250		25
14	Kitchen cupboards	1007	605	550				55
15	Loan—National Bank	–	3000				3000	
18	Student desk	1008	330			300		30
21	Kitchen cupboards	1009	869	790				79
24	Student desk	1010	308			280		28
28	Video cabinet	1011	242		220			22
30	Student desk	1012	308			280		28
30	Totals		16510	1940	800	1360	12000	410

There are distinct advantages in using a multi-column cash journal, compared to using the simple design demonstrated previously. First, a total can be quickly calculated for each special column in the journal. If a computer spreadsheet is used (for example, using *Excel*®), this total can be automatically calculated and the business owner can track the performance of the business throughout the reporting period. These totals can also be used at a later stage to prepare a summary of the journal (covered later in this chapter). The second advantage is that the journal has a more elaborate checking device built into its design. Once the special columns have been totalled, these totals can be checked with the total in the amount banked column. In figure 5.2, the total of $16 510 can be checked with the totals of $1940 + $800 + $1360 + $12 000 + $410. If these totals do not match, a recording error has been made somewhere in the journal. Such errors should be found and corrected before proceeding any further with the financial information in this journal. Once again, the demands of *reliability* require that all records be accurate. In this case the amounts received can be checked against source documents. If errors are detected, all entries should be re-checked against the receipts and the business owner should ensure that details have been entered accurately.

5.4 Recording cash payments

A **cash payments journal** can be designed along the same lines as the cash receipts journals shown previously. As a general rule, cash payments should normally be made by cheque and all cheque numbers should be noted in the payments journal. The cheque butt is the source document for entries in the cash payments journal. The cash payments journal records all payments by a business, regardless of their nature. An example of the simple version

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cash payments journal is shown below, once again using the example of Stephen O'Brien, Cabinetmaker.

Figure 5.3 Cash payments journal

S. O'Brien, Cabinetmaker: cash payments journal (basic version)

Date	Details	Cheque no.	Total paid $	Amount paid $	GST paid $
Sep 1	Electric tools	7001	583	530	53
2	Timber	7002	440	400	40
3	Wages	7003	300	300	
5	Advertising	7004	275	250	25
7	Drawings	7005	200	200	
9	Timber	7006	330	300	30
10	Wages	7007	280	280	
13	Timber	7008	110	100	10
14	Drawings	7009	200	200	
17	Wages	7010	300	300	
18	Timber	7011	264	240	24
21	Drawings	7012	200	200	
24	Wages	7013	300	300	
27	Insurance	7014	528	480	48
28	Drawings	7015	250	250	
30	Totals		4 560	4 330	230

Care should always be taken when using a cheque book, and the details of all cash payments should be copied on to the cheque butt when each individual cheque is made out. As the cheques are used in sequence, the cheque number column in the cash payments journal provides an easy way to ensure that all cheques are accounted for. It is quite a simple procedure to run an eye down this column to check that all cheque numbers are sequential and that therefore none have gone missing.

5.5 Multi-column cash payments journals

As was the case with the cash receipts for O'Brien's business, it would be usual that he would also experience some cash payments more often than others. If a business has repetitive and frequently occurring cash payments, a multi-column journal may be designed to allow for this. If special columns are created for such items, a total can be quickly ascertained, as all similar payments will be grouped together. The simple journal shown in figure 5.3 has been redrafted in figure 5.4 as a *multi-column cash payments journal.*

In order to minimise recording errors, the entries in the multi-column cash payments journal should also be checked by totalling the special columns and reconciling these with the Total paid column. The actual headings used in the special columns will, of course, depend on the nature of the business under examination. The journal shown in figure 5.4 has been prepared as a spreadsheet and has been designed so that all regular payments can be conveniently summarised at the end of the month. Items not provided for by a special column should always

Figure 5.4 Multi-column cash payments journal

S. O'Brien, Cabinetmaker: cash payments journal (multi-column version)

Date	Details	Cheque no.	Total paid $	Timber $	Wages $	Draw. $	Assets $	Sundry payments $	GST paid $
Sep 1	Electric tools	7001	583				530		53
2	Timber	7002	440	400					40
3	Wages	7003	300		300				
5	Advertising	7004	275					250	25
7	Drawings	7005	200			200			
9	Timber	7006	330	300					30
10	Wages	7007	280		280				
13	Timber	7008	110	100					10
14	Drawings	7009	200			200			
17	Wages	7010	300		300				
18	Timber	7011	264	240					24
21	Drawings	7012	200			200			
24	Wages	7013	300		300				
27	Insurance	7014	528					480	48
28	Drawings	7015	250			250			
30	Totals		4 560	1 040	1 180	850	530	730	230

be recorded in the sundry payments column. It should also be kept in mind at this stage that a business such as a cabinetmaker would probably conduct some business on credit. However, only cash transactions will be considered in this chapter and the accounting system will be further developed in the chapters that follow.

5.6 Statements of receipts and payments

The purpose of the cash journals is to record the daily details of cash receipts and cash payments. However, once a business has been operating for a number of months, the cash journals will consume numerous pages and be difficult to comprehend. Therefore, there is a need for a summary of the transactions. A **statement of receipts and payments** is a report that summarises cash receipts and cash payments over a period of time. A cash journal prepared on a multi-column basis helps in the preparation of a statement of receipts and payments, as the most frequent transactions are already totalled. Referring to the business owned by Stephen O'Brien (see figures 5.2 and 5.4), the statement of receipts and payments for the month of September would be prepared as shown in figure 5.5.

Note that the heading on this accounting report includes the name of the firm and the period being covered by the report. Statements of receipts and payments should be prepared on a regular basis (for example, monthly) to allow comparisons to be made with previous periods. Although ratios such as the working capital ratio can be used to evaluate a firm's liquidity, a statement of receipts and payments can be used to identify causes of a change in liquidity. The statement of receipts and payments is a summary of all cash transactions over a period of time and provides vital information about the sources of cash receipts as well as the purposes for

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Figure 5.5 Statement of receipts and payments

S. O'Brien, Cabinetmaker: statement of receipts and payments for month ended 30 September 2015

Cash receipts	$	$
Fees—Kitchen cupboards	1 940	
—Video cabinets	800	
—Student desks	1 360	
Capital contribution	9 000	
Loan—National Bank	3 000	
GST collected	410	16 510
Cash payments		
Timber	1 040	
Wages	1 180	
Drawings	850	
Purchase of assets	530	
Advertising	250	
Insurance	480	
GST paid	230	4 560
Excess of receipts over payments		11 950
Bank balance (1 September 2015)		Nil
Bank balance (30 September 2015)		11 950

which cash was used. Note that the items that were recorded in the column headed sundry payments in the cash payments journal have been listed individually in the statement of receipts and payments. This has been done to provide as much information as possible to the users of this report. You are encouraged to experiment with the design of cash journals and the related statement of receipts and payments when you are completing the practical exercises in this chapter.

5.7 Reporting for the GST

During any period of trading a business is likely to experience many transactions involving the GST. If a business is registered for GST, they are obliged to collect 10% GST on all fees charged to customers. It will also pay 10% GST on many of its cash payments. The statement of receipts and payments prepared in figure 5.5 included two items in relation to the GST. These items were:

Cash receipts:	GST collected	$410
Cash payments:	GST paid	$230

At the end of each reporting period, the difference between the GST received and the GST paid should be determined. The GST received by a business is collected on behalf of the government and is therefore owed to the taxation office at the end of the period. However, if a business has paid GST during the same period, this amount should be deducted from the amount collected, with the net amount then being payable to the taxation office. In the above example \$410 was collected and \$230 paid during the period; therefore \$410 – \$230 = \$180 owing to the taxation office. This amount should be shown in the balance sheet of the business as a current liability, as GST is usually payable to the taxation office either monthly or quarterly (that is, every three months). This item may be referred to as a **GST debt** or a **GST liability** and can be reported as follows:

Current liabilities:	
GST liability	\$180

A second possibility is that a business pays more GST than it has collected from its customers. For example, consider the following information, which has been extracted from a statement of receipts and payments:

Cash receipts:	GST collected	\$300
Cash payments:	GST paid	\$400

In this situation the business has paid more GST than it has collected from its customers and is therefore entitled to a **GST refund**. Once again, as most businesses report GST either monthly or quarterly, if a firm is entitled to a GST refund this should be reported under the heading of current assets, as follows.

Current assets:	
GST refund	\$100

5.8 Evaluating single entry accounting for a small business

The basic single entry system demonstrated in this chapter is not suitable for all small businesses. Single entry accounting involves making one entry in a cash journal for each business transaction. Many small business owners use cash journals to record their payments and receipts and then call on a professional accountant to prepare their accounting reports. The design of the cash journals must suit the needs of that particular firm. This basic system of accounting may suit some businesses but not others. A small business that deals on a cash basis only may be satisfied by an accounting system like that outlined in this chapter. However, as a business increases its turnover and becomes more complex, there is more pressure on the system to provide the information required by the owner and/or the manager.

Additional information may be required because:

- the firm buys goods or services on credit
- the firm sells goods or services on credit
- the owner requires details of all stock being held
- the owner needs details of all assets owned by the firm.

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Single entry accounting can be modified to cater for the items listed above. However, the more complex the business becomes, the more likely it is to adopt a system of double entry accounting, which has the ability to handle the most complex of business situations. Double entry accounting is the focus of Units 3 and 4 of VCE Accounting. However, the remainder of this text concentrates on single entry accounting and how it can be expanded to cater for a variety of situations.

GLOSSARY OF TERMS

cash payments outflows of cash paid to individuals or businesses. This includes paying expenses, buying assets, repaying debt, and withdrawals of capital made by the owner.

cash payments journal a daily record of the details of all cash payments, including date of payment, cheque number, the nature of the payment, the GST paid and the total amount paid.

cash receipts inflows of cash received from individuals or businesses. This includes receipts from services provided, goods sold, assets sold, loans taken out, and capital contributions made by the owner.

cash receipts journal a daily record of the details of all cash receipts, including date of receipt, receipt number, the nature of the receipt, the GST received and the total received.

GST liability (or **GST debt**) an obligation to the taxation office that exists because the GST collected by a business exceeds the GST paid by the business to its suppliers.

GST refund a current asset that exists because a business has paid more GST to its suppliers than it has collected from its customers.

multi-column journal a daily record subdivided into special columns to cater for cash receipts and cash payments that occur frequently.

statement of receipts and payments a report prepared periodically as a summary of a firm's receipts and payments over a stated period of time.

Summary questions

1. State four different types of financial transactions where a business may receive cash.
2. State five different types of financial transactions a business may have involving cash payments.
3. Explain the major advantages of using multi-column cash journals.
4. Explain the circumstances that need to exist for a business to benefit from using a multi-column cash receipts journal.
5. 'A multi-column cash payments journal can be designed to suit all types of businesses.' Do you agree? Discuss.
6. State the source documents used to make entries in the cash receipts and cash payments journals. Are these documents originals or copies? Explain your answer.
7. Outline the purpose of the statement of receipts and payments.
8. Explain how one business may be entitled to a GST refund, whereas another business has a GST liability to the taxation office.

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9 A business collected $900 GST from its customers during June, but has paid $700 GST to its suppliers during the same month. How should this be reported in the firm's balance sheet as at 30 June?

10 A business owner has reported that she received $600 GST from customers during the last quarter, but she believes that she is entitled to a tax refund from the government. Explain how this is possible, using an example to prove your case.

11 Single entry is not a suitable method of accounting for all types of businesses. Outline the circumstances where single entry accounting is suitable and where it is less likely to be a satisfactory method.

Practical exercises

[Exercise 5.1]

The following transactions relate to Werribee Office Cleaners for the first two weeks of September 2015.

Receipts		$
Sep 1	Capital	10000
4	Fees (Rec. 51)	180 + 18 GST
5	Loan NAB	5000
8	Fees (Rec. 52)	160 + 16 GST
	Fees (Rec. 53)	180 + 18 GST
11	Fees (Rec. 54)	180 + 18 GST
13	Fees (Rec. 55)	160 + 16 GST
	Fees (Rec. 56)	120 + 12 GST
14	Fees (Rec. 57)	190 + 19 GST
Payments		$
Sep 1	Advertising (Chq. 101)	500 + 50 GST
2	Equipment (Chq. 102)	800 + 80 GST
3	Cleaning materials (Chq. 103)	290 + 29 GST
9	Advertising (Chq. 104)	140 + 14 GST
11	Drawings (Chq. 105)	600
13	Cleaning materials (Chq. 106)	280 + 28 GST
14	Computer system (Chq. 107)	2000 + 200 GST

a Prepare a simple cash receipts journal, with columns for Date, Details, Receipt number, Total received, Amount received and GST received.

b Prepare a simple cash payments journal, with columns for Date, Details, Cheque number, Total paid, Amount paid and GST paid.

c Prepare a statement of receipts and payments for the two weeks ended 14 September 2015, showing a summary of the firm's cash transactions and the bank balance at that date.

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[Exercise 5.2]

Malvern Motor Mechanics had $2400 in the bank on 1 October 2015 and had the following transactions during the first two weeks of October 2015.

Oct 1	Received $200, plus $20 GST, from Ace Couriers for a tune-up (Rec. 11)
2	Received $150 for a service, plus $15 GST (Rec. 12) from W. Gabriel
3	Paid rent for week $820, plus GST of $82 (Chq. 254)
	Received $200, plus $20 GST, from H. Gauld for a tune-up (Rec. 13)
	and $160, plus $16 GST for a service from H. Smillie (Rec. 14)
4	Purchased oil $150, plus $15 GST (Chq. 255)
5	Received $160 + $16 GST from M. Bradley for a service (Rec. 15)
7	Banked receipt from W. Rogers for service $160 + $16 GST (Rec. 16)
	The owner withdrew $800 for personal use (Chq. 256)
9	Purchased spare parts $480, plus GST of $48 (Chq. 257)
10	Paid weekly rent $820, plus $82 GST (Chq. 258)
11	Received service fees from B. Franklin $160, plus GST of $16 (Rec. 17) and Ace Couriers $180, plus $18 GST (Rec. 18)
13	Received $190, plus $19 GST from Quicker Transport Co. for a tune-up (Rec. 19)
14	The owner withdrew $900 (Chq. 259)

a Prepare simple versions of cash receipts and cash payments journals for Malvern Motor Mechanics.

b Redraft your journals in part **a** to a multi-column format.

c Prepare a statement of receipts and payments for the fortnight ended 14 October 2015.

d State two advantages of using multi-column cash journals.

[Exercise 5.3]

Eddie's Electrical Services is a small business that services DVD players, televisions and stereo systems. On 1 November 2015 the firm had an overdraft of $300. The following transactions occurred during November 2015.

Nov 2	Received from Flemington High School $120 for a DVD service, plus GST of $12 (Rec. no. 189)
3	Paid assistant's wages $850 (Chq. 3281)
4	Received $600 for TV repairs from W. Dobbs (plus $60 GST)
5	Received $360, plus $36 GST for TV repairs and $80, pus $8 GST for DVD service
7	Purchased spare parts $530 + $53 GST
8	Received $160 from R. Salmon for DVD repairs (plus GST of $16)
9	Received $150 + $15 GST for stereo repairs and $100 + $10 GST for DVD service
10	Paid assistant's wages $750 and advertising $380, plus GST of $38
12	Princes Hill Secondary College paid $420 for work done on its DVD players and paid an additional $42 GST
13	$180 from M. Long, plus $18 GST for stereo repairs and the owner cashed a cheque and withdrew $650
14	Received $100 for DVD service, plus $10 GST and $290 for TV repairs, plus $29 GST
	Purchased spare parts $420 + GST of $42

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a Design multi-column cash journals for Eddie's Electrical Services and then record the above transactions in these journals. Reminder: the numbers on cheques and receipts used by Eddie will run in numerical sequence.

b Prepare a statement of receipts and payments to summarise the fortnight's cash transactions.

[Exercise 5.4]

VCE Tutoring Services provides tutoring in accounting, economics and legal studies. On 1 March 2015 the business had assets of $400 Cash at bank and $600 Equipment. The following documents were used to evidence transactions during March 2015.

DATE: 2 / 3 / 15
RECEIVED FROM: L. Rosbrook
FOR: Accounting
AMOUNT: $ 80.00
GST $ 8.00
TOTAL $ 88.00
278001

DATE: 4 / 3 / 15
RECEIVED FROM: N. Austin
FOR: Economics
AMOUNT: $ 80.00
GST $ 8.00
TOTAL $ 88.00
278002

DATE: 4 / 3 / 15
RECEIVED FROM: C. Salm
FOR: Legal Studies
AMOUNT: $ 80.00
GST $ 8.00
TOTAL $ 88.00
278003

DATE: 7 / 3 / 15
RECEIVED FROM: A. Dickinson
FOR: Economics
AMOUNT: $ 100.00
GST $ 10.00
TOTAL $ 110.00
278004

DATE: 9 / 3 / 15
RECEIVED FROM: L. Rosbrook
FOR: Accounting
AMOUNT: $ 80.00
GST $ 8.00
TOTAL $ 88.00
278005

DATE: 11 / 3 / 15
RECEIVED FROM: N. Austin
FOR: Economics
AMOUNT: $ 80.00
GST $ 8.00
TOTAL $ 88.00
278006

DATE: 11 / 3 / 15
RECEIVED FROM: C. Salm
FOR: Legal Studies
AMOUNT: $ 80.00
GST $ 8.00
TOTAL $ 88.00
278007

DATE: 14 / 3 / 15
RECEIVED FROM: C. Millard
FOR: Accounting
AMOUNT: $ 100.00
GST $ 10.00
TOTAL $ 110.00
278008

DATE: 19 / 3 / 15
RECEIVED FROM: C. Salm
FOR: Legal Studies
AMOUNT: $ 80.00
GST $ 8.00
TOTAL $ 88.00
278009

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DATE: 22 / 3 / 15
RECEIVED FROM: L. Rosbrook
FOR: Accounting
AMOUNT: $ 80.00
GST $ 8.00
TOTAL $ 88.00
278010

DATE: 25 / 3 / 15
RECEIVED FROM: N. Austin
FOR: Economics
AMOUNT: $ 80.00
GST $ 8.00
TOTAL $ 88.00
278011

DATE: 29 / 3 / 15
RECEIVED FROM: C. Millard
FOR: Economics
AMOUNT: $ 100.00
GST $ 10.00
TOTAL $ 110.00
278012

DATE: 2 / 3 / 15
TO: Promo Ads
FOR: Advertising
AMOUNT: $ 170.00
GST $ 17.00
TOTAL $ 187.00
CHQ. NO. 33471

DATE: 5 / 3 / 15
TO: Quickcopy
FOR: Photocopying
AMOUNT: $ 60.00
GST $ 6.00
TOTAL $ 66.00
CHQ. NO. 33472

DATE: 13 / 3 / 15
TO: Acme Supplies
FOR: Equipment
AMOUNT: $ 100.00
GST $ 10.00
TOTAL $ 110.00
CHQ. NO. 33473

DATE: 15 / 3 / 15
TO: Cash
FOR: Drawings
AMOUNT: $ 400.00
GST $
TOTAL $
CHQ. NO. 33474

DATE: 16 / 3 / 15
TO: Promo Ads
FOR: Advertising
AMOUNT: $ 180.00
GST $ 18.00
TOTAL $ 198.00
CHQ. NO. 33475

DATE: 19 / 3 / 15
TO: Quickcopy
FOR: Photocopying
AMOUNT: $ 70.00
GST $ 7.00
TOTAL $ 77.00
CHQ. NO. 33476

DATE: 22 / 3 / 15
TO: Cash
FOR: Drawings
AMOUNT: $ 350.00
GST $
TOTAL $
CHQ. NO. 33477

DATE: 26 / 3 / 15
TO: Quickcopy
FOR: Photocopying
AMOUNT: $ 70.00
GST $ 7.00
TOTAL $ 77.00
CHQ. NO. 33478

DATE: 28 / 3 / 15
TO: AAMI
FOR: Insurance
AMOUNT: $ 450.00
GST $ 45.00
TOTAL $ 495.00
CHQ. NO. 33479

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a Prepare multi-column cash journals for VCE Tutoring Services for the month of March 2015. Use appropriate columns for recurring items and make sure that all transactions are entered in chronological order.

b Prepare a statement of receipts and payments for the month of March 2015.

[Exercise 5.5]

David Park provides a range of home services, including lawn mowing, plumbing work and painting. He has asked for your assistance in designing his cash journals and has provided the following documents from his last month of trading.

DAVE THE HOME HANDYMAN

DATE: 2 / 4 / 15
RECEIVED FROM: N. Carroll
FOR: Lawn mowing
AMOUNT: $ 60.00
GST $ 6.00
TOTAL $ 66.00
2061

DAVE THE HOME HANDYMAN

DATE: 7 / 4 / 15
RECEIVED FROM: R. Bonney
FOR: Painting – lounge
AMOUNT: $ 280.00
GST $ 28.00
TOTAL $ 308.00
2062

DAVE THE HOME HANDYMAN

DATE: 8 / 4 / 15
RECEIVED FROM: T. Buszard
FOR: Plumbing repairs
AMOUNT: $ 200.00
GST $ 20.00
TOTAL $ 220.00
2063

DAVE THE HOME HANDYMAN

DATE: 9 / 4 / 15
RECEIVED FROM: N. Carroll
FOR: Lawn mowing
AMOUNT: $ 60.00
GST $ 6.00
TOTAL $ 66.00
2064

DAVE THE HOME HANDYMAN

DATE: 11 / 4 / 15
RECEIVED FROM: J. Flynn
FOR: Painting – ceilings
AMOUNT: $ 700.00
GST $ 70.00
TOTAL $ 770.00
2065

DAVE THE HOME HANDYMAN

DATE: 12 / 4 / 15
RECEIVED FROM: J. Holland
FOR: Lawn mowing
AMOUNT: $ 80.00
GST $ 8.00
TOTAL $ 88.00
2066

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DAVE THE HOME HANDYMAN

DATE: 14 / 4 / 15
RECEIVED FROM: J. Garra
FOR: Painting – garage
AMOUNT: $ 550.00
GST $ 55.00
TOTAL $ 605.00
2067

DAVE THE HOME HANDYMAN

DATE: 15 / 4 / 15
RECEIVED FROM: N. Carroll
FOR: Lawn mowing
AMOUNT: $ 60.00
GST $ 6.00
TOTAL $ 66.00
2068

DAVE THE HOME HANDYMAN

DATE: 18 / 4 / 15
RECEIVED FROM: L. McDonald
FOR: Painting – 2 brms
AMOUNT: $ 450.00
GST $ 45.00
TOTAL $ 495.00
2069

DAVE THE HOME HANDYMAN

DATE: 19 / 4 / 15
RECEIVED FROM: T. Knox
FOR: Lawn mowing
AMOUNT: $ 90.00
GST $ 9.00
TOTAL $ 99.00
2070

DAVE THE HOME HANDYMAN

DATE: 21 / 4 / 15
RECEIVED FROM: N. Carroll
FOR: Lawn mowing
AMOUNT: $ 60.00
GST $ 6.00
TOTAL $ 66.00
2071

DAVE THE HOME HANDYMAN

DATE: 22 / 4 / 15
RECEIVED FROM: M. Sleeman
FOR: Plumbing – blocked pipes
AMOUNT: $ 180.00
GST $ 18.00
TOTAL $ 198.00
2072

DAVE THE HOME HANDYMAN

DATE: 25 / 4 / 15
RECEIVED FROM: B. Smith
FOR: Painting – patio
AMOUNT: $ 130.00
GST $ 13.00
TOTAL $ 143.00
2073

DAVE THE HOME HANDYMAN

DATE: 29 / 4 / 15
RECEIVED FROM: D. Cruickshank
FOR: Painting – ceilings
AMOUNT: $ 460.00
GST $ 46.00
TOTAL $ 506.00
2074

DAVE THE HOME HANDYMAN

DATE: 30 / 4 / 15
RECEIVED FROM: T. Ludeman
FOR: Lawn mowing
AMOUNT: $ 80.00
GST $ 8.00
TOTAL $ 88.00
2075

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DATE: 3 / 4 / 15
TO: Caltex
FOR: Petrol
AMOUNT: $ 160.00
GST $ 16.00
TOTAL $ 176.00
CHQ. NO. 1956

DATE: 5 / 4 / 15
TO: Leader Newspaper
FOR: Advertising
AMOUNT: $ 320.00
GST $ 32.00
TOTAL $ 352.00
CHQ. NO. 1957

DATE: 11 / 4 / 15
TO: Caltex
FOR: Petrol
AMOUNT: $ 150.00
GST $ 15.00
TOTAL $ 165.00
CHQ. NO. 1958

DATE: 13 / 4 / 15
TO: Wattyl Paints
FOR: Paints
AMOUNT: $ 900.00
GST $ 90.00
TOTAL $ 990.00
CHQ. NO. 1959

DATE: 14 / 4 / 15
TO: Caltex
FOR: Petrol
AMOUNT: $ 150.00
GST $ 15.00
TOTAL $ 165.00
CHQ. NO. 1960

DATE: 16 / 4 / 15
TO: Cash
FOR: Drawings
AMOUNT: $ 500.00
GST $
TOTAL $
CHQ. NO. 1961

DATE: 17 / 4 / 15
TO: Wattyl Paints
FOR: Paints
AMOUNT: $ 650.00
GST $ 65.00
TOTAL $ 715.00
CHQ. NO. 1962

DATE: 23 / 4 / 15
TO: Cash
FOR: Drawings
AMOUNT: $ 400.00
GST $
TOTAL $
CHQ. NO. 1963

DATE: 24 / 4 / 15
TO: Caltex
FOR: Petrol
AMOUNT: $ 150.00
GST $ 15.00
TOTAL $ 165.00
CHQ. NO. 1964

DATE: 26 / 4 / 15
TO: Bendigo Bank
FOR: Loan repayment
AMOUNT: $ 800.00
GST $
TOTAL $
CHQ. NO. 1965

DATE: 27 / 4 / 15
TO: Wattyl Paints
FOR: Paints
AMOUNT: $ 450.00
GST $ 45.00
TOTAL $ 495.00
CHQ. NO. 1966

DATE: 29 / 4 / 15
TO: Caltex
FOR: Petrol
AMOUNT: $ 160.00
GST $ 16.00
TOTAL $ 176.00
CHQ. NO. 1967

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a Design an appropriate cash receipts journal for Park's business and record the relevant transactions for the month of April 2015.

b Design a multi-column cash payments journal for Dave the Home Handyman and complete the journal for April 2015.

c Prepare a statement of receipts and payments to summarise the cash transactions of the business for the month, given that the cash at bank balance was $393 on 1 April 2015.

CASE STUDY

JULIE DAMIANOS is the proprietor of Blinds 'R' Us, a small business that specialises in supplying and installing a range of blinds for home owners. Julie has asked for your help in designing a single entry accounting system. A friend of hers, Tyana Viti, also runs a small business. Viti's accountant has set up an accounting system based on *Microsoft Excel*® spreadsheets. She simply enters the daily receipts and payments in cash journals, and the spreadsheet automatically generates a statement of receipts and payments at the end of the month. Damianos would like to use a similar system.

In Damianos' business, customers place orders for venetian blinds, holland blinds and canvas awnings. They pay cash up-front for their orders, as most of the blinds have to be custom-made. GST at the rate of 10% is collected on all orders. Damianos purchases materials based on each customer's order. She has three main suppliers for these materials and she pays cash on delivery, plus the required amount of GST. Damianos' assistant helps her with the fitting of the blinds, but Damianos has to do all the office work. She tends to purchase stationery every few days, as it is needed. This is not a hassle for her, as there is a stationery supplier across the road from her rented shop. Her business is advertised in the local paper on a weekly basis and has been quite successful in recent times. From time to time, Damianos has to purchase non-current assets for the business such as tools and ladders. She usually pays cash for such items because she is already committed to a loan that requires weekly repayments. Damianos makes a withdrawal of cash each week, as she is quite confident about making a profit on a regular basis.

a Using *Microsoft Excel*®, design multi-column cash journals that could be used by Damianos each month in the business of Blinds 'R' Us. You should consider the operations of Damianos' business before designing her system. The cash journals should include formulas to automatically add up any special columns that you create.

b Within the same spreadsheet, prepare a pro-forma statement of receipts and payments. This report should be prepared automatically as receipts and payments are entered in the cash journals. Note that Damianos should enter the balance of cash at bank at the start of the month. (That is, this figure is not to be created automatically by the spreadsheet.)

c Explain how the qualitative characteristic of reliability would be satisfied in the single entry system that you have created for Blinds 'R' Us.

d Is there a link between a statement of receipts and payments and the balance sheet? Explain fully.

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Chapter 6

Income statements for service firms

OBJECTIVES

At the completion of this chapter, you should be able to:

- outline the demands expected of accounting reports
- define profit
- define revenues and expenses
- distinguish between cash and profit
- prepare an income statement for a service firm.

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6.1 Demands of accounting reports

Accounting reports should be prepared on the basis of generally accepted accounting principles and in compliance with the statements of accounting concepts (as outlined in chapter 1 of this text). This is in response to the demands placed on accounting reports to ensure that they will convey valuable information to their users. These demands are:

- *Relevance:* The reports must contain information relevant to the entity under examination, and no others. The accounting entity principle and the reporting period principle are of vital importance in this instance.
- *Reliability:* Most accounting information comes from source documents and therefore it can be verified, or checked, against factual evidence. Verifiable documentation removes the need to rely on opinions and estimates. It should be noted, however, that some accounting processes do involve estimation (for example, budgeting).
- *Comparability:* Accounting reports should be prepared in such a way as to allow comparisons to be made from one reporting period to the next. Therefore consistent accounting methods should be used from one year to the next.
- *Understandability:* Accounting reports should be prepared in such a fashion as to provide the maximum number of individuals with a report that is easily understood. Although accounting reports may contain some specialised terminology, the format of such reports should assist in their understandability. The choice of headings and the general layout of a report should be user-friendly.

The statement of receipts and payments is an example of an accounting report that should have the characteristics outlined above so that it can be a valuable tool in the hands of the user. In the case of cash flows, the *relevant* information is that of all cash receipts and cash payments. *Reliability* can be satisfied, as the cash inflows can be checked against the cash receipts issued by the business. Likewise, the cash payments can be verified with the cheque butts retained by management. This report has a simple layout and therefore *understandability* is usually satisfied quite easily. If the statement is prepared in the same way at the end of each month, results can be compared quite easily and therefore *comparability* is also satisfied. Whenever an accounting report is being prepared these four characteristics, or values, should always be kept in mind. This chapter introduces a second general purpose accounting report, that of the income statement. Although this report focuses on a different aspect of a business, the demands of the SACs remain all-important.

6.2 Revenues and expenses

The statement of receipts and payments is a summary of all cash inflows and outflows. However, when reporting on the profit performance of a business, not all cash transactions are considered. An **income statement** is a report that compares the revenue and expenses that have occurred within the one reporting period. The final result of such a report is shown as a net profit or a net loss for the period. **Profit** is the excess of revenue over expenses. A loss will occur if the expenses for the period are greater than the revenue. But what are revenues and expenses?

Revenues *are inflows of future economic benefits in the form of increases in assets or reductions in liabilities of the entity, other than those relating to contributions by the owner, that result in an increase in equity in the reporting period.* Therefore, revenue will be recognised if a business performs a service and receives cash for doing so. It is recognised as revenue because an economic benefit in the form of cash has been received by the business. If the service is provided on a credit basis, it will still be viewed as revenue because there is still a future economic benefit in the form of a debtor's promise to pay. Similarly, if a trading firm sells goods for cash or on credit, an amount of revenue is created. Sometimes a business may provide goods or services but, rather than receive cash, may simply take the value of the transaction off a debt to an existing liability. Although this transaction does not increase an asset, it will result in the reduction of a liability and therefore it qualifies under the definition of a revenue item. It should be noted that cash contributed by an owner does not qualify as a revenue transaction.

Expenses *are losses of future economic benefits in the form of reductions in assets or increases in liabilities, other than those relating to distributions to owners, which result in a decrease in equity in the reporting period.* Therefore, an expense will be recognised if a business pays for services (for instance, by paying wages) during a period. The payment of wages results in a loss of economic benefits in the form of cash. Such a reduction will ultimately reduce the equity of the owner of the business. Similarly, a trading firm will sacrifice physical goods when it makes a sale. The cost of such goods is the loss of economic benefits in this transaction. Rather than reducing an asset, a liability may be increased when an expense is created. For example, if a business requests an advertisement in a local paper, it may be arranged on a credit basis. This transaction does not result in a reduction of an asset but it does increase liabilities in the form of creditors. Therefore, the definition is satisfied and it would be recognised as an expense.

6.3 Distinguishing between cash and profit

It is important to recognise the differences between a statement of receipts and payments and an income statement. The statement of receipts and payments examines the cash inflows and cash outflows for the reporting period, and its final result is the cash balance at the end of that period. The income statement reports on the revenues and expenses for the reporting period, and its final result is a net profit (or loss) for that period. These two reports have entirely different purposes and it is vital that one can distinguish between the items that appear in each of the two reports. Consider the following comparison of transactions that have occurred during the one reporting period.

Cash inflows	Revenues
Cash received from customers Cash contributions by the owner Money borrowed from a bank	Sale of goods to customers (cash or credit) Provision of services to customers (cash or credit)
Cash outflows	Expenses
Cash paid to suppliers Cash paid to employees Cash withdrawn by the owner Loan repayments to the bank	Goods sacrificed to earn sales Services used by the business (cash or on credit)

The concept of *relevance* is important when preparing any accounting report. The definition of cash receipts and cash payments, and revenues and expenses determines what should or should not be included in each report. The comparisons shown above demonstrate some of the differences between the two types of reports. It is important to realise that sometimes an item may in fact be shown in *both* reports. For example, if a business sells goods for cash, a cash inflow has occurred and therefore this transaction is relevant to the statement of receipts

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and payments. However, the firm has also experienced an inflow of economic resources in the form of an increase in assets. As this inflow also has the effect of increasing equity, it qualifies under the definition of revenue. Compare this to a loan taken out from a bank. Although this is a cash inflow (the business has received cash), this transaction increases liabilities and does not increase the equity of the owner. The loan therefore does not qualify as a revenue item.

A similar situation may exist with cash payments and expenses. If a business pays cash out for employees' wages, a cash outflow has clearly occurred and therefore this would be reported in the statement of receipts and payments. As wages represent an economic sacrifice that decreases the equity of the owner, it would also be reported as an expense in the income statement. However, the situation is different in the case of a loan repayment. A cash payment has still occurred in this case, but an expense item is not created. This is because a loan repayment causes a reduction in the future obligation to a liability but has no effect on the equity of the owner.

The format of the two accounting reports may be summarised as follows:

Statement of receipts and payments:
Cash receipts less Cash payments
= Excess of receipts over payments
+ Bank balance at beginning
= Bank balance at end

Income statement:
Revenue less Expenses
= Profit for the period

6.4 Preparing an income statement

One of the most important accounting reports for a small business owner is the income statement. This report can be used to inform the owner or manager whether or not a profit or loss has been made over a period of time. An income statement is used to report revenues and expenses for a given period. Profit is the excess of revenue over expenses over the duration of the reporting period.

The income statement follows the **reporting period** principle, whereby revenue for a specific period of time is compared to the expenses over that same period of time, in order to determine whether a profit or a loss has occurred. These two classifications provide the basic format of the income statement. To demonstrate this format, the example of S. O'Brien, Cabinetmaker, will be revisited. A statement of receipts and payments was prepared earlier in this text (refer figure 5.5) and has been repeated in figure 6.1 on the next page.

Under the definitions of revenue and expenses, the six items marked with an asterisk in figure 6.1 would not be included in an income statement, for the following reasons:

- 'Capital contribution' is not revenue, as it represents a contribution of assets by the owner. The $9000 is simply an asset put into the business by the proprietor and is therefore part of owner's equity.
- 'Loan—National Bank' does not represent an inflow of economic resources that increase the owner's equity. When a loan is taken out, the cash at bank (asset) will be increased, with a corresponding increase occurring in the firm's future obligations (i.e. liabilities). Therefore the loan would be treated as an increase in liabilities and not revenue.
- 'Drawings' is simply cash withdrawn by the owner for personal use. This represents a distribution of equity funds to the owner and is therefore not an economic sacrifice as prescribed by the definition of expenses. It should never be treated as an expense.

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Figure 6.1 Statement of receipts and payments

S. O'Brien, Cabinetmaker: statement of receipts and payments for month ended 30 September 2015		
Cash receipts	*$*	*$*
Fees—Kitchen cupboards	1 940	
— Video cabinets	800	
— Student desks	1 360	
Capital contribution*	9 000	
Loan—National Bank*	3 000	
GST collected*	410	16 510
Cash payments		
Timber	1 040	
Wages	1 180	
Drawings*	850	
Purchase of assets*	530	
Advertising	250	
Insurance	480	
GST paid*	230	4 560
Excess of receipts over payments		11 950
Bank balance (1 September 2015)		NIL
Bank balance (30 September 2015)		11 950

- 'Purchase of assets' is clearly an increase in the assets of the business. An item classified as an asset should not be treated as an expense until such time as the asset is sacrificed in order to increase owner's equity. For example, the cost of an asset will be treated as an expense when it is sold because cash received for the sale of an asset will be treated as a revenue item.
- 'GST collected' and 'GST paid' should never be part of an income statement. The GST collected from customers is done so on behalf of the government and results in the creation of a liability; it does not cause an increase in owner's equity. In simple terms, the GST collected does not belong to the business owner. The GST paid by a business simply reduces the amount owing to the government as a GST liability. Therefore, GST paid is never reported as an expense. GST transactions for a period should always be reported in the balance sheet of a business as either a GST liability or a GST refund.

Having deemed some items as not relevant to an income statement, the report can now be prepared as shown in figure 6.2.

There are some important things to note about the income statement. First, the heading should always state the name of the entity (as is the case with all accounting reports) and the period being examined. In the case of S. O'Brien, the report clearly states that it is for one month's operations. When evaluating a profit figure, the length of time taken to earn that profit is of paramount importance. Also, it is common practice to use subheadings in the report to show totals for revenue and expenses (SAC2—*understandability*). Note also that the final figure should be clearly labelled. In this case, a profit of $1 150 has been earned for the month of September 2015.

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Figure 6.2 Income statement

S. O'Brien, Cabinetmaker: income statement for month ended 30 September 2015		
Revenue	*$*	*$*
Fees—Kitchen cupboards	1 940	
—Video cupboards	800	
—Student desks	1 360	4 100
Expenses		
Timber	1 040	
Wages	1 180	
Advertising	250	
Insurance	480	2 950
Net profit		1 150

Once a profit or loss figure has been calculated, this amount is then transferred to the owner's equity section of the balance sheet. A profit will increase the owner's equity, with a loss causing a decrease in the equity figure. In addition to the profit figure, any withdrawals made by the firm's owner must also be shown under owner's equity, as drawings decrease the owner's claim on the business. To demonstrate these points, the balance sheet for S. O'Brien is shown in figure 6.3.

Figure 6.3 Balance sheet

S. O'Brien, Cabinetmaker: balance sheet as at 30 September 2015

Assets	*$*	*Liabilities*	*$*	*$*	*$*
Bank	11 950	Loan—National Bank		3 000	
Electric tools	530	GST liability		180	3 180
		Owner's equity			
		Capital	9 000		
		plus Net profit	1 150	10 150	
		less Drawings		850	9 300
	12 480				12 480

It should be noted at this stage that the statement shown in figure 6.2 is a simple format designed to suit the needs of a service firm with only a few expense items. Subsequent chapters in this text will examine the needs of a more complex business, as well as reporting for a trading firm. It must always be kept in mind that all accounting reports must be designed in such a way as to be useful to the users of that report. Therefore changes may be made to the format of an income statement in response to such needs.

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GLOSSARY OF TERMS

expenses losses of economic benefits that cause assets to decrease or liabilities to increase.

income statement an accounting report that states revenue for a period, the expenses for that same period, and a profit or loss result for the reporting period.

profit the excess of revenues over expenses for a specific period of time.

reporting period the period of time over which revenues are compared with expenses in order to determine a profit figure for that period.

revenues inflows of economic benefits that cause an increase in assets or a decrease in liabilities. Revenues are usually gained from the provision of goods or services to customers.

Summary questions

1. State, and describe, the four main demands (as per the SACs) that accounting has to satisfy in order to provide valuable information.
2. Define the term 'revenue' and state an example of revenue for each of the following small businesses:
   - a pizza shop
   - b accountant
   - c car park.
3. Define the term 'expenses' and state four examples of expenses for each of the following small businesses:
   - a hairdresser
   - b mechanic
   - c window-cleaner.
4. What are the two business documents that are used to verify revenue transactions?
5. Name the two business documents used to verify expense transactions.
6. Revenues cause an increase in the assets of a firm. State the two assets that could be increased when a business earns revenue.
7. Explain how two different items in a balance sheet may be affected by the creation of an expense.
8. Explain what accountants mean by the term 'profit'.
9. State three reasons why profit may not equal the balance of a firm's bank account at the end of a period.
10. Explain what is meant by the reporting period.
11. 'If a business earns a loss for a period, this means that it has no money in the bank.' Do you agree? Discuss.
12. A business earned a profit but the owner's equity decreased. Explain how this is possible.

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Practical exercises

[Exercise 6.1]

The following accounting report has been provided by Christian Malivindi, Carpenter, who has $25 000 of capital as at 1 January 2015.

C. Malivindi, Carpenter: statement of receipts and payments for month ended 31 January 2015

Cash receipts	*$*	*$*
Carpentry fees—Private customers	3 250	
—Business customers	2 450	
Interest from bank	220	
Loan—National Bank	4 500	
GST collected	570	10 990
Cash payments		
Timber	980	
Wages	1 600	
Office expenses	140	
Drawings	930	
Advertising	450	
Purchase of electric tools	1 280	
GST paid	285	5 665
Excess of receipts over payments		5 325
Bank balance (1 January 2015)		3 420
Bank balance (31 January 2015)		8 745

a Prepare an income statement for Malivindi for the month of January 2015.

b Prepare the owner's equity section of the balance sheet as at 31 January 2015.

c State four items that appear in the above statement that you have not included in the income statement. Explain why you excluded such items from your report.

d What is the GST situation for this business as at 31 January 2015? Explain your answer fully.

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[Exercise 6.2]

Bonnie Blyth, the proprietor of Blyth Mechanical Repairs, has $40 000 capital as at 1 April 2015 and has provided the following information.

Blyth Mechanical Repairs: statement of receipts and payments for quarter ended 30 June 2015

Cash receipts	$	$
Repair fees—Brakes	7 480	
—Tune-ups	5 460	
—General services	3 200	
Capital injection	5 000	
Commission on sale of batteries	850	
GST received	1 699	
Interest—Term deposit	420	
Loan—Trusty Finance	1 500	25 609
Cash payments		
Spare parts used	1 980	
Wages—mechanic	6 800	
Postage	180	
Drawings	5 400	
Advertising	590	
Cleaning of garage	840	
GST paid	1 987	
Rent of garage	14 000	
Purchase of computer	2 280	34 057
Excess of payments over receipts		(8 448)
Bank balance (1 April 2015)		6 428
Bank balance (30 June 2015)		(2 020)

a Prepare an income statement for Blyth for the quarter.

b Prepare the owner's equity section of the balance sheet as at 30 June.

c Explain your treatment of the following items: 'Commission on sale of batteries', 'Capital injection', 'Wages—mechanic' and 'Purchase of computer'.

d Comment on the performance of this business for the reporting period under examination.

[Exercise 6.3]

Cavalieri's Computer Services is a small business that provides repairs and general servicing of computers and printers. On 1 April 2015 the firm had a bank balance of $430, a GST debt of $560 and owner's equity of $36 000. The following transactions occurred during April 2015.

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Apr 2	Received from D. Hughes $220, plus $22 GST, for computer repairs (Rec. no. 892)
3	The owner withdrew $400 cash (Chq. 8123) and paid wages $600
5	Paid rent for month $2 850, plus $285 GST
7	Received $100 from A. Glenn for printer repairs (plus $10 GST)
8	Received $260 for computer repairs (plus $26 GST) and $120 for repairs to a printer (plus $12 GST)
10	Paid wages $630 and bought spare parts for cash $440, plus $44 GST
11	Received $160, plus $16 GST from A. Nelson for printer repairs
13	Received $250 for printer repairs (plus $25 GST) and $310 for computer repairs (plus $31 GST)
14	Paid advertising $170, plus GST of $17 and the owner withdrew $350
15	C. Adele paid us $220 for work done on a computer (plus $22 GST)
17	Received $180, plus $18 GST, from C. Carly for computer repairs and paid wages $630
18	Received $100 for computer service and $90 for printer repairs (plus GST of $10 and $9 respectively)
19	Purchased spare parts $390, plus $39 GST
20	Received $120 for computer repairs, plus $12 GST, from D. Murdoch
21	Fixed a printer and received $190, plus $19 GST, from G. Garnsworthy
22	Paid for advertisement in local paper $220, plus $22 GST
24	Paid wages $520
26	Received $220 for computer repairs and $150 for servicing a printer (plus GST of $22 and $15)
28	The proprietor withdrew $400 by cashing a cheque
30	Received $100 from L. Carter, plus $10 GST, for printer repairs

a Design suitably ruled cash journals for Cavalieri's Computer Services and then record all the transactions for April 2015.

b Prepare a statement of receipts and payments for the month ended 30 April 2015.

c Prepare an income statement for the month of April 2015.

d Show how the owner's equity section of the balance sheet would appear as at 30 April 2015.

e Calculate the GST debt or refund that exists at 30 April 2015. Explain how this should be reported in the balance sheet as at this date.

[Exercise 6.4]

Classic Photography is a small business that provides a range of photographic services. On 1 May 2015 the business had the following assets: Cash at bank $1 400 and Equipment $10 200 and a GST liability of $650. The following documents were used to evidence transactions during May 2015.

DATE: 1 / 5 / 15
RECEIVED FROM: M. Dekker
FOR: Passport
AMOUNT: $ 30.00
GST $ 3.00
TOTAL $ 33.00
NO. 187

DATE: 2 / 5 / 15
RECEIVED FROM: D&R Hawking
FOR: Wedding
AMOUNT: $ 840.00
GST $ 84.00
TOTAL $ 924.00
NO. 188

DATE: 3 / 5 / 15
RECEIVED FROM: A&C Black
FOR: Wedding
AMOUNT: $ 750.00
GST $ 75.00
TOTAL $ 825.00
NO. 189

DATE: 5 / 5 / 15
RECEIVED FROM: C. Galbraith
FOR: Passport
AMOUNT: $ 30.00
GST $ 3.00
TOTAL $ 33.00
NO. 190

DATE: 6 / 5 / 15
RECEIVED FROM: D. Bascetta
FOR: Family portrait
AMOUNT: $ 90.00
GST $ 9.00
TOTAL $ 99.00
NO. 191

DATE: 8 / 5 / 15
RECEIVED FROM: N. Mokbel
FOR: Passport
AMOUNT: $ 30.00
GST $ 3.00
TOTAL $ 33.00
NO. 192

DATE: 10 / 5 / 15
RECEIVED FROM: I&I Lawrence
FOR: Wedding
AMOUNT: $ 820.00
GST $ 82.00
TOTAL $ 902.00
NO. 193

DATE: 11 / 5 / 15
RECEIVED FROM: K&L Ellis
FOR: Family portrait
AMOUNT: $ 120.00
GST $ 12.00
TOTAL $ 132.00
NO. 194

DATE: 13 / 5 / 15
RECEIVED FROM: R. Charchar
FOR: Passport
AMOUNT: $ 30.00
GST $ 3.00
TOTAL $ 33.00
NO. 195

DATE: 14 / 5 / 15
RECEIVED FROM: A. Fuller
FOR: Passport
AMOUNT: $ 30.00
GST $ 3.00
TOTAL $ 33.00
NO. 196

DATE: 16 / 5 / 15
RECEIVED FROM: L&B Olden
FOR: Wedding
AMOUNT: $ 710.00
GST $ 71.00
TOTAL $ 781.00
NO. 197

DATE: 17 / 5 / 15
RECEIVED FROM: N&A Courtney
FOR: Wedding
AMOUNT: $ 750.00
GST $ 75.00
TOTAL $ 825.00
NO. 198

DATE: 21 / 5 / 15
RECEIVED FROM: J. Wang
FOR: Family portrait
AMOUNT: $ 90.00
GST $ 9.00
TOTAL $ 99.00
NO. 199

DATE: 25 / 5 / 15
RECEIVED FROM: K&R Wilson
FOR: Wedding
AMOUNT: $ 880.00
GST $ 88.00
TOTAL $ 968.00
NO. 200

DATE: 29 / 5 / 15
RECEIVED FROM: S. Surace
FOR: Passport
AMOUNT: $ 40.00
GST $ 4.00
TOTAL $ 44.00
NO. 201

DATE: 3 / 5 / 15
TO: City News
FOR: Advertising
AMOUNT: $ 160.00
GST $ 16.00
TOTAL $ 176.00
CHQ. NO. 22714

DATE: 6 / 5 / 15
TO: Kodak
FOR: Enlargements
AMOUNT: $ 120.00
GST $ 12.00
TOTAL $ 132.00
CHQ. NO. 22715

DATE: 9 / 5 / 15
TO: Cash
FOR: Drawings
AMOUNT: $ 300.00
GST $
TOTAL $
CHQ. NO. 22716

DATE: 12 / 5 / 15
TO: Quicktrips
FOR: Courier fees
AMOUNT: $ 50.00
GST $ 5.00
TOTAL $ 55.00
CHQ. NO. 22717

DATE: 15 / 5 / 15
TO: Cash
FOR: Drawings
AMOUNT: $ 350.00
GST $
TOTAL $
CHQ. NO. 22718

DATE: 19 / 5 / 15
TO: City News
FOR: Advertising
AMOUNT: $ 160.00
GST $ 16.00
TOTAL $ 176.00
CHQ. NO. 22719

DATE: 22 / 5 / 15
TO: Quicktrips
FOR: Courier fees
AMOUNT: $ 60.00
GST $ 6.00
TOTAL $ 66.00
CHQ. NO. 22720

DATE: 28 / 5 / 15
TO: Kodak
FOR: Equipment
AMOUNT: $ 400.00
GST $ 40.00
TOTAL $ 440.00
CHQ. NO. 22721

DATE: 31 / 5 / 15
TO: Agfa
FOR: Enlargements
AMOUNT: $ 70.00
GST $ 7.00
TOTAL $ 77.00
CHQ. NO. 22722

a Prepare cash journals for Classic Photography for the month of May 2015, using appropriate columns for recurring items.

b Prepare a statement of receipts and payments for the month of May 2015.

c Prepare an income statement for the month of May 2015.

d Calculate the GST liability of the business as at 31 May 2015.

e Prepare a balance sheet as at 31 May 2015.

f Explain how the demand for reliability is satisfied by the above business documents.

g By referring to your two accounting reports prepared in parts **b** and **c**, explain how you have satisfied the demands of understandability.

[Exercise 6.5]

M. Lazzaro has provided the following in relation to his business, which trades as Matt's Mowing.

Summary of transaction data for February 2015:

1 Cash at bank as at 1 February—$540, GST liability as at 1 February $840
2 The owner contributed $2000 as capital
3 Cost of fuel for the month—$320 paid in cash, plus $60 still owing (GST paid $32)
4 Equipment purchased for cash—$2500, plus GST of $250
5 Advertising costs paid—$430 plus $43 GST
6 Cash withdrawals made by the owner—$750
7 Fees received from clients—$1 800, plus GST $180
8 Repairs to mowers—$220, plus $22 GST
9 Loan repayments—$800
10 Telephone bill for the month—$90 (not yet paid)

a Prepare a statement of receipts and payments for the month ended 28 February 2015.

b Prepare an income statement for the month ended 28 February 2015.

c With reference to the concept of relevance, explain your treatment of item (3) above in the two accounting reports prepared in this question.

[Exercise 6.6]

The following is a summary of the transactions experienced by Tan Ha, owner of a small business trading under the name Tan the Painter, during the month of June 2015.

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1 Cash collected from customers for work done during June—$7700, plus $770 GST
2 The cost of paint used on jobs during June was $1540. This was bought for cash during June, along with GST of $154
3 Wages paid to the assistant during June amounted to $3200
4 $40 was received for interest on the firm's bank account
5 Delivery costs of $60 were paid during June, plus $6 GST
6 The owner withdrew $600 from the business for personal use on 16 June
7 Ha organised for an advertisement to be run during June at a cost of $480, plus GST. The paper has not sent an account yet and Ha thinks he will pay for this item early in July
8 During June Ha placed an order for some new paint brushes to be delivered in July. At this stage he is not sure how much they will cost.

a Prepare a statement of receipts and payments for the month ended 30 June 2015. (The bank balance as at 1 June was $240.)

b For each of the eight items listed above, state whether or not they would appear in an income statement prepared for the month ended 30 June 2015.

c Prepare an income statement for June.

[Exercise 6.7]

The new owner of City Upholsterers, Linda Hawthorn, needs some advice. Hawthorn has decided to rent a shop at a cost of $30000 per year, starting on 1 June 2015. However, the owner of the property has offered her a special deal. They have negotiated a deal whereby Hawthorn would pay $125000 in advance for the next five years' rental. She has agreed to this offer and took possession of the business property on 1 June 2015. Hawthorn has decided that the reporting period for her business will conclude on 31 December each year. She has a basic understanding of accounting, but is unsure how to treat the rent expense in the accounting reports for the year 2015. Hawthorn's brother has suggested that the full amount of $125000 be treated as an expense because it was paid that year. However, her mother has recommended that one-fifth, or $25000, should be reported because 2015 is the first year of a five-year contract. Hawthorn's father suggests that, as the usual cost is $30000 per year, that is how much should be reported for 2015.

a State one advantage and one disadvantage of the five-year payment for Hawthorn's business.

b Consider the definition of expenses earlier in this chapter. Make a comment on each of the solutions offered by members of Hawthorn's family.

c How much rent expense (if any) do you think should be reported in the income statement prepared by Hawthorn on 31 December 2015? Give reasons for your answer. Refer to any accounting principles and/or qualitative characteristics to support your findings.

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[Exercise 6.8] Bobby's Boats is a small business that specialises in the design and construction of custom-made boats. On 1 May 2015, Bobby's Boats signed a contract with V. Jackson to build a boat. The contract price was stated as $50 000. A 10% deposit was required within 30 days of the signing of the contract and this was received on 25 May 2015. Progress payments were then required as follows, in line with the amount of work expected to be completed on the boat:

30/6/15—$15 000, 31/8/15—$5 000, 31/10/15—$5 000, balance on delivery.

The boat was delivered to the customer on 22 December. However, at that time Jackson was a little short of cash and asked for 30 days to settle the final amount outstanding. Bobby's Boats works on a six-month reporting period.

a How much revenue (if any) should be reported for Bobby's Boats in relation to the contract with Jackson for the six months ended 30 June 2015? Explain your answer fully, with reference to the definition of revenue earlier in this chapter.

b How much revenue should be reported for the six months ended 31 December 2015? Support your answer with a full explanation.

CASE STUDY

The business of **GISBORNE FURNITURE REPAIRS** is owned and operated by Brendon Fogarty, who established the business on 1 September 2014. At that time he deposited $90 000 into a separate bank account to start the business. During the year ended 31 August 2015, the following transactions occurred:

- Repair fees received in cash totalled $48 000, plus GST of $4 800.
- Fogarty borrowed $15 000 from the bank.
- The loan has to be repaid at the rate of $250 per month. A total of $3 000 was paid back to the bank during Fogarty's first reporting period.
- Interest expense on the loan was paid in cash. This amounted to $900.
- The loan was used to buy office furniture ($4 000 plus $400 GST) and equipment ($11 000 plus $1 100 GST).
- Advertising completed during the year cost $1 500 (plus $150 GST) paid in cash.
- Repair materials had to be purchased in order to complete customers' jobs. Materials costing $8 600 were purchased for cash (plus $860 GST).
- A part-time assistant was employed during the year and his wages were $12 250.
- Rent of the repair shop cost Fogarty $24 000, plus GST of $2 400.
- Office expenses cost his business $950 (plus $95 GST); all of these were paid in cash.
- A computer was bought during the year for $3 000, plus GST of $300. It was purchased on credit from Computer Solutions, which was still owed $500 of the $3 000 on 31 August 2015. All of the GST has been paid.
- Fogarty withdrew cash from the business on the last day of every month, for a total of $18 000 during the year.

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a Select the items from the above list that are cash flows and prepare a statement of receipts and payments for the year ended 31 August 2015.

b Identify the items that represent revenue and expenses and prepare an income statement for the year ended 31 August 2015.

c Taking into account all of the above information, prepare a balance sheet as at 31 August 2015.

d Consider the results as reported in your statement of receipts and payments. Comment on the cash position of the business after one year of operation.

e Using the results shown in your income statement, comment on the profit result achieved over the year.

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Chapter 7

Cash control: bank reconciliations

OBJECTIVES

At the completion of this chapter, you should be able to:

- explain the meaning of the term ‘internal control’
- outline how internal control is achieved in a business situation
- describe procedures which help achieve control over cash
- define the meaning of the term ‘bank reconciliation’
- explain why a bank reconciliation is necessary
- explain the meaning of the terms ‘unpresented cheques’, ‘dishonoured cheques’ and ‘deposits not credited’
- interpret the entries on a bank statement
- update cash journals when given a bank statement
- prepare a bank reconciliation statement for a business
- explain how bank reconciliations assist in the control of cash.
- describe what is meant by a bank overdraft
- state the advantages and disadvantages of operating an overdraft
- reconcile an overdrawn account with a bank statement
- prepare bank reconciliation statements over consecutive periods.

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7.1 Internal control

Part of the role of accounting is to provide control mechanisms to protect the economic resources of a business. Unfortunately, the assets of a business may be at risk because of misuse or theft. The materials held by a service firm, and equipment such as computers, are likely targets for dishonest individuals. Cash, of course, is the most vulnerable asset of them all. Unfortunately, there is always the possibility that employees or outsiders are going to attempt to steal assets from a business. There are steps that can be taken to reduce the likelihood of a theft being perpetrated by either of these groups. Accounting has a role to play in protecting the assets of a business because it provides the means of checking what is actually owned by the firm.

A system of **internal control** involves setting up procedures within the structure of a business to protect the assets of the firm. Typical internal control procedures would include the following:

1. *Separation of duties:* For example, staff involved in receiving cash should not also be banking the cash. Staff involved in writing cheques should not be responsible for writing up creditors' records. The system should demand that a number of staff members be involved in any one process, thereby reducing the opportunity to commit a fraud against the firm. In this way staff are actually used to 'control' one another.
2. *Rotation of duties:* The duties of employees should be rotated occasionally to ensure that one member of staff has not created a situation where a fraud can go on undetected. Job rotation ensures that correct procedures are being followed.
3. *Random checking:* Without warning, checks should be carried out occasionally to ensure that goods or money are not missing. If cash on hand is accessible to staff, it must be watched very carefully and should be checked regularly. Such checking can be a sensitive issue with employees, but should be carried out as part of a normal routine.
4. *Accurate record-keeping:* Records can only be an effective tool against fraud if they are up-to-date and accurate. In any accounting system, steps must be taken to ensure the accuracy of records. Otherwise, they cannot be used as control mechanisms. Records of all cash receipts and payments and references to their source documents must be extremely accurate and up-to-date. Care should also be taken with receipt books and cheque books. These documents are pre-printed with sequential numbers and must all be accounted for.
5. *Physical protection of assets:* Steps should be taken to prevent the physical removal of a firm's assets. Management should consider the use of security cameras and alarm systems to protect their assets.

Some of the internal control procedures outlined above will not be relevant to all firms. In a small business with one or two employees, the idea of rotating duties may be totally irrelevant, as it is not possible. However, as a business grows and takes on more employees, the demand for more internal control procedures also grows. The procedures put in place must be in response to the needs of the business and its assets.

7.2 Control over cash

The asset that is most likely to be the target of fraudulent behaviour is cash. It is almost impossible to prove ownership of notes and coins. Therefore it is imperative that a business takes steps to ensure that the cash coming into the business ends up in the business bank account. Similarly, the money coming out of the account should only be for legitimate, business purposes. Every

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business owner needs to consider how best to control the cash that moves through the business on a day-to-day basis. Some of the more common procedures would include the following:

- All cash receipts should be evidenced by a receipt (either handwritten or cash register docket).
- Cash registers should be cleared regularly, to avoid having large sums of money in the registers at any time.
- In larger firms, two staff should clear registers together and the money should be counted immediately and recorded against the specific register (particularly for businesses dealing in large sums of cash).
- Large sums of money should not be left on business premises overnight or on weekends. (A night safe is an alternative.)
- Daily takings should be banked, intact, to allow checking against cash register tapes.
- Cash shortages in registers that occur regularly should be investigated.
- Payments should not be made from cash registers.
- Money should not be borrowed from cash registers.
- Staff involved in receiving cash should not also count cash receipts or do the banking.
- When large amounts of cash need to be carried, two staff should go to the bank together, or a security firm should be employed.
- All payments should be made by cheque (except perhaps very small payments, which may be made from a petty cash tin, if available).
- In larger firms, cheques should be signed by at least two designated employees.
- Formal cash receipts and cash payments journals should be maintained, recording all document numbers and amounts.
- A bank reconciliation statement should be prepared regularly (see section 7.3).

The steps outlined above do not guarantee protection from all forms of fraud and theft. However, they do provide procedures that can reduce the likelihood of theft. Following such steps will result in a more accurate set of accounting records.

7.3 Bank reconciliations

If a business makes all payments by cheque and banks all receipts intact on a daily basis, an external checking device is automatically provided for the accounting system. The bank will issue a **bank statement**, usually monthly, which lists all deposits and withdrawals relating to the firm's account. This provides the business owner with an opportunity to check the accuracy of the firm's cash records. However, it is normal to find that, although many of the transactions will be identical on both records, the final balance may be totally different. This occurs because the business will be aware of some transactions of which the bank has not yet been informed, and the bank will have recorded transactions that the business owner did not know existed. These two possibilities are examined in detail below.

First, payments and receipts involving the business can be recorded on the day that they take place. For example, when a firm receives $1 000 in fees for the day, the entry can be recorded in the cash receipts journal immediately. When the business writes out five different cheques to creditors, the details can be recorded in the cash payments journal immediately. However, the bank does not know of these events until the relevant documents have been processed. In the case of the daily receipts, the deposit may not be recorded by the bank until the next day. With Friday's takings, the deposit may not be recorded until the following Monday. When a deposit made by a firm has not yet been recorded by the bank, it is known as a **deposit not yet credited**. With payments by cheque, there is an even bigger timing difference. Cheques written

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out and recorded by the business on a particular day will not be recorded by the bank until they have been received and banked by the payee. This may take several days and, in some cases, several weeks or even months before the cheque has been presented for payment. An **unpresented cheque** is a cheque written out by the business that, for one reason or another, has not yet been deducted from the firm's account by the bank. If a business has deposits not yet credited or unpresented cheques, the balance according to the bank statement will not correspond to that shown by the firm's own cash records.

The other situation that may exist is where the bank records transactions not yet shown in the books of the business. Every month the firm's account will be adjusted for such items, but the amount of these items is unknown to the firm until a bank statement is issued. For example, an account may be affected by a *direct debit*, whereby the bank is authorised to periodically withdraw a certain amount. This may happen if a business has a loan from the bank and makes its regular repayments through a direct debit entry. It is also possible that an account has a *direct credit*, whereby money has been paid directly into the firm's account (for example, interest on an investment). A bank statement may also confirm that a cheque deposited to a firm's bank account has been 'dishonoured'. A **dishonoured cheque** occurs when one of the firm's customers has paid by cheque, but has insufficient funds in the cheque account to cover the payment. When a business receives a cheque, it is usually recorded in the receipts journal on the assumption that it will be honoured. If the cheque 'bounces' (that is, if it is not honoured), an adjustment to the account is necessary. The other item a bank statement may include is bank charges. If there are any fees or charges applicable to the account, these will also be listed on the regular bank statement. Taking into account all the above possibilities, it is clear that the balance shown on the bank statement will rarely correspond to that shown in the books of the business.

Because of the differences in recording outlined above, there is a need to update the business records to ensure that all relevant transactions have been recorded. However, even when all direct debits, direct credits, bank fees and dishonoured cheques have been entered in the cash journals kept by the business, the balances of the two records will still not be identical. The **bank reconciliation** *statement* attempts to show that the balance according to a bank statement is actually the same as the firm's records, once deposits not yet credited and unpresented cheques are taken into account.

7.4 The bank reconciliation process

The bank reconciliation process consists of five separate steps. These steps are the same for all bank reconciliations, regardless of the size of the business being examined.

Step 1—The *credit entries* in the bank statement are ticked off against the entries in the *cash receipts journal* of the business. (All deposits to an account are recorded as credits by the bank.) All amounts should be checked carefully, but note that the dates of the deposits do not have to match the dates in the journal. Entries should be ticked in both records if correct.

Step 2—The *debit entries* in the bank statement are ticked off against the entries in the *cash payments journal* of the business. (All withdrawals are recorded as debits by the bank.) The cheque numbers and values should be checked carefully. Also, keep in mind that the cheques will not necessarily be in order on the bank statement. Entries should be ticked in both records if correct.

Step 3—Any unticked credits (deposits) on the bank statement must be entered in the cash receipts journal of the business, as they will be receipts previously unknown to the business (for example, a direct credit for interest received).

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Step 4—Any unticked debits (withdrawals) on the bank statement must be entered in the cash payments journal of the business, as they will be payments previously unknown to the business (for example, bank charges).
Step 5—The unticked items in the cash journals are then used to prepare a bank reconciliation statement.

To demonstrate these five steps, the following case study uses the two cash journals for the business of Sunshine Swim Centre, plus the bank statement received from the Commonwealth Bank. The business had $1 000 in the bank on 31 May 2015.

7.5 Case study: preparing a bank reconciliation statement

Figure 7.1 Cash receipts journal

Sunshine Swim Centre: cash receipts journal—June 2015

Date	Details	Receipt no.	Amount banked $	Amount received $	GST received $
Jun 1	Cash fees	CRS	495 ✔	450	45
4	Cash fees	CRS	605 ✔	550	55
7	Cash fees	CRS	495 ✔	450	45
8	Cash fees	CRS	77 ✔	70	7
10	Cash fees	CRS	484 ✔	440	44
14	Cash fees	CRS	704 ✔	640	64
17	Cash fees	CRS	352 ✔	320	32
20	Cash fees	CRS	231 ✔	210	21
21	Cash fees	CRS	66 ✔	60	6
25	Cash fees	CRS	209 ✔	190	19
30	Cash fees	CRS	968	880	88
30	Totals		4 686	4 260	426

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Figure 7.2 Cash payments journal

Sunshine Swim Centre: cash payments journal—June 2015

Date	Details	Cheque no.	Total paid $	Amount paid $	GST paid $
Jun 2	Advertising	34980	198 ✔	180	18
4	Cleaning	34981	77 ✔	70	7
6	Wages	34982	400 ✔	400	
11	Cleaning	34983	88 ✔	80	8
13	Wages	34984	400 ✔	400	
15	Insurance	34985	682	620	62
20	Wages	34986	400 ✔	400	
22	Cleaning	34987	121 ✔	110	11
27	Wages	34988	400 ✔	400	
29	Computer	34989	1 595	1 450	145
	Fax machine	34990	902	820	82
30	Totals		5 263	4 930	333

Using the cash journals shown in figures 7.1 and 7.2, the balance of the bank account according to the firm's records at 30 June can be calculated as follows:

	Bank balance as at 1 June 2015	$1 000
plus	Total receipts from cash receipts journal	4 686
		5 686
less	Total receipts from cash payments journal	5 263
	Bank balance as at 30 June 2015	423

However, the bank statement received from the bank on 30 June (refer figure 7.3) shows a balance of $2 719 in the account of Sunshine Swim Centre. The differences between the two records are due to different information being known by the two parties. The specific differences will be identified as the steps of the bank reconciliation process are completed.

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Figure 7.3 Bank statement received from Acme on 30 June 2015

Acme Bank

Business Banking Account

Sunshine Swim Centre
1990 Tottenham Road
SUNSHINE 3020

BSB and Account number
999-999 3860-9800

Account name
Sunshine Swim Centre

Date	Details	Debit	Credit	Balance*
June 1	Balance		Brought forward	1 000 CR
1	Cash		495 ✔	1 495 CR
4	Cash/chqs		605 ✔	2 100 CR
6	34980	198 ✔		1 902 CR
7	34982	400 ✔		1 502 CR
7	34981	77 ✔		1 425 CR
7	Cash		495 ✔	1 920 CR
8	Chq.		77 ✔	1 997 CR
10	Cash		484 ✔	2 481 CR
14	Cash/chqs		704 ✔	3 185 CR
15	34984	400 ✔		2 785 CR
15	Interest		100	2 885 CR
17	Cash		352 ✔	3 237 CR
20	Cash/chqs		231 ✔	3 468 CR
21	Cash		66 ✔	3 534 CR
22	34986	400 ✔		3 134 CR
25	Cash		209 ✔	3 343 CR
25	34983	88 ✔		3 255 CR
26	34987	121 ✔		3 134 CR
28	34988	400 ✔		2 734 CR
30	Bank charges	15		2 719 CR

Date of issue
30 June 2015

Final balance $2 719.00 CR
Subject to any adjustment—Please see over*

Proceeds of cheques will not be available until cleared. Please check all entries promptly and notify Bank immediately of any errors.

Important Please keep this statement in a safe place. It is a record of your account with the Bank and should be retained for taxation purposes.

Page 1 of 1

Acme Banking Corporation ABN 12 345 678 910

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Steps 1 and 2 of the bank reconciliation process have already been completed. Note that most items in the cash journals have been ticked off. However, in figure 7.1 the last receipts banked (on 30 June) do not appear on the bank statement and are therefore not ticked off. In figure 7.2, the payments journal has all entries ticked off, except for cheque numbers 34985, 34989 and 34990. These cheques have not yet been presented for payment and therefore do not appear on the bank statement. The bank statement shown in figure 7.3 also has some unticked items. Bank charges of $15 (refer 30 June) are unticked, as they were not previously known by the business and are therefore not in the cash payments journal. The interest received of $100 (refer 15 June) has been credited to the account but does not appear in the cash receipts journal. Steps 3 and 4 of the reconciliation process involve updating the firm's cash journals with the unticked items in the bank statement. Having identified the unticked items in the bank statement, they would be added to the appropriate journals as shown in figures 7.4 and 7.5.

Figure 7.4 Updated cash receipts journal

Sunshine Swim Centre: updated cash receipts journal (extract)

Date	Details	Rec. no.	Amount banked $	Amount received $	GST received $
21	Cash fees	CRS	66 ✔	60	6
25	Cash fees	CRS	209 ✔	190	19
30	Cash fees	CRS	968	880	88
15	Interest revenue	B/S	100 ✔	100	
30	Totals		4 786	4 360	426

Figure 7.5 Updated cash payments journal

Sunshine Swim Centre: updated cash payments journal (extract)

Date	Details	Chq. no.	Total paid $	Amount paid $	GST paid $
27	Wages	34988	400 ✔	400	
29	Computer	34989	1 595	1 450	145
	Fax machine	34990	902	820	82
30	Bank charges	B/S	15 ✔	15	
31	Totals		5 278	4 945	333

Now that the cash journals have been updated with the additional information revealed by the bank statement, an accurate balance can be calculated as at 30 June 2015.

Bank balance as at 1 June 2015		$1 000
plus	Total receipts from cash receipts journal	4 786
		5 786
less	Total payments from cash payments journal	5 278
Bank balance as at 30 June 2015		508

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However, the bank statement states a balance of $2719 in the account. The final step in the bank reconciliation process is the preparation of the bank reconciliation statement (step 5). This statement reconciles the differences between the updated bank balance according to the firm's records, and the balance as stated on the bank statement. The bank reconciliation statement uses the unticked items in the cash journals and is shown in figure 7.6.

Figure 7.6 **Bank reconciliation statement**

Sunshine Swim Centre: bank reconciliation statement as at 30 June 2015

	Balance as per bank statement		$2 719
plus	Deposits not yet credited		968
			3 687
less	Unpresented cheques		
	Chq. no.	Amount	
	34985	$682	
	34989	1 595	
	34990	902	3 179
	Balance as per firm's cash records		$508

As the two records have been reconciled, the owner of Sunshine Swim Centre now knows that the firm's cash records are both up to date and accurate. The additional information revealed by the bank statement has been recorded in the business records so that they now include all cash flows. Also, the bank reconciliation statement shows that when the bank does record the outstanding deposits and unpresented cheques, the two records will coincide with each other.

It is important to note that the items that appear in a bank reconciliation statement one month must be checked the following month to ensure that they have been correctly recorded. It is possible that an unpresented cheque, for example, appears on several consecutive bank reconciliation statements. Therefore, bank reconciliations are actually a continuous process that a business owner should carry out throughout the life of the business.

7.6 Bank overdrafts

The examples presented so far in this chapter have involved situations where the business has had money in the bank. That is, the balances presented on the bank statements were all 'credit' balances, indicating a positive cash balance. However, this situation may not necessarily exist all the time. Some small businesses experience fluctuations in their cash flows and they may, at times, simply run out of cash. If the business (and its owner) has a good credit history, an overdraft facility may be available from the bank. A **bank overdraft** is simply an overdrawn bank account, or a bank account with a negative balance. When a bank approves a customer for an overdraft it usually sets a limit on its future overdrawn balances. For example, a very small business may be restricted to an overdraft limit of $2000. Larger businesses may have overdraft limits of $10 000 or $20 000, while some companies are allowed overdrafts of millions of dollars. Once an overdraft facility has been approved, the business owner can use it when and as required. That is, the overdraft facility is there if they need it. Thus, an overdraft can act

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as a form of emergency fund. The business owner is not locked into borrowing a set amount of cash and a loan period is not set either. A bank overdraft is a form of short-term finance, but it is not like a loan over a specific period of time. Consider the transactions below, involving cash receipts and payments. The firm's bank balance is shown after each financial event has taken place.

Date	*Transaction*		*Bank balance*
August 1	Opening balance		$350
2	Paid rent	$300	$50
3	Paid wages	$500	$450 OD*
4	Received cash from sales	$600	$150
5	Purchased stock for cash	$700	$550 OD*

*indicates overdraft

After the rent was paid on 2 August the business had only $50 left in the bank. When wages of $500 were paid on 3 August the business had run out of cash. As only $50 was left before this payment, the $500 payment produced a negative, or overdrawn, balance. The cash receipt on the next day brought the cash balance back into the positive, as the business had $150 cash in the bank again. The payment on 5 August again took the firm's account into overdraft. This simple example shows how an overdraft may be used. It is an ideal source of finance to cover short-term fluctuations in cash. The major advantage of an overdraft facility is that the business owner is not locked into a loan of two, three or more years. Neither does the owner have to borrow a specific amount of cash. However, the interest charged on overdrafts is relatively high and, of course, overdrafts may not be available to all business owners.

7.7 Reconciling an account in overdraft

The procedure outlined earlier in this chapter is only applicable to situations involving a positive cash balance. You will notice that the balance on the bank statement in figure 7.3 is noted as 'CR', indicating a credit balance. This means that the business has cash in the bank. Therefore, when additional deposits are made to the account, the balance will increase. This is the reason why *deposits not credited* are added to the bank statement balance. When cheques are written out and presented for payment, the account balance will decrease. Therefore, *unpresented cheques* are subtracted from the balance in the bank reconciliation statement. This standard format can be used any time a business has a positive cash balance (see figure 7.6).

When a business has an overdrawn balance, the format of the bank reconciliation statement must be changed. The basic difference is the starting point, as the balance on the bank statement will be shown as 'Dr' (meaning 'debit'). Note that some banks use the notation 'OD' to indicate an overdrawn account. As an overdraft exists, what is added and subtracted to the balance will also change. When there is an overdraft, a cheque written out will increase the overdraft, as payments will increase the amount the business owes to the bank. On the other hand, when a deposit is made, the overdraft will be decreased. Taking into account these differences, the format of the bank reconciliation statement for an overdrawn account will be as shown in figure 7.7.

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Figure 7.7 Bank reconciliation format for an overdrawn account

	Balance as per bank statement		$400 OD
plus	Unpresented cheques		
	Chq. no.	Amount	
	23909	$300	
	23921	200	500
			900
less	Deposits not yet credited		100
	Balance as per firm's cash records		800 OD

Note that the format of the report is basically the opposite of the standard format of the reconciliation statement. Unpresented cheques are added to the overdrawn balance, with the unrecorded deposits being deducted from the total. The final result should then be equal to the overdrawn balance shown by the firm's cash records.

7.8 Case study: reconciling an account in overdraft

This case study has been written to demonstrate the process of reconciling a bank account when it is in overdraft. The business under consideration is that of Camberwell Carpet Layers, a business that uses separate cash journals for its receipts and payments. The journals in figures 7.8 and 7.9 have been prepared for the month of September 2015, prior to receiving a bank statement on 30 September.

Figure 7.8 Cash receipts journal for Camberwell Carpet Layers

Camberwell Carpet Layers: cash receipts journal

Date	Details	Rec. no.	Amount banked $	Amount received $	GST received $
Sep 1	Cash fees	454	198 ✔	180	18
4	Cash fees	455	297 ✔	270	27
7	Cash fees	456	495 ✔	450	45
9	Cash fees	457	396 ✔	360	36
12	Cash fees	458	594 ✔	540	54
13	Cash fees	459	550 ✔	500	50
15	Cash fees	460	396 ✔	360	36
18	Cash fees	461	275 ✔	250	25
21	Commission	462	99 ✔	90	9
24	Cash fees	463	198 ✔	180	18
27	Cash fees	464	440 ✔	400	40
29	Cash fees	465	495 ✔	450	45
30	Cash fees	466	198	180	18
30	Totals		4 631	4 210	421

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Figure 7.9 Cash payments journal for Camberwell Carpet Layers

Camberwell Carpet Layers: cash payments journal

Date	Details	Chq. no.	Total paid $	Amount paid $	GST paid $
Sep 1	Drawings	321	500 ✔	500	
3	Shaggy Carpets	322	1 980 ✔	1 800	180
4	Advertising	323	594	540	54
7	Wages	324	450 ✔	450	
10	Stationery	325	99 ✔	90	9
12	McLeans Rugs	326	990 ✔	900	90
14	Wages	327	450 ✔	450	
17	Drawings	328	400 ✔	400	
19	Computer	329	1 980	1 800	180
21	Wages	330	480 ✔	480	
24	Insurance	331	792	720	72
28	Wages	332	480 ✔	480	
29	Drawings	333	600 ✔	600	
30	Shaggy Carpets	334	1 540	1 400	140
30	Totals		11 335	10 610	725

According to the records of the business, the cash balance at the start of September 2015 was $520. Using the journals shown above and the opening balance for September, the balance according to the records of the firm would be calculated as follows:

Balance as at 1 September 2015		$520
plus	Total of cash receipts journal for Sept.	4 631
		5 151
less	Total of cash payments journal for Sept.	11 335
Balance of cash at bank as at 30 Sept.		6 184 OD

Although the business started off the month of September with $520 in the bank, it has suffered from excessive cash payments during September, leaving it with an overdraft of $6 184 on 30 September. However, the bank statement received on 30 September showed an overdrawn balance of only $1 506 (see figure 7.10).

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Figure 7.10 Camberwell Carpet Layers: bank statement received from Acme on 30 September 2015

Acme Bank

Business Banking Account

Camberwell Carpet Layers
9832 Burke Road
CAMBERWELL 3124

BSB and Account number
999-999 909-2819

Account name
Camberwell Carpet Layers

Date	Details	Debit	Credit	Balance*
Sep 1	Balance c/f		Brought forward	520 CR
1	Cash		198 ✔	718 CR
1	909321	500 ✔		218 CR
4	Cash		297 ✔	515 CR
6	909325	99 ✔		416 CR
7	Chqs		495 ✔	911 CR
7	909324	450 ✔		461 CR
9	Cash		396 ✔	857 CR
12	Chqs		594 ✔	1 451 CR
12	909322	1 980 ✔		529 OD
13	Cash		550 ✔	21 CR
14	909326	990 ✔		969 OD
14	909327	450 ✔		1 419 OD
15	Chqs		396 ✔	1 023 OD
16	OD fee	20		1 043 OD
17	909328	400 ✔		1 443 OD
18	Cash		275 ✔	1 168 OD
21	Chqs		99 ✔	1 069 OD
24	Cash		198 ✔	871 OD
25	909330	480 ✔		1 351 OD
27	Cash		440 ✔	911 OD
28	909332	480 ✔		1 391 OD
29	Chqs		495 ✔	896 OD
29	909333	600 ✔		1 496 OD
30	Bank charges	10		1 506 OD

Date of issue
30 September 2015

Final balance $1 506.00 OD
Subject to any adjustment—Please see over*

Proceeds of cheques will not be available until cleared. Please check all entries promptly and notify Bank immediately of any errors.

Important Please keep this statement in a safe place. It is a record of your account with the Bank and should be retained for taxation purposes.

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Reconciling the overdrawn account

Steps 1 and 2 of the bank reconciliation process have already been completed. Note that, in both the cash journals and the bank statement, a number of items have already been ticked off. These ticked entries have been recorded in *both* records. That is, they have been recorded exactly the same by both the business and the bank. This also leaves several items not yet ticked off. Note that in the cash receipts journal the last entry, on 30 September, has not yet been ticked off. This is because the deposit on this date has not yet been processed by the bank. In the cash payments journal four different payments have not yet been presented to the bank for payment. These four items have not been ticked off in the cash payments journal.

In the bank statement there are also some unticked items. All the receipts (credits) correspond to the entries in the cash receipts journal and have therefore been ticked off. However, the cash payments listed by the bank (shown as debits on the bank statement) include two items that have not yet been ticked off. One of these is on 16 September and is listed as an OD fee. This is an overdraft fee and the business has been charged a fee of $20 for being in overdraft. The second item is that of bank charges on 30 September. The bank is not going to inform a business owner of charges every time their account is debited. Therefore the business owner would have no knowledge of this fee until the bank statement is received. This explains why such an item does not appear in the records of the business.

Having completed the ticking procedures in both records, the journals should now be updated (step 3 of the reconciliation process). The only adjustment required is to the cash payments journal, as all credit entries in the bank statement have been checked against the cash receipts journal. The adjusted cash payments total would be determined as follows:

Total of cash payments journal:	$11 335
plus Overdraft fee	20
plus Bank charges	10
Adjusted total	11 365

The adjusted balance according to the firm's records can now be determined, as shown below:

Balance as at 1 September 2015		$520
plus	Total of cash receipts journal for Sept.	4631
		5 151
less	Total of cash payments journal for Sept.	11 365
Balance of cash at bank as at 30 Sept.		6 214 OD

This adjusted balance of $6 214 overdrawn should be an accurate figure for cash at bank. It takes into account all receipts and payments known by the business owner, including those items revealed by the bank statement when compared to the cash journals. However, the final step in the reconciliation process still has to be completed. Although the updated balance in the business records is now $6 214 overdrawn, the bank statement still shows an overdraft of only $1 506. The fourth and final step in the process is the actual bank reconciliation statement, prepared by using the unticked items in the firm's cash journals, as shown in figure 7.11.

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Figure 7.11 Bank reconciliation statement

Camberwell Carpet Layers: bank reconciliation statement as at 30 September 2015

	Balance as per bank statement			$1 506 OD
plus	Unpresented cheques			
		Chq. no.	Amount	
		909323	594	
		909329	1 980	
		909331	792	
		909334	1 540	4 906
				6 412
less	Deposits not yet credited			198
	Balance as per firm's records			6 214 OD

This balance is now exactly the same as that determined by the records of the business. The overdrawn balance shown by the bank statement is so low because of the four unpresented cheques that remain outstanding. When these cheques are presented for payment, the bank will also report the true situation of the business in relation to its overdraft.

In summary, the four steps required to complete a bank reconciliation statement have not changed at all, even if the account is in overdraft. The only difference is in the layout of the actual reconciliation statement. To have a clear picture of the difference in approach, a comparison is provided below:

When a firm has cash in the bank:	**When an account is overdrawn:**
Balance as per bank statement	Balance as per bank statement
+ Deposits not yet credited	+ Unpresented cheques
– Unpresented cheques	– Deposits not yet credited
= Balance as per firm's records	= Balance as per firm's records

7.9 Reconciling an account over consecutive periods

The process of reconciling a bank account continues into the subsequent banking period. Once a bank reconciliation statement has been prepared it cannot be filed away and forgotten, as the process is still not complete. In fact, it never is! The bank will send another statement at the end of the next month and the process will have to be carried out all over again. As long as a business continues to operate, a bank reconciliation should be part of a regular schedule of events. In relation to the example used previously, Camberwell Carpet Layers would receive another bank statement at the end of October 2015. As part of completing the reconciliation for October, the statement for September should be reviewed. In the September reconciliation there were unpresented cheques and a deposit not yet credited. These items may appear on the October bank statement and therefore will no longer be outstanding. On the other hand, it is

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possible that some items will still remain unknown to the bank. For example, if a cheque is lost in the mail or misplaced by one of the suppliers, it may still be unpresented at the end of the subsequent month. In some cases this may happen over several months.

To demonstrate this process, the example of Camberwell Carpet Layers will again be used. This time the cash journals for October are presented, along with the bank statement provided at the end of the month. The ticking-off procedures have already been carried out on these records (see figures 7.12, 7.13 and 7.14).

Figure 7.12 Cash receipts journal

Camberwell Carpet Layers: cash receipts journal

Date	Details	Rec. no.	Amount banked $	Amount received $	GST received $
Oct 2	Cash fees	467	288 ✔	260	28
3	Cash fees	468	385 ✔	350	35
6	Cash fees	469	1 595 ✔	1 450	145
8	Cash fees	470	572 ✔	520	52
11	Cash fees	471	792 ✔	720	72
14	Cash fees	472	759 ✔	690	69
16	Cash fees	473	594 ✔	540	54
19	Cash fees	474	352 ✔	320	32
22	Cash fees	475	440 ✔	400	40
24	Cash fees	476	198 ✔	180	18
27	Loan—EZ Finance	–	5 000 ✔	5 000	
29	Cash fees	477	594 ✔	540	54
30	Cash fees	478	308	280	28
30	Totals		11 877	11 250	627

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Figure 7.13 Cash payments journal

Camberwell Carpet Layers: cash payments journal

Date	Details	Chq. no.	Total paid $	Amount paid $	GST paid $
Oct 2	Telephone	335	187 ✔	170	17
3	Drawings	336	400 ✔	400	
5	Wages	337	460 ✔	460	
8	Folino Flooring	338	792	720	72
9	Drawings	339	450 ✔	450	
12	Wages	340	450 ✔	450	
15	Shaggy Carpets	341	880 ✔	800	80
18	Drawings	342	400 ✔	400	
19	Wages	343	450 ✔	450	
22	Maintenance	344	198 ✔	180	18
24	Drawings	345	460 ✔	460	
26	Wages	346	440 ✔	440	
28	Fax machine	347	792	720	72
31	Drawings	348	440 ✔	440	
30	Totals		6 799	6 540	259

In addition to the usual ticking-off procedure in the cash journals and the bank statement, the previous bank reconciliation statement should also be checked. At the end of September there were four unpresented cheques and one item listed as a deposit not yet credited. When the bank statement for October is received, it is important to check that these items have now been recorded. This has been done in the statement in figure 7.15, which has been reproduced to demonstrate all steps required to reconcile the books at the end of October.

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Figure 7.14 Bank statement

Acme Bank

Business Banking Account

Camberwell Carpet Layers
9832 Burke Road
CAMBERWELL 3124

BSB and Account number
999-999 909-2819

Account name
Camberwell Carpet Layers

Date	Details	Debit	Credit	Balance*
Oct 1	Balance c/f		Brought forward	1 506 OD
1	Cash		198 ✔	1 308 OD
2	Cash		288 ✔	1 020 OD
3	Cash		385 ✔	635 OD
3	909336	400 ✔		1 035 OD
4	909335	187 ✔		1 222 OD
6	Chqs		1 595 ✔	373 CR
8	909334	1 540 ✔		1 167 OD
8	Cash		572 ✔	595 OD
9	909339	450 ✔		1 045 OD
9	909337	460 ✔		1 505 OD
12	Chqs		792 ✔	713 OD
13	909340	450 ✔		1 163 OD
14	Cash		759 ✔	404 OD
16	Chqs		594 ✔	190 CR
18	909342	400 ✔		210 OD
19	Cash		352 ✔	142 CR
19	909343	450 ✔		308 OD
22	Cash		440 ✔	132 CR
24	Cash		198 ✔	330 CR
24	909344	198 ✔		132 CR
25	909345	460 ✔		328 OD
26	909341	880 ✔		1 208 OD
27	Loan—transfer		5 000 ✔	3 792 CR
27	Loan appn fee	20		3 772 CR
27	909346	440 ✔		3 332 CR
28	909329	1 980 ✔		1 352 CR
29	Chqs		594 ✔	1 946 CR
29	909348	440 ✔		1 506 CR
30	Interest		5	1 511 CR
30	909331	792 ✔		719 CR
31	Bank charges	15		704 CR

Date of issue
31 October 2015

Final balance $704.00 CR
Subject to any adjustment—Please see over*

Proceeds of cheques will not be available until cleared. Please check all entries promptly and notify Bank immediately of any errors.

Important Please keep this statement in a safe place. It is a record of your account with the Bank and should be retained for taxation purposes.

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Figure 7.15 Bank reconciliation statement

Camberwell Carpet Layers: bank reconciliation statement as at 30 September 2015

	Balance as per bank statement			$1 506 OD
plus	Unpresented cheques			
		Chq. no.	Amount	
		909323	594	
		909329	1 980 ✔	
		909331	792 ✔	
		909334	1 540 ✔	4 906
				6 412
less	Deposits not yet credited			198 ✔
	Balance as per firm's records			6 214 OD

Note that three of the four cheques from the September bank reconciliation have now been presented for payment. For some reason cheque number 909323 has still not been presented. This cheque will have to be reported again as an unpresented cheque in the October statement. The deposit of $198 not credited in the September bank reconciliation appears at the top of the bank statement for October (on 1 October) and therefore has been taken into account. Having checked last month's bank reconciliation statement, as well as checking this month's journals with the October bank statement, the owner is now in a position to update the cash balance in the firm's records and then prepare the October reconciliation statement. Note that there are three items unticked in the October bank statement; namely the loan application fee of $20 (27 October), bank charges of $15 (31 October) and interest received of $5 on 30 October. To update the firm's records:

Total of cash payments journal:	$6 799
plus Loan application fee	20
plus Bank charges	15
Adjusted total	6 834
Total of cash receipts journal:	11 877
plus Interest	5
Adjusted total	11 882

To determine the adjusted balance according to the firm's records:

Balance as at 1 October 2015	($6 214) OD
plus Total of cash receipts journal for Oct.	11 882
	5 668
less Total of cash payments journal for Oct.	(6 834)
Balance of cash at bank as at 31 Oct. 2015	(1 166) OD

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Once again the two sets of records do not match in terms of the balance at the end of the month. The records of the business have now taken everything into account and an overdrawn balance of $1 166 is the final balance as at 31 October. However, the bank statement shows a credit balance of $704 at the same date. The reconciliation statement should account for this difference and show that both records are accurate. The problem is one of timing, as the bank is still unaware of some items, particularly the cheque that was written out in September. The reconciliation would be done as shown in figure 7.16.

Figure 7.16 Bank reconciliation statement

Camberwell Carpet Layers: bank reconciliation statement as at 31 October 2015

	Balance as per bank statement			$704 CR
plus	Deposits not yet credited			308
				1 012
less	Unpresented cheques			
		Chq. no.	Amount	
		909323	594	
		909338	792	
		909347	792	2 178
	Balance as per firm's records			1 166 OD

The important thing to keep in mind when performing a bank reconciliation is to always check the previous reconciliation statements prepared by the business. They must be reviewed to ensure that the previous deposits not credited have now been recorded by the bank. All outstanding cheques should also be checked, as it is possible that a cheque remains unpresented for several consecutive reconciliation statements. Such cheques must be listed as unpresented every month until they are recorded by the bank. Thus the process of bank reconciliation is a continuous one, with one reconciliation statement acting as a link to the next. This process is repeated at the end of every month.

› GLOSSARY OF TERMS

bank reconciliation the process of verifying that the entries in the cash journals of a business are the same as those recorded by the firm's bank.

bank statement a report, usually prepared monthly, that shows all deposits and withdrawals made by a business with its bank and the balance at the end of the period.

deposit not yet credited a deposit made by a business that has not yet been processed by the bank and therefore is not yet shown on a bank statement.

dishonoured cheque a cheque that the bank refuses to pay out because there are insufficient funds in the payer's account to cover the amount shown on the cheque.

internal control a system of control procedures designed to protect the assets of a business and to ensure the accuracy of the accounting system.

overdraft a short-term source of finance that occurs when a business owner writes a cheque for an amount greater than the balance remaining in their account.

unpresented cheque a cheque that has been written out and sent to a supplier but has not yet been presented to the bank for payment.

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Summary questions

1. What is the aim of 'internal control'?
2. State, and describe, three different examples of internal control procedures.
3. From your own experience, state any control mechanisms that you have seen in place at:
   a. a cinema
   b. a car park.
4. State six different ways of ensuring control is maintained over cash.
5. State four different reasons why the balance on a bank statement may be different from the balance of cash at bank shown by a firm's books.
6. Define the following terms:
   a. unpresented cheque
   b. deposit not yet credited
   c. dishonoured cheque
   d. direct credit
   e. direct debit.
7. Describe the format of a bank reconciliation statement and identify the four items usually included in such a report.
8. Explain how bank reconciliations assist in the control of cash within a firm.
9. Explain what is meant by the term 'bank overdraft'.
10. State, and explain, two advantages of a bank overdraft as a source of finance.
11. State one disadvantage of a bank overdraft for a small business owner.
12. Describe the changes in the format of a bank reconciliation statement when a business has an overdrawn bank balance at the end of a month.
13. Explain how one bank reconciliation statement acts as a link to the subsequent reconciliation statement.
14. For each of the following items, state the effect that they have on an overdrawn bank balance:
    a. deposits not yet credited
    b. unpresented cheques
    c. bank charges
    d. interest received
    e. loan application fees.
15. Explain the following statement: 'Bank reconciliation statements are necessary because of timing differences in recording transactions.'
16. Consider the following statement: 'Once a cheque is listed as unpresented on a bank reconciliation statement, it is accounted for and therefore the process is finalised.' Do you agree? Explain your answer fully.

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Practical exercises

[Exercise 7.1]

Nick Louder is the owner of the Happy Valley Amusement Park. The park operates six different rides at $4 per ride and one employee looks after each ride. Louder has told his workers to collect the cash when the customers are on the rides, as this eliminates the cost of tickets. As he wants to know how much each ride earns in terms of revenue, Louder has instructed the ride attendants to count the money at the end of the day and write the total received in an exercise book in the office. The attendants then put the money in the top drawer of the desk in Louder's office. Louder is quite happy with his system, as the unpopular rides have been identified and replaced, and all of his workers appear quite happy to work as required.

a Make a list of criticisms of the way Louder is running his business in terms of the demands of internal control.

b Devise a plan of how you think the business should be operated. Your plan should include a step-by-step approach from the selling of tickets to the banking of money.

[Exercise 7.2]

M. Kingsley, the owner of S.O. Heater Installations, received a bank statement on 31 July 2015 showing a balance of $400 in the firm's account. He is somewhat confused, as his own records indicate a balance of only $75. Upon closer inspection, the following differences were noted between the two records:

- A deposit of $80 made on 31 July does not appear on the bank statement.
- Two cheques written out on 26 July are also missing from the bank statement. They are cheque numbers 4561 for $180 and 4562 for $225.

Prepare a bank reconciliation statement for S.O. Heater Installations as at 31 July 2015.

[Exercise 7.3]

G. Touma is the proprietor of G.T. Car Detailing. On 31 August 2015 a bank statement was received and it showed a balance of $625 in the firm's account. According to the cash journals kept by Touma, he should only have $220 in the bank. A comparison of the two records revealed the following differences:

- Cheque no. 347827 written out on 22 August for $122 does not appear on the bank statement.
- A deposit of $145 made on 31 August has not been recorded by the bank.
- Interest received of $110 was deposited directly to the firm's account and has been recorded on the bank statement.
- A cheque written out on 25 August is missing from the bank statement. It is cheque number 347831 for $340.
- Bank charges of $22 appear on the bank statement.

Prepare a bank reconciliation statement for G.T. Car Detailing as at 31 August 2015 and adjust the business records to be reconciled with the bank statement.

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[Exercise 7.4]

The cash journals shown below were prepared for Doncaster Glaziers for the month of March 2015. On 1 March the business had $2 400 in the bank.

Cash receipts journal

Date	Details	Rec. no.	Amount banked $	Amount received $	GST received $
Mar 1	Cash fees	865	253	230	23
2	Cash fees	866	176	160	16
5	Cash fees	867	396	360	36
7	Cash fees	868	121	110	11
9	Cash fees	869	231	210	21
10	Cash fees	870	396	360	36
14	Cash fees	871	473	430	43
18	Cash fees	872	99	90	9
22	Cash fees	873	594	540	54
25	Cash fees	874	231	210	21
31	Cash fees	875	198	180	18
31	Totals		3 168	2 880	288

Cash payments journal

Date	Details	Chq. no.	Total paid $	Amount paid $	GST paid $
Mar 1	Rent	24135	1 595	1 450	145
4	Wages	24136	800	800	
7	Insurance	24137	341	310	31
12	Drawings	24138	1 000	1 000	
18	Wages	24139	800	800	
27	Petrol	24140	154	140	14
30	Stationery	24141	253	230	23
31	Totals		4 943	4 730	213

a Compare the bank statement information on the next page with the firm's records and update the journals, if necessary.

b Calculate the cash at bank balance according to the firm's records.

c Prepare a bank reconciliation statement as at 31 March 2015.

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Acme Bank

Business Banking Account

Doncaster Glaziers
717 Monopoly Road
DONCASTER 3108

BSB and Account number
999-999 389-0089

Account name
Doncaster Glaziers

Date	Details	Debit	Credit	Balance*
Mar 1	Balance		Brought forward	2 400 CR
1	Cash		253	2 653 CR
2	Cash		176	2 829 CR
5	Chq.		396	3 225 CR
5	24136	800		2 425 CR
7	Cash/chq.		121	2 546 CR
9	Cash		231	2 777 CR
10	Cash		396	3 173 CR
13	24138	1 000		2 173 CR
14	Chq.		473	2 646 CR
16	24135	1 595		1 051 CR
18	Cash		99	1 150 CR
19	24139	800		350 CR
22	Chq.		594	944 CR
25	Cash		231	1 175 CR
28	24137	341		834 CR
31	Bank charges	13		821 CR

Date of issue
31 March 2015

Final balance $821.00 CR
Subject to any adjustment—Please see over*

Proceeds of cheques will not be available until cleared. Please check all entries promptly and notify Bank immediately of any errors.

Important Please keep this statement in a safe place. It is a record of your account with the Bank and should be retained for taxation purposes.

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[Exercise 7.5]

Snorter and Snorter, Solicitors, had $5000 in the bank on 1 June 2015, and have prepared the following cash journals for the month of June:

Cash receipts journal

Date	Details	Rec. no.	Amount banked $	Amount received $	GST received $
Jun 1	Legal fees	54	220	200	20
3	Legal fees	55	264	240	24
5	Legal fees	56	143	130	13
8	Legal fees	57	220	200	20
11	Legal fees	58	297	270	27
15	Legal fees	59	275	250	25
19	Legal fees	60	396	360	36
21	Legal fees	61	253	230	23
29	Legal fees	62	330	300	30
30	Legal fees	63	363	330	33
30	Totals		2 761	2 510	25

Cash payments journal

Date	Details	Chq. no.	Total paid $	Amount paid $	GST paid $
Jun 3	Stationery	65413	319	290	29
5	Salaries	65414	1 800	1 800	
8	Insurance	65415	429	390	39
16	Office computer	65416	1 991	1 810	181
19	Salaries	65417	1 800	1 800	
28	Law Journal	65418	352	320	32
29	Drawings	65419	650	650	
30	Totals		7 341	7 060	281

a Using the bank statement on the next page, update the cash journals of the firm and calculate the cash at bank balance.

b Prepare a bank reconciliation statement as at 30 June 2015.

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Acme Bank

Business Banking Account

Snorter & Snorter—Solicitors
123 Legislation Avenue
SOUTH YARRA 3141

BSB and Account number
999-999 007–1462

Account name
Snorter & Snorter—Solicitors

Date	Details	Debit	Credit	Balance*
June 1	Balance		Brought forward	5 000 CR
1	Chq.		220	5 220 CR
3	Chq.		264	5 484 CR
6	Chq.		143	5 627 CR
6	165414	1 800		3 827 CR
8	Chq.		220	4 047 CR
11	Chq.		297	4 344 CR
12	165415	429		3 915 CR
14	165413	319		3 596 CR
15	Chq.		275	3 871 CR
19	Chq.		396	4 267 CR
19	165417	1800		2 467 CR
21	Chq.		253	2 720 CR
24	loan R/P	100		2 620 CR
28	Chq.		330	2 950 CR
29	165416	1 991		959 CR
30	165419	650		309 CR
30	Bank charges	14		295 CR

Date of issue
30 June 2015

Final balance $295.00 CR
Subject to any adjustment—Please see over*

Proceeds of cheques will not be available until cleared. Please check all entries promptly and notify Bank immediately of any errors.

Important Please keep this statement in a safe place. It is a record of your account with the Bank and should be retained for taxation purposes.

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[Exercise 7.6]

Steven Vu, the owner of Prahran Plumbing, supplied the following information regarding its cash transactions during September 2015 (all figures presented include GST):

Cash at bank—1 September $1 350

Receipts during September				*Payments during September*			
Sep 4	Service fees	$400		Sep 2	Van registration	(Chq. 18091)	$380
4	Service fees	280		4	Materials	(18092)	400
7	Service fees	300		7	Wages	(18093)	500
7	Commission	100		9	Stationery	(18094)	220
12	Service fees	500		14	Telephone	(18095)	180
16	Capital	5 000		14	Wages	(18096)	500
19	Service fees	650		18	Equipment	(18097)	6 000
21	Service fees	240		21	Materials	(18098)	450
24	Service fees	340		21	Wages	(18099)	540
28	Service fees	560		28	Wages	(18100)	520
30	Capital	3 000		30	Rent—factory	(18101)	1 800

a Compare the bank statement provided on the next page with the above information and update the cash receipts and payments, if necessary.

b Calculate a cash at bank balance according to the firm's records.

c Prepare a bank reconciliation statement as at 30 September 2015.

d Explain what may have happened to cause the entry on the bank statement on 26 September, noted as 'Misc. Dr.', which indicates a miscellaneous debit.

Acme Bank

Business Banking Account

Prahran Plumbing
545 High Street
PRAHRAN 3181

BSB and Account number
999-999 838-0091

Account name
Mr Steven Vu

Date	Details	Debit	Credit	Balance*
Sep 1	Balance		Brought forward	1 350 CR
2	Chqs.		400	1 750 CR
4	C/chqs.		280	2 030 CR
6	18092	400		1 630 CR
7	C/chqs.		400	2 030 CR
7	18093	500		1 530 CR
11	18091	380		1 150 CR
12	C/Chqs.		500	1 650 CR
15	18096	500		1 150 CR
16	Cash		5000	6 150 CR
19	C/chqs.		650	6 800 CR
21	C/chqs.		240	7 040 CR
22	18095	180		6 860 CR
22	18099	540		6 320 CR
24	Chq.		340	6 660 CR
25	18098	450		6 210 CR
26	Misc. Dr.	340		5 870 CR
28	C/chqs.		560	6 430 CR
28	18100	520		5 910 CR
30	Qtly fee	20		5 890 CR
30	Bank charges	6		5 884 CR

Date of issue
30 September 2015

Final balance $5 884.00 CR
Subject to any adjustment—Please see over*

Proceeds of cheques will not be available until cleared. Please check all entries promptly and notify Bank immediately of any errors.

Important Please keep this statement in a safe place. It is a record of your account with the Bank and should be retained for taxation purposes.

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[Exercise 7.7] The following is a summary of the receipts and payments made by Rogers Gym Hire during the month of November 2015 (all figures include GST):

Receipts during November

Nov 2	Cash fees	$150
3	Cash fees	1 180
5	Cash fees	220
7	M. Coiro	1 380
9	Cash fees	300
10	Cash fees	500
13	Cash fees	170
16	A. Helleybuyck	280
24	Cash fees	140
28	Cash fees	260
30	Cash fees	1 960

Payments during November

Nov 2	Shop rent	(Chq. 58245)	$600
3	Wages	(58246)	250
6	Telephone	(58247)	160
9	Advertising	(58248)	120
10	Wages	(58249)	250
15	Postage	(58250)	45
17	Wages	(58251)	275
23	United Sports	(58252)	2 550
24	Wages	(58253)	250
29	Stationery	(58254)	60
30	Super Sports Co.	(58255)	2 100

The bank account of the business had a balance of $140 on 1 November 2015.

a Compare the above information with the bank statement on the next page, and update the receipts and payments with any necessary items.

b Calculate the cash at bank balance according to the firm's records.

c Prepare a bank reconciliation statement as at 30 November 2015.

d Explain to the owner of Rogers Gym Hire why the deposit made on 30 November does not appear on the bank statement received for that month.

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Acme Bank

Business Banking Account

Rogers Gym Hire
21989 Barkers Road
KEW EAST 3102

BSB and Account number
999-999 1781-35256

Account name
Rogers Gym Hire

Date	Details	Debit	Credit	Balance*
Nov 1	Balance		Brought forward	140 CR
2	Cash		150	290 CR
3	Cash		1180	1 470 CR
3	58246	250		1 220 CR
4	58245	600		620 CR
5	Cash		220	840 CR
7	Chq.		1380	2 220 CR
9	Cash		300	2 520 CR
9	58247	160		2 360 CR
10	Cash		500	2 860 CR
11	58249	250		2 610 CR
13	Cash		170	2 780 CR
16	58250	45		2 735 CR
17	Chq.		280	3 015 CR
17	58251	275		2 740 CR
24	Cash		140	2 880 CR
24	58253	250		2 630 CR
25	58252	2 550		80 CR
28	Bank chg.	15		65 CR
28	Cash		260	325 CR

Date of issue
30 November 2015

Final balance $325.00 CR
Subject to any adjustment—Please see over*

Proceeds of cheques will not be available until cleared. Please check all entries promptly and notify Bank immediately of any errors.

Important Please keep this statement in a safe place. It is a record of your account with the Bank and should be retained for taxation purposes.

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[Exercise 7.8]

The following cash transactions have been maintained for Ken Barbie, Electrical Contractor. His bank balance on 1 July 2015 was $1 400.

Receipts

Date	Details	Rec. no.	Fees (inc. GST)
Jul 3	A. Borda	651	$100
6	D. Bune	652	120
12	M. Taila	653	380
14	D. Joans	654	80
18	S. Worn	655	180
24	M. Wore	656	1 300
26	M. Hews	657	1 820
31	I. Heelee	658	1 920

Payments

Date	Details	Chq. no.	Amt (inc. GST where applicable)
Jul 5	Materials	12451	$140
7	Wages	12452	470
10	Telephone	12453	150
14	Wages	12454	480
21	Wages	12455	500
22	Materials	12456	250
28	Insurance	12457	560
28	Materials	12458	240
28	Wages	12459	480

a Using the bank statement on the next page, update the cash journals shown above and calculate a final cash at bank balance as at 31 July 2015.

b Prepare a bank reconciliation statement for K. Barbie, Electrical Contractor, as at 31 July 2015.

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Acme Bank

Business Banking Account

Ken Barbie
General Electrical Contractor
761 Sparks Court
ST KILDA 3182

BSB and Account number
999-999 900-7801

Account name
Ken Barbie

Date	Details	Debit	Credit	Balance*
July 1	Balance		Brought forward	1 400 CR
4	Chq.		100	1 500 CR
6	Chq.		120	1 620 CR
7	12452	470		1 150 CR
10	12451	140		1 010 CR
12	Chq.		380	1 390 CR
14	Loan R/P	350		1 040 CR
15	Chq.		80	1 120 CR
15	12453	150		970 CR
15	12454	480		490 CR
16	Loan fee	10		480 CR
18	Chq.		180	660 CR
21	12455	500		160 CR
24	Chq.		1 300	1 460 CR
26	Chq.		1 820	3 280 CR
28	12459	480		2 800 CR
29	Misc. Dr.	1 820		980 CR
30	12457	560		420 CR
31	Bank Chg.	16		404 CR

Date of issue
31 July 2015

Final balance $404.00 CR
Subject to any adjustment—Please see over*

Proceeds of cheques will not be available until cleared. Please check all entries promptly and notify Bank immediately of any errors.

Important Please keep this statement in a safe place. It is a record of your account with the Bank and should be retained for taxation purposes.

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[Exercise 7.9]

The business of Bendigo Computers has only been trading for one month and the owner has just received her first bank statement. The statement shows that the business has slipped into overdraft by the end of the month. The owner is not very concerned because she knows that it will take time to establish the business. She has provided you with copies of her cash journals, as well as the bank statement just received.

Cash receipts journal

Date	Details	Rec. no.	Amount banked $	Amount received $	GST received $
Jul 1	Capital		40 000	40 000	
3	Cash fees	321	275	250	25
6	Cash fees	322	1 980	1 800	180
9	Cash fees	323	88	80	8
12	Cash fees	324	1 870	1 700	170
17	Cash fees	325	1 210	1 100	110
21	Cash fees	326	295	270	25
31	Cash fees	327	77	70	7
31	Totals		45 795	45 270	525

Cash payments journal

Date	Details	Chq. no.	Total paid $	Wages $	Drawings $	Sundry payments $	GST paid $
Jul 1	Advertising	001	1 980			1 800	180
3	Shop fittings	002	18 150			16 500	1 650
4	Furniture	003	2 970			2 700	270
5	Wages	004	600	600			
8	Creditors	005	12 000			12 000	
10	Equipment	006	2 090			1 900	190
11	Drawings	007	1 000		1 000		
12	Wages	008	600	600			
14	Insurance	009	1 540			1 400	140
16	Creditors	010	10 000			10 000	
19	Wages	011	600	600			
22	Stationery	012	297			270	27
26	Wages	013	600	600			
29	Drawings	014	500		500		
31	Totals		52 927	2 400	1 500	46 570	2 457

a Compare the bank statement on the next page with the entries in the cash records of this business. Identify any differences and adjust the cash journals with any information that the business owner was unaware of prior to receiving the bank statement.

b Determine the balance of the bank account according to the firm's records.

c Prepare a bank reconciliation statement as at 31 July 2015.

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Acme Bank

Business Banking Account

Bendigo Computers
82812 Hume Avenue
BENDIGO 3550

BSB and Account number
999-999 342-9901

Account name
Bendigo Computers

Date	Details	Debit	Credit	Balance*
			Brought forward	
Jul 1	Cash		40 000	40 000 CR
3	Cash		275	40 275 CR
5	132004	600		39 675 CR
6	Cash		1 980	41 655 CR
8	132002	18 150		23 505 CR
9	Cash		88	23 593 CR
10	132001	1 980		21 613 CR
11	132007	1 000		20 613 CR
12	Cash		1 870	22 483 CR
13	132008	600		21 883 CR
13	132005	12 000		9 883 CR
17	Chqs		1 210	11 093 CR
18	132006	2 090		9 003 CR
20	132011	600		8 403 CR
21	Cash		295	8 698 CR
22	132003	2 970		5 728 CR
24	132010	10 000		4 272 OD
25	OD fee	20		4 292 OD
26	132013	600		4 892 OD
29	132014	500		5 392 OD
31	Bank chg.	10		5 402 OD

Date of issue
31 July 2015

Final balance $5 402.00 OD
Subject to any adjustment—Please see over*

Proceeds of cheques will not be available until cleared. Please check all entries promptly and notify Bank immediately of any errors.

Important Please keep this statement in a safe place. It is a record of your account with the Bank and should be retained for taxation purposes.

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[Exercise 7.10]

Leigh Parsons is the owner of LP's Music Hire. Parsons maintains cash journals for his business but is having trouble reconciling them with the bank statement he has just received (see next page). The bank balance at 1 August was $1 860 and the cash journals for August are provided below:

Cash receipts journal

Date	Details	Rec. no.	Amount banked $	Amount received $	GST received $
Aug 3	Cash fees	5436	880	800	80
6	Cash fees	5437	825	750	75
7	Cash fees	5438	1 210	1 100	110
9	Cash fees	5439	891	810	81
12	Cash fees	5440	847	770	77
17	Cash fees	5441	1 320	1 200	120
22	Cash fees	5442	924	840	84
27	Cash fees	5443	1 430	1 300	130
31	Cash fees	5444	935	850	85
31	Totals		9 262	8 420	842

Cash payments journal

Date	Details	Chq. no.	Total paid $	Wages $	Equipment $	Sundry payments $	GST paid $
Aug 5	Equipment	83844	1 980		1 800		180
7	Wages	83845	650	650			
10	Advertising	83846	495			450	45
14	Wages	83847	640	640			
19	Drawings	83848	5 000			5 000	
21	Wages	83849	660	660			
24	Computer	83850	3 960			3 600	360
26	Equipment	83851	1 540		1 400		140
28	Wages	83852	630	630			
29	Insurance	83853	770			700	70
31	Totals		16 325	2 580	3 200	9 750	795

a Compare the two records and determine an updated balance according to Parsons' records (show all workings).

b Prepare a bank reconciliation statement as at 31 August 2015.

c Comment on Parsons' cash position, given that his overdraft limit with his bank is $5 000.

Acme Bank

Business Banking Account

LP's Music Hire
100 Calrton Boulevard
CARLTON 3053

BSB and Account number
999-999 909-2819

Account name
Mr Leigh Parsons

Date	Details	Debit	Credit	Balance*
Aug 1	Balance c/f		Brought forward	1 860 CR
3	Cash		880	2 740 CR
6	Cash		825	3 565 CR
7	Cash		1 210	4 775 CR
8	83845	650		4 125 CR
9	Cash		891	5 016 CR
12	Cash		847	5 863 CR
14	Loan R/P	1 600		4 263 CR
15	83846	495		3 768 CR
17	Cash		1 320	5 088 CR
19	83848	5 000		88 CR
21	83849	660		572 OD
22	Cash		924	352 CR
24	83844	1 980		1 628 OD
27	Cash		1 430	198 OD
28	83852	630		828 OD
30	83850	3 960		4 788 OD
31	Bank chg.	25		4 813 OD
31	Interest—bonds		100	4 713 OD

Date of issue
31 August 2015

Final balance $4 713.00 OD
Subject to any adjustment—Please see over*

Proceeds of cheques will not be available until cleared. Please check all entries promptly and notify Bank immediately of any errors.

Important Please keep this statement in a safe place. It is a record of your account with the Bank and should be retained for taxation purposes.

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[Exercise 7.11]

The owner of Windy Hill Laundry Services, Cheryl Lloyd, has requested your assistance. She is attempting to match her bank statement with the cash journals that she maintains but is experiencing some difficulty. The balance shown from her calculations is $350, but the bank statement shows an overdraft of $581. On closer examination she noticed the following:

- A deposit of $570 made on 30 November was not yet recorded by the bank.
- A loan repayment of $550 was deducted from Lloyd's account as a direct debit.
- Two cheques written out by Lloyd during November do not appear on the November bank statement. Cheque number 298111 was for $95 and cheque number 298117 for $120 did not appear at all.
- Bank charges made to the account totalled $35. Lloyd was not aware of these charges before receiving the bank statement.
- Lloyd made a deposit of $365 on 15 November, but this was incorrectly recorded in her cash journal as $356.

a Update Lloyd's records to determine an accurate balance of her account (show all workings).

b Prepare a bank reconciliation statement as at 30 November 2015.

c The owner is still not convinced. Explain to Lloyd how it is possible for her to have a positive cash balance in her records but have a bank statement reflecting an overdraft situation.

[Exercise 7.12]

John Ong is the proprietor of John's Landscaping Services. He has usually done his own bank reconciliations, but is having trouble completing this month's statement. He has provided you with the following information:

John's Landscaping Services: bank reconciliation statement as at 30 September 2015

	Balance as per bank statement			$2 160 OD
plus	Unpresented cheques			
		Chq. no.	Amount	
		13954	$445	
		13962	210	
		13968	430	
		13973	500	1 585
				3 745
less	Deposits not yet credited			412
	Balance as per firm's records			3 333 OD

On 31 October Ong calculated his bank balance as $4 424 overdrawn. However, this was before October's bank statement was taken into account. The bank statement prepared on 31 October showed a final overdraft of $3 434. When he compared this statement to his own records, Ong noted the following differences:

- » Bank charges of $32 were debited to the account during October.
- » A deposit of $450 made by Ong on 31 October does not appear on the bank statement.
- » Interest on a term deposit was credited to his account. The interest was $120.
- » Three cheques written out by Ong during October do not appear on the bank statement. They were cheque numbers 13976, 13982 and 13987 for the amounts of $132, $245 and $360 respectively.
- » A deposit of $412 recorded by Ong on 30 September was credited to his account on 1 October.
- » A loan service fee of $25 was charged to Ong's account. This appeared on the October bank statement.
- » Cheque numbers 13954 and 13973 both appear on the October bank statement.

a Calculate an updated balance of Ong's account at the end of October 2015.

b Prepare a bank reconciliation statement for John's Landscaping Services as at 31 October 2015.

c Ong is concerned about what may have happened to cheque numbers 13962 and 13968. State two reasons that explain why these two cheques have not yet appeared on a bank statement.

[Exercise 7.13]

Burlak's DVD Hire is owned and managed by Joy Burlak. Burlak studied accounting for a short time at secondary school, but is unsure how to reconcile her bank account. A friend completed the reconciliation at the end of June, but she has asked you to complete the report this time around. Burlak has made the following information available to you:

Burlak's DVD Hire: bank reconciliation statement as at 30 June 2015

	Balance as per bank statement			$3 210 CR
plus	Deposits not yet credited			1 240
				4 450
less	Unpresented cheques			
		Chq. no.	Amount	
		699012	$1 020	
		699022	1 820	
		699027	1 940	4 780
	Balance as per firm's records			330 OD

At the end of July Burlak used her cash records and determined an overdraft of $1 220, but the bank thinks she has cash left in her account. On 31 July the bank statement she received stated her final balance as $120 credit. On closer inspection, the following differences were identified between the two sets of records.

- » Bank charges of $28 were debited to Burlak's account on 14 July.
- » Cheque no. 699042 was written out on 4 July but does not appear on the bank statement. The cheque was for an advertising contract and was for $350.
- » A deposit of $1 240 made by Burlak on 30 June was credited to her account on 1 July.
- » Interest of $22 was debited to her account on 16 July. This item has not been recorded in the cash journal of the business.
- » Cheque numbers 699012 and 699022 have both been presented for payment during July.
- » A cheque received by Burlak during July and recorded in her cash journal as a receipt of $200 has been returned by the bank as there were insufficient funds in the customer's account. This cheque was listed by the bank as a miscellaneous debit on 18 July 2015. No adjustment has been made to the cash records of the firm.
- » $450 was paid by Burlak with cheque number 699051 on 15 July. This cheque does not appear on the July statement.
- » A deposit of $500 made by Burlak on 31 July does not appear on the bank statement.
- » A loan repayment of $650 was made by the bank on Burlak's behalf on 26 July. This payment does not appear in the cash journals of the business.

a Determine an accurate balance of Burlak's account by adjusting her cash journals with items that were previously unknown to her before she received her July bank statement.

b Prepare a bank reconciliation statement as at 31 July 2015.

c State two reasons why a bank reconciliation should be completed at the end of every month.

[Exercise 7.14]

Seoud's Suit Hire is owned by Hamid Seoud, who maintains two cash journals for his cash transactions. The business specialises in high quality suits. On 31 July the following statement was prepared:

Bank reconciliation statement as at 31 July 2015

	Balance as per bank statement			$540 CR
plus	Deposits not yet credited			670
				1 210
less	Unpresented cheques			
		Chq. no.	Amount	
		315397	$1 400	
		315423	1 190	
		315431	1 370	3 960
	Balance as per firm's records			2 750 OD

The cash journals for August are presented on the next page, followed by the bank statement for August. Note that the cash balance as at 1 August 2015 was $2 750 overdrawn.

Cash receipts journal

Date	Details	Rec. no.	Amount banked $	Amount received $	GST received $
Aug 4	Cash fees	0431	638	580	58
5	Cash fees	0432	528	480	48
9	Cash fees	0433	660	600	60
13	Cash fees	0434	649	590	59
20	Cash fees	0435	616	560	56
28	Cash fees	0436	627	570	57
31	Cash fees	0437	682	620	62
31	Totals		4 400	4 000	400

Cash payments journal

Date	Details	Chq. no.	Total paid $	Suits $	Wages $	Sundry payments $	GST paid $
Aug 2	Wages	5434	380		380		
8	Suits	5435	2 530	2 300			230
9	Wages	5436	390		390		
11	Drawings	5437	600			600	
15	Rates	5438	590			590	
16	Wages	5439	410		410		
18	Stationery	5440	198			180	18
22	Suits	5441	1 650	1 500			150
23	Wages	5442	380		380		
25	Printer	5443	385			350	35
29	Drawings	5444	500			500	
30	Wages	5445	400		400		
31	Totals		8 413	3 800	1 960	2 220	433

a Update the cash journals for the owner to determine an accurate balance of the firm's cash balance as at 31 August 2015.

b Prepare a bank reconciliation statement as at 31 August 2015, taking into account all the relevant information from above.

Acme Bank

Business Banking Account

Seoud's Suit Hire
4328 Queensberry Road
SOUTH MORANG 3752

BSB and Account number
999-999 3421–5369

Account name
Mr Hamid Seoud

Date	Details	Debit	Credit	Balance*
Aug 1	Balance c/f		Brought forward	540 CR
1	Cash		670	1 210 CR
2	5434	380		830 CR
4	Cash		638	1 468 CR
5	Cash		528	1 996 CR
7	5431	1 370		626 CR
9	Cash		660	1 286 CR
10	5436	390		896 CR
11	5437	600		296 CR
12	Interest		22	318 CR
13	Cash		649	967 CR
16	5439	410		557 CR
20	Cash		616	1 173 CR
22	5397	1 400		227 OD
23	5442	380		607 OD
24	Loan appn fee	50		657 OD
28	Cash		627	30 OD
29	5444	500		530 OD
30	5445	400		930 OD
31	Bank charges	32		962 OD
31	5438	590		1 552 OD

Date of issue
31 August 2015

Final balance $1 552.00 OD
Subject to any adjustment—Please see over*

Proceeds of cheques will not be available until cleared. Please check all entries promptly and notify Bank immediately of any errors.

Important Please keep this statement in a safe place. It is a record of your account with the Bank and should be retained for taxation purposes.

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[Exercise 7.15]

a Andrew Trinh is the owner of Easy Equipment Hire and on 30 September he received a bank statement that showed a credit balance of $930. When he compared the statement against his own cash records, he made note of the following differences:

- Cheque number 20039 for $386 was written out on 16 September and cannot be located on the bank statement.
- A loan repayment of $500 was recorded as a direct debit by the bank on 21 September.
- A deposit of $290 made on 30 September does not appear on the bank statement.
- Two cheques written out on 24 September do not appear on the bank statement. The missing cheques are numbers 20051 for $480 and 20052 for $290.
- Bank charges of $30 were debited to the account by the bank on 30 September.

According to Trinh's records, he had a balance of $594 in the account on 30 September. Prepare a bank reconciliation statement for Easy Equipment Hire as at 30 September 2015.

b On 31 October Trinh received his next bank statement. This time it showed a balance of $120 in his account. Trinh was somewhat amazed at this, as his records indicated that he had overdrawn his account by $52 by the end of October. He made a comparison of the two sets of records again and this time he noted the following differences:

- The monthly loan repayment of $500 was again recorded as a direct debit.
- Cheque number 20061 for $450 did not appear on the bank statement.
- A deposit of $320 made on 31 October did not appear on the bank statement.
- A cheque received by Trinh from one of his customers was returned to him marked 'insufficient funds'. This cheque was banked on 15 October and returned to Trinh on 18 October. A miscellaneous debit of $365 appeared on the bank statement on 18 October.
- Bank charges debited to the account on 31 October were $38.
- Interest on government bonds of $95 was credited to Trinh's account on 23 October.
- Cheque number 20072 had not been presented for payment as yet. This cheque was for $464.
- Cheque numbers 20051 and 20052 (from September) had now been recorded by the bank as officially paid.

Prepare a bank reconciliation statement for the business as at 31 October 2015.

[Exercise 7.16]

Annette Ryan has employed you to prepare bank reconciliation statements for her business. The following summary relates to Brunswick Catering Supplies (note: all dollar amounts include the relevant GST).

Receipts during October			*Payments during October*			
Date	*Details*	*$*	*Date*	*Details*	*Chq. no.*	*$*
Oct 2	Cash sales	200	Oct 2	Stock	493453	1 200
4	Cash sales	400	3	Advertising	493454	600
7	Debtors	800	6	Drawings	493455	550
8	Cash sales	600	9	Wages	493456	580
11	Cash sales	750	10	Stock	493457	1 320
15	Debtors	700	15	Wages	493458	580
18	Cash sales	900	17	Creditors	493459	3 600
22	Cash sales	700	22	Wages	493460	540
25	Cash sales	800	24	Stock	493461	1 000
28	Debtors	880	29	Wages	493462	560
31	Cash sales	960	30	Insurance	493463	960

Receipts during November			*Payments during November*			
Date	*Details*	*$*	*Date*	*Details*	*Chq. no.*	*$*
Nov 1	Debtors	500	Nov 3	Advertising	493464	650
3	Cash sales	300	5	Wages	493465	620
6	Cash sales	700	7	Stationery	493466	250
7	Debtors	800	8	Mobile phone	493467	250
10	Cash sales	450	12	Wages	493468	630
13	Capital	5 000	14	Drawings	493469	700
16	Cash sales	600	16	Stock	493470	1 600
19	Debtors	600	19	Wages	493471	610
21	Cash sales	750	24	Stock	493472	1 000
25	Debtors	350	26	Wages	493473	600
28	Cash sales	960	29	Stock	493474	550
30	Cash sales	670	30	Creditors	493475	1 800

Ryan has also stated that, according to her records, her bank balance as at 1 October 2015 was $200 overdrawn. The bank statements received from the bank have been provided on the next page.

a Determine an updated balance for Ryan's business at the end of October 2015 (show all workings).

b Prepare a bank reconciliation statement as at 31 October 2015.

c Determine an accurate balance, according to Ryan's records, at the end of November 2015 (show all workings).

d Prepare a bank reconciliation statement as at 30 November 2015.

e Comment on the change in the firm's cash position over the two months covered in this exercise.

Acme Bank

Business Banking Account

Brunswick Catering Supplies
12199 Sydney Road
EAST BRUNSWICK 3057

BSB and Account number
999-999 909-2819

Account name
Ms Annette Ryan

Date	Details	Debit	Credit	Balance*
Oct 1	Balance c/f		Brought forward	200 OD
2	Cash		200	0
4	Cash		400	400 CR
6	493455	550		150 OD
7	Interest		40	110 OD
8	Chq.		800	690 CR
8	Cash		600	1 290 CR
9	493456	580		710 CR
10	493453	1 200		490 OD
11	Cash		750	260 CR
14	Bank charges	25		235 CR
15	493458	580		345 OD
16	Chq.		700	355 CR
18	Cash		900	1 255 CR
19	493454	600		655 CR
21	493459	3 600		2 945 OD
22	Cash		700	2 245 OD
23	493460	540		2 785 OD
25	Cash		800	1 985 OD
28	Loan fee	100		2 085 OD
29	493462	560		2 645 OD
30	Chq.		880	1 765 OD
31	493457	1 320		3 085 OD

Date of issue
31 October 2015

Final balance $3 085.00 OD
Subject to any adjustment—Please see over*

Proceeds of cheques will not be available until cleared. Please check all entries promptly and notify Bank immediately of any errors.

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Acme Bank

Business Banking Account

Brunswick Catering Supplies
12199 Sydney Road
EAST BRUNSWICK 3057

BSB and Account number
999-999 909–2819

Account name
Ms Annette Ryan

Date	Details	Debit	Credit	Balance*
Nov 1	Balance c/f		Brought forward	3 085 OD
1	Cash		960	2 125 OD
2	Chq.		500	1 625 OD
3	Cash		300	1 325 OD
5	493465	620		1 945 OD
6	Cash		700	1 245 OD
7	493464	650		1 895 OD
8	Chq.		800	1 095 OD
10	Cash		450	645 OD
12	493468	630		1 275 OD
13	Cash		5 000	3 725 CR
14	493469	700		3 025 CR
14	493466	250		2 775 CR
15	493463	960		1 815 CR
16	Cash		600	2 415 CR
19	493471	610		1 805 CR
20	Chq.		600	2 405 CR
21	Cash		750	3 155 CR
22	493467	250		2 905 CR
25	493472	1 000		1 905 CR
25	Chq.		350	2 255 CR
26	493473	600		1 655 CR
27	493470	1 600		55 CR
28	Cash		960	1 015 CR
30	Bank charges	30		985 CR

Date of issue
30 November 2015

Final balance $985.00 CR
Subject to any adjustment—Please see over*

Proceeds of cheques will not be available until cleared. Please check all entries promptly and notify Bank immediately of any errors.

Important Please keep this statement in a safe place. It is a record of your account with the Bank and should be retained for taxation purposes.

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Chapter 8

Budgeting for small business

OBJECTIVES

At the completion of this chapter, you should be able to:

- explain what accountants mean by the term 'budgeting'
- list a variety of budgets prepared by business
- outline the purpose of cash budgets, budgeted income statements and budgeted balance sheets
- identify the information required to prepare a cash budget
- prepare schedules of collections from debtors and schedules of payments to creditors
- prepare a formal cash budget to identify a cash surplus or deficit
- describe the implications resulting from a cash surplus or deficit
- identify the information required to prepare a budgeted income statement
- prepare a budgeted income statement to identify a budgeted profit or loss
- describe the implications resulting from a budgeted income statement
- prepare a budget variance report for both cash and profit, including variances in both dollar and percentage terms
- define the term 'variance', and explain the impact of favourable and unfavourable variances
- prepare a report to management, commenting on significant budget variances.

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8.1 What is budgeting?

Budgeting is simply planning for the future. In accounting, budgeting is the process of predicting future financial transactions to enable management to improve its decision-making. If a **budget** can be drawn up to estimate what is likely to occur in the future, management will be better prepared for when it actually happens. Also, if the predicted events are not to management's liking, steps can be taken to try to change the situation so that a satisfactory outcome is achieved. Another part of budgeting occurs when management decides to set a target of achievement for some time in the future. Setting a sales target of $75 000 for a quarter, or trying to raise $40 000 in cash by the end of six months, are simple examples. Budgeting has a controlling role to play as well. If particular departments can be identified within a business, each of these departments can be issued a budgeted amount of spending for each reporting period. This has the effect of putting a ceiling on expenditure, thus ensuring that the firm does not overspend. All of these examples have one thing in common. They all rely on estimating future financial transactions to plan and control the outcomes of management decision-making.

8.2 Types of budgets

There are many different types of budgets that a business can prepare. Depending on the size of the firm, these may include:

- *Sales or fees budget:* to predict a future revenue target or market share (in both quantity and total revenue).
- *Purchases budget:* used by trading firms to estimate the goods required to meet a sales target (in both quantity and cost).
- *Materials budget:* to estimate the material requirements for the period, if a firm manufactures goods rather than buying them from a wholesaler.
- *Labour budget:* to predict the number of employees required and the total cost of labour expenses.
- *Expense budget:* to estimate all the costs that are likely to be incurred in trying to meet the budgeted revenue for the next period.
- *Cash budget:* to predict all the future cash inflows and outflows of the firm, with the final figure being an estimate of the balance of cash at bank.
- *Budgeted income statement:* to summarise all the estimates of future revenues and expenses for a particular period, with the end result being a budgeted net profit (or net loss).
- *Budgeted balance sheet:* to list estimates of the values of assets, liabilities and the future owner's equity in the business.

This chapter will only concentrate on cash budgeting and budgeted income statements. However, it is important to realise that when management is preparing a budget for a small business, the information it needs may in fact come from another type of budget. All the budgets listed above interrelate with one another to make up the **master budget** of the business. Quite often an error in estimation for one item in one budget will lead to a further error in another budget. However, it must be kept in mind that a budget is only a plan and as such is not expected to be perfect. Budgeting should be looked on as a starting point for management when it is planning its future decisions.

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8.3 Cash budgets

Control over cash is a major objective for all businesses. Every firm needs an adequate cash flow for basic survival, let alone for other objectives such as paying off loans or buying new assets. It is imperative that a business plans ahead to anticipate its cash needs. A **cash budget** is very much like a statement of receipts and payments, except for one important difference. Whereas a statement of receipts and payments reports on what has happened in terms of cash flows, a cash budget estimates what is expected to occur in the future. Therefore a cash budget lists all the anticipated cash inflows, deducts the estimated cash outflows and finds a predicted cash surplus (or deficit) for a period. This surplus (or deficit) is then added to the bank balance at the start of the budget period to produce an estimated bank balance in the future. Consider the following situation: Chris Chisholm is the owner of Armadale Auto Repairs. She wants to purchase a new computer for the office at a cost of $3500. On 1 July 2015 the business had only $400 cash at bank. Chisholm has supplied the following information about her business:

1 Last year she earned cash fees of $8000 (plus GST) during July. So far this year, her fees have been up by about 10% on last year's figures.
2 Chisholm purchases all her spare parts on credit and expects to buy about $4000 worth of parts during July (plus GST). However, creditors' accounts due for payment before the end of July amount to $3400.
3 The monthly performance report of the firm shows the following regular expenses: rent $1900 (plus GST of $190), wages $800 and petrol—van $200 (plus GST of $20).
4 In addition to the above expenses, the annual insurance premium on her delivery van is due on 14 July each year. This costs $550 (plus GST of $55).
5 The business has loan repayments of $375 per month.
6 Chisholm usually withdraws $250 per week for personal spending.

When preparing a cash budget, it is vital that only cash inflows and outflows are considered. It should be noted that there is an irrelevant item in the above information. The amount of goods purchased on credit (part of item 2 above) is totally irrelevant to the cash budget, as it is not a cash flow. However, the amount expected to be paid to creditors is relevant, as it involves a movement of cash. Keeping these points in mind, a cash budget can be prepared as shown in figure 8.1 on the next page.

The cash budget shown in figure 8.1 can be used by Chisholm to evaluate whether or not she can buy the computer. As the purchase price was estimated as $3500 it is apparent that there will not be sufficient cash at the end of July, as the cash budget predicts a balance of $1510. Chisholm may decide to do one or more of the following:

- wait until later to buy the computer
- borrow the required money
- put in some additional capital
- cut back on drawings
- try to reduce expenses, if possible.

If Chisholm decides to wait until the business has sufficient cash with which to buy the computer, she may decide to extend the budget period to see what lies ahead. Figure 8.2 demonstrates a cash budget prepared for a three-month period.

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Figure 8.1 Cash budget

Armadale Auto Repairs: cash budget for the month ending 31 July 2015		
Estimated receipts	*$*	*$*
Cash fees ($8 000 + 10% increase)	8 800	
GST receipts	880	9 680
less Estimated payments		
Creditors	3 400	
Rent	1 900	
Wages	800	
Petrol—van	200	
Insurance of van	550	
Loan repayments	375	
Drawings	1 000	
GST payments	265	8 490
Estimated surplus for month		1 190
Bank balance 1 July 2015		400
Estimated bank balance 31 July 2015		$1 590

Figure 8.2 Quarterly cash budget

Armadale Auto Repairs: cash budget for the quarter ended 30 September 2015			
	Jul	*Aug*	*Sep*
Estimated receipts	*$*	*$*	*$*
Cash fees	8 800	9 000	9 000
GST receipts	880	900	900
Total receipts	9 680	9 900	9 900
less Estimated payments			
Creditors	3 400	4 000	4 000
Rent	1 900	1 900	1 900
Wages	800	800	800
Petrol—van	200	220	220
Insurance of van	550	–	–
Loan repayments	375	375	375
Drawings	1 000	1 000	1 000
GST payments	265	212	212
Total payments	8 490	8 507	8 507
Estimated surplus for month	1 190	1 393	1 393
Bank balance start of month	400	1 590	2 983
Estimated balance end of month	$1 590	$2 983	$4 376

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The quarterly budget appears to indicate that there will be enough cash available by the end of September to buy the computer. However, if the firm bought the computer for $3 500, this would leave an estimated $796 in the bank—and that is if the budget proves to be accurate! It only takes one unexpected payment to occur and the available cash may be eliminated. It may be wise to have a buffer zone, or safety margin, whereby a minimum amount of cash is kept in the bank account. If this is not done, the business may be forced to go into overdraft (if available) and this costs money in terms of interest.

The other important factor to keep in mind is that the longer the budget period, the less reliable the estimates will be. Note how in figure 8.2 the estimated balance at the end of July becomes the opening balance for August. The final balance for August becomes the balance at the start of September. If the budget for July is found to be inaccurate, the budget for the following two months must be questionable. For example, if the expected increase in fees does not eventuate in July, the predicted cash balances for August and September must be in doubt.

Much of the data used in a cash budget is based on past records and experience. Apart from this, a budget becomes a matter of opinion. Budgeting is basically prediction, and it is one of the few areas in accounting where the information is not *reliable*. None of the business documents in use can tell us what will happen in the future. However, although the demands of *reliability* cannot be satisfied when preparing a budget, the quality of *relevance* is certainly important. That is, all expected cash inflows and outflows should be reported if they are likely to occur. The accuracy of a budget will depend on the expertise of those involved in its preparation and the predictability of the items included in the budget. Some industries are fairly stable, as are some businesses. Others are more volatile and subject to erratic changes. Keep in mind that a budget is a planning tool and it should never be taken as a report based on fact.

8.4 Cash budgets and decision-making

The result of a cash budget will be either a cash surplus or a cash shortage for the period. Once this result has been calculated, the final estimated balance is then found. The next step involves looking at the decisions that have to be made in response to the result of the budget. First of all, management must decide on a desirable level of cash to maintain in the firm's normal bank account. Once this has been defined, there are two possible scenarios. The first is that there is an excess amount of cash available. The second possibility is that the business is expected to suffer from a shortage of cash in the future.

Cash surplus: A cash budget may predict that an excess amount of cash will be available above and beyond the normal requirements of the firm. As the interest on a standard cheque account is either very low or non-existent, a decision should be made about what to do with the excess cash. There are a number of possibilities, some of which are:

- pay off some liabilities
- invest internally through the purchase of non-current assets
- withdraw some for personal use (although this may adversely affect the firm)
- invest the cash externally.

If the cash is going to be invested externally, there are a number of considerations to be made. Key factors to be examined include interest rates, security, length of investment and access to the money. The highest interest rate may not necessarily be the best choice. It must be kept in mind that the business may have excess cash for three or four months, but then be faced with a cash shortage if the money is tied up. Therefore it may be necessary to accept a lower rate of interest and invest the money 'at call', or at short-term notice of, say, 30 days. The key to

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investing such funds is flexibility, as the primary use of the money should always be within the business. Funds should be invested externally only if the cash is clearly in excess of the firm's needs; caution should always be exercised.

Cash shortages: The problem of cash shortages is not as easy to solve. If a budget forewarns of a shortage, steps should be taken to improve the situation before this occurs. Possible action may include:

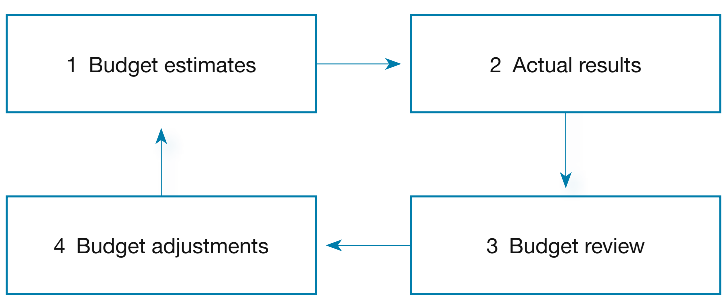
- reducing the level of drawings
- contributing additional capital
- reducing the level of expenses
- postponing the payment of expenses
- postponing the purchase of additional assets
- generating additional revenue
- offering incentives to debtors to encourage payment—for example, discounts
- borrowing money externally.

Sources of finance for small business are covered in detail later in this text. At this point one basic rule will be introduced: the length of any type of borrowing should match the purpose of the spending. If a business anticipates a short-term shortage of cash, a bank overdraft may be the answer. Long-term projects usually require long-term finance (for example, a loan over 10 years). If a shortage is expected to continue for a longer period of time, the causes should be identified, as a larger problem may exist. Shortages revealed by a cash budget may simply be a warning of more serious trouble. If a business has insufficient capital or has purchased non-current assets on short-term finance, a liquidity problem may soon arise. Therefore, the cash budget is one part of the overall plan of where the business is heading and how it is going to be financed.

8.5 Budget variance reports

The budgeting process is not complete when a cash budget has been drawn up and a predicted cash balance calculated. In fact, this is only the start of the budgeting process. What should happen next is a report on the progress of the budget. When the quarterly cash budget was prepared for Armadale Auto Repairs (refer figure 8.2) the point was made that, if the first month's estimates were wrong, the estimates for the following two months would be inaccurate as a consequence. After the first month, the budget should be reviewed and, if necessary, adjustments made to the budget for the following two months. When a budget has been prepared on a month-by-month basis, this process of review should occur at the end of each month throughout the budget period. The adjustments made should be used as a learning process to improve the accuracy of budgets in the future. Budgeting is a continuous process that is forever under review. This process is illustrated in figure 8.3.

Figure 8.3 The budgeting process



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The budget review process can be done informally, but the preferred approach is to prepare a formal report. A budget variance report compares the budget estimates with the actual results achieved and highlights the differences between them. These differences are known as budget **variances**, which may be either favourable or unfavourable.

A **favourable variance** is one in which the actual result is better than that expected in the budget. If fees revenue was budgeted to be $5 000 and $6 000 was the actual result, this would be referred to as a $1 000 favourable variance. Alternatively, it may be referred to as a variance 20% above budget ($1 000/$5 000 = 20%). When expenses are being examined, if the budgeted amount was $400 and the actual amount paid was only $300, this too would be seen as a favourable variance. This is because the result was better for the firm than was anticipated—that is, $100 or 25% ($100/$400) better than budget.

An **unfavourable variance** is one in which the actual results are worse than were predicted in the budget. This occurs when revenue is less than predicted, or when expenses are greater than the budget estimates (refer to figure 8.4).

This budget variance report allows management the opportunity to review the cash budget formally. All variances are labelled with a 'U' for unfavourable or an 'F' for favourable. The Comments section, although difficult to complete in a classroom situation, is very important in the 'real world'. If reasons can be found for variances of either type, they should be noted for future reference when planning the next budget.

It is important that all *significant variances* be investigated. The problem is the meaning of the term 'significant'. As a budget is based on estimation, variances are expected to occur and therefore should not necessarily create concern. However, major variances do warrant action. It is a matter of opinion when a variance becomes significant. As a guide, a variance of 10% or more may be seen as significant, whereas less than this amount may be deemed to be insignificant. The problem with such a rule is that some industries are more volatile than others, and it is therefore more difficult to prepare budgets for them. Therefore, when budgeting for a real business, management's emphasis is on what past experiences have taught it and how accurate the budget is normally. If the budgets prove to be very accurate, a variance of only 5% may be investigated as a matter of course. On the other hand, budgeting for an unpredictable business may lead to the decision to tolerate all variances under 10% without further investigation. As with most budgeting processes, decisions such as this will, to a large degree, depend on previous experiences.

To demonstrate a formal budget variance report, the cash budget prepared for Armadale Auto Repairs (figure 8.2) will be used as an example.

It is important to prepare a budget variance report for all budgets in operation. The variance report prepared for the cash budget in figure 8.4 is simply an example of what can be done. If a budgeted income statement (covered later in this chapter) has been prepared, it too should be followed up with a variance report. If the 'set and forget' approach is taken to budgeting, the job is only half done and the budgets are likely to be ineffective.

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Figure 8.4 Budget variance report

Armadale Auto Repairs: budget variance report for month ended 31 July 2015

	Budget	Actual	Variance		Comments
	$	$	$	%	
Receipts					
Cash fees	8800	8200	600	6.8 U	Special promotion by competitor
GST receipts	880	820	60	6.8 U	
Total receipts	9680	9020	660	6.8 U	
Payments					
Creditors	3400	3500	100	2.9 U	
Rent	1900	1900	Nil		
Wages	800	800	Nil		
Petrol—van	200	160	40	20.0 F	Fall in revenue
Insurance of van	550	600	50	9.1 U	Unexpected premium increase
Loan repayments	375	400	25	6.7 U	Higher interest rate
Drawings	1000	800	200	20.0 F	Lower fees received
GST payments	265	266	1	0.4 U	
Total payments	8490	8426	64	0.7 F	
Surplus for month	1190	594	596	50.1 U	
Bank balance 1/7/15	400	400			
Bank balance 31/7/15	$1590	$994	596	37.5 U	

8.6 Cash budgets: collection schedules

One of the most difficult items to predict accurately is the revenue that a business expects to earn in the future. The past experiences of the firm can be taken into account, but circumstances do change and the future is never certain. However, even when the revenue figure has been estimated, there is a further complication. The question arises as to whether or not the revenue is on a cash basis, or whether customers will take advantage of the firm's credit facility. As the cash budget only shows actual cash flows, if there are credit sales a schedule needs to be prepared to show when these credit sales are expected to be turned into cash receipts. This is fully explained through the following example.

The Commercial Cleaning Co. is preparing a cash budget for the quarter starting 1 July 2015. It reports that over the last three months it has achieved the following revenue (note: all figures include GST):

April $40000	May $45000	June $48000

Based on past experience and extensive market research, the following estimates of revenue have been made for the next three months (note: all estimates include GST):

July $48 000	August $50 000	September $52 000

A study of the firm's past records indicates that, of the total revenue earned, approximately 60% was on a cash basis, with the other 40% being made on credit. When management is looking at the information required for the cash budget of July, August and September, estimates are needed of the actual cash receipts resulting from the above revenue figures. The first step is to break down the total revenue into cash and credit percentages. Figure 8.5 shows this breakdown.

Figure 8.5 Cash/credit fees analysis table

Month	Total sales	Cash fees	Credit fees
		60%	40%
July	$48 000	$28 800	$19 200
August	50 000	30 000	20 000
September	52 000	31 200	20 800

This table provides the cash fees data required for the cash budget. As cash fees result in an immediate cash inflow, the figures shown in figure 8.5 under the heading of cash fees can be put straight into the cash budget. However, the dollar amounts for credit fees are still not cash flows. By examining the previous history of the firm's debtors, it was discovered that 70% of accounts are settled in the month after the invoice was issued, with 20% usually being collected in the second month after issue and the remaining 10% being collected during the third month after the fees were charged. Using this data, a **schedule of collections** can be prepared as shown in figure 8.6.

Figure 8.6 Debtors collections schedule

		Collections in:		
Month	Credit fees $	July $	August $	September $
April	16 000	1 600	–	–
May	18 000	3 600	1 800	–
June	19 200	13 440	3 840	1 920
July	19 200	–	13 440	3 840
August	20 000	–	–	14 000
September	28 000	–	–	–
Total cash received		18 640	19 080	19 760

To help explain the details of these figures, two months will be examined in detail. In the month of April, total revenue was $40 000. As credit fees are 40% of the total, the credit fees in the table would be $16 000. Of April's credit fees, 70% would have been collected in May, 20%

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in June and the remaining 10% is expected to be received during July. Of these three months, only July is relevant to the budget period. Therefore 10% of April's credit fees are expected to be collected during July (10% of \$16 000 = \$1 600).

In the month of June, credit fees were 40% of \$48 000, which is \$19 200. Over the three-month staggered collection period, 70% (\$13 440) is expected to be collected in July, 20% (\$3 840) in August and 10% during September, which is \$1 920. By adding all three collection figures, the total credit fees for June will be found.

The September credit fees will be collected during October, November and December, and are therefore irrelevant to the cash flows for the September quarter. The totals at the bottom of figure 8.6 are used in the actual cash budget for the quarter. By combining the information contained in figures 8.5 and 8.6, the estimated receipts of the business would be shown in a cash budget, as shown in figure 8.7. Note that the cash fees have been divided by 11 to determine the GST component for each month. Therefore, using July as an example, the estimated cash fees of \$28 800 (including GST) has been divided by 11 to determine the GST figure of \$2 618. Taking this result (\$2 618) from the total of \$28 800, the actual cash fees expected can be determined: that is \$28 800 – \$2 618 = \$26 182. It is important to always check whether the predictions for future transactions include GST.

Figure 8.7 **Cash budget (extract) using data from collection schedules**

Commercial Cleaning Co: cash budget for quarter ending 30 September 2015

	July	*Aug*	*Sept*
	\$	*\$*	*\$*
Estimated receipts:			
Cash fees	26 182	27 273	28 364
GST receipts	2 618	2 727	2 836
Collections from debtors	18 640	19 080	19 760
Total receipts	47 440	49 080	50 960

8.7 Cash budgets: payment schedules

If a business purchases goods or services on credit, another problem arises in the budgeting process. The cash budget must show the actual cash outflow to creditors, and not the amount of credit purchases. Just as a schedule was prepared to calculate the collections from debtors, a **schedule of payments** can be used to find the cash expected to be paid to creditors. Consider the example of Commercial Cleaning Co.

Commercial Cleaning Co. purchases cleaning products on credit. Accounts are usually settled in the month following purchase to take advantage of a 2% discount. Monthly purchases are expected to be as follows (all figures include 10% GST):

June (actual)	\$20 000
July (estimated)	\$22 000
August (estimated)	\$24 000
September (estimated)	\$25 000

A schedule of payments to creditors can be prepared as shown in figure 8.8.

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Figure 8.8 Creditors payments schedule

Month	Credit purchases $	Collections in: July $	August $	September $
June	20 000	19 600	–	–
July	22 000	–	21 560	–
August	24 000	–	–	23 520
September	25 000	–	–	–
Total payments		19 600	21 560	23 520

The figures shown as payments in figure 8.8 are the credit purchases for the previous month less the 2% discount on offer for prompt payment. Therefore the June purchases of $20 000 are expected to be paid in July after 2% has been deducted. That is, $20 000 – $400 = $19 600. The payments listed in figure 8.8 can then be entered straight into the cash budget of the firm. Payments to creditors can also be staggered over several months, as was demonstrated with credit sales. However, the business often determines its own pattern of paying creditors. Therefore, the payments schedule is normally easier to predict than was the case with collections from debtors.

8.8 Budgeted income statements

Cash budgets are prepared in order to help plan the future cash position of a business. A second important budget for small business owners is in relation to the future profit performance of the business. A **budgeted income statement** is used to examine the predicted revenues and expenses of a business over a given period of time. It is therefore used to predict the estimated net profit for a specific period of time. Earning a profit is a basic objective for most small business owners and it is vital that they have information relating to the future earning potential of the firm. It should be noted that the format of the budgeted income statement is exactly the same as the historical report. The only difference is that the dollar values in the budgeted report are predictions, rather than historical results. The usual definition of profit is used in the budgeted income statement. That is, budgeted profit equals revenues expected less the expenses expected to be incurred over the reporting period. It is important to be able to distinguish between the items relevant to a cash budget and those that are used to prepare a budgeted income statement. Figure 8.9 highlights the differences between the two types of reports.

Figure 8.9 A comparison of cash budgets and budgeted income statements

Included in a budgeted income statement	Included in a cash budget
Revenue earned Expenses incurred Credit fees Cost of materials used	Revenue received Expenses paid Collections from debtors Payments to creditors/suppliers Cash paid for new assets Capital contributions by owner Cash withdrawals by the owner Cash from new loans Cash paid for loan repayments

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In summary, the budgeted income statement reports on future estimates of revenues and expenses. The cash budget, however, reports on all expected cash inflows and outflows, regardless of whether or not the items involve revenues and expenses. When a budgeted income statement has been prepared, management is provided with a prediction of its future profit performance. If this plan is not to the satisfaction of management (for example, if it predicts a net loss), changes should then be made to try to improve the situation before the budget period commences. Management may have to review its predicted expenses for the budget period. Ideally, such reviews should be considered by management on a continuous basis to try to improve the profit of the business. The value of a budgeted income statement is that it forces management to consider the future profits of the business. It can then be used to set goals for the future.

8.9 Case study: preparing a budgeted income statement

The following example has been prepared to not only demonstrate how to prepare a budgeted income statement, but also to show the differences with cash budgeting. The owner of Mobile Mechanics has provided the following information:

- Estimated repair fees for July are $9 000, with $8 000 of these fees expected to be collected during July. The remaining $1 000 is expected to be collected in the month following.
- Spare parts to be purchased during July will cost about $3 000. The expectation is that about $2 000 worth of spare parts will be used to complete jobs booked in July. The remaining $1 000 of spare parts will be required for jobs in August.
- The following expenses are expected in July:
  - Wages $3 000
  - Advertising $500
  - Insurance $600 (note: $600 is due to be paid on 1 July but this amount covers a full year's insurance)
- Other payments expected in July are:
  - Cash drawings by the owner $900
  - Loan repayments $800

Given the above information, a budgeted income statement can be prepared as follows:

Figure 8.10 Budgeted income statement

Mobile Mechanics: budgeted income statement for month ending 31 July 2015

Revenue	*$*	*$*
Repair fees		9 000
less Expenses		
Spare parts	2 000	
Wages	3 000	
Advertising	500	
Insurance	50	5 550
Estimated net profit		3 450

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Notes to figure 8.10:

- Repair fees expected to be earned during the month are reported, not just how much cash is expected to be received from customers.
- Spare parts expected to be used during July should be used in this budget. It doesn't matter how much is paid for spare parts – the amount expected to be used to earn the repair fees of $9 000 should be used as the estimate.
- The insurance expected to be paid during July is $600. However, as the budgeted income statement is used by the owner to predict profit for the month of July, only one month's insurance has been used. This will assist the owner in preparing a more accurate prediction of the month's profit.
- Both Loan repayments and Drawings have been excluded from the budgeted income statement. Although both of these items would be reported in a cash budget, neither of them relate to revenues and expenses. Loan repayments relate to liabilities and drawings are reported as a reduction in owner's equity. As the income statement is attempting to predict profit performance neither of these two cash payments have any relevance at all. It is vitally important that when preparing a budgeted income statement only revenue and expense items are considered.

Once a budgeted income statement has been prepared, it should then be reviewed by management in terms of a desired profit level. If the results predicted by the budget fit in with management's overall objectives the report may simply be accepted. If the owner is not happy with the budget predictions they should be reviewed and changes introduced to meet the owner's goals. The budgeted income statement should be seen as a plan for the future profitability of a business and, once finalised, should be viewed as providing a target that specifies a satisfactory level of performance.

8.10 Budgeted income statements and variance reports

The importance of variance reports has already been stressed in relation to cash budgets. However, they are just as important in relation to budgeted income statements. If a predicted net profit is not achieved at the end of a budgeted period, questions should be asked as to why the expected result did not eventuate. Therefore, a variance report should also be prepared for all budgeted income statements in order to identify both problems and areas of success. The format of the variance report for the budgeted income statement is basically the same as that shown earlier in this chapter for cash budgets. That is, budgeted figures are reported, along with actual results, thus identifying all variances for the period. Just as was the case with cash budgets, if a budgeted income statement has been prepared on a month-by-month basis, the review process via the variance report should also occur at the end of each month. For an income statement, the budget variance report allows an owner to review the profit performance of their business. All variances are labelled with a 'U' for unfavourable or an 'F' for favourable, as shown in the previous examples. To demonstrate a variance report in relation to a budgeted income statement, the budget prepared for Mobile Mechanics (refer figure 8.10) will be used as an example.

Figure 8.11 Budgeted income statement variance report

Mobile Mechanics: budget variance report for month ended 31 July 2015

	Budget	Actual	Variance	
	$	$	$	%
Revenue				
Repair fees	9 000	10 000	1 000	11.1 F
less Expenses				
Spare parts	2 000	2 200	200	10.0 U
Wages	3 000	3 450	450	15.0 U
Advertising	500	500	Nil	
Insurance	50	50	Nil	
Total expenses	5 550	6 200	650	11.7 U
Net profit for the month	$3 450	$3 800	350	10.1 F

This business owner would probably be pleased with the performance of the business in July. The variance report shows that the business performed even better than expected. Repair fees were greater than that predicted. However, it should also be noted that this increased level of revenue caused an increase in two expenses: namely spare parts and wages. The higher level of repair fees more than covered this increase in expenses, thus ensuring a positive profit result for the owner. As with all types of budgets, it is crucial that a variance report be prepared for all budgeted income statements. The results of such variance reports should be noted by the business owner and then be used in their planning for the subsequent budgets of the business. If results are not satisfactory, expenses may have to be cut or new sources of revenue sought. As with all budgets, a business owner would be better prepared if a formal system of budgeting had been put in place.

GLOSSARY OF TERMS

budget a plan that sets out the expected financial transactions for a business in a future reporting period.

budgeted income statement a report that shows estimates of revenues and expenses over a period of time, and the expected net profit to be made during that budget period.

cash budget a report that shows estimates of cash receipts and cash payments, and an estimated cash balance, at a particular point in time in the future.

cash shortage a situation in which a cash budget predicts that a business will have insufficient cash at some time in the future.

cash surplus a situation in which a cash budget predicts that a business will have an amount of cash in excess of its needs at some time in the future.

favourable variance a variance in which the actual result for a particular item is better than that estimated in a budget.

master budget the overall planning strategy of a business, which consists of many smaller budgets.

schedule of collections a table used by businesses (that sell on credit) to help predict cash inflows from debtors.

schedule of payments a table used by businesses (that purchase on credit) to help predict cash outflows to creditors.

unfavourable variance a variance in which the actual result for a particular item is worse than that estimated in a budget.

variance the difference between a budget estimate and an actual result.

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Summary questions

1 Explain what accountants mean by the term 'budgeting'.

2 State, and explain, two reasons why a small business owner should prepare budgets regularly.

13 Outline the role budgeting can play in the controlling of a firm's expenditure.

4 'Budgeting is just guesswork and therefore cannot be relied on by management.' Discuss this statement.

5 State four different types of budgets and write a brief description of each one.

6 What is a master budget? What is its purpose?

7 What is a cash budget? Explain why a firm should prepare a cash budget on a regular basis.

8 Describe the key steps to be followed in the preparation of a cash budget.

9 Explain the two possible outcomes of a cash budget.

10 If a business predicts it is going to have excessive cash at bank in the future, what are some of the alternatives management should consider? Make a list of the possibilities.

11 A firm has just completed its cash budget and it estimates that it will have a serious cash shortage for the next three months. Make a list of the possible steps management could follow to remedy this situation.

12 What is a budget variance report? What is its purpose?

13 Explain the meaning of the term 'variance'.

14 Distinguish between a favourable variance and an unfavourable variance.

15 Explain what is meant by the following statement: 'Budgeting is a continuous process.'

16 Describe the purpose of a schedule of collections from debtors.

17 Explain the purpose of a budgeted income statement.

18 State three cash flow items which would not be included in a budgeted income statement.

19 A business owner has just prepared a budgeted income statement and is not happy with the predicted result. Explain two things the owner may attempt to do to improve the profit performance of the business.

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Practical exercises

[Exercise 8.1]

David Fang is the owner of Newtown Plumbing, and he is concerned about the amount of cash the business has in the bank. On 1 August 2015 the balance of the account was $850. He has supplied the following estimates of the transactions he expects to have during August:

Credit fees	$2 000	Cash fees	$6 000	Wages	$400
Advertising	600	Office expenses	1 200	Rent	2 000
Credit purchases	4 000	GST received	600	GST paid	380
Payments to creditors	3 600	Receipts from debtors	1 000		

a Prepare a cash budget for Newtown Plumbing for the month of August 2015.

b Comment on the firm's cash position in light of the owner's concerns about insufficient cash.

c State two practical steps that Fang could undertake to try to improve the situation predicted for August.

[Exercise 8.2]

Gayle Mathews is the proprietor of Mathews Carpentry Services. She is thinking of buying new equipment for the business at a cost of $7 000. On 1 October 2015 the business only had $3 200 in the bank. Over the last few months her service fees have been around $8 000 per month. The business only deals on a cash basis. Mathews is confident she can increase her revenue over the next few months to the following amounts: October $9 000, November $9 500 and December $10 000. The following expenses are expected to occur over the next quarter:

	Oct	*Nov*	*Dec*
	$	*$*	*$*
Wages	3 000	3 200	3 200
Advertising	300	400	500
Cash purchases of timber	2 000	2 200	2 400
Vehicle expenses	300	300	300

In addition to the expenses of the business, Mathews usually withdraws $2 200 per month for personal spending. Her GST transactions are expected to include the following:

	Oct	*Nov*	*Dec*
	$	*$*	*$*
GST collected	900	950	1 000
GST paid	260	290	320

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a Prepare a cash budget for Mathews Carpentry Services for the quarter ending 31 December 2015. Your budget should show the estimated bank balance at the end of each month.

b In which month, if any, should Mathews purchase the new equipment costing $7 000? Give reasons for your answer.

c Does your cash budget prepared in part **a** satisfy the concept of reliability? Explain your answer fully.

[Exercise 8.3]

The following information relates to Malvern Tailors, a small business owned and operated by Joseph Taouk.

	Jul $	*Aug* $	*Sep* $
Estimated fees (all cash)	6 500	6 500	7 000
GST receipts	650	650	700
Regular expenses:			
Wages	1 200	1 500	1 500
Cleaning	320	320	320
Office expenses	100	100	100
Payments to suppliers	3 250	3 250	3 500
GST payments	367	367	392

In addition to the above items, the firm's annual insurance premium of $1 350 (plus GST of $135) is due on 16 August. Loan repayments of $1 600 per quarter are payable on 10 January, 10 April, 10 July and 10 October each year. Taouk normally withdraws $1 600 per month for private use. The business has $1 600 in the bank on 30 June 2015.

a Prepare a cash budget for Malvern Tailors for the three months ending 30 September 2015.

b Write a report to Taouk commenting on the liquidity situation revealed by the cash budget prepared in part **a**. Your report should recommend any necessary action to be taken by Taouk.

c What is Taouk's position expected to be in relation to the GST at the end of the quarter ending 30 September 2015? Explain the implications of his GST position in relation to planning future cash transactions.

[Exercise 8.4]

Scoresby Landscaping provides credit to its regular customers. Based on past experience, about 75% of its total fees are on credit. Of these fees, approximately 60% of the debtors pay in the month after the service was provided, with the other 40% paying in the second month after the credit has been granted. The following revenue data was made available by the management of the business:

Month	*Total fees (including GST)*
July	$20 000 (actual)
August	22 000 (actual)
September	22 000 (estimated)
October	24 000 (estimated)
November	26 000 (estimated)

a Prepare a table to show the breakdown of fees revenue into cash and credit fees on a monthly basis (from July to November).

b Using the credit fees data from the table in part **a**, prepare a schedule of collections from debtors for September, October and November.

c Prepare a cash budget extract, showing how the information derived from the tables would appear under the heading of 'Estimated receipts' for September, October and November (hint: do not forget to separate cash fees from the GST expected to be collected; divide the cash fees by 11).

[Exercise 8.5]

The following fees information relates to E.Z. Painting Services:

Month	*Actual fees**	*Month*	*Estimated fees**
January	$40 000	April	$35 000
February	37 000	May	30 000
March	35 000	June	25 000

* Note: all figures provided for Fees include 10% GST

By referring to past revenue data, it has been found that of the total fees charged, 70% have been on a cash basis, with only 30% being made on credit. Of the customers granted credit, they usually pay in the following manner: 60% pay one month after the job is completed, 30% pay two months after the invoice date and the remaining 10% usually pay in the third month after the service has been performed.

The owner of the store has also supplied the following information pertaining to the purchases of paint for the business, which are usually made on a credit basis:

March $20 000 (actual) (all estimated)	April $18 000	May $16 000	June $14 000

Creditors' accounts are all settled in the month after purchase to take advantage of a 5% discount.

a Prepare a table and calculate the dollar amounts of both cash and credit fees for the months from January to June.

b Prepare a schedule of collections from debtors for the quarterly budget period of April to June.

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c Calculate the estimated amount of GST expected to be collected during April, May and June.

d Draw up a schedule of payments to creditors showing clearly the actual cash to be paid to creditors in April, May and June.

[Exercise 8.6]

Joseph Zaita is the proprietor of Green Thumb Gardening, and has supplied the following information regarding his business:

Balance of bank account on 1 August 2015		$2 300
Fees over the last two months, including GST, were:		
June	—Cash fees	16 000
	—Credit fees	18 000
July	—Cash fees	18 000
	—Credit fees	20 000

During August all fees are expected to be 10% higher than the July figures. The usual trend for Zaita's business is that 80% of credit customers pay in the month after invoice, with the other 20% paying in the second month after being charged.

The business had the following purchases during July (including GST):

Cash	$1 100
Credit	9 900

During August, Zaita expects to have cash purchases of $1 000 and credit purchases of $10 000. It is Zaita's policy to pay creditors in the month after purchase.

The firm's regular payments include the following:

Advertising	$1 000 per month, plus GST
Wages	4 000 per month
Drawings	1 000 per month
Loan repayments	800 per month

The firm is also paying the annual rates bill of $4 800 by instalments, with $1 200 being payable on 10 February, 10 May, 10 August and 10 November.

On 27 August Zaita expects to pay a deposit of $2 000 on a new truck costing $20 000. The truck should be available some time during September. No GST has to be paid on the truck during August.

a Prepare a cash budget for Green Thumb Gardening for the month of August 2015.

b Taking into consideration that the firm is expecting to pay for the remainder of the cost of the van in September, comment on the cash position of the business.

c If Zaita decides not to pay cash for the van, what type of finance would you recommend as appropriate for such an asset? State your recommendation and support your answer with valid reasons.

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[Exercise 8.7]

Jan Abbey prepares a cash budget on a regular basis. However, she is concerned that, even though her budget estimated a cash balance of $2150 at the end of November, the bank statement she has just received indicates something quite different. After examining her cash records, the following differences were found to exist between Abbey's budget and the actual cash flows:

	Budget $	*Actual* $
Receipts		
Cash fees	12 000	13 000
Collections from debtors	6 000	2 400
GST receipts	1 200	1 300
Total receipts	19 200	16 700
Payments		
Wages	5 500	2 600
Advertising	800	400
Rent	2 400	2 400
Payments to suppliers	6 600	6 800
Office expenses	400	420
Loan repayments	600	700
Purchase of computer	–	3 000
Drawings	1 200	1 800
GST payments	1 020	1 302
Total payments	18 520	19 422
Excess of receipts over payments	680	(2 722)
Bank balance 1 November 2015	1 500	1 500
Bank balance 30 November 2015	2 180	(1 222)

a Prepare a budget variance report, including variances in dollar amounts and percentages, for Abbey's Electricals for November 2015.

b Write a report to the proprietor, explaining clearly why the projected cash figure was not achieved. Your report should include both positive and negative features of the budget.

c Judging by the events that occurred during November, comment on Abbey's approach to cash budgeting.

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[Exercise 8.8]

The following comparison of budgeted cash flows and actual cash flows has been prepared for Donaldson's Drycleaning for the quarter ended 30 September 2015.

	Budget $	*Actual* $
Receipts		
Cash fees	24 000	32 000
Collections from debtors	12 000	14 500
Loan from ABC Finance Co.	5 000	
GST collected	2 400	3 200
Payments		
Wages	6 000	6 500
Insurance	800	840
Suppliers	14 000	16 400
Postage and telephone	400	380
Purchase of new equipment	5 000	4 600
Cleaning of shop	1 200	1 200
Drawings	4 500	3 800
GST paid	2 140	2 342

The business had $500 in the bank on 1 July 2015.

a Prepare a budget variance report for the quarter ended 30 September 2015 to reveal the significant differences between the budgeted and actual data.

b What was the predicted cash balance on 30 September?

c What was the actual cash balance on 30 September?

d State, and explain, the major causes of the difference between the budgeted and actual bank balance.

e Do you think a quarterly period is appropriate for cash budgeting? Give reasons for your answer.

[Exercise 8.9]

David Santacroce is the owner of Modern Renovations. The transactions below are those he expects to occur during the month of October 2015.

» Total fees are predicted to be $16 000 plus GST—all fees are expected to be collected during October.

» Cash purchases of materials should be about $200. GST of 10% will be paid on all purchases paid for during October.

» The quarterly rent payment of $9 000 is due on 1 October (plus $900 GST)

» Wages for October are predicted to be $2 000.

» Santacroce has arranged for newspaper advertising during October at a cost of $1 400. As the terms allow 30 days' credit, the account will be settled some time in November. (The relevant GST will also be paid in November.)

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- » Santacroce intends to withdraw $500 per week for personal use.
- » A loan of $10 000 from the National Bank is expected to be granted on 14 October.
- » The balance of the firm's bank account on 1 October 2015 is $2 700.

a Prepare a cash budget for Modern Renovations for the month of October 2015.

b Prepare a budgeted income statement for October to determine a budgeted net profit figure.

c Make a list of any items that you have included in the cash budget that you did NOT include in the budgeted income statement.

d Explain why some items are reported in a cash budget but not in a budgeted income statement.

[Exercise 8.10] Keryn Michaels is the proprietor of Bayside Catering and she has provided the following accounting report:

Bayside Catering: balance sheet as at 31 August 2015

Assets	*$*	*Liabilities*	*$*	*$*
Debtors	3 200	Bank overdraft	1 100	
Equipment	26 800	Creditors	2 900	
Vehicle	30 000	GST liability	1 000	
		Loan—Fewster credit	24 000	29 000
		Owner's equity—capital		31 000
	60 000			60 000

During September 2015, Michaels expects the following to occur:

- » Of the debtors at 31 August, $3 000 is expected to be collected in September, with the other $200 expected to be received in October.
- » Credit fees to be earned in September should be about $2 500 (plus GST) while cash fees are expected to be $7 800, plus GST. All credit customers are offered 30 days' credit, and all of them are expected to settle their accounts in October.
- » All creditors owed money at 31 August will be paid during September.
- » Michaels has decided to pay cash on delivery for all purchases from now on. In September she anticipates buying about $5 400 of fresh food (no GST applicable).
- » All food is expected to be used by September.
- » The usual monthly expenses paid in cash are: wages $2 500, petrol $280 (plus GST) and advertising $400 (plus GST).

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- » A new insurance policy is being arranged and is expected to be taken out during September. The cost of $600 (plus $60 GST) covers the period 1 October 2015 to 30 September 2016. Michaels expects to pay this bill in the last week of September 2015.
- » The firm intends to make a cash purchase of $600 worth of office stationery on 1 September (plus $60 GST) The stationery is expected to last for six months, from September through to February.
- » This business pays its GST monthly. The GST liability from 31 August is due for payment on 28 September.
- » Michaels expects to repay $5000 to Fewster Credit on 27 September and she usually withdraws $300 per week from the business.

a Prepare a cash budget for Bayside Catering for the month ending 30 September 2015.

b Write a brief comment on the liquidity of the business.

c Prepare a budgeted income statement for Bayside Catering for the month ending 30 September 2015.

d Write a brief comment on the expected profit result of the business.

e Explain why the two budgets show different results for the budget period.

[Exercise 8.11]

The following balance sheet relates to a small business trading under the name of Wizard Window Cleaners, owned by Megan Egan.

Wizard Window Cleaners: balance sheet as at 31 March 2015

Assets	*$*	*Liabilities*	*$*
Cash at bank	3 500	Advertising owing	200
Debtors	4 400	Creditors	2 500
Stock of materials	870	GST debt	1 500
Vehicle	16 800	Loan from R. Biggs	3 500
		Owner's equity	
		Capital—Egan	17 870
	25 570		25 570

According to the owner's plans, the following is expected to occur in April 2015:

- » Service fees to be earned during the month will be $10 000, of which $7 500 will be on a cash basis (plus 10% GST). Fees charged to debtors are usually received in the month following the service.
- » Debtors as at 31 March are all expected to pay during April.
- » $2 200 worth of materials (inc. GST) are expected to be purchased on credit during April. Creditors will be paid $1500 during April. All materials will be used in April.
- » New equipment is going to be purchased during April at a cost of $2000 (plus GST), which will be paid in cash.

→

- » Advertising costs for April will be $500 but Egan expects to pay a total of $700 for advertising during April, as she owes $200 from the previous month. The total of $70 GST will also be paid at this time.
- » On 18 April R. Biggs will be paid $1 100, which includes $100 interest.
- » Other expenses for April are expected to be wages $2 450 and petrol $230 (plus GST).
- » The owner expects to withdraw a total of $1 600 during April.
- » The GST owing in the March balance sheet will also be paid during April.

a Prepare a cash budget for the month of April 2015.

b Prepare a budgeted income statement for the month of April 2015.

c Write a brief comment on the results revealed by your two budgets.

[Exercise 8.12]

The following comparison of budgeted and actual data has been prepared for Con the Concreter for the month ending 30 June 2015.

	Budget $	*Actual* $
Revenue		
Concreting fees	12 000	11 000
less Expenses		
Materials used	3 200	3 500
Petrol	350	400
Advertising	300	400
Insurance	50	50
Wages	600	800

a Prepare an income statement variance report for the month ending 30 June 2015 to reveal the significant differences between the budgeted and actual data.

b What was the predicted net profit for June?

c What was the actual net profit for June?

d Explain why the predicted result was not achieved in June 2015.

[Exercise 8.13]

The owner of Commercial Cleaners is concerned about how his business is performing lately. His knowledge of accounting is not strong but he regularly prepares budgets and has offered the following for your consideration:

Budgeted income statement for July 2015			
Revenue:			
Cleaning fees	12 000		
Bank loan	5 000		
GST collected	1 200	18 200	
Expenses:			
Wages	5 000		
Cleaning materials	1 000		
Office expenses	600		
Insurance (12 months)	1 200		
GST paid	280		
Loan repayments	500		
Owner's drawings	12 000	20 580	
Net profit			(2 380)

At the end of July 2015, the actual results reported by the owner were as follows:

Income statement for July 2015 (actual results)			
Revenue:			
Cleaning fees	14 000		
Bank loan	5 000		
GST collected	1 400	20 400	
Expenses:			
Wages	6 000		
Cleaning materials	1 000		
Office expenses	500		
Insurance (12 months)	1 200		
GST paid	270		
Loan repayments	500		
Owner's drawings	14 000	23 470	
Net profit			(3 070)

a It appears that this owner has included some irrelevant items in his reports. Redraft his budgeted income statement to determine an accurate prediction of his budgeted net profit for the month of July 2015.

b Prepare an income statement variance report for Commercial Cleaners to reveal the actual result for July and all variances for the month.

c Comment on the owner's concerns, given that both the budgeted and actual results for July indicated to him a net loss for the month. Explain why this occurred and explain to the owner the true situation.

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CASE STUDY

JOHNNY FIESCHI is the owner of Reservoir Roof Restorations. At the end of December 2014 there is only $260 in the business bank account. His other problem is that he would like to purchase a new vehicle (costing about $25 000) for the business, but he doesn't know when he will have the $10 000 deposit required. One of Fieschi's friends has advised him that he should prepare a forecast of his future transactions, but he is unsure how to do so. He has asked for your assistance and has provided the following information in relation to his business (note: you do not have to take into account any GST in this question).

- The quarter of January to March is Fieschi's busiest quarter each year. In the year 2014 he earned the following revenue: January $12 000, February $14 000 and March $15 000. After this, business slowed down a little. In the next quarter he earned the following revenue: April $14 000, May $12 000 and June $10 000. Fieschi is confident that revenue will be higher in the early part of 2015. He has already signed contracts to complete the following jobs in January 2015:
  - 131 Long Drive $1 900
  - 283 Hardwick Place $1 750
  - 161 Lucas Avenue $1 800
  - 263 Hird Street $1 950
  - 112 Solomon Court $1 850
  - 612 Alessio Avenue $1 950
  - 12 Lloyd Road $1 900
- For the months of February and March, Fieschi expects to earn fees about 10% higher than the previous year, but in the quarter April–June he doesn't expect the same level of business. In fact, he has stated that he expects his revenue to be about 5% lower than in the same quarter last year.
- Fieschi purchases materials for jobs as they are required. When he is quoting for a job, he calculates the cost of materials and multiplies this by four to calculate the total cost of the job. Fieschi argues that this allows for labour costs, vehicle expenses and a profit margin for himself. The cost of materials is therefore 25% of the revenue expected to be earned.
- The business employs two assistants who are each paid on Friday. One is employed full-time and is usually paid $550 per week. The other employee is employed on a casual basis. During the busiest months (January–March) he will probably be paid about $500 per week. In the period April–June his wages will drop back to about $400 per week. Note: in the year 2015 there are four pay days in each month, with the exception of January, May, July and October, where there are five Fridays and therefore five pay days.
- The firm has one truck, which transports all materials to job sites. Petrol expenses for the truck are usually about $200 per month, but in the January–March quarter this will go up to about $240 per month. The truck is due for a service in February and this will cost about $320.
- The insurance on the truck is due on 2 March each year. It is expected to cost $640 this year. Registration of the vehicle is due on 11 June and should be about $540.
- Fieschi advertises his business in the local papers at a cost of $150 per month.
- New equipment will have to be purchased during February at a cost of $3 800. Fieschi has arranged for a credit arrangement to help with this purchase. The supplier has agreed to take a $1 000 deposit on delivery of the equipment, and then $400 payments will have to be paid each month until it is fully paid off.
- Fieschi does his office work at home. He usually incurs office expenses for the business at around $100 per month.
- Loan repayments of $1 500 are due on 15 February, 15 May, 15 August and 15 November.
- Fieschi usually withdraws $500 each Friday for personal use. (Remember, there are four Fridays in March and June 2015.)

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a Prepare a cash budget for Reservoir Roof Restorations for the period January–June 2015. Your budget should show the anticipated cash balance at the end of each month.

b In which month will Fieschi be able to afford the $10 000 deposit for a new vehicle? Support your answer with reasons.

c Fieschi has had second thoughts about the expected downturn in business in the April–June period. He is considering a new advertising strategy that will cost him $100 more each month (for April–June) but is expected to increase his revenue during these months by 8%. However, this will increase wages by $150 per week and, of course, the extra jobs will cause an increase in the amount of materials used. Redraft your budget and take note of the changes in the estimated bank balances. Should Fieschi go ahead with this advertising plan? Give reasons for your answer.

INTERNET activity

Daniel Giese is a 28-year-old secondary teacher who earns a salary of $4000 (after tax) per month. He is considering going into small business in about a year's time. However, he will need to save at least another $8500 during the next 12 months in order to set up the business properly. Giese is unsure as to whether or not his current spending pattern will allow him to achieve this goal. He has made the following information available to you and seeks your advice:

Other income:	Interest per annum is approximately $500	
General expenses:	Mortgage repayments	$200 per week
	Utilities (gas etc.)	$900 per year
	Rates	$800 per year
	Insurance	$600 per year
Transport costs:	Registration	$500 per year
	Insurance	$600 per year
	Petrol	$50 per week
	Maintenance	$600 per year
Health costs:	Health insurance	$20 per week
	Medical bills	$500 per year
Personal spending:	Groceries	$200 per week
	Clothing/shoes	$100 per month
	Gifts	$30 per fortnight
Entertainment:	Concerts/movies	$40 per week
	Sport	$40 per week

Use the following website to help you determine whether or not Giese can achieve his budget objective:

<www.anz.com.au>

a According to the ANZ budget planner, what are Giese's available monthly savings? Will he be able to meet his objective?

b Giese has indicated that he may be able to reduce his spending on sport to $40 per fortnight, rather than $40 weekly. What is the new result if he is prepared to change his budget in this way?

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c If the budget is still not satisfactory, Giese would consider reducing his spending on movies and concerts. Rather than $40 per week, he would decrease spending in this area to about $40 per month. What effect would this change have on Giese's budgeted savings?

d If absolutely necessary, Giese will reduce spending on sport and to $40 per month in each area. Recalculate his budget plan to determine his new level of savings.

e Consider Giese's overall budget plan. Suggest two other ways of achieving his objective if his spending on sport and movies cannot be kept under control.

f Do you think Giese's budget is realistic? Are there any major omissions from his list of expenditures? State any items not currently in his budget plan that you think he should consider.

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Chapter 9

Sources and uses of available credit

OBJECTIVES

At the completion of this chapter, you should be able to:

- explain why small businesses may need to borrow money
- distinguish between internal and external sources of finance
- describe various sources of finance for small business
- outline advantages and disadvantages of various sources of finance
- recommend appropriate finance for particular purposes
- distinguish between flat rate interest and reducing balance interest
- explain the difference between a flat rate and an effective rate of interest
- outline the factors used to assess a loan application
- explain the concept of gearing
- calculate a debt ratio for a business
- explain the link between gearing and risk
- calculate a return on owner's investment ratio
- evaluate an owner's return on investment
- explain the effect of gearing on the owner's return on investment.

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9.1 Sources of finance for small business

Small business owners must decide the best way to finance their businesses. When a business is being established, the question of sources of finance is often a vital decision, for without finance the business may not even start. But even for established firms, decisions relating to finance will often arise. A business owner may be thinking of expanding the firm to larger premises. Another typical situation would be contemplating the purchase of a new asset (for example, a service vehicle). Even the day-to-day buying of goods may involve deciding on whether or not to use some form of finance. The question of business finance is usually an ongoing problem for small business owners. There are two types of finance available to small business owners: internal and external. **Internal sources of finance** come from within the business. That is, from the resources of the owner and the business itself. **External sources of finance** are those individuals or other entities that are prepared to lend funds or finance the operations of the small business. Examples of these two types of finance are described below.

Internal sources of finance:

1. *Proprietor's capital:* When a sole trader commences a business, the owner usually makes a substantial commitment both in terms of time and money. The amount of cash, and other assets, the owner contributes is referred to as the proprietor's capital. It is common for the owner's capital to make up the majority of the finance for a small business.
2. *Retained profits:* Once a business has been established and has been operating for a period of time, a profit may be earned. The owner may choose to withdraw some of these profits (this is known as drawings) and the remainder stays in the business for future use. Therefore **retained profits** are profits kept within the business to help finance future plans. Of course, retained profits will only occur if a profit is earned and the owner does not withdraw it for private use.

External sources of finance:

1. *Trade credit:* This is a common form of short-term credit used by small businesses. **Trade credit** may be used by trading firms to purchase the goods they sell in their day-to-day operations. Such goods are referred to as trading stock, or inventory. Service firms may use trade credit to purchase the materials necessary to provide their services to customers. For example, a plumber may purchase spouting using trade credit. A garage may purchase spare parts for vehicle repairs using trade credit. Trade creditors (the suppliers of the goods) stipulate the credit terms to the buyer. Trade credit provides finance for a short period of time such as 30 or 60 days and is usually interest free, so long as the account is paid on time.
2. *Bank overdraft:* A **bank overdraft** occurs when the bank allows the small business owner to withdraw more than the amount left in the firm's bank account. It is an ideal source of finance to cover short-term fluctuations in cash. During slow trading periods, a business may run short of cash. An overdraft can be used to get through these slow periods without the cost of being committed to a long-term loan. The amount borrowed via an overdraft can be varied according to the firm's needs and is therefore a very practical source of finance for short-term borrowing. Interest is payable on overdrafts and is calculated daily, and the bank will always stipulate a limit on borrowing through the overdraft facility.

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3 *Term loans:* For longer-term finance, a **term loan** may be considered. Term loans may be for only a short period such as two or three years, or may be for a much longer period such as 10 or 20 years. Such loans are usually taken out for a specific purpose. For example, a five-year term loan may be used to buy a new delivery van. This period gives the business enough time to generate the cash needed to repay the loan (plus the interest). To buy a property for a business, a loan over 20 years would be more appropriate. Such a loan would usually be a secured loan, where the borrower is required to put up some collateral (security) in case the loan is not repaid. A bank may ask for a mortgage on the business owner's personal house as security for a long-term loan of a substantial amount. Depending on the financial record of a business and its owner, a short-term loan may be an unsecured loan, whereby the requirement of collateral is not enforced.

4 *Leasing:* As an alternative to buying assets, some businesses choose to lease them. Assets commonly leased include computers, photocopiers and vehicles, as well as the business premises themselves. **Leasing** saves a business from making the large outlay of cash involved in buying an asset. It also avoids the long-term commitment associated with some loans. Leasing, however, is like renting in that the asset is never actually owned. The main benefit of leasing is that the business gets the use of the asset immediately without having to save up the purchase price of the asset or commit itself to a long-term loan. Also, as many leases run for only one or two years, the assets leased can always be the most modern and up-to-date models.

A summary of the advantages and disadvantages of the various types of finance has been prepared in the table below.

	Advantages	Disadvantages
Capital	Interest free. No fixed payments	Limited to personal resources.
Retained profits	Interest free. No repayments	May not exist (if losses occur). May be eliminated by drawings.
Trade credit	Readily available. No interest.	Only for short-term items. Must be repaid on time or supply may be threatened.
Bank overdraft	Flexible amount. Available when needed.	High interest. May be called up at short notice.
Term loans	Ideal for long-term projects. Can be designed to suit the needs of the business.	Fixed repayments must be budgeted for. Involves a commitment for an extended period of time.
Leasing	Avoids large outlay of cash. Assets can be updated every couple of years.	Item is not actually purchased. Rent money is 'dead' money. Not available for all assets.

It is important that the business owner uses the appropriate form of finance when borrowing money. As a general rule, short-term finance should be used for short-term assets and long-term finance for long-term assets. Thus, when buying stock for a business, trade credit is ideal. However, it would be inappropriate to use trade credit for the purchase of a fleet of vehicles. Such assets could be leased or could be financed with a long-term loan.

The other consideration to be taken into account is the cost of finance. Borrowing money costs more money and therefore, before making a commitment to any form of finance, the owner should investigate the full cost of that finance.

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9.2 Flat rate interest versus reducing balance interest

Small business owners should be aware of the consequences of borrowing money before they commit themselves to long-term finance contracts. The cost of interest is an important consideration when comparing loans. The first distinction to be made is between **flat rate interest** and **reducing balance interest**. The basic difference is that flat rate is calculated on the amount borrowed, whereas reducing balance is calculated on the amount owing. Therefore, as a loan is being repaid over a number of years, the interest on a flat rate loan is not reduced. It is the same amount in the first year as in the second, third or fourth. The interest on a reducing balance loan will be smaller as each year passes because the amount owing is reduced.

Consider a loan of $12 000 over three years. Assuming the loan is going to be paid off at an equal rate over the three years (that is, $4 000 per year), the following calculations can be made:

Flat rate:
Year 1: 10% of $12 000 = $1200: amount owing at start of year $12 000
Year 2: 10% of $12 000 = $1200: amount owing at start of year $8 000
Year 3: 10% of $12 000 = $1200: amount owing at start of year $4 000
Total interest payable $3 600

Reducing balance:
Year 1: 10% of $12 000 = $1200: amount owing at start of year $12 000
Year 2: 10% of $8 000 = $800: amount owing at start of year $8 000
Year 3: 10% of $4 000 = $400: amount owing at start of year $4 000
Total interest payable $2 400

It should be noted that the above example simplifies the calculations made under reducing balance loans. Such loans normally calculate interest on a more regular basis (such as monthly or even daily). Also, the amount of interest payable depends on how many repayments are made in each yearly period. However, the above example does show the basic difference between the two types of loans. The glaring difference is that, even though only $8 000 is owed after one year of repayments, the interest on the flat rate is still $1 200 (10% of $12 000). Similarly, when there is only $4 000 owing, the interest remains at $1 200 for the year. On the other hand, as the loan is repaid under the reducing balance system, the interest reduces with every repayment.

The reducing balance type of interest is obviously the most beneficial for the borrower. However, it may not always be available for the purpose required by the borrower. If an individual is seeking a loan from a bank for a period of four years to buy a car for a business, a loan may be offered at flat rate interest. If the same person requests finance to purchase a business property, a mortgage loan over 20 years may be offered. Such a loan would usually be offered at reducing balance interest.

9.3 Flat rate versus effective rate of interest

As was demonstrated in the above example, the flat rate of interest means that the interest being charged is based on the amount borrowed, regardless of how much has been repaid. In the above example, interest was calculated on the amount of $12 000, even though only $4 000 was owed. The effect of this is that the borrower is effectively paying a higher rate of interest than that stipulated in flat rate terms. It is important for the borrower to know the difference between the flat rate (known as the nominal rate of interest) and the **effective rate** being paid. Using the data from the previous example, the rates being paid each year could be shown as follows:

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$$\text{Year 1: } \frac{\text{Interest}}{\text{Amount owing}} = \frac{\$1\,200}{\$12\,000} = 10\%$$

$$\text{Year 2: } \frac{\text{Interest}}{\text{Amount owing}} = \frac{\$1\,200}{\$8\,000} = 15\%$$

$$\text{Year 3: } \frac{\text{Interest}}{\text{Amount owing}} = \frac{\$1\,200}{\$4\,000} = 30\%$$

To calculate the effective rate over the total period of a loan, the following formula is used:

$$EI = \frac{2 \times R \times I}{P\,(N + 1) + \frac{I}{3}(N - 3R + 2)} \times \frac{100}{1}$$

where EI = effective interest rate
R = the number of repayments per year
I = the total interest over the life of the loan
P = the principal borrowed
N = the total number of repayments in the loan.

Using this formula, the actual effective rate for the three-year loan of \$12 000 at 10% flat interest would be:

$$EI = \frac{2 \times 12 \times \$3\,600}{\$12\,000\,(36 + 1) + \frac{\$3\,600}{3}(36 - 3\,(12) + 2)} \times 100$$

$$= \frac{24 \times \$3\,600}{\$444\,000 + \$1\,200\,(36 - 36 + 2)} \times 100$$

$$= \frac{\$86\,400}{\$444\,000 + \$1\,200\,(2)} \times 100$$

$$= \frac{\$86\,400}{\$446\,400} \times 100$$

$$= 19.35\%$$

The figure of 19.35% indicates to the borrower the 'real' cost of the 10% loan over three years. This means that the quoted rate of 10% equates to an effective rate of 19.35%. To gain an approximation of an effective rate of interest for a flat rate loan, the flat rate can be simply doubled. As can be seen in the previous example, the 10% flat rate would convert to 20% by the approximate method. Its true effective rate was 19.35%, which shows how close the approximation can be. It must be stressed, however, that the accuracy of the doubling method will depend on the variables involved, such as the number of repayments per year and the total time period of the loan.

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9.4 Applying for credit

When a small business owner decides to borrow money, financial institutions require some details to support the application, and to assess the owner's ability to manage the finances of the business so as to repay the amounts borrowed. An individual's personal credit rating may be taken into account. This is a measure of one's ability to repay a loan and helps a bank assess the risk of lending to the specific customer. The credit rating of a small business owner is affected by many factors, including:

- monthly income
- monthly expenses
- current credit commitments
- previous credit history
- statement of assets and liabilities.

It is important for a business owner to establish a proven record in financial management over several periods. This can then be used in the future to prove to a bank that they have the ability to manage loans and budget effectively to meet future commitments. Once any sort of finance has been approved, it is then important to meet all repayments on time. This has the effect of confirming a good credit rating and can be referred to when seeking further finance in the future.

A loan application form will usually require relevant accounting information from a small business owner. Two familiar accounting reports are usually used by financial institutions when assessing a loan application. The first of these is a *cash budget*, whereby the monthly receipts of the business can be compared to the monthly payments. Of course, if a proprietor is going to meet the repayments of a loan, the estimated receipts would be expected to be above the estimated payments. Otherwise, the capacity of the borrower to service the loan (that is, meet the repayments) would be questionable and the bank may refuse the application. Therefore, the calculation of 'surplus cash inflows' per month is vital when evaluating a loan application. The second report is the *balance sheet*, whereby the potential borrower is required to state the assets and liabilities of the business. If a business is already highly geared (see *gearing* below), a lender may refuse to approve further finance. Sometimes a lender will only do so if a mortgage on a property can be arranged. This is done to provide protection for the lender in the event that the business owner does not meet the repayments as required. It must be remembered that institutions such as banks are in the business of lending money. However, they will not lend to an unacceptable risk and it is up to the business owner to show that the loan can be handled. Therefore, the customer must have a satisfactory level of equity in the business and not be overburdened with debt. Also, the receipts and payments over a monthly period must allow a loan to be repaid. This further emphasises the importance of accurate financial accounting for a business owner.

9.5 Credit and gearing

The gearing of a business must be considered, as it is affected when an owner decides to borrow from external sources. **Gearing** refers to the dependence of a business on borrowed funds compared with the funds contributed by its owner. Gearing compares the amounts owed to liabilities with the value of the owner's equity. A highly geared business is one that has significant debt compared with the amount of the owner's investment. A lowly geared firm is one that borrows very little. Consider the following businesses:

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	Business A	Business B
Assets	$200 000	$200 000
Liabilities	20 000	160 000
Owner's equity	180 000	40 000

Both of these businesses have assets costing $200 000. However, they are financed in totally different ways. Business A has borrowed very little, whereas Business B has financed most of its assets with borrowed funds. The **debt ratio** can be used to measure the extent of a firm's external borrowings, as follows:

		Business A	Business B
Debt ratio =	$\frac{\text{Liabilities}}{\text{Total assets}}$	$\frac{\$20\,000}{\$200\,000}$	$\frac{\$160\,000}{\$200\,000}$
		= 0.1	= 0.8
		or 10%	or 80%

Therefore, the debt ratio for Business A indicates that 10% of its assets are financed by external sources. Business B finances 80% of its assets with liabilities and is clearly the more highly geared business. As a general rule, the higher the debt ratio, the higher is the risk of a business collapse. This is because, as borrowings increase, there is more pressure on a business in terms of finding the cash necessary to repay debts. Therefore, when a business owner is thinking of borrowing money for a particular purpose, a review of the firm's present gearing position should be carried out. Also, financial institutions may refuse finance to businesses that are too highly geared and are therefore seen as an unacceptable risk.

9.6 The return on owner's investment

A ratio of particular interest to the business owner is the return on owner's investment. It measures the percentage return the owner is earning on the investment made in the business. This ratio is known as a profitability ratio, as it compares profit to the personal funds invested. If an owner invests capital of $50 000 and earns a profit of $5 000 in the first year of trading, the calculation of the return on investment would be:

$$\text{Return on owner's investment} = \frac{\text{Net profit}}{\text{Owner's equity}}$$

$$= \frac{\$5\,000}{\$50\,000}$$

$$= 0.10 \text{ or } 10\% \text{ per annum}$$

This figure can be used to evaluate the success, or failure, of the investment made in the business. There is no single measure of whether or not this percentage return is satisfactory to the owner. However, it should be measured against a yardstick such as:

1. *The returns available on alternative investments.* For example, what interest could be earned in the financial market?
2. *What returns are earned by businesses similar to ours?* An accountant may be able to evaluate whether or not the returns earned are above or below average.

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3 *The trend in the return on investment.* By comparing the return on investment over several years, the owner can evaluate whether or not the return is improving or declining.

4 *What was the expected return for this year?* No matter how high the return on investment, it will not be viewed as satisfactory if it did not achieve the owner's expectations.

9.7 Gearing and the return on owner's investment

As mentioned previously, gearing compares the amount a firm borrows with the owner's personal investment. As a general rule, the higher the gearing, the higher the financial risk. Why, then, would a business owner risk being involved in a highly geared firm? One possible reason would be through necessity. If an owner has insufficient personal resources, there may be no choice but to borrow. However, some business owners use gearing to their advantage, in terms of the return on their own funds. Consider the two businesses, Business A and B, as shown previously. The two businesses are of the same size in terms of total assets, but are totally different in their gearing. If the two firms earn the same profit in a given year, the following scenario will exist:

	Business A	*Business B*
Assets	$200 000	$200 000
Liabilities	20 000	160 000
Owner's equity	180 000	40 000
Profit for the year	20 000	20 000

	Business A	Business B
Returns on owner's investment =	$\frac{\$20\,000}{\$180\,000}$	$\frac{\$20\,000}{\$40\,000}$
	= 0.11	= 0.50
	or 11%	or 50%

This example demonstrates that, in the case of Business B (which is more highly geared), the return on the owner's investment is also much higher. This is because the owner has used other people's money to purchase the firm's assets to generate profits. In the case of a lowly geared business, the owner contributes most of the required funds and therefore will usually have a lower return on the investment made.

Therefore, although highly geared firms have more financial risk because of heavier loan repayments, they may be beneficial for the owner because of the higher returns that can be earned on the personal funds invested. The opportunity of possibly earning higher returns through higher gearing must be weighed up against the greater risk of business collapse through excessive borrowing. The balance between risk and returns will depend on the personal assets of the business owner and their willingness to risk borrowing money for possible future gains.

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› GLOSSARY OF TERMS

bank overdraft a bank account with a negative balance (that is, an overdrawn balance) that is used as a short-term source of finance. It is ideal as a means of covering short-term fluctuations in a firm's cash supplies.

debt ratio an analytical ratio used to measure gearing and determined by dividing liabilities by total assets.

effective rate of interest the 'real' cost of borrowing money, as compared to the flat rate of interest often quoted for fixed-term loans.

external sources of finance funds borrowed from an individual or business that is external to the business under examination.

flat rate interest interest applied to the principal amount borrowed over a fixed term, regardless of how much has already been repaid.

gearing the dependence of a business on borrowed funds (liabilities) compared to the funds contributed by the owner.

internal sources of finance funds provided to a business by the owner, which may include the owner's capital plus any retained profits.

leasing the payment of a fee for the use of an asset for a specific period of time, whereby the asset is not actually owned by a business.

reducing balance interest interest on a loan that is based on the amount currently owed and not on the principal amount borrowed.

retained profits profits that are kept within a business rather than being withdrawn by the owner.

term loan a loan taken out for a fixed period of time; that is, it is due for repayment at a predetermined date.

trade credit short-term credit usually made available by suppliers of goods. Typical trade credit terms are 30 days, but may also extend to 60 days.

Summary questions

1. Distinguish between internal and external sources of finance.
2. State and describe two types of internal finance.
3. State and describe four types of external finance.
4. State one advantage and one disadvantage for each type of finance you listed in questions 2 and 3 above.
5. Explain the difference between a secured loan and an unsecured loan.
6. For each of the following assets, state the source of finance that should be used by a small business owner who is running short of cash (more than one source may be suitable for some items):
   - **a** trading stock
   - **b** office furniture
   - **c** vehicles
   - **d** payment of yearly insurance premium
   - **e** shop premises.
7. Explain the basic difference between a loan with flat rate interest and one with reducing balance interest.
8. A loan at a flat rate of 10% interest may cost much more in effective terms. Explain what is meant by the 'effective rate' and why this is higher than the flat rate of interest.

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9. Make a list of five different types of information a bank may require from a business owner before approving a loan application.
10. What two accounting reports would a bank manager be interested in when considering a loan application? Explain why the manager would be interested in these two reports.
11. Describe what is meant by the term 'credit rating'.
12. Explain what a business owner could do to ensure a good credit rating.
13. What is meant by the term 'gearing'?
14. What is the debt ratio and how is it calculated?
15. Explain the relationship between gearing and risk.
16. How is the 'return on owner's investment' calculated? What is the purpose of this ratio?
17. State four ways of evaluating whether or not an owner's return on investment is satisfactory.
18. Explain the relationship between gearing and the owner's return on investment (use an example to clarify your answer).

Practical exercises

[Exercise 9.1]

Note: this exercise may be completed by compiling your own answers or it may include information gained from interviews with small business owners.

- **a** Make a list of a variety of assets (current and non-current) that are owned by two small businesses operating in different service industries (for example, a plumber and a doctor). Your list should include six to eight assets.
- **b** Recommend an appropriate source of finance for each of the assets listed in part **a** above.
- **c** Give reasons to support your recommendations in part **b** above.

[Exercise 9.2]

Janette Garro is an accountant who is thinking about getting a new car for her business. However, she is unsure whether to buy a car or lease it. The model she is thinking of buying has an advertised price of $30 000. If she buys the car she will probably keep it for three years before selling it for about $20 000. Garro has $5000 cash to put towards the purchase and a bank loan is available for the balance. The loan is at 10% per annum flat rate interest over three years. Garro has made enquiries about leasing a similar vehicle at a cost of $100 per week for three years.

- **a** State one advantage and one disadvantage of each source of finance being considered by Garro.
- **b** Calculate the cost of leasing the vehicle over the three-year period.
- **c** What is the interest payable on the three-year bank loan? (Show your workings.)
- **d** Determine the total cost of purchasing the car if the bank loan is used.
- **e** Write a report comparing the two alternatives and make a recommendation to Garro, stating clearly your recommendation. Give reasons to support your conclusion.

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[Exercise 9.3] Win Doherty is considering taking out a loan of $6000 to purchase a new computer system for her business. Her bank has told her that a loan is available over four years, with monthly repayments, at a flat rate of interest of 10%.

- **a** Explain how 'flat rate interest' is applied to loans by financial institutions.
- **b** Calculate the total amount of interest that would be paid.
- **c** What is the total amount that Doherty would pay back to the bank if the loan is taken out?
- **d** Calculate Doherty's monthly repayments.
- **e** What accounting report should Doherty prepare to help her convince the bank manager that she can meet the loan repayments?
- **f** Is the real cost of the loan 10% per annum or is it higher? Explain your answer fully.
- **g** Using the formula demonstrated in this chapter, calculate the effective rate of interest on this loan.

[Exercise 9.4] John Knight has applied for a loan of $10000 to buy a motorcycle for his courier business. His bank has informed him that a four-year loan at 12% p.a. flat interest is available. He would have to make 48 equal monthly instalments if the loan is accepted.

- **a** The bank has asked Knight to arrange a guarantor for the loan. Define the term 'guarantor' and explain the implications of this for the future.
- **b** Compute the total cost of interest on the loan.
- **c** Calculate the total amount to be repaid under the conditions of the loan.
- **d** Calculate the monthly repayments to which Knight would be committed.
- **e** What is the rate of interest Knight is paying in effective terms?
- **f** One of Knight's friends has suggested that interest on the reducing balance is a better alternative. Explain to Knight the advantage of such loans.

[Exercise 9.5] Jacky Ngo has saved $25000 for a deposit on a business property. He has approached the bank for an 11% mortgage loan of $125000, to be repaid over 20 years. The bank has told him that interest will be calculated daily and charged monthly to his account. Repayments of $1290 are to be made monthly.

- **a** Explain what is meant by a 'mortgage loan'.
- **b** Does the 11% refer to flat rate or reducing balance interest? Explain how this interest will be applied to the loan.
- **c** Calculate the total cost of the loan to Ngo.
- **d** Would there be an advantage to Ngo if he made fortnightly repayments instead of monthly? Explain your answer fully.

[Exercise 9.6] United Earth Moving has total assets of $250000 and an owner's equity of $200000.

- **a** What is the total value of liabilities?
- **b** Calculate the debt ratio for this business and comment briefly on the extent of its borrowings.

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[Exercise 9.7] St Kilda Boat Hire has liabilities of $20 000, while Williamstown Boat Hire has liabilities totalling $40 000. Which business is more highly geared? Explain your answer fully, using examples.

[Exercise 9.8] The following statements relate to two small businesses, both operating as panel beaters:

Sammy's Panels: balance sheet as at 30 June 2015

Current assets	$	$	*Current liabilities*	$	$
Debtors	5 000		Bank overdraft	6 000	
Spare parts	12 000	17 000	Creditors	8 000	
			GST liability	1 000	
			Loan	3 000	18 000
Non-current assets			*Non-current liabilities*		
Equipment	10 000		Mortgage loan		100 000
Premises	150 000	160 000	*Owner's equity*		
			Capital		59 000
		$177 000			$177 000

Sue's Body Shop: balance sheet as at 30 June 2015

Current assets	$	$	*Current liabilities*	$	$
Bank	2 500		Creditors	5 000	
Debtors	3 500		Loan	3 000	8 000
Spare parts	16 000	22 000	*Non-current liabilities*		
Non-current assets			Mortgage loan		60 000
Equipment	12 000		*Owner's equity*		
Premises	160 000	172 000	Capital		126 000
		$194 000			$194 000

a Calculate the total liabilities for each business.

b Calculate the debt ratio for each firm.

c Determine the working capital ratio (current assets/current liabilities) for both businesses.

d Compare the two firms and comment on their financial structure. Your comments should refer to the liquidity, the gearing and the general financial risk of each. Explain your comments fully.

[Exercise 9.9] Dave Servello invested $40 000 into Rapid Couriers on 1 July 2014. For the year ended 30 June 2015, the business earned a profit of $5 000.

a Calculate the return on Servello's investment in the business.

b Taking into account the rates of interest generally available in the finance market, comment on his return on investment.

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[Exercise 9.10] Harry Koecher earned a profit of $30 000 as the proprietor of Western Billiard Tables, whereas Dave Romic earned $40 000 operating as Deluxe Billiards. Which business owner has the higher profitability? Use examples to explain your answer.

[Exercise 9.11] Consider the details of the following two businesses, both of which specialise in the hiring of electrical appliances:

	Ace Electricals	*Acme Electricals*
Assets	$125 000	$125 000
Liabilities	25 000	50 000
Net profit	20 000	20 000

a Calculate the owner's equity for the two proprietors.

b Calculate the debt ratio for each firm and state which business has the higher gearing.

c Calculate the return on the owner's investment for each business.

d Given that the two businesses have the same value for total assets, explain why one owner is receiving a greater return on the funds invested.

INTERNET activity

This activity is designed to show the cost of borrowing money in relation to purchasing a property. The costs of buying business premises may include stamp duty, government taxes and, of course, the interest on the amount borrowed. The decision to buy a property, rather than renting, should take into account the costs of finance. This exercise should also enlighten you about how much is actually repaid when long-term finance is used to purchase property. Note: the website to be used was designed for home-owner queries, but the principles involved can be applied to a business situation.

Sharon Matheson is considering the purchase of a business property for $600 000. She has been saving towards this goal for a few years now and has accumulated $50 000 cash for a deposit on the property. She has been offered finance at 7.5% per annum for a loan of $550 000 over 25 years, based on monthly repayments. Matheson is interested in knowing what the property will really cost her over this time.

Visit the following website to answer the following questions:

<www.commbank.com.au> Note: use the Home loan calculator

a What is the interest payable on the loan over 25 years?

b How much will Matheson have to repay if she borrows $550 000?

c Matheson is thinking about reducing the loan period to only 20 years. How much would she save if she could achieve this objective?

d Matheson has also considered saving for a bit longer before buying a property. Would she be better off simply reducing the loan to 20 years, or taking the loan over 25 years but waiting until she has a deposit of $80 000? Determine the difference in the total amount to be repaid under the two proposals.

e Interest rates are tipped to increase in the future and this concerns Matheson. She has asked you to complete the table below showing the comparisons of her options if interest rates increase in relation to her loan. Cross-reference the length of the loan with the interest rates and make a note of the total amount repayable for each alternative. Keep in mind that the total cost of the property is $600 000.

Deposit of $50 000	7.5%	8.0%	8.5%
20 years			
25 years			
30 years			

Deposit of $80 000	7.5%	8.0%	8.5%
20 years			
25 years			
30 years			

Chapter 10

Alternatives to establishing a small business: other investment opportunities

OBJECTIVES

At the completion of this chapter, you should be able to:

- explain the meaning of the term ‘investing’
- describe a variety of investment opportunities
- outline the advantages and disadvantages of different investments
- distinguish between investment and speculation
- explain the relationship between risk and returns
- calculate a rate of return on an investment
- explain the effects of taxation and inflation on a rate of return
- calculate both simple and compound interest
- describe the workings of the Australian Securities Exchange
- report and interpret movements in share prices.

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The VCE Accounting units concentrate on accounting for sole proprietor businesses. As sole proprietors are not a separate legal entity in the eyes of the law, the owner and the business are one and the same for the purposes of investment. Many business owners invest money to secure their long-term future. In fact, the actual business represents a most significant investment for many sole proprietors. The topics in this chapter relate to some of the more popular investment strategies taken up by small business owners. It also features a section on the share market, as it is now readily accessible to both small business owners and private individuals.

10.1 The meaning of investing

Investing can be defined as putting economic resources into something with the intention of making monetary gain. Private individuals, wage and salary earners, small business owners and companies are all involved in investing activities. Investors such as these may invest spare or idle cash in a variety of schemes with two basic objectives. The first of these is to earn a cash return on their investments. Some investments are undertaken because they generate a cash return monthly, quarterly or even yearly. The second objective of investing is to make a capital gain. That is, the investment gains in value over time, and when it is resold the investor shows a net profit because they can sell the investment for a greater value than they paid for it originally. The type of investment undertaken will depend on the objectives of the investor. Some will be after a steady cash return; others will prefer a capital gain. Some investments may in fact generate both types of gains to the investor. Some of the more popular types of investments are described below, as well as the benefits of each type of investment.

10.2 Types of investment opportunities

Individuals need to be aware of the investments available to them in the money market if they are to have a chance of getting the best possible returns from their investments. Some of the most popular types of investments are described below.

Savings accounts: many individuals start investing money at a young age through a personal savings account with a bank. There will always be a need for basic savings accounts, but these have changed in recent times and extra options have become available from the banking system. Accounts now have ATM (Automated Teller Machine) access as well as EFTPOS (Electronic Funds Transfer at Point of Sale) facilities and links to credit card accounts. Many wage and salary earners have their weekly wages or salaries deposited directly into such accounts. The big plus with savings accounts at a bank is that they are very secure investments with little, if any, risk. The disadvantage of basic savings accounts is that they normally earn a very low rate of interest. Savings accounts are also available from other financial institutions such as building societies, friendly societies and credit cooperatives. Such institutions are in competition with the major banks, and many offer higher rates of interest or other benefits to their customers to make them more attractive. Savings accounts are usually 'at call', which means that the investor can withdraw money from the account at will when it is required.

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Term deposits: If an individual has cash available to invest for an extended period of time, a **term deposit** may be preferred. Such an investment means that the cash deposited is for a specific period such as three months, six months or perhaps a year. Under normal circumstances, the investor is not allowed to withdraw any of the money invested during this time. Because of this, the banks are prepared to pay a higher interest rate compared with that of a savings account. To take advantage of the higher interest, the investor must budget carefully to ensure that the cash will not be required during the term of the deposit.

On-line investment accounts: In recent times on-line banking has become much more popular as it is very convenient for many bank customers. **On-line accounts** are attractive to the banks as their costs are kept to a minimum, as customers are not visiting branches and requiring staff to assist them. Interest rates for on-line investment accounts are often comparable with term deposit rates, with the added advantage being that cash is available at call via an on-line transfer. The disadvantage for some individuals is simply using the internet for their banking transactions. Computer fraud is an ongoing issue and some individuals are still reluctant to use on-line banking because of this threat.

Government bonds: The federal government, state governments and government utilities often borrow money from the public through the issue of 'bonds'. As the resources of the general public are accessible, this is an ideal way for such bodies to raise funds. As the bonds are government guaranteed they represent a secure, long-term investment for both individuals and companies. **Government bonds** are usually taken over a number of years at a set rate of interest, with the interest being paid periodically. Government bonds are usually advertised in the daily press and a formal application form is provided for interested investors.

Shares in companies: Some individuals may like to consider an investment in the **share market** (**stock market**). Compared with investing money with a bank, buying **shares** (also known as **stocks**) involves much more risk, but the rewards may also be higher. Shares can be purchased in a public company through a stockbroker, who acts as the investor's agent. By buying shares in a company, the investor becomes a part-owner of the business and may be entitled to a share of its profit (if one is made). However, it is also possible that losses will be made by the company and the investor may receive a zero return. The other reason people buy shares is to make a 'capital gain'. This can occur if the market price of the shares increases over time and the investor sells them at the higher price. Of course, the price may fall over time. In fact, shares can become worthless and the investor may lose the total amount invested. A more detailed examination of the share market appears later in this chapter.

Debentures: A **debenture** is a loan by a member of the public to a company. Unlike shares, if a debenture is taken out, the investor is not a part-owner. Debentures are recorded as liabilities by the company, as they are loans that must be repaid. Some public companies have the legal right to ask for funds from the public at large and they pay for this privilege. A debenture is usually for a fixed period of time (e.g. one, three or five years) and interest is normally paid at regular intervals (e.g. every six months). Debentures are usually secured, as they are backed up by the assets of the company. This means that debentures are as secure as the company to which the investor is lending. There is some risk as to whether the money will be repaid, and therefore the interest on debentures will usually be higher than that on offer by the banks on term deposits. In order to take out debentures, the investor is required to complete a formal application form which is usually included as part of a document known as a 'prospectus'. A prospectus sets out the purpose of the debenture issue and provides all details of interest rates payable and the legal obligations of both parties.

Unsecured notes: Another form of investment involving companies is unsecured notes. As the name implies, **unsecured notes** do not have security in terms of the money being repaid to the investor. Because of this, they usually pay slightly more interest than do debentures. This is because they rank behind debentures in terms of repayment in the event of a company being wound up. Applications for unsecured notes are made by way of a prospectus, in the same way as a debenture issue.

Property: A popular form of long-term investment is land and buildings. Individuals often buy property with the long-term plan of building the family home in mind. This type of investment is not made for a specific return of interest. Rather, it is made to ensure financial security in the future. The second type of individual who buys property is the speculator. Property may not pay interest, but as a general rule property values increase over time. Therefore it is an obvious target for the investor who is trying to make a capital gain over a number of years. Quite often speculators buy properties that will also generate income each year through rent. Flats have been used as investment properties for many years and in recent times inner-city apartments have also become very popular with investors. Such investments provide two opportunities for a return on their investment. A regular cash flow through rental income can provide a return almost immediately and there is also the possibility of a capital gain through increased property values.

Trusts: **Trusts** are used by individuals to reap the benefits of a variety of investments made by a trustee. The investor buys a specified number of units in a trust and then is eligible to receive a share of what the trust managers have earned for the trust over a period of time. A trust may, for example, invest in government securities, a portfolio of shares (several different companies) or in a number of properties (for rent and/or speculation). Periodically, the net returns earned by the trust are calculated and distributed to the unit holders of the trust. Therefore the return to the individual is not guaranteed and is reliant on the success or otherwise of the decisions made by the trustee.

Superannuation: This has become more important to individuals in recent years. **Superannuation** is a long-term investment that aims to provide financial security in retirement. Employers are compelled to make superannuation contributions on behalf of their employees and individuals may also elect to supplement these contributions by making additional contributions themselves. As such, individuals do not invest in superannuation for interest payments each year. However, they should ensure that they are making sufficient contributions to their fund and that the fund managers are investing wisely so that a reasonable amount of interest is being earned each year. The contributions plus interest are used to accumulate funds over many years so that the individual has sufficient funds required for a secure retirement.

Other assets: There are many other assets in which individuals choose to invest their money. Such things as stamps, coins, jewellery, paintings and antiques all involve huge markets and valuable investments. However, these forms of investment are often taken out with speculation in mind and sometimes represent more of a hobby than a true investment.

The above list does not include all types of investments, but does include the more common ones available to private individuals or business owners.

10.3 Speculating or investing?

When an individual is considering making an investment, one of the first decisions to be made is whether to speculate or to invest for a specific return. If a specific return is desired, an investor may consider a term deposit or government bond. Such investments have a specified amount of interest being paid per annum and are relatively secure. However, some investors prefer to take a gamble and speculate on the chance of making a large profit. For example, buying shares

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in a mining company because of a rumour about a new oil discovery is basically gambling. Such shares may be cheap in price and appear to be an attractive investment. However, if an oil deposit is not found (that is, if the rumour had no basis) the shares may become worthless.

Speculative investments can be attractive, but they should not be allowed to dominate the investments of an individual. When making up a portfolio, or a combination of investments, one should always be wary of too much **speculation**. A balanced approach should be taken when making investment decisions. If an individual wants to take a 'punt' on a speculative investment, it should be balanced with other secure investments such as government bonds.

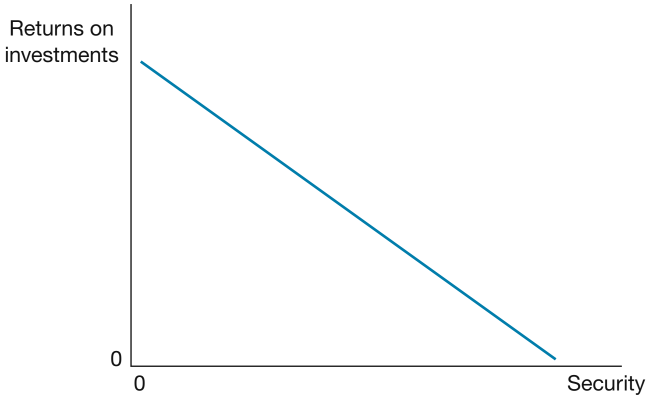
This provides room for error and helps to cover losses if the results of speculation are not as predicted. It should be noted that not all speculative investments face total loss. Investments in vacant land may not always produce high returns, but the individual still owns the property that, hopefully, still has some value. However, such an investment is useless if the investor requires a percentage return on the money each year. The decision on the types of investments required for an individual is a personal one. However, a balanced approach to an investment portfolio should always be followed, as this will guarantee some returns each year, as well as providing the opportunity for financial growth on speculative investments.

As well as following a balanced approach, the needs of the individual at the time must also be considered. As has already been noted, some investments tie money up for extended periods of time. Other investments are flexible in their nature and allow access to money if required. There is little value in chasing high interest rates by locking your money away for five years if it is likely that you will need your cash in 12 months' time. Budgeting plays an important role in determining the types of investments needed at a particular point in time. The plans of an individual must be kept in mind when investments are being considered.

10.4 The balance between risk and returns

As a general rule, there is an inverse relationship between the security of an investment and the returns earned on that investment. That is, for those prepared to invest in 'risky' investments there is the chance to earn a higher return. In theory, this higher return is the reward for taking the risk. For the conservative investor who demands government guarantees, there is a smaller return. This relationship is shown graphically in figure 10.1.

Figure 10.1 Returns on investments and security



This graph illustrates the relationship between security and returns. If an investor has money in government-guaranteed savings accounts, a smaller return must be expected. If, however,

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the investor is prepared to lend money to a company with little, if any, security, the expectation is that a higher rate of interest would be earned. As mentioned before, an investment portfolio should strike a balance between the two extremes illustrated in figure 10.1.

10.5 Calculating rates of return on investments

Ratio analysis can also be used in relation to evaluating returns on investments. The **rate of return** measures the percentage return made on an investment over a period of time and is calculated as follows:

$$\text{Rate of return} = \frac{\text{Profit earned}}{\text{Amount invested}}$$

If money is invested in a term deposit, the return will be known at the time of investment. For example, 6% may be paid on term deposits with a particular bank. However, the rate of return is most useful when evaluating other forms of investment.

Consider the case of Lachlan McKenna, who purchased a coin collection on 1 March 2014 for \$1 500. One year later McKenna sold the collection for \$1 800. To evaluate his investment, the profit made (\$300) can be compared with the original investment, giving a rate of return calculation of:

$$\begin{aligned}\text{Rate of return} &= \frac{\text{Profit earned}}{\text{Amount invested}} \\ &= \frac{\$300}{\$1\,500} \\ &= 20\%\text{ p.a.}\end{aligned}$$

McKenna can then compare the return earned (20%) with alternative investment opportunities. He may decide that, as the return is significantly above that available through banks or bonds, he will attempt to purchase more such collections. The point McKenna must keep in mind is that his speculation paid off this time, but next time he may not be so lucky. However, he has accounting information regarding his investment and, as he is informed, he is in a position to make better financial decisions. The rate of return is an evaluation tool that provides information about the success (or failure) of an investment.

10.6 Taxation, inflation and the rate of return

Income earned on investments is normally part of an individual's taxable income. Although a detailed knowledge of taxation is not required for this course, the impact of taxation on investments is relevant to the rate of return. Consider the case of Erin Manderson, who invested \$4 000 in a term deposit at 5% per annum. Manderson pays tax at the rate of 30 cents in the dollar, which means that if she earns additional income she must pay 30% of that income to the taxation office. Her rate of return on her investment before tax is obviously 5%, but the effect of taxation on her return can be shown as follows:

Interest earned 5% of \$4 000	\$200
less tax payable 30% of \$200	60
Interest earned after tax	140

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Therefore:

$$\text{Rate of return after tax} = \frac{\text{Profit after tax}}{\text{Amount invested}}$$

$$= \frac{\$140}{\$4000}$$

$$= 0.035 \text{ or } 3.5\%$$

The same figure can be determined by multiplying the taxation rate by the interest rate being earned. That is, 30% of 5 = 1.5% lost through taxation. This means that, after considering the tax that Manderson would have to pay, she is in effect only earning 3.5% return on her investment.

Another factor to keep in mind when considering an investment is that of inflation. In times of rising prices, the real value of money decreases. That is, the purchasing power of the dollar falls in times of inflation because it costs more to buy goods or services. If, for example, there is inflation over the past year of 3%, investments must have earned at least 3% just to maintain the value of the money invested. If an investment earns less than the current inflation rate, an individual's money is actually worth less than before. If an investor earns income at a rate higher than the inflation rate, that investor is said to have achieved growth in their net worth. Looking at the previous example of Erin Manderson, an inflation factor could also be introduced. The effect of this is shown below:

Rate of return before tax	5.0%
less taxation payable	1.5%
Rate of return after tax	3.5%
less inflation rate	3.0%
Rate of return after tax and inflation	0.5%

The above calculations indicate to Manderson that in real terms she is earning 0.5% per annum on her investment. This is more realistic than the figure of 5% that the bank is paying her. Taxation is a fact of life and all interest on bank deposits is taxable. Inflation can have a dramatic impact on the real value of an individual's money and therefore should also be taken into account. Manderson's investments are only just keeping pace with inflation, and she may want to investigate other possibilities to try to improve the growth potential of her investment dollar.

10.7 Simple interest versus compound interest

Normally the interest being earned on personal investments is calculated by what is known as **simple interest**, which is a flat rate of interest multiplied by the amount invested. In the example of Erin Manderson (see above), she was receiving 5% from her bank on her term deposit of $4000. Therefore, the interest earned was $200.

If the term deposit was for a period of three years, Manderson's interest would be calculated each year at 5% of the amount invested and she would receive $200 each year for three years, as shown on the next page:

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Year 1	5% of $4 000	=	200	interest
Year 2	5% of $4 000	=	200	interest
Year 3	5% of $4 000	=	200	interest
Total interest earned		=	600	

Compound interest results when the interest earned in the first year is not paid to the investor, but itself becomes part of the investment. In the second year, under compound interest, Manderson would receive interest on her $4 000 as well as interest on her interest. The investment continues to compound until maturity, when she would receive the full amount of the interest earned. The following table demonstrates the effect of compounding Manderson's interest each year:

Year 1	5% of $4 000	=	200.00	interest
Year 2	5% of $4 200	=	210.00	interest
Year 3	5% of $4 410	=	220.50	interest
Total interest earned		=	630.50	

In this example, Manderson earned $30.50 more if the interest was compounded each year, even though the term of the investment remained at three years. The longer the term of the investment, the greater the impact of compound interest.

Superannuation funds can provide very large payments on retirement because an employee puts money away and allows it to compound yearly. This may occur over 30 or 40 years, which maximises the benefit of compound interest.

Compound interest will give even greater benefits if the interest is compounded more often than once a year. Consider an investment of $10 000 for five years earning 8% per annum. The following calculations show:

1 8% p.a. simple interest
2 8% p.a. interest compounding yearly
3 8% p.a. interest compounding half-yearly
4 8% p.a. interest compounding quarterly.

1 *8% p.a. simple interest:*

0.08 × $10 000	=	$800 interest p.a. × 5 years
	=	$4 000 total interest

2 *8% p.a. compounding yearly:*

After 1st year	0.08 × $10 000.00	=	$800.00
2nd year	0.08 × $10 800.00	=	864.00
3rd year	0.08 × $11 664.00	=	933.12
4th year	0.08 × $12 597.12	=	1 007.77
5th year	0.08 × $13 604.89	=	1 088.39
Total interest		=	4 693.28

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3 *8% p.a. compounding half-yearly:*
In order to compound half-yearly, 8% p.a. equates to 4% per half-year. Therefore, there will be 10 periods of interest calculation.

Period 1	0.04 × $10 000.00	=	$400.00
2	0.04 × $10 400.00	=	416.00
3	0.04 × $10 816.00	=	432.64
4	0.04 × $11 248.64	=	449.95
5	0.04 × $11 698.59	=	467.94
6	0.04 × $12 166.53	=	486.66
7	0.04 × $12 653.19	=	506.13
8	0.04 × $13 159.32	=	526.37
9	0.04 × $13 685.69	=	547.43
10	0.04 × $14 233.12	=	569.32
Total interest		=	4 802.44

4 *8% p.a. compounding quarterly:*
In order to compound quarterly, 8% p.a. equates to 2% quarterly. Therefore, there will be 20 periods of interest calculation. It is unnecessary to show all 20 computations here, but the total interest received works out to be $4 859. A summary of the comparative data follows:

Type of interest		*Total interest earned*
1	8% simple interest	$4 000
2	8% compounding yearly	4 693
3	8% compounding half-yearly	4 802
4	8% compounding quarterly	4 859

It is obvious from this example that compound interest will accumulate more interest over a given period compared to simple interest. It is also clear that an investment compounding half-yearly or quarterly will earn more interest than one that compounds annually. One point for the personal investor to keep in mind is that compound interest is not paid to the investor each period. If the objective of an investment is to receive interest in 12 months' time and use this interest to purchase an asset, compound interest will not satisfy this aim. Its purpose is to create an accumulating fund to provide a one-off payment at maturity, as is the case with superannuation.

For those students with a mathematical inclination, the formula to work out the future value of an investment earning compound interest is:

Future value = $P\,(1 + I)^n$
where P = principal invested
I = interest rate per period
n = number of compounding periods

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Using the data from the previous example, the interest for the $10 000 investment over five years compounding half-yearly would be calculated as:

$$\begin{aligned} \text{Future value} &= \$10\,000\,(1 + 0.04)^{10} \\ &= \$10\,000\,(1.4802) \\ &= \$14\,802 \end{aligned}$$

Therefore the interest earned is $4802.

Compound interest and annual yields

When financial institutions advertise investments involving compound interest, it is common practice to state the actual interest being paid (called the nominal rate) and the effective annual yield being earned. This yield is the rate at which the investment effectively earns interest once the compounding of interest is taken into account. For example, if an investment is earning 5% per annum payable monthly, it will equate to 5.1164% as an annual yield when the interest is compounded every month. (Students may like to prove this rate by working through the calculations for a year.) This is a handy piece of information for the investor, as this rate could then be compared to other investments paying simple interest over the same period.

This reinforces the point made earlier that compound interest equates to a higher effective rate only if two things occur. First, there is an assumption that the interest rate will not change over the stated period, as some investments have fluctuating interest rates. Second, the benefits of compound interest (at the effective rate) will only be achieved if the funds are left in the investment for the entire period. If an investor chooses to withdraw funds during the year, the effective yield will not be achieved.

10.8 The share market

At first glance, the daily newspaper coverage of the share market looks highly complicated. A page full of numbers in small text does not appear easy to understand. The notes that follow will simplify the key information contained in the newspapers so that the basic workings of the share market can be understood. Before looking at the daily listing from the market, you need to become familiar with some key terms:

Shares: when an individual purchases shares, they become a part-owner of a company. A share certificate (sometimes referred to as a *holding statement*) is issued to the shareholder and this states how many shares are owned by that person. A company may have millions of shares available, but an individual shareholder may own a few hundred or perhaps several thousand of these shares.

Registered capital: this is the maximum amount of capital that a company may raise from its shareholders. It is registered when the company is originally formed and it includes a statement as to the types and numbers of shares available. For example, a company may have registered capital of one million $1 ordinary shares.

Par value: the original value of the shares when they were first created is called the **par value**.

Market price: the current price at which shares are being sold on the open market is called the **market price**.

Stockbroker: a **stockbroker** acts as an agent for a person wanting to either buy or sell shares. An individual wanting to buy instructs the broker as to what share to buy, the quantity to buy and at what price. The buyer's broker then registers the bid to buy at this particular price. Meanwhile, a person who owns shares in the same company may have decided to sell. Their

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broker will receive similar instructions. That is, the company to sell, the number of shares and a desired selling price. Obviously, the seller will usually want the highest price possible, while the buyer will be looking for the lowest price possible. When both parties are in agreement in terms of price, a transaction can take place. The share market acts in much the same way as any other market: buyers and sellers both looking for the best price. However, a broker must be used by individuals when either buying or selling shares.

In recent times, share trading on the internet has become very popular. For a relatively small fee (approximately $20–25), individuals can now trade in shares online. However, the organisations that offer online trading (for example, CommSec) are still playing the role of a stockbroker. That is, they act as an agent on behalf of the buyer or seller. The use of the internet has streamlined share market transactions because offers to buy and sell can be received from anywhere and at any time from all over the country, simply by using a home or office computer. Added to this is the fact that investors can also receive up-to-date information in relation to shares via the website operated by the Australian Securities Exchange <www.asx.com.au>. This is an invaluable source of information for investors as share prices, company results, company histories and special announcements are all available at any time.

Brokerage fee: this is the fee paid by both buyers and sellers of shares to their stockbroker. Some brokers charge a minimum fee for small parcels of shares, while others charge a commission, which is a percentage of the total dollar value of the transaction.

Dividend: a **dividend** is a payment to shareholders as their share of the profit being distributed among the owners. Dividends are paid, for example, as 20 cents per share for each share owned. It should be noted, however, that there is no set rate for dividend payments and shareholders may not receive a dividend at all if profit results were disappointing (or non-existent).

All Ordinaries Index: this index is used to gauge the overall feeling of the market after a day's trading. It is basically an average of the changes in share prices and is usually quoted on evening television and radio news to summarise the change in the stock market that day. If most shares increase in value, the **All Ordinaries Index** will increase. If the market is depressed and most shares fall in price, so too will the index. This index is said to provide a guide as to the confidence (or lack of confidence) that investors have in the financial market.

Understanding the stock market report

The major newspapers report on the activities of the share market on a daily basis. Figure 10.2 has been based on actual data and has been compiled to show some examples using well-known companies. In the newspapers there are hundreds of companies listed, many of which are not well known. To help you gain an understanding of the share market, some simple examples will be used as an introduction. Once the information is thoroughly understood, you are encouraged to go to the newspapers and look at the latest share market news.

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Figure 10.2 A stock market report

Stock	Close	Move	Buy	Sell	12 month		Sales '000s	Dividend yield
					High	Low		
Bluescope Steel	232	+7	232	233	332	185	14 910	2.16
Billabong	845	+30	844	845	1 232	731	1 408	4.26
JB Hi-Fi	1 781	-9	1 780	1 784	2 276	1 732	459	3.71
NAB	2 384	+14	2 383	2 384	2 903	2 223	4 614	6.38

(Information quoted from market summary 5/01/11)

Stock: this column states the name of the company (or an abbreviation of the company name)

Close: this refers to the closing price at the end of the day's trading; that is, the last price at which shares were sold during that particular day. For example, Bluescope Steel closed at $2.32 per share. Shares in National Bank (NAB) closed at $23.84 per share. Note that dollar signs and decimal points are not shown in the report.

Move: this column shows the change in the share price from the previous day's trading; that is, whether the share price increased or decreased over the last 24 hours. For example, shares in Billabong gained $0.30 during this day's trading, whereas JB Hi-Fi lost $0.09 per share.

Buy/Sell: this is the latest offer to buy and sell shares. Note that someone has made a bid to buy shares in JB Hi-Fi at a price of $17.80, while someone else is prepared to sell at $17.84. The offer to buy will usually be lower than the offer to sell and may have to be increased if a trade is to take place. Alternatively, the seller may have to drop their price in order to complete a sale.

12 month High/Low: these two columns may help investors when they are trying to predict the future trends in the market. By looking at the 'low' over the last 12 months, it is evident that the market has changed over the last 12 months. Figure 10.2 reveals that JB Hi-Fi was trading near its 12 month low, whilst the other shares listed were trading at a mid-point between their high and low prices. The constant question for investors is 'Will the price go higher?' or 'Is there a chance it will fall this week?' JB Hi-Fi may appear as a good buy at the above listed price. It is a little down on the year high price and therefore may be viewed as a good purchase. But then again, it may drop even further!

Sales '000s: this shows the turnover in shares for the day. It shows how many shares were traded during one day and can be used to gauge the interest in a particular company's shares. The table in figure 10.2 indicates that 14 910 000 shares in Bluescope Steel were sold and 4 614 000 National Bank Shares changed hands in one day's trading! (Note that turnover is shown in thousands.) Turnover in the National Bank on this day (4 614 000 shares at about $23.84 each), means that about $110 million changed hands in one day in just that one company!

Dividend yield: this is an analytical ratio similar to the rate of return on investment shown earlier in this chapter. The **dividend yield** is calculated by the following formula:

$$\text{Dividend yield} = \frac{\text{Dividend per share}}{\text{Current market price}}$$

This ratio uses the latest declared dividend from the company and compares it to the latest selling price per share. It is used to indicate an approximate rate of return if shares are purchased at the quoted price. As the market price goes up (that is, as the shares become more expensive to buy), the dividend yield will fall. If the market price falls, the dividend yield will rise. A cautious approach is recommended when considering dividend yields. This is because the latest dividend per share may in fact be from the previous reporting period of the company. If

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business takes a turn for the worse this year, the company may decide to reduce the dividend or simply not pay a dividend at all. Therefore the dividend yield should only be used as a guide, as there is no guarantee of any return when one purchases shares in a company. Referring to the table in figure 10.2, NAB has the best yield from the four companies listed (6.38%), whereas Bluescope Steel had the lowest dividend yield (2.16%). The dividend yield will change daily, depending on what movement occurs in the company's share price. Of course, those investors who purchased NAB at $29.03 (the high for the year) would be earning a lower return on their investment. Shareholders who bought into NAB at a price of $22.23 would currently be earning a much higher dividend yield. This highlights the nature of the dividend yield calculation. As prices change day to day, so too will the dividend yield. It should always be kept in mind that the share market works on the basic laws of supply and demand and prices of shares can go up or down on any given day.

› GLOSSARY OF TERMS

All Ordinaries Index an index that represents the overall trend in the Australia Securities Exchange on a particular day.

compound interest interest that is paid both on the original amount of money saved and on the interest that has been added to it. Over several periods the investor actually earns interest on the interest, thus creating a compounding effect.

debenture a form of investment whereby the general public lends money to a company, with the funds owing being secured by the assets of the company.

dividend a share of a company's profits that represents a return on investment paid to shareholders. Dividends are dependent on satisfactory profits being earned by the company.

dividend yield a ratio used by shareholders to determine the percentage return that may be earned on particular shares.

government bonds a form of investment whereby the general public can lend money to a government body and in return receive a fixed rate of interest.

investing contributing economic resources with the intention of making a monetary gain.

market price (of shares) the current price at which a particular share is being traded.

on-line investment account a bank account accessible through the internet which usually earns a higher rate of interest compared to basic savings accounts.

par value (of shares) the original price at which a share was first issued.

rate of return the percentage return earned on an investment over a specific period of time.

shares (also known as **stocks**) an investment in a company, whereby the owners are referred to as shareholders. These owners may be entitled to receive a dividend from the company if performance results are satisfactory.

simple interest a flat rate of interest determined by multiplying the amount invested by the rate of interest per annum.

speculation making an investment on the chance that its value will grow over time.

stockbroker a person who acts on behalf of an individual wanting to either sell or buy shares.

share market (also known as **stock market**) a financial market that allows buyers and sellers to make bids to buy and sell shares/stocks at specific prices. When the two agree, a sale that transfers ownership of the shares/stocks may take place.

superannuation a long-term investment strategy, aimed primarily at ensuring that an individual will have sufficient cash to live comfortably in retirement.

term deposit a secure form of investment that returns a specific rate of interest on the condition that the cash is tied up for a fixed period.

trust a form of investment consisting of a fund of assets controlled by a trustee, who represents individual investors. The trustee is usually responsible for making investments and managing these investments throughout the year.

unsecured notes an investment whereby the general public lends money to a company. Unlike debentures, this form of investment has no security in relation to the company's assets.

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Summary questions

1. List six types of investments a small business owner may have and write a brief description of each.
2. For the investments you listed in question 1 above, state one advantage and one disadvantage for each type of investment.
3. Explain the major difference between an 'at call' savings account and a term deposit account.
4. Describe the features of an on-line investment account, highlighting one advantage and one disadvantage of this form of investment.
5. Visit your local bank and collect any available material on the different types of accounts available. Prepare a table summarising this information, including such details as name of account, minimum deposit, special conditions, bank fees, interest rate and any other relevant data.
6. Refer to the daily newspapers and collect advertisements relevant to investments. Prepare a table similar to that outlined in question 4 above to summarise your collection.
7. Distinguish between speculative investments and investments for specific returns. State two examples of each type of investment.
8. Refer to eight different types of investments described in this chapter. List these investments under the headings of 'Speculative', 'Specific returns' or 'Both speculative and specific returns'.
9. Explain the role of a prospectus when referring to investments.
10. 'When investing, don't put all your eggs in the one basket.' Explain the relevance of this statement to investing in the financial market.
11. Describe the usual relationship between the security of investments and the return on these investments. Use an example to explain your answer.
12. What is the return on investments ratio? What is its purpose?
13. Explain why a rate of return after tax is a good measure of an investment's value.
14. 'If you are only earning interest at the rate of inflation, you are going nowhere!' Do you agree with this statement? Explain your answer fully.
15. Distinguish between the terms 'simple interest' and 'compound interest'.
16. What is superannuation? What is its purpose?
17. 'Superannuation uses compound interest to great effect.' Explain this statement fully.
18. What is meant by the term 'registered capital' when referring to a company?
19. Explain the difference between par value and market value of a share.
20. How is dividend yield calculated?

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Practical exercises

[Exercise 10.1] Michael Grosso purchased a stamp collection on 1 January 2015 for $400. He sold the collection on 31 December 2015 for $440.

a Calculate the rate of return Grosso earned on his investment. Express your answer as a percentage per annum.

b Would your answer be any different if the collection was purchased on 1 January 2014? What would be the rate of return under these circumstances?

c Explain to Grosso how the rate of return calculation can be used to evaluate investments.

[Exercise 10.2] Jill Franklin invested $8000 in a one-year government bond paying 6% per annum. Franklin's marginal tax rate is 15 cents in the dollar. The inflation rate over the year has been put at 2.5%.

a What is Franklin's rate of return before tax?

b What is her rate of return after tax?

c What is Franklin's rate of return after allowing for inflation?

d How much interest (in dollars) will Jill receive on the bond and how much of this will go in taxation?

[Exercise 10.3] Matthew Mason took out a three-year $12000 debenture earning 7% per annum. Mason's marginal tax rate is 30%.

a How much interest will Mason receive:
i per year?
ii in total?

b How much of the interest earned will be payable in tax?

c Calculate Mason's rate of return after tax.

d If inflation was measured at 4% p.a., what is the net gain achieved by Mason's investment in real terms?

e State one advantage and one disadvantage of debentures as an investment for individuals.

[Exercise 10.4] Kylie Watson has $7 000 invested in a term deposit over four years. She receives an interest cheque of $455 once a year and pays personal income tax at the rate of 40 cents in the dollar.

a What interest rate is Watson earning on her money?

b How much will Watson pay each year in tax on her interest?

c Calculate Watson's rate of return after taxation.

d If inflation is running at 4% per annum, comment on Watson's investment in terms of maintaining her spending power.

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[Exercise 10.5] Consider the following newspaper advertisements:

A

AVAILABLE NOW!
6.2%
AT CALL
INTEREST CALCULATED DAILY

B

LIMITED OFFER!
1 YEAR 6.75%
2 YEARS 6.95%
3 YEARS 7.10%
MINIMUM DEPOSIT: $2000

a Explain why the interest offered in advertisement **B** is higher than that in advertisement **A**.

b Explain the meaning of the term 'at call' as it has been used above.

c Why do some financial institutions demand a minimum deposit in some types of investments?

d State one advantage and one disadvantage of each investment shown above.

e Some institutions pay interest on the minimum monthly balance in an account. In advertisement **A** above, the interest is calculated daily. State, and explain, which is more advantageous for the investor.

f Explain the implications of taking up the offer advertised in **B** above. Make a list of things to consider before taking out such an investment.

[Exercise 10.6] An investor is considering the following possible investments:

1 Term deposit	2 Government bonds	3 Debentures	4 Unsecured notes
30 days	12 months	ABC Finance Co.	ABC Finance Co.
6%	7.5%	1 year	1 year
		8.2%	8.9%

a Explain why the investor may prefer to invest in the term deposit rather than the other alternatives.

b State one reason why the government bonds pay less interest than the company debentures.

c What is the difference between a debenture and an unsecured note?

d Explain why an investor may decide to put some money into each of the above investments.

e Comment on the following statement:

'The highest interest rate is always the best investment.'

Refer to the above alternatives in your answer.

[Exercise 10.7] Kevin Buckley has $10 000 to invest. He has been offered 6.5% simple interest over three years or 6% compound interest (compounding yearly) over the same time period. He has asked your advice about the two alternatives.

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a Calculate the total interest receivable under each of the options.

b Which alternative should Buckley accept? Why?

c Would your answer be different if the period was changed to four years? Explain your answer fully.

[Exercise 10.8] Maree Johnson is not convinced about the benefits of compound interest. She has $15 000 to invest and can get 8% interest in the money market for a four-year investment.

a If the 8% was simple interest, calculate the amount of interest earned per annum and for the total investment period.

b Assuming the interest was compounded yearly, calculate the total interest earned over the four years.

c If the interest was compounded half-yearly, what is the additional benefit to Johnson?

d State one disadvantage to Johnson of accepting an investment involving compound interest.

[Exercise 10.9] The following advertisement was printed in the financial press.

CASH MANAGEMENT ACCOUNT
EFFECTIVE RATES 1/6/2015

	NOMINAL RATE	EFFECTIVE ANNUAL YIELD*
$5 000–$9 999	3.45%	3.51%
$10 000–$19 999	3.75%	3.82%
$20 000–$49 999	4.80%	4.91%
$50 000 +	5.25%	5.38%

* BASED ON MONTHLY INTEREST REINVESTED AT CURRENT RATES

a Explain the difference between 'nominal rate' and 'effective annual yield'.

b State two reasons why the effective yield may not be achieved.

c Explain why the rates on offer increase in line with the amount invested.

[Exercise 10.10] Paul Douglas is thinking about investing in the share market. He is considering three different companies and has asked for your assistance. He has provided the following information.

Company name	Current share price	Dividend per share
Only Jeans	$1.20	7.5 cents
National Beneficial	$2.50	8.75 cents
Wool Stores	$5.12	17 cents

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a Using the data stated on the previous page, calculate the dividend yield for each of the three companies.

b In which company would you advise Douglas to invest? Justify your answer.

c State three other factors Douglas should consider before selecting one of the three companies.

d Douglas's friend Janette has told him that dividend yields are based on history and should be disregarded when selecting shares for investment. Do you agree?

[Exercise 10.11] Refer to the table of share prices in figure 10.2. As the share prices in that table were actual market prices quoted in January 2011, they can now be used as a comparison with current prices.

a Using one of the major newspapers as a reference, determine the latest closing price for each of the four companies listed.

b Calculate the change in the share price for each company.

c Express the change in selling price in percentage terms.

d In terms of capital gains, which of the four was the best buy in 2011? Explain your answer fully.

[Exercise 10.12] You have just inherited $50 000 from a rich aunt. You have decided to purchase a portfolio of shares. Your broker has recommended that you spread your investment over four different companies, with a minimum of $5 000 being invested in each company.

a Using a newspaper as a reference, state the four companies you would select for investment purposes.

b Calculate how many shares you would buy in each of the four companies. Complete the following table in your workbook:

Company name	Current price	Number of shares purchased	$ invested in each company
1	$		$
2	$		$
3	$		$
4	$		$
		Total invested	$

c Follow the share prices for your four companies over the next two weeks (or four weeks if time permits) and graph the daily movements on the one graph. Use the *x*-axis for the days observed and the *y*-axis for the closing share price.

d At the end of your observation period, calculate the total value of your share portfolio. Write a brief report on the success or otherwise of your investment decisions.

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INTERNET activity

Visit the website of the Australian Securities Exchange at <www.asx.com.au>. Key in the following company codes and extract the latest information about each company so that you can complete the following table. Complete this task on five consecutive days, after trading has concluded for the day.

Alternatively, you may prefer to select your own five companies. Check with your teacher first and see what they prefer you to do.

Stock	ASX code	Closing price	High price for day	Low price for day	Volume (turnover)
ANZ Bank	ANZ				
BHP Billiton	BHP				
Caltex	CTX				
Harvey Norman	HVN				
Woolworths	WOW				

At the end of the week, write a short report on what has happened during the week, including answers to the following questions:

a Which shares were traded the most over the five days?

b Calculate the total value of shares sold in the week in the company you named in part **a** above.

c Which share made the greatest gain in the week's trading? Determine the increase in value in dollars and as a percentage.

d Which share performed the worst over the week? Determine the decrease (or increase) in value in both dollars and as a percentage.

e Comment on any other significant events that occurred during the week's trading in relation to these five companies.

Chapter 11

Taxation and small business owners

OBJECTIVES

At the completion of this chapter, you should be able to:

- outline the responsibilities of sole proprietors in relation to taxation
- explain how profits are treated as part of assessable income
- define profit under accrual and cash accounting
- distinguish between cash accounting and modified cash accounting
- outline the role played by source documents in relation to taxation
- define taxable income, assessable income and allowable deductions
- outline the requirements for substantiation of expenses
- explain how a logbook may be used for vehicle expenses
- explain the application of depreciation on non-current assets
- calculate taxation payable on a variety of income levels
- complete a wages book, including deductions for taxation
- describe how the GST is applied to goods and services
- outline the purpose of a business activity statement (BAS)
- calculate GST owing using a BAS worksheet.

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The VCE Accounting units concentrate on accounting for sole proprietor businesses. As sole proprietors are not a separate legal entity in the eyes of the law, the owner and the business are one and the same for the purposes of taxation. Therefore, this chapter looks at taxation of the individual business owner in terms of assessable income, and their legal requirements in relation to the income tax of employees. This chapter also includes an introduction to the goods and services tax (GST). It should be noted that students of VCE Accounting are not expected to have an in-depth knowledge of the Taxation Act in relation to small business owners. However, you may have a desire to gain a basic understanding of taxation matters as part of developing your own financial literacy. This chapter aims to provide you with an appreciation of tax in relation to the individual as a taxpayer, as sole traders and employees are both subject to individual tax assessment.

11.1 Small business and taxation

Small business owners have certain responsibilities in relation to taxation. Whether it be payroll tax, income tax or even the goods and services tax (GST), small business owners will be heavily involved. All forms of taxation require some form of record-keeping and therefore accounting plays a key role in relation to taxes. As this text has concentrated on sole proprietor businesses, the implications of taxation will be restricted to that type of firm. It should be kept in mind that a sole proprietor business is not a separate legal entity. That is, in the eyes of the law, the business and its owner are one and the same thing. This legal definition is important, as it means that the business cannot be taxed as a separate legal body. Profits earned by a business operated by a sole owner are treated as part of the individual's total assessable income for the taxation year. For example, Lex Arthurson is a full-time teacher but is also the proprietor of Arthurson's Tutoring Services. The small business operates on weekends and the income from the business would be assessed for income tax along with Arthurson's other income for the year, as shown below:

	Teacher's salary	$70 000
plus	Profit from Arthurson's Tutoring Services	5 000
plus	Interest on bank account	500
plus	Interest on debentures	1 400
plus	Dividends from shares	100
	Total assessable income	77 000

Arthurson's Tutoring Services is not taxed, as it is a sole proprietor business. However, the profit earned by the business is taxed as part of the individual's income. The responsibility for determining the profit or loss earned by such a business lies with the owner. Accurate record-keeping is essential (SAC2 *reliability*). Business documents and accounting records are required to keep track of all revenue made by the business as well as to verify all expenses the firm experiences throughout the taxation year. This chapter will examine such requirements in the determination of profit for taxation purposes.

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11.2 Definition of profit

In relation to taxation assessment, business owners have a choice of two methods when determining a profit figure for a given reporting period. This choice depends on the basic definition of profit. The two methods available are known as **accrual accounting** and **cash accounting**. The profit figure for a period may vary significantly, depending on the method chosen by the owner and/or accountant. Consider the following definitions:

Cash accounting: Profit = revenue received less expenses paid.

Accrual accounting: Profit = revenue earned less expenses incurred.

Cash accounting, as the name implies, relies on cash flows in its definition of revenue and expenses. On the other hand, accrual accounting ignores the cash element and raises the questions of revenue being *earned* and expenses being *incurred*. Consider the following example.

Lucy's Landscaping completed some gardening work for Carlton Primary School during June 2015. An invoice was issued on 24 June for $800. The invoice was settled in July 2015. Lucy's reporting period ends on 30 June each year.

Under cash accounting, Lucy would not recognise the $800 in her profit calculation for the year ended 30 June 2015. This is because the cash was not received in that reporting period. However, under the rules of accrual accounting, the $800 would be recognised because it was earned during the period ended 30 June 2015. It does not matter that the cash has not been received by that date. As the services have been provided and there is reliable evidence of the transaction (that is, the invoice), it can be recognised as revenue earned.

A similar situation exists with the definition of expenses. If Lucy paid an annual insurance premium of $600 on 1 June 2015, the treatment of the payment depends on the accounting method being used. For the year ended 30 June 2015 the insurance would be reported as follows:

- *Cash accounting:* Insurance of $600, as this is the amount paid during the period.
- *Accrual accounting:* Insurance of $50 ($600/12), as this is the amount incurred for the period. That is, only $50 of the $600 payment has been used up, or expired, by the end of the period. The remaining $550 will be treated as an expense in the following reporting period.

A business owner must therefore choose between cash accounting and accrual accounting. Many sole proprietors elect to use cash accounting, as it is the simpler of the two methods. It is quite acceptable for taxation purposes and it is easy to understand. Many small businesses deal only on cash terms and therefore the definition of profit is in line with the way the business operates. However, if a business buys and sells on credit or has many transactions like the insurance example above, accrual accounting is said to be more accurate and it should be considered.

If cash accounting is preferred, two adjustments need to be made to the above definition in order to comply with the requirements of the taxation office. This method of determining profit is known as modified cash accounting and works as follows:

Modified cash accounting: Profit = revenue received less expenses paid, with adjustments for stocks and depreciation of non-current assets. This definition of profit allows for adjustments in relation to inventory. Particularly for trading firms, a change in the level of stock over one year will affect the performance of a business. Therefore, the profit is adjusted for changes in stocks. Secondly, non-current assets are depreciated over the years that they are used by a business. The cost of such assets is spread over several reporting periods. This is an advantage to the business owner as the cost of the asset can be written off, so reducing profit and therefore the amount of taxation payable.

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11.3 Business documents and taxation records

Business documents are the source of much of the information required for taxation purposes. The method chosen to determine the profit earned by a firm will influence the documentation required by the owner. If the simpler *modified cash method* is preferred, the following documents play a vital role:

- *Receipts*: provide evidence of revenue received and GST received during the period.
- *Cheque butts:* provide evidence of expenses paid and GST paid during the period.

In terms of accounting records, modified cash accounting requires:

- *Cash journals:* to record all revenue received and expenses paid.
- *Asset registers:* to keep track of all details of non-current assets for depreciation purposes.
- *Physical stocktakes:* a record of all stock on hand on the first and last days of a reporting period.

If *accrual accounting* is the preferred method of determining profit, more detailed information will be required by the owner. The following business documents may be used to provide such information:

- *Receipts:* provide evidence of revenue earned and GST received on a cash basis during the period.
- *Cheque butts:* provide evidence of expenses paid and GST paid during the period.
- *Sales invoices:* provide evidence of revenue earned and GST charged on a credit basis during the period.
- *Purchase invoices:* provide evidence of expense items created by credit transactions and the GST charged on these expenses.

The accrual system will also require some additional record-keeping by the owner if credit transactions are occurring throughout the reporting period. The records must provide the proprietor with an accurate picture of what has happened during the year. Therefore, the following records may be maintained:

- *Cash journals, asset registers and physical stocktakes* (as outlined above)
- *Debtors' records and creditors' records:* to record details of all revenues and expenses created by credit transactions with the firm's debtors and creditors.

Regardless of the method of profit determination, a small business owner must be organised in order to keep an accurate set of accounting records. In order to satisfy the demands of the taxation office, an owner must also be prepared to keep certain records in particular detail. In addition to the details outlined above, a sole proprietor should also consider using the following as part of an organised, systematic accounting system:

- pre-printed, sequentially numbered duplicate receipt books
- pre-printed, sequentially numbered duplicate invoice books
- pre-printed, sequentially numbered cheque books
- continuous cash register rolls or computer-generated receipts
- a personalised cash deposit book (with duplicates) for all banking (to be used daily)
- multi-column cash journals (checked against cheque butts and deposit book).

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Depending on the circumstances of the business, a proprietor may also require some or all of the following:

- A vehicle **logbook**: if a vehicle is used partly for the business and partly for private use, a tax deduction may be available for the portion of business use. In order to keep track of the kilometres travelled for business use, a logbook is suggested (discussed in section 11.7).
- A **wages book**: if the business has employees and income tax has been deducted from their weekly pay packet, a wages record must be kept (see section 11.10). Such records will show the taxes collected for each individual employee as well as the total taxes paid periodically to the taxation office.
- GST records: if the firm is involved in the collection of the GST, accurate records must be maintained in regard to taxes collected, taxes paid and taxes passed on by the business to the taxation office. A **business activity statement (BAS)** must be completed periodically to determine the amount to be paid to the taxation office or the tax refund due to the business (covered in section 11.11).
- Business diary: if a business owner incurs expenses such as travel costs or overseas trips (for business reasons), a diary should be maintained to show details of expenses created.

11.4 Assessable income

In order to determine the amount of income tax payable by an individual, the following formula is used to calculate their **taxable income**:

Taxable income = assessable income – allowable deductions

When an individual completes a tax return, all **assessable income** for the financial year must be declared. As has already been discussed in this chapter, profit from a sole proprietor business is treated as part of an individual's assessable income. The term 'assessable income' is used to describe all income subject to taxation. The *Income Tax Assessment Act 1997* lists different forms of assessable income, but as this Act is very complex, this text will deal only with the most relevant forms of income for the average individual. Therefore, 'assessable income' will include the following:

- wages and salaries
- other allowances from employers (e.g. travel allowances)
- tips (e.g. for waiters)
- interest on investments
- rent received from property
- profits from businesses
- capital gains on assets sold (in some cases)
- unemployment benefits.

The list above does not leave many forms of income exempt from taxation. However, there are some receipts by individuals that are not subject to tax. These include:

- gifts
- gambling wins (e.g. at the racetrack)
- lottery profits (e.g. Tattslotto).

Therefore, all profits from business are subject to income tax. It cannot be argued that running a business is a gamble and therefore profits should be tax free! In fact, if your business is being a bookmaker or a professional punter, you are subject to income taxes.

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11.5 Allowable deductions

An individual may be able to decrease the amount of tax payable if there were expenses incurred in order to earn the income declared. Such expenses are known as **allowable deductions**. In order to claim such a deduction, the taxpayer must be able to demonstrate that:

1 the individual paid for the expense personally
2 the individual was not reimbursed by an employer
3 the expense was necessary for the individual to complete their duties for the employer.

There are some exceptions to the above rules. One common case is donations to recognised charities. As an incentive for individuals to help needy charities, the government allows donations to organisations such as World Vision and the Salvation Army to be classified as tax deductible. However, no matter what claims individuals make, the taxpayer must keep adequate records (e.g. receipts) to substantiate any such claims. Some typical allowable deductions for different occupations and businesses are shown in the table below.

Plumber	Tutoring business	Disc jockey
Cost of tools	Textbooks	Cost of compact discs
Union fees	Stationery	Equipment repairs
Safety boots	Computer software	Hire of lighting

It must be stressed that decisions on allowable deductions will vary with each individual case. However, taxpayers are not permitted to claim for expenses such as travel costs between home and work, and items bought for personal use. If an individual has to use a personal vehicle to perform duties at work, the cost of such vehicle usage is an allowable deduction. Also, if an employee travels directly from one job to a second job, the cost of such travel is allowable. There are several methods of calculating the cost of such travel, with the simplest one being a deduction for every kilometre that the taxpayer's personal vehicle was used for work purposes (refer section 11.7). If ever in doubt about a taxation question, individuals are advised to approach the Taxation Department with their query or refer it to a qualified accountant.

11.6 Substantiation of expenses

If a taxpayer wants to claim expenses as tax deductions, they must comply with particular rules laid down by the taxation office. It is the taxpayer's responsibility to be able to prove that the cost of an item was incurred in order to earn their assessable income (**substantiation of expenses**). In the case of a small business owner, the expense must relate to the earning of revenue by the business. This means that items purchased for personal use cannot be written off as business expenses (also backed up by the entity principle). There are a number of ways a small business owner can substantiate, or prove, their claim.

1 *Pay business expenses by cheque:* as cheques are kept by the bank for a number of years, the bank can be used as a checking device for the business owner. Cheques should not be written out to cash, but should include the name of the payee. This provides evidence of the expense transaction.

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2 *File purchase invoices carefully:* if items are bought on credit, a formal invoice should be received. This document should state the name of the supplier, the goods or services purchased, the cost per item and the total value of the transaction. As a further cross check, when the invoice is paid the number of the cheque being issued can be written on the invoice. This provides further evidence that the expense was paid by the proprietor as a legitimate business expense.

3 *Use a business credit card:* some small business owners make arrangements for a credit card to be issued to them personally, but only use it for business-related expenditure. Once again, the bank can be used to provide a check of all transactions. Receipts for credit card purchases should be kept, as they provide details of the individual expenses. As a monthly statement is issued, it provides a detailed summary of all transactions. Both of these records can be used to help substantiate business expenses.

4 *Cash receipts:* sometimes a business owner may buy something for cash, although this is not recommended. If it occurs, receipts should be stored carefully. They should also be checked to ensure that they contain sufficient details such as the name of the supplier, the items that were purchased, the cost of each item, the GST paid and the date of the transaction. This is important because a lot of cash register receipts do not contain such detail. This is why it is advisable to use a formal purchase invoice, followed by a payment through a formal cheque account.

5 *Diary entries:* as has been mentioned earlier in this chapter, a diary may be used to record some business expenses. This is particularly useful for expenses created by business travel. However, the use of a credit card for such business expenses, along with diary entries, make substantiation much easier.

11.7 Logbooks and vehicle expenses

Quite often a small business owner will use a personal vehicle for business-related trips. In relation to allowable deductions, the Taxation Act does allow for a deduction for such expenses, but only for the amount of travel actually done for work purposes. Also, a taxpayer cannot claim the cost of travelling to and from work. However, if a business owner uses a personal vehicle to go to a warehouse to pick up items required for the business, the trip there and back is deductible. Of course, trips made for personal reasons, or family trips on weekends, are not allowable. The problem with such a deduction is how to calculate the cost of running the vehicle for business-related travel. The 2010 Tax Pack provided a choice of four methods to work out such a claim. These are:

- cents per kilometre method
- 12% of original value method
- one-third of actual expenses method
- logbook method.

Cents per kilometre method

This method may only be used for claims up to 5000 kilometres. The taxpayer must be able to explain how the total kilometres travelled was calculated. Although written evidence is not required for this method, diary entries are an acceptable method of determining the total kilometres travelled in the year. It is then a matter of simply using the following schedule to determine the allowable deduction:

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Engine capacity	Cents per km
1 600 cc (1.6 litre) or less	63 cents
1 601 cc – 2 600 cc (1.6 litre – 2.6 litre)	74 cents
2 601 cc (2.601 litre) and over	75 cents

The deduction allowable is based on the engine capacity of the vehicle used. If a taxpayer is claiming for 2 000 kilometres as a car expense, the deduction for a 1.6 litre car would be 2 000 × 63 cents = $1 260. However, if the taxpayer did the same travel in a 3.8 litre vehicle the claim would be 2 000 × 75 cents = $1500. This method recognises the fact that it is more expensive to run a bigger car and therefore a taxpayer's claim will be higher if a car with a bigger engine has been used.

12% of original value method

This method may be used if the taxpayer travelled more than 5 000 kilometres for business purposes during the tax year. If the business owner bought the car, they may claim 12% of the cost of the car. If the car is leased, they may claim 12% of its market value. Written records do not have to be kept to use this method, but once again the onus is on the taxpayer to be able to prove how they determined that they travelled more than 5 000 kilometres during the year. Therefore, if a taxpayer travelled 6 000 kilometres during the year in a car that cost $30 000, the claim would be: 12% of $30 000 = $3 600.

One-third of actual expenses method

As its name implies, this method is based on determining the total actual expenses in relation to the car and then claiming one-third of this amount. This method may be used if the taxpayer travelled more than 5 000 kilometres in the year. In order to make a claim, the taxpayer must have kept odometer records throughout the year, as well as written evidence of all expenses (for example, receipts). The taxation office will allow an estimate of petrol and oil costs, but all other expenses must be backed by written evidence. The total expenses may therefore include registration, insurance, maintenance and servicing, depreciation and any other expenses in relation to the vehicle. Once a total has been determined for the year, one-third of it may be claimed as a deduction.

Logbook method

The logbook method requires a detailed listing of all kilometres travelled during the year for business purposes. The taxpayer must also have written evidence of all car expenses for the period. (Estimates of fuel and oil are acceptable.) Odometer readings at the start and end of the tax year are essential. At the end of the year the following calculation can then be made:

$$\frac{\text{Kilometres travelled for work-related purposes}}{\text{Total kilometres travelled during the year}}$$

$$= \text{Percentage for business use}$$

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This is then multiplied by the total car expenses for the year to arrive at the allowable deduction. For example, a taxpayer had total car expenses of \$12 000 during a year. The distance travelled for business purposes was 8 000 kilometres and the car did a total of 20 000 kilometres during the year. The claim would be calculated as:

$$\frac{8\,000}{20\,000} \times 12\,000 = \$4\,800$$

If a taxpayer elects to use the logbook method, they must ensure that the logbook is completed accurately when the car is actually used to make business-related trips. It must be kept in mind that the logbook is used to determine the percentage of travel for business use. Therefore it is an important record, as it has a direct impact on the dollar value of a substantial tax deduction. A suggested format for a travel logbook is shown in figure 11.1.

Figure 11.1 Logbook for car expenses

Make of vehicle:			Model:		Engine capacity: cc			Registration no:	
Odometer at start of year: km						Odometer at end of year: km			
Date of entry	Start of trip	End of trip	Odometer at start	Odometer at end	Km this trip	Purpose of trip	Name of driver	Name of person making entry	Signature

11.8 Depreciation for taxation purposes

The historical cost of non-current assets may be claimed by taxpayers over the effective life of such assets, as long as the assets are used for the purpose of generating income. Taxpayers may make their own estimates of the effective life of non-current assets, or they may base their claims on previous determinations made by the Tax Commissioner. There are two methods of **depreciation** available for such claims. The first is known as the prime cost method, the second being calculated on an asset's diminishing value (or carrying value). This method is also known as the reducing balance method. Prime cost takes the original cost of the asset and multiplies it by a fixed percentage every year. That is, the depreciation claimed as a deduction will not change from year to year. Under the diminishing value method, depreciation is charged at a higher rate but it is applied to the value of the asset after depreciation has been deducted. That is, each year the asset's carrying value is reduced and therefore the amount of depreciation will also reduce over time. As stated above, depreciation rates are determined by the taxation office from time to time. Although the list from the taxation office is not exhaustive, the examples in figure 11.2 have been selected for demonstration purposes.

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Figure 11.2 Sample depreciation rates for non-current assets

Asset	Prime cost method	Diminishing value method
Motor vehicles	15%	22.5%
Curtains and drapes	20%	30%
Cash registers	17%	25%
Furniture and fittings	13%	20%

To show the difference between the two methods of depreciation, consider the case of a lawyer who spent $5 000 on curtains for the office. The two methods, using the rates specified above, result in the following deduction for depreciation.

Prime cost:
Year 1: 20% of $5 000 = $1 000 depreciation expense
Year 2: 20% of $5 000 = $1 000 depreciation expense
Year 3: 20% of $5 000 = $1 000 depreciation expense

If the asset is depreciated at the rate of $1000 per year, the total cost of the asset will be written off after five years. Of course, after this time the asset cannot be written off any more, as the total cost has been allocated. The diminishing value method, however, comes up with a different result. Please note that the diminishing value of an asset will be determined by subtracting the total depreciation allocated, since the asset was purchased from the original cost of the asset, as shown below:

Diminishing value:
Year 1: 30% of $5 000 = $1 500 (diminishing value $5 000 – $1 500 = $3 500)
Year 2: 30% of $3 500 = $1 050 (diminishing value $5 000 – $2 550 = $2 450)
Year 3: 30% of $2 450 = $735 (diminishing value $5 000 – $3 285 = $1 715)

Note how the diminishing value method allocates more depreciation on the curtains in the first and second year, when compared to the prime cost method. However, in the third year (and any subsequent years), the amount allocated under the diminishing value method will be less than the prime cost method. Once again, if a taxpayer wishes to claim a deduction for depreciation, written evidence of the cost of an asset will be required. The calculations of depreciation must also be kept for a period of five years in case of queries in the future or if the taxation office wants to conduct an audit of the individual taxpayer. Depreciation is covered in more detail later in this text.

11.9 Rates of income tax

Once a business owner has determined all of the assessable income for the tax year and has deducted all allowable deductions, the rates of tax payable on the taxable income can then be determined. The taxation rates for an individual depend on the level of income being earned. The higher the income level, the higher the rate of taxation. This method of taxation is known as the **progressive system of taxation**. The figures applicable to the 2009–2010 tax year are shown in figure 11.3.

Figure 11.3 Personal tax rates on taxable income

Taxable income	Tax payable
$0–$6 000	Nil
$6 001–$35 000	15c for each $1 over $6 000
$35 001–$80 000	$4 350 plus 30c for each $1 over $35 000
$80 001–$180 000	$17 850 plus 38c for each $1 over $80 000
Over $180 000	$55 850 plus 45c for each $1 over $180 000

To clarify the use of this table, consider the case of two separate individuals, one having a taxable income of $10 000 for the year and another with a taxable income of $45 000. The calculations of the tax payable by these two individuals are shown in figure 11.4.

Figure 11.4 Examples of calculations of tax payable

Individual 1: taxable income	$10 000	Individual 2: taxable income	$45 000
Tax on $6 000	Nil	Tax on $35 000	$4 350
Tax on $4 000 × 0.15	$600	Tax on $10 000 × 0.30	$3 000
Tax on $10 000	$600	Tax on $45 000	$7 350

The key step in this process is to locate the appropriate tax bracket depending on the individual's income. In this case individual 1, with a taxable income of $10 000, falls between $6 000 and $35 000. The tax rates indicate that no tax is payable on the first $6 000, and then 15 cents in the dollar above this amount (15% of $4 000). Therefore, the tax payable on a taxable income of $10 000 is $600.00.

Individual 2 earned $45 000 as taxable income, which falls between $35 000 and $80 000. The tax rates indicate that tax of $4 350 is payable on the first $35 000 of income, and then 30 cents from every dollar over that amount (30% of $10 000). Therefore, the tax payable on a taxable income of $45 000 is $7350.

The above calculations are important to a small business owner. If employees are earning sufficient income to be over the **income tax threshold** (that is, $6 000 per year), employers have the responsibility of taking tax out of their pay packet each pay day. This tax is then passed on to the government on a regular basis. Therefore, if an individual employee is earning more than $115.38 per week ($6 000/52 weeks), their total income for a year will be over the income tax threshold of $6 000. The business owner must then deduct tax at a prescribed rate. These rates are provided to business owners by the taxation office and are updated whenever there is a change in tax rates.

11.10 Wages records and income tax

The owner of a small business may employ staff on either a full-time or part-time basis. If the weekly gross pay of an employee exceeds the allowable amount in terms of the income tax threshold (see above), the employer is required to make an income tax deduction. The rates

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of income tax are specified by the taxation office and printed as a schedule to assist owners or managers with their payroll calculations. These schedules are usually available from taxation offices and may also be available from Australia Post. If the government changes the rates of income tax a new schedule is printed, therefore providing employers with new guidelines. As an employer may be dealing with the personal income tax details of several staff members, it is essential that accurate records be kept. This is also important because the business owner is actually collecting tax on behalf of the government. This, of course, demands that business proprietors get it right! A wages book is a vital accounting record for all business managers, if staff are employed by the business. Consider the following format:

Figure 11.5 Wages book

Employee's name: Mark Rayson							Employee number: 64744					
Week ending	Hours worked	Normal hours	Hourly rate	Normal pay	O/time hours	O/time pay	Gross pay	Tax ded.	Union ded.	Super. ded.	Tot. ded.	Net pay
10/7/15	20	20	$20	$400			$400	$60	$5	$20	$85	$315

The columns used in a wages record may vary slightly from business to business. However, this record must always show total gross wages, tax deducted from this pay and the net pay paid to the employee. In the example shown in figure 11.5, the employee worked 20 hours and has earned $400 for the week (the pay rate being $20 per hour). From this gross pay, $60 has been withheld as income tax, $5 has been deducted for union membership and $20 has been deducted for superannuation. Therefore the total deductions are $85, with the net pay equalling $315. Sometimes overtime may be worked and some employees receive 1.5 times or 2 times their normal hourly rate. The wages record shown in figure 11.5 has been designed to allow for such earnings before the gross pay is finalised. Of course, if an employee earns more in any given week, they will be taxed more heavily. The details of an employee's weekly earnings should also be printed on the payslip given to the employee on pay day. At the end of the tax year, a PAYG (Pay As You Go) payment summary can be easily made up from the totals of the key columns in the wages record. As a PAYG payment summary must include yearly totals of gross pay, tax deductions, other deductions and net pay, the wages record should be designed to meet these needs. As with all requirements in relation to taxation, evidence of transactions is of paramount importance and accurate record-keeping is vital.

Please note that in figure 11.5 income tax has been applied at the rate of 15% of gross earnings. If the current tax rates are available from your teacher, the table can be reworked to reflect accurate tax rates for this year. If the tax rates are not available, it should not be of great concern. All practical exercises in this chapter have included a percentage of tax to be applied in the absence of up-to-date information. Refer to your teacher if you are unsure.

Another payroll record that may be kept by business owners is designed to cater for multiple employees. A wages book can be used to record the wage details of all employees on the one page. This form of record is an organised way of keeping track of the taxes withdrawn from employees' pay packets. Figure 11.6 is an example of such a record.

Figure 11.6 Wages book for multiple employees

Wages record for week ended 17 July 2015

Emp. name	Hours worked	Norm. hours	Hourly rate	Norm pay	O/time hours	O/time pay	Gross pay	Tax. ded.	Union ded.	Super. ded.	Tot. ded.	Net pay
T. Knox	38	38	$20	$760			$760	$152	$5	$38	$195	$565
J. Bell	38	38	$20	$760			$760	$152	$5	$38	$195	$565
T. Tims	42	38	$20	$760	4	$120	$880	$176	$5	$44	$225	$655
R. Lyn	45	38	$20	$760	7	$210	$970	$194	$5	$48	$247	$723
Totals							$3 370	$684	$20	$168	$417	$2 498

*Please note: to simplify the calculations, income tax has been applied at 20% of gross pay for all employees in this example.

The wages record in figure 11.6, which is ideally suited to a spreadsheet program, contains all the necessary detail to:

- complete the individual pay slips for each employee
- keep track of the income tax deducted from employees, which must be forwarded to the government at a later date
- verify the cash paid to employees on pay day, which would be recorded in the cash payments journal.

Note how T. Tims and R. Lyn worked longer hours in this particular week than the standard 38-hour week. By looking at the overtime hours and overtime pay columns, it can be seen that their additional hours worked have been paid at the rate of $30 per hour (or 1.5 times the normal pay rate of $20 per hour). You should keep in mind that the hourly rates paid and the hours that are deemed to be normal hours will vary from business to business.

11.11 Preparing a business activity statement

A small business owner may have several commitments in relation to accounting for taxation. Since the year 2000, one of the most important tasks to be completed periodically is accounting for the **goods and services tax (GST)**. In previous chapters the design of cash journals was covered in relation to the GST. These journals can assist a GST-registered business owner in keeping track of all GST received from customers and all GST paid to suppliers. There are two other basic procedures a business owner must complete on a periodic basis. These are:

- reporting GST transactions to the government, usually monthly or quarterly, by completing a BAS
- paying the net amount of GST owing to the taxation office (or claiming an entitlement to a tax refund).

The introduction of the GST was a massive change in taxation that has affected the accounting habits of many small business owners. Some have closed down, citing the pressure of coping with all the GST paperwork as the reason for not continuing in business. Others have had to introduce computerised accounting to their businesses for the first time. Sales of software such as *QuickBooks*®, *Cashflow Manager*® and *Mind Your Own Business* (*MYOB*®) soared as business people tried to come to grips with the accounting requirements of the GST and the

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BAS. Businesses had to be registered with the taxation office both for the GST system and for an Australian business number (ABN). As has been previously mentioned, basic documentation had to be adapted to meet the demands of the new tax system. Source documents such as receipts and invoices had to be modified to meet GST requirements. The following must now be included on a tax invoice for it to be 'GST approved':

- the words 'Tax Invoice'
- the ABN of the business providing the goods or services (or the address of the business)
- the price of the goods and services and the cost of GST itemised separately
- the total amount charged (including GST)
- the date of the transaction
- the name of the supplier
- the name of the buyer
- a description of the goods or services provided (including quantity).

Although some business owners were very keen to introduce computerised accounting packages and utilise the benefits of new software, others tried to persist with manual recording systems based on single entry accounting. This is quite satisfactory, but usually results in more work being done by the owner! It is possible to satisfy all GST requirements using a manual accounting system. However, *QuickBooks*® and *MYOB*® are so efficient, and now so cheap, that having such effective accounting software is almost a necessity for small business owners. The business documents generated by these programs have been updated to include the GST, and the BAS can even be prepared automatically as part of routine accounting procedures.

Having recorded GST transactions accurately for a month or a quarter, a business owner must then complete a BAS and submit this report to the taxation office, along with any payment due. The official BAS has many parts to it and is beyond the scope of this unit, but the basic features are covered below.

Figure 11.7 **Completing a BAS**

Total sales for the period (inc. GST) $	**Payments for the period (inc. GST) $**
GST collected (sales/11) $ A	**GST paid (payments/11) $ B**
Is the amount shown at A more than B? If yes, write the result of A – B. This amount is payable to the taxation office. Payment due (A – B) $	
Is the amount shown at B more than A? If yes, write the result of B – A. This amount is refundable to you. Refund due (B – A) $	

To demonstrate the basic workings of a BAS, two scenarios have been prepared below. The information has been recorded in the cash journals of two different businesses. The first business has a GST liability to the government, while the second is owed a refund. Their details are shown as follows:

	Cash sales for period (inc. GST)	Payments that include GST
Business 1	$11 000	$8 800
Business 2	$9 900	$13 200

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Using the basic outline of the BAS provided above, the two calculations have been prepared below.

Business 1

Total sales for the period (inc. GST) $11 000	**Payments for the period (inc. GST) $8 800**
GST collected (sales/11) $1 000 A	**GST paid (payments/11) $800 B**
Is the amount shown at A more than B? If yes, write the result of A – B. This amount is payable to the taxation office. Payment due (A – B) $200	
Is the amount shown at B more than A? If yes, write the result of B – A. This amount is refundable to you. Refund due (B – A) $	

Business 2

Total sales for the period (inc. GST) $9 900	**Payments for the period (inc. GST) $13 200**
GST collected (sales/11) $900 A	**GST paid (payments/11) $1 200 B**
Is the amount shown at A more than B? If yes, write the result of A – B. This amount is payable to the taxation office. Payment due (A – B)	
Is the amount shown at B more than A? If yes, write the result of B – A. This amount is refundable to you. Refund due (B – A) $300	

These two simple examples show the basic difference between a GST debt and a GST refund. Business 1 would have to send a cheque to the taxation office for $200, while Business 2 would receive $300 from the taxation office once its BAS had been processed.

› GLOSSARY OF TERMS

accrual accounting a method of accounting where profit is determined by deducting expenses incurred from revenue earned.

allowable deductions expenses incurred by a taxpayer in the earning of their assessable income (subject to approval by the taxation office).

assessable income all income earned by a taxpayer that is subject to taxation (as determined by the taxation office).

business activity statement (BAS) a report required by the taxation office from business owners who collect GST either monthly or quarterly in order to determine their tax liability or their entitlement to a tax refund.

cash accounting a method of accounting where profit is determined by deducting expenses paid from revenue received.

depreciation the allocation of the cost of an asset that is written off against a taxpayer's assessable income (subject to approval by the taxation office).

goods and services tax (GST) a broad-based tax that is applied to most goods and services.

income tax threshold the level of income at which an individual must start paying income tax.

logbook a daybook used to record the use of a motor vehicle for work purposes so that an allowable deduction for vehicle expenses can be verified.

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progressive system of taxation a system of taxation where the percentage of tax payable is dependent on the level of income earned by an individual. The tax rate increases as an individual moves into a higher income bracket.

substantiation of expenses a requirement that all taxpayers must be able to verify and justify expenses being claimed as allowable deductions.

taxable income the assessable income of a taxpayer less any allowable deductions being claimed against that income.

wages book an accounting record that can be used to verify all wage details of employees, including gross pay, tax deducted and net pay.

Summary questions

1. 'Taxation only affects the owners of large companies.' Do you agree? Give reasons for your answer.
2. How is the profit of a sole proprietor treated when it comes to income tax?
3. Define profit under:
   a. cash accounting
   b. accrual accounting.
4. What are the two key source documents used in cash accounting? Explain the purpose of each.
5. State two source documents that may be used to:
   a. provide evidence of revenue under accrual accounting
   b. provide evidence of expenses under accrual accounting.
6. Justify the need for pre-printed sequentially numbered business documents.
7. Distinguish between the terms 'assessable income' and 'taxable income'.
8. State three examples of assessable income for a private individual.
9. State two examples of receipts by an individual that do not have to be declared as income.
10. a. Explain what is meant by the term 'allowable deduction'.
    b. What rules must a taxpayer satisfy before claiming an item as a tax deduction?
11. For each of the following occupations, state three examples of allowable tax deductions:
    a. carpenter
    b. doctor
    c. accountant.
12. State and describe three different ways for a business owner to substantiate their business expenses.
13. Outline the circumstances where a business owner can claim the use of a private car as a tax deduction.
14. State the four methods of determining a deduction for car expenses.
15. In relation to taxation, what is depreciation?

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16 State the two methods of depreciating an asset and write a brief description of each.

17 What is progressive taxation? Use an example to help explain your answer.

18 What is an income tax threshold?

19 Explain why a wages book should be kept by a small business owner.

20 What is the GST? How does it affect a small business operator?

21 Make a list of the items that must be included on a tax invoice.

22 A small business collected $2318 in GST during the quarter ended 30 June 2015. During that same period it paid GST of $2183 on its purchases. Is the business due to receive a refund or does it have a tax liability? Explain your answer fully.

23 What is a business activity statement? What is its purpose?

24 Explain how the demands of reliability relate to the preparation of a business activity statement.

Practical exercises

[Exercise 11.1] Using the personal tax rates shown below (or the latest rates if available), calculate the income tax payable on the following taxable incomes:

Personal tax rates on taxable income

Taxable income	Tax payable
$0–$6 000	Nil
$6 001–$35 000	15c for each $1 over $6 000
$35 001–$80 000	$4 350 plus 30c for each $1 over $35 000
$80 001–$180 000	$17 850 plus 38c for each $1 over $80 000
Over $180 000	$55 850 plus 45c for each $1 over $180 000

a $5 000 **b** $12 000 **c** $38 000
d $42 500 **e** $92 250 **f** $196 000.

[Exercise 11.2] David Pham is the sole proprietor of Spotswood Trailer Hire. He has kept systematic records during the year and lists the following as his cash receipts:

Hiring fees	$55 600
Capital contributions	10 000
Loan from bank	5 000
GST received	5 560

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His payments for the year were:

Rent of premises	$20 000
Advertising	2 000
Assistant's wages	10 000
Equipment repairs	2 200
Cash withdrawals	30 000
GST payments	2 420

Pham has also received the following amounts privately:

Tattslotto winnings	$5 000
Bank interest	160
Gift from parents	1 000
Interest on debentures	2 200

Pham has used his private car sometimes to deliver trailers to customers. He has a 2000 cc vehicle and has kept a logbook that shows that a total of 800 kilometres were travelled for work purposes.

In order to calculate deductions or tax payable for this question, use the rates shown in question **1** or the latest rates, if available.

a Calculate the net profit earned by the business during the year.

b State the items that would be included in Pham's assessable income and calculate the total dollar amount.

c State the items that would be allowable deductions and calculate the total dollar amount.

d Calculate Pham's taxable income.

e Calculate the income tax payable by Pham for the financial year.

f What is Pham's GST position at the end of this year? (Include the balance sheet classification of GST in your answer.)

[Exercise 11.3]

Sharon Tullio works as a plumber during the day and as a waitress part-time. She has provided the following information in regard to her taxation return:

Plumbing fees received	35 000	Bank interest	140
Wages—waitressing	12 000	Plumbers and Gasfitters Union Fees	160
Cost of parts used	12 800	Cost of overalls	60
Interest on government bonds	1 200	Petrol and oil—van	1 200
Winnings from football tipping	500	Cost of uniform (waitress)	40
GST collected	3 500	Gift to grandmother	500
Plumber's van—registration & insurance	600	Donation to Salvation Army	50
		GST paid	1 395

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a Are there any items in the list that are irrelevant to Tullio's tax return? If so, explain why each of them is irrelevant.

b Prepare an income statement to determine the profit on Tullio's plumbing business.

c Calculate the dollar amounts for Tullio's assessable income, allowable tax deductions and taxable income (show workings).

d Calculate the income tax payable on Tullio's taxable income. (Use the rates specified in question **1** or the current rates, if they are available.)

[Exercise 11.4]

The proprietor of Carlton Computer Repairs has recently bought new shop fittings to display her range of spare parts. The fittings cost her a total of $5000. She anticipates using the fittings for the next three years. Calculate the depreciation of the fittings for tax purposes for three years using:

a the prime cost method at 13% per annum

b the reducing balance method (diminishing balance method) at 20% per annum.

[Exercise 11.5]

The owner of Parade Steam Cleaning has just purchased a new motor vehicle for $32000 cash. The proprietor has asked for your assistance in calculating depreciation on this asset, as he is unsure which method should be used. Prepare a table showing the calculations over a five-year period using:

a the prime cost method at 15% per annum

b the reducing (diminishing) balance method at 22.5% per annum.

[Exercise 11.6]

The following information was provided by Willie Bin, the proprietor of Domestic Rubbish Removal, in relation to the wages of his employee, Rhys Icle. The owner pays Icle $15 per hour and he usually works a 38-hour week. Icle puts aside $20 per week from his earnings for his superannuation and he has his union fees automatically deducted from his gross pay. This deduction is $4 every week. Icle worked 38 hours in both the week ending 7 July and the week ending 14 July.

a Prepare an individual wages record and show the wages details for Icle for each of the two weeks. (Use the latest income rates available or simply apply tax at the rate of 20% of gross earnings.) Your record should show clearly the gross pay and net pay as well as all deductions made.

b From your wages record prepared in a above, identify any items that would appear in a cash book on either 7 July or 14 July. Explain the nature of such entries.

c From your wages record, identify how much income tax is owed to the government by Willie Bin, as a result of the two weeks' work by Icle.

[Exercise 11.7]

Jan Paine is the owner of Modern Upholstery and has asked for your assistance with her wages records. Paine employs Steve Bantragoulas as an assistant and pays him $18 per hour for a standard 35-hour week. If Bantragoulas works any overtime, Paine pays him double his usual wages. Over the last month, Bantragoulas has worked the following hours:

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Week ending:	7 August	35 hours
	14 August	38 hours
	21 August	40 hours
	28 August	35 hours

Bantragoulas contributes to his own superannuation fund and has arranged for it to be withdrawn from his weekly earnings. He makes a contribution of 5% of his gross pay each week. He is a member of the United Upholsterers Union and has $5 deducted from his weekly pay packet.

a Complete a wages record for Bantragoulas for the month of August 2015. (Use the latest income tax rate if available. If not, simply calculate income tax at the rate of 20% of gross pay.)

b How much has Bantragoulas contributed to his superannuation during August 2015?

c What is the total deducted for union membership during August 2015?

d How much would appear for the item 'wages' in a statement of receipts and payments for the month of August?

e What figure should be reported for 'wages' in an income statement for the month of August?

[Exercise 11.8]

The following details relate to the employees of Western Video Hire for the week ending 11 September 2015. All employees are paid at the rate of $16 per hour for the first 38 hours. Any overtime earns 1.5 times the usual rate of pay. The hours worked for the week were:

J. Belfiore	38	N. Vuong	38	J. Khouzi	40	L. Li	42

All employees contribute 2.5% of their gross pay to a superannuation fund. Belfiore and Khouzi are union members and have $4 deducted from their pay every week. Apply an income tax rate of 20% to all employees.

Prepare a computer spreadsheet to record the details of the payroll for the week ended 11 September 2015.

[Exercise 11.9]

All-Suburbs Plumbing employs four plumbers and two assistants. The plumbers are paid $22 per hour worked for up to 35 hours. All overtime is paid at double time. The assistants are paid $16 per hour for a 35-hour week, with overtime earning 1.5 times their normal pay. Strangis and Tran are union members and have $6 per week deducted from their pay for their member's fees. Serratore and Beecroft pay 5% of their gross pay into a superannuation fund, with all other employees requesting that only 2.5% be deducted from their pay for superannuation. All employees have agreed to have $3.50 withdrawn from their weekly wages to pay for a Christmas Club break-up party. The following hours were worked during October 2015.

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Week ending		9 Oct	16 Oct	23 Oct	30 Oct
Plumbers:	Serratore	38	38	35	35
	Beecroft	39	42	40	36
	Strangis	42	40	40	42
	Truong	35	35	38	40
Assistants:	Tran	35	35	38	38
	Budgen	36	35	40	35

a Prepare a weekly wages record showing gross pay, all deductions and net pay for each worker for each of the four weeks of October 2015 (assume an income tax rate of 20%).

b What is the total tax liability of All-Suburbs Plumbing for its income tax for October 2015?

c How much cash has the business paid its workers for wages during October 2015?

d Assuming that the number of employees does not change during the year, how much will be raised for the Christmas Club over 12 months?

e What is the total cost for wages expenses for October 2015?

[Exercise 11.10] For each of the following circumstances, determine the extent of the tax liability faced by the business owner or the amount of refund that would be due to her as a result of her GST transactions:

a GST collected from customers $265, GST paid on purchases $198

b GST collected from customers $625, GST paid on purchases $685

c GST collected from customers $562, GST paid on purchases $562.

[Exercise 11.11] David Hawking, the owner of Hawk the Handyman, reports his GST transactions to the taxation office on a quarterly basis. For the quarter ended 30 June 2015, the following details have been compiled from Hawking's cash journals:

GST collected on cash fees:	April	$354
	May	$386
	June	$312
GST paid on materials purchased and other expenses:	April	$120
	May	$165
	June	$111

a Is a refund due to Hawking, or does he have a tax liability at the end of June?

b If he has a tax liability, how would you classify this liability in a balance sheet prepared as at 30 June 2015? Explain your answer.

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[Exercise 11.12] Tim Cunningham is the owner of Lara Computer Repairs. Over the previous month Cunningham has made sales of $7 700, including GST collected. During the same period of time he has made cash payment of $5 500, including 10% GST. Cunningham has asked for your assistance in completing his monthly business activity statement. A modified version of a BAS has been prepared below. Use this basic format to determine Cunningham's GST liability or refund.

BAS

Total sales for the period (inc. GST) $	**Payments for the period (inc. GST) $**
GST collected (sales/11) $ A	**GST paid (payments/11) $ B**
Is the amount shown at A more than B? If yes, write the result of A – B. This amount is payable to the taxation office. Payment due (A – B) $	
Is the amount shown at B more than A? If yes, write the result of B – A. This amount is refundable to you. Refund due (B – A) $	

[Exercise 11.13] The following summary of cash transactions has been provided by Jaimee Alex, the owner of Jaimee's Gym Hire.

Summary for June:	
Cash received (including GST)	$15 484
Cash receipts not attracting GST	$6 400
Cash paid (including GST)	$16 342
Cash payments not attracting GST	$5 200

a Complete the simplified version of the business activity statement provided below to determine Alex's GST liability or GST refund.

b Explain how the GST situation should be reported in the balance sheet as at the end of June.

BAS

Total sales for the period (inc. GST) $	**Payments for the period (inc. GST) $**
GST collected (sales/11) $ A	**GST paid (payments/11) $ B**
Is the amount shown at A more than B? If yes, write the result of A – B. This amount is payable to the taxation office. Payment due (A – B) $	
Is the amount shown at B more than A? If yes, write the result of B – A. This amount is refundable to you. Refund due (B – A) $	

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CASE STUDY

PATRICIA YOUNG is the owner of Preston Car Detailing. She uses a single-entry accounting system to record her business transactions. She has appointed you to set up multi-column cash journals that will cater for her receipts and payments, including GST amounts. Young is considering using a spreadsheet for this purpose, as she is quite familiar with spreadsheet programs. The following transactions occurred during the month of April 2015.

April 1	Young started the month with a bank balance of $3980
2	Cash fees received from customers $400, plus GST of $40 (Rec. 314–317)
3	Cash fees received $380, plus GST of $38 (Rec. 318–320)
4	Cash fees received $420, plus GST of $42 (Rec. 321–324)
	Paid for an advertisement in the local paper $120, plus GST of $12 (Chq. 4232)
5	Cash fees received $550, which included GST of $50 (Rec. 325–329)
	Paid wages $450 (Chq. 4233)
8	Purchased wax and detergents for cash $250, plus GST of $25 (Chq. 4234)
	Cash fees received $390, plus GST of $39 (Rec. 330–334)
9	Received $484 from customers, which included GST of $44 (Rec. 335–338)
	Cash withdrawn by Young $600 (Chq. 4235)
10	Cash fees received $420, plus GST of $42 (339–342)
11	Received fees totalling $530, plus GST of $53 (Rec. 343–347)
12	Purchased a fax machine for the office for $660 (including GST of $60) (Chq. 4236)
	Paid wages $460 (Chq. 4237)
15	Purchased detergents for cash $190, plus GST of $19 (Chq. 4238)
16	Cash fees received $390, plus GST of $39 (Rec. 348–351)
17	Daily takings totalled $561, including GST of $51 (Rec. 352–357)
18	Paid for advertising $140, plus GST of $14 (Chq. 4239)
19	Cash fees received $400, plus GST of $40 (Rec. 358–362)
	Paid wages $450 (Chq. 4240)
23	Young cashed a cheque for personal use for $300 (Chq. 4241)
24	Cash fees received totalled $540, plus GST of $54 (Rec. 363–368)
25	Received fees $460, plus GST of $46 (Rec. 369–373)
26	Paid wages of $460 (Chq. 4242)
29	Advertising paid $280, plus $28 (Chq. 4243)
30	Cash fees received $300, plus GST of $30 (Rec. 374–377)

a Design multi-column cash journals for Young's business, taking into account the transactions listed above. (Check with your teacher whether or not the cash journals should be done on an *Excel*® spreadsheet.)

b Enter the transactions listed for April 2015.

c Prepare a statement of receipts and payments for April 2015.

d How much GST was collected from Young's customers during April 2015?

e How much GST did Young pay during April?

f Determine the extent of Young's GST liability to the taxation office after April's transactions have been completed.

g Explain why the qualitative characteristic of reliability is so important in relation to GST transactions.

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UNIT

2

Accounting for a trading business

Chapter 12

The two-fold effect of transactions on balance sheets

OBJECTIVES

At the completion of this chapter, you should be able to:

- explain what is meant by the two-fold effect of transactions
- state the two-fold effect of a variety of business transactions
- prepare a worksheet showing the two-fold effect of transactions
- prepare a balance sheet from a worksheet.

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12.1 Service firms versus trading firms

The second half of this text concentrates on accounting for trading businesses; that is, the type of business that buys and sells goods in order to make a profit. Accounting for service firms has been covered in detail in the first half of this text. Service businesses tend to be easier to account for, since there are no transactions involving the buying and selling of physical items. The items that are bought and sold by trading firms are usually referred to as **stock**, or **inventory**. As will be seen in the subsequent chapters, the demands of accounting for stock are far more complex than the simple requirements of accounting for service firms. Service businesses simply provide their services to their customers and collect their revenue. However, they will be revisited as part of the introduction to more complex business situations. This is an ideal opportunity to reemphasise the effect of transactions on the balance sheet of a small business. However, rather than prepare numerous reports one after another, this chapter introduces the use of a **worksheet** for such a purpose.

12.2 The two-fold effect of transactions on service firms

In the early stages of this text, balance sheets were prepared after every business transaction took place. This, of course, is not a realistic approach to accounting for a small business. However, it did show how each and every transaction affected the balance sheet. Two items in the report were affected in every case. Sometimes assets were affected, sometimes liabilities; and on other occasions the owner's equity changed within the report. However, on every single occasion at least two items were always affected by the transaction. This is the essence of the two-fold effect on balance sheets, as two items are always affected. If GST is involved, there will be a third item affected by each transaction. The following examples have been created to demonstrate and revisit the way in which transactions will affect the balance sheet prepared for a service-type business. In order to keep the examples as straightforward as possible, it has been assumed that the business has a GST liability (refer figure 12.1).

Figure 12.1 **The two-fold effect of transactions on the balance sheet**

Transaction	First effect	Second effect
Jun 1. Owner deposited $50 000 to commence business as Speedy Couriers	Increase cash at bank (asset) by $50 000	Increase capital (owner's equity) by $50 000
Jun 2. Took out an interest-only loan of $20 000 from EZ Finance	Increase cash at bank (asset) by $20 000	Increase loan (liability) by $20 000
Jun 3. Bought motorcycle for cash $10 000, plus GST of $1 000	Decrease cash at bank (asset) by $11 000	Increase motorcycle (asset) by $10 000 AND Decrease GST debt (liability) by $1 000
Jun 4. Purchased computer on credit for $4 000, plus GST of $400	Increase computer (asset) by $4 000 AND Decrease GST debt (liability) $400	Increase creditors (liability) by $4 400
Jun 5. Banked courier fees $15 000, plus GST of $1 500	Increase cash at bank (asset) by $16 500	Increase capital (owner's equity) by $15 000, as courier fees are classified as revenue AND Increase GST debt (liability) by $1 500
Jun 6. Paid wages for the week $1000	Decrease cash at bank (asset) by $1000	Decrease capital (owner's equity) by $1 000, as wages are classified as an expense

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Note that, regardless of the nature of the financial transaction, there are always at least two items affected in the balance sheet. The transactions listed for June 5 and 6 demonstrate the effect of revenues and expenses on owner's equity. Of course, revenues and expenses are reported in an income statement, with the overall profit being added to owner's equity in the balance sheet. Therefore, when a business receives revenue, the effect on owner's equity will be an increase, as revenues increase profits and profits are added to owner's equity at the end of the period. On the other side of the report, the cash at bank value will also increase. When an expense is paid (for example, wages) the opposite will occur. As expenses decrease profit, expenses will lead to a decrease in the owner's equity. On the assets side of the report, cash at bank will decrease when the wages are paid. Always keep in mind that revenue items will lead to an increase in owner's equity, while expense items will decrease the owner's equity as reported in the balance sheet.

Note also the effect of GST on the balance sheet of the business. If services are provided for cash, cash at bank increases. The corresponding effect is an increase in the firm's revenue, plus an increase in the GST debt of the business. If a business pays GST on the purchase of an item, such a payment causes a decrease in the GST debt of the firm.

A second way to show the effect of transactions on the balance sheet is to use a worksheet. This worksheet is based on the accounting equation, with *assets* on the left side and *liabilities* and *owner's equity* on the right side. That is, the worksheet takes its format from the T-form balance sheet. It can be used as an alternative to preparing numerous reports, one after another. The worksheet in figure 12.2 has been prepared using the transactions shown previously in figure 12.1. The difference this time is that one can see how each individual transaction will impact on the items listed in the balance sheet.

Figure 12.2 Worksheet approach: transactions and the two-fold effect on a service business

Transaction	Assets			Liabilities			Owner's equity
	Cash at bank	Motorcycle	Computer	Creditor	Loan	GST debt	Capital
Jun 1. Owner deposited $50 000 to commence business as Speedy Couriers	+$50 000						+$50 000
Jun 2. Took out an interest-only loan of $20 000 from EZ Finance	+$20 000				+$20 000		
Jun 3. Bought motorcycle for cash $10 000, plus GST of $1 000	–$11 000	+$10 000				–$1 000	
Jun 4. Purchased computer on credit for $4 000, plus GST of $400			+$4 000	+$4 400		–$400	
Jun 5. Banked courier fees $15 000, plus GST $1 500	+$16 500					+$1 500	+$15 000
Jun 6. Paid wages for the week $1 000	–$1 000						–$1 000
	$74 500	$10 000	$4 000	$4 400	$20 000	$100	$64 000

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The two-fold effect of each transaction can be clearly seen in figure 12.2. Some items have been increased while others have been decreased, but two items have been affected every time. The final results can then be tallied at the bottom of the worksheet, ready to be listed in a formal balance sheet. The results from these six transactions would be reported as in the balance sheet below.

Speedy Couriers: balance sheet as at 6 June 2015

Assets	$	*Liabilities*	$	$
Cash at bank	74 500	Creditor	4 400	
Motorcycle	10 000	Loan EZ Finance	20 000	
Computer	4 000	GST debt	100	24 500
		Owner's equity		
		Capital		64 000
	88 500			88 500

Note that the balance sheet is still based on the accounting equation of Assets = Liabilities + Owner's equity, and therefore must still balance. Keep in mind that this example has been prepared to simply demonstrate how transactions have a two-fold effect on this accounting report. This is not a practical approach to accounting for a real business, particularly one that has numerous transactions.

12.3 The two-fold effect of transactions on trading firms

Trading businesses will experience many of the transactions encountered by service firms. Both types of businesses have owners that contribute capital. They both may take out loans, and both pay expenses such as advertising and wages on a regular basis. However, a most significant difference between the two types of businesses relates to the frequent transactions involving the buying and selling of stock. The basic purpose of a trading firm is to buy and sell goods as quickly as possible in order to generate a profit. To simplify these two areas, purchases of stock will be covered first, followed by the more complex situation of selling stock.

There are two ways a trading firm may purchase its stock; namely cash purchases or credit purchases. Cash purchases, as the name implies, are purchases in which the business pays for its goods at the time of purchase. Business owners do this in some industries because of substantial discounts offered to cash clients. For example, retail outlets may have stock delivered to their door on a **C.O.D.** basis (that is, **cash on delivery**). A cheque is written out when the goods arrive and the stock is then placed on the shelves, ready for sale. The second method of buying stock is via a credit facility. Trade credit is when a supplier offers a customer a period of time to pay for the goods purchased. A typical trade credit arrangement is for the buyer to have 30 days to settle the account. This gives the retail store time to try to sell the goods to their customers before paying the supplier. The two-fold effect of these two types of purchases is shown below:

Figure 12.3 Two-fold effect of purchase transactions by a trading business

Transaction	First effect	Second effect
July 1: Bought stock for cash for $1 000, plus GST of $100	Increase stock (asset) by $1 000 AND Decrease GST debt (liability) by $100	Decrease cash at bank (asset) by $1 100
July 2: Bought stock on credit for $2 000, plus GST of $200	Increase stock (asset) by $2 000 AND Decrease GST debt (liability) by $200	Increase creditors (liability) by $2 200

Note that, in both these examples, the asset 'stock' was increased. Regardless of whether goods are purchased for cash or on credit terms, stock will always be increased as a result of these transactions. The GST debt is also reduced by both transactions because the business has to pay GST to its suppliers. These amounts of GST may be deducted from the GST collected from customers, thereby reducing the GST debt of the business. The difference between the two types of purchases is that one decreased an asset (*cash at bank*), whereas the second one increased a liability (**creditors**). Having purchased stock, the owner of a trading firm would then endeavour to sell it as soon as possible. Once again, there are two possibilities: cash and credit sales. However, there is a further complication. When stock is sold there are actually two transactions occurring within a trading firm. First, stock is being sacrificed in order to make a sale. As stock is said to have future economic benefits and is controlled by the business, it is classified as an asset. However, when it is sold it has been sacrificed and is therefore no longer an asset. The stock has actually been used up and therefore should be written off as an expense. Therefore, the change in the nature of stock is one transaction. The asset stock turns into an expense, which is referred to as **cost of sales**.

The second transaction is that of the revenue created by the sale. Once again, the two possibilities are a cash sale or a credit sale. To demonstrate both transactions that arise when goods are sold, two examples have been given in figure 12.4.

Figure 12.4 Two-fold effect of selling goods in a trading business

Transaction	First effect	Second effect
Jul 3. Sold goods for cash for $800, plus GST of $80 (cost price $500)	Increase cost of sales (expense) by $500, the cost price of the goods sacrificed AND Increase cash at bank (asset) by $880, as this is the amount actually received	Decrease stock (asset) by $500, the cost price of the goods sacrificed AND Increase owner's equity, as revenue of $800 has been earned AND Increase GST debt (liability) by $80, as this has been collected from customers
July 4. Sold goods on credit for $800, plus GST of $80 (cost price $500)	Increase cost of sales (expense) by $500, the cost price of the goods sacrificed AND Increase debtors (asset) by $880, as they now owe this amount	Decrease stock (asset) by $500, the cost price of the goods sacrificed AND Increase owner's equity, as revenue of $800 has been earned AND Increase GST debt (liability) by $80, as this has been charged to credit customers

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Note that in these examples the cost price entry is exactly the same, regardless of whether goods are sold for cash or on a credit basis. Whenever stock is sold, the asset account (stock) must be decreased and the cost price of the goods sold is transferred to the expense (cost of sales). The effect on the GST debt is also the same, regardless of whether the goods were sold for cash or on credit. The difference between the two types of sales relates to the asset that is increased when a sale is made. If stock is sold for cash, naturally the cash at bank must be increased. If customers are provided with stock on a credit basis, then debtors will be created in the balance sheet. **Debtors** are customers that have been provided credit on the basis that they will pay sometime in the near future. As debtors have a legal obligation to pay the business, they are expected to have future economic value and are therefore classified as a current asset. It is important to note that the amount that the debtors owe includes the 10% GST charged on the sale. When a credit sale is made the invoice price should be stated, the 10% GST should be included and then the total amount owing should be clearly shown.

Having demonstrated both purchases and sales of stock the two-fold effect of such transactions can now be shown in a worksheet. Please note that the examples listed in figure 12.5 on the next page are the same purchases and sales transactions used previously. However, one additional transaction has been included before these transactions in order to establish the business. Also, after the purchases and sales have been completed, there are two additional transactions involving the firm's debtors and creditors. These two events will help provide a full picture of the events faced by the management of a trading firm.

The impact of the sales made by a trading firm are listed in figure 12.5 and can be summarised in simple terms as follows:

- increase either *cash at bank* or *debtors* (with selling price)
- decrease *stock* (with cost price)
- increase *owner's equity* with the difference between cost price and selling price (that is, the profit made on the deal)
- increase the liability shown as the *GST debt*.

When stock is sold, an expense item in the form of *cost of sales* will be created. Because expenses decrease profit, the ultimate impact of this item will be a reduction in the owner's equity in the balance sheet. Therefore, the worksheet approach deducts the cost of sales from the sales revenue, with the profit on the deal being added to owner's equity.

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Figure 12.5 Worksheet approach: transactions and the two-fold effect on a trading business

Transaction	Assets			Liabilities		Owner's equity
	Cash at bank	Stock	Debtors	Creditors	GST debt	Capital
Jul 1. Owner deposited $40 000 to commence business	+$40 000					+$40 000
Jul 1. Bought stock for cash for $1000, plus GST $100	–$1 100	+$1 000			–$100	
Jul 2. Bought stock on credit for $2000, plus GST $200		+$2 000		+$2 200	–$200	
Jul 3. Sold goods for cash $2500, plus $250 GST (cost price of $1 200)	+$2 750	–$1 200			+$250	+$1 300
Jul 4. Sold goods on credit for $1200, plus $120 GST (cost price $500)		–$500	+$1 320		+$120	+$700
Jul 5. Paid creditors $600 of amount owing	–$600			–$600		
Jul 6. Received $200 from debtors	+$200		–$200			
Final results after transactions	$41 250	$1 300	$1 120	$1 600	$70	$42 000

The final results from the worksheet prepared above can then be presented in a balance sheet in the usual fashion, as shown below:

City Traders: balance sheet as at 6 July 2015

Assets	*$*	*Liabilities*	*$*	*$*
Cash at bank	41 250	Creditor	1 600	
Stock	1 300	GST debt	70	1 670
Debtors	1 120			
		Owner's equity		
		Capital		42 000
	43 670			43 670

› GLOSSARY OF TERMS

C.O.D. (cash on delivery) cash is paid for goods at the point of delivery, rather than paying when an invoice is received.

cost of sales the cost price of goods sold by a trading firm.

creditors suppliers of a business that are owed money because they have provided goods or services on credit.

debtors customers of a business that owe money because they have been sold goods or services on credit.

stock (or **inventory**) the goods purchased by a trading firm for the purpose of resale.

worksheet a means of showing the two-fold effect of transactions, which also determines the values of items to be reported in a balance sheet.

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Summary questions

1. Explain what is meant by the two-fold effect of transactions.
2. State an example of a business transaction that affects a balance sheet in the following ways:
   - **a** increases one asset and decreases another asset
   - **b** increases an asset and increases a liability
   - **c** decreases an asset and decreases a liability
   - **d** increases an asset and increases owner's equity.
3. A service business received cash fees of $1 000, plus GST of $100 and paid wages of $400. Explain how the balance sheet would be affected by these events.
4. State one benefit for a trading firm paying C.O.D. for its stock purchases.
5. Explain the advantage of buying stock using a trade credit facility.
6. State the effect on a balance sheet when a trading business buys stock for cash and pays GST.
7. Would your answer to question **6** above change at all if the purchase of stock was on credit? Explain your answer fully.
8. A trading business sold stock for $600 for cash, plus $60 GST. The cost price of the stock sold was $350. State the effect of this transaction on the firm's balance sheet.

Practical exercises

[Exercise 12.1]

Clint Stuart is the owner of Stuart's Security Services and he has provided you with the following list of transactions in his first week of business.

2015	
Jul 1	Stuart invested $25 000 cash to commence business
2	Purchased a computer for $1 500 cash, plus GST of $150
3	Provided security services at a nightclub and received $1600 cash, plus $160 GST
4	Purchased a fax machine on credit for $800 (GST $80)
5	Stuart contributed office furniture to the business valued at $500. The furniture was previously used at his private home but is no longer required
6	Provided security at a high school formal and received $900, plus $90 GST. Paid advertising $100, plus GST $10
7	Stuart withdrew $100 for personal use

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a Prepare a worksheet to show the two-fold effect of each of the above transactions. Use the following headings in your worksheet: Cash at bank, Office equipment, Office furniture, GST liability, Creditors, Capital.

b Using the final results of your worksheet from a above, prepare a balance sheet as at 7 July 2015.

[Exercise 12.2]

Diamond Valley Landscaping Services is a small business that offers its services to both commercial and domestic clients. It is owned and managed by Michelle King and has been in business for several reporting periods. King uses the accrual method of accounting and she recognises GST at the time services are provided. On 31 July 2015 the balance sheet prepared for this business showed the following values: Cash at bank $1 200, Vehicle $25 000, Equipment $5 200, Debtors $800, Creditors $400, GST liability $1 200, Loan $4 400, Capital $26 200.

During the first week of August the following events occurred:

Aug	1	Charged debtors $400, plus $40 GST
	2	Received cash fees from clients amounting to $800, plus GST $80 and paid petrol expenses of $100, plus GST of $10
	3	Paid $600 off the business loan
	4	Purchased new equipment on credit to the value of $1500, plus GST of $150
	5	Charged a commercial client $1000 for services, plus GST of $100 provided and paid wages of $400
	6	Received cash fees of $400, plus $40 GST and paid advertising $200, plus $20 GST
	7	Paid creditors $400 on account

a Prepare a worksheet to show the two-fold effect of each of the above transactions. Use the headings in the list of opening balances. (Hint: make sure you include the opening balances at the top of the worksheet.)

b Using the final results of your worksheet from part **a** above, prepare a balance sheet as at 7 August 2015.

[Exercise 12.3]

Darryl Holland has decided to open a new business trading under the name Dutchy's Paints & Wallpapers. He aims to make a profit through buying and selling a range of paints, wallpapers and assorted accessories. Holland uses the accrual method of recognising GST. The following events took place in the early stages of his business:

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Sep 1	Holland contributed cash of $30 000 and a vehicle valued at $20 000 to start the business
2	Took out a loan from Mutual Finances for $10 000
3	Purchased display equipment for $15 000 cash, plus GST of $1 500
4	Bought stock for $18 000 C.O.D., plus $1800 GST
5	Purchased stock on credit for $12 000 from Paints 'R' Us (plus GST of $1 200)
6	Sold goods for $2 000 cash, plus $200 GST (cost price of goods sold $800)
7	Sold goods for $1 000 on credit, plus $100 GST (cost price of goods sold $500)
8	Repaid $200 to Mutual Finances
9	Sold goods for $600 cash plus $60 GST (cost price $300) and paid $100 for office expenses, plus $10 GST
10	Collected $300 from debtors

a Prepare a worksheet to show the two-fold effect of each transaction listed above and use the results to prepare a balance sheet as at 10 September 2015.

b What source documents would be used by Holland in relation to the transactions on the following dates: 4, 5, 6 and 7 September?

[Exercise 12.4]

Chapel Street Furniture is a retail store owned by Laura Magill. The business has traded successfully for three years and its most recent balance sheet (prepared 30/6/15) included the following dollar values: Cash at bank $13 200, Debtors $4 200, Stock $48 000, Office furniture $6 000, Creditors $12 000 and GST liability $1 300.

The transactions listed below occurred during July 2015:

Jul 1	Bought stock on credit for $5 000, plus $500 GST
2	Received $2 200 cash from debtors on account
3	Sold furniture for $3 000 cash, plus $300 GST (cost of sale $1 400)
4	Magill withdrew stock for personal use. The stock cost $2 000
5	Paid creditors $4 000
6	Sold furniture on credit for $6 000, plus $600 GST (cost of sale $2 900)
7	Paid weekly wages of $500 to assistant
8	Magill contributed an additional $5000 cash to the business
9	Borrowed $6 000 from the National Bank
10	Cash sale of $3 000, plus $300 GST (cost price $1 600) and paid for cleaning of shop $100, plus $10 GST
11	Purchased stock for cash $2 900, plus $290 GST
12	Paid for telephone expenses $150, plus $15 GST
13	Bought a second-hand delivery van for $19 000
14	Credit sale of $5 000, plus $500 GST (cost price $2 600) and paid wages of $500

a Complete a worksheet to show the two-fold effect of all transactions listed above.

b Prepare a balance sheet as at 14 July 2015.

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[Exercise 12.5] Andy Erkihun owns and operates Andy's Discount Store. On 1 August 2015 the balance sheet of his business included the following items: Cash at bank $3 290, Stock $54 300, Debtors $7 800, Shop fittings $22 500, Creditors $3 780 and GST debt $1 800. During August the following transactions occurred:

Aug	2	Sold goods for cash $3 000 (GST $300) – cost price of sales $1 300
	4	Purchased additional shop fittings costing $2 500 for cash, plus GST of $250.
	7	Bought stock on credit for $3 400, plus $340 GST
	11	Erkihun withdrew $800 cash from the business
	13	Made a credit sale for $2 400 (plus $240 GST) – cost price $1 100
	16	Sent a cheque to a creditor for $1 280
	19	Paid advertising of $200, plus $20 GST and insurance $660 (plus $66 GST)
	23	Purchased stock for $500, plus $50 GST, paying C.O.D.
	25	Collected $1 600 from debtors
	28	Made a cash sale for $2 300, plus GST of $230 (cost of sale $1 100)

a Complete a worksheet to show the effect of all transactions listed above on the assets, liabilities and owner's equity of Andy's Discount Store.

b Prepare a balance sheet as at 31 August 2015.

c State the source document that would be used by Erkihun to evidence the following transactions: 2 August, 4 August, 7 August, 13 August and 23 August.

d Explain how the documents you listed in part **c** above help satisfy the qualitative characteristics of accounting.

Chapter 13

Price-setting strategies

OBJECTIVES

At the completion of this chapter, you should be able to:

- describe various methods of setting selling prices
- define terms such as break-even point, fixed costs, variable costs and contribution margin
- calculate a break-even point for a business proposal
- prepare a break-even graph
- determine profit over a range of business activity.

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13.1 Determining selling prices

When an individual decides to start a trading business, one of the first decisions to be made is the selling price of the goods that the business is providing. This is one of the most crucial decisions to be made by management, as prices charged to customers have a direct impact on the success of the business. Many service firms operate under a system of recommended fees (for example, doctors) and there is not much variation in their charges to customers. However, the prices of some types of service firms can vary immensely. Car repairers, building contractors, plumbers and carpenters may quote prices that differ from their competitors' prices quite markedly. In the case of trading firms, prices may also vary significantly depending on a range of factors, some of which are mentioned in the methods outlined below.

Recommended retail prices: Wholesalers often recommend a selling price as a guide to retailers. These prices are recommendations only and do not have to be followed. However, they do provide a good starting point and a retailer may choose to use recommended prices if unsure about what to do when commencing a new business. Some suppliers include their recommended retail prices on their invoices to assist managers of retail outlets. These prices should be referred to from time to time to ensure that selling prices are adjusted for increases in cost prices.

Percentage mark-up: A mark-up is the amount added to a cost price to determine a selling price. That is, a percentage mark-up determines the profit margin made on an individual item. A firm may, for example, add 100% to everything it sells. Therefore, if an item was purchased for $3, the profit margin would be $3 (100% of $3) and therefore it would be sold for $6. A product bought for $5 would have a mark-up of $5 and therefore be sold for $10. The examples in the table below demonstrate the application of other percentage mark-ups.

Mark-up of 50%

Cost	*Profit margin*	*Selling price*
$5.00	50% of $5.00 = $2.50	$5.00 + $2.50 = $7.50
$10.00	50% of $10.00 = $5.00	$10.00 + $5.00 = $15.00
$20.00	50% of $20.00 = $10.00	$20.00 + $10.00 = $30.00

Mark-up of 125%

Cost	*Profit margin*	*Selling price*
$5.00	125% of $5.00 = $6.25	$5.00 + $6.25 = $11.25
$10.00	125% of $10.00 = $12.50	$10.00 + $12.50 = $22.50
$20.00	125% of $20.00 = $25.00	$20.00 + $25.00 = $45.00

Competitors' prices: Regardless of whether a firm bases its prices on recommended retail or fixed mark-ups, they may be adjusted from time to time in reaction to competition from other similar businesses. A competitor's business may be in the next street or even in the next suburb, but it may have a drastic impact on our business if their prices are considerably lower. Some industries are highly competitive and prices are changed daily in reaction to competition. Petrol stations are a good example of this. Consumers react to price changes very quickly in this particular industry. Management must ensure that the most appropriate price is set for the day or sales may be drastically affected. In other, less volatile industries, prices may be adjusted every few months. Special promotions such as weekly specials may also be introduced as a reaction to what competitors are doing.

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Market reactions: Even if there is little competition in a particular suburb, management must always be alert to changes in buyers' tastes. The success of a small business often depends on the ability of management to 'read' the market accurately. In an economy such as Australia's, all business operators are basically fighting one another for a share of the dollars available for spending. Different markets change over time. Some businesses die out while others prosper. Managers must be willing to react to changes in the market and/or the needs of their customers. Business owners who become set in their ways and who are unwilling to change with the times may not last in the long run. Flexibility is the key to success in small business and the approach to setting prices must also be flexible.

Break-even analysis: This technique for setting prices is based on the relationship between costs, volume (number of units sold) and profit. It can be used to calculate a particular selling price in order to produce a certain level of profit. Break-even analysis is covered in detail below.

13.2 Break-even analysis

Break-even analysis is a tool that can be used by prospective business owners to evaluate a business proposal. It can also be used by established firms to set selling prices to generate a certain level of profit. In order to fully understand the workings of break-even analysis, the following terms must be defined:

- **Break-even** is the point at which revenue (income) equals expenses (costs). That is, there is no profit or loss made.
- **Fixed costs** are those expenses that are a fixed amount, regardless of the number of units sold in a period. For example, the rent of a shop may be $800 per week. It does not matter if one or one thousand units are sold; the cost of rent is fixed at $800.
- **Variable costs** are those expenses that vary directly with a change in the volume of sales. For example, if the packaging of a product costs $5 per unit, this cost increases with every unit sold. Therefore, if one unit is sold, the cost is $5. For two units the cost is $10, three cost $15, and so on.
- *Semi-variable costs* are those expenses that have both a variable and a fixed component. For example, sales staff salaries may be fixed at $30 000 per annum plus a commission of $2 for every unit sold.
- **Contribution margin** is the difference between the selling price and the variable cost of a product; that is, the amount one unit contributes towards a firm's profit. This is also known as the **variable profit per unit**.

13.3 Calculating the break-even point

When evaluating a business proposition, break-even analysis can be used to determine the number of units that need to be sold to achieve break-even. In order to demonstrate the workings of break-even, the following information relates to Josie Papaleo, who is considering opening a pizza shop.

Cost of making a pizza	$4 per unit		
	Selling price per pizza	$9 per unit	
	Weekly costs	—rent of shop	$600
		—wages	$400

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The break-even formula is:

$$\text{Break-even point (in units)} = \frac{\text{Fixed costs}}{\text{Contribution margin}}$$

or

$$= \frac{\text{Fixed costs}}{\text{Selling price} - \text{Variable costs}}$$

Applying the data from Josie's Pizza Shop, the break-even formula provides the following calculation:

$$\text{Break-even point (in units)} = \frac{\$1\,000}{\$9 - \$4}$$

$$= \frac{\$1\,000}{\$5}$$

$$= 200 \text{ pizzas}$$

This calculation tells Josie that to break even she must sell 200 pizzas in a week. Therefore, for Papaleo to earn a profit, she would have to sell in excess of this number. This break-even calculation can be checked by preparing a simple income statement, as follows:

Sales revenue	200 pizzas × $9	$1 800
less Variable costs	200 pizzas × $4	800
Gross profit		1 000
less Fixed costs		
Rent	600	
Wages	400	1 000
Net profit		$0

This statement is proof that the break-even point in units is 200 pizzas or, in terms of sales dollars, the break-even point is $1 800 (200 pizzas @ $9 each). The break-even point can also be proven by using the following mathematical equation:

$$\text{Profit} = (SP \times \text{units sold}) - (VC \times \text{units sold}) - FC$$

where SP = selling price, VC = variable cost and FC = fixed costs.

Using the data from Josie's Pizza Shop, the calculation would be:

$$\text{Profit} = (\$9 \times 200) - (\$4 \times 200) - \$1\,000$$

$$= \$1\,800 - \$800 - \$1\,000$$

$$= \$0$$

Of course, Papaleo is unlikely to be willing to work long hours in a pizza shop and risk losing her own money simply to break even. She may have a weekly profit figure in mind. The break-even formula can be modified to include a desired profit figure. For example, if Papaleo wanted to earn a profit of $800 per week, the calculation becomes:

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$$\text{Break-even point + Profit} = \frac{\text{Fixed costs + Profit}}{\text{Contribution margin}}$$

$$= \frac{\$1\,000 + \$800}{\$9 - \$4}$$

$$= \frac{\$1\,800}{\$5}$$

$$= 360 \text{ pizzas}$$

A simple income statement can again be used to prove the answer:

Sales revenue	360 pizzas × $9	$3 240
less Variable costs	360 pizzas x $4	1 440
Gross profit		1 800
less Fixed costs		1 000
Net profit		$800

The calculations shown above can be very useful to a business owner such as Papaleo. However, one vital question must still be answered: can the shop actually sell the numbers required to earn the desired profit? As part of a feasibility study, Papaleo estimated that the maximum sales that she could expect would be 300 pizzas in a week. Therefore, a target of 360 pizzas for a profit of $800 may never happen. Once a maximum turnover figure is estimated, the question becomes: at what price must she sell 300 pizzas to earn a profit of $800? By working backwards through the statement (from net profit up), the required selling price can be determined as follows:

Sales revenue	300 pizzas × $?	$3 000
less Variable costs	300 pizzas × $4	1 200
Variable profit		1 800
less Fixed costs		1 000
Net profit		$800

The above statement indicates that if Papaleo can sell only 300 pizzas in a week, she must sell them for $10 each ($3 000/300 pizzas) in order to earn the required revenue of $3 000.

Break-even analysis is based on several assumptions and the results of break-even calculations are valid only if these assumptions hold true. Break-even assumes that:

1 All goods made are sold.
2 Expenses can be divided into fixed and variable.
3 The selling price of goods will remain constant.
4 All costs are known and will remain constant.

If any one of the above assumptions fails to hold true, break-even calculations become invalid. For example, in the case of Josie's Pizza Shop, if the cost of pizzas changed from $4, all break-even figures would have to be calculated again. If any factor within the break-even formula changes, all figures become obsolete and a new break-even point will have to be determined.

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13.4 Break-even graphs

Break-even calculations are often quite repetitive. Rather than necessitating numerous mathematical calculations, break-even data can be shown on a single graph. The relationship between units sold, costs and profit can then be seen at a glance. To illustrate the relevant graphs, the original data from Josie's Pizza Shop will be used. Papaleo had variable costs of $4, a selling price of $9 and fixed costs of $1 000 per week. The first graph that can be prepared is that of fixed costs. Figure 13.1 shows the relationship between units sold and fixed costs.

It should be noted that fixed costs remain at a constant amount, regardless of the number of pizzas being sold.

Figure 13.2 illustrates the relationship between units sold and variable costs. Note how variable costs increase in direct proportion to the number of units being sold. The variable cost line always starts at the coordinates (0, 0) and increases at the rate of $4 per pizza in the case of Papaleo's business.

By joining together the fixed costs and variable costs, a graph can be prepared showing the relationship between units sold and **total costs**. Figure 13.3 shows the total costs line for Josie's Pizza Shop. Note the point at which the total cost line starts. If zero units are sold, fixed costs are still paid and therefore the total cost line always starts at the value of fixed costs (in this case $1 000).

Figure 13.1 Fixed cost graph

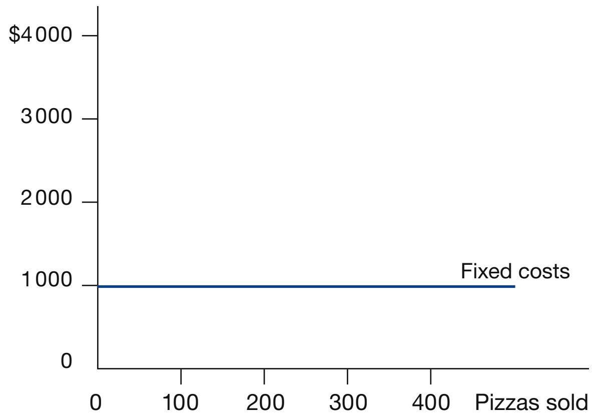


Figure 13.2 Variable cost graph

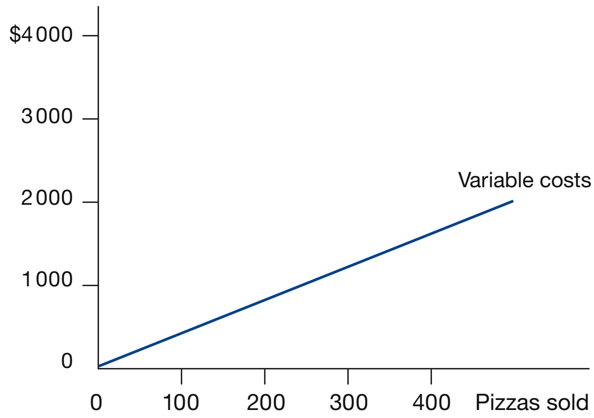


Figure 13.3 Total cost graph

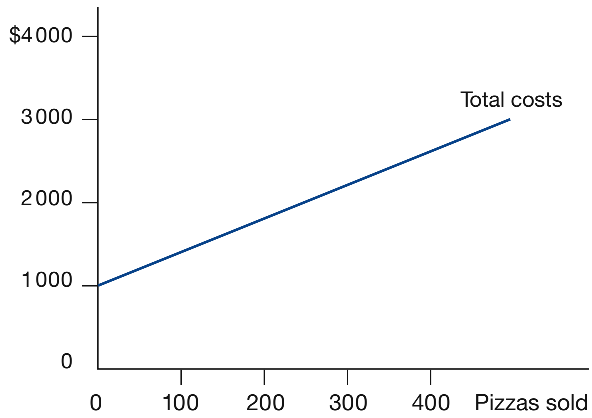
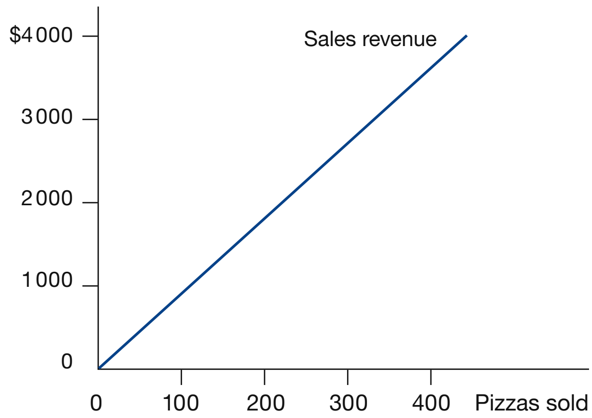


Figure 13.4 Sales revenue graph



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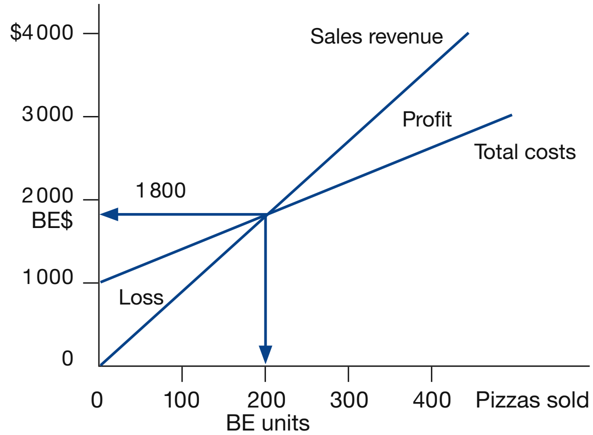
Sales revenue can also be plotted on the same type of graph. Figure 13.4 shows the relationship between the number of units sold and sales revenue earned. Note how the revenue line starts at the coordinates (0, 0) and increases at the rate of $9 for every additional pizza sold.

Although it is important that all of the above graphs be fully understood, a break-even graph relies on the use of the total costs line and the sales revenue line only. By comparing these two lines, the effect of a change in sales volume can be seen at a glance. Figure 13.5 below is the break-even graph for Josie's Pizza Shop.

Figure 13.5 Break-even graph



This graph can be used to give a profit or loss figure for all levels of turnover. Note how, once the break-even point is passed, the margin between sales and costs increases with every additional unit sold. Similarly, the lower the sales figure is below the break-even point, the greater the loss that will be incurred. This break-even graph is relevant only as long as the data remain unchanged. If one item alters (e.g. if variable costs rise to $5), a new graph will have to be prepared.

› GLOSSARY OF TERMS

break-even point the point at which the revenue of a business is exactly equal to the total expenses of the business. That is, no profit or loss is made.

contribution margin (or **variable profit per unit**) the value that each unit sold contributes towards a firm's profit. It is found by subtracting variable costs per unit from the selling price per unit.

fixed costs costs that do not change when the volume of goods sold changes; that is, expense items that do not vary when the number of units sold changes.

percentage mark-up a percentage added to a product's cost price in order to determine the product's selling price.

recommended retail price a suggested price set by a supplier for a retailer to use as a starting point when determining selling prices.

total costs the addition of fixed costs and variable costs at a specific level of sales.

variable costs costs that change directly in line with a change in sales volume.

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Summary questions

1. Explain why a business owner may elect to use recommended retail prices when determining selling prices.
2. Explain what is meant by a 'percentage mark-up'.
3. What type of business uses a mark-up? Explain your answer.
4. Define the term 'break-even point'.
5. Distinguish between fixed costs and variable costs, using an example to explain your answer.
6. State two examples of fixed costs and two examples of variable costs for a petrol station.
7. Explain what is meant by the term 'contribution margin'.
8. Consider the following statement: 'I'm not interested in break-even analysis because I'm not interested in breaking even. I want a profit!' Comment on this proprietor's understanding of break-even analysis.

Practical exercises

[Exercise 13.1] A clothing store is considering using a fixed percentage mark-up on the goods it sells. It currently sells three lines of stock with the following cost prices:

Jeans	$40
T-shirts	$10
Baseball caps	$5

Calculate the selling prices for each of the items if the following mark-ups were used:

a 50%

b 90%

c 150%

[Exercise 13.2] Paul Stewart is the owner of a book store. When setting his selling prices he sometimes follows the recommended retail prices. However, he believes that these prices are too high on some products and therefore he reduces the prices to what he feels comfortable with. A friend has suggested that he should maintain a fixed mark-up on all goods sold. Stewart says he already does on the more expensive lines, as he makes $11 clear profit on all items over $20. He has supplied the following information and has asked for your assistance.

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Stock item	Cost price	Selling price
Novels	$4.50	$9.95
Dictionaries	$12.90	$19.95
Thesauruses	$18.00	$29.00
Biographies	$22.00	$33.00
World atlases	$38.00	$49.00

a Do you agree that Stewart has applied a fixed mark-up on all items selling for $20 or more? Explain your answer.

b Calculate the actual mark-up being applied on the five types of stock being sold.

c State one advantage to Stewart of maintaining a fixed mark-up on all goods sold.

d State one disadvantage of Stewart's method of estimating selling prices.

e What other factors should Stewart take into account when setting his selling prices?

[Exercise 13.3]

The SRC at your school is considering selling a range of commemorative goods to its Year 12 students. They have decided that their first item to be sold is a rugby top. The Principal believes that the students should learn about the costs of running a business. She has therefore approved their plan and has agreed to rent out a room to the SRC at a cost of $60 per week so that they can run their small business. The estimated cost price per rugby top is $45 and it has been decided to sell them for $50. If they can make a profit the extra funds can then be used to buy other Items.

a If the SRC went ahead with its plan, how many rugby tops would have to be sold in a week to break even?

b Prepare a simple income statement to prove your answer to part **a**.

c How many rugby tops would have to be sold to earn a weekly profit of $100?

d If the SRC increased its selling price to $55, what effect would it have on the break-even point?

e If the principal increased the rent to $70, what is the new break-even point? (Assume that the selling price is $50.00.)

[Exercise 13.4]

Bill Gabriel is the owner of Exclusive Coffee Tables. He rents a workshop at a cost of $200 per week. The timber for each table costs $35 and stain costs him $5 per table. Gabriel is thinking of selling the coffee tables for $90 each.

a What are Gabriel's total fixed costs per week?

b What are the total variable costs per coffee table?

c Calculate the contribution margin per table.

d How many coffee tables does Gabriel have to sell in a week to break even?

e How many coffee tables would Gabriel have to sell in a week to earn a profit of $300?

f Prepare income statements to prove your answers to parts **d** and **e**.

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[Exercise 13.5]

Eva Amez owns the Modern Music Shop, which sells compact discs for $25 each. She pays a part-time assistant weekly wages of $140 and rents her shop at a cost of $490 per week. Each compact disc costs $16.

a Calculate the break-even point in units and in sales dollars for Amez's business.

b How many compact discs does the shop have to sell in a week to earn a profit of $450?

c If Amez drops the selling price to $22 each, what would be the new break-even point?

d If the shop sells 200 discs in a week, what selling price must be charged to earn a profit of $400?

e Prepare a graph showing fixed costs and variable costs for the Modern Music Shop. Use the horizontal axis to show units ranging from zero to 200 compact discs.

[Exercise 13.6]

The following information relates to Reliable Golf Buggies, a small business owned by Michelle Templar.

Reliable Golf Buggies: income statement for month ended 31 March 2015

	$	$
Sales of buggies		9 600
less Cost of buggies		6 400
Gross profit		3 200
less Other expenses		
Salaries	1 600	
Cleaning	400	
Rent	2 400	4 400
Net profit (loss)		(1 200)

Templar sells her golf buggies for $120 each.

a How many golf buggies did she sell during March?

b What is the variable cost per golf buggy?

c Calculate the break-even point for Reliable Golf Buggies.

d Explain why the business suffered a loss for the month of March 2015.

e Given the number of units sold during March, what selling price was necessary to achieve break-even during this month?

f If 200 buggies were sold in a month, what selling price would need to be charged to earn a profit of $4 000?

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g Using the original data, copy and complete the following table:

Units sold	Sales revenue $	Fixed costs $	Variable costs $	Total costs $	Profit (loss) $
50					
70					
90					
110					
130					
150					
170					

h Using the information in the table completed in part **g** above, prepare a graph showing sales revenue, total costs and the break-even point for Reliable Golf Buggies.

[Exercise 13.7]

Ebony Rea is a small business owner and has supplied the following information about her firm:

Victorian Video Cabinets: income statement for month ended 31 May 2015

	$	$
Sales of cabinets		7 200
less Cost of cabinets		3 840
Gross profit		3 360
less Other expenses		
Wages	2 000	
Electricity	130	
Telephone	120	
Advertising	200	2 450
Net profit		910

According to her records, Rea sold 48 cabinets during May.

a What price was Rea charging per cabinet?

b How much did Rea pay per cabinet?

c Calculate the contribution margin per cabinet.

d Calculate the break-even point in units and in sales dollars for the business.

e List any assumptions you have made in calculating your answer to part **d**.

f If Rea wants to earn a profit of $4 000 per month, how many cabinets must she sell?

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g If Rea could produce and sell only 75 cabinets per month, what selling price must be charged to earn a profit of $4 000?

h If the cost of cabinets went up by 10%, what would be the new break-even point? (Assume that the current selling price is maintained.)

i Prepare a break-even graph for Victorian Video Cabinets using the data from the May income statement. Draw a revenue line and a total cost line, and indicate the break-even point in units and in sales dollars.

j Redraw the break-even graph in part **i**, taking into account the increase in the cost of the cabinets of 10% as specified in part **h**.

[Exercise 13.8]

Darren Berry makes and sells cricket bats from his rented shop, trading under the business name of Berry's Bats. His monthly rent is $2 400. He has one assistant who receives a weekly wage of $650. His insurance expenses for the year come to a total of $1 440. Each cricket bat costs a total of $280 to make. Berry is currently selling his bats for $440 each.

a How many bats does Berry have to sell per month to break even?

b Prove your answer to part **a** by preparing an income statement.

c Berry aims to make a profit of $4 000 per month. How many bats would he need to sell to earn this profit?

d Prove your answer to part **c** by preparing an income statement.

e If Berry could produce and sell only 20 cricket bats per month, what selling price must be charged to break even?

f If Berry could increase production and make 40 bats per month, he would require a second assistant and therefore his wages expense would increase to about $1 000 per week. What price would he now need to charge in order to earn his desired profit of $4 000 per month?

g Prepare a break-even graph for Berry's Bats using the original data.

CASE STUDY

Part 1: January 2015

NICOLE STEVENS runs a small business in addition to working full-time as a receptionist at the local vet. She manufactures dog kennels to a standard design and sells them at the local craft market for $59 each. Stevens hires a workshop each Saturday at a cost of $52. This fee covers the use of the premises, as well as all the tools she requires. Stevens plans on using the workshop every Saturday of the year in order to keep up with demand for her product. She feels confident of doing this, as her grandfather has retired recently and has offered to help her out on weekends. He doesn't expect payment for his assistance. On Saturdays Stevens and her grandfather construct the kennels and complete all painting work. On Sundays Stevens has to pay $14 to gain a site at the market. The local council has advised her that the market will be closed for four weeks during the winter period. This doesn't worry her greatly, as it will provide an opportunity to catch up with production if she falls behind.

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To make one dog kennel, Stevens incurs the following costs:

» Timber: for frame and sides	$24
» Fibreglass sheeting: for roof	$12
» Paint	$8
» Nails, screws and glue	$2

a Make a list of the factors that Stevens should take into account when determining the selling price of her kennels.

b Calculate the total fixed costs that Stevens will incur in a full year of trading.

c How many kennels will Stevens have to sell in a year in order to break even? (Assume that she only sells her standard model.)

d Once her business is established, Stevens would like to make a profit of about $5000 over a full year. How many kennels would need to be made and sold to achieve this objective?

e Stevens is confident that she can complete the production of eight kennels per week. This will allow her time for both construction and painting. Does this create a problem for her business? Explain your answer fully.

f If production were restricted to a maximum production level of eight kennels per week, how much would Stevens have to sell a kennel for in order to achieve her profit objective?

Part 2: January 2016

Stevens's business is now operating quite successfully, although she hasn't achieved all of her objectives. During 2015 Stevens sold a total of 320 kennels, after she decided that she should keep her selling price at $59 each. However, she is receiving numerous enquiries for custom-made kennels. Prospective customers are bringing along their own designs and asking Stevens for quotes.

One customer has requested that she make them a double kennel, designed to house their two dogs together. She is considering their design and is trying to work out if it is feasible to make, but she is unsure about what price to charge. Stevens has been working on the following details:

» Cost of timber for frame	$2 per metre
» Timber required	14 metres
» Cost of timber panelling	$14 per kennel
» Cost of fibreglass sheeting	$12 per sheet
» Fibreglass required	1.5 sheets
» Cost of paint	$12 per kennel
» Nails, screws and glue	$4 per kennel

a Before considering new designs, Stevens would like to have a precise report on how her business performed during 2015. Prepare an income statement to determine her profit or loss for the year.

b Stevens has asked you to help her prepare a quote for the double kennel. What price would you recommend she quote for this kennel as a one-off sale? Show all of your workings and justify why you have selected your recommended price.

c Stevens is prepared to make a few double kennels and see if they sell. Make a list of the factors that she should take into account before starting on the production of a new design.

Chapter 14

Cash records for trading firms

OBJECTIVES

At the completion of this chapter, you should be able to:

- describe the basic differences between transactions for service and trading-type businesses
- identify modifications necessary to cash journals for trading firms
- describe the differences in the cash records for trading firms
- design multi-column cash journals for trading businesses
- modify cash journals to record cash flows for debtors and creditors
- record receipts and payments for trading firms in cash journals
- design and use cash journals for a trading business
- prepare a statement of receipts and payments for a trading business.

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14.1 Trading and service firms: a comparison

The basic operations of a **trading firm** involve the buying of goods for resale at a profit. While a service firm earns its revenue by providing services to its customers, trading firms earn revenue by dealing in physical goods, usually referred to as inventory or stock. Therefore, the revenue of a service firm may be given a general name, such as 'service fees', or something more specific to describe the nature of the services being provided. For example, 'video repair fees' is quite specific, as is 'car parking fees' or 'cinema admission fees'. In the case of a trading firm, the stock purchased by the business is sold to customers (hopefully at a higher price than the business originally paid!). Therefore, the term **sales** is used to describe the revenue earned in such a transaction. **Purchases** is a term used to describe the cost of stock bought with the intention of reselling it at a later stage. These two terms, 'purchases' and 'sales', are significant terms when accounting for trading firms, as they relate to the two basic transactions experienced by trading firms on a continuous basis.

Both purchases and sales may occur on a cash and credit basis. Therefore, the basic financial documents used by service-type firms will also play an important role for trading businesses. At this stage it is important to revisit the purpose of each of the main business documents. They are:

Purchase invoice: this document is used to provide evidence of a credit purchase of inventory. The supplier of the goods provides the **purchase invoice** to the trading firm. In the example in figure 14.1, the trading firm of Watson's Golf Shop has purchased goods on credit from PGF Golf Company.

Figure 14.1 Purchase invoice

PGF GOLF CO.
365 FAIRWAY DRIVE
BOGIEVILLE 3916

TAX INVOICE 81250

DATE: 27/8/15

SOLD TO: WATSON'S GOLF SHOP
12 EAGLE ROAD
HUNTINGDALE 3166

TERMS: STRICTLY 30 DAYS

Qty	Description	Value $	Total $
5	Full sets		
	Never Slice clubs	400	2 000.00
	PLUS GST 10%		200.00
Total of this invoice			2 200.00

Sales invoice: this invoice is issued by the trading firm to a customer when a credit sale has been made. Its format may be very similar to the purchase invoice, except that in this case the trading firm will issue the **sales invoice** to the customer. A copy should be kept by the firm for its own records. An example of a sales invoice for Watson's Golf Shop appears in figure 14.2.

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Figure 14.2 Sales invoice

WATSON'S GOLF SHOP
12 EAGLE ROAD
HUNTINGDALE 3166

TAX INVOICE 60012

DATE: 3/9/15

SOLD TO: R. INTERDONATO
3 NORMAN AVENUE
MELBOURNE 3000

Terms: Strictly 30 days

Qty	Description	Value $	Total $
1 set	Never Slice clubs	750	750.00
1 doz.	Top-Flite balls	30	30.00
Subtotal			780.00
Plus 10% GST			78.00
TOTAL CHARGED			858.00

Cheque (cheque butt): these are used in exactly the same way as they are by service firms. Cheques should be used for all payments of cash and can be used to pay expenses, buy assets, repay loans and pay creditors, and for cash withdrawals by the owner. When a cheque is written out, its details should be immediately copied on to the **cheque butt**. This is vital, because the cheque butt is used as the source document to provide evidence of all cash payments. When Watson's Golf Shop pays PGF Golf for the purchase made on 27 August 2015, the cheque butt details will be as shown in figure 14.3.

Cash receipts: these are also used in the same way as they are by service firms. Receipts are issued when cash flows into the business. This will usually occur as a result of a cash sale, or when a debt is collected from a debtor as a result of a credit sale being made at an earlier time. In the case of Watson's Golf Shop, when R. Interdonato paid the amount owing on invoice number 60012, the following **cash receipt** was issued (figure 14.4).

Figure 14.3 Cheque butt

DATE: 4/9/15
PAYEE: PGF Golf Co.
FOR: Creditors (stock)
(Inv. 81250)
BAL. B/F: $5000.00
THIS CHQ.: $2200.00
BAL C/F: $2800.00
999122

Figure 14.4 Cash receipt

WATSON'S GOLF SHOP REC. 3985
12 EAGLE ROAD
HUNTINGDALE 3166
RECEIVED FROM: R. Interdonato
THE AMOUNT OF: Eight hundred and fifty-eight DOLLARS
– CENTS
FOR: On account—Inv. 60012
$858.00
SIGNED: T. Watson DATE: 5/9/15

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14.2 Cash receipts and cash payments journals

Recording cash receipts

As is the case with any accounting record, the cash receipts journal for a trading firm should be designed to suit the needs of the business. As outlined above, the item *service fees* (service firms) is replaced by *sales* (trading firms). A cash receipts journal may be simple in design or it may be prepared as a multi-column record. The design must, however, be able to accommodate the GST collected on the sale of goods. The simple form of a cash receipts journal for a trading business is shown in figure 14.5.

Figure 14.5 Cash receipts journal: simple version

Watson's Golf Shop: cash receipts journal (basic version)

Date	Details	Receipt no.	Amount banked $	Amount received $	GST received $
Oct 1	Capital		6 000	6 000	
2	Cash sale—clubs	4001	660	600	60
4	Cash sale—accessories	4002	88	80	8
6	Cash sale—clothing	4003	77	70	7
9	Cash sale—clubs	4004	715	650	65
11	Loan—EZ Finance		5 000	5 000	
13	Cash sale—clothing	4005	165	150	15
14	Cash sale—clubs	4006	825	750	75
15	Cash sale—clothing	4007	330	300	30
17	Cash sale—accessories	4009	110	100	10
19	Cash sale—accessories	4010	88	80	8
21	Cash sales—clubs	4011	572	520	52
24	Cash sale—clubs	4012	198	180	18
27	Cash sale—clothing	4013	99	90	9
31	Cash sale—accessories	4014	88	80	8
31	Totals		15 015	14 650	365

The cash receipts journal shown above is very similar to that shown earlier in this text for service type businesses. The obvious difference is in the Details column. Rather than recording fees received, the above journal has been used to record a variety of cash sales. The GST collected on these sales has been recorded (where appropriate) and the total cash actually received has been shown. As with all accounting records, the source document should always be noted, if one is available. When an owner contributes cash as capital, or when a loan is taken out (refer 1 and 11 October in the above journal), a receipt would not normally be issued. However, with these two exceptions, the receipt numbers run in sequence and therefore it is quite easy to check that all receipts are accounted for. In larger firms, a cash register summary may be prepared and the abbreviation CRS may be entered in the receipts journal as a total for the day. Although the simple version of the cash receipts journal demonstrated above serves

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the basic purpose for which it was designed, a **multi-column journal** is usually preferred by small business owners. The above journal can be redesigned with special columns to provide a summary of key transactions. A multi-column journal is shown in figure 14.6.

Figure 14.6 Cash receipts journal: multi-column version

Watson's Golf Shop: cash receipts journal

Date	Details	Receipt no.	Amount banked $	Sales			Sundry receipts $	GST received $
				Clubs $	Clothing $	Accessories $		
Oct 1	Capital		6000				6000	
2	Cash sales	4001	660	600				60
4	Cash sales	4002	88			80		8
6	Cash sales	4003	77		70			7
9	Cash sales	4004	715	650				65
11	Loan—EZ Finance		5000				5000	
13	Cash sales	4005	165		150			15
14	Cash sales	4006	825	750				75
15	Cash sales	4007	330		300			30
17	Cash sales	4009	110			100		10
19	Cash sales	4010	88			80		8
21	Cash sales	4011	572	520				52
24	Cash sales	4012	198	180				18
27	Cash sales	4013	99		90			9
31	Cash sales	4014	88			80		8
31	Totals		15015	2700	610	340	11000	365

It is timely at this stage to again state the benefits of multi-column cash journals. The obvious benefit of the multi-column version shown in figure 14.6 is the summarised data available at the bottom of the record. As can be seen in figure 14.6, totals are readily available for the key items. The owner of Watson's Golf Shop can find totals for sales of clubs, clothing and accessories very quickly, particularly if this journal is prepared on a spreadsheet. The second advantage of the multi-column journal is that the totals at the bottom of the record can be added and checked against the total of the Amount banked column. This ensures that basic recording errors have not been made in the preparation of the journal.

Recording cash payments

As was the case with the cash receipts journal, a cash payments journal may be designed as a simple record or it may contain special columns for frequently occurring transactions. To keep control over the cash payments of a business, it is important to use a cheque when making a payment. In the cash payments journal all cheque numbers should then be recorded to ensure that all payments are accounted for. The difference between a payments journal for a trading firm and a payments journal for a service firm may appear to be a very small one. Some service firms record cash purchases in relation to materials purchased. Such materials are used in order to provide services to customers. For example, a carpenter may have cash purchases of building

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materials on a regular basis. An electrician may have to purchase electrical parts in order to complete jobs for customers. The difference for trading firms lies in the purpose of the purchases made. In relation to trading business, the term 'purchases' is used for those products intended to be resold in the normal course of business. Therefore, although the terms are similar, the meaning is quite different for the two types of businesses. Keeping this point in mind, a simple version of a cash payments journal for a trading firm is shown in figure 14.7.

Figure 14.7 **Cash payments journal: simple version**

Watson's Golf Shop: cash payments journal

Date	Details	Cheque no.	Total paid $	Amount paid $	GST paid $
Oct 1	Advertising	34001	550	500	50
2	Wages	34002	450	450	
3	Stationery	34003	110	100	10
5	Drawings	34004	500	500	
7	Stock	34005	880	800	80
9	Wages	34006	450	450	
9	Advertising	34007	550	500	50
10	Computer	34008	3 300	3 000	300
16	Wages	34009	500	500	
17	Advertising	34010	660	600	60
19	Stock	34011	770	700	70
23	Wages	34012	450	450	
24	Drawings	34013	650	650	
25	Shop fittings	34014	1 540	1 400	140
26	Advertising	34015	660	600	60
28	Drawings	34016	400	400	
30	Wages	34017	500	500	
31	Totals		12 920	12 100	820

The cash payments journal shown above provides the absolute bare essentials in terms of an accounting record. It does provide for cheque numbers to be noted and the type of payment can also be shown. However, it can be improved by the multi-column approach, using special columns to classify the cash payments into various categories. Figure 14.8 (on the next page) uses the same data as shown in figure 14.7, but records the transactions under the special headings.

Note the use of the column headed 'Assets' in the payments journal in figure 14.8. As non-current assets may be purchased for cash (for example, the computer on 10 October), such payments must be accounted for in the payments journal. However, it is important that purchases of assets are not mixed up with expenses, and therefore a separate column may be used. When preparing a statement of receipts and payments it is acceptable to simply state the total cash paid out for new assets. The details of the assets purchased are not usually required when looking at cash flows for a period. Therefore, the total of the Assets column may be shown as one item in a statement of receipts and payments. If using a computer spreadsheet to record cash payments, the Assets column can simply be transferred to the statement of receipts and payments as one total, thereby making the preparation of the report much easier.

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Figure 14.8 Cash payments journal: multi-column version

Watson's Golf Shop: cash payments journal

Date	Details	Chq. no.	Total paid $	Adv. $	Wages $	Stock $	Other exp. $	Drawings $	Assets $	Sundry payts $	GST paid $
Oct 1	Advertising	34001	550	500							50
2	Wages	34002	450		450						
3	Stationery	34003	110				100				10
5	Drawings	34004	500					500			
7	Stock	34005	880			800					80
9	Wages	34006	450		450						
9	Advertising	34007	550	500							50
10	Computer	34008	3 300						3 000		300
16	Wages	34009	500		500						
17	Advertising	34010	660	600							60
19	Stock	34011	770			700					70
23	Wages	34012	450		450						
24	Drawings	34013	650					650			
25	Shop fittings	34014	1 540						1 400		140
26	Advertising	34015	660	600							60
28	Drawings	34016	400					400			
30	Wages	34017	500		500						
31	Totals		12 920	2 200	2 350	1 500	100	1 550	4 400		820

Note also the column headed 'Other expenses'. Such a column should always be available to record the payments of expenses that only occur on an occasional basis. A business owner may not be able to predict each and every expense item that will be paid in the future. The Other expenses column can then be used to record any unexpected costs or very minor items that may occur from time to time. The payment of $100 for stationery has been recorded in Other expenses because it would not warrant its own column. It is a comparatively small amount and would not be expected to occur on a frequent basis. It is quite acceptable to record such cash payments under the general heading of Other expenses.

14.3 Cash journals: recording for debtors and creditors

It is common practice for many trading firms to both buy and sell goods on credit. If goods are purchased on credit from a supplier, the firm undertakes a promise to make a cash payment at a later stage. When goods are sold on credit to a customer, cash will hopefully be received at a later date from the credit customer (that is, the debtor). However, in the cash journals shown so far in this chapter, no provision has been made for recording the cash flows involving debtors and creditors. A minor modification needs to be made to the cash journals if a trading firm either buys or sells on credit. In figure 14.8 cash purchases of inventory were shown on two occasions (7 and 19 October). Such cash purchases of stock should be kept separate from any cash payments to creditors for credit purchases made at an earlier date. All that is required is the creation of an additional column headed 'Creditors'. Any time cash is paid to creditors, this

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column should be used to record the amount of cash paid out. The payments journal of Watson's Golf Shop has been modified with this additional column and is shown below in figure 14.9.

Figure 14.9 Cash payments journal with column for creditors (extract)

Watson's Golf Shop: cash payments journal

Date	Details	Chq. no.	Total paid $	Creditors $	Advert. $	Wages $	Stock $	Other expenses $	Drawings $	Assets $	Sundry pay. $	GST paid $
Nov 1	Insurance	34018	440					400				40
2	Stock	34019	550				500					50
3	S. Roberts	34020	2 500	2 500								
4	Stock	34021	660				600					60
	Breen P/L	34022	1 000	1 000								

A similar modification is also necessary if a trading firm decides to provide credit to its customers. The cash receipts journals shown earlier in this chapter do not provide a suitable column to record receipts from credit transactions. The introduction of a Debtors column is necessary if management decides to sell on credit. The cash receipts journal shown in figure 14.10 below is a modified version of the multi-column receipts journal shown earlier in this chapter for Watson's Golf Shop.

Figure 14.10 Cash receipts journal with column for debtors (extract)

Watson's Golf Shop: cash receipts journal

Date	Details	Receipt no.	Amount banked $	Debtors $	Sales			Sundry rec. $	GST received $
					Clubs $	Clothing $	Access. $		
Nov 1	Cash sales	4015	660		600				60
2	Cash sales	4016	110			100			10
3	E. Cartman	4017	1 200	1 200					
4	Cash sales	4018	132				120		12
5	S. Marsh	4019	800	800					
6	Loan		5 000					5 000	

As with the previous cash receipts journals shown in this text, it is still possible to subdivide the cash sales into special areas or departments. This provides management with additional information in relation to the sales being made on a daily basis. The only difference in the journal shown in figure 14.10 is the extra column for debtors. When selling on credit it is crucial to record cash received from debtors accurately. Credit accounts must be watched closely and unpaid debts must be followed up to ensure that debtors pay within a reasonable amount of time. The other important point to note at this stage is in relation to the GST. The GST charged to debtors will be created at the time when an invoice is issued. It is important that GST is not recorded twice. Therefore, when a debtor pays an amount owing, the GST column is not used. The special column for debtors provides easy access to details of all cash received from credit customers. The recording of transactions in relation to debtors and creditors is a topic in itself and is covered in detail in chapter 16 of this text.

14.4 Statements of receipts and payments

A statement of receipts and payments should be prepared on a regular basis for a trading firm. As this report is used to summarise cash inflows and outflows for a period, the manager of the trading firm can use the statement of receipts and payments to review the inflows resulting from the sale of goods, compared to the outflow for the purchase of goods and payments for expenses. The statement is prepared in exactly the same manner as it was for service firms. The difference between the two types of businesses is simply the nature of the items included in the report. Cash sales and cash purchases are the two key items reported in the cash flows for a trading firm. If the business buys or sells on credit, the cash flows resulting from such credit transactions would also be seen as important items. Using the cash journals previously demonstrated for Watson's Golf Shop, the statement of receipts and payments for the month of October 2015 would be prepared as shown in figure 14.11 (assuming that the business had $5 000 in the bank as at 1 October 2015).

Figure 14.11 Statement of receipts and payments

Watson's Golf Shop: statement of receipts and payments for month ended 31 October 2015

Cash receipts	*$*	*$*
Sales—Golf clubs		2 700
—Golf clothing		610
—Accessories		340
Capital contribution		6 000
Loan—EZ Finance		5 000
GST collected		365
		15 015
Cash payments		
Advertising	2 200	
Wages	2 350	
Stock	1 500	
Other expenses	100	
Drawings	1 550	
Purchase of assets	4 400	
GST paid	820	12 920
Excess of receipts over payments		2 095
Bank balance (1 October 2015)		5 000
Bank balance (31 October 2015)		7 095

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Remember that the heading on this accounting report should include the name of the business and the length of the reporting period under examination. The manager of a trading firm may prepare such a statement on a monthly basis, or perhaps even weekly, to analyse the performance of the business in terms of receipts and payments. This report provides a summary of all cash transactions over a period of time and includes vital information about the sources of cash receipts as well as the purposes for which cash was used. Note that the items that were recorded in the columns headed 'Other expenses' and 'Assets' in the cash payments journal have been listed as totals in the statement of receipts and payments. If a spreadsheet is used to prepare the cash journals, the total of the column can simply be transferred from one cell in the journal to another cell in the statement of receipts and payments. In a manual system the individual items in a column headed 'Other expenses' may be listed individually when preparing a statement of receipts and payments.

› GLOSSARY OF TERMS

cash receipt a document used to verify the receipt of cash by a business.

cheque butt a document used to verify details of a cash payment made by cheque.

multi-column journal a journal designed to cater for frequently occurring transactions by having special columns for repetitive events.

purchase invoice a business document received by a trading firm from a supplier (creditor) when inventory is purchased on credit.

purchases transactions involving the acquisition of inventory products (stock) by a trading firm.

sales the revenue earned by a trading firm through the provision of goods to its customers.

sales invoice a business document issued by a trading firm to a customer (debtor) when inventory is sold on credit.

trading firm a type of business that earns its revenue through the buying and selling of goods.

Summary questions

1. Explain the fundamental difference between the operations of a service firm and a trading firm.
2. What is the difference between a sales invoice and a purchase invoice? Explain your answer using names of trading firms.
3. Ace Computers buys in bulk from Oz Computer Suppliers and has sold a computer on credit to Brunswick Primary School. In relation to both purchase and sales invoices, would Ace Computers have original documents or copies of the two types of invoices? Explain your answer.
4. Describe the differences between a cash receipts journal for a service firm compared to a cash receipts journal for a trading firm.
5. A cash payments journal for a trading firm is basically the same as that used by service businesses. Do you agree? Justify your answer.
6. A cash receipts journal may be a simple version or a multi-column version. Would any business managers use the simple version of this journal? Explain your answer.
7. State the two benefits gained by the use of a multi-column cash journal.

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8 Matthew Cooke has just started business as a retailer, selling furniture. State the headings you would recommend Cooke use in his cash receipts journal and his cash payments journal.

9 Jill Ryan is the new owner of a clothing store. Will she be able to use the same headings as those you suggested for Cooke's business in question **8** above? Explain fully.

10 Explain the purpose of the Other expenses column in a multi-column cash payments journal.

11 If a trading firm buys and sells on credit, what modifications is it necessary to make to its cash journals?

12 How often should the manager of a trading firm prepare a statement of receipts and payments? Give reasons for your answer.

Practical exercises

[Exercise 14.1] The following transactions relate to Williamstown Electricals for the first two weeks of July 2015.

Receipts			
	Jul 1	Capital	$10 000
	3	Cash sale (Rec. 101)	$800 plus $80 GST
	4	Cash sale (Rec. 102)	$500 plus $50 GST
	5	Cash sale (Rec. 103)	$640 plus $64 GST
		Cash sale (Rec. 104)	$820 plus $82 GST
	6	Loan—YQ Finance	$6 500
	8	Cash sale (Rec. 105)	$810 plus $81 GST
	9	Cash sale (Rec. 106)	$670 plus $67 GST
	11	Cash sale (Rec. 107)	$750 plus $75 GST
	14	Cash sale (Rec. 108)	$900 plus $90 GST
Payments			
	Jul 1	Cash purchases of stock (Chq. 5401)	$2500 plus $250 GST
	2	Fax machine (Chq. 5402)	$1800 plus $180 GST
	3	Wages (Chq. 5403)	$490
	4	Drawings (Chq. 5404)	$500
	5	Advertising (Chq. 5405)	$350 plus $35 GST
	8	Cash purchases of stock (Chq. 5406)	$2 300 plus $230 GST
	10	Wages (Chq. 5407)	$480
	14	Drawings (Chq. 5408)	$800

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a Prepare a simple cash receipts journal with columns for Date, Details, Receipt number, Amount banked, Amount received and GST received.

b Prepare a simple cash payments journal with columns for Date, Details, Cheque number, Total paid, Amount paid and GST paid.

c Prepare a statement of receipts and payments for the two weeks ended 14 July 2015, showing a summary of the firm's cash transactions and the bank balance at that date.

[Exercise 14.2]

Pat's Outdoor Furniture is a small business that sells both furniture and barbecues. On 1 August 2015 the business had $3400 in its bank account. During the first two weeks of August the following transactions took place:

Aug 1	Received $900, plus $90 GST from D. Cresswell for a furniture setting: cash sale (Rec. 181)
2	Sold a barbecue for $450 cash, plus $45 GST (Rec. 182) to P. Guest
3	Paid rent for week $900, plus $90 GST (Chq. 4441)
	Received $800 (plus GST $80) from K. Doyle for a furniture sale (Rec. 183) and $550 for a barbecue sold to A. Johnson, including $50 GST (Rec. 184)
4	Cash purchases of deck chairs $840, plus $84 GST (Chq. 4442)
5	Received $600, plus $60 GST, for a cash sale of furniture (Rec. 185)
7	Cash sale of furniture to A. Phung $550, including $50 GST (Rec. 186)
	The proprietor withdrew $450 for personal use (Chq. 4443)
9	Purchased stock for cash $1 480, plus $148 GST (Chq. 4444)
10	Paid weekly rent $900 + $90 GST (Chq. 4445)
11	Cash sale of furniture of $160 plus $16 GST (Rec. 187)
13	Received $80 for sale of two chairs to P. McCuskey (GST received $8, Rec. 188)
14	Cash withdrawal by the owner $250 (Chq. 4446)
	Sold a barbecue to S. Burgess for $560 (Rec.189, GST collected $56)

a Prepare simple versions of cash receipts and cash payments journals for Pat's Outdoor Furniture.

b Redraft your journals in part **a** to a multi-column format.

c Prepare a statement of receipts and payments for the fortnight ended 14 August 2015.

d State two advantages of using multi-column cash journals.

[Exercise 14.3]

Connie's Computers is a small business that sells computers, printers and accessories. On 1 September 2015 the firm had a bank overdraft of $830. The following transactions occurred during the month of September 2015.

Sep	2	Sold a computer for $2200 cash, plus $220 GST (Receipt no. 891)
	2	Purchased goods on credit from Computer Solutions for $4200, plus $420 GST (Inv. 12234)
	3	Paid advertising $340 + $34 GST (Chq. 2813)
	4	Received $460 for sale of a printer (GST collected $46, Rec. 892)
	5	Paid weekly wages $540 (Chq. 2814)
	7	Received $2100 for cash sale of computer (Rec. 893, GST received $210)
	8	Sold accessories for $140 cash, plus $14 GST (Rec. 894)
	9	Purchased accessories for cash $630, plus $63 GST (Chq. 2815)
	10	Paid supplier for last month's credit purchases $4 300 (Chq. 2816)
	10	Paid for advertising in local paper $340, plus $34 GST (Chq. 2817)
	10	Negotiated with the bank for an increase in the overdraft limit to $8000
	11	Received $600 for a printer (Rec. 895) GST collected $60
	12	Sold a computer for $2430, plus $243 GST (Rec. 896) and a printer for $550, including $50 GST (Rec. 897)
	12	Paid weekly wages $560 (Chq. 2818)
	12	Bought new cash register for $1200, plus GST of $120 (Chq. 2819)
	13	The proprietor cashed a cheque for $450 for personal use (Chq. 2820)
	13	Sold a printer for $490 (GST $49, Rec. 898) and accessories for $110 (GST $11, Rec. 899)
	14	Sold a computer for $2500 cash, plus $250 GST (Rec. 900)
	14	Cash purchases of stock $600, plus GST of $60 (Chq. 2821) and paid creditors for purchases made on 2 September $4 620 (Chq. 2822)
	14	The owner withdrew $860 (Chq. 2823)

a Design multi-column cash journals for Connie's Computers and then record the above transactions in these journals.

b Prepare a statement of receipts and payments to summarise the two weeks' cash transactions.

[Exercise 14.4]

Tim's Vans is a small business that specialises in caravan sales. The business stocks three different models: the standard, the deluxe and the prestige models. On 1 October 2015 the business had cash at bank of $4300. The following transactions took place during October 2015:

Credit transactions

Oct 1 Received invoice number 73754 from Oz Caravans for $72 400, plus GST of $7 240

3 Sold one standard van to P. Camilleri on credit for $12 800, plus $1 280 GST (Inv. 83844)

12 Issued invoice 83845 to T. Franklin for $16 500 for one deluxe caravan (plus $1 650 GST)

19 Purchased stock from Oz Caravans for a total cost of $82 600 (Inv. 73762) GST charged was $8 260

Cash receipts

2 Sold a standard model for $12 000 cash, plus $1 200 GST (Rec. 838)

4 Sold one deluxe for $16 500 + $1 650 GST (Rec. 839) and one standard for $11 800 + $1 180 GST (Rec. 840)

6 Sold one standard for $12 000, plus GST of $1 200 (Rec. 841)

7 Cash sales: one prestige model for $22 000 + $2 200 GST (Rec. 842) and one standard for $12 200 + $1 220 GST (Rec. 843)

9 Sold one deluxe model for $16 850, plus GST of $1 685 (Rec. 844)

10 The owner contributed an extra $5 000 cash to the business

11 Received $8 000 from P. Camilleri (Rec. 845)

12 Sold a standard caravan for $11 900, plus $1190 GST (Rec. 846)

14 One prestige van was sold for $21 500 cash, plus $2 150 GST (Rec. 847)

17 Borrowed $10 000 from the Quick Fix Finance Co.

19 Sold one deluxe and one standard (Rec. 848 for $16 900 + $1 690 GST and Rec. 849 for $11 900 + $1 190 GST)

22 Sold a prestige model for $22 500 cash, plus $2 250 GST (Rec. 850)

24 Collected $5 000 on debt owed by T. Franklin (Rec. 851)

26 Sold a deluxe van for $16 500, plus $1650 GST (Rec. 852)

31 One prestige van was sold for $22 600 + GST of $2 260 (Rec. 853)

Cash payments

3 Paid fortnight's rent of property $3 000 plus $300 GST (Chq. 95999)

5 Paid wages of assistant $480 (Chq. 96000)

6 Owner withdrew $1 200 by cashing cheque no. 96001

8 Sent a cheque to Oz Caravans for $12 000 (Chq. 96002)

12 Weekly wages were paid $520 (Chq. 96003)

14 Advertising paid $550, plus $55 GST (Chq. 96004)

17 Paid rent $3 000 + $300 GST (Chq. 96005)

19 Paid wages $490 (Chq. 96006)

22 Cheque no. 96007 for $22 000 was sent to Oz Caravans

26 Wages of $560 were paid by cheque no. 96008

27 The proprietor withdrew $900 (Chq. no. 96009)

31 Paid advertising $550, plus $55 GST (Chq. 96010)

a Select the relevant items from those listed above and prepare cash journals for Tim's Vans for the month of October 2015. Use appropriate columns for recurring items.

b Prepare a statement of receipts and payments for the month of October 2015.

[Exercise 14.5]

Lucas Elliott is the proprietor of Elliott's Electric Tools, a small business that sells electric drills, saws and sanders. The following transactions occurred during the month of August 2015:

Receipts		
Aug 1	Loan from Bonney Finance Co.	$20 000
3	Cash sale of one drill (Rec. 555)	$100 plus $10 GST
4	Sold a sander for cash (Rec. 556)	$80 plus $8 GST
5	Cash sale—one drill (Rec. 557)	$100 plus $10 GST
	Cash sale—one electric saw (Rec. 558)	$120 plus $12 GST
6	Additional capital contributed by Elliott	$12 500
8	Sold a sander for cash (Rec. 559)	$90 plus $9 GST
11	Cash sale—one drill (Rec. 560)	$100 plus $10 GST
14	Cash sale—one sander (Rec. 561)	$80 plus $8 GST
18	Sold a drill for cash (Rec. 562)	$110 plus $11 GST
21	Receipt 563 issued for sale of saw	$120 + $12 GST
25	Cash sale—electric saw (Rec. 564)	$130 + GST of $13
29	Sold a sander for cash (Rec. 565)	$90 plus $9 GST
31	Cash sale—two drills for $210	GST $21 (Rec. 566)
Payments		
Aug 1	Cash drawings (Chq. 8888)	$1 200
2	Advertising for month (Chq. 8889)	$1 200 plus $120 GST
4	Cash purchases of stock items (Chq. 8890)	$3 000 + $300 GST
7	Paid weekly wages (Chq. 8891)	$640
10	Bought new cash register (Chq. 8892)	$690 plus $69 GST
12	Cash purchases of stock (Chq. 8893)	$1 800 plus $180 GST
14	Weekly wages (Chq. 8894)	$650
17	Owner withdrew cash (Chq. 8895)	$800
20	Chq. 8896 written out for insurance	$820 plus $82 GST
21	Wages paid for week (Chq. 8897)	$580
23	Bought stock with Chq. 8898	$600 + GST of $60
25	Paid accounting fees (Chq. 8899)	$470 plus $47 GST
28	Paid wages (Chq. 8900)	$720

a Design multi-column cash journals for Elliott's Electric Tools and record the above transactions in these journals.

b Prepare a statement of receipts and payments for the month ended 31 August 2015, showing a summary of the firm's cash transactions and the bank balance at that date. Note: the business had an overdraft of $300 as at 1 August 2015.

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[Exercise 14.6]

Claudette Dallas owns a retail outlet trading under the name Dallas Locks. She has asked you to design suitable multi-column cash journals for her business. Dallas has $1 520 cash in the bank at the start of September 2015. She uses a summary from her cash register to record her cash sales and has asked you to make the notation 'CRS' in her receipts journal. The following events took place during September:

Sep 2	Sold goods for cash $450, plus $45 GST
4	Paid security company weekly fee (cheque 7155) $80 plus $8 GST
5	Sold goods for cash $650 + $65 GST
6	Bought stock items on credit from Locks 'R' Us $2 100, plus $210 GST (Inv. 675)
7	Cash sales were banked $890 plus $89 GST
9	Received interest from term deposit $45
10	Bought stock for cash $560 + $56 GST (Chq. 7156)
11	Cash sales amounted to $430 plus GST of $43
11	Cheque no. 7157 for security expenses $80 + $8 GST
13	Received $508 owing from Debtor—Slater (Rec. 701)
14	Sold goods for cash $450 plus $45 GST
15	Dallas withdrew $900 for personal use (Chq. 7158)
16	Cash sales $880, GST collected $88
17	Bought goods for cash $760, GST paid $76 (Chq. 7159)
18	Paid security company $80 plus $8 GST (Chq. 7160)
20	Purchased goods on credit from Locks Incorporated for $1 230, plus $123 GST (Invoice 3124 was received from the supplier)
22	Banked cash sales $660, including $60 GST
23	Dallas withdrew $500 for personal spending (Chq. 7161)
24	Total sales made to cash customers were $870, plus $87 GST
25	Security expenses paid by cheque (no. 7162) $88, including $8 GST
27	Collected money owing from Debtor—Carlson $1 200
28	Paid $440 cash for a new colour printer for the office (Chq. 7163). The payment included GST of $40. Dallas jumped at the opportunity as he had seen the exact same printer advertised for $525
29	Cash sales banked $540, plus $54 GST
30	Paid Locks 'R' Us $600 on account (Chq. 7164)

a Prepare a suitably designed cash receipts journal for Dallas Locks, select the relevant information from that listed above and enter all receipts for the month of September 2015.

b Design a multi-column cash payments journal for Dallas Locks and enter the relevant transactions for September 2015.

c Prepare a statement of receipts and payments for September 2015, clearly showing the final cash balance at the end of the month.

d Explain how your cash journals have satisfied the demands of reliability.

e Explain how your statement of receipts and payments satisfies the demands of understandability.

f State the accounting principle you have followed in recording the purchase of the printer on 28 September. Explain fully.

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Chapter 15

Trading firms: accounting for stock

OBJECTIVES

At the completion of this chapter, you should be able to:

- explain the meaning of the term ‘stock’
- state the purpose of a physical stocktake
- describe the processes involved in a physical stocktake
- outline what is involved in the perpetual inventory system
- explain the purpose of stock cards
- prepare a stock card under the first in, first out (FIFO) assumption
- adjust a stock card for a stock loss or a stock gain
- describe the circumstances that exist for a stock loss or a stock gain to occur
- prepare an income statement to determine a gross profit figure
- outline the principles of efficient stock management
- describe the various measures used to protect inventory.

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15.1 Trading firms and stock

Most of the material covered in this text to date has related to service firms. However, many small businesses that are encountered on a daily basis are trading firms. Businesses such as milk bars, clothing stores and hardware shops all deal in the buying and selling of goods. This chapter concentrates on such businesses, and looks at the special accounting needs of trading firms. The term 'stock' is used to refer to the goods that are bought and sold in the normal day-to-day operations of a trading firm. (Alternative terms for stock are 'inventory' and 'merchandise'.) This definition of stock is important. At times a business may buy new assets or sell off unwanted assets, but such transactions should not be seen as part of stock. For example, a supermarket buys and sells groceries as part of its normal day-to-day operations. If an old delivery van is sold, this should not be treated as a stock transaction.

Accounting for stock is important because, for many small businesses, it is one of the most valuable assets owned. Stock creates many business transactions, as the firm will usually purchase goods, return goods, sell goods, pay for goods and try to get customers to pay for the sales that are made. These transactions will often occur on a continuous basis and so there is a great demand for accurate, timely information about stock. Unfortunately, stock also attracts the attention of those individuals who may be contemplating a theft or fraud. Shoplifting is a common problem for trading firms, but there are also other worries such as attempts at theft or fraud by employees. These problems create a need for control over stock. Accounting can assist in this area, in addition to providing information as mentioned above.

15.2 The physical stocktake

An important process that all trading firms must undertake at least once every year is a **physical stocktake**, which is the physical counting of all stock on hand on one particular date. The result of a stocktake is used to help determine a profit figure, and so an accurate figure is required annually. It is also needed to satisfy the requirements of the taxation authorities. There are two processes involved in a stocktake. The first step is to physically count the number of units of every type of stock in the store. The second is to determine the *cost price* of all stock items; that is, how much was originally paid by the firm when the goods were purchased. It should be noted that selling prices of stock are not used when stocktakes are being performed.

As the aim of a stocktake is to find a total for all stock in a business on one particular day, an organised approach is vital. A stocktake is often a long, boring and detailed process. If the stocktake is done in a haphazard manner, some goods may be counted twice or others may not be counted at all. A simple accounting record can be used to record the details of a stocktake. A **stock sheet** is used to record all details of stock on hand when a stocktake is being done. Figure 15.1 shows a simple example of a stock sheet for a clothing store.

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Figure 15.1 Stock sheet

Item	Qty	Cost $	Total $
Leevise 105 jeans	50	40	2 000
Goldstar jeans	30	20	600
Bonds Deluxe T-shirts	200	10	2 000
Bonds T-shirts	50	4	200
No-Holes socks	100	3	300
Total stock on hand			5 100

Recording cost prices

The number of units of stock on hand is easily counted, but how is the cost price of every product recorded? One method is to locate the latest invoices received, which would show the latest purchase prices. However, this could be difficult, as the goods in stock may be from a range of different purchase lots. Therefore this method is often impractical. However, there are several alternative systems. As an introduction to this area of accounting, two simple systems for calculating the cost prices of stock will be covered below.

The mark-up method

The first is a system of fixed *mark-ups*. That is, a fixed percentage is added to the cost price to determine the selling price of a good. For example, if the clothing store mentioned above (see figure 15.1) applies a 100% mark-up to all goods being sold, it is simply a matter of halving the price to determine the cost price of each item. Therefore the jeans that had a cost price of $40 would have $80 on their price tag plus GST of $8: a total of $88. It should be noted that price tags on display in shops are expected to include the GST as part of the selling price. Other mark-ups are not as easy to work out, which makes the following formula very useful:

$$\text{Cost price} = \frac{\text{Selling price} \times 100}{100 + \text{mark-up}}$$

For example, stock with a selling price of $66 on its price tag was found in the stocktake of a firm that marks everything up by 50%. To determine its cost price, the GST must first be removed from the equation. $66 divided by 11 reveals that GST of $6 is included in the selling price. Therefore, by deducting the $6 GST, the actual selling price of $60 can be identified. The formula then becomes:

$$\begin{aligned}\text{Cost price} &= \frac{\$60 \times 100}{100 + 50}\\ &= \frac{\$6\,000}{150}\\ &= \$40\end{aligned}$$

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This answer can always be checked by working from the cost price back to the selling price, as demonstrated below:

Mark-up	=	50% of $40	= $20
Therefore selling price	=	$40 + $20	= $60
Plus 10% GST		(10% of $60 = $6)	$6
Price as per price tag			$66

In order for such a system to work, it is assumed that the selling prices and therefore the mark-ups have not changed over time. If the usual mark-up has not been maintained because some stock is being sold at a reduced price, the system would have to be adjusted to account for this.

Coded price tags

In order to overcome the problems with the mark-up system (as outlined above), a firm may decide to encode each product with its original cost price. This could be a very simple, handwritten code or a sophisticated computer-generated barcode. As many small businesses are run by one person, a simple, inexpensive approach is often required. Consider the price tag found on a hammer at Horsham Hardware, shown in figure 15.2.

In this case the owner/manager has used a method that allows the date of purchasing the stock to be recorded as well as the actual cost price of the product. The customer is ignorant of the details recorded by the owner, as it appears as simply a series of numbers. This method records the purchase date (12/10), the cost price ($15.40) and the year (10). Other numbers may be used to denote such things as a supplier's code or a department number.

A similar method uses an alphabetical code to 'hide' the cost price from the public's view. Consider the price tag in figure 15.3.

Figure 15.2 Price tag with coded cost price

HORSHAM HARDWARE
1210154010
$33.00

Figure 15.3 Price tag with alpha-code

C.D.'S MUSIC
CR/SG
$19.80

The letters on the tag are meaningless unless the code being used is known. In this case, the owner of the firm, Chris Duong, has used the letters in her name to denote particular numbers. The letters translate as:

C	H	R	I	S	D	U	O	N	G
1	2	3	4	5	6	7	8	9	0

The price tag shown in figure 15.3 is for an item of stock with a cost price of $13.50, as 'C' = 1, 'R' = 3, the '/' separates dollars and cents, 'S' = 5 and 'G' = 0. Any letters can be used in such a code. The code should, however, be easily translated into dollars and cents, as it may be handy to know the exact cost price when dealing with customers, particularly in industries where it is common for the customer to try to get the price reduced (for example, electrical appliances). It is also a good idea to try to disguise the code in such a way that others, including customers and competitors, cannot decipher the cost prices with ease. Customers can be very sensitive to mark-ups and may be annoyed if they know the profit margin of the business!

Regardless of the way the cost price is recorded on products, such coding methods make the task of completing a stocktake much easier. Quite often one particular item may have been purchased at several different prices during the one reporting period. Therefore, if 20 units of a product are in stock at the end of the year, it may not be correct to simply assume that all were purchased at the same price. Coding methods allow an accurate stocktake to be achieved because they identify the actual cost price of each item of stock, which can be entered straight into the stock sheets.

15.3 The perpetual inventory system

The **perpetual inventory** system is based on continuous recording of stock movements throughout a reporting period. That is, every time inventory is purchased this event must be recorded. Similarly, every transaction involving the sale of stock must also be recorded. If this is done, management should have up-to-date information about its various inventory lines. However, the major accounting records in a single entry accounting system remain the cash journals. The purpose of these journals is to record movements of cash, not stock. Therefore, an additional record must be developed to cope with the demands of the perpetual inventory system. This record is known as a **stock card**. A business using perpetual inventory should have a stock card for every different type of inventory being sold. An example of a stock card is shown in figure 15.4.

Figure 15.4 Stock card

Stock item: Megafast computer
Supplier: Advanced Computers Pty Ltd
Min: 5 Max: 10

Product code: PC186291
Location: South warehouse
Valuation method: FIFO

Date	Reference	IN			OUT			BALANCE		
		Qty	Cost	Value	Qty	Cost	Value	Qty	Cost	Value
Aug 1	Balance							5	1 200	6 000
2	Inv. 2101	5	1 300	6 500				5 5	1 200 1 300	12 500
3	Rec. 3301				2	1 200	2 400	3 5	1 200 1 300	10 100
4	Rec. 3302				2	1 200	2 400	1 5	1 200 1 300	7 700
5	Rec. 3303				1 1	1 200 1 300	1 200 1 300	4	1 300	5 200
6	Inv. 2120	6	1 300	7 800				10	1 300	13 000

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This stock card has been prepared using the **first in, first out (FIFO)** method of stock recording. As has been pointed out earlier in this chapter, the management of a trading firm may choose to try to identify the actual cost prices of stock sold by a variety of methods. They could work backwards from a mark-up percentage or they could label products with their actual cost price. However, such methods may not be practical in some businesses. Consider the case of a petrol station. It is physically impossible to label each litre of petrol with its cost price. When petrol is purchased at different prices it is likely to be stored in the one tank. Therefore, management cannot identify the actual cost price of each litre as sales are made. In other businesses, management may deem it impractical or too time-consuming to have to label every single item with its cost price. Therefore, many small business owners look for an alternative system.

One possible alternative is to use the FIFO system, whereby it is assumed that the first goods purchased are the first goods sold. That is, stock is assumed to follow a pattern in which the first goods to come into the business are the first out of the business. Consider the stock card shown in figure 15.4. The following can be noted from this inventory record, which has been prepared using the FIFO method:

Aug 1: Five computers were in stock, with each item having a cost price of $1 200.

Aug 2: Five more units were purchased on credit, as noted by Invoice number 2101. Note the impact on the Balance column. The business is now holding five units with a cost price of $1 200 and another five at a cost of $1 300 each. It is crucial that the cost prices of stock purchased be kept in the order of purchase. This will allow the proper application of the FIFO rule when stock is sold at a later stage.

Aug 3: Two units were sold for cash (Receipt 3301). Note that, as the first stock bought cost $1 200 per unit, it is assumed that this stock is the first sold. Therefore, two of the $1 200 have been moved to the OUT column, leaving only three at this cost price. All of the $1 300 stock remains in the business at this stage.

Aug 4: On this day two more computers were sold (as evidenced by Receipt 3302). As the business still has three units left at $1 200 each, it is assumed that the two sold had a cost price of $1 200.

Aug 5: This is where the application of the FIFO assumption is crucial. Note that the business has one computer left at a cost of $1 200, with five others that cost $1 300. As two were sold on 5 August, it is assumed that one of these is from the earlier stock purchased ($1 200). Once this assumption is made, the other one sold must have cost $1 300, as all the $1 200 stock has now been sold.

Aug 6: Six new computers were purchased, but note that, with this purchase, the cost price is the same as that previously charged. In such a case the units can simply be added to the existing stock. Please note that this can only be done if the latest cost price is the same as the last lot of stock purchased by the firm.

Note: When stock is purchased at different prices, these cost prices must be kept in order within the stock card. Cost prices may increase or decrease, but this does not affect the application of the FIFO assumption. As long as the cost prices are kept in the order in which they occurred, the FIFO rule can be applied when stock is sold.

15.4 Accounting for stock losses and gains

The use of stock cards in the perpetual inventory system does not eliminate the need for a physical stocktake. A stock card will only let management know how many units should be on hand at any point in time. However, the only way to find the number of units that are actually still on hand is to physically count them. Therefore, a physical stocktake should be carried out from time to time to check on the number of goods still in stock. If the FIFO assumption is being applied to stock movements, cost prices do not have to be checked when performing a stocktake. All that has to be checked is the number of units still on hand. There are three possible outcomes from a physical stocktake. These are:

1 The number of units physically counted matches the number of units shown as the balance on hand in the stock card.
2 The number of units physically counted is less than that shown in the stock card.
3 The number of units physically counted is greater than that shown in the stock card.

Management would be quite happy to find the first result. If all units are accounted for, it indicates that none have been stolen and that all the entries on the stock card appear to be correct. That is, all movements of that particular stock item have been recorded correctly. The second possible result may indicate a problem. A **stock loss** is said to exist if there are fewer items on hand than are shown by a stock card. A stock loss may be found to exist at the end of a reporting period through the following circumstances.

- *Stock has been stolen by customers or staff.* Shoplifting is a major problem for many trading businesses. However, strict controls should also be kept on all employees to ensure that stock does not go 'missing'. A detailed look at stock security follows later in this chapter.
- *Undersupply by creditors.* When goods are delivered, the quantity shown on an invoice as being delivered should be physically checked against the goods that actually arrive from a supplier. If this is not done, a 'short order' may not be picked up. For example, 15 units may be charged on an invoice and therefore that is the number of units that will be recorded on the stock card. However, if only 14 units were delivered and this error is not picked up, it would appear that a stock loss has occurred. The truth of the matter is that poor control did not pick up on the undersupply by the creditor.
- *Over-supply to customers.* In this case the problem is that too many units have left the business, compared to the amount stated on invoices. Some cases of fraudulent behaviour discovered over the years have involved staff members trying to look after friends by sending out additional units that have not been invoiced. This problem calls for all invoiced quantities to be physically checked against the units that actually leave the business premises. This is particularly important for firms that send goods out by post, or that package goods ready for courier delivery. Goods that leave without being invoiced will show up later as a stock loss.
- *Double invoicing by suppliers.* Controls and checks should be in place to ensure that this problem does not occur. However, some firms have experienced the case of double invoicing, whereby a supplier has sent out two invoices for the one lot of stock purchased. If this is not detected, a stock loss will be the end result because the stock card will show that additional units should be on hand.
- *Stocktaking errors.* Physical stocktakes often involve boring, repetitive counting tasks. It is very difficult to guarantee that a stocktake is 100% accurate. Errors can be made and, if one section of the store has not been counted and this error is not picked up, it may appear that the business has a serious stock loss problem.
- *Recording errors.* As with any accounting record, stock cards may contain recording errors. There are many checks that can be put into place to try to minimise errors, but occasionally some may slip through. A common error of this type is when the owner of a business withdraws stock for personal use and forgets to make note of this event. Such errors may cause a stock loss to show up at the end of the year.

Although a stock loss is the more likely event, it is also possible for a trading firm to experience a **stock gain**. The following circumstances explain how a business may appear to have more units on hand than the stock card says it should.

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- *Oversupply by creditors*. If this error is not picked up, the quantity stated on the invoice will be entered on a stock card. If the invoice states 12 units, but 12 dozen were delivered, a stock gain would be a distinct possibility. Once again, this type of error should be detected at the time of delivery and, to avoid embarrassment, the supplier should be notified immediately.
- *Undersupply to customers*. If an error is made when packing a customer's order, it may not be picked up when the goods are delivered to that customer. Therefore, the stock card may show that 40 units left the business, but only 14 units were actually delivered. This type of error may be the cause of a stock gain at the end of the reporting period.
- *Stocktaking errors*. If a careless approach is taken to doing a stocktake, it is possible that one section of a store is counted twice, thus artificially inflating the value of stock on hand. This should not happen, but after several hours of mind-numbing stocktaking, anything is possible.
- *Recording errors*. Stock cards can include errors that will produce either a stock loss or a stock gain.

Adjusting a stock card for a stock loss

A stock card states the number of units that should be on hand. A physical stocktake reveals the actual quantity of units on hand (assuming an accurate stocktake has been done). A stock loss occurs when the quantity identified by the physical stocktake is less than the quantity shown on a stock card. When this occurs, the stock card must be adjusted to reflect the true situation. Consider the stock card for the Megafast computer shown previously in figure 15.4. In order that a stock loss can be adjusted for, information must be available in regard to the physical stocktake. Therefore, for the purposes of this example, a physical stocktake conducted on 6 August revealed that nine Megafast computers were in stock. The stock card shown in figure 15.4 has been adjusted in figure 15.5 (see below) for a stock loss of one unit.

Figure 15.5 Stock card adjusted for a stock loss

Stock item: Megafast computer
Supplier: Advanced Computers Pty Ltd
Min: 5 Max: 10

Product code: PC186291
Location: South warehouse
Valuation method: FIFO

Date	Reference	IN			OUT			BALANCE		
		Qty	Cost	Value	Qty	Cost	Value	Qty	Cost	Value
Aug 1	Balance							5	1 200	6 000
2	Inv. 2101	5	1 300	6 500				5 5	1 200 1 300	12 500
3	Rec. 3301				2	1 200	2 400	3 5	1 200 1 300	10 100
4	Rec. 3302				2	1 200	2 400	1 5	1 200 1 300	7 700
5	Rec. 3303				1 1	1 200 1 300	1 200 1 300	4	1 300	5 200
6	Inv. 2120	6	1 300	7 800				10	1 300	13 000
6	Memo 101				1	1 300	1 300	9	1 300	11 700

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After the purchase of six computers on 6 August, this business should have had 10 units in stock. However, the stocktake revealed only nine on hand. Therefore, for one reason or another, one computer has gone missing. It may have been stolen, or perhaps a delivery wasn't checked properly and the firm was one unit short. The important thing is that the stock card has been adjusted to reflect the actual number of units on hand. Note that the FIFO assumption even applies to stock losses. If there is a stock loss and there are different cost prices shown on the stock card, the stock lost is assumed to be the earliest stock purchased. The document used to evidence stock losses and gains is a memorandum (or memo). The memo should be completed by the owner or manager and details of the stock loss identified should be noted. In case of queries in the future, the memo can be referred to if need be.

Each and every stock card must be checked in this manner, ensuring that the number of units shown as being on hand is the same as is revealed by the stocktake. It is important to note that an adjustment for a stock loss has two effects on the balance sheet of the business. These two effects are:

1. As inventory on hand has decreased, this will directly affect the value reported for stock under the heading Current assets.
2. Stock losses represent a sacrifice of economic resources by a business, even if this sacrifice was unintentional. Therefore, stock losses are actually an expense to the business. Therefore expenses increase, leading to a lower profit, which consequently leads to a lower value for owner's equity in the balance sheet.

Adjusting for a stock gain

A stock gain occurs when the number of units shown on a stock card as being on hand is actually less than the quantity revealed by the physical stocktake. As mentioned before, a stock gain may appear somewhat odd. However, regardless of the cause of a stock gain, stock cards must be adjusted to reflect the actual situation on balance day. In the example of the Megafast computer, the adjustment required would be totally different if 11 computers were found to be in stock on 6 August.

Note that the adjustment for the stock gain actually increases the number of units shown on the stock card (refer figure 15.6). In this example the units increased from 10 units to 11, as this was the number revealed to be on hand according to the stocktake. It should be noted that on balance day it would not be known which units were incorrectly recorded or wrongly supplied. Therefore, when recording stock gains, the principle of conservatism should be kept in mind. In the above example there was only one cost price available in the balance column of the stock card (that is, $1300). However, if there are two or more different cost prices recorded and a stock gain occurs, the gain should be recorded at the lowest cost price stated in the balance column. This is done in order to comply with the principle of *conservatism*. This ensures that the gain has not been overstated and therefore stock will not be overstated in the balance sheet of the business. Stock gains will also have a two-fold effect on a firm's balance sheet, namely:

1. As inventory on hand has increased, this will directly affect the value reported for stock under the heading Current assets.
2. Stock gains represent an inflow of resources to the business and are therefore classified as a revenue item. Therefore, stock gains increase total revenue, leading to a higher profit, which consequently leads to a higher value for owner's equity on the balance sheet.

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Figure 15.6 Stock card adjusted for a stock gain

Stock item: Megafast computer Supplier: Advanced Computers Pty Ltd Min: 5 Max: 10					Product code: PC186291 Location: South warehouse Valuation method: FIFO					
Date	Reference	IN			OUT			BALANCE		
		Qty	Cost	Value	Qty	Cost	Value	Qty	Cost	Value
Aug 1	Balance							5	1 200	6 000
2	Inv. 2101	5	1 300	6 500				5 5	1 200 1 300	12 500
3	Rec. 3301				2	1 200	2 400	3 5	1 200 1 300	10 100
4	Rec. 3302				2	1 200	2 400	1 5	1 200 1 300	7 700
5	Rec. 3303				1 1	1 200 1 300	1 200 1 300	4	1 300	5 200
6	Inv. 2120	6	1 300	7 800				10	1 300	13 000
6	Memo 101	1	1 300	1 300				11	1 300	14 300

15.5 Determining a gross profit for a trading firm

As has been outlined so far in this text, a single entry accounting system consists of cash journals as a starting point. This cash-based system may be supplemented by stock cards so that the owner can manage stock efficiently. However, these two records need to come together at the end of the reporting period so that management can see the overall performance of the business. The cash journals are used to record, among other things, the following key features of a trading business:

- the cash paid for purchases of stock
- the cash received from sales of stock.

Stock cards on the other hand record:

- the cost price of stock when purchased
- the cost price of stock when sold.

Somehow all of these details must come together so that an owner of a trading business can determine if a profit or loss has been made on the stock sold. Stock is always valued at cost price and when it is purchased the cost paid will be noted in the cash journals. However, when it is sold, the *cost price* is recorded in the OUT column of the appropriate stock card. The customer, of course, does not pay cost price (under normal circumstances). The selling price received is recorded in the cash journals as *sales*. The difference between the cost price of the stock sold and the selling price received represents the profit made on the sales of the business. To demonstrate this, the following accounting records (figures 15.7, 15.8a and b) have been provided for the business of Camilleri's Computers for the month of September. This retail outlet sells both the Megafast computer and the Economy computer.

Figure 15.7 Camilleri's Computers: cash receipts journal

Date	Details	Receipt no.	Amount banked $	Sales		Sundry receipts $	GST rec'd $
				Megafast $	Economy $		
Sep 3	Cash sales	001	2 200		2 000		200
6	Cash sales	002	5 500	5 000			500
8	Cash sales	003	2 750	2 500			250
11	Cash sales	004	3 850		3 500		350
14	Cash sales	005	4 950	4 500			450
15	Capital	–	5 000			5 000	
16	Cash sales	006	2 750	2 500			250
19	Cash sales	007	5 720		5 200		520
22	Cash sales	008	3 960		3 600		360
24	Cash sales	009	7 700	7 000			700
28	Cash sales	010	1 980		1 800		180
29	Loan—NAB	–	4 000			4 000	
30	Totals		50 360	21 500	16 100	9 000	3 760

Note: The total cash sales of the business for the month of September can be found by adding the two columns used for the sales of the two types of computers. Therefore, cash sales will equal $21 500 + $16 100 = $37 600 total sales revenue. The capital contribution made on 15 September is not included as revenue, as it represents owner's equity. The loan taken out on 29 September is also excluded from the definition of revenue, as it represents a liability of the business. To be able to see what happened to the firm's inventory during September, the two stock cards are presented in figures 15.8a and b.

Note: A stocktake completed on 30 September revealed that there were ten Megafast computers and six Economy computers in stock. This means that the firm has suffered a stock loss of one Economy model and the required adjustment has been entered in the stock card.

In order to determine a **gross profit** for September, the stock cards must first be examined to calculate the total cost of sales for the month. By looking at the OUT column of the stock cards for the two lines of stock sold, the cost of the sales made can be determined as follows:

Megafast model	
Date	Cost of sales $
Sep 6	2 600
8	1 300
14	2 600
16	1 300
24	2 600
24	1 350
Total	11 750

Economy model	
Date	Cost of sales* $
Sep 3	1 000
11	2 000
19	3 000
22	2 000
28	1 000
Total	9 000

* Note: the cost of sales for the month does not include stock losses or gains. Any stock losses experienced by a trading business should be reported as a separate expense item in an income statement.

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Figure 15.8a Stock card for Megafast computer

Stock item: Megafast computer Supplier: Advanced Computers Pty Ltd Min: 5 Max: 10						Product code: PC186291 Location: South warehouse Valuation method: FIFO				
Date	Reference	IN			OUT			BALANCE		
		Qty	Cost	Value	Qty	Cost	Value	Qty	Cost	Value
Sep 1	Balance							8	1 300	10 400
6	Rec. 002				2	1 300	2 600	6	1 300	7 800
8	Rec. 003				1	1 300	1 300	5	1 300	6 500
12	Inv. 3838	5	1 350	6 750				5 5	1 300 1 350	13 250
14	Rec. 005				2	1 300	2 600	3 5	1 300 1 350	10 650
16	Rec. 006				1	1 300	1 300	2 5	1 300 1 350	9 350
24	Rec. 009				2 1	1 300 1 350	2 600 1 350	4	1 350	5 400
26	Inv. 3894	6	1 370	8 220				4 6	1 350 1 370	13 620

Figure 15.8b Stock card for Economy computer

Stock item: Economy computer Supplier: Advanced Computers Pty Ltd Min: 5 Max: 10						Product code: PC14321 Location: South warehouse Valuation method: FIFO				
Date	Reference	IN			OUT			BALANCE		
		Qty	Cost	Value	Qty	Cost	Value	Qty	Cost	Value
Sep 1	Balance							10	1 000	10 000
3	Rec. 001				1	1 000	1 000	9	1 000	9 000
11	Rec. 004				2	1 000	2 000	7	1 000	7 000
19	Rec. 007				3	1 000	3 000	4	1 000	4 000
21	Inv. 3864	6	1 050	6 300				4 6	1 000 1 050	10 300
22	Rec. 008				2	1 000	2 000	2 6	1 000 1 050	8 300
28	Rec. 010				1	1 000	1 000	1 6	1 000 1 050	7 300
30	Memo 205				1	1 000	1 000	6	1 050	6 300

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Therefore, to determine the total cost of sales for the month for this business, the two stock lines are added together to give:

Cost of sales = $11 750 + $9 000 = $20 750 (from the addition of the two stock cards)

Sales revenue for the month has already been noted as $37 600 (from the cash receipts journal).

Therefore the following accounting report may now be prepared.

Camilleri's Computers: income statement for month ended 30 September 2015

		$
	Cash sales	37 600
Less	Cost of sales	20 750
	Gross profit	16 850

This report shows both the amount of revenue received by the business and the cost of stock that was sacrificed in order to earn this revenue. The difference is known as the gross profit for the period. The amount of gross profit earned by a trading business will depend on a number of factors, including:

- how many units are sold within the given period of time
- what mark-up percentage has been added to the cost price of the stock in order to determine selling prices
- whether selling prices are rigid, or whether allowances are made for 'haggling' with customers. Sometimes negotiations at the point of sale result in the selling price being reduced in an attempt to clinch a sale.

The management of a business may want to extend the above income statement to account for stock losses or gains. The example above included a stock loss of one Economy computer, at a cost of $1 000. This too can be incorporated into the report, as shown below:

Camilleri's Computers: income statement for month ended 30 September 2015

		$
	Cash sales	37 600
Less	Cost of sales	20 750
	Gross profit	16 850
Less	Stock loss	1 000
	Adjusted gross profit	15 850

If a trading firm experiences a stock gain in a particular reporting period, this gain is simply added to gross profit, as shown below. In this example, Camilleri's Computers reported a stock gain of $1 350 at the end of October's trading period:

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Camilleri's Computers: income statement for month ended 31 October 2015

		$
	Cash sales	50 000
Less	Cost of sales	25 750
	Gross profit	24 250
Plus	Stock gain	1 350
	Adjusted gross profit	25 600

This **adjusted gross profit** figure should truly reflect the success (or otherwise) of a trading business. It reports on the sales revenue of the firm, deducts the cost of these sales, and is then adjusted for any stock losses or gains as revealed by a physical stocktake. The only thing not yet considered in the above report is the range of other expenses that a trading firm may experience. Expenses such as rent, wages and advertising have not been shown in the above report. In order to prepare a full income statement, such expense items are simply deducted from the gross profit figure to reach a final **net profit** result. For example, rent, wages and advertising would be shown in the report as follows:

Camilleri's Computers: income statement for month ended 31 October 2015

		$	$
	Cash sales		50 000
Less	Cost of sales		25 750
	Gross profit		24 250
Plus	Stock gain		1 350
	Adjusted gross profit		25 600
Less	Other expenses		
	Rent	1 600	
	Wages	1 200	
	Advertising	800	3 600
	Net profit		22 000

Note: Full details of the income statement and the reporting of expenses will be covered in Chapter 17.

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It is also important to recognise the link between stock cards and the balance sheet. The value of the current asset 'stock' comes directly from the totals of the individual stock cards. In the previous example, stock on hand would be determined as follows:

Stock item:	*Value as at 30 September (from final balance of stock cards)*
Megafast computers	$13 620
Economy computers	6 300
Total of stock on hand	19 920

This value is simply reported in the balance sheet, along with the firm's other current assets, as shown in the extract below. (Values have been included for the other current assets so as to provide a realistic example.)

Current assets		
Cash on hand	$300	
Cash at bank	5 400	
Stock	19 920	$25 620

15.6 Management of stock

Stock cards provide an owner with information about how well stock has been selling during a period. These cards reflect the decisions of management and show the day-to-day movement of goods as they are bought and sold. Sound management of stock can lead to an increase in sales and therefore profit. For management to use stock efficiently the following principles should be followed:

1 *Minimum and maximum quantities should be determined.* For each particular line of stock, management should determine a maximum quantity to be kept in stock. Once this amount is purchased, sales can be made until the minimum number is reached. An order should be placed at this stage and the maximum number of units can be re-ordered. In a perfect situation, the minimum quantity should be just enough to satisfy sales until the new delivery arrives. This is referred to as **just-in-time ordering**. However, the success of such a system depends on the **lead time** of deliveries from the suppliers. Lead time is the number of days it takes from the moment an order is made until the actual delivery of goods takes place. It is a dangerous practice to carry too little stock, as sales opportunities may be missed and customers may go elsewhere.

2 *All stock should be rotated.* When a new delivery of goods takes place, it is most important that stock items are rotated so that the older units are on prominent display. If goods are stacked up (for example, books) the older stock should be on top with the new delivery at the bottom of the stack. If goods are on display shelves, the new stock should be put at the back of the shelf. This is particularly important for perishable items (for example, food) but can be equally important for other types of stock with use-by dates such as batteries and medicines. Other types of stock should also be rotated because all products have a risk of

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becoming shop-soiled, dusty, dirty or marked. The longer an item sits in a shop, the more likely it is to become damaged.

3 *Seasonal products must be monitored.* Some businesses may have stock items that are prone to seasonal demand. In such instances management must ensure that, towards the end of a season, stocks are run down to a minimum or zero in some cases. Stock that cannot be sold for another twelve months is often referred to as dead stock. Such items have been paid for but are not generating sales. Therefore they cost the business money to just sit there on display. The selling price of such items may have to be reduced to clear them as the season comes to a close. Examples of such items include woollen jumpers, bathers, thongs, sunscreen lotion, swimming pool accessories and the like. Shops involved in sporting goods are particularly affected by seasonal factors. If a large quantity of football jumpers and other related merchandise are still in stock in September, attempts should be made to clear such items as quickly as possible. There is little value in having a plentiful supply of football jumpers over summer.

4 *Technological advances must be monitored.* Some industries are affected by rapid technological change. Computers, iPods, iPads and mobile phones are good examples of products that should not be ordered in large quantities. The technology of products is subject to change very quickly and consumers generally want the latest developments. To manage such stock effectively, owners and managers must also keep themselves up to date in terms of technology and the impact it has on their stock items.

5 *Complementary products should be considered.* A useful tactic for efficient stock management is the use of complementary products. This means that the business provides a range of stock items that complement one other. For example, a menswear store will usually sell ties and belts as well as shirts and trousers. A camera shop will sell cameras, memory cards, camera cases, batteries and perhaps picture frames as well as providing printing services. The sales of one particular item can then be used to promote sales of other items.

6 *The business and its products must be promoted.* Management may from time to time run special prices on old stock or out-of-season items. However, business owners should also consider special promotions on current items. Doing something different keeps the name of the business in the public eye and keeps customers involved with the firm. Many businesses slowly die out because owners think they can just sit back and things will take care of themselves. Managers should always be looking for new ways to promote their stock (and their business). The life-blood of a trading firm is the turnover of the actual goods in stock. Special deals, discount prices, in-store celebrities, two-for-one offers, free movie passes and lucky draws are all examples of methods used by trading firms to try to improve sales. It is vital that the name of the firm is kept in the public eye.

7 *Adequate security should be in place.* It is vital that management pay attention to the security of inventory. Stock items are quite often the target of thieves. Stock may be taken by customers or by staff if adequate security is not in place. Some devices and/or tactics that may be considered by management include:

- security guards
- undercover security personnel
- video surveillance
- security tags on all products
- two-way mirrors
- dye bombs
- electronic security gates at all exits
- random checks on staff.

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Naturally, single-owner businesses cannot always afford or may not need some of these security measures. Management should consider what security is required for their particular store and respond on that basis. Of course, if stock losses are getting out of control, something different should be attempted or additional security devices may be required. Unfortunately, shoplifting is an ever-present danger to all trading businesses.

Above all else, management must be prepared to react to changes in the market when reviewing inventory. The management of stock demands continuous attention. Business owners must be willing to watch over stock cards on a daily basis to detect slow-moving items, as these may have to be discontinued. Fast-moving lines must also be identified, as it is likely that they will sell out. All other stock must be scrutinised to ensure that items are not damaged or dirty and that displays are as required. If changes in the general market are detected, management must be ready and able to react. Prices and products are subject to change and management's decision-making must be in reaction to such changes.

› GLOSSARY OF TERMS

adjusted gross profit sales revenue less cost of sales, less any adjustment for stock loss (or plus any adjustment for a stock gain).

first in, first out (FIFO) a system of recording inventory movements that is based on the assumption that the first goods purchased are the first goods sold.

gross profit sales revenue for a period less the cost of sales over that same period of time.

just-in-time ordering a method of purchasing stock whereby the new order of goods arrives just before the business runs out of stock.

lead time the number of days from the time an order is made until the time the goods are delivered.

net profit sales revenue less all expenses incurred by a business.

perpetual inventory a method of recording movements of inventory that involves the maintenance of continuous records throughout a reporting period.

physical stocktake the process of physically counting the number of units of inventory on hand on a particular date.

stock card a subsidiary record that is used to record all movements of a particular line of stock sold by a business.

stock gain a situation whereby the number of units revealed by a physical stocktake is greater than the quantity shown on a stock card.

stock loss a situation whereby the number of units revealed by a physical stocktake is less than the quantity shown on a stock card.

stock sheet a record used to record details of all stock on hand when a physical stocktake is being completed.

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Summary questions

1. Explain the meaning of the term ‘stock’.
2. What is the purpose of a physical stocktake at the end of a reporting period?
3. Describe the two processes involved in doing a physical stocktake.
4. Explain the role of stock sheets.
5. Describe two methods of working out the cost price of stock on hand.
6. State two benefits of having the cost price encoded on the price tags of goods.
7. Explain what is involved in a perpetual inventory system.
8. State two reasons why the management of a trading firm may adopt the FIFO method of assigning cost prices to stock sold.
9. How is a stock loss identified? Explain this process fully.
10. State four different reasons why a stock loss may occur.
11. Describe the circumstances that exist when a stock gain occurs.
12. State three different reasons why a stock gain may occur.
13. Explain the two-fold effect that an adjustment for a stock loss has on a balance sheet.
14. Distinguish between the terms ‘gross profit’ and ‘adjusted gross profit’ as they are used in an income statement.
15. In an income statement the item ‘cost of sales’ appears. Where does the value for this item originate? Explain fully.
16. How is a stock gain treated in an income statement?
17. A business can have too much or too little stock on hand. Outline the implications of each of these situations.
18. Explain what is meant by the term lead time.
19. Some business owners try to practice just-in-time ordering of stock. Explain what is meant by this practice.
20. Explain why stock rotation is important for all trading businesses.
21. List, and describe, three principles of efficient stock management.
22. Make a list of security techniques or devices you have noticed in trading firms in the various shopping centres you have visited. State the name of the trading firm and a brief description of the type of security measure being used by its management.
23. Refer to a variety of media (television, newspapers, magazines etc.) and describe six different examples of special promotions used by trading firms to sell their inventory. Select the most effective and the most ineffective promotion and explain why you have made your choices.

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Practical exercises

[Exercise 15.1]

The manager of Greendale Trading Store completed a physical stocktake and found the following stock on hand:

Item no. 16790:	520 units with a cost price of $24.00 each
Item no. 16791:	300 units @ $19.50 each
Item no. A854:	145 units @ $10.00 each
Item no. CB76:	580 units @ $4.50 each
Item no. 60175:	150 units @ $32.00 each and 400 units @ $34.00 each

a Prepare the stock sheets for the physical stocktake, showing clearly the value of each stock item.

b Calculate the total cost of stock on hand.

[Exercise 15.2]

As part of an annual stocktake, the following goods were identified as being part of stock. The selling price (including GST) of each item is also listed:

AFL footballs	$99
NSL soccer balls	$66
NBL basketballs	$33

a Calculate the GST included in each of the selling prices stated above and determine the price being charged by the business for each item.

b Calculate the cost price of each of the items if the firm was using a mark-up of:

i 100% ii 80%
iii 65% iv 50%
v 20%

c Prove your answers to part **b** iii by working from the cost prices back to the selling prices.

[Exercise 15.3]

The Home Appliance Centre has supplied the following information from its physical stocktake:

Item	*Units in stock*	*Selling price*	*Cost price*
Electric toasters	80	$39.90	QI/RL
Microwave ovens	30	$399.00	UQR/LL
Video recorders	15	$550.00	AER/FR
Televisions	20	$645.00	DLO/ER

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All price tags are encoded with cost prices before goods are put on sale. The following coding system has been used:

Q	U	A	D	R	E	F	O	I	L
1	2	3	4	5	6	7	8	9	0

a Convert the coded cost prices into dollars and cents.

b Prepare stock sheets to determine the value of stock on hand.

[Exercise 15.4]

Ron Waters owns a small business trading as Williamstown Gym Equipment. He uses a coding system to identify the cost price of all his stock items, based on the following letters:

R	O	N	A	L	D	S	G	Y	M
1	2	3	4	5	6	7	8	9	0

On 30 June 2015, Waters completed a stocktake and determined the following quantities on hand:

Stock item	*Quantity on hand*	*Price code*	*Quantity sold this period*
Exercise bikes	24	ONM/LM	80
Home gymnasiums	8	ROMM/	22
Electric treadmills	12	DSM/YL	27
Sets of weights	20	YG/AL	110

a Using the coding system provided, determine the cost of stock on hand as at 30 June 2015.

b If Waters applies a mark-up of 100% to all stock sold, prepare an income statement to determine his gross profit for the year ended 30 June 2015.

[Exercise 15.5]

The following transactions relate to the Big Kahuna barbecue, one of several models of barbecues bought and sold by Bellarine Barbecues.

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July 1 Six Big Kahunas were in stock, with each one costing the business $200, plus GST of $20
2 Sold one Big Kahuna for $390, plus $39 GST (Rec. 283)
3 Sold two Big Kahunas for $780, plus $78 GST (Rec. 284)
4 Purchased 10 barbecues for $220 each, plus $22 GST (Inv. 3929)
5 Sold two barbecues for $390 each, plus $39 GST (Rec. 285 and 286)
6 Sold two Big Kahunas for $780, plus $78 GST (Rec. 287)
7 Sold one barbecue for $400, plus $40 GST (Rec. 288)

a Prepare a stock card for the Big Kahuna barbecue under the FIFO assumption.

b How many barbecues should be in stock on 7 July?

c Is it possible for a business selling barbecues to experience a stock loss? Explain your answer fully.

[Exercise 15.6] The following information was extracted from a stock card prepared under the FIFO assumption:

Date	Reference	IN			OUT			BALANCE		
		Qty	Cost	Value	Qty	Cost	Value	Qty	Cost	Value
Sep 28	Rec. 425				2	100	200	9 20	100 105	3000
29	Rec. 426				3	100	300	6 20	100 105	2700

a How many units were on hand at the close of business on 27 September?

b If a physical stocktake carried out on 30 September revealed that there were 23 units in stock, what is the value of the stock loss or gain experienced by this business?

c Justify why an adjustment for stock loss/gain should be made on 30 September.

[Exercise 15.7] The owner of Seaford Skis has provided the following extract from one of his stock cards. It relates to Elite Skis, which sell for about $170 per pair, plus GST.

Date	Reference	IN			OUT			BALANCE		
		Qty	Cost	Value	Qty	Cost	Value	Qty	Cost	Value
Aug 28	Inv. 3199	10	80	800				2 10	75 80	950
30	Rec. 194									

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a On 30 August the business sold three pairs of Elite skis for cash. At what value should these skis be recorded in the OUT column of the stock card if the FIFO assumption was followed?

b No other transactions occurred in relation to the Elite skis in the remaining days of August. A stocktake on 31 August revealed that there were 10 pairs of skis still on hand. What adjustment is necessary in the stock card as a result of the information revealed by the stocktake? (Memo 32.)

c Copy out the above stock card and make all entries required at the end of August 2015.

d State two possible reasons to explain why the quantity revealed by the stocktake on 31 August was different from that shown on the stock card.

[Exercise 15.8] An extract of a stock card has been prepared below. It was prepared by Gary Schickerling, the manager of a retail business, who uses the perpetual inventory system.

Date	Reference	IN			OUT			BALANCE		
		Qty	Cost	Value	Qty	Cost	Value	Qty	Cost	Value
Jul 29	Rec. 909				21	40	840	9 80	40 42	360 3 360
31	Inv. 2916	100	44	4 400				9 80 100	40 42 44	360 3 360 4 400

A physical stocktake conducted on 31 July revealed that 174 units were still on hand.

a Using the FIFO assumption of stock flows, determine the value of any stock loss or gain revealed by the stocktake on 31 July (show workings).

b State, and explain, three different causes of the stock loss (or gain) you have identified in part **a** above.

b State the two-fold effect of the stock loss (or gain) on the balance sheet of Schickerling's business.

[Exercise 15.9] Lynne Olsen is the proprietor of Olsen's Outdoor Furniture. This small business stocks two types of outdoor chairs. The Standard model has been selling for $30, plus $3 GST, and has been selling quite well for the business. The Deluxe model, which features a can holder and footrest, usually sells for $40, plus $4 GST. Olsen sells to individual consumers, but has also sold quite a few chairs to sporting clubs and businesses. In recording inventory movements, Olsen follows the FIFO assumption. The following events occurred during August 2015:

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Aug 1	Stock on hand: Standard model: 32 chairs, seven with a cost price of $12 and 25 with a cost price of $13 Deluxe model: 17 chairs, all costing $18 each
3	Cash sale of six Standard chairs for $30 each, plus GST of $3 (Rec. 939)
5	Sold three Deluxe chairs for $110 cash, plus $11 GST (Rec. 940)
7	Cash sale of five Deluxe chairs for $190, plus $19 GST (Rec. 941)
9	Purchased 25 more Deluxe model chairs at a cost of $20 each, plus $2 GST (Inv. 3820)
11	Sold six Standard chairs for $170 cash, plus $17 GST (Rec. 942)
14	Made a sale to the local football club at a special price: 10 Standard chairs for $250 (plus $25 GST) and five Deluxe chairs for $180 (plus $18 GST) for a total cash sale of $430 + $43 GST = $473 (Rec. 943)
17	Purchased 30 Standard chairs for $15 each (Inv. 3727: $450 + $45 GST = $495)
20	Sold four Standard chairs for $120, plus $12 GST (Rec. 944)
23	Cash sale of six Deluxe chairs for $220, plus $22 GST (Rec. 945)
25	Sold one Standard and one Deluxe for a total of $70, plus GST of $7 (Rec. 946)
28	Sold three Deluxe chairs for $110, plus $11 GST (Rec. 947)
31	A physical stocktake revealed the following quantities on hand at the end of the month: Standard model 31 chairs, Deluxe model 20 chairs (Memo 102)

a Prepare a stock card for each of the two types of chairs sold by Olsen's Outdoor Furniture.

b Check your stock cards against the details of the physical stocktake and make any necessary adjustments on 31 August.

c Calculate the total value of cash sales for August for each model of chair sold.

d Using your stock cards, calculate the cost of sales for August for each model of chair sold.

e Using your calculations from parts **c** and **d** above, prepare an income statement to determine the firm's gross profit for the month. (Include any adjustments for stock losses or gains, as appropriate.)

[Exercise 15.10]

Hill's Hockey Shop is a small business owned by Michael Hill. He sells a range of hockey equipment, including hockey sticks that come in two sizes: junior and senior. On 1 September 2015 the business had the following stock of hockey sticks on hand: junior—22 sticks and senior—19 sticks. The stock cards for these two items have the following balances as at 31 August:

Junior sticks	5 @ $15	$75	Senior sticks	9 @ $24	$216
	17 @ $16	$272		10 @ $23	$230
	22	$347		19	$446

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The following transactions occurred during September 2015:

Sep 2	Sold three junior sticks for cash at $29 each, plus GST of $2.90 each (Rec. 293)
3	Purchased on credit 20 junior sticks at a cost of $17 each, plus GST of $1.70 (Inv. 943)
4	Sold for cash four senior sticks for a total of $180, plus $18 GST (Rec. 294)
5	Cash sale of two senior sticks for $45 each, plus $4.50 GST (Rec. 295)
7	Sold four junior sticks for $118, plus $11.80 GST (Rec. 296)
9	Issued receipt no. 297 for a cash sale of two senior sticks for $90, plus $9 GST
11	Cash sale: three junior sticks for $85, plus $8.50 GST (Rec. 298)
14	Purchased on credit 15 senior sticks @ $25 each, plus $2.50 GST (Inv. 933)
16	Sold for cash two senior (@$40 each) and two junior sticks (@$30 each) for $140, plus $14 GST (Rec. 299)
18	Sold four junior sticks for $122, plus $12.20 GST (Rec. 300)
20	Cash sale: two senior sticks for $90, plus $9 GST (Rec. 301)
23	Issued Receipt no. 302 for $180 (plus $18 GST) for a cash sale of three junior (3 @ $30) and two senior sticks (2 @ $45)
25	Sold for cash one junior stick $32, plus $3.20 GST (Rec. 303)
28	Cash sale of three senior sticks for $130, plus $13 GST (Rec. 304)
30	Physical stocktake completed. Quantities on hand: junior sticks 17; senior sticks 15 (Memo 007)

a Prepare a stock card for September for each of the two types of hockey sticks sold by Hill.

b Verify your stock card balances with the details of the physical stocktake and make any necessary adjustments on 30 September.

c Calculate the total value of cash sales for September for each type of hockey stick sold.

d Using your stock cards, calculate the cost of sales for September for each type of hockey stick.

e Using your calculations from parts **c** and **d** above, prepare an income statement to determine the firm's gross profit for the month. (Include any adjustments for stock losses or gains, as appropriate.)

f Given the results of the physical stocktake completed on 30 September, comment on the owner's level of control over his inventory.

g Suggest two possible strategies that the owner could adopt in this business to improve control over stock.

CASE STUDY

FIESTA FURNITURE sells a range of computer desks and maintains stock cards under the FIFO method for each type of desk. The Student model has always been popular, but in recent times the owner has noticed increasing sales of both the Executive model and the Director's Special. The owner also maintains multi-column cash journals to account for all cash flows. Customers are not allowed use of a credit facility, so all sales are made on a cash basis. The following information has been made available for your perusal.

Fiesta Furniture: cash receipts journal

Date	Details	Receipt no.	Amount banked $	Sales			Sundry rec. $	GST received $
				Stud. desks $	Exec. desks $	Director's Special $		
Oct 1	Cash sales	645	440		400			40
2	Cash sales	646	220	200				20
3	Cash sales	647	660			600		60
4	Cash sales	648	880		800			80
5	Cash sales	649	660			600		60
8	Cash sales	650	440		400			40
9	Cash sales	651	440	400				40
11	Cash sales	652	880		800			80
12	Cash sales	653	1 320			1 200		120
15	Cash sales	654	880		800			80
16	Cash sales	655	440	400				40
18	Cash sales	656	1 320			1 200		120
19	Cash sales	657	440	400				40
23	Cash sales	658	660	200	400			60
24	Cash sales	659	880		800			80
25	Cash sales	660	1 100	400		600		100
29	Cash sales	661	880		800			80
30	Cash sales	662	1 320			1 200		120
31	Cash sales	663	880	400	400			80
31	Totals		14 740	2 400	5 600	5 400		1 340

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Fiesta Furniture: cash payments journal

Date	Details	Chq. no.	Total paid $	Stock $	Advert $	Wages $	Draws $	Assets $	Sundry pay. $	GST paid $
Oct 1	Advertising	301	165		150					15
5	Wages	302	420			420				
10	Drawings	303	600				600			
12	Wages	304	430			430				
15	Advertising	305	165		150					15
17	Cleaning	306	132						120	12
18	Computer	307	4 433					4 030		403
19	Wages	308	400			400				
22	Stock	309	2 420	2 200						220
25	Drawings	310	600				600			
26	Wages	311	400			400				
31	Loan R/P	312	3 000						3 000	
31	Electricity	313	110						100	10
31	Totals		13 275	2 200	300	1 650	1 200	4 030	3 220	675

Note: the business had a cash balance of $4 300 in the bank on 1 October 2015.

ADDITIONAL INFORMATION:

- The cash purchase of stock on 22 October was for 20 Student desks. Purchases of both the Executive and Director's Special desks are usually made on credit from the suppliers.
- On 25 October, 20 Executive desks were purchased on credit at a cost of $205 each, plus GST of $20.50 per desk.
- On the following day, 12 Director's Specials were purchased on credit for $310 each, plus GST of $31.
- Unfortunately, on 31 October, at about 10 pm, the owner was called to the business by the police. It appeared that someone had driven a heavy vehicle through the shop's front window. The owner conducted a stocktake immediately and found 16 Student desks, 21 Executive models and 14 Director's Specials on hand. No adjustments have been made to the stock cards in response to these events.

Stock cards

Stock item: Student desk   Supplier: Southgate Systems Pty Ltd   Valuation method: FIFO

Date	Reference	IN			OUT			BALANCE		
		Qty	Cost	Value	Qty	Cost	Value	Qty	Cost	Value
Oct 1	Balance							9	100	900
2	Rec. 646				1	100	100	8	100	800
9	Rec. 651				2	100	200	6	100	600
16	Rec. 655				2	100	200	4	100	400
19	Rec. 657				2	100	200	2	100	200
22	Chq. 309	20	110	2 200				2 20	100 110	2 400
23	Rec. 658				1	100	100	1 20	100 110	2 300
25	Rec. 660				1 1	100 110	100 110	19	110	2 090
31	Rec. 663				2	110	220	17	110	1 870

Stock item: Executive desk   Supplier: Advantage Desks   Valuation method: FIFO

Date	Reference	IN			OUT			BALANCE		
		Qty	Cost	Value	Qty	Cost	Value	Qty	Cost	Value
Oct 1	Balance							5 10	190 200	2 950
1	Rec. 645				1	190	190	4 10	190 200	2 760
4	Rec. 658				2	190	380	2 10	190 200	2 380
8	Rec. 650				1	190	190	1 10	190 200	2 190
11	Rec. 652				1 1	190 200	190 200	9	200	1 800
15	Rec. 654				2	200	400	7	200	1 400
23	Rec. 658				1	200	200	6	200	1 200
24	Rec. 659				2	200	400	4	200	800
25	Inv. 939	20	205	4 100				4 20	200 205	4 900
29	Rec. 661				2	200	400	2 20	200 205	4 500
31	Rec. 663				1	200	200	1 20	200 205	4 300

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Stock item: Director's Special desk		Supplier: Amazon Furniture				Valuation method: FIFO				
Date	Reference	IN			OUT			BALANCE		
		Qty	Cost	Value	Qty	Cost	Value	Qty	Cost	Value
Oct 1	Balance							12	300	3600
3	Rec. 647				1	300	300	11	300	3300
5	Rec. 649				1	300	300	10	300	3000
12	Rec. 653				2	300	600	8	300	2400
18	Rec. 656				2	300	600	6	300	1800
25	Rec. 660				1	300	300	5	300	1500
26	Inv. 48311	12	310	3720				5 12	300 310	5220
30	Rec. 662				2	300	600	3 12	300 310	4620

a Calculate the value of the stock loss experienced on 31 October 2015 (show all workings).

b Determine the value of stock on hand as at 31 October 2015 (show all workings).

c Using the relevant information from the above sources, prepare a statement of receipts and payments for the month ended 31 October 2015.

d Extract all relevant information from the above sources and prepare an income statement for the month ended 31 October 2015.

e How much is the owner selling each type of desk for at the moment?

f The owner has not altered selling prices for quite a while. Comment on his price setting strategy in light of the purchases made on 22, 25 and 26 October.

g State one benefit for this business in buying some of its stock on credit.

h Do you think this business should offer credit facilities to its customers? Explain your answer fully.

i The owner admits to only checking the stock cards occasionally. Could this create a problem in this business? Refer to one or more of the stock cards in your explanation.

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Chapter 16

Accounting for credit transactions

OBJECTIVES

At the completion of this chapter, you should be able to:

- define a credit transaction
- distinguish between a cash and a credit transaction
- identify the documents used to evidence credit transactions
- define the terms ‘debtor’ and ‘creditor’
- record credit transactions in appropriate records
- maintain a subsidiary record for both debtors and creditors
- prepare a debtors or creditors schedule at the end of a period
- classify debtors and creditors in a balance sheet
- determine a GST liability, taking into account credit transactions.

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16.1 Credit transactions

So far, most of this text has concentrated on cash transactions for small businesses. However, many small businesses do not deal only on a cash basis. Many firms buy goods and services on credit and quite often provide credit facilities to their customers. A **credit transaction** is one in which goods or services are supplied immediately, but payment follows at a later date. This delay in payment may only be a few days, but quite often will extend to 30 or 60 days. Once a customer is extended credit, some businesses offer discounts as an incentive for prompt payment. Such discounts are referred to as settlement discounts, as they encourage the customer to settle, or pay off, their accounts quickly. The period of time offered to credit customers and the discounts available to them make up the credit terms of a credit agreement. Typical credit terms would be notations such as 5/7, 2/30 and N/60, which in turn mean '5% discount if paid within 7 days', '2% discount if paid within 30 days' and 'the net amount payable due within 60 days' (that is, no discount). The credit terms are usually stated on the invoice given to the customer (see below). It is vitally important that credit transactions are verified by source documents. An **invoice** is the document used to inform a customer of the cost of a credit transaction. The original invoice is given to the customer and a copy should always be kept by the supplier. An invoice made out by Perfect Printers to Vivien's Video Repairs is shown in figure 16.1.

Figure 16.1 Sales invoice

PERFECT PRINTERS
12 SYDNEY STREET
WEST COBURG 3058

TAX INVOICE NO. T278

DATE: 12/7/10

SUPPLIED TO: VIVIEN'S VIDEO REPAIRS
6 MAIN ROAD
MALVERN 3144

DETAILS OF GOODS SUPPLIED:

Quantity	Description	Cost per unit	Total $
1000	Business cards as per sample	$15 per 100	150
	GST (10%)		15
	TOTAL AMOUNT OWING		165

CREDIT TERMS: 5/7 N/30

Figure 16.1 demonstrates an original document that would be issued by Perfect Printers to Vivien's Video Repairs. Perfect Printers would keep a copy for its records. Note the credit terms on the bottom of the invoice. If Vivien pays the invoice within the seven-day discount period, she would be entitled to take off a discount of 5%. Although this helps Vivien's business through a reduced price, it is also advantageous to Perfect Printers, as slow-paying debtors can prove very costly to businesses.

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16.2 Debtors and creditors

It is important at this stage to define the terms 'debtors' and 'creditors'. In order to explain these two terms, the example of Perfect Printers and Vivien's Video Repairs (see previous page) will be used. If you were keeping the books for Perfect Printers, Vivien's Video Repairs would be classified as a debtor, because a **debtor** is an individual or a business that has been supplied goods or services on credit. Debtors are usually classified as current assets in a balance sheet, as they are expected to pay their debts within the next 12 months (hopefully within one or two months).

Creditors include all individuals or businesses that have supplied goods or services to a business on credit. In the case of Perfect Printers, a creditor may be the supplier of materials such as paper and inks, which would be purchased for use in the business. Creditors are usually classified as current liabilities because they are usually looked on as a short-term source of finance. Creditors usually allow credit terms of 30 days (sometimes 60 days) and therefore clearly fall within the definition of current liabilities.

16.3 Recording credit purchases

As most single entry accounting systems rely on cash journals as the major accounting record, **subsidiary records** will need to be created if credit transactions are going to occur frequently. Many small business owners simply place invoices in a shoebox or desk drawer until they are paid, but a more organised approach is recommended, particularly if a firm has numerous debtors and creditors. The first step in organising credit transactions is to create a **credit purchases journal**. Figure 16.2 shows such a record for a small business, trading as Helen's Hardware.

Figure 16.2 Credit purchases journal

Helen's Hardware: credit purchases journal

Date	Creditor	Invoice no.	Stock $	GST $	Total creditors $
Aug 1	Reliable Plumbing Supplies	32165	1 200	120	1 320
5	Wholesale Timber Co.	5409	950	95	1 045
8	Tim's Tools P/L	BF890	1 320	132	1 452
14	Reliable Plumbing Supplies	32289	650	65	715
19	Reliable Plumbing Supplies	32312	800	80	880
22	Tim's Tools P/L	BG023	400	40	440
28	Reliable Plumbing Supplies	32365	300	30	330
31	Totals for month		5 620	562	6 182

This simple record keeps all the credit purchases together in the one record and can be referred to in the future if there are any queries. Note that the key details of each invoice are recorded in the journal. The date, the creditor's name, the invoice number, the value of the transaction, the GST charged and the total of each invoice should always be recorded. Although this record shows all purchases on credit for a particular period of time, it does not show the amount owing to each individual creditor. A firm dealing on credit may also require individual creditors' records. The details in the above credit purchases journal have been used to complete the following individual creditors' records, shown in figure 16.3.

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Figure 16.3 Individual creditors' records

Creditor's record: Reliable Plumbing Supplies				
Date	Details	Doc. no.	Amount $	Balance $
Aug 1	Stock/GST	Inv. 32165	1 320	1 320
14	Stock/GST	Inv. 32289	715	2 035
19	Stock/GST	Inv. 32312	880	2 915
28	Stock/GST	Inv. 32365	330	3 245

Creditor's record: Wholesale Timber Co.				
Date	Details	Doc. no.	Amount $	Balance $
Aug 5	Stock/GST	Inv. 5409	1 045	1 045

Creditor's record: Tim's Tools Pty. Ltd.				
Date	Details	Doc. no.	Amount $	Balance $
Aug 8	Stock/GST	Inv. BF890	1 452	1 452
22	Stock/GST	Inv. BG023	440	1 892

It should be noted that these entries may be made using an alternative approach. In the first creditors' records, one entry has been made each time a credit purchase was made. Each of these entries included the GST charged as part of the total transaction. If one prefers, the entries can be broken down into two separate entries: that is, one for the cost price of the stock being purchased and one for the GST being charged. To clarify this, the entries made above in the recording for Tim's Tools will be used as an example. Rather than simply record stock/GST as the one item, the transactions have been recorded in figure 16.4 using the alternative approach.

Figure 16.4 Individual creditors' records: alternative approach

Creditor's record: Tim's Tools Pty. Ltd.				
Date	Details	Doc. no.	Amount $	Balance $
Aug 8	Stock	Inv. BF890	1 320	1 320
	GST charged		132	1 452
22	Stock	Inv. BG023	400	1 852
	GST charged		40	1 892

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Both approaches are quite satisfactory, as *reliability* can be satisfied under either method. As long as the document numbers are stated, the invoices can be traced at a later date to answer any possible queries. It is a matter of personal preference as to how such records are maintained, as the totals should still be the same, regardless of the method being used.

The records above simply break down all the credit purchases on an individual basis. The information is posted, or transferred, from the credit purchases journal to the individual records. Note how the current amount owing to each creditor can be shown in the right-hand column each time the account is updated. However, these records only show part of the overall picture that would exist in a typical business situation. Creditors will be paid cash eventually, and if some cash transactions are included a more realistic picture can be seen. By referring to the cash journals maintained by Helen's Hardware, the following two cash payments were located:

Aug 4	Paid Reliable Plumbing Supplies $1 300 and received a discount of $20
Aug 31	Paid Reliable Plumbing Supplies $715

If the above cash payments were included in the individual creditor's record for Reliable Plumbing Supplies, the record would be as shown in figure 16.5.

Figure 16.5 Creditor's record with cash payment included

Creditor's record: Reliable Plumbing Supplies				
Date	Details	Doc. no.	Amount $	Balance $
Aug 1	Stock/GST	Inv. 32165	1 320	1 320
4	Cash payment	Chq. 76320	1 300	20
	Discount revenue		20	Nil
14	Stock/GST	Inv. 32289	715	715
19	Stock/GST	Inv. 32312	880	1 595
28	Stock/GST	Inv. 32365	330	1 925
31	Cash payment	Chq. 76325	715	1 210

As was the case with stock purchases and the GST, a cash payment and a discount gained from a creditor may also be combined into the one entry. In the above record, the payment on 4 August was for $1 300. The discount of $20 was granted by the supplier on this day for this prompt payment. As this $20 causes a decrease in the amount owing to the liability, it represents a revenue item and it has therefore been noted as *discount revenue*. If one prefers to join these two entries into the one, it can simply be recorded as Cash payment/Discount revenue $1 320. It is again a matter of personal choice as to how best to record such items.

The creditor's record shown in figure 16.5 is an ideal way of providing vital information about a firm's creditors. Because a running balance is recorded after every transaction, the amount owing to individual creditors is available at a glance. All document numbers are recorded for future reference, providing a history of the transactions with a particular creditor in one compact record.

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16.4 Recording credit sales

An additional record can be designed to cater for transactions where a firm sells goods on credit to its customers. The **credit sales journal** is used to record the details of all invoices issued to customers for goods provided on credit. In this case the original invoice is issued to the customer and a copy is used to record the details in the journal. Figure 16.6 demonstrates a typical design for a credit sales journal.

Figure 16.6 Credit sales journal

Helen's Hardware: credit sales journal

Date	Debtor	Inv. no.	Credit sale $	GST $	Total debtors $
Sep 1	Balwyn College	1200	2 100	210	2 310
4	Scissors Salon	1201	500	50	550
7	D. Haynes	1202	450	45	495
14	Balwyn College	1203	600	60	660
19	M. Taylor	1204	80	8	88
24	Scissors Salon	1205	250	25	275
30	Balwyn College	1206	200	20	220
30	Totals		4 180	418	4 598

As was the case with the purchases journal, the details in the credit sales journal include the date of the transaction, the debtor's name, the invoice number, the selling price charged, the GST charged and the total value of the transaction. One notable difference is that the invoice numbers should always run in sequence in the sales journal. This is because the document numbers used are all from the same source, whereas in the purchases journal the invoices being recorded may be received from several different businesses. This ensures that all invoices are recorded accurately, since missing numbers are easily identifiable. In order to demonstrate individual records for debtors, the following cash receipts have been created:

Sep 6	Received from Scissors Salon $540, discount expense $10 (Receipt no. 101)
16	Received from Balwyn College $2 310 (Rec. 102)
20	Received from Balwyn College $645, discount allowed $15 (Rec. 103)
24	Received from D. Haynes $495 (Rec. 104)

Using the transactions in the credit sales journal shown in figure 16.6, plus the previous cash receipts listed, Helen's Hardware would have the individual debtors' records as shown in figure 16.7.

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Figure 16.7 **Individual debtors' records**

Debtor's record: Balwyn College				
Date	Details	Doc. no.	Amount $	Balance $
Sep 1	Credit sale/GST	Inv. 1200	2 310	2 310
14	Credit sale/GST	Inv. 1203	660	2 970
16	Cash received	Rec. 102	2 310	660
20	Cash received/Discount expense	Rec. 104	660	Nil
30	Credit sale/GST	Inv. 1206	220	220

Debtor's record: Scissors Salon				
Date	Details	Doc. no.	Amount $	Balance $
Sep 4	Credit sale/GST	Inv. 1201	550	550
6	Cash received/Discount expense	Rec. 101	550	Nil
24	Credit sale/GST	Inv. 1205	275	275

Debtor's record: D. Haynes				
Date	Details	Doc. no.	Amount $	Balance $
Sep 7	Credit sale/GST	Inv. 1202	495	495
24	Cash received	Rec. 104	495	Nil

Debtor's record: M. Taylor				
Date	Details	Doc. no.	Amount $	Balance $
Sep 19	Credit sale/GST	Inv. 1204	88	88

It is of vital importance that an owner and/or manager has up-to-date information regarding debtors. The debtors' records shown above provide a clear, concise summary of transactions relating to each individual debtor. Therefore it is quite easy to see such things as which debtor has not made a payment in the last month or which debtors have fully paid their accounts. Debtors who have not made a recent payment or have not paid within the stipulated credit terms must be followed up. In business, one cannot simply rely on a debtor's good name to pay an overdue account. In order to control debtors, an owner or manager should consider using some or all of the following tactics:

- making reminder calls via the telephone
- posting monthly statements with a reminder notice

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- faxing a copy of the original invoice with *Please note, this account is overdue* stamped clearly across it
- employing a debt collector
- threatening legal action (in extreme cases)
- refusing further credit until the account is settled
- charging interest (if stipulated as a term of the contract).

16.5 Modifying cash journals for discounts

If a business receives a discount from a supplier (discount revenue) or allows a discount to its debtors (discount expense), these items must be recorded at the time the transaction takes place. Discount revenue occurs when a prompt payment is made to a supplier. Discount expense will occur when a credit customer pays within the discount period. As both of the items occur when a cash transaction is taking place, it makes sense that the cash journals should be used to take note of such items. The two cash journals can be modified slightly to take into account discount revenue and discount expense. In order to demonstrate such events, two transactions shown earlier in this chapter have been repeated below:

Discount revenue

Aug 4 Paid Reliable Plumbing Supplies $1 300 and received a discount of $20

Helen's Hardware: cash payments journal (with column for discount revenue)

Date	Details	Chq. no.	Total paid $	Discount revenue $	Creditors $	Stock $	Sundry pay. $	GST paid $
Aug 4	Reliable Plumbing Supplies		1 300	20	1 320			

Discount expense

Sep 6 Received from Scissors Salon $540, discount expense $10 (Receipt no. 101)

Helen's Hardware: cash receipts journal (with column for discount expense)

Date	Details	Receipt no.	Amount banked $	Discount expense $	Debtors $	Cash sales $	Sundry receipts $	GST received $
Sep 6	Scissors Salon	101	540	10	550			

Note that the actual amount of cash paid must be recorded in the Total paid column. If a discount was granted, this should be shown under Discount revenue. The total effect on the creditor's account is then listed in the Creditors column. Thus, in the first example, $1 300 was paid, a $20 discount was granted and therefore the creditor's account would be decreased by a total of $1 320. The situation for a discount granted to a debtor can be recorded in a similar fashion (see second example).

The same principles applied to discount revenue can be applied to discount expense. That is, the actual amount of cash that has changed hands is shown in the Amount banked column.

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If a discount has been granted to a debtor it should be shown under Discount expense, as the business has made an economic sacrifice and does not collect this amount in cash. The total effect on the debtor's account should then be recorded in the Debtors column. When completing the individual debtor's account, these details can then be transferred as one total or as two individual entries, as demonstrated earlier.

16.6 Debtors and creditors schedules

When a balance sheet is being prepared for a business, there is little point in listing every individual debtor and creditor. This is indeed the case for a firm that has hundreds of debtors. However, the total amount owing to the business by debtors must be listed under the heading of Current assets. Similarly, the total amount owing to creditors by the firm must be listed under the heading of Current liabilities. If a business is using a system of individual records (as shown previously) for their debtors or creditors, a summary of these records is required. A **debtors schedule** is a listing of all debtors with their amounts owing at a particular date. Using the example of the debtors' records shown in figure 16.7, a debtors schedule could be prepared as follows:

Debtors schedule as at 30 September 2015	
Balwyn College	$220
Scissors Salon	275
M. Taylor	88
Total amount owing	$583

Therefore, in the balance sheet of Helen's Hardware, 'Debtors' of $583 would be shown as a current asset as at 30 September 2015. A **creditors schedule** can be prepared in a similar fashion from the creditors' records to show a listing of all creditors, with the amounts owing to them at a particular date.

16.7 Debtors, creditors and the GST

Having now covered both cash and credit transactions involving the GST, it is timely to consider the overall impact of the GST on a small business. There are now four types of transactions that may create an item that will have an impact on the GST debt of a business. These are:

1. GST collected by a business on its cash sales
2. GST paid by a business on its cash payments
3. GST charged to debtors when credit sales are made
4. GST charged by suppliers when credit purchases are made.

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When a business owner completes their BAS, the overall GST situation must be determined. Consider the following example:

GST collected on cash sales (from cash receipts journal)	$700
GST charged to debtors on credit sales (from credit sales journal)	400
Total charged to customers	1 100
GST paid on cash payments (from cash payments journal)	300
GST charged by creditors (from credit purchases journal)	200
GST charged by all suppliers	$500

The GST paid to and charged by suppliers can then be deducted from the GST collected from and charged to customers. This is done to determine the overall GST debt owing to the government. Therefore the net result from the above would be:

GST charged to customers	$1 100
Less GST charged by suppliers	500
GST debt owing to the Taxation Office	600

Of course, in the event that the GST paid to suppliers exceeds the amounts charged to customers, the business would be entitled to a GST refund. Both situations are allowed for in the preparation of the BAS and it is up to each business owner to keep appropriate records so that they can prove to the taxation office their entitlement at the end of the month.

GLOSSARY OF TERMS

credit purchases journal a daily record used to record details of all credit purchases made from creditors.

credit sales journal a daily record used to note details of all credit sales made to debtors.

credit transaction a transaction whereby goods or services are provided now but payment is deferred to a later date.

creditors suppliers of a business that the firm owes money to because they have provided goods or services on credit.

creditors schedule a listing of creditors' names with the current amount owing to each of them.

debtors customers of a business that owe the firm money because they have been sold goods or services on credit.

debtors schedule a listing of debtors' names with the current amount owing from each of them.

invoice a business document used to provide evidence of a credit transaction.

subsidiary record an accounting record kept in addition to the standard cash journals. Subsidiary records may be kept by a small business owner to keep track of debtors or creditors, as well as stock.

Summary questions

1. Explain what is involved in a credit transaction.
2. State the source documents used to evidence:
   - **a** a cash purchase of goods
   - **b** a credit purchase of goods.
3. State the source documents used to evidence the sale of goods to a customer:
   - **a** for cash
   - **b** on credit.
4. Distinguish between debtors and creditors.
5. Under what report classifications would you expect to find:
   - **a** debtors
   - **b** creditors?
6. What is a settlement discount? Why are such discounts offered?
7. Explain what the following notations mean when included on an invoice:
   - **a** 5/10
   - **b** 1/30
   - **c** N/60.
8. Describe the function of a credit purchases journal.
9. Why should a firm that sells on credit maintain individual debtors' records?
10. State three tactics a business owner may use if a debtor's account has not been paid after a period of time.
11. What is a debtors schedule? When is such a schedule prepared?
12. Describe the changes that need to be made to cash journals if discounts occur in a business that deals on credit.
13. A debtor owes a trading business a total of $300. They paid $290 and were granted a discount of $10. State the amounts that should be recorded in a receipts journal under each of the following columns: Amount banked, Discount expense, Debtors.
14. GST charged by creditors during a given month was $700. GST charged to debtors during the same time was $500. Does this business have a GST debt or is it due for a refund? Explain your answer fully.

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Practical exercises

[Exercise 16.1] For each of the following situations, state the amount of cash paid to the creditor and the discounts received.

a A purchase of $100 on 4 June 2015 on credit terms of 5/7, N/30. Payment was made on 7 June 2015.

b Invoice for $160 dated 14 July 2015, with credit terms of 2/30, N/60. Payment occurred on 1 August 2015.

c On 8 August 2015 goods were purchased for $350, on terms of 5/14, N/30. The invoice was paid on 25 August 2015.

d On 11 September 2015 an invoice was received for materials purchased. The total cost was $180 and the terms were 2/30, N/60. The account was settled on 8 October 2015.

[Exercise 16.2] The following credit purchases were made by Domestic Lighting during July 2015.

Jul 2	Bought goods on credit from Wholesale Electrics: Invoice number 32001: $500 plus $50 GST
5	Credit purchase from Lights 'R' Us Pty Ltd $340, plus $34 GST: Invoice 4530
9	Received Invoice no. TJ324 from Red Hot Electrics for goods purchased, a total of $330, including GST of $30
13	Bought goods on credit from Wholesale Electrics for $90, plus $9 GST: Invoice 32093
19	Received Invoice no. TJ371 for $120 worth of goods, plus $12 GST, purchased from Red Hot Electrics
24	Purchased stock from Wholesale Electrics and received Invoice 33102 for a total of $130, plus GST of $13

a Enter the above transactions in a credit purchases journal.

b Transfer the information from the purchases journal into individual creditors' records.

c Prepare a creditors schedule as at 31 July 2015.

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[Exercise 16.3]

Oliver's Office Products has supplied the following information regarding creditors' transactions during August 2015:

		GST $
Credit purchases:		
Aug 1	Invoice 654, from Bulk Stationery Co., for $270	27
5	Cleaner Paper Products, Invoice TY780, for $290	29
10	Bulk Stationery Co., $300 (Invoice 698)	30
13	Invoice 712, from Bulk Stationery Co., for $160	16
17	$180 from Perfect Pens, Invoice no. 50	18
25	Cleaner Paper Products, Invoice TZO09, for $120	12
Payments to creditors:		
Aug 11	Paid Bulk Stationery Co. $297 (Cheque 54001)	
16	Cheque 54002 sent to Cleaner Paper Products, $200	
23	Paid Perfect Pens $198, Cheque 54003	
31	Paid $165 to Bulk Stationery Co. (Cheque 54004)	

a Prepare a credit purchases journal for August 2015.

b Record both the credit purchases and cash payments to creditors in the individual creditors' records (all entries must be in chronological sequence).

c Prepare a creditors schedule as at 31 August 2015.

[Exercise 16.4]

Melbourne Computer Parts provides its goods to its regular customers on credit. The following credit transactions occurred during September 2015:

Sep 1	Issued Invoice number 4501 to Carlton College for goods provided. The total amount charged was $308, including $28 GST
4	Charged Fitzroy University $150 for a credit sale, plus $15 GST, Invoice 4502
8	Sent Invoice 4503 to P. Scaturchio for $230, plus $23 GST
11	Carlton College was issued Invoice 4504 for goods provided, $440, including $40 GST
18	Classy Couriers billed for $150 plus $15 GST, Invoice 4505
22	Charged Carlton College $850, plus $85 GST by issuing Invoice 4506
29	Invoice 4507 was sent to Fitzroy University for a total of $473, including $43 GST

a Enter the above transactions into a credit sales journal for Melbourne Computer Parts.

b Post the information from the sales journal to individual debtors' accounts.

c Prepare a debtors schedule as at 30 September 2015.

[Exercise 16.5]

Kay's Book Store has supplied the following information regarding her dealings with debtors in October 2015:

Credit sales charged to debtors:		*GST $*
Oct 1	Invoice 1496, to Footscray Library, for $380	38
3	To Preston TAFE, Invoice 1497 for $80	8
7	Invoice 1498, to H. Mai for $50	5
12	Footscray Library, Invoice 1499, for $280	28
17	Footscray Library, Invoice 1500, for $280	28
21	Preston TAFE, Invoice 1501, for $90	9
24	Invoice 1502, to T. Lam, for $60	6
28	Footscray Library, Invoice 1503, for $300	30
31	Invoice 1504, to Preston TAFE, for $80	8
Cash receipts from debtors:		
Oct 10	Received from Preston TAFE $88, Receipt no. 900	
13	Footscray Library paid $418 (Rec. 901)	
16	Received from H. Mai $30 (Rec. 902)	
21	Receipt number 903 issued to Footscray Library for $308	

a Record the credit sales for October in a suitably designed credit sales journal.

b Enter both the credit sales charged to debtors and the cash received from debtors in individual debtors' records (all entries must be in sequence).

c Prepare a debtors schedule as at 31 October 2015.

d Explain why the document numbers in the sales journal run in sequence.

[Exercise 16.6]

The following transactions relate to a small business trading as Toby's Toy Store:

Nov 1	Invoice no. 564 issued to Jacana Playgroup for $60, plus $6 GST
4	Received Invoice 340 from H.B. Bear $140, plus GST of $14
6	Invoiced Jacana Playgroup $55 (including $5 GST): Invoice 565
9	Charged B. Young $90, plus $9 GST: Invoice 566
11	Received Invoice A134 from Taz Industries for $440, including $40 GST
12	Received $66 from Jacana Playgroup: Rec. 860
16	Invoiced Y. Oldman $80, plus $8 GST: Inv. 567
18	Paid H.B. Bear $100: Chq. 3412
21	Charged B. Young $90, plus $9 GST: Invoice 568
23	Purchased toys on credit from H.B. Bear: Invoice 401, $160, plus $16 GST
25	Received $55 from Jacana Playgroup: Rec. 861.
26	Paid Taz Industries $440: Chq. 3413
28	Invoice number 569 to Y. Oldman, $80, plus $8 GST
29	Received $198 from B. Young: Rec. 862
30	Received Invoice 434 from H.B. Bear, $280, plus $28 GST
	Charged Jacana Playgroup $80 plus GST of $8: Invoice 570

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a From the previous list, enter the relevant transactions in a credit sales journal and a credit purchases journal.

b Prepare individual records for both the debtors and creditors of Toby's Toy Store.

c Draw up a debtors schedule and a creditors schedule as at 30 November 2015.

[Exercise 16.7]

The following transactions all relate to dealings with United Trading Co. over the month of June 2015. At the start of June, this creditor was already owed $200.

Credit purchases:		
Jun 2	Invoice 765	$120 plus $12 GST
9	Invoice 791	$160 plus $16 GST
15	Invoice 823	$140 plus $14 GST
24	Invoice 845	$200 plus $20 GST
30	Invoice 891	$180 plus $18 GST
Cash payments:		
Jun 4	Cheque 8912	$200
14	Cheque 8922	$250
	Discount received	$10
29	Cheque 8937	$310
	Discount received	$15

a Prepare the creditor's record for United Trading Co., showing all transactions during the month of June 2015.

b Explain how reliability has been satisfied in your creditor's record.

c State one benefit of taking advantage of discounts for prompt payment (refer 14 June above)

d State one disadvantage of making a prompt payment in order to get a discount.

[Exercise 16.8]

Anthony Kirley has had the following events take place in his hairdressing salon during July 2015:

GST collected on cash transactions:	$1 200
GST paid on cash payments:	$500
GST charged by suppliers on credit purchases	$250

Taking into account the above information, does Kirley owe the Taxation Office in relation to the GST or is he owed a tax refund? Explain fully.

[Exercise 16.9]

On 1 October 2015 Jeanette Shapadovski owed the Taxation Office $450 because of GST transactions by her business, Shapa's Art Supplies. During October Shapadovski experienced the following events in her business:

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GST charged by suppliers on credit purchases	$650
GST charged to debtors on credit sales	$980
GST paid on cash payments	$350
Cash payments not attracting GST	$5400
GST received on cash sales of inventory	$780
Cash receipts not attracting GST	$1200

a Calculate the GST debt or GST refund due as at 31 October 2015.

b How would you classify your answer to part **a** above in the balance sheet of Shapadovski's business? Explain your answer fully.

[Exercise 16.10]

Perfect Fit is a clothing store that buys its inventory on credit and allows credit to its trusted customers. Discounts are allowed for prompt settlement of accounts. On 1 July 2015, the following amounts were already owed by debtors: T. May $100, G. Matthews $90. The following events took place during July 2015:

Jul 2	Invoice number 789 issued to Ron Ponting for $80, plus $8 GST
4	Purchased stock from Cool Clothes Co. at a cost of $1300, plus $130 GST. Invoice number TR651 was received
9	Tony May paid $97 and was granted a discount of $3, Receipt number 24
11	Issued Invoice no. 790 to Michael Waugh for $120, plus $12 GST
13	Ron Ponting paid $82 and was allowed $6 discount, Rec. 25
15	Bought goods from Top Designs for $600, plus $60 GST, Inv. 354
17	Issued Invoice no. 791 to Max Hughes for $120, plus $12 GST
19	Paid Cool Clothes Co. $1400 and received a discount of $30, Chq. 76003
21	Gary Matthews paid $40, Receipt 26
24	Charged Ivan Healy $90, plus $9 GST, for a credit sale. Inv. 792
28	Paid Top Designs $640 and received $20 discount, Chq. 76004
31	Purchased $600 of goods from Cool Clothes Co. and received Inv. no. TR790 (GST charged $60)
	Invoiced Gary Matthews $60 plus $6 GST, Inv. 793

a Enter the relevant transactions from the list above into a credit purchases journal.

b Prepare an extract from the cash payments journal to show how the payments on 19 July and 28 July would be recorded.

c Prepare individual creditors' accounts showing all entries in correct sequence.

d Select the appropriate transactions from the list above and prepare a credit sales journal.

e Prepare an extract from the cash receipts journal to show how cash received during the month would be recorded.

f Prepare individual debtors' accounts with all relevant entries.

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g Prepare debtors and creditors schedules as at 31 July 2015.

h Using your credit journals, determine the GST situation of this business at the end of July 2015. Explain your answer fully.

[Exercise 16.11]

Ferrante Furniture is a small business that buys and sells its goods on credit. Debtors are encouraged to settle their accounts quickly by the discounts offered by the proprietor. On 1 August 2015, the following debtors' accounts were already in existence: J. Espandiar $1 450, R. Benigno $600 and D. Tran & Co. $2 200. Balances owing to creditors at that date were: Classic Importers $5 100 and Fancy Furniture $3 200.

Aug 1	Paid Classic Importers $3 100, Cheque no. 98342
2	Invoice number 213 issued to R. Benigno for $180, plus $18 GST
3	Purchased goods from Fancy Furniture for $2 800, plus $280 GST—Invoice 432
6	Sold goods to J. Espandiar for $550, including $50 GST Invoice 214
	D. Tran & Co. paid $1 650 and was granted a discount of $30 (Rec. 332)
9	Issued Invoice no. 215 to R. Benigno for $240, plus $24 GST
11	J. Espandiar paid $1 430 and was allowed $20 discount, Rec. 333
12	Issued invoice 216 to Shepparton Secondary College for $2 800, plus $280 GST
15	Bought stock from Classic Importers for $2 100 (Invoice TY445): GST charged $210
18	Sold goods on credit to S. Bramante for $800, plus $80 GST (Inv. 217)
21	Paid Fancy Furniture $3 160 and received a discount of $40 (Chq. no. 98343)
22	Issued Invoice no. 218 to Shepparton Secondary College for $520, plus $52 GST
23	R. Benigno sent a cheque for $600 for overdue payment (Rec. 334)
24	Sold goods on credit to J. Espandiar $540, plus $54 GST (Inv. 219)
26	Purchased stock on credit from Oz Furniture for $2 600, plus $260 GST (Inv. DE121)
28	S.Bramante paid $855 on account and was allowed a discount of $25 (Rec. 335)
29	Invoiced D. Tran & Co. for credit sale of $4 200, plus GST of $420 (Inv. 220)
30	Purchased inventory from Fancy Furniture for $4 300, plus GST of $430 (Inv. 454)
31	Sold goods on credit to Cusack and Sons for $2 360 (Inv. 221): GST charged $236

a Prepare the following journals for the month of August 2015, with all relevant transactions:
- credit sales journal
- cash receipts journal
- credit purchases journal
- cash payments journal.

b Prepare individual debtors' accounts with all relevant entries in correct sequence.

c Prepare individual creditors' accounts showing all entries for August.

d Prepare debtors and creditors schedules as at 31 August 2015.

e Determine whether this business has a GST debt or is owed a GST refund at the end of August 2015 (show workings).

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Chapter 17

Income statements for trading businesses

OBJECTIVES

At the completion of this chapter, you should be able to:

- prepare an income statement for a trading business
- explain the difference between service firms and trading firms in relation to the income statement
- distinguish between gross profit and net profit
- distinguish between cost of goods sold and cost of sales
- use alternative means of presentation, including graphs, in relation to performance data
- evaluate the results reported by an income statement.

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17.1 Income statements for service businesses

The first half of this text focused on the accounting needs of service businesses; for these, the two cash journals were the major tool for recording transactions. The information could then be extracted from these cash records in summarised form and an income statement prepared at the end of the reporting period. This is essentially the basic structure of a single entry accounting system. Before introducing the income statement for a trading business, it is important to revisit this report for a service business. This will allow you to make a comparison between the reports prepared for the two types of businesses. An example of a income statement for a service firm has been provided in figure 17.1.

Figure 17.1 Income statement for a service business

Clarkes Cleaning Services: income statement for year ended 30 June 2015

	Revenue	*$*	*$*
	Cleaning fees		90 000
less	*Expenses*		
	Wages	30 000	
	Office expenses	4 000	
	Insurance	2 000	
	Advertising	1 000	
	Vehicle expenses	3 000	40 000
	Net profit		50 000

This report is designed to satisfy the needs of the owner of a service business. It is simple in style, as there are basically only two parts to the report. The revenue items are listed at the top of the report, followed by the firm's expenses items. The end result, which is the profit or loss for the period, is then stated at the bottom of the report. This statement will be useful to compare with the reports prepared for trading businesses in this chapter.

17.2 Income statements for trading businesses

The major change required when reporting for a trading business is that both gross profit and net profit should be stated in the income statement. As a trading business has the basic function of buying and selling goods to earn its revenue, the income statement should report on these activities. The mark-up added to cost prices in order to determine selling prices will have a significant impact on the profit results of a trading firm. This point will be further explored later in this chapter. At this stage, it is important to define some key terms in relation to trading businesses.

Sales: this is the major source of revenue for a trading business. Sales may consist of both cash sales and credit sales. The value of cash sales can be extracted straight from the cash journals, whereas credit sales for a period will be shown as the total of the credit sales journal.

Cost of sales: this will include the cost prices of all stock sold during the reporting period. The total cost of sales can be determined by adding the entries for the sales made in the OUT column of the firm's stock cards (but not including stock losses).

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Gross profit: a gross profit figure is determined by deducting the cost of sales from the sales revenue earned for the reporting period. That is, gross profit is the difference between the selling prices and the cost prices of the stock sold during the period.

Adjusted gross profit: gross profit is adjusted for any stock losses or stock gains to provide an adjusted gross profit figure.

Net profit: the net profit figure is the final performance result for the reporting period. The total revenues earned for a period less all expenses for the same period provides management with a net profit result. In terms of the income statement, net profit will be achieved by following the format set out below:

	Sales
less	Cost of sales
=	Gross profit
less	Stock loss
=	Adjusted gross profit
less	Expenses
=	Net profit

The formal layout of an income statement for a trading business follows this outline. In fact, the headings used within the report come from this outline. Consider the report shown in figure 17.2.

Figure 17.2 Income statement for a trading business

Carmelina's Gift Shop: income statement for the year ended 30 June 2015

	Revenue	*$*	*$*
	Cash sales	172 000	
	Credit sales	28 000	200 000
less	Cost of sales		90 000
	Gross profit		110 000
less	Stock loss		5 000
	Adjusted gross profit		105 000
less	*Expenses*		
	Wages	50 000	
	Office expense	8 000	
	Insurance	12 000	70 000
	Net profit		$35 000

This income statement reports on the key areas in which management would have an interest. The turnover of the business is stated (that is, total sales of $200 000), the gross profit made on the sales is clearly stated ($110 000) and the overall profit result for the year has been determined ($35 000). These are all important factors for an owner or manager to consider at the end of a reporting period.

It is also timely to revisit the treatment of the net profit figure, having determined it through the preparation of the income statement. The net profit is the result of deducting expenses from revenues, with a profit leading to an increase in owner's equity. Thus, the profit figure is also reported as part of the balance sheet. If a net profit is determined, it is added to owner's equity.

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Figure 17.3 The link between the financial statements

Income statement
Revenue *less* Expenses = Net profit

Balance sheet
Assets = Liabilities + Owner's equity

Net profit increases owner's equity

In the case of a net loss, the final result is deducted from owner's equity. Figure 17.3 represents this link between the two financial statements.

The relationship represented in this diagram is further evidence of the two-fold effect of all business transactions on the balance sheet. Rather than adjusting the value of owner's equity after every single transaction, the income statement acts as a summary of all revenue and expense transactions for the entire reporting period. As revenues represent an inflow of resources, revenues will increase assets, usually through debtors or cash at bank. Expenses, on the other hand, represent sacrifices of economic resources and will therefore result in decreases in assets. Therefore, the net result of all revenue and expense transactions will have an impact on two elements in the balance sheet: assets and owner's equity.

17.3 Distinguishing between cost of goods sold and cost of sales

Cost of sales is a vitally important item in the income statement. The cost price of the goods that a firm sells is deducted from its revenue in order to determine gross profit. However, sometimes a trading firm incurs other costs in getting its stock ready to sell. An additional heading may be used in the income statement to bring all such expenses together. The heading **Cost of goods sold** includes all expenses incurred in acquiring stock and preparing it for sale. Thus cost of goods sold may include such items as cost of sales, cartage inwards (delivery costs into the business), packaging costs, buying expenses and customs duty (if goods are imported from overseas). All of these expenses are incurred in order to get stock into the business ready to sell. In the income statement such items are listed together before the firm's gross profit is determined. An example of this layout has been prepared in figure 17.4.

Figure 17.4 Income statement with 'Cost of goods sold' subheading

Toorak Trading Store: income statement for month ended 30 June 2015

	Revenue	*$*	*$*
	Cash sales	8 000	
	Credit sales	2 000	10 000
less	Cost of goods sold		
	Cost of sales	4 000	
	Cartage inwards	500	
	Buying expenses	500	5 000
	Gross profit		5 000
less	*Expenses*		
	Cartage outwards	200	
	Wages—sales staff	2 400	2 600
	Net profit		$2 400

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Note that in this report all expenses incurred in getting stock ready for sale are listed under the heading Cost of goods sold. This includes, of course, the actual cost of sales for the period. All other expenses are then simply listed in the bottom half of the report. Note also the item *cartage outwards* listed under the Expenses heading. Whereas *cartage inwards* is a delivery fee created when stock is coming into the business, cartage outwards is an expense incurred when stock leaves the business and is being delivered to customers. As cartage outwards is not created when stock is being prepared for sale, it would not be considered to be part of cost of goods sold. Wages is also an expense created in helping move the stock out of the business. Sales staff are paid to move stock out of the business as quickly as possible. Therefore wages of the sales team would be listed under the Expenses heading, along with any other general expenses.

17.4 Performance data: alternative means of presentation

One of the important qualitative characteristics of accounting set down by SAC2 is that of *understandability*. That is, accounting information should be presented in such a way that the users of the report easily understand it. Income statements such as that presented in figure 17.2 can be prepared in an easy-to-read fashion, set out with headings, subtotals and all key figures suitably labelled. However, some users of financial reports still find it difficult to comprehend exactly what it is that is being presented. Some individual users of reports find a page full of numbers quite daunting. Because of this, accountants sometimes present financial information in alternative ways. This is done in an attempt to improve understanding of the financial statements. Alternative forms of presentation may include graphs or charts, since graphs may have an impact that a page of numbers cannot achieve. Pie charts, line graphs and bar graphs can all be used to convey information in a clear, understandable fashion. Consider the financial information presented in figure 17.2, which has been re-presented here in an abbreviated form. In addition to the dollar values for each item, percentages have also been presented, with all the expenses being expressed as a percentage of the total sales revenue.

		$	%
Cash sales		172 000	
Credit sales		28 000	
		200 000	100.0
less	Cost of sales	90 000	45.0
	Gross profit	110 000	55.0
less	Stock loss	5 000	2.5
	Adjusted gross profit	105 000	52.5
	Wages	50 000	25.0
	Office expenses	8 000	4.0
	Insurance	12 000	6.0
	Total expenses	70 000	35.0
	Net profit	35 000	17.5

When the dollar values are converted to percentages, it is much easier to present this data as a pie chart. The percentages shown above represent what happened to the average sales dollar earned by the business during the period. For example, 45% of the sales dollar was consumed

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by the cost price of the stock. Wages was also a significant item, absorbing 25% of the sales revenue earned by the firm. After taking into account all expense items, this business still had 17.5% of each sales dollar remaining as net profit. This information can be presented in a pie chart, as shown in figure 17.5.

Rather than showing details of every individual expense item, an alternative sometimes used is a simplified version of figure 17.5. Cost of sales is a crucial figure in terms of a successful trading business, as is the total expenses for the period. To highlight these two figures, as well as the profit for the period, an alternative pie chart can be prepared as shown in figure 17.6.

As with all graphs, a pie chart should be designed to report on the key areas of the business. Figure 17.6 clearly shows that 45% of sales was consumed by cost of sales. However, because all expenses have been added together to make up a total of 37.5% of sales, the importance of wages cannot be identified in this chart. As the amount for wages was significant ($50 000), it probably deserves its own segment in the pie chart, thus highlighting its impact on the profit of the business.

Figure 17.5 Pie chart showing breakdown of sales dollar

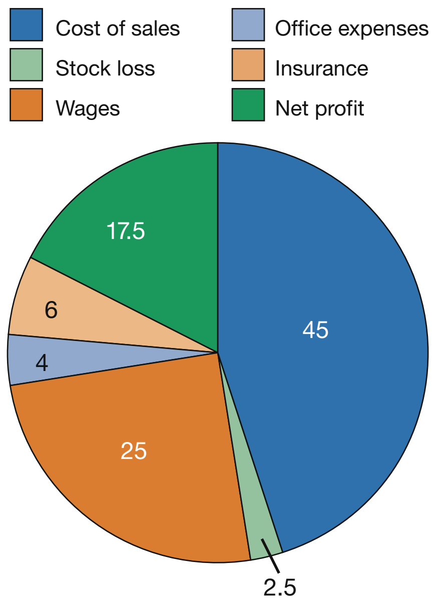
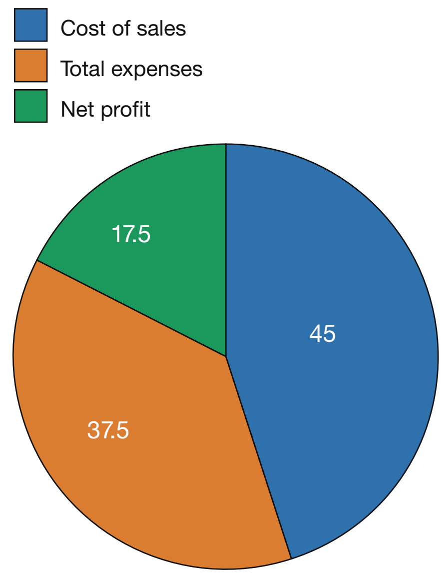


Figure 17.6 Pie chart showing breakdown of sales dollar (summarised version)

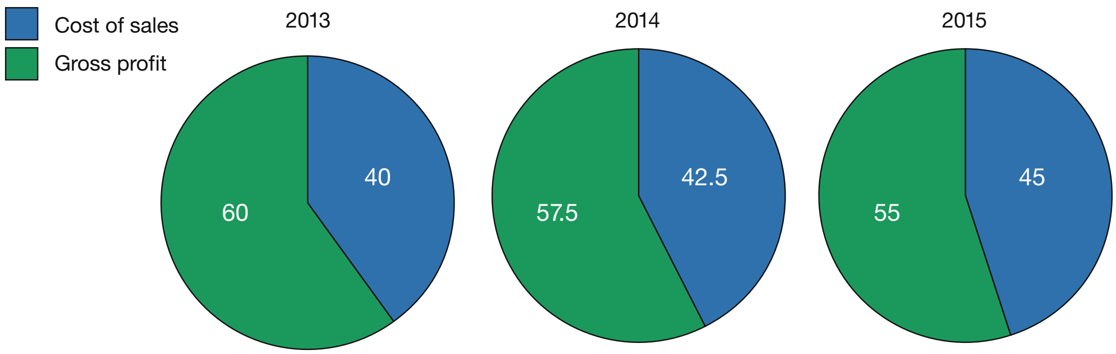


There are no set rules for graphs or charts in accounting. However, if they are going to be used in an attempt to satisfy *understandability* (SAC2), they should be used to reveal all key information. An excellent use of pie charts is to present a series of charts over consecutive reporting periods. As the charts can be used to show the breakdown of the sales dollar, changes in the firm's operations can be identified quite easily. To demonstrate this, the pie charts in figure 17.7 have been prepared to show the breakdown of the sales dollar into two segments, cost of sales and gross profit. They have been based on the data shown below.

	2013		2014		2015	
	$	%	$	%	$	%
Sales	180 000	100.0	190 000	100.0	200 000	100.0
– Cost of sales	72 000	40.0	79 800	42.0	90 000	45.0
Gross profit	108 000	60.0	110 200	58.0	110 000	55.0

This three-year comparison in dollar terms may not present a clear picture of what has happened in this business. However, by presenting the data graphically in percentage terms, we get a clearer picture.

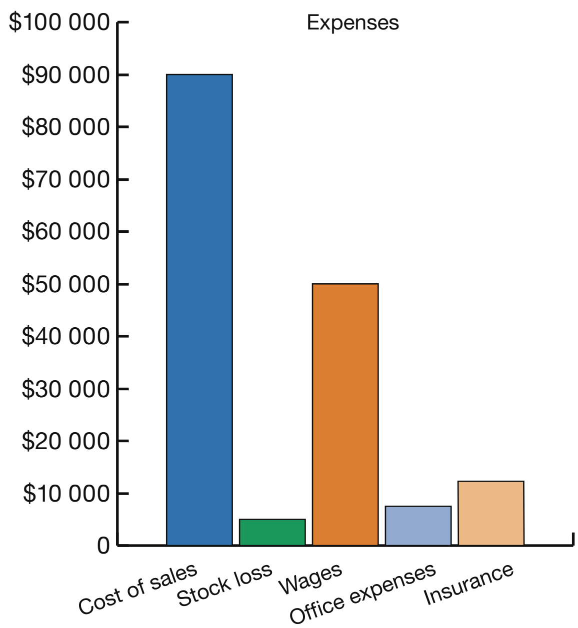
Figure 17.7 Comparative pie charts over consecutive reporting periods



The movement in the percentage of sales that remains as gross profit can be seen to be shrinking over the three years, as shown in figure 17.7 (see above). This is a most useful aspect of graphs in accounting. Changes can be identified quite easily, particularly if graphs are prepared on a consistent basis and colour or shading is used to good effect. Most individuals can identify such changes when information is presented graphically, even if they do not fully understand accounting reports. This clearly helps satisfy *understandability*, as the graphs help get the message across to the users of the report, and this is the basic task of those who prepare such reports. Such comparisons over several reporting periods form the basis of trend analysis, which will be covered in detail in chapter 20.

Other graphs and charts may also be used to convey accounting information. Bar graphs, for example, allow for easy comparison of the various expense items incurred by a business. Using the data previously used for Carmelina's Gift Shop (refer figure 17.2), the expenses of this business could be presented as follows:

Figure 17.8 Bar graph showing comparative spending on expense items



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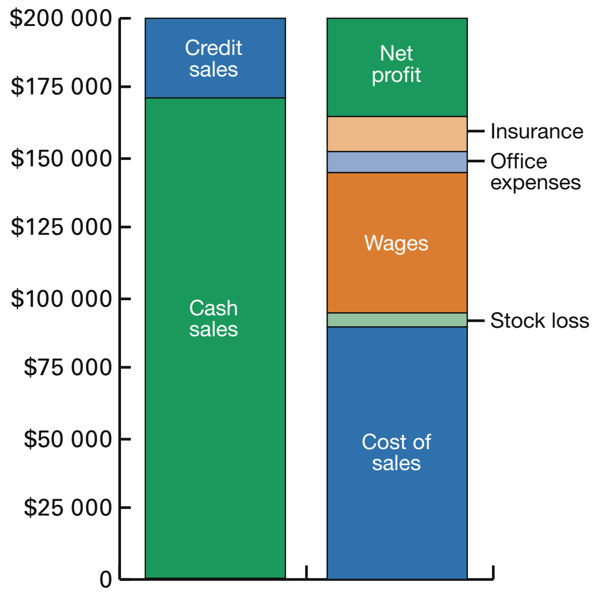
A variation of a bar graph is a stacked graph. This type of graph may be used to allow an easy comparison of the revenue and expenses of the business. One part of the graph is used to show the revenue of the firm, which can be broken down into credit and cash sales. The other half of the graph can be divided into segments representing all of the expense items, plus one section showing net profit. Figure 17.9 is a stacked graph, based on the data from Carmelina's Gift Shop.

Figure 17.9 Stacked graph of revenues and expenses



It should always be remembered that one role of accounting is to convey information to the users of financial reports. If charts or graphs can improve the quality of information being conveyed, their use should be encouraged. Graphs can be an important tool for accountants if used in the correct manner, as they are preferred by individuals who are put off by a page full of numbers. Therefore graphs and charts should be viewed as an additional tool that accountants can use to help get their message across to the users of their financial statements.

17.5 Evaluating an income statement

Once an income statement has been prepared, it should not be filed away and forgotten. It is important to be able to assess what the report actually means in terms of the final profit result. The first point to keep in mind is that the length of the reporting period is stated in the heading of the report. This is a crucial factor to consider when evaluating a net profit figure. For example, a $20 000 profit may be quite disappointing if the reporting period is a year. However, if the reporting period is one month in duration, the owner may well be delighted with the result. Apart from this fundamental consideration, there are several other **benchmarks**, or **yardsticks**, that can be used to evaluate performance.

1 *Comparing profit to previous results:* This type of comparison provides management with a *trend* in the profit results over time. This may indicate an improved performance, or perhaps a declining profit trend. The results from several reporting periods may provide an owner

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with a better idea of performance than simply one period's results. Consider the profit results of the two firms shown in the table below.

Net profit results:	*2011* *$*	*2012* *$*	*2013* *$*	*2014* *$*	*2015* *$*
Business A	2 000	8 000	16 000	28 000	48 000
Business B	90 000	78 000	65 000	56 000	48 000

If the year 2015 is examined in isolation, the simple conclusion would be that the two businesses earned the same net profit. However, when the trend is taken into account a different picture of events takes shape. Business A has been improving its profit every year, while Business B shows quite a different story. Trend analysis should always be considered, rather than only looking at one period, as it may well help predict the likely future results of a business.

2 *Budgeted (or expected) profit:* The past trend in a firm's profit results may be used to evaluate performance. However, even if profit has improved compared to previous results, it may still be seen as unacceptable if it did not meet management's expectations. Referring to Business A in the example above, the budgeted profit for 2015 may well have been $52 000. Even though the business increased its profit from the previous year, if the target for the period was $52 000, some disappointment may still be expressed.

3 *Industry averages:* An accountant may be able to advise a business owner as to how their business compares to other similar businesses. If industry statistics are available, an owner can evaluate how their business rates with the **industry average**. Is the business performance better than most? Has our business been falling behind in the last few years? Questions such as these help a business owner evaluate financial performance.

4 **Analytical ratios**: Accountants may use several different analytical ratios when evaluating a net profit result. Although chapter 20 will provide extensive coverage of such ratios, two will be introduced at this stage: the **net profit ratio** and the **return on owner's investment**. These ratios are detailed below.

$$\text{Net profit ratio (also known as the return on sales ratio)} = \frac{\text{Net profit}}{\text{Total sales}}$$

This ratio compares the net profit for a period to the amount of sales revenue generated. It determines the percentage of the sales dollar that remains after all expenses have been taken into account. This ratio has actually already been introduced in figures 17.5 and 17.6, in pie charts of the sales dollar showing how much of the dollar was consumed by expenses and how much remained as profit. If a business has total sales of $50 000 and net profit was $5 000, the net profit ratio would be:

$$\begin{aligned}\text{Net profit ratio} &= \frac{\text{Net profit}}{\text{Total sales}}\\ &= \frac{\$5\,000}{\$50\,000}\\ &= 0.1{:}1 \text{ or } 10\%\end{aligned}$$

This ratio indicates that 10% of the sales dollar was ultimately earned as net profit. Another way of interpreting this result is that, out of every sales dollar earned, 10 cents profit was earned. If expenses increase and selling prices remain the same, the net profit ratio will decrease. This will happen because expenses are eating away more of the sales dollar. The reverse of this is also possible. If selling prices increase and expenses remain constant, the net profit ratio will increase.

$$\text{Return on owner's investment} = \frac{\text{Net profit}}{\text{Average capital}}$$

This ratio compares the profit earned by a business to the funds contributed by its owner. Most small business owners invest their capital in order to maximise their return. They could put their money into term deposits in a bank and have a secure, low-interest return. When they go into business the risks are greater, but so too are the potential rewards. The return on owner's investment ratio can be used by a proprietor to evaluate whether or not it is still worthwhile to continue with their business investment. It is calculated as follows:

Capital as at 1 January 2015	\$70 000
Capital as at 31 December 2015	90 000
Net profit for 2015	20 000

$$\begin{aligned}\text{Return on owner's investment} &= \frac{\text{Net profit}}{\text{Average capital}}\\ &= \frac{20\,000}{(\$70\,000 + \$90\,000)/2}\\ &= \frac{\$20\,000}{\$80\,000}\\ &= 0.25{:}1 \text{ or } 25\%\end{aligned}$$

This ratio indicates that for every dollar invested by the owner a return of 25 cents was earned. In order to compare the return with other possible investments, it may be simply stated that the owner has earned a return of 25% per annum. Note that, in the above calculation, an average was determined for the owner's capital. An owner may contribute additional funds or may withdraw assets during a reporting period. Rather than using owner's capital at the start or at the end of the period, an average figure is usually used. This provides a more accurate assessment of the owner's return when their contribution has changed during a reporting period. When evaluating an owner's return on investment, the simple percentage return should not be the only thing taken into account. A business owner is taking a substantial risk by investing personal funds into a business venture. The other thing to keep in mind is that many small business owners work very long hours when managing their own business. Although it is difficult to put a value on the risk taken and the hours worked, the return on an owner's investment should be substantially more than that available in the financial markets.

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› GLOSSARY OF TERMS

analytical ratio the comparison of one financial item with another. Ratios are used to provide additional information about a business when assessing its performance.

benchmark (or **yardstick**) a tool used to assess the performance of a business. Benchmarks may include pre-determined levels of performance.

Cost of goods sold a heading used in an income statement that includes all expenses incurred in getting goods into the business ready for sale.

industry average a tool used to assess the performance of a business, whereby the firm's results are compared to typical results in that particular industry.

net profit ratio (or **return on sales**) the percentage of sales revenue left as profit after all expenses have been taken into account (determined by dividing net profit by sales revenue).

return on owner's investment the return earned on the funds invested by a business owner (determined by dividing net profit by average capital).

Summary questions

1. Describe the basic difference between an income statement prepared for a service firm and one prepared for a trading business.
2. State three items that may appear in an income statement for a trading business that would not appear in a report for a service firm.
3. Explain the link between the income statement and the balance sheet.
4. Distinguish between the terms 'cost of sales' and 'cost of goods sold'.
5. State two expense items that may be listed under the heading Cost of goods sold in an income statement.
6. State two expense items that would not be listed under Cost of goods sold. That is, items that would appear after the gross profit has been determined.
7. Explain why some accountants present financial information using graphs.
8. The qualitative characteristic of understandability may be satisfied in part by the use of graphs and charts. Explain how this is achieved.
9. Explain why it is advisable to consider a trend in profit results rather than the results of a single reporting period.
10. A budget may be used to assess business performance. How is this done?
11. Consider the following statement, made by a small business proprietor. 'My business is unique, so industry averages are of little use to me when assessing performance.' Do you agree with this business owner? Explain your answer fully.
12. What is the net profit ratio? How is it determined?
13. Describe what is revealed by the ratio known as the return on owner's investment. Explain the purpose of determining this ratio.

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Practical exercises

[Exercise 17.1]

Linda Kowarzik owns South Yarra Books and has provided the following details of her trading results for the year ended 31 March 2015.

Cash sales	$85 000	Credit sales	$15 000
Cost of sales	45 000	Wages—sales assistant	25 000
Advertising	2 000	Interest expense	1 200
Postage expenses	800	Stock loss	1 300

a Prepare an income statement for the year ended 31 March 2015.

b State two items in your statement that would appear in a report for a service business.

[Exercise 17.2]

David Foss is the owner of Essendon Sports Store, a trading business that sells a range of sporting equipment and apparel. The owner has provided the following details from his records for the year ended 31 August 2015.

From the cash journals:		*From the sales journal:*	
Cash receipts:		Credit sales	$32 600
Cash sales	$95 400		
Capital	20 000	*From the stock cards:*	
Loan	10 000	Cost of sales	58 600
GST collected	9 540		
Cash payments:		*From the stocktake of 31 August:*	
Casual wages	18 800	Stock loss	2 400
Interest on loans	1 200		
Laptop computer	2 600		
Office expenses	3 400		
Drawings	2 000		
Rent	35 000		
GST paid	4 100		

a There are several items listed above that are not relevant to an income statement. Make a list of these items and write a brief note explaining why they are irrelevant to this report.

b Using the relevant information from that provided, prepare an income statement for the year ended 31 August 2015.

c Make a brief comment on the profit performance of this business.

[Exercise 17.3]

Frances Wade is the owner of Maldon Hardware. She has summarised her transactions for the three-month period ended 30 September 2015 and has made the following information available:

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Advertising	$1 320	Cartage inwards	$640
Cartage outwards	340	Cash at bank balance	3 200
Cash sales	24 000	Cost of sales	17 200
Council rates	580	Credit sales	12 100
Drawings	4 300	Electricity expenses	340
Insurance	430	Loan repayments	4 300
Stationery expenses	860	Vehicle expenses	540

ADDITIONAL INFORMATION:

» On 30 September 2015 Wade totalled all of her stock cards and found that stock on hand should be $27 100. However, a physical stocktake carried out on this date revealed stock on hand of $27 800.

a Prepare an income statement for the three months ended 30 September 2015 (use the heading 'Cost of goods sold' in your report).

b State two ways in which the discrepancy revealed by the stocktake could have been created.

c If the owner's capital was $34 000 on 1 July 2015, prepare an extract from the firm's balance sheet to show the owner's equity section of the report as at 30 September 2015.

[Exercise 17.4]

The manager of the FX Lighting Store has supplied the information below, which relates to the reporting period ended 30 June 2015.

Sales	$102 000	Cartage in	$1 250	Insurance	$570
Rent	20 000	Capital (1/7/14)	32 000	Carry bags	680
Cleaning	940	Postage	450	Cost of sales	47 600
Wages	17 000	Accounting costs	540	Telephone exp.	620
Rates	1 230	Interest on loans	980	Drawings	4 300
Stock as per stock cards	34 200				
Stock as per stocktake	32 400				

a Prepare an income statement for the year ended 30 June 2015, showing clearly the gross and net profits for the period.

b Prepare an extract from the firm's balance sheet to show the owner's equity section of the report.

c The owner admits to a regular working week of 60–80 hours. Comment on the performance of this business, taking into account this information and the amount of capital invested.

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[Exercise 17.5] The following information relates to Warrnambool Trading Store:

Sales revenue	$125 000
Cost of sales	56 250
Wages	31 250
Office expenses	10 000

a Determine the net profit earned by this business.

b Calculate the net profit ratio.

c Comment on the results of your calculation in part **b** above, explaining clearly what this ratio shows.

d Prepare a pie chart, showing the breakdown of the sales dollar into the various expense items and the net profit that remains. (Hint: use the chart wizard in *Microsoft Excel®* to prepare your pie chart.)

e Prepare a bar graph for all expense items so that the owner can compare the spending in the various areas.

[Exercise 17.6] Johnny Truong is the owner of J.T.'s Appliance Store. He has asked for your assistance in analysing the performance results of his business over the last three years. Truong has provided the following details for your information:

	2013	*2014*	*2015*
Cash sales	$120 000	$132 000	$138 000
Credit sales	40 000	48 000	62 000
Cost of sales	80 000	93 600	110 000
Sales staff wages	18 000	23 760	27 600
Advertising	6 000	10 560	13 800

a Calculate the net profit for each of the three reporting periods.

b Determine the net profit ratio for each of the three years.

c Comment on the trend in the net profit ratio over the three-year period.

d Prepare pie charts for each of the three years, showing clearly the breakdown of total sales revenue. (Hint: use the chart wizard in *Excel®*.)

e Prepare a stacked graph for each of the three years. Present cash and credit sales on one part of the graph, with all expense items and net profit on the other section.

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[Exercise 17.7] The following information relates to two similar businesses:

	Dandenong Furniture	*Cranbourne Furniture*
Net profit	$55 200	$56 000
Capital (1/7/14)	220 000	210 000
Capital (30/6/15)	240 000	190 000

a Calculate the return on owner's investment for the two business owners.

b Comment on the results from part **a** above, indicating clearly which owner has the better return.

c State three benchmarks that may be used to evaluate a return on the owner's investment.

[Exercise 17.8] Daniel Lee is the proprietor of Lee's Pharmacy. He has provided the following details from his most recent reporting periods:

	2013	*2014*	*2015*
Sales revenue	$180 000	$160 000	$200 000
Net profit	27 000	28 800	30 000
Capital (start of period)	96 000	100 000	110 000
Capital (end of period)	100 000	110 000	120 000

a Calculate the net profit ratio for each of the three reporting periods and comment on the trend in the ratio.

b Calculate the return on owner's investment for each of the reporting periods and comment on your results.

[Exercise 17.9] The following details relate to the business of Altona Auto Parts for the period ended 31 March 2015:

Wages—shop assistant	$24 300	Cash sales	$86 700
Credit sales	68 600	Buying expenses	1 200
Interest on loan	2 300	Postage & telephone	1 240
Promotional expenses	3 200	Cartage inwards	2 100
Cost of sales	63 400	Shop maintenance	5 400
Delivery costs to customers	2 400	Heating & lighting	1 320
Salary—receptionist	27 000		

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ADDITIONAL INFORMATION:

- Owner's capital as at 1 April 2014: $54 300
- Total of stock on hand according to stock cards: $32 400
- Stock on hand according to stocktake: $31 600

a Prepare an income statement for the year ended 31 March 2015, showing clearly both gross profit and net profit.

b Calculate the net profit ratio and explain the significance of this ratio.

c Calculate the return on owner's investment, given that the owner's capital as at 31 March 2015 was $45 700.

d The return on owner's investment should be approximately the same as that available on term deposits. Do you agree? Explain fully.

[Exercise 17.10] Steve Gellion is the owner of Pascoe Vale Antiques & Collectables. At the end of the current reporting period he has prepared the following summary of events for the year ended 30 September 2015:

Cash sales	$65 000	Credit sales	$32 900	Cartage inwards	$910
GST received	6 500	Advertising	1 230	Stock loss	2 140
Customs duty	1 280	Interest paid	2 190	Drawings	9 830
Office equipment	5 650	Cost of sales	43 260	Cartage outwards	1 210
Shop rent	22 000	GST paid	2 663	Part-time wages	8 250
Legal fees	1 270	Insurance	1 400	Security costs	3 760

a Prepare an income statement for the year ended 30 September 2015. Your report should show both gross and net profit results.

b Given that Gellion's capital was $43 000 as at 30 September 2014, prepare an extract from his balance sheet to show how owner's equity would be reported as at 30 September 2015.

c Calculate the return on the owner's investment for the year and comment on the rate that the owner is earning.

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CASE STUDY

STRATHMORE JEANS is a retail outlet that sells the latest fashion gear. It has been established for a number of years. The owner of the business, Bree Semini, has been keeping cash journals and a credit sales journal. She supplements these records with individual stock cards and debtors' records. At the end of the previous reporting period, the balance sheet for the business reported the following:

Strathmore Jeans: balance sheet as at 30 September 2014

Assets	$	*Liabilities*	$	$	$
Cash at bank	3 210	GST debt		2 000	
Debtors	4 320	Mortgage loan		173 000	175 000
Stock	45 300	Owner's equity			
Shop fittings	12 000	Capital	115 430		
Office equipment	8 600	*plus* Net profit	28 000	143 430	
Premises	220 000	*less* Drawings		25 000	118 430
	293 430				293 430

Semini has prepared the following summary of events at the end of the current reporting period:

From her cash journals:		*From her credit sales journal:*	
Cash sales	$86 400	Credit sales	$21 400
Receipts from debtors	12 340	GST charged to debtors	2 140
Capital	10 000		
Loan from NAB	12 000	*From her stock cards:*	
GST received	8 640	Cost of sales	51 200
Cartage inwards	1 210	Stock losses	2 300
Cash purchases of stock	45 000		
Wages	22 400	*From the physical stocktake:*	
Advertising	1 470	Stock on hand as at 30/9/15	36 800
Loan repayments	10 400		
Buying expenses	1 420		
Electricity	1 620		
Drawings	37 000		
Office expenses	2 180		
Interest on loans	9 800		
Purchase of shop fittings	4 300		
GST paid	5 720		

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ADDITIONAL INFORMATION:

- The mortgage loan is repayable at the rate of $200 per week.
- The loan from NAB is an interest-only loan. The total amount borrowed is due for repayment on 30 June 2020.
- The firm's bankers have approved an overdraft facility to cover short-term shortages of cash.

a Prepare a statement of receipts and payments for the year ended 30 September 2015.

b Using the results from your statement in part **a** above, comment on the firm's cash position at the end of the period.

c Prepare an income statement for the year ended 30 September 2015. (Hint: you will need to determine if the business has experienced a stock loss or a stock gain.)

d Draw a pie chart to show the breakdown of the sales dollar. The chart should be divided into three sections: cost of goods sold, expenses and net profit.

e Using your statement in part **c** above, plus your chart in part **d** above, comment on the profit performance of the business.

f Prepare a classified balance sheet as at 30 September 2015. (Hint: you will need to determine how much is owed by debtors as at 30/9/15 and you will need to calculate the GST liability of the business.)

g Prepare a stacked graph of the firm's balance sheet. On one side of the graph, show the breakdown of the assets. On the other side of the graph, show the liabilities and owner's equity of the business.

h Using the data from the previous period's balance sheet, calculate the owner's return on investment.

i Using the balance sheet prepared as at 30 September 2015, calculate the owner's return on investment.

j Write a brief comment on the trend in the owner's return on investment over the two years.

k Semini is worried about the level of stock losses that the business is suffering.

- i State two possible causes of the stock loss.
- ii State two security measures that may be appropriate for Semini's business.

l Semini is confused. She is certain that her business made a profit again this year but is worried about the shortage of cash experienced by the firm. Explain to her why she has run out of cash but has been able to report a profit again in the current period. Your explanation should state the items that affect cash on hand but do not affect profit.

Chapter 18

Balance day adjustments

OBJECTIVES

At the completion of this chapter, you should be able to:

- define profit under the accrual method of accounting
- explain the role of the reporting period principle
- define the term 'balance day adjustments'
- outline the link between the reporting period and the need for balance day adjustments
- define the terms 'prepaid expenses' and 'accrued expenses'
- explain the effect of prepaid expenses and accrued expenses on the income statement
- classify prepaid expenses and accrued expenses in a balance sheet
- define 'depreciation'
- calculate depreciation under the straight line method
- justify the treatment of depreciation as an expense
- explain the effect of depreciation on accounting reports
- prepare an income statement under accrual accounting.

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18.1 Accrual accounting

Earlier in this text both the reporting period principle and the qualitative characteristic of relevance were introduced. The *reporting period principle* demands that the life of a business be divided into set periods of time. These reporting periods, which are of a maximum period of one year (due to taxation requirements), are used to assess the performance of the business over a specific period of time. This assessment of performance is achieved by determining what revenues and expenses are *relevant* to a particular reporting period in order to determine a net profit or loss.

Although cash journals are a fundamental part of a single entry accounting system, they will not provide all of the detail necessary to determine a profit or loss for a particular period. The cash journals do provide some required information, including cash sales and expenses paid in cash. However, other relevant information will not come from the cash journals. Depending on the complexities of the business under examination, this information may include:

- credit sales: provided by the credit sales journal
- cost of sales: from the stock cards
- stock losses (or gains): from a comparison of the physical stocktake with the stock cards
- depreciation of non-current assets (introduced in section 18.5)
- adjustments for prepaid expenses (introduced in section 18.3)
- adjustments for accrued expenses (introduced in section 18.4).

All of the above items may need to be considered when determining a profit under the accrual method of accounting. The *accrual method of accounting* determines profit by matching revenue earned with expenses incurred over a specific reporting period. The accrual method is generally recognised as being the most accurate method of determining profit. Rather than just considering revenue received and expenses paid, **accrual accounting** attempts to match the revenues and expenses that belong to the same reporting period. The following examples will help clarify how accrual accounting is applied to common business situations.

Example 1: A business makes a credit sale of $10 000 on 3 December 2015. The sale was to a trusted customer who always pays 30 days later. If the reporting period ends on 31 December 2015, a decision has to be made in respect of the sale. Is the revenue recognised in the 2015 reporting period, or is it delayed until 2016? The sale was made in 2015, an invoice was issued in 2015 but the cash will not be received until 2016. Under accrual accounting the revenue is deemed to have been *earned* in the 2015 reporting period. The goods have been delivered and there is *reliable* evidence of the dollar amount (the invoice). As there is a reasonable expectation that the sale will result in an inflow of resources, the revenue may be recognised at the *point of sale*. That is, when a credit sale has been made, accrual accounting recognises the revenue as being earned. Therefore, the entire $10 000 would be reported as revenue in the income statement. As the revenue has not yet been collected, a debtor of $10 000 would also be reported as a current asset in the balance sheet of the business.

Example 2: A business pays an annual insurance premium of $1 200 in advance on 1 December 2015. The firm's reporting period ends on 31 December each year. Under accrual accounting the business should only recognise the amount of this expense that has been incurred in the current reporting period. That is, the amount of insurance that has expired during 2015 should be treated as an expense. As the premium covers 12 months, this equates to $100 per month ($1 200/12 = $100). This means that, under accrual accounting, $100 should be reported as an expense in the income statement. As the other $1 100 remains unused as at 31 December 2015, it should be reported as a current asset in the balance sheet.

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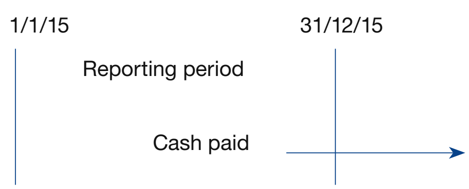
The previous examples provide an introduction to the way accrual accounting is applied to particular transactions. Although there are several such situations, Unit 2 of the VCE Accounting course only requires you to consider specific circumstances. The rest of this chapter concentrates on these specific situations.

18.2 Balance day adjustments

Most single entry accounting systems are based on the use of cash journals. At the end of a reporting period, a statement of receipts and payments can be prepared to summarise all cash inflows and outflows experienced by the business. This report will provide much of the detail required to prepare an income statement. However, some of the items in the statement of receipts and payments may need to be adjusted in order to determine profit under accrual accounting. On balance day (the last day of a reporting period) the cash figures are adjusted to equal either revenue earned or expenses incurred; hence the name **balance day adjustments**.

The adjustment for stock losses is an example of a balance day adjustment that has already been covered in this text. A business may buy its stock for cash and it may also sell its goods for cash. However, adjustments for stock losses are necessary in order to determine an accurate measurement of profit. This adjustment is also necessary to ensure that an accurate value for stock is reported as a current asset in the balance sheet at the end of the reporting period.

It should be noted that all balance day adjustments have an effect on both financial reports. That is, every adjustment affects both the income statement and the balance sheet. It should also be noted that, as usual, there will be a two-fold effect on the balance sheet. The role of balance day adjustments is to assist in the determination of profit under the accrual method of accounting. Balance day adjustments are necessary because financial transactions may overlap reporting periods. The reporting period defines a specific period of time and, unfortunately, transactions do not all fall neatly into this period of time. This problem is represented by the following diagram.



The diagram above involves a transaction that is paid in 2015, but clearly overlaps the current reporting period and the period of 2016. Accrual accounting demands that only that part of the payment that has been sacrificed during the current period be reported in the income statement. This fits in with the definition of an expense under SAC2. Economic sacrifices (expenses) should be matched with the inflows of resources (revenues) in order to determine profit. This is the essence of accrual accounting.

18.3 Prepaid expenses (expenses paid in advance)

A **prepaid expense** occurs when a business pays for an item in advance and not all of the cost has been used at balance day. Consider the following example. A business paid $6000 for a six-month advertising campaign on 1 May 2015. The campaign is going to run from 1 May until 31 October 2015. The reporting period for this business is 30 June each year. The following table summarises the treatment of this item.

1 May 2015
Advertising paid $6 000

On balance day

Amount used
2 months (May, June)
$2 000
Expense
Income statement

Amount unused
4 months (July–October)
$4 000
Current asset
Balance sheet

The important thing to remember is that the amount used up or expired must be reported in the income statement as an expense. Any amounts paid in advance for the subsequent reporting period should then be reported as a current asset in the balance sheet. The following table summarises the treatment of the $6 000 payment in the three different financial reports.

Statement of receipts and payments	Income statement	Balance sheet
Advertising paid $6 000	Advertising expired $2 000	Advertising prepaid $4 000

According to the definitions in SAC2, any item with future economic benefits should be treated as an asset. Therefore, when an item is paid for in advance and covers a subsequent reporting period, it should be referred to as an asset. The demands of accrual accounting do not conflict with this definition, as only those amounts used up or sacrificed are treated as expenses. Therefore, the balance day adjustment for prepaid expenses fits in neatly with SAC2, the reporting period principle and the definition of profit under accrual accounting.

18.4 Accrued expenses (expenses owing)

An **accrued expense** occurs when a business has used up or incurred an expense item but has not yet paid for the expense by balance day. Consider the following example: a business signed a contract with the local newspaper for $500 of advertising each month for six months (from January through to the end of June 2015). An invoice would be sent to the business on a monthly basis. All invoices, with the exception of the June invoice, have been paid before the end of the reporting period, which is 30 June. The following table summarises the treatment of this item.

30 June 2015
Advertising paid $2500 (5 × $500)
+ Advertising owing $500
= Advertising expense $3 000

On balance day

Advertising incurred
$3 000 expense
Income statement

Amount owing (for June)
$500 current liability
Balance sheet

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Just as was the case with prepaid expenses, the important thing to achieve is that the amount of expense used up or expired must be reported in the income statement. If the expense has been incurred but not yet paid in the current reporting period, it should be reported as an expense item and taken into consideration when determining the net profit figure. The amount owing should then be reported in the balance sheet as a current liability. This is important as the accrued expense represents a present obligation of the business that is expected to be paid within the next twelve months. Therefore, it qualifies as a current liability. The following table summarises the treatment of both the advertising expense and accrued advertising in the three different financial reports.

Statement of receipts and payments	Income statement	Balance sheet
Advertising paid $2 500	Advertising incurred $3 000	Accrued advertising $500 (advertising owing)

18.5 Depreciation of non-current assets

Depreciation is the process of allocating the cost of a non-current asset over its **useful life**. Non-current assets such as vehicles, furniture and equipment cannot be included as expenses in an income statement because they are not used up in one reporting period. However, such assets do represent a 'cost' to the business. The unique feature of non-current assets is that the cost of such assets generates an economic benefit to the firm over a number of years. A delivery van, for example, may be a useful asset to a business for five years, during which time it helps to earn the firm its revenue by delivering goods. Under accrual accounting, revenue for the reporting period is matched with the relevant expenses for that period. Therefore, if the delivery van is expected to be used for five years, it is logical to 'write off' its cost over this time. Depreciation, therefore, attempts to write off a portion of a non-current asset as an expense each reporting period.

18.6 Calculating depreciation

There are several methods of calculating depreciation on non-current assets. One method is covered in Unit 2 of the VCE course, with a second method being introduced as part of Unit 4 studies. For the purposes of this VCE Unit, only the simplest method will be examined. The **straight-line method of depreciation**, also known as the **fixed instalment method**, allocates depreciation at the same rate each year. (This method is referred to as the *prime cost method* by the taxation office.) To calculate depreciation under this method, three items need to be known. These are:

1. the historical cost (or original cost) of the asset
2. the estimated life of the asset (usually expressed in years)
3. the estimated **scrap** or **residual value** of the asset. That is, how much is expected to be received for the asset at the end of its useful life, when it is 'scrapped'.

As a delivery van has already been mentioned above, it will serve as a useful example. The following details are supplied regarding the van:

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Date of purchase:	1 July 2015
Purchase cost:	$20 000
Estimated useful life:	5 years
Estimated residual value:	$5 000

The straight line method calculates the depreciation expense using the following formula:

$$\text{Depreciation expense} = \frac{\text{Cost} - \text{Residual value}}{\text{Useful life (in years)}}$$

Thus for the delivery van the calculation would be:

$$\text{Depreciation expense} = \frac{\$20\,000 - \$5\,000}{5}$$

$$= \frac{\$15\,000}{5}$$

$$= \$3\,000 \text{ per year}$$

This means that $3000 would be treated as an expense in each of the five years that the van is under the control of the business. The depreciation expense can also be expressed as a percentage of the asset's cost. To calculate the annual rate the following formula is used:

$$\text{Annual depreciation rate} = \frac{\text{Depreciation expense per year}}{\text{Historical cost of asset}}$$

Therefore, for the delivery van:

$$\text{Annual depreciation rate} = \frac{\$3\,000}{\$20\,000}$$

$$= 0.15 \text{ or } 15\%$$

There are basically two ways information will be presented in relation to depreciation of non-current assets. The first method involves the application of the formula for depreciation, as outlined above. You should familiarise yourself with this formula, but also be aware that some practical exercises (and possibly exams) will simply state that an asset has to be depreciated at a fixed percentage each period. For example, a computer costing $2000 is to be depreciated at 30% per annum. In this scenario you simply apply the fixed percentage to the historical cost of the asset. Therefore 30% × $2000 = $600 depreciation for the year.

18.7 Depreciation and accounting reports

At the end of each reporting period, depreciation causes a two-fold effect on the accounting reports of the firm. First, it results in a reduction in the firm's profit by $3000 each year, as depreciation is an expense. The allocation of depreciation increases expenses, which leads to a decrease in net profit. Consequently, this leads to a reduction in the owner's equity figure. Second, a negative asset is created in the balance sheet. This negative asset is known as **accumulated depreciation**. It represents the total depreciation written off the asset so far. The accumulated depreciation, as its name implies, accumulates the depreciation each year, and this total figure is deducted from the original cost of the asset in the firm's balance sheet.

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Following on with the delivery van example, figure 18.1 shows how the balance sheets for the firm would appear over the van's expected five years of useful life.

Figure 18.1 Balance sheet (extracts) as at 30 June

	2016 *$*	*2017* *$*	*2018* *$*	*2019* *$*	*2020* *$*
Non-current assets					
Delivery van	20 000	20 000	20 000	20 000	20 000
less Accumulated depreciation	3 000	6 000	9 000	12 000	15 000
	17 000	14 000	11 000	8 000	5 000

It should be noted that the historical cost (that is, the original cost) of an asset is shown in the balance sheet throughout the asset's life. The accumulated depreciation is then deducted from the historical cost and the remaining figure is known as the asset's **carrying value** (also known as the **book value**). The carrying value of an asset will always include the original estimate of scrap value, as well as any depreciation still to be written off. In figure 18.1, after depreciation has been allocated on 30 June 2016, the business is still carrying the cost of $17 000 on its books in relation to the delivery van.

18.8 Case study: accounting reports under accrual accounting

The purpose of the following case study is to demonstrate the preparation of an income statement under the accrual method of accounting. This case study relates to a furniture retailer that uses cash journals during the reporting period. A statement of receipts and payments has been prepared as a summary of the firm's cash journals. Additional information is also provided about the business so that the necessary balance day adjustments can be made and a profit figure can be determined under accrual accounting.

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Topline Furniture: statement of receipts and payments for year ended 30 June 2015

Cash receipts:	$	$
Cash sales	85 000	
Collections from debtors	45 000	
GST receipts	8 500	
Loan from TB Finance Co.	20 000	158 500
Cash payments:		
Cash purchases of stock	15 000	
Payments to creditors	53 000	
Cartage inwards	1 000	
Wages	20 000	
Purchase of computer (on 30/6/15)	6 000	
Insurance	1 200	
Office expenses	1 000	
Drawings	14 000	
GST payments	2 420	
Loan repayments	1 800	
Interest expenses	2 000	117 420
Excess of receipts over payments		41 080
Bank balance as at 1 July 2014		5 000
Bank balance as at 30 June 2015		46 080

ADDITIONAL INFORMATION:

- Credit sales for the year—$55 000
- Cost of sales for the year—$60 000
- Stock loss for the year—$1 000
- A delivery van that cost $25 000 is to be used by the business for four years and is expected to be sold for $13 000 after that time. It is to be depreciated by the straight line method of depreciation.
- The insurance was paid on 1 October 2014 and covers a 12-month insurance policy.
- An invoice for office expenses incurred June 2015 has not yet been paid. The amount owing is $100.

Before preparing the actual income statement, it is wise to do some preliminary calculations so that all required data is ready for the report. It should also be noted that some of the listed items have no relevance to the preparation of the income statement. These items are:

- *Collections from debtors:* Although this item represents a cash flow, it does not represent revenue under the accrual method of accounting. Rather than simply considering cash received from debtors, the level of credit sales actually made to debtors should be reported in an income statement.

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- *Loan from TB Finance:* This cash receipt is also not classified as a revenue item. When a loan is taken out the result is an increase in a liability, which should be reported in the balance sheet of the business.
- *Cash purchases of stock and cash paid to creditors:* Although both of these items relate to the purchase of stock and payments to suppliers, they do not represent an expense to be reported in an income statement. The cost of stock sacrificed to earn sales should be reported as an expense and this item, the *cost of sales*, is recorded in the firm's stock cards, not the cash journals.
- *Purchase of computer:* Payments for new assets will affect the balance sheet, but not the income statement for the current period. As the computer was purchased on the last day of the reporting period it will not be depreciated as yet, but in the following period depreciation should be allocated as an expense and this will then be reported in the subsequent income statements.
- *Drawings:* This cash payment represents a reduction in the owner's equity and is not an expense. Therefore it will not be included in the income statement. Note, however, that drawings should be deducted from capital in the balance sheet.
- *Loan repayments:* This payment is a reduction in a liability item and is also not an expense. It too will be excluded from the income statement but the reduction in the loan should be reflected in the balance sheet.

The calculations that are required prior to the preparation of the income statement are as follows:

1 *Depreciation of delivery van:* using the formula for straight line depreciation:

$$\frac{\text{Cost} - \text{residual}}{\text{Useful life}}$$

$$= \frac{\$25\,000 - \$13\,000}{4}$$

$$= \frac{\$12\,000}{4}$$

= $3 000 depreciation p.a.

2 *Calculating insurance expense:*

$1 200 for the year = $100 per month ($1 200/12)

As the policy was paid on 1 October 2014 and the reporting period ends on 30 June, nine months have expired and therefore only 9/12 of the total cost should be written off as an expense. Therefore $900 should be treated as an expense (9 × $100 per month). Keep in mind that the other $300 should be reported as a current asset in the balance sheet.

3 *Calculating office expenses:*

$1 000 paid + $100 owing = $1 100 expense incurred

The $100 of office expenses owing has been incurred in the current reporting period. Although this amount has not been paid, the cost has been incurred and therefore, under accrual accounting, all of this cost should be recognised as an expense this reporting period. Therefore, the $100 is added to the $1 000 that has been paid, making the total cost of office expenses for the period $1 100. Of course, as with the other adjustments, the balance sheet is also affected as the accrued office expenses must be reported as a current liability.

Having excluded the irrelevant items and calculated the office expenses, insurance expense and depreciation expense, the income statement may now be prepared. The full report is shown below:

Topline Furniture: income statement for year ended 30 June 2015

Revenue:		$	$
	Cash sales	85 000	
	Credit sales	55 000	140 000
less	Cost of goods sold		
	Cost of sales	60 000	
	Cartage inwards	1 000	61 000
	Gross profit		79 000
less	Stock loss		1 000
	Adjusted gross profit		78 000
less	*Expenses*		
	Wages	20 000	
	Insurance expense	900	
	Office expenses	1 100	
	Interest expenses	2 000	
	Depreciation of delivery van	3 000	27 000
	Net profit		$51 000

This income statement, prepared under accrual accounting, matches revenue earned with expenses incurred for the year ended 30 June 2015. Some of the expense items in this statement are exactly the same as those shown in the firm's cash journals. This means that the amount paid is exactly the same as the amount incurred. That is, the expense is not prepaid.

It is important to keep in mind that a profit figure has no link to the cash surplus for a period. In this case study, a profit of $51 000 was earned for the year, even though a cash surplus of only $41 080 was reported in the firm's statement of receipts and payments. The cash journals are used to record all cash inflows and outflows for the period, while the income statement reports on revenues earned and expenses incurred. Profit is not cash and it is possible to earn a profit and have an overdrawn bank balance. Similarly, it is possible to incur a net loss for a period but have ample cash in the bank. As can be seen from the list below, there may be several reasons why a cash surplus differs from a profit figure for a particular period.

Cash flows not included in an income statement	Revenue and expense items not included in a statement of receipts and payments
Capital contributed by the owner Cash withdrawals by the owner Loans taken out Loan repayments Non-current assets bought for cash Expenses paid in advance	Credit sales Cost of sales Stock losses and stock gains Depreciation of non-current assets

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In summary, accrual accounting is the preferred method of determining a profit figure, as it matches the revenue earned with the expenses incurred over the same period of time. It takes into account all revenues, whether cash or on credit. It also considers all expenses, including depreciation of non-current assets. Expenses are adjusted for prepaid and accrued expenses so that only those expenses that relate to the current period are considered in the profit calculation. Therefore, when evaluating the performance of a business, a profit figure determined under the accrual method of accounting will provide an accurate assessment of performance. This profit figure may be totally different from the net increase or decrease in the cash balance of the business bank account. Although cash balances are an important consideration when looking at the cash management of a business, the net profit result should be used when evaluating the trading performance of the business.

› GLOSSARY OF TERMS

accrual accounting a method of determining profit whereby revenue earned is matched against the expenses incurred over the same period of time.

accrued expense an expense incurred in the current reporting period which has not yet been paid. As accrued expenses are owing, they are classified as current liabilities.

accumulated depreciation the total amount of depreciation allocated from the time an asset was acquired by a business until the present date.

balance day adjustments adjustments made to revenues and expenses on the last day of the reporting period so that profit can be determined under the accrual method of accounting.

carrying value (or **book value**) the historical cost of an asset less its accumulated depreciation at a particular date.

depreciation the process of allocating the cost of a non-current asset over its effective useful life.

prepaid expense an expense paid in advance for a subsequent reporting period. That is, an item that has been paid for but has not yet been sacrificed by the business. Prepaid expenses are classified as current assets.

scrap value (or **residual value**) an estimate of how much an asset will be sold for when it is disposed of at the end of its useful life.

straight-line method of depreciation (also **fixed instalment method**) a method of depreciation that allocates a fixed amount of cost to each reporting period.

useful life an estimate of the time an asset is expected to be used by a business in order to generate revenue.

Summary questions

1. Define the meaning of the term ‘profit’, as it is used under accrual accounting.
2. Justify why accrual accounting is deemed to be an accurate method of determining profit.
3. Explain the link between the reporting period principle and the accrual method of determining profit.
4. Define the term ‘balance day adjustment’.
5. Explain what is meant by the term ‘prepaid expenses’.

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6 A business paid $900 for a 12 month insurance policy on 1 March 2015. The reporting period ends on 30 June each year. Copy and complete the following table to show how this item would be reported in the two key accounting reports for the year ended 30 June 2015.

	Income statement $	Balance sheet $
Item		
Classification		

7 Explain the circumstances that exist in order for an accrued expense to be created on balance day.

8 A business owner paid $670 for advertising during the current reporting period. On balance day another $130 for advertising completed during the period had not been paid. Copy and complete the following table to show how this item would be reported at the end of the period.

	Income statement $	Balance sheet $
Item		
Classification		

9 Define the term 'depreciation'.

10 How does depreciation help satisfy the demands of accrual accounting?

11 State the formula used to determine depreciation under the straight line method of depreciation.

12 What is meant by the 'carrying value' of an asset? How is it calculated?

13 Consider the following statement: 'Profit is not cash.' Do you agree? Explain your answer fully.

14 State four items that may appear in a statement of receipts and payments but would not appear in an income statement prepared under accrual accounting.

15 State four items that may appear in an income statement but would not appear in a statement of receipts and payments prepared under accrual accounting.

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Practical exercises

[Exercise 18.1] Fancellu's Furniture Store pays its rent three months in advance. Its last rent payment was made on 1 December 2015, when $12 000 was paid. The reporting period for this business ends on 31 December 2015.

- **a** Should the entire payment of $12 000 be reported as an expense in the year ended 31 December 2015? Give reasons for your answer.
- **b** If your answer to part **a** above was 'no', how much should be recognised as an expense? (Show all workings.)
- **c** If a balance day adjustment was made in relation to the rent payment, explain the two-fold effect of the adjustment on the balance sheet of this business.

[Exercise 18.2] The business of Chan's Computers paid $1 200 for an insurance premium on a business vehicle on 1 April 2015. Chan's reporting period runs from 1 July to 30 June each year.

- **a** What amount would appear in the cash journal of Chan's Computers in relation to the insurance of vehicles?
- **b** How much should be reported as 'insurance expense' in the firm's income statement?
- **c** Would an amount relating to the insurance appear in the balance sheet as at 30 June 2015? If so, provide details as to the amount and the classification of the item.

[Exercise 18.3] Shannon Mason is the owner of a small business trading under the name of Presentation Gift Store. She recently took out a cleaning contract with Wizard Window Cleaners at a cost of $90 per month. On 1 November 2014 Mason paid Wizard Window Cleaners in advance for a six-month contract. Balance day for her business is 31 March each year.

- **a** State the amount that would be reported in the statement of receipts and payments in relation to the cleaning contract.
- **b** What dollar amount should be reported in the income statement for cleaning expenses for the year ended 31 March 2015?
- **c** Explain why the cleaning expenses paid in advance should be reported as an asset as at 31 March 2015. Refer to the relevant SACs and/or accounting principles in your answer.

[Exercise 18.4] Advertising is an important consideration for Kamel Ali, the owner of Ali's Artworks. He pays for his advertising in advance at a cost of $500 per advertisement. During the current reporting period he signed a new advertising contract and paid for 20 advertisements in advance. On balance day, which is 30 September 2015, only 15 advertisements have been run, with the remaining five to be run from October through to December.

- **a** What amount would appear in the firm's cash payments journal for advertising?
- **b** For the year ended 30 September 2015, how much should be reported for the advertising expense in the income statement? (Show workings.)
- **c** Is the balance sheet for Ali's Artworks affected by the above information in relation to advertising? If so, explain how.

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[Exercise 18.5] The owners of McSheileh's Gift Shop usually pay a cleaning contractor $250 per month for keeping their shop clean and presentable. Payments for cleaning in the current reporting period come to a total of $2 500. The last two payments have not yet been made, despite the fact that the cleaning work was done on time.

- **a** Does the $2 500 represent the expense for the year ended 31 December 2015? Give reasons for your answer.
- **b** If your answer to part **a** above was 'no', how much should be recognised as an expense? (Show all workings.)
- **c** If a balance day adjustment was made in relation to the cleaning payment, explain the two-fold effect of the adjustment on the balance sheet of this business.

[Exercise 18.6] The owner of Caulfield Computers, Mina Gorelik, paid $3 500 for advertising during the period 1 July 2014 to 30 June 2015. On 30 June 2015 Gorelik found an unpaid invoice for advertising at a cost of $180, plus $18 GST.

- **a** What amount would appear in the cash journal of Caulfield Computers in relation to advertising expense?
- **b** How much should be reported as 'advertising expense' in the income statement for the year ended 30 June 2015?
- **c** Would an amount relating to advertising appear in the balance sheet as at 30 June 2015? If so, provide details as to the amount and the classification of the item.

[Exercise 18.7] Normie Salloum is the owner of a small business trading under the name of Salloum's Electricals. He is trying to finalise his accounts for the year ended 30 September 2015 and is not sure what to do with an unpaid invoice for $2 300, plus GST of $230. The invoice was sent to Salloum by his lawyer in relation to some legal advice for his business. During the reporting period Salloum had already paid legal fees totalling $1 800.

- **a** State the amount that would be reported in the statement of receipts and payments in relation to legal fees.
- **b** What dollar amount should be reported in the income statement for legal fees for the year ended 30 September 2015?
- **c** Explain why the legal fees owing should be reported in the balance sheet as at 30 September 2015. Refer to the relevant SACs and/or accounting principles in your answer.

[Exercise 18.8] Natali Mikulic, the owner of Hawthorn Fashions, purchased a computer for the office on 1 April 2015. It cost the firm $4 000, plus GST, and is expected to be used by the business for two years, after which it will be scrapped for an estimated $800.

- **a** Calculate the annual depreciation expense under the straight line method of depreciation.
- **b** Calculate the annual depreciation expense as a percentage of the asset's cost.
- **c** What item, relating to the computer, would appear in the income statement for the year ended 31 March 2016?
- **d** What item, relating to the computer, would appear in the balance sheet as at 31 March 2016?
- **e** What is the carrying value of the computer as at 31 March 2016?

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[Exercise 18.9] Essendon Butchers purchased a delivery van on 1 July 2015 for $12 000 cash, plus GST. It is expected to be used for three years and then sold for approximately $4 800.

a Calculate the annual depreciation expense to be charged on the van under the straight line method of depreciation.

b What is the percentage rate of depreciation per annum?

c What would be the value of accumulated depreciation of the van as at 30 June 2016 and 30 June 2017?

[Exercise 18.10] United Sports Wholesalers purchased four forklifts at a cost of $15 000 each, plus GST of $1 500 each. They were purchased on 1 October 2015 and are expected to be used for five years, before being sold for about $3 000 each.

a What is the yearly depreciation expense per forklift?

b What is the total annual expense for depreciation of forklifts?

c Prepare an extract from the balance sheet showing the historical cost, accumulated depreciation and carrying value of the forklifts as at 30 September 2016, 2017 and 2018.

[Exercise 18.11] Malvern Computers bought a new Holden Commodore from Melbourne Holden on 1 July 2015. The business paid $42 000 cash (excluding GST) for the vehicle and expected to use the car for three years, before trading it in for approximately $15 000.

a Calculate the yearly depreciation rate for the vehicle.

b Prepare an extract from the balance sheet showing all details of the vehicle as at 31 December 2015, 2016 and 2017.

[Exercise 18.12] The following information relates to the business of CBD Cleaning Products for the year ended 30 November 2015:

Cash sales	$72 000	Advertising	$1 100
Cash at bank	1 200	Office equipment	6 000
Vehicles	30 000	GST received	7 200
Rent	15 000	GST paid	3 600
Loan from National Bank	7 000	Capital—Mannix	29 500
Cost of sales	24 000	Assistant's wages	15 000
Interest on loan	1 200	Drawings	8 000
Stock	20 000	Creditors	9 400

ADDITIONAL INFORMATION:

- The office equipment must be depreciated by $600.
- The vehicles must be depreciated by $7 000.

a Prepare an income statement for the year ended 30 November 2015 under the accrual method of accounting.

b Prepare a classified balance sheet as at 30 November 2015.

[Exercise 18.13] The Sorrento Shoe Shop has supplied the following information from its accounting records.

Sales	$96 000	Capital—Feelgood	$74 320
Assistant's wages	22 000	Repairs and maintenance	1 700
Cost of sales	38 000	Insurance	3 400
Stock	21 500	Cash at bank	3 100
Loan from EZ Finance		GST receipts	9 600
(due 30/9/16)	5 600	Interest on loans	5 600
Office equipment	9 000	Cleaning expenses	4 500
Telephone bills	400	Stationery expenses	200
Premises	120 000	Mortgage on premises	55 000
Drawings	10 200	GST payments	4 520
Accumulated depreciation—office equipment	3 600		

ADDITIONAL INFORMATION:

- The office equipment must be depreciated by 20% p.a. on cost.
- Cleaning expenses owing—$500
- Insurance prepaid for 2016—$400

a Prepare an income statement for the year ended 31 December 2015.

b Prepare a classified balance sheet as at 31 December 2015.

[Exercise 18.14] The following information relates to the business of Richmond Rugs:

Sales	$53 000	Vehicles	$64 000
Insurance	1 200	Telephone expenses	640
Cost of sales	21 000	Stationery expense	650
Vehicle repairs	890	Capital—M. Randi	69 760
Assistant's wages	22 550	Advertising	970
Creditors	1 320	Petrol expense	2 780
Office equipment	5 600	Drawings	10 000
Accumulated depreciation:		Interest on loan	400
– Office equipment	1 800	Bank overdraft	1 413
– Vehicles	24 000	Stock loss	1 200
Stock	22 000	GST paid	2 713
GST collected	5 300		

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ADDITIONAL INFORMATION:

- Office equipment is to be depreciated 15% on cost.
- Vehicles are to be depreciated 25% on cost.
- Insurance was paid for 12 months on 1 March 2015.
- Accrued advertising expenses as at 31 December 2015—$230.

Using the relevant information from the above list, prepare an income statement for the year ended 31 December 2015 and a classified balance sheet as at 31 December 2015.

[Exercise 18.15]

The owner of Bridgewater Boat Parts has supplied the following information and has asked you to prepare an income statement and a classified balance sheet at the end of the yearly reporting period, which ended on 30 June 2015.

Advertising	$1 400	Bank overdraft	$1 200
Drawings	6 500	Equipment	12 400
Office furniture	2 400	Sales	48 000
Cost of sales	16 830	Wages	18 200
Stock	21 500	Cartage in	250
Insurance	890	Stationery expenses	600
Telephone bills	580	Rent	12 000
Accumulated depreciation:		Capital—Babic	27 362
– Equipment	4 960	Creditors	9 680
– Office furniture	720	GST collections	4 800
GST payments	3 172		

ADDITIONAL INFORMATION:

- Office furniture is to be depreciated 10% on cost.
- Equipment is to be depreciated 20% on cost.
- Telephone bills incurred but not yet paid—$120.
- One insurance policy was taken out on 1 March 2015. The amount of $480 was paid for a 12-month policy. The rest of the insurance was fully used up during the current reporting period.

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CASE STUDY

CAPTAIN SNORES is a small business that sells a range of bedroom furniture and accessories. The owner of the firm, Ryan Perez, has built the business up over several years. He believes that he is successful because of his free delivery service, which is offered to all customers. Perez maintains a delivery vehicle in order to provide this service. At the end of the previous reporting period, the following report was prepared:

Captain Snores: balance sheet as at 31 December 2014

Assets	$	*Liabilities*	$	$	$
Cash at bank	2 190	Creditors	3 200		
Debtors	8 670	GST debt	2 200		5 400
Stock	52 300	Owner's equity			
Delivery vehicle	28 000	Capital	65 430		
–Accumulated dep'n	(8 000)	*plus* Net profit	32 000		
Office furniture	6 400			97 430	
–Accumulated dep'n	(1 200)	*less* Drawings		14 470	82 960
	88 360				88 360

Perez provided the following summary of events in relation to the 2015 reporting period:

Cash sales	$92 400	Cost of sales	$72 900
Credit sales	51 900	Stationery expenses	540
Cartage inwards	2 430	Prepaid security expenses	1 200
GST receipts	9 240	GST payments	5 750
Stock loss	1 250	Customs duty	860
Wages	25 400	Prepaid insurance	1 560
Advertising	1 200	Drawings	32 000
Electricity	980	Prepaid rent	45 500
Vehicle expenses	2 200	Telephone expenses	1 020
GST charged to debtors	5 190	GST charged by creditors	2 120

ADDITIONAL INFORMATION:

- The delivery vehicle was originally purchased for $28 000. It has an estimated useful life of four years and an estimated scrap value of $12 000.
- The office furniture was purchased for $6400 and has an estimated residual value of $400. It is expected to be used in the business for 10 years.
- The prepaid insurance amount of $1 560 was paid on 1 March 2010 for 12 months' insurance.
- The business pays its rent one month in advance. The cost of rent per month is $3 500.

→

- An account for stationery used up in December 2015 has not yet been paid. The owner expects to pay the $160 owing in January 2016.
- Perez signed a contract on 1 August 2015 with Acme Security Services to provide security patrols to the shop after hours. A total of $1 200 was paid in advance for their security services covering the period from 1 September 2015 to 29 February 2016.

a Calculate the amount of expense incurred for each of the following items: depreciation of vehicle, depreciation of office furniture, insurance expense, rent expense, stationery expense and security expenses.

b Prepare an income statement for the year ended 31 December 2015.

c Prepare two extracts from the firm's balance sheet as at 31 December 2015. The first should include all non-current assets controlled by the business, including the relevant amounts for accumulated depreciation. The second extract should present the owner's equity section of the report.

d Comment on the owner's level of drawings, in light of the profit result for 2015. What potential problem might this create? Discuss.

e How many more years does Perez expect to use his two non-current assets? Explain how you determined these two figures.

f What amounts would be reported on 31 December 2015 as prepaid expenses? Show all workings in relation to the prepaid items.

g What is the GST situation at the end of December 2015? Show all workings and explain how your final figure should be reported.

Chapter 19

Cash flow statements

OBJECTIVES

At the completion of this chapter, you should be able to:

- explain the purpose of a cash flow statement
- describe the additional information revealed by a cash flow statement
- classify cash flows under the headings of operating, investing and financing
- outline the basic format of a cash flow statement
- prepare a cash flow statement from cash journals
- analyse the results revealed by a cash flow statement
- explain the link between a cash flow statement and management decision-making.

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19.1 The purpose of the cash flow statement

At the end of a reporting period a business owner may prepare an income statement in order to evaluate the trading performance of the business. The end result of this report is the determination of a net profit or loss figure over a specific period of time. A balance sheet may also be prepared to report on the financial state of the business, including the calculation of the net worth of the owner: that is, the owner's equity. Although these two reports receive the most coverage in the majority of introductory accounting courses, there is a third report that should be treated as equally important. This is the **cash flow statement**. It reports on the movements of cash both into and out of the business during the reporting period. The focus of this statement is purely on the cash reserves of the business; basically, it reports on the sources of cash and the uses of the cash by the business during the period. The role of the cash flow statement is relatively new in the world of accounting. The relevant accounting standard only came into being in 1991. The emphasis on cash management has certainly increased in recent times and the net profit figure should no longer be regarded as the only figure of importance at the end of a period.

The purpose of the cash flow statement is quite simple. This statement completes the financial picture of a business. As an overall picture, the three statements report on profit performance, financial position and cash movements. As the cash flow statement reports on movements of cash in and out of a business, it deals with an area of the business not covered by the other two financial reports. Specifically, the cash flow statement will assist management in such areas as:

- determining the net amount of cash generated by the trading activities of a business
- evaluating the firm's ability to meet future obligations to lenders and bankers
- assessing the firm's long-term debt arrangements
- reviewing the commitment of the business in relation to non-current assets.

As has been stated before in this text, profit is not cash. The determination of a net profit figure under accrual accounting is based on the matching of revenue earned and expenses incurred. Although the net profit figure is crucial in terms of evaluating trading performance, it has nothing to do with cash management. The cash flow statement concentrates solely on cash flows and therefore is an ideal tool for management to use as part of the overall cash management plan. Even if a business is profitable, it will not survive if it does not have cash available when it is needed. Expenses have to be paid and some cannot be delayed. For example, employees will want to be paid on time and will not be happy if pay day is put off because of a cash shortage. Creditors also need to be paid, as do loan repayments. The owner may also have demands for cash in terms of their personal drawings. Information regarding cash flows is not provided in either the income statement or the balance sheet. Therefore, the cash flow statement fills a gap for management and actually supplements the information already provided in the other two financial reports.

19.2 Classification of cash flows

One report that has already been presented in this text in relation to cash is the statement of receipts and payments. This report can be prepared directly from a firm's cash journals. However, the statement of receipts and payments is rather simplistic in its nature. The name of the report says it all: it reports on receipts and payments. This statement is simply a summary of the cash transactions over a period of time. The cash flows are not classified in any way, apart from the two general headings of Receipts and Payments. A typical statement of receipts and payments follows.

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Figure 19.1 Statement of receipts and payments

Jackson Trading: statement of receipts and payments for year ended 30 June 2015			
	Receipts	*$*	*$*
	Cash sales	90 000	
	Collections from debtors	30 000	
	Capital	40 000	
	Loan from bank	20 000	
	GST collections	9 000	189 000
less	*Payments*		
	Creditors	60 000	
	Advertising	5 000	
	Wages	35 000	
	Office expenses	3 000	
	Purchase of vehicle	25 000	
	Purchase of computer	4 000	
	Loan repayments	3 000	
	Drawings	20 000	
	GST payments	3 700	158 700
	Excess of receipts over payments		30 300
	Bank balance as at 1 July 2014		2 000
	Bank balance as at 30 June 2015		32 300

The above statement is a simple summary of the cash transactions of this business over the reporting period. It shows that a surplus of cash of $30 300 was generated, taking the cash balance from $2 000 at the start of the period to $32 300 at the end. However, it does not provide any additional information because of its simplistic design. To gain more information about the business, cash flows can be classified into three main areas: **operating activities**, **investing activities** and **financing activities**. These three areas provide the basic format of the cash flow statement and are covered in detail in the notes that follow.

Operating activities: This area of cash flows includes cash movements of two types. First, it covers cash inflows from the provision of goods and services to customers. Second, it includes cash outflows to employees and suppliers of both goods and services. The area of operating activities will therefore include cash flows in relation to many of the items that appear in an income statement. Cash sales and collections from debtors are two of the most important operating cash flows. Note that credit sales are irrelevant to the cash flow statement, as this item is not a cash flow.

However, when a debtor settles the account a cash flow does occur and this should be included. Thus, credit sales is not a cash flow but collections from debtors clearly do affect the cash balance of the business. The cash outflows under operating activities would include items such as payments to creditors, wages paid, insurance paid and advertising paid. However, keep in mind that some items that appear in an income statement under the heading of Expenses will not be reported in a cash flow statement. Depreciation of non-current assets, although an expense item, is clearly not a cash flow and is therefore irrelevant to the report. Cost of sales is another important item in the income statement that is not a cash flow. Also, some expenses

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reported under accrual accounting do not equate to a cash flow. Prepaid expenses are adjusted so that only the amount used up is reported in the income statement. However, the cash flow statement requires the reporting of all cash flows. Therefore, all expenses paid must be reported, regardless of whether or not they have all been used up during the reporting period.

Investing activities: This area of the cash flow statement relates to the buying and selling of non-current assets. That is, it is used to report the cash paid out when assets are purchased and the cash received when unwanted assets are disposed of. When a business purchases non-current assets, it is making an investment for the long term. The basic definition of non-current assets includes those assets expected to be owned for longer than 12 months. Because assets have future economic benefits for a business, they are viewed as investments that are used to help generate revenue for the firm. Thus investing activities relate to investing cash in the non-current assets of a business, as well as receiving cash at their time of disposal.

Financing activities: The last classification in a cash flow statement is that of financing activities. This category refers to cash flows that result because of changes in a firm's financial structure. A business may be financed by internal funds, which come from the owner, or by external funds, which involve borrowing cash from liabilities. How a business is financed is an important consideration when looking at the long-term future of a business. The cash flows required to repay debts and support an owner's drawings is an important feature of the cash flow statement. Such information would also be of relevance to lenders and to prospective owners. Financing activities therefore include capital contributions by the owner (cash only) and withdrawals of cash by the owner, as well as the taking out of loans and repayments of loans.

These three headings provide the basic format of the cash flow statement. All cash inflows and outflows are classified according to these three groups, with a net figure being produced under each heading. It is common practice to label this net figure as either **net cash provided** or **net cash used** by each particular activity. The links between the cash flow statement and the other two major financial reports become clearer when the three classifications are considered. *Operating activities* examines the cash flows relating to revenues and expenses, which are brought together in the income statement. *Investing activities* looks at part of the balance sheet as it examines cash flows from non-current assets. *Financing activities* also focuses on part of the balance sheet, as it looks at changes in long-term liabilities and owner's equity. Thus, the three sections of the cash flow statement look at three different aspects of the business. The table in figure 19.2 provides some examples of the different nature of these cash flows.

Figure 19.2 Examples of cash flows by classification

Operating activities	Investing activities	Financing activities
Cash inflows from: Selling goods for cash Providing services for cash Collecting cash from debtors Commission received Interest received	*Cash inflows from:* Selling non-current assets for cash	*Cash inflows from:* Capital injections by the owner Borrowing cash via loans
Cash outflows from: Purchasing stock for cash Paying cash to creditors Paying cash for services Paying cash for expenses	*Cash outflows from:* Buying non-current assets for cash	*Cash outflows from:* Cash drawings Loan repayments

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19.3 The meaning of cash

When preparing a cash flow statement it is important to keep an open mind as to the meaning of the term 'cash'. The Accounting Standards refer to 'cash and cash equivalents'. This means that cash includes assets such as cash on hand and cash at bank, but it can also include very short-term investments. For example, if a business has cash in a 60-day term deposit, this item would be viewed as being part of 'cash'. Also, if a business has a bank overdraft, this should be viewed as a negative cash item that is part of the cash resources of the business. Therefore, the calculation of **cash held** by a business might be done as follows:

Cash on hand	$500
Bank overdraft	(400)
Term deposit (60 days)	5 000
Cash held	5 100

The definition of cash held is important, as this figure is the final dollar amount reported in the cash flow statement. The report starts with 'cash held' at the start of the period and concludes with the value of 'cash held' at the end of the reporting period. The full format of the statement is covered in section 19.4.

19.4 The format of the cash flow statement

The basic format of a cash flow statement is prescribed by the Accounting Standards. There is some variation allowed for in the standards, but cash flow statements are easily recognisable because they always follow a set layout, based on the three classifications described earlier. To demonstrate the format of the statement, the example of Jackson Trading (see figure 19.1) will again be used. The statement of receipts and payments can be used as a source of the required information in relation to cash flows. The data presented earlier in the statement of receipts and payments has been reproduced in the following report. The only difference this time is that the information has been presented under the three headings of Operating, Investing and Financing activities. Consider the statement in figure 19.3.

Note how each of the three classifications is clearly labelled and how a subtotal is provided for each category (SAC2: *understandability*). These subtotals can then be used to highlight the net cash inflow or outflow for each classification. For example, in figure 19.3 it can be seen that the cash generated by operating activities was not sufficient to purchase the two new assets that the business required. The owner contributed cash and money was borrowed from the bank. Without these two financing items, the purchase of the vehicle and the computer would not have been possible. Business owners would usually expect that their operating activities would generate cash. If the cash from operating activities was a negative result, this would be a worrying sign that all was not well within a business. Given that stock usually sells for a price greater than its cost price, the cash inflows from operations should be sufficient to cover cash outflows in that area. However, if sales have slowed down, the business has stocked up for a busy period and several expenses have been prepaid, it may be possible that operating activities actually use up cash rather than providing a net amount.

Figure 19.3 Cash flow statement: basic format

Jackson Trading: cash flow statement for year ended 30 June 2015		
Cash flows from operating activities	$	$
Receipts from customers	129 000	
Payments to suppliers & employees	(106 700)	
Net cash provided by operating activities		22 300
Cash flows from investing activities		
Purchase of vehicle	(25 000)	
Purchase of computer	(4 000)	
Net cash used by investing activities		(29 000)
Cash flows from financing activities		
Capital contribution	40 000	
Loan from bank	20 000	
Loan repayments	(3 000)	
Proprietor's drawings	(20 000)	
Net cash provided by financing activities		37 000
Net increase (decrease) in cash held		30 300
Cash held at the beginning of the year		2 000
Cash held at the end of the year		32 300

There are no set expectations for the rest of the report. The areas of investing and financing may have a net cash inflow or outflow. If a business is expanding, there may be a significant use of cash in the investing area. In other periods a business may not buy any new assets and, if they dispose of old assets for cash, the investing area may reveal a 'net cash provided' figure. Similarly, financing activities may result in net cash provided or net cash used. In some periods cash may be raised from either the owner or liabilities, and this may result in a net cash inflow. On the other hand, an established business may simply have cash outflows in this area. Loan repayments and the proprietor's drawings may result in a 'net cash used' final result.

A further point about the format of figure 19.3: there is very little detail in relation to the operating cash flows. Although this format satisfies the Accounting Standards, some users of the report prefer to have detailed information about the operating activities. If the firm has many expenses, the list of operating outflows may be quite substantial and this is why it can be summarised within the statement. However, if required, a supporting schedule may also be prepared. This schedule would list all of the items that have been considered in making up the two items under Operating activities. Such a schedule is shown in figure 19.4 on the next page.

If a user of the cash flow statement requires details of operating activities, they can simply refer to this schedule. The two totals shown in figure 19.4 are the two key figures presented in the formal cash flow statement. If it is desirable, the details of this schedule may be included within the cash flow statement. However, this tends to clutter up the report and, if there are too many expenses paid in a given period, the operating section of the report becomes rather large and may then be difficult to interpret. The alternative presentation is shown in figure 19.5 on the next page.

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Figure 19.4 Schedule of cash flows from operating activities

	$	$
Receipts from customers		
Cash sales	90 000	
Collections from debtors	30 000	
GST receipts	9 000	129 000
Payments to suppliers & employees		
Creditors	(60 000)	
Advertising	(5 000)	
Wages	(35 000)	
Office expenses	(3 000)	
GST payments	(3 700)	(106 700)
Net cash from operating activities		22 300

Figure 19.5 Cash flow statement: alternative format

Jackson Trading: cash flow statement for year ended 30 June 2015

		$	$	$
Cash flows from operating activities				
	Receipts from customers:			
	Cash sales	90 000		
	Collections from debtors	30 000		
	GST receipts	9 000	129 000	
less	Payments to suppliers & employees			
	Creditors	(60 000)		
	Advertising	(5 000)		
	Wages	(35 000)		
	Office expenses	(3 000)		
	GST payments	(3 700)	(106 700)	
Net cash provided by operating activities				22 300
Cash flows from investing activities				
	Purchase of vehicle		(25 000)	
	Purchase of computer		(4 000)	
Net cash used by investing activities				(29 000)
Cash flows from financing activities				
	Capital contribution		40 000	
	Loan from bank		20 000	
	Loan repayments		(3 000)	
	Proprietor's drawings		(20 000)	
Net cash provided by financing activities				37 000
Net increase (decrease) in cash held				30 300
Cash held at the beginning of the year				2 000
Cash held at the end of the year				32 300

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As with all accounting statements, the cash flow statement should be prepared so as to satisfy the demands of the individual user. Therefore, you should practise preparing statements under both styles of presentation. It should be noted that the net result is exactly the same in both formats. The only difference is that the standard format summarises the operating activities and presents the two totals for inflows and outflows. If detail is required in relation to the firm's operating activities, it is quite acceptable to include a detailed listing of all operating activities within the report.

19.5 Cash flows and decision-making

As with all financial statements, there is little point in preparing a cash flow statement if management does not analyse the results and use it to make decisions to rectify problems or improve the business in the future. A good starting point is to compare the results of the current period with those of the previous reporting period. This allows management to identify changes in the three areas reported in the cash flow statement. For example, if the net cash provided by operating activities is decreasing over consecutive periods, it should set off alarm bells with management. The reason for such a fall should be identified (if possible) and decisions taken to try to rectify the situation. Consider the comparative reports in figure 19.6, which relate to the previous example of Jackson Trading.

Figure 19.6 Comparative cash flow statements

Jackson Trading: cash flow statements for years ended 30 June

		2014		*2015*
	$	*$*	*$*	*$*
Cash flows from operating activities				
Receipts from customers	110 000		129 000	
Payments to suppliers & employees	(95 000)		(106 700)	
Net cash provided by operating activities		15 000		22 300
Cash flows from investing activities				
Purchase of shop fittings	(9 000)		–	
Purchase of vehicle	–		(25 000)	
Purchase of computer	–		(4 000)	
Net cash used by investing activities		(9 000)		(29 000)
Cash flows from financing activities				
Capital contribution	–		40 000	
Loan from bank	–		20 000	
Loan repayments	–		(3 000)	
Proprietor's drawings	(10 000)		(20 000)	
Net cash provided by financing activities		(10 000)		37 000
Net increase (decrease) in cash held		(4 000)		30 300
Cash held at the beginning of the year		6 000		2 000
Cash held at the end of the year		2 000		32 300

A comparison of cash flows may reveal a lot about a business. In the previous example, there has been good news in relation to operating activities. An increase in the net cash provided by operating activities can be noted, with the net result in 2015 being $7 300 above the figure achieved in the previous year. However, this is not the significant change in these statements. The investing activities reflect a considerable investment in assets over the past two years. In 2014, $9 000 was invested in shop fittings, followed by the purchase of a vehicle and a computer in 2015. These items required significant finance and it is apparent that at the end of 2014 the business had insufficient cash to fund these purchases. However, in 2015 the owner made a cash contribution of $40 000 and then borrowed an additional $20 000. This assisted the business in making the purchases of the new non-current assets, without using up all the firm's cash. At the end of 2015 the overall cash position is in a sound state. Keeping in mind that the business is unlikely to have to buy such assets again in the near future, the owner should be confident that the firm's cash supplies can now be consolidated in future periods.

This example shows how the various cash flow items can be linked to describe what has happened in a business over a period of time. The changes in the various items can be readily identified, as can any problems that are developing. Successful strategies can also be reviewed. If management has a particular objective, the comparative statements can be used to evaluate the decisions taken during the reporting period. For example, a simple objective may be to increase net cash provided by operating activities by 10%, in order to fund the purchase of new assets. By preparing comparative statements, such decisions can easily be evaluated. The complete package of an income statement, a balance sheet and a cash flow statement provides management with a range of information that should allow them to make sound decisions. Evaluating profit performance, financial position and cash management are all crucial factors in ensuring that a business remains a successful venture. Further issues in relation to evaluation will be covered in chapter 20.

› GLOSSARY OF TERMS

cash flow statement an accounting report that states all cash inflows and cash outflows over a specific period of time.

cash held the aggregate of all cash and short-term investments, less any bank overdrafts the business may have.

financing activities cash flows that relate to changes in the financial structure of a business.

investing activities cash flows that result from the purchase of assets or sale of assets for cash.

net cash provided a net cash inflow reported for one of the areas of operating, investing or financing activities.

net cash used a net cash outflow reported for one of the areas of operating, investing or financing activities.

operating activities cash flows that relate to the day-to-day operations of a business, including receipts from customers and payments to suppliers and employees.

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Summary questions

1. Describe the basic purpose of a cash flow statement.
2. Explain what information can be gained from a cash flow statement that is not available from other financial reports.
3. Distinguish between a statement of receipts and payments and a cash flow statement.
4. **a** State the three classifications that are used in part **a** cash flow statement.

   b For each of the three classifications stated in part **a** above, provide two examples of items that would appear under each heading.
5. Classify the following items under the three classifications used in a cash flow statement. If you do not think an item should be reported in a cash flow statement, state 'non-cash item' for the irrelevant items.

   a cash purchases of stock
   b credit purchases of stock
   c cartage inwards paid
   d repayment of a loan
   e GST collected on cash sales
   f withdrawal of stock by the owner
   g cash sale of stock
   h cash purchase of office furniture
   i capital contribution by owner
   j credit sale of stock
   k withdrawal of cash by the owner
   l GST paid on cash purchases
   m stock loss
6. State one revenue item that should be reported in a cash flow statement and one revenue item that should not be reported in this statement.
7. State two expense items that should be reported in a cash flow statement and two expense items that should not be reported in this statement.
8. Explain the advantage of preparing comparative cash flow statements for two consecutive reporting periods.

Practical exercises

[Exercise 19.1]

The proprietor of Sumner's Shoe Store has provided the following information about his business:

Receipts	*$*	*Payments*	*$*
Cash sales	40 000	Cash purchases of stock	25 000
Collections—debtors	10 000	Wages	12 000
GST collections	4 000	Office expenses	3 000
		Loan repayments	8 000
		GST payments	2 800

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a Using the relevant information from that provided, calculate the net cash provided by operating activities for the year ended 31 July 2015.

b Did you omit any items in your calculation in part **a** above? If so, explain why.

[Exercise 19.2]

Vivien Kovanovic is the owner of V.K.'s Jeans. She has extracted the following information from the financial records of the shop:

Cash sales	$92 000
Credit sales	23 000
Collections from debtors	12 000
GST receipts	9 200
Cost of sales	55 000
Cash purchases of stock	53 000
Wages	22 500
Cartage inwards	1 200
GST payments	5 420

a Select the relevant items from the above list and calculate the net cash provided (or used) by operating activities.

b Explain your treatment of the item 'credit sales'.

c Would you expect net cash flows from operating activities to be a positive or a negative figure? Explain your answer fully.

[Exercise 19.3]

The owner of Nguyen's Nut Shop provided the following summary of events in relation to his cash flows over the past year:

Receipts	*$*	*Payments*	*$*
Cash sales	86 000	Cash purchases of stock	37 000
Collections from debtors	22 000	Purchase of computer	4 000
Sale of computer	1 000	Drawings	25 000
GST receipts	8 600	Wages	25 000
		GST payments	4 100

Using the relevant information from the lists above, calculate the net cash provided (or used) by investing activities.

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[Exercise 19.4]

Helen Ferry, the proprietor of Models 'R' Us, has provided the following information about her small business:

Cash purchase of fax machine	$1 450
Cash purchase of stock	32 560
Cash sales of inventory	67 340
GST receipts	6 734
Cash received from sale of office equipment	2 130
Purchase of display equipment for cash	9 820
Credit sales of inventory	12 320
GST payments	4 383

Determine the net cash provided (or used) by investing activities. Show all workings.

[Exercise 19.5]

During the year ended 30 June 2015 the owner of Shepparton Sports Store, Bruce Ken, contributed assets worth $32 000 to his business. This consisted of $15 000 cash and a vehicle valued at $17 000. His other receipts for the year were as follows:

Cash sales	$90 800
GST receipts	9 080
Debtors	23 000
Loan	15 000

Ken's cash payments for the year included the following:

Creditors	$45 600
Loan repayments	4 850
Drawings	5 000
Insurance	1 200
New computer	2 500
GST payments	370

Determine the net cash provided (or used) by financing activities over the year ended 30 June 2015.

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[Exercise 19.6]

The manager of Wilson's Toy Store has provided the following details about her business:

Receipts	*$*	*Payments*	*$*
Cash sales	123 000	Creditors	10 200
Capital	25 000	Salary	28 000
Loan	12 500	Drawings	12 800
Debtors	14 300	Purchase of office equipment	4 500
GST receipts	2 300	GST payments	450

Make a list of all the items relevant to financing activities and determine the net cash flow for the year in relation to financing.

[Exercise 19.7]

Doris Friggieri is the owner of Friggieri's Furniture Store. She has prepared a simple statement of receipts and payments but is unsure how to prepare a formal cash flow statement. She has asked for your assistance in relation to the report prepared below:

Friggieri's Furniture Store: statement of receipts and payments for year ended 31 May 2015

	$	*$*
Receipts		
Cash sales	132 000	
Collections from debtors	28 700	
GST collections	13 200	
Loan from bank	15 000	188 900
less *Payments*		
Creditors	52 000	
Wages	27 600	
Office expenses	3 000	
Purchase of delivery van	19 200	
Shop cleaning	1 200	
Purchase of office equipment	6 500	
GST payments	2 990	
Loan repayments	4 300	
Drawings	46 000	162 790
Excess of receipts over payments		26 110
Bank balance as at 1 June 2014		(4 500)
Bank balance as at 31 May 2015		21 610

a Prepare a cash flow statement, showing clearly the net cash provided (or used) by operating, investing and financing activities.

b Comment on the results achieved by this business over the last year, with reference to the three areas of cash flows.

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[Exercise 19.8] The following report has been submitted by the owner of Haslam's Hardware:

Haslam's Hardware: statement of receipts and payments for year ended 31 December 2015

Receipts		$	$
	Cash sales	128 900	
	Collections from debtors	32 760	
	Capital	15 000	
	Sale of delivery van	9 800	
	Commission revenue	2 000	
	GST receipts	13 090	
	Loan from PLZ Finance	12 500	214 050
less	*Payments*		
	Creditors	52 000	
	Interest	1 200	
	Stationery expenses	2 200	
	Purchase of computer system	10 400	
	Advertising	5 200	
	Wages	44 300	
	GST payments	1 780	
	Loan repayments	4 300	
	Drawings	46 000	167 380
	Excess of receipts over payments		46 670
	Bank balance as at 1 January 2015		2 100
	Bank balance as at 31 December 2015		48 770

a Prepare a schedule to determine the net cash provided by operating activities.

b Prepare a fully classified cash flow statement for the year ended 31 December 2015.

c Comment on the firm's cash position at the end of 2015.

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[Exercise 19.9]

John Barker, the owner of Barker's Bricks & Tiles, has prepared the following summary of his cash transactions:

Barker's Bricks & Tiles: statement of receipts and payments for year ended 30 September 2015

Receipts		$	$
	Cash sales	240 000	
	Collections from debtors	45 300	
	Loan from CBA	12 000	
	Sale of shop fittings	2 400	
	Interest revenue	1 200	
	Sale of delivery van	9 800	
	GST receipts	24 000	
	Capital	22 000	356 700
less	*Payments*		
	Salaries	43 000	
	Cash purchases of stock	29 000	
	Creditors	148 000	
	Cleaning costs	4 500	
	Legal expenses	3 100	
	Purchase of vehicle	30 300	
	Promotional expenses	6 350	
	Loan repayments	3 700	
	GST payments	8 815	
	Purchase of shop fittings	14 900	
	Drawings	25 000	316 665
	Excess of receipts over payments		40 035
	Bank balance as at 1 October 2014		(5 689)
	Bank balance as at 30 September 2015		34 346

a Prepare a schedule to determine the net cash provided by operating activities.

b Prepare a fully classified cash flow statement for the year ended 30 September 2015.

c Comment on the firm's cash position at the end of September 2015.

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[Exercise 19.10] The cash journals presented below have been produced by the owner of Ballarat Computers:

Cash receipts journal

Date	Details	Receipt no.	Amount banked $	Debtors $	Disc. exp. $	Cash sales $	Sundry rec. $	GST received $
Aug 1	Cash sales	654	1 980			1 800		180
2	Loan—NAB	–	5 000				5 000	
5	A. Pitson	655	3 200	3 200				
8	Cash sales	656	242			220		22
11	M. Morath	657	1 800	1 800				
14	Cash sales	658	1 980			1 800		180
16	G. Giese	659	2 700	2 700				
17	Cash sales	660	319			290		29
20	Commission	661	220				200	20
23	Sale of equipment	662	500				500	
26	Cash sales	663	1 760			1 600		160
27	Cash sales	664	1 760			1 600		160
29	G. Honey	665	2 600	2 600				
31	Cash sales	666	1 925			1 750		175
31	Totals		25 986	10 300	0	9 060	5 700	926

Cash payments journal

Date	Details	Cheq. no.	Total paid $	Creditors $	Wages $	Draw. $	Assets $	Sundry pay. $	GST paid $
Aug 1	Drawings	343	600			600			
2	James & James	344	4 600	4 600					
3	Shop fittings	345	13 200				12 000		1 200
6	Wages	346	600		600				
9	Stationery	347	253					230	23
11	Pendulum Pty Ltd	348	2 300	2 300					
13	Wages	349	650		650				
16	Drawings	350	1 000			1 000			
19	Display equipment	351	4 950				4 500		450
19	Wages	352	600		600				
25	Loan r/p	353	400					400	
26	Wages	354	640		640				
29	Drawings	355	2 000			2 000			
31	Mania Trading	356	2 600	2 600					
31	Totals		34 393	9 500	2 490	3 600	16 500	630	1 673

ADDITIONAL INFORMATION:

On 1 August 2015 the business had the following cash reserves: cash on hand—$500; cash at bank—$5 400.

a Prepare a schedule to determine the net cash provided by operating activities during August 2015.

b Prepare a fully classified cash flow statement for the month ended 31 August 2015.

c Comment on the changes in the cash position of the business during August 2015.

[Exercise 19.11] The owner of Brunswick Music Store, Neil Young, has provided the following cash journals from his business:

Cash receipts journal

Date	Details	Receipt no.	Amount banked $	Debtors $	Disc. exp. $	Cash sales $	Sundry rec. $	GST received $
Sep 2	Cash sales	910	770			700		70
2	Cash sales	911	1 210			1 100		110
5	J. Lupo	912	2 100	2 150	50			
6	Cash sales	913	440			400		40
9	Cash sales	914	1 650			1 500		150
12	G. Hernandez	915	2 100	2 140	40			
14	Cash sales	916	3 300			3 000		300
16	Cash sales	917	770			700		70
18	Interest revenue	–	500				500	
21	Sale of computer	918	950				950	
22	Capital	–	8 000				8 000	
24	Cash sales	919	1 540			1 400		140
26	S. Vang	920	3 200	3 200				
27	F. Caruso	921	1 270	1 300	30			
29	Cash sales	922	1 870			1 700		170
30	Totals		29 670	8 790	120	10 500	9 450	1 050

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Cash payments journal

Date	Details	Chq. no.	Total paid $	Creditors $	Stock $	Draw. $	Assets $	Sundry pay. $	GST paid $
Sep 1	J. Walsh	641	1 200	1 200					
3	Computer	642	3 520				3 200		320
5	Stock	643	9 900		9 000				900
7	Drawings	644	1 400			1 400			
10	T. Walkley	645	3 400	3 400					
12	Stock	646	2 200		2 000				200
14	Loan r/p	647	1 650					1 650	
17	Drawings	648	800			800			
20	Advertising	649	550					500	50
24	Fax machine	650	880				800		80
27	Stock	651	990		900				90
28	A. Chimirri	652	1 230	1 230					
28	Loan r/p	653	1 650					1 650	
30	Totals		29 370	5 830	11 900	2 200	4 000	3 800	1 640

ADDITIONAL INFORMATION:

The business maintains two bank accounts. On 1 September 2015 they had the following balances: account #1 $1 500, account #2 bank overdraft ($1 960).

a Prepare a fully classified cash flow statement for the month ended 30 September 2015.

b Comment on the changes in the cash position of the business during September 2015.

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[Exercise 19.12] Millie Demidenko, owner of M.D.'s Barbecues & Camping Store, has prepared the following cash journals. She has also advised that her cash balance on 1 November 2015 was $5 460.

Cash receipts journal

Date	Details	Receipt no.	Amount banked $	Debtors $	Cash sales $	Sundry rec. $	GST received $
Nov 2	Cash sales	7331	638		580		58
7	Cash sales	7332	825		750		75
8	Cash sales	7333	605		550		55
11	Cash sales	7334	726		660		66
14	Cash sales	7335	1 320		1 200		120
16	Cash sales	7336	979		890		89
22	Cash sales	7337	2 178		1 980		198
23	Sale of vehicle	7338	9 000			9 000	
26	Cash sales	7339	1 375		1 250		125
30	Capital	–	5 000			5 000	
30	Totals		22 646	0	7 860	14 000	786

Cash payments journal

Date	Details	Cheque no.	Total paid $	Wages $	Drawings $	Stock $	Sundry pay. $	GST paid $
Nov 4	Stock	1243	2 420			2 200		220
9	Wages	1244	550	550				
10	Drawings	1245	870		870			
12	Advertising	1246	1 760				1 600	160
15	Office furniture	1247	2 200				2 000	200
16	Wages	1248	580	580				
18	Drawings	1249	2 000		2 000			
22	Wages	1250	600	600				
25	Stock	1251	2 860			2 600		260
28	Wages	1252	620	620				
28	Computer	1253	2 750				2 500	250
30	Totals		17 210	2 350	2 870	4 800	6 100	1 090

a Prepare a schedule to determine the net cash provided by operating activities during November 2015.

b Prepare a fully classified cash flow statement for the month ended 30 November 2015.

c The owner is concerned about the cash flows of the business. Comment on the cash position of the firm and the results revealed by your report in relation to the three areas of cash flows.

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[Exercise 19.13] The following cash flow statements relate to the business of Betty's Boutique:

Betty's Boutique: cash flow statements for years ended 31 December:

	2014	*2015*
	$	*$*
Cash flows from operating activities		
Receipts from customers	88 000	96 000
Payments to suppliers & employees	(47 000)	(52 000)
Net cash provided by operating activities	41 000	44 000
Cash flows from investing activities		
Proceeds from sale of non-current assets	3 400	2 300
Purchase of non-current assets	(12 000)	(3 200)
Net cash used in investing activities	(8 600)	(900)
Cash flows from financing activities		
Loan repayments	(10 000)	(10 000)
Capital injection	20 000	–
Proprietor's drawings	(35 000)	(33 000)
Net cash used in financing activities	(25 000)	(43 000)
Net increase in cash held	7 400	100
Cash held at beginning of year	2 340	9 740
Cash held at end of year	9 740	9 840

Comment on the changes that have taken place over the period covered by the two reports shown above. Your comments should consider the changes that have occurred in operating, investing and financing activities.

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Chapter 20

Evaluation of performance

OBJECTIVES

At the completion of this chapter, you should be able to:

- explain the differences between cash and profit
- prepare graphs and tables to reflect changes in sales turnover
- calculate a gross profit ratio for a trading firm
- explain how a change in mark-up affects a gross profit ratio
- calculate a net profit ratio for a trading firm
- prepare a pie chart showing the breakdown of the sales dollars for a trading firm
- calculate a stock turnover rate for a trading firm
- interpret the results of a stock turnover rate
- determine a debtors turnover rate
- explain the results of a debtors turnover rate
- calculate the length of an operating cycle for a trading firm
- explain the factors that determine the length of an operating cycle
- calculate a debt ratio for a small business
- explain the link between gearing and risk.

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20.1 What are analysis and interpretation?

One function of accounting is the preparation of the three financial statements. However, the accounting process does not end there. Throughout this text the emphasis has been on the link between accounting and decision-making, and this link is vital when final reports have been prepared. Making sense of financial reports and knowing what to do next is the secret of business success. **Analysis and interpretation** attempt to get the most out of accounting reports. *Analysis* is the breaking down of something complex into workable segments. Therefore, analysis of an accounting report is the breaking down of a complete report into usable, meaningful portions. *Interpretation* involves making sense of such analysis to enable management decisions to be made. This may include compiling a written report that provides interpretations of the changes in analytical ratios. These ratios relate different parts of accounting reports to one another to produce meaningful information.

For the purposes of this text, analytical ratios will be broken into three main groups: profitability ratios, liquidity ratios and stability ratios. It must be emphasised from the outset that these ratios should not be examined in isolation. Although three broad groups can be identified, ratios often interrelate with one another. A change in one ratio will often cause a subsequent change in another. Ratios can also be used in conjunction with other accounting reports. For example, the working capital ratio evaluates liquidity, but it should be looked at in association with other reports such as budgets (refer chapter 8) to get the full picture of a firm's liquidity. It is important to keep in mind that analytical ratios may well provide many clues, but they should not be seen as providing all the answers!

20.2 Cash versus profit

When evaluating the performance of a trading firm, it is important to keep in mind that high profits may not equate to excessive amounts of cash being available to the business owner. The net profit for a reporting period is determined by matching the revenue earned with the expenses incurred during that period (accrual accounting definition of profit). The revenue earned may include many sales made on a credit basis. Some expenses may remain unpaid at the end of a period, while others may have been paid in advance. Therefore, there may be several differences between the items that are included in an income statement and the firm's cash at bank.

In addition to the above-named items, there can also be other differences. Some items that appear in an income statement do not affect the bank account at all. Depreciation is one such item. Depreciation is allocated on balance day and results in the creation of an expense item in the income statement and also the creation of a negative asset in the balance sheet. However, as depreciation does not involve a movement of cash, it will not affect the bank account at all. There may also be items that affect the cash supply of the business, yet have no impact on the income statement. For example, an owner who contributes additional cash funds to a business will experience an increase in the cash at bank account. However, capital funds do not qualify under the definition of revenue and therefore this item is not included in an income statement. There may be many differences between the items that appear in an income statement and those that affect the bank account of the business. These differences are summarised next.

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Cash receipts not treated as revenue	Revenue not recorded as cash receipts
Capital contributions by the owner Loans taken out by the business Collections from debtors from sales made in the previous period	Credit sales Discount revenue
Cash payments not treated as expenses	**Expenses not recorded as cash payments**
Cash withdrawals by the owner Loan repayments Payments to creditors for purchases made in the previous period Cash purchases of non-current assets	Depreciation of non-current assets Cost of sales Discount expenses Stock losses

Taking into account all the above differences between cash and profit, it is vital that profit results be viewed correctly. Many small business owners find it difficult to understand how record profits can be earned, yet their bank statement reveals that they are in overdraft. Profits may lead to an increase in cash at bank, but all the other types of transactions must be kept in mind. For example, if a business earns a profit of $50 000 but the owner withdraws $70 000 in cash, the firm is unlikely to experience a growth in cash at bank. If a business earns a profit of $30 000 but spends $45 000 cash on the purchase of non-current assets, an overdraft may in fact occur. Individuals with little or no accounting experience often have difficulty accepting the fact that profits can be up, yet a cash shortage is being experienced. Also, if losses are being experienced by a business, it is difficult to appreciate that cash at bank may have increased during the reporting period (perhaps through capital injections). These problems occur because of a lack of understanding of the definition of profit. As long as accrual accounting is being applied, revenue earned and expenses incurred will rarely equate to cash receipts and payments. To put it simply, profit is not cash and should not be viewed as such. The role of the income statement is to provide information that reports on the profit performance of a business. If an individual wants to analyse the cash position of a business, the cash flow statement can be used to provide the required information. In summary, profit is not cash and the roles of the two reports should be seen as quite distinct because they examine totally different aspects of a business.

20.3 Trading firms and sales analysis

The key factor in determining the success or otherwise of a trading firm is *sales turnover*. Trading firms buy and sell goods to make a profit. They usually buy goods in bulk, add a mark-up percentage to the cost price in order to determine the selling price, and then, hopefully, sell their goods to customers. To be a success, a trading firm must achieve a particular level of sales. When analysing the performance of a trading firm, the sales figure is usually one of the first items considered. A drop in sales will usually lead to a drop in profit. An increase in sales is a positive trend and may lead to an increase in profit. The change in sales may be reported in a variety of ways. As with any type of financial analysis, the aim is to provide information to the business owner or manager so that decisions can be made. It is common practice to use tools such as graphs and charts to show what has happened over a particular period of time. Some of these commonly used techniques are introduced next.

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Dollar changes: the most common method of analysing a change in sales is to express the annual change in dollar terms. That is, the sales achieved this year are simply compared to the sales figures of the previous year. Consider the following data:

Year	*Sales*
2013	$80 000
2014	90 000
2015	110 000

The change from 2013 to 2014 was an increase in sales of $10 000. From 2014 to 2015 the firm increased its revenue by $20 000, a considerable improvement on the previous year's increase.

Although this is a simple analytical tool, the change from one period to the next is the obvious starting point when assessing the sales performance of a trading firm.

Percentage changes: rather than determining a change in sales in dollar terms, the calculation of a percentage increase or decrease is often preferred. This method compares the current period's results to those achieved in the previous period, but expresses the change in percentage terms. Using the same data as shown above, the increase of $10 000 from 2013 to 2014 is divided by the sales of 2013, thereby determining the percentage increase for the year, as shown below:

$$\frac{\$10\,000}{\$80\,000} = 12.5\%\text{ increase}$$

To determine the percentage increase achieved in 2015, the increase in sales for that year is divided by the sales achieved in the previous year. Therefore:

$$\frac{\$20\,000}{\$90\,000} = 22.2\%\text{ increase}$$

Percentage increases or decreases in sales are often preferred to indicate levels of performance. If the increase in sales is simply expressed in dollar terms, it may have limited impact. For example, an increase in sales of $20 000 may impress in a small business, but may not be significant for a large trading firm. However, the use of percentages puts the level of performance in perspective. Consider the following sales results:

	Business A	*Business B*
2013	$80 000	$300 000
2014	100 000	320 000
Increase for the year	20 000	20 000
Percentage increase	20/80	20/300
	= 25%	= 6.7%

If the sales performance of the two firms was expressed in terms of a dollar increase, the conclusion would be that both firms increased their sales by $20 000. However, in percentage terms, Business A has achieved a massive 25% increase in sales, compared to the small increase of 6.7% for Business B. The use of percentages in this case puts the increases in perspective and shows that the growth in sales achieved by Business A was far better than that achieved by Business B.

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Sales index: many business owners or managers prefer to have an overview of the sales trend in relation to their business. The use of a sales index allows for a comparison of results over several consecutive reporting periods. One year is chosen as the *base year* and all other years are compared to that particular period's results. For example, an owner may wish to have a five-year trend analysis of sales. The year 2015 may be chosen as the base year and then all other results are expressed as a simple index in relation to the year 2015. Consider the following sales data:

Year	*Sales*
2015	$50 000
2016	60 000
2017	75 000
2018	75 000
2019	80 000

In order to calculate a sales index, it is important to remember that all results must be compared to the results achieved in the base year (in this case the year 2015). The sales figure for a particular period is divided by the sales results achieved in the base year and multiplied by 100/1. The following is the result:

Year:	*2015*	*2016*	*2017*	*2018*	*2019*
		$60/$50	$75/$50	$75/$50	$80/$50
		× 100	× 100	× 100	× 100
Index	100	= 120	= 150	= 150	= 160

The advantage of using a sales index is that it provides an owner with a snapshot of the firm's sales performance over several periods in an easy-to-read summary. Increases or decreases and the size of such changes are easily identified. For example, the huge jump in sales from 2016 to 2017 is clearly identified by the 30-point increase in the index shown above. It also identified the fact that sales did not change from 2017 to 2018. In the final year (2019) the index shows the smallest increase over the five-year period, an increase in the index of 10 points.

Budget targets: a common practice for business owners is to set a sales target for a particular reporting period. These targets may be expressed in both dollars and percentage terms. Once a target has been set, it becomes a tool for analysis. The change in sales can be determined (as shown above) and then simply compared to the objective set by the owner before the period commenced. Consider the following sales data:

	2013	*2014*	*2015*	*2016 Budget*	*2016 Actual*
Sales	$50 000	$55 000	$60 000	$66 000	$62 000

When the sales achieved in 2016 are compared to the sales of 2015, management may report that they have increased sales for the fourth straight year, which is a positive result. However, when compared to the sales target set in the budget for 2016, the firm's performance fell short

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of expectations. The setting of a budget target can therefore be used as a reference point when assessing sales achievements. In larger firms, budget targets may also be used to assess the performance of individual staff members. Targets may be set for sales staff, and if they are achieved a bonus may be paid to employees. This acts as an incentive and can help boost the sales of a business. At the end of a reporting period the budgeted sales figure also acts as an analytical tool for the owner or manager.

Graphs and charts: some people prefer accounting information to be displayed in diagrammatic or graphical form, rather than by a page of numbers or statistics. Graphs or charts can show financial information with great clarity and are easier to understand for some individuals. The following sales data will be used to demonstrate some of the more common approaches to graphing accounting information:

	2013	*2014*	*2015*	*2016*	*2017*
Sales	$75 000	$82 000	$78 000	$88 000	$95 000

A bar chart is an excellent way of showing the trend in sales over this five-year period. Figure 20.1 provides a simple demonstration.

Rather than a bar chart, a simple line graph may also be used to show the changes in sales over consecutive reporting periods. Figure 20.2 uses the same sales data as the previous example.

The line graph shown in figure 20.2 contains exactly the same financial information as the bar graph, only in a different fashion. It really becomes a matter of personal taste as to the format of graphs or charts used for accounting purposes. The use of computers in small business makes the preparation of such graphs a relatively easy task. The financial data can be entered on a spreadsheet and then displayed in graphic form. You are encouraged to experiment with

Figure 20.1 Bar chart showing sales trend

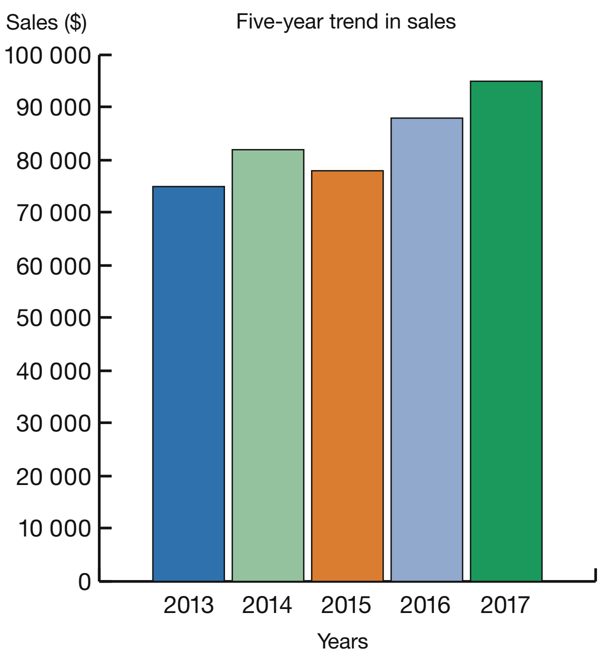
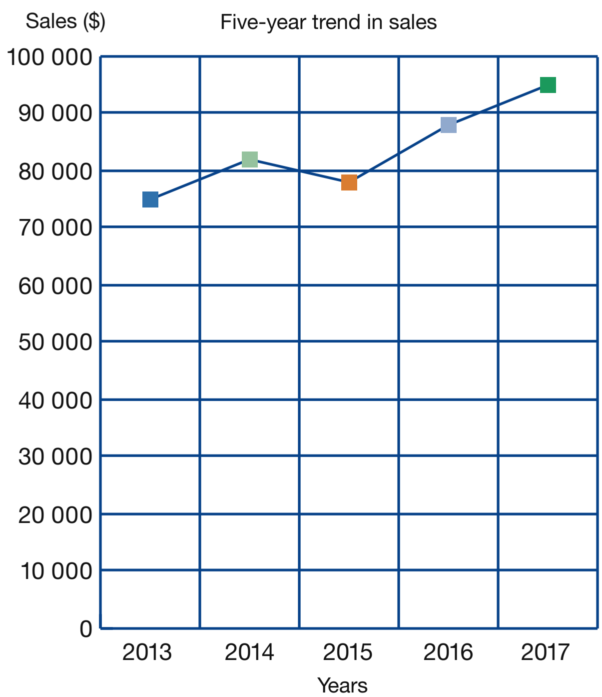


Figure 20.2 Line graph showing sales trend



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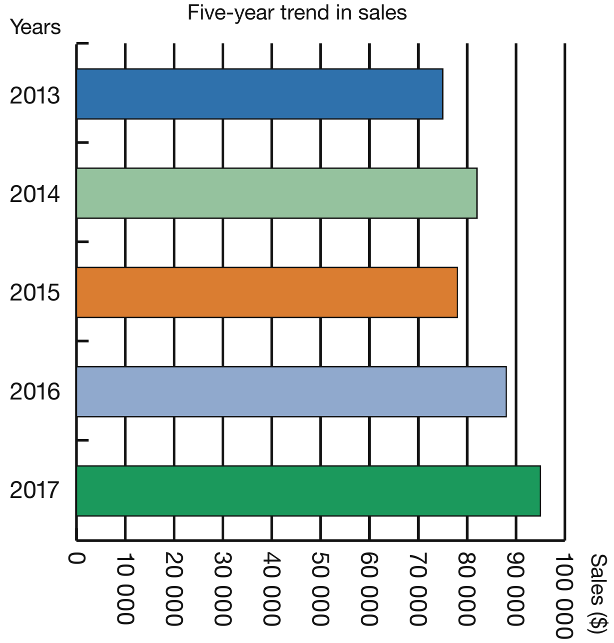
the design of graphs for accounting purposes to discover the format that, in your opinion, most easily conveys the information being examined. In relation to sales data, individuals with little or no accounting background find it quite easy to interpret changes when they are shown in graphic form. Sales expressed in either dollars or as an index can be graphed to show the trend over several reporting periods and provide a useful alternative as an analytical tool. Figure 20.3 below is a variation of the two graphs already demonstrated and may be seen as a better alternative by some simply because of its different design.

Figure 20.3 Horizontal bar chart



20.4 Gross profit ratios and mark-ups

Sales turnover is a key factor in the success of a trading firm. A second factor to consider is the percentage of the sales dollar that remains as profit for the business. It is possible for a trading firm to have very high sales, yet earn a loss for a period. In a competitive market, sales may be increased by simply decreasing the firm's selling prices. If consumers are likely to react to a change in selling prices, demand for the firm's products may increase. However, increased sales do not always mean increased profits!

When a trading firm purchases goods from a manufacturer or wholesaler, the manager of the business must decide on the selling price to be charged. Although there are a variety of techniques that may be used in setting selling prices (refer chapter 13), all of them work on one basic premise. Management must decide on the size of the mark-up to be applied to the firm's stock. A *mark-up* is the percentage added to a cost price in order to determine a selling price. Some retailers apply a 100% mark-up on their products, which means that if an item costs $1 it would be sold for $2. A stock item that costs $2 would be sold for $4 and so on. When setting a mark-up, or considering recommended retail prices, a business owner must ensure that the 'gap' between cost and selling prices is sufficient to cover all expenses of the firm. The higher the

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mark-up being applied, the bigger the gap between cost and selling prices. However, the higher the selling price set by an owner, the less likely it is that consumers will buy from the business. It is somewhat of a balancing act between setting a sufficient profit margin and ensuring that sales will still occur.

A mark-up can be any particular percentage and will usually take into consideration factors such as:

- demand for the product
- recommended retail prices (if available)
- competitors' prices
- desired profit margins
- desired market share.

A business may apply different mark-ups to different products. For example, a clothing store may apply a mark-up of 125% to its suits, 110% to its trousers and shirts and 70% to its ties, but only 50% to its socks. Some cost prices have been listed below to demonstrate the application of these mark-up percentages.

Having decided on a suitable mark-up for their range of products, a business owner simply applies the percentage to goods as they are purchased and put on display. However, even if a set mark-up is decided on, many changes can occur within a reporting period. Sometimes the cost prices of goods increase, but for one reason or another the owner of the business does not want to increase the selling prices being charged. Selling prices may also be changed in reaction to competitors' prices. A business owner may decide to run some 'specials' for a particular week and drop the selling price of some products as a promotion for the business. Regardless of mark-ups, it is common practice in some industries for customers to 'haggle' over selling prices to get the 'best price' available (for example, when buying cars and large electrical goods or furniture). Therefore, even though a mark-up was originally applied, the actual selling price charged may be completely different.

As part of analysing the performance of a business, the **gross profit ratio** can be used as an indicator of the success or otherwise of the trading activities of a business. The gross profit ratio is determined by the formula:

$$\text{Gross profit ratio} = \frac{\text{Gross profit}}{\text{Sales}}$$

This ratio determines the percentage of the sales dollar earned as gross profit for the business. It can be used to report on the relationship between the cost prices and selling prices of the goods sold during the reporting period. That is, the gross profit ratio will show the results of the average mark-up that has been applied to the firm's goods in a given period.

Consider the following data:

	2013	*2014*	*2015*
Sales	$100 000	$120 000	$150 000
less Cost of goods sold	50 000	65 000	90 000
Gross profit	50 000	55 000	60 000

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It should be noted that this firm's sales have increased each year over the three-year period. Also, the gross profit has also increased each year. However, the calculation of the gross profit ratio shows interesting results:

		2013	2014	2015
Gross profit / Sales		$50 000 / 100 000	$55 000 / 120 000	$60 000 / 150 000
Gross profit ratio	=	50%	45.8%	40.0%

Although gross profit increased each year, gross profit as a percentage of sales actually decreased. These decreases occurred because cost prices also increased. In the period 2013 to 2014, sales increased by 20% ($100 000 to $120 000). However, at the same time, cost of goods sold increased by 30% ($50 000 to $65 000). As cost prices increased at a greater rate than did sales, the gross profit percentage actually fell during 2014. This means that this business was making less profit on each product sold during 2014 but, perhaps due to lower prices, they actually sold more, with the end result being an increase in gross profit of $5000. A fall in the gross profit ratio indicates that the average mark-up of the business fell during the period. If the gross profit ratio increases in a given period, this indicates that the average mark-up being applied to stock has increased over time. An average mark-up for a business can be determined at the end of a reporting period to explain changes in profit performance. Using the data stated above, the average mark-up is calculated as shown below:

$$\text{Average mark-up} = \frac{\text{Gross profit}}{\text{Cost of goods sold}}$$

	2013	2014	2015
	$50 000 / 50 000	$55 000 / 65 000	$60 000 / 90 000
=	100%	84.6%	66.7%

In a business where different mark-ups are being applied to different products (refer to the example of the clothing store above), the average mark-up becomes an important consideration when explaining changes in the gross profit ratio. If an owner wants to boost the gross profit ratio, they should concentrate on selling the products with a higher mark-up. Perhaps suits should be advertised more and less attention given to the marketing of socks and ties. The gross profit ratio is a key indicator of the profit performance of a trading firm, as it examines the relationship between the cost prices and selling prices on goods sold during a period. Changes in sales and cost of goods sold can happen for a variety of reasons. However, at the end of a period the total effect of all of these changes will be shown in the gross profit rate earned by the business.

20.5 Net profit ratio

Analysing the profit performance of a business does not stop with the calculation of a gross profit ratio. Gross profit is simply the difference between sales revenue and the cost of goods sold during a reporting period. Trading firms may experience a range of other expenses such as wages and salaries, cleaning, advertising, stationery, telephone and interest. In order to gain a full appreciation of a firm's profit performance, the net profit should be considered in addition to the gross profit ratio discussed above. The **net profit ratio** (also known as the **return**

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on sales ratio) determines the percentage of the sales dollar that remains as profit after all expenses have been taken into account. It is calculated as follows:

$$\text{Net profit ratio} = \frac{\text{Net profit}}{\text{Sales}}$$

Therefore, if a business earned a net profit of $10 000 when sales revenue was $100 000, the net profit ratio would be $10/$100 = 0.10 or 10%. This means that the average sales dollar earned during the period produced a return of $0.10. This also indicates that the expenses of the firm consumed $0.90 out of the average sales dollar earned ($1.00 – $0.10). Cost of goods sold and the firm's other expenses such as wages and advertising made up the costs that consumed an average of $0.90 from each dollar of sales. It is usual practice to determine the gross profit ratio as well as the net profit ratio in order to explain the changes that have occurred within a business. For example, an increase in a firm's net profit ratio may be explained by the gains made in the gross profit ratio due to higher average mark-ups. In fact, the entire income statement may be broken into sections to explain what happened to the sales dollar earned by the business. Consider the report below, which is expressed in dollars as well as percentages.

Thornbury Software—D. Morandin proprietor: income statement for year ended 30 September 2015

	$	$	%
Revenue			
Sales		120 000	100.0
less Cost of sales		60 000	50.0
Gross profit		60 000	50.0
less Expenses			
Wages	20 000		16.7
Advertising	6 000		5.0
Office expenses	4 000		3.3
Interest expense	5 000		4.2
Total expenses		35 000	29.2
Net profit		$25 000	20.8

The statement shown above provides a wide range of information to the proprietor of the business. Not only are the revenues and expenses reported for the year, but also the sales dollar has been broken down into the various components. The owner can determine, for example, that half the sales were consumed by the cost prices of goods sold, giving a gross profit ratio of 50%. This left $0.50 of each dollar to cover expenses and net profit. The expenses came to a total of $35 000, which represents 29.2% of sales. Once these expenses were taken into account, 20.8% of the total sales earned was left as profit for the owner. An owner or manager may also examine the details of individual expenses to determine exactly what happened to the sales dollar during the period. In the above example the key expense is obviously wages, with 16.7% of the sales dollar being consumed by wages in this particular year. One should be cautious when doing such analysis, as the income statement for one period may not be typical for the business. However, if this form of analysis was taken one step further, trends might be identified for individual items. Consider the report prepared next, which compares the sales dollar breakdown over two consecutive reporting periods.

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Thornbury Software—D. Morandin proprietor: income statements for year ended 30 September

	2015		2016	
Revenue	$	%	$	%
Sales	120 000	100.0	140 000	100.0
less Cost of sales	60 000	50.0	68 000	48.6
Gross profit	60 000	50.0	72 000	51.4
less Expenses				
Wages	20 000	16.7	28 000	20.0
Advertising	6 000	5.0	8 000	5.7
Office expenses	4 000	3.3	5 000	3.6
Interest expense	5 000	4.2	5 000	3.6
Total expenses	35 000	29.2	46 000	32.9
Net profit	25 000	20.8	26 000	18.5

A two-year comparison allows for an in-depth analysis of the firm's profit performance. Note that, in the second reporting period shown above, the business experienced a marked improvement in sales revenue. The sales jumped from $120 000 to $140 000. However, when the two net profits are compared it is disappointing to report that net profit only increased by $1 000. The business owner would be entitled to ask 'What happened to my sales? Where are my profits?' The percentage breakdown of the sales dollar can be used to answer such questions. The gross profit ratio actually increased (from 50% to 51.4%), which shows that the average mark-up of the firm was slightly improved. However, this slight improvement was outweighed by the increases in expenses as a percentage of the sales dollar. Wages consumed 16.7% of sales in 2015, but in 2016 this jumped to 20% out of each sales dollar. Advertising also consumed more of the sales dollar, as did office expenses. As interest expenses stayed constant over the two years, this expense actually decreased as a percentage of the sales dollar. In summary, the increase in total expenses as a percentage of sales meant that the firm's net profit ratio decreased from 20.8% in 2015 to 18.5% in 2016. This indicates that a smaller percentage of the sales dollar is now left as profit for the owner. These changes can be used to explain why, despite sales increasing by $20 000, profit only increased by $1 000.

Graphs may also be used to show the breakdown of the sales dollar in a particular reporting period. Pie charts are an ideal tool for this purpose, as the pie can be used to represent the average sales dollar. This can then be broken into the various segments, with one piece of the pie representing the net profit left for the owner (that is, the net profit ratio). In order to demonstrate the use of a pie chart for a trading firm, the data from Thornbury Software for 2015 has been reproduced in summarised form as follows.

	$	%
Sales	120 000	100.0
Cost of sales	60 000	50.0
Wages	20 000	16.7
Advertising	6 000	5.0
Office expenses	4 000	3.3
Interest expense	5 000	4.2
Net profit	25 000	20.8

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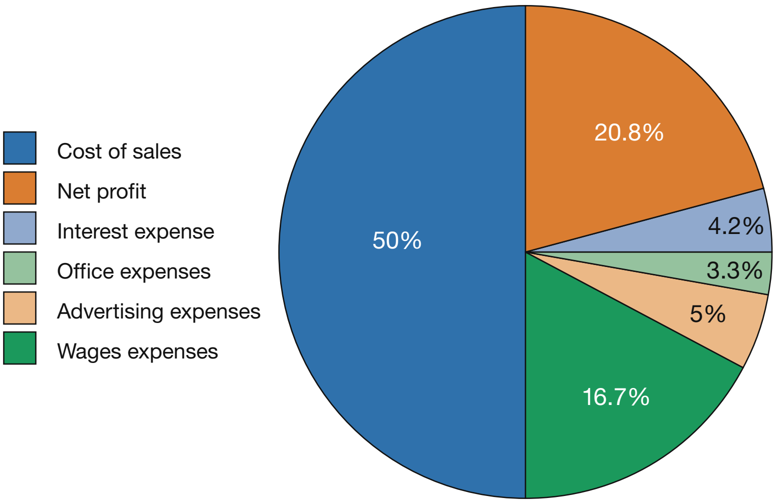
This summarised report can be represented in a pie chart as follows:

Figure 20.4 Pie chart



Pie charts are easily understood by most individuals and changes in items can be clearly illustrated within the chart. The percentage of the sales dollar consumed by each expense and the amount of the sales dollar left as net profit are quickly identifiable. As the general purpose of accounting is to convey financial information to the user of the report, pie charts can certainly help accountants get their message across to interested parties.

20.6 Return on owner's investment

An additional method of evaluating business performance is to compare the net profit of the business to the funds invested by the owner. This type of analysis allows an owner to evaluate whether or not it is worthwhile for them to continue investing in the business. If the owner's funds are not earning a sufficient return, the owner may decide that it would be to their advantage to close the business down and invest their capital elsewhere. The **return on owner's investment ratio** uses a dollar value from the income statement (net profit) and a value from the firm's balance sheet (capital). Thus, this ratio is calculated as follows:

$$\text{Return on owner's investment} = \frac{\text{Net profit}}{\text{Average capital}}$$

This ratio measures the return earned on the investment made by the owner. For example, if the average capital was \$100 000 over a given year and net profit was \$20 000, the ratio would be:

$$\frac{\$20\,000}{\$100\,000} = 0.2{:}1 \text{ or } 20\% \text{ per annum}$$

Note: the capital at the start or at the end of a reporting period may be used when calculating this ratio. However, an average of these two figures is often preferred because the amount of capital in a business may change many times during a period. The investment in a business by an owner may increase or decrease over time. Therefore, **average capital** is used to represent the average investment by a proprietor during a reporting period. The figure of \$100 000 in the above ratio may have been calculated as follows:

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Owner's equity as at 1/1/15 – $90 000
Owner's equity as at 31/12/15 – $110 000
Average owner's equity for the year: ($90 000 + $110 000)/2 = $100 000

In order to assess the performance of the owner's investment, this ratio can be compared with:

- rates of return on alternative investments in the money market
- rates of return earned in similar businesses
- the rate earned in previous periods (that is, the trend in the ratio)
- the budgeted rate of return (or expected return).

The yardsticks listed above are used to evaluate many ratios. Not all of this information is always available to the business owner. Therefore opinions are invariably involved and, if in doubt, a professional accountant should be consulted.

20.7 Stock turnover ratio

The success of a trading firm depends largely on the management's ability to buy inventory and turn it into sales. A firm that purchases the wrong type of stock, or too much stock, will end up with money tied up in an investment that provides no return. There is little point in a business buying stock if it is simply going to sit there and do nothing! Stock is only effective as an investment if it can be turned into revenue. An analytical ratio, which can be used to examine the performance of management in this area, is the **stock turnover ratio**. Stock turnover is determined by dividing the cost of goods sold for the period by the average level of investment in stock. This calculation shows how many times the investment in stock has been turned into sales. It must be kept in mind that stock is valued at cost price, and therefore it is logical to compare the investment in stock (cost price) with the cost of goods sold for a period (which is also expressed in terms of cost prices). Consider the following example:

Stock as at 1 July 2014	$38 000
Stock as at 30 June 2015	$42 000
Cost of goods sold for the year ended 30 June 2015	$160 000

Using the above financial data, the calculation of the stock turnover ratio would be:

$$\text{Stock turnover} = \frac{\$160\,000}{(\$38\,000 + \$42\,000)/2}$$

$$= \frac{\$160\,000}{\$40\,000}$$

$$= 4 \text{ times per annum}$$

This ratio indicates that the firm turned its stock into sales four times during the yearly reporting period. As the level of inventory changes over time, it is common practice to use an average of stock for the year. Stock at the end of the year may be used but, if stock levels have recently been increased or decreased, this may provide misleading figures. Stock at the

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beginning and the end of the period may be used to determine an average figure or monthly stock figures may also be used. In this case the 12 monthly figures would be totalled and divided by 12. Great care must be taken when interpreting the results of a stock turnover ratio. It must be remembered that a key factor in turning over stock is the type of product being sold. There is no standard, desirable rate for all trading firms. It is reasonable to expect that the stock turnover achieved by a fruit shop would be greater than that of a sports store. Perishable products must be turned over quickly or there is a risk of having to throw them out as rubbish. However, shops trading in furniture or electrical appliances do not have the same pressure to turn their stock over quickly. In order to evaluate a stock turnover rate, management should consider:

- the nature of the goods being sold
- industry averages (that is, turnover rates for similar businesses)
- the trend in the ratio (what were the rates achieved in the last two or three periods?)
- the budgeted rate (what did management expect to achieve?).

Stock turnover rates can also be expressed in terms of the average number of days it takes to turn stock over once. Using the same data as an example, the calculation becomes:

$$\text{Stock turnover rate (in days)} = \frac{365}{\text{Turnover ratio}}$$

$$= \frac{365}{4}$$

$$= 91.25 \text{ or } 91 \text{ days}$$

This indicates that the firm took an average of 91 days to turn its investment in stock into sales. It must be emphasised at this point that this rate is strictly an average for the period. A business may experience fluctuations in turnover due to seasonal factors. For example, a business selling wood heaters would experience a much faster turnover rate in the colder months and a slower turnover during summer. The stock turnover rate will reflect the average turnover for the period. If stock values at the beginning and end of a year are used in the calculation, the final result will show an average of the ups and downs a business may experience in a typical year.

20.8 Debtors turnover ratio

Once stock has been turned into sales, a question that arises is the time taken to actually collect the cash from credit customers. The collection of debts from debtors is another important factor in determining the success or otherwise of a business. If goods are sold for cash, the collection of the sales revenue happens immediately. However, when goods are sold on credit the customer is typically given 30 or 60 days in which to settle their account. Such credit terms are stipulated by the business providing the credit and are usually stated on the sales invoice. The **debtors turnover ratio** may be used to evaluate the effectiveness of management in collecting the credit sales of the business. Consider the following example:

Debtors balance as at 1 July 2014	$14 000
Debtors balance as at 30 June 2015	$16 000
Credit sales for the year ended 30 June 2015	$150 000

The debtors turnover rate is calculated by dividing the credit sales for a period by the average level of debtors. Using the above data, it would be calculated as follows:

$$\text{Debtors turnover} = \frac{\$150\,000}{(\$14\,000 + \$16\,000)/2}$$

$$= \frac{\$150\,000}{\$15\,000}$$

$$= 10 \text{ times per annum}$$

and to convert it to days:

$$\frac{365}{10} = 36.5 \text{ or } 37 \text{ days}$$

This ratio indicates that it took this business an average of 37 days to collect its debts from its credit customers. Once again, it must be emphasised that the results of this ratio are based on an average. This means that some customers would have taken less than 37 days to pay their accounts, while others may have taken much longer than indicated by the ratio analysis. In order to evaluate the debtors turnover ratio, the following factors need to be considered:

- the credit terms extended by the business to the customers
- the trend in the ratio over the last few reporting periods
- the budgeted, or desired, rate as set by management.

There is little point in comparing a debtors turnover rate to any industry benchmark. As the credit terms are stipulated by management, the control of debtors and their payments is also up to management. If credit terms of 30 days are granted to credit customers, some business owners may be satisfied with an average collection period of 30–35 days. Others may be satisfied with a range of 30–40 days. However, most business managers would not be pleased with an average collection period of 60 days if the credit terms issued were only 30 days. Such a result would indicate poor control over debtors and should be seen as a warning signal that management is not following up on overdue accounts. The trend in this ratio is vitally important. If the average collection period is always increasing, the firm's credit control procedures may have to be reviewed. Steps can be taken to reduce the average collection period and these may include:

- offering discounts for accounts settled early
- giving reminders to overdue customers by telephone
- sending copies of invoices to slow payers as a reminder
- issuing monthly statements with stickers indicating 'payment now due'
- making threats of legal action in the case of very late accounts
- employing a debt collecting agency
- making threats to not provide credit in the future.

20.9 Trading firms and the cash cycle

Trading firms usually have a large percentage of their available funds tied up in inventory. It is important therefore that stock be turned over as quickly as possible in order to generate sales revenue. The stock turnover rate can be used to evaluate this aspect of a firm's performance. The results of the stock turnover rate have a direct effect on the firm's profit for a period. If stock turnover is improving, one would expect to have a higher level of sales reported in the income statement. Once the inventory has been sold, it is then important to collect from customers as

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quickly as possible. The debtors turnover rate can be used to report on the performance of management in collecting debts. If a firm is not collecting debts quickly enough, management can find it difficult to pay bills on time. Depending on the liquidity of the business, a manager may find that there is insufficient cash to pay expenses such as wages, rent and office expenses. In addition to expense items, it may be doubtful that there will be enough cash to meet loan repayments and the personal demands of the owner in terms of drawings. Therefore, it should be evident that the stock turnover and debtors turnover rates can be crucial to the success and, in some cases, the survival of the business. There is an obvious link between these two turnover ratios. Stock is sold to debtors that should, after a short period of time, be turned into cash. As these two ratios have a logical link between them, they may be joined as one to show the overall time it takes for a business to turn stock into cash. The **cash cycle** of a trading firm is the total of the stock turnover rate (in days) and the debtors turnover rate (in days). The cash cycle can be used to evaluate the average time taken to turn stock into debtors, and then debtors into cash. This process is represented by the diagram in figure 20.5.

Figure 20.5 The cash cycle

The stock turnover and debtors turnover of a business are added together to determine the cash cycle. The previous examples demonstrated in this chapter showed a stock turnover of 91 days and a debtors turnover of 37 days. Therefore:

Cash cycle	=	91 days + 37 days
	=	128 days

The cash cycle shows the total time taken by a business to turn its average level of stock into cash. In this example, just over four months has passed before the cash from selling the firm's stock is received from debtors. This is a long period of time, particularly if the business has purchased the stock from its suppliers on 30 days' credit. A business in this situation would need a certain level of cash readily available to meet its everyday expenses. As the average cash cycle takes 128 days, the liquidity of the firm may be threatened by such a slow collection of cash. As the cash cycle can have a huge impact on a firm's liquidity, many analysts consider the cash cycles together with working capital ratios. There is no one acceptable figure for all trading businesses. However, at this stage you should appreciate that some businesses are more likely to experience liquidity problems. Consider the two businesses described below:

Business A: Buys for cash, has a slow stock turnover, sells only on credit, and has a long collection period from its debtors.

Business B: Buys on credit, has a fast stock turnover, and sells only for cash.

The working capital needs of these two firms will differ greatly. Business B has the advantage of buying on credit, perhaps on 30-day terms. Its stock is sold quickly and all sales are for cash. Therefore, management is not waiting for the collection of cash and the suppliers have allowed 30 days before payment is due. Business B does not require large amounts of cash kept on hand to meet expenses, as the stock will provide ready cash. Business A, on the other hand, has a problem. Management pays cash for all purchases, yet makes all sales on credit. It takes a long time to turn its stock into sales and takes even more time to collect debts from its credit

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customers. In this situation, Business A would require a large amount of cash available to meet its daily and weekly expenses. This comparison of two scenarios involves the two extremes that businesses may experience. In reality, most businesses would fall somewhere between these two extremes. When analysing a cash cycle for a trading firm, it is important to judge each case on its merits. Trends are very important and, if the liquidity of the business is being considered, the cash cycle should be looked at in conjunction with working capital trends and cash budgets. The consideration of these different aspects of a business will provide a better chance of a correct assessment.

20.10 Liquidity ratios

The liquidity of a business is crucial for its survival. A firm may be highly successful in generating revenue, but if liquid funds are not available it will not survive. *Liquidity* is the ability of a firm to meet its short-term debts as they fall due. One common method of evaluating liquidity is to calculate a **working capital ratio**:

$$\text{Working capital ratio} = \frac{\text{Current assets}}{\text{Current liabilities}}$$

As the working capital ratio focuses on the current items from a balance sheet, it examines the short-term liquidity of a firm. There is not a recommended minimum percentage for the working capital ratio. As cash flows are of vital importance when looking at liquidity, the working capital ratio should be considered in conjunction with the cash flows of the past as well as those predicted in cash budgets. The most important tool for evaluation is the trend in this liquidity ratio. As a guide, most owners would like to see the ratio above 1:1 or 100%, or liquidity problems may arise. However, a firm may survive with less than this rate under conditions such as those outlined below.

A business may survive with low working capital if it:

1. buys its goods or services on credit (30 or 60 days to pay)
2. provides its services or goods only on cash terms
3. has a quick turnover of its inventory.

A supermarket, for example, would operate under such conditions. Stock turnover may be around 10 to 14 days and virtually all sales are on a cash basis. This means that inventory could be turned over twice before creditors had to be paid for the first lot of purchases. Such a business would be able to operate with a working capital ratio of less than 100%.

Looking at the worst-case scenario, a firm will struggle to survive with a low working capital if it:

1. buys goods and services for cash
2. sells everything on credit on 30- or 60-day terms
3. has a slow stock turnover.

Such a business will always be chasing money and will often run into liquidity problems. These two examples reinforce the fact that the ratios are only a guide and other factors may be equally important.

A second ratio that can be used to evaluate liquidity is the **quick asset ratio**. Whereas the working capital ratio measures short-term liquidity (up to one year), the quick asset ratio looks at the immediate liquidity of a business (the next one to two months). The quick asset ratio modifies the assets and liabilities used in the equation, as shown next:

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$$\text{Quick asset ratio} = \frac{\text{Current assets—Stock}}{\text{Current liabilities—Bank overdraft}}$$

The adjustments made to current assets and current liabilities mean that only assets of a very short-term nature are left (namely cash and debtors) and these can then be compared to the very urgent debts (namely creditors). This allows management to see if in the next month or so the cash coming in will be sufficient to meet the debts that have to be met. Stock is excluded because a firm is usually unable to turn all of its stock into cash in a very short time. Of course, if every item was sold below cost this may be possible, but the business would not be able to continue without stock! The bank overdraft is also excluded from this calculation, as many small businesses run on an overdraft for several months at a time. Other businesses have fluctuating bank balances and overdrafts are there when they need them. Although banks have the right to call up the amount owing on overdraft, they are also supporting the business by allowing it this line of finance. Therefore, overdrafts are not usually considered as urgent debts. To demonstrate the two liquidity ratios, the following example has been created.

	2014	*2015*
Cash at bank	$2 000	–
Debtors	5 000	$8 000
Stock	25 000	28 000
Bank overdraft	–	3 000
Creditors	4 000	6 000

The two ratios would be calculated as follows:

Working capital ratio:

		2014		*2015*
$\frac{\text{CA}}{\text{CL}}$		$\frac{32\,000}{4\,000}$		$\frac{36\,000}{9\,000}$
		= 8:1		= 4:1
	or	800%	or	400%

Quick asset ratio:

$\frac{\text{CA—Stock}}{\text{CL—OD}}$		$\frac{7\,000}{4\,000}$		$\frac{8\,000}{6\,000}$
		= 1.75:1		= 1.33:1
	or	175%	or	133%

The working capital ratio appears to show a very healthy liquidity position. In 2014 the business had $8 of current assets to cover every $1 of current liabilities. In 2015 this situation changed considerably, but the firm still appears to have ample assets to cover its short-term debts. The 2015 result shows that the business has $4 of current assets to match every $1 of current liabilities. The trend in this ratio should be monitored, particularly if it continues to decrease. If it does decrease to under 100%, a business may experience problems in meeting its debts. However, it must always be kept in mind that the length of the firm's cash cycle will help determine if a liquidity problem is likely to arise.

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20.11 The debt ratio

Financial stability looks at the longer-term viability of a business. Whereas liquidity ratios consider the next 12 months, *stability ratios* examine how stable the business is in the long term. They take into account the *gearing* of the firm and the financial risk involved in investing in the business. Gearing refers to the dependence of a firm on borrowed funds compared with the amount invested by the owner. To evaluate gearing, the following ratio is used to determine the dependence of a business on debt finance.

$$\text{Debt ratio} = \frac{\text{Total liabilities}}{\text{Total assets}}$$

A firm that borrows to a large degree is said to be highly geared and therefore to have more risk. With a higher level of liabilities, there is a higher level of repayments. The risk increases as gearing increases because, in the event of a drop in revenue, and therefore a decrease in cash inflows, these repayments still have to be met. If a firm runs into liquidity problems, it may struggle to borrow more cash to meet its current commitments. If this situation becomes too serious, the possibility of business collapse may arise.

To demonstrate the calculation of the **debt ratio** for a business, the following data is provided:

	2014	*2015*
Total liabilities	$80 000	$100 000
Owner's equity	$120 000	$100 000
Total assets	$200 000	$200 000

$$\text{Debt ratio:} \quad \frac{\text{Liabilities}}{\text{Total assets}} \qquad \frac{80\,000}{200\,000} \qquad \frac{100\,000}{200\,000}$$

$$= 0.4{:}1 \qquad = 0.5{:}1$$

$$\text{or} \quad 40\% \qquad \text{or} \quad 50\%$$

The gearing ratio calculated for 2014 indicates that 40% of this firm's assets were funded by outside funds, or liabilities. In 2015 this percentage has increased to 50%, indicating that the gearing of the business has increased. A greater percentage of assets is now funded by liabilities, meaning that there will be more pressure on this business in terms of loan repayments and interest expense. This is why, in general terms, the higher the gearing of a business, the higher the financial risk being faced by the owner. The ultimate risk of extremely high gearing is the total collapse of the business. Once again, the trend in the gearing ratio should be closely watched over time. If gearing is unacceptably high, an owner may have to inject additional capital to reduce it to acceptable levels.

20.12 Non-financial analysis

In addition to the analysis of financial information by ratios, many small business owners also conduct an evaluation of their firms based on **non-financial analysis**. Business owners do not go into business just to make money, although for many proprietors profit is the major reason for their existence. Business people may also start a business for reasons such as:

Independence: Small business owners often enter the business world simply because they do not like working for someone else. They strive for the feeling of independence. After several reporting periods some business owners have difficulty maintaining this feeling. Although they remain their own bosses, many owners are heavily reliant on suppliers for their success. They simply become part of the bigger scheme of things and their success is often dependent on the success of others. Business owners operating in the retail sector can also feel trapped by the long hours they may be forced to work. Whereas an employee works specific hours, or gets paid overtime for longer hours when they are worked, the owner may have very heavy demands placed on their time. If they find this a heavy burden to bear, it becomes a question of judgment whether or not the business is actually a success or not.

Better lifestyle: Similar to the objective of independence is the desire for a better lifestyle. Making more money than a wage earner and changing one's lifestyle is often a goal for the small business owner. However, even if profits are up it may be difficult to enjoy the fruits of success if one is working 80–100 hours per week. Of course, a highly successful business owner may not need to work in the firm at all and may have a manager to take care of the business. In this case, a better lifestyle may indeed point to a very successful business!

Hours of work: Small business people often state 'I am my own boss and I set my own hours.' However, not many business owners reap the rewards of success without working long hours. Some owners plan to work long hours to get a business up and running, and then in later life sit back and take things a little easier. If they cannot reach this point in their business life, some owners may admit that they have failed to reach one of their objectives. An interesting calculation may also be done in reference to hours worked. The annual profit divided by the total hours worked can be used as a comparison with hourly wage rates as an employee. This type of comparison allows an owner to evaluate their input into a business.

Development of products: Some business owners evaluate their success by having a set of objectives in terms of product development. Even if a firm earns moderate profits, the proprietor may gain a high degree of satisfaction if a range of products have been developed and have been accepted in the open market. To see one's own ideas come to fruition is a highly satisfying experience. There are many backyard inventors who have not made a lot of money but view themselves as successful business people. Perhaps a lack of management skills prevents some people from making big profits, but in their eyes they are still a success.

Increasing market share: A goal of many proprietors is to increase their share of the market in terms of the number of their products being sold. A longer-term goal may be to increase profits, but an immediate goal may be to get products known to consumers and increase the number of units being sold. It should always be kept in mind that, to earn long-term profits, short-term goals may have to be fulfilled first.

Staff development and growth: Owners may also have objectives in relation to their employees. Staff should be adequately trained, but it is also beneficial for business owners to ensure that their staff grow in terms of skills and abilities. The business will benefit from a multi-skilled staff and this may flow on to improved profits. Employees also have needs, and if these are not met they may look elsewhere. Workers who are looked after, trained, updated and feel wanted will usually be more productive. Therefore there are benefits for both sides if the owner pays attention to the firm's employees and has them all 'on side'.

Objectives such as those outlined above are important to small business owners. The goals defined when a business is first commenced should always be kept in mind. If these goals are not being satisfied, the business may be viewed as a failure in the eyes of the owner. Profits are, of course, very important but the personal ambitions and desires of the individual owner also need to be considered when evaluating the success of a business.

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› GLOSSARY OF TERMS

analysis and interpretation the breaking down of complex financial reports into workable segments so as to gain meaningful information about a business.

average capital a figure that represents the average investment by a proprietor during a reporting period.

cash cycle the aggregate of the stock turnover rate and the debtors turnover rate, the cash cycle is usually expressed in terms of number of days.

debt ratio a stability ratio that is used to measure the dependence of a business on borrowed funds (liabilities) compared to owner's equity.

debtors turnover ratio the time a business takes to turn its debtors into cash. Alternatively, the average time taken by a business to collect its debts from its credit customers.

gross profit ratio a profitability ratio that determines the percentage of the sales dollar that remains as gross profit after cost of sales has been deducted.

net profit ratio (also **return on sales ratio**) a profitability ratio that determines the percentage of the sales dollar that remains as net profit after all expenses have been accounted for.

non-financial analysis factors that are used to evaluate the performance of a business and that may not be totally based on dollar values.

quick asset ratio a liquidity ratio that is used to evaluate a firm's ability to meet its debts in the immediate future.

return on owner's investment ratio a profitability ratio that is used to evaluate the percentage return earned on the funds invested by a business owner.

stock turnover ratio the number of times stock can be turned into sales within one reporting period. Alternatively, the number of days a business takes to turn its stock into sales.

working capital ratio a liquidity ratio that is used to evaluate a firm's ability to meet its debts in the short-term future.

Summary questions

1. Distinguish between the terms 'analysis' and 'interpretation'.
2. Explain how analysis and interpretation can assist management in its decision-making.
3. State, and describe, the three main areas of a firm's performance about which ratio analysis can provide information.
4. The owner of a trading firm is confused. Although the income statement shows a substantial profit for the year, the bank account of the business is in overdraft. Is this possible? Explain your answer fully.
5. State three items that may appear in an income statement but do not appear in a cash flow statement.
6. State four items that are reported in a cash flow statement but are excluded from an income statement.
7. When analysing a change in a firm's sales, why do some analysts determine percentage changes rather than simple dollar changes?

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8 What is a sales index? What is its purpose?

9 Explain how budget targets can be used as a means of assessing the performance of a trading firm.

10 Why do accountants use graphs when reporting changes in sales? Explain your answer.

11 How is a gross profit ratio determined? What does it show?

12 What is a mark-up? Explain the link between mark-ups and a firm's gross profit ratio.

13 Consider the following statement: 'The higher the mark-up, the more gross profit the business will earn.' Do you agree? Explain your answer fully.

14 How is a net profit ratio calculated? What does it show?

15 'If the gross profit ratio increases over time, so too must the net profit ratio.' Do you agree? Explain your answer.

16 Explain how a pie chart can be used in relation to an income statement. What does it show?

17 What does the return on owner's investment evaluate?

18 What should the return on owner's investment be compared to in order to measure performance?

19 'All firms should strive to achieve a stock turnover of at least ten times per annum.' Do you agree? Explain your answer, using appropriate examples.

20 One firm may be satisfied with a debtors turnover of 55 days, while another is not happy if the turnover exceeds an average of 25 days. Explain how this is possible.

21 What is a cash cycle? What is its purpose?

22 'A firm with a stock turnover of six times per annum must have a faster cash cycle than a firm with a stock turnover of five times per annum.' Do you agree? Explain your answer, using an example.

23 Explain the link between a slow cash cycle and poor liquidity.

24 Distinguish between the working capital ratio and the quick asset ratio. Do they measure the same thing?

25 **a** What is gearing?

b Explain the link between gearing and financial risk.

c Explain how the debt ratio is calculated.

26 Why are trends so important to ratio analysis?

27 Profit is not the only objective of business owners. State and describe three non-financial objectives a proprietor may have.

28 Explain how the feeling of independence a business owner may desire can be threatened by the demands of running a small business.

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Practical exercises

[Exercise 20.1] Boca's Book Shop reported the following sales figures over the past five years:

2011	$75 000
2012	$80 000
2013	$88 000
2014	$98 560
2015	$109 400

a Copy and complete the following table:

Year	Sales this year $	Sales previous year $	Increase $	Increase %
2012				
2013				
2014				
2015				

b State the year in which the firm experienced the biggest increase in sales in:
- i dollar terms
- ii percentage terms.

[Exercise 20.2] The proprietor of Gibaldi Imports has provided the following sales data:

2011	$162 000
2012	$163 620
2013	$155 440
2014	$162 600
2015	$168 900

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a Copy and complete the following table:

Year	Sales this year $	Sales previous year $	Increase $	Increase %
2012				
2013				
2014				
2015				

b Comment on the sales growth of Gibaldi Imports over the period 2011 to 2015.

[Exercise 20.3]

a Using the sales data from exercise 20.1, calculate a sales index for the five years, using 2011 as the base year.

b Explain what the sales index tells you about the firm's growth over the years.

[Exercise 20.4]

a Using the sales data from exercise 20.2, prepare a sales index for the five-year period, using 2011 as the base year.

b Explain the significance of the index you calculated for the year 2013.

[Exercise 20.5]

Using the data provided in exercises 20.1 and 20.2, prepare a graph showing the trends in sales performance of Boca's Book Shop and Gibaldi Imports. For this exercise you are encouraged to experiment with different types of graphs, using software such as *Microsoft Excel*®. You should prepare:

a line graphs

b bar charts

c horizontal bar charts.

[Exercise 20.6]

Two business owners were discussing the trading performances of their shops. One owner had sales of $140 000 for the year, whereas the other had total sales of $120 000. The owner of the first business claimed that, as his sales were higher, he must have the greater gross profit ratio. However, the second owner was convinced that she had the better gross profit ratio of the two firms. Which owner is correct? Explain your answer fully, using a practical example to prove your point.

[Exercise 20.7]

The manager of Bianchin's Appliances applies a range of mark-ups to the goods sold in the store. Toasters are marked up by 80%, kettles by 90%, grillers by 100% and microwaves by 125%.

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Calculate the selling price of each of the following items of stock:

Item	*Cost price*
Sunshine Toasters	$20
Kambook Kettles	$40
Dack & Blecker Kettles	$50
Beville Grillers	$70
Soni Microwaves	$200

[Exercise 20.8] Andrew Cassar is the owner of Cassar's Clothing. He does not use a fixed mark-up on all products sold by the business. Cassar has provided the following information in relation to his stock:

	Mark-up	*Cost price*
Socks	50%	$6
Ties	75%	$16
Shirts	100%	$24
Trousers	150%	$28
Suits	120%	$90

a Calculate the selling price of each item if the stated mark-ups are applied.

b Calculate the gross profit (in dollars) for each of the following situations: one suit is sold, five suits are sold, and 10 suits are sold.

c Calculate the gross profit ratio for each of the situations outlined in part **b** above. Compare your three answers and make a brief comment on your findings.

d Calculate the gross profit and gross profit ratio if one of each of the stock items were sold (that is, one pair of socks, one tie, one shirt, etc.)

e Using your data from part **d** above, determine the average mark-up for this business if it sold one of each of its stock items.

[Exercise 20.9] The trading results of a small business operating under the name Sharon's Gifts are shown below:

	2013	*2014*	*2015*
Sales	$102 000	$107 100	$109 242
Cost of sales	51 000	53 550	58 450

a Calculate the increases in sales and cost of goods sold for the periods 2013–2014 and 2014–2015.

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b Determine the gross profit for each of the three years.

c Calculate the gross profit ratio for each of the three years.

d Explain what has happened in this business over the three-year period. (Hint: you may find it useful to determine the average mark-up for each year's results.)

[Exercise 20.10] Justin El-Asmar is the owner of J.E.'s Furniture. He has provided the following information in relation to his business:

	2013	*2014*	*2015*
Sales	$123 000	$119 310	$127 660
less Cost of sales	55 350	56 200	58 720
Gross profit	67 650	63 110	68 940

a Prepare a sales index for each of the three years stated above, using 2013 as the base year.

b Prepare a similar index for cost of sales, showing the changes over the three-year period.

c Calculate the gross profit ratio for the three years.

d Write a brief report to El-Asmar, explaining the changes that occurred from 2013 to 2015.

[Exercise 20.11] Mary Gray has provided the data below in relation to the small business she operates:

	2014	*2015*
Sales	$86 000	$113 400
Cost of sales	43 000	54 000
Other expenses	34 400	45 792

a Prepare an income statement for the two years to show net profit in dollars and the breakdown of the sales dollar into the various expense groups.

b Prepare a pie chart for each of the two years to represent the breakdown of the sales dollar.

[Exercise 20.12] The income statements for two businesses included the following information:

	Groovy Menswear	*Cool Clothes Co.*
Sales	$100 000	$120 000
Cost of sales	45 000	50 000
Gross profit	55 000	70 000
Wages	15 000	30 000
Office expenses	3 000	3 000
Insurance	1 000	25 000
Interest	1 000	2 000
Total expenses	20 000	60 000
Net profit	35 000	10 000

a Copy out the income statements above and include columns for percentages. Express all items in the reports as percentages of sales revenue.

b What is the gross profit ratio and the net profit ratio for each business?

c Explain how it is possible for the Cool Clothes Co. to have sales $20 000 higher than Groovy Menswear, yet earn a profit $25 000 lower.

d List any other information you think would be helpful in your analysis of the firms' profitability.

[Exercise 20.13] Thomastown Toys is owned and managed by Apu Simpson. He is a little concerned about the trading results of his business and has asked for your assistance. A summary of the last three income statements revealed the following details:

	2013	*2014*	*2015*
Sales	$112 500	$123 120	$126 700
Cost of sales	62 500	68 400	72 400
Wages	25 400	28 600	34 200
Office expenses	9 500	10 200	15 800

a Prepare an income statement in dollars and percentage terms for the three-year period (make sales = 100% and show all items as a percentage of sales).

b State the gross profit ratio and the net profit ratio for each of the three years.

c Write a brief report to Simpson, explaining the major changes that occurred over the three-year period. Refer to your calculations in part **a** if required.

d Prepare a pie chart for each of the three reporting periods. Your chart should include expenses and net profit, with percentages displayed for each area.

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[Exercise 20.14] Helen's Hardware Store prepares a budgeted income statement annually. The following statements have been made available:

	2014 Actual	*2015 Budget*	*2015 Actual*
Sales	$86 000	$92 000	$88 000
Cost of sales	43 000	46 000	48 000
Gross profit	43 000	46 000	40 000
Wages	12 000	14 000	18 000
Office expenses	3 000	3 000	3 000
Interest	6 000	5 000	4 000
Total expenses	21 000	22 000	25 000
Net profit	22 000	24 000	15 000

a Prepare a percentage breakdown of the sales dollar for the three statements shown above (budgeted and actual).

b Refer to the above reports, and state possible three reasons why the expected profit was not earned in 2015.

c Using the information from parts **a** and **b** above, explain to Helen what has happened to the relationship between cost prices and selling prices of the goods sold during the year 2015.

d Using the information from part **a** above, comment on what happened in each of the expense items listed in the statements.

[Exercise 20.15] The owner of a business had capital at the start of the year of $65 000, while at the end of the period it was $61 000. During the year the business earned a profit of $5 800.

a Calculate the rate of return on the owner's investment.

b Would this rate be satisfactory to the owner? Give reasons for your answer.

[Exercise 20.16] Peter Davidson earned a profit of $25 000 in his business after investing $90 000 as owner's capital. Bob Kelic made an investment of $60 000 capital and earned a profit of $18 000.

a Calculate the return on owner's investment for each of the two owners.

b Which owner has the higher profitability? Explain your answer fully.

[Exercise 20.17] Michelle Miller owns Essendon Sports, while Linda Selemidis is the proprietor of Brunswick Sports. The following data is available regarding the two businesses:

	Essendon Sports	*Brunswick Sports*
Assets	$125 000	$125 000
Liabilities	25 000	55 000
Owner's capital	100 000	70 000
Net profit for the year	30 000	30 000

a Calculate the following ratios for both businesses:
 i the return on owner's investment
 ii the debt ratio.

b Which firm is the more profitable? Explain your answer.

c Which owner has the better return? Compare the two firms, and explain how Selemidis has used borrowed funds to boost her rate of return.

d Are there any dangers in the type of financial structure Selemidis has created? Explain fully.

[Exercise 20.18] A business had stock of $28 000 at the beginning of the year and stock of $33 000 at the end of the year. Cost of sales during the year amounted to $152 500.

a Calculate the number of times this firm turned over its stock during the year.

b Convert the stock turnover into days, and comment on the adequacy of the turnover.

[Exercise 20.19] A fashion boutique recorded sales of $180 000 for the year ended 30 June 2015. The business applies a mark-up of 100% to all of its stock. Stock at the beginning of the year was $22 000 and at the end of the period it had increased to $27 000. The owner believes that stock turnover should be around four times per annum, as she likes to move stock in line with the four seasons. However, if new products come on to the market she is very keen to have them in the shop and she admits it is tempting to purchase a few units of everything available.

a Calculate the stock turnover for the year ended 30 June 2015, and convert it to days.

b Has the owner's objective in terms of turnover been reached? Explain your answer fully.

c Comment on the owner's approach to buying stock, taking into account the stock turnover rate calculated in part **a**.

[Exercise 20.20] The stock turnover of a firm increased from four times per annum to five times per annum. Does this mean the business sold a greater quantity of goods in the second year? Explain your answer fully.

[Exercise 20.21] The total value of debtors on 1 January 2015 was $15 000, while on 31 December they were only $12 000. Credit sales for the year were $74 250. The business offers credit customers 30 days to settle their accounts.

a Calculate the debtors turnover in terms of 'times per annum'.

b Express the turnover rate in days to show the average time taken for settlement of accounts.

c Comment on the performance of the firm in controlling its debtors.

d Make a list of what the business could do to improve the present situation.

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[Exercise 20.22] The following information relates to Commercial Computer Systems:

	1/1/15	*31/12/15*
Stock on hand	$32 000	$26 000
Debtors balance	$12 000	$16 000
Credit sales for the year		$168 000
Cash sales for the year		$152 000
Cost of sales for the year		$174 000
Budgeted stock turnover		45 days
Standard credit terms for debtors		30 days

a Calculate the stock turnover and debtors turnover in days.

b How long is the firm's cash cycle?

c Comment on the success of the firm in meeting its objectives with regard to the turnover of stock and debtors.

[Exercise 20.23] Vin's Video Hire has current assets of $8 360 and current liabilities of $7 600, whereas Val's Videos has current assets of $12 240 and current liabilities of $10 200.

a Calculate the working capital ratio for each business.

b Which firm has the better liquidity? Give reasons for your answer.

[Exercise 20.24] Carol's Cafe has a working capital ratio of 0.9:1, whereas Fred's Food Stop's ratio is 1.1:1. An accountant has examined both businesses and has suggested that Carol's business has a better liquidity position. Explain how such a conclusion could be reached.

[Exercise 20.25] Consider the following data, which relate to O.S. Travel Service:

Balance sheet data as at 31 December

	2014	*2015*
	$	*$*
Cash on hand	100	200
Cash at bank	2 400	–
Debtors	6 900	8 700
Bank overdraft	–	1 000
Creditors	7 600	9 800
Loan (due 30/6/15)	5 000	–

a Calculate the working capital ratio for both 2014 and 2015.

b Comment on the current position and the trend in the firm's liquidity ratio.

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c What additional information would be relevant when evaluating the liquidity of this business?

d 'Working capital can be either too low or too high.' Explain the problem of having too much working capital.

[Exercise 20.26] The business of Lehane's Lawn Mowing has total assets of $40 000 and owner's equity of $30 000. The owner of Sue's Gardening Services has owner's equity of $22 500 out of the firm's total assets of $75 000.

a Calculate the debt ratio for both firms.

b Which firm has the higher gearing of the two?

c State one advantage and one disadvantage of being a highly geared firm.

CASE STUDY

The following information relates to the **MELBOURNE TRADING COMPANY** and covers three consecutive reporting periods.

Income statements for years ended 31 December

	2013	*2014*	*2015*
	$	*$*	*$*
Credit sales	100 000	110 000	120 000
less Cost of sales	50 000	55 000	57 000
Gross profit	50 000	55 000	63 000
less Wages	25 000	30 000	33 000
Office expenses	4 000	6 000	10 000
Interest	3 000	2 000	–
Total expenses	32 000	38 000	43 000
Net profit	18 000	17 000	20 000

Balance sheets as at 31 December

	2013	*2014*	*2015*
	$	*$*	*$*
Cash at bank	4 000	2 000	3 000
Debtors	6 000	8 000	12 000
Stock	20 000	28 000	38 000
Premises	150 000	150 000	150 000
Total assets	180 000	188 000	203 000
Creditors	6 000	7 000	8 000
Loan from National Bank	10 000	5 000	–
Capital—Bond	164 000	176 000	195 000
Total equities	180 000	188 000	203 000

Note: The 2012 figures were basically the same as those for 2013.

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a Prepare a line graph for the three years with separate lines for sales, gross profit and net profit. Use the *x*-axis for years and the *y*-axis for dollars. Comment briefly on what the graphs reveal.

b Prepare a pie chart showing the sales breakdown for each of the three reporting periods. Comment on any significant changes that are apparent.

c Calculate the following ratios, and other indicators, for each of the three years:

- gross profit ratio
- net profit ratio
- return on owner's investment
- stock turnover
- debtors turnover.
- cash cycle
- working capital ratio
- quick asset ratio
- debt ratio

d Write a report on the changes in the gross profit ratio and the net profit ratio.

e Comment on the changes in stock turnover, debtors turnover and the firm's cash cycle. Your comments should indicate whether or not the changes were favourable for the business.

f Comment on the firm's liquidity and long-term financial stability, with reference to the relevant ratios.

INTERNET activity

Visit the following websites and gather the required information to enable you to calculate the analytical ratios listed below for the following businesses.

Myer	**<www.myer.com.au>**
JB Hi-Fi	**<www.jbhifi.com.au>**
Woolworths	**<www.woolworths.com.au>**
David Jones	**<www.davidjones.com.au>**

Determine the following ratios for each of the companies listed above. If possible, determine the ratios for the last two reporting periods:

- working capital ratio
- debt ratio
- net profit ratio*
- return on owner's equity*.

* The information for companies is a little different from that for a sole proprietor. Rather than net profit, look for an item called operating profit or operating profit before tax.

Write a brief report on what you have learned about the three companies. You should refer to the relative performance of the various companies and consider questions such as:

a Is there a 'stand-out' performer?

b Are they all much the same?

c What is the level of liquidity?

d Is one company more heavily geared than the others?

e Who earned the highest net profit?

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Chapter 21

Computerised accounting

OBJECTIVES

At the completion of this chapter, you should be able to:

- develop an understanding of the role that computers play in accounting
- design a chart of accounts using an accounting software package
- use a computerised accounting system to record financial transactions
- prepare accounting reports using an accounting software package
- describe the features of a computerised accounting system
- outline the advantages and costs of a computerised accounting system.

Note: the VCE Accounting course (accredited for 2012–2016) requires students to use Information and Communications Technology (ICT). However, it does not prescribe a specific software tool that must be used by all students. The use of technology and the related software may be determined by both the facilities and software available at each individual school. Many schools use packages such as *QuickBooks*® or *MYOB*®, but this text is not a guide for a specific software package. This chapter includes a set of exercises that may be used as part of the ICT requirements for Unit 2 of the VCE Accounting course.

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The software packages available for school use have a range of activities that are valuable for VCE Accounting classes. Students may complete exercises that include:

- setting up a small business accounting system
- designing business documents
- establishing a chart of accounts
- designing appropriate accounting reports
- entering transactions for a reporting period
- generating general purpose accounting reports.

Please refer to your teacher for further advice.

Practical exercises

[Exercise 21.1] Haylee O'Brien is the owner of a small business that has just commenced trading under the name Haylee's Hardware Store. She has asked for your assistance to help set up an accounting system using her personal computer. Using one of the commercially available accounting software packages, complete the following tasks:

a Create a file to establish the business name for O'Brien's small business, and complete all necessary details in the software package. (Hint: for *QuickBooks®* users, use an Australian Company Number (ACN) 111 222 333.) Use your own personal details, including your address and telephone number, to make O'Brien's business look realistic.

b Create a list of the necessary accounts for O'Brien's business (commonly referred to as a chart of accounts). In completing this task, you should anticipate the assets, liabilities, revenues and expenses that such a business may experience.

c Create a sales invoice for O'Brien's business, including all relevant details. (Hint: your invoice should include provision for the recording of GST.)

[Exercise 21.2] Anthony Caruso, who has just purchased an accounting package to help manage his business, owns Prahran Plumbing. The business operates from rented premises at 1762 Greville Street, Prahran. He has two employees, runs two different vehicles and advertises in the local newspaper on a regular basis. Caruso provides a range of plumbing services to his customers, including roof repairs, gas installations and general plumbing work. However, he is not quite sure how to use the accounting package in relation to his business operations. In asking for your help, Caruso would like you to:

a establish a file for his business and create an appropriate list of all accounts to cater for his needs (if using *QuickBooks®*, use ACN 111 222 333)

b design appropriate business documents to cater for both cash and credit customers

c explain to him two advantages of using a software package to account for his business.

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[Exercise 21.3] Joe Romic has decided to start a new business, trading under the name Fawkner Fitness. The business is located at 9126 Ledger Avenue, Fawkner, 3060. Romic is unsure how his new venture will perform and therefore he has decided to sell two types of walking machines (treadmills) as a starting point. If things go well, he plans to expand the number of stock lines in the future. If using *QuickBooks*®, use ACN 111 222 333 when establishing your business. The following details are provided regarding the businesses suppliers, customers and the stock items that will be sold:

Suppliers:

Central Gym Supplies
3 Muscle Avenue
Coburg 3058

Office Essentials
16 Rose Street
Fawkner 3060

Trusty Real Estate
121 Commission Court
Pascoe Vale 3044

Empire Publications
2717 Swanston Street
Melbourne 3000

Optus
64 Telephone Rd
Williamstown 3016

Australia Post
250 Elizabeth Street
Melbourne 3000

Employees:

David Harris
275 Main Street
Fawkner 3060

Credit customers:

Preston University
177 High Street
Fawkner 3060

M. Sheedy
873 William Street
Melbourne 3000

O'Brien's Gym
93 Window Street
Fawkner 3060

Stock items:

Product number 101
Economy treadmills
Cost price $800
Normal mark-up 50%

Product number 102
Deluxe treadmills
Cost price $1 200
Normal mark-up 50%

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The following transactions occurred during the first month of trading:

Date	Details
1	Romic contributed $50 000 cash to commence business (Rec. 001)
2	Purchased office equipment for $6 000 (plus $600 GST) cash from Office Essentials (Chq. 101)
3	Paid Trusty Real Estate $4 000 (plus $400 GST) for the first month's rent (Chq. 102)
4	Purchased stock from Central Gym Supplies on credit (Inv. 6465). 10 Economy treadmills were purchased for $800 each (plus GST of $80 each) and 6 Deluxe models were bought for $1 200 each (plus $120 GST)
5	Paid $500 (plus $50 GST) for advertising to Empire Publications (Chq. 103)
9	Sold a Deluxe treadmill to M. Sheedy for $1800, plus $180 GST (Rec. 002)
10	Purchased stationery for $500 (plus $50 GST) from Office Essentials (Inv. 8344)
11	Sold 2 Economy treadmills to Preston University for $1 200 each, plus GST of $120 (Inv. 401)
12	The owner cashed a cheque for $400 for personal use (Chq. 104)
13	Sold an Economy treadmill to P. Hetherington for $1 200 cash, plus $120 GST (Rec. 003)
16	Received $500 cash from Preston University (Rec. 004)
17	Paid Central Gym Supplies $2 000 (Chq. 105)
18	Wrote a cheque to Australia Post for postage expenses $100 (Chq. 106)
19	Cash sale to J. Scholes: 1 Deluxe treadmill for $1 800, plus $180 GST (Rec. 005)
20	Paid casual wages to D. Harris $200 (Chq. 107)
23	Sold an Economy treadmill to M. Sheedy for $1 200 on credit, plus GST of $120 (Inv. 402)
24	Purchased 5 Economy treadmills from Central Gym Supplies at a cost of $800 each, plus GST of $80 each (Inv. 6472)
25	Sold 2 Economy treadmills on credit to O'Brien's Gym for $1 200 each, plus GST of $120 (Rec. 006)
26	Paid monthly telephone bill $120 to Optus, plus $12 GST (Chq. 108)
30	Purchased office furniture for $800 cash (plus GST of $80) from Office Essentials (Chq. 109)

Using a computer software package:

a Establish an appropriate chart of accounts for Fawkner Fitness to cater for the transactions listed above.

b Design an appropriate sales invoice to cater for Fawkner Fitness credit sales.

c Set up all required details for suppliers, customers and stock records.

d Record all transactions for the month shown above.

e Print an income statement for the month.

f Print a balance sheet as at the end of the month.

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[Exercise 21.4] Claudette Dickinson has just established CD's Music Shop. She has decided to sell both compact discs and DVDs. Her rented shop is located at 1725 Bourke Street, Melbourne 3000 and it costs $1 000 a week to rent. The following details are provided in relation to Dickinson's suppliers, customers, employees and inventory.

(Note: for *QuickBooks*® use ACN 111 222 333.)

Stock items:

Product number CD05 Compact discs Cost price $15 Normal mark-up 100%	Product number DVD06 Digital Video Discs Cost price $20 Normal mark-up 75%	Product number:ACC10 Accessory bags Cost price $8 Normal mark-up 50%

Suppliers:

Hip Hop Music Co. 12 Abbey Road Footscray 3011	R&B Music Pty Ltd 634 Apple Avenue Balwyn 3103	VCAR Insurance Co. 9891 Royal Parade Carlton North 3054
City Furniture 2711 Lonsdale Street Melbourne 3000	Central Real Estate 2nd floor 21 Flinders Lane Melbourne 3000	Speedy Couriers 99 Exhibition Street Melbourne 3000
Jardine & Jardine Legal Firm 129 Swanston Street Melbourne 3000		

Employees:

Alan Slater 919 Roberts Street West Footscray 3012	Jon Garra 811 Main Road East St Albans 3021

Credit customers:

D.J. Holmes 22/182 Docklands Drive Docklands 3008	City Secondary College 9102 Exhibition Street Melbourne 3000

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The following transactions occurred during the first month of trading:

Date	Details
1	Dickinson invested $70 000 cash to commence business (Rec. 501)
1	Paid first month's rent $1 000, plus $100 GST to Central Real Estate (Chq. 940)
2	Purchased shop fittings for $18 000 (plus $1 800 GST) cash from City Furniture (Chq. 941)
3	Accepted a delivery of 600 compact discs from Hip Hop Music Co. Invoice 3423 received for $9 000, plus $900 GST
4	Paid for one month's insurance $300, plus $30 GST. Cheque 942 sent to VCAR Insurance
5	Received a delivery of 400 DVDs from R&B Music. Total charged to Dickinson's account was $8 000, plus GST of $800 (Invoice 4242)
8	Paid wages to J. Garra for helping set up the shop $100 (Chq. 943)
10	Sold goods on credit to D.J. Holmes 30 CDs @ $30 each (plus $3 GST) and 10 DVDs @ $35 each (plus $3.50 GST) (Inv. 1001)
13	Cash sale to Michael Meldrum: 20 CDs @ $30 each, plus $3 GST (Rec. 502)
15	The owner cashed a cheque for $800 for personal use (Chq. 944)
16	Paid casual wages to A. Slater $120 (Chq. 945)
18	Purchased 100 accessory bags from Hip Hop Music for $8 each, plus GST of $0.80 per unit (Inv. 3455)
19	Filled an order received from City Secondary College: 50 CDs @ $30 each, plus GST of $3 each 20 DVDs @ $35 each, plus GST of $3.50 each 5 accessory bags @ $12 each, plus GST of $1.20 each Invoice number 1002 issued to Homer Skinner, Principal of the College
21	Paid Hip Hop Music Shop $9 900 in relation to Invoice 3423
23	Paid casual wages: J. Garra $140 and A. Slater $120 (Cheques 946 and 947)
25	Sold 20 CDs for cash to Denise Dancer. Total sale $600 plus $60 GST (Rec. 503)
27	Paid monthly courier expenses for month $100, plus $10 GST (Chq. 948)
30	Paid legal expenses in relation to setting up new business $500 plus $50 GST (Chq. 949)

Using a computer software package:

a Establish an appropriate chart of accounts for CD's Music Shop.

b Set up all required details for suppliers, customers and stock records.

c Record all transactions for the month shown above.

d Print an income statement for the month.

e Print a balance sheet as at the end of the month.

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[Exercise 21.5] The following information relates to a small business trading under the name of Brownlow Sports Store, owned by John Douglas. His shop is located at 2186 Lower Heidelberg Road, Ivanhoe 3079. Douglas has provided the following information in relation to his store.

(Note: for *QuickBooks*® use ACN 111 222 333.)

Stock items:

Product number SH180
Footballs
Cost price $60
Normal mark-up 90%

Product number CB821
Cricket bats
Cost price $150
Normal mark-up 100%

Product number: BB115
Basketballs
Cost price $40
Normal mark-up 60%

Suppliers:

Sherrin Australia
Factory 1
712 Main Road
Eltham 3095

Kookaburra Co. Ltd
915 Kahuna Drive
Watsonia 3087

National Basketballs
67 Key Court
Macleod 3085

The Furniture Fella
116 Main Road
Eltham 3095

Commercial Cleaners
189 Sydney Road
Coburg 3058

Carlton Computers
756 Parkville Parade
Carlton 3053

Sheehan Real Estate
79 Were Street
Montmorency 3094

Ivanhoe Times
1200 Lower Heidelberg Road
Ivanhoe 3079

Employees:

Craig Cook
76 Vineyard Street
Aberfeldie 3040

Debtors:

Lower Plenty Football Club
Centre Square Drive
Greensborough 3088

Eltham High School
45 Academic Boulevard
Eltham 3095

Chanel Sports Club
55 Michelle Avenue
Mt Eliza 3930

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The following transactions occurred during the first month of trading:

Date	Details
1	Douglas invested $90 000 cash to commence business (Rec. 251)
1	Paid first month's rent $3 000, plus $300 GST (Chq. 300)
2	Took out an advertisement in the *Ivanhoe Times* to promote the new shop. The cost was $500, plus $50 GST (Chq. 301)
3	Purchased shop fittings for $25 000 (plus $2 500 GST) cash from The Furniture Fella (Chq. 302)
4	Purchased goods on credit from Kookaburra Co. Ltd and received Invoice number 36287. Goods delivered: 50 cricket bats @ $150 each, plus $15 GST per bat
6	Paid C. Cook $200 wages (Chq. 303)
8	Bought goods for cash from National Basketballs—30 basketballs @ $40 each, plus $4 GST (Chq. 304)
9	Accepted a delivery from Sherrin Australia: 100 footballs @ $60 each, plus $6 GST (Inv. 7398)
11	Sold 2 cricket bats for cash @ $300 each, plus $30 GST per bat (Rec. 252)
13	Paid C. Cook wages $180 (Chq. 305)
14	Made a credit sale to Eltham High School: 10 footballs @ $114.00 each, 4 cricket bats @ $300 each and 5 basketballs @ $64 each (GST $11.40, $30.00 and $6.40 each (Inv. 3001)
16	The owner wrote a cheque to 'cash' and withdrew $1 000 for personal use (Chq. 306).
17	Paid Kookaburra Co. Ltd $5 000 (Chq. 307)
18	Sold 5 footballs for cash—$114.00 plus $11.40 GST per ball (Rec. 253)
19	Purchased a computer and printer for the business and paid by Cheque number 308. The amount paid to Carlton Computers was a total of $2 500, plus $250 GST
20	Wages paid to C. Cook $200 (Chq. 309)
22	Sold 20 footballs on credit to Lower Plenty Football Club. Selling price was $114.00 plus GST of $11.40 each (Inv 3002)
23	Paid for cleaning of shop $200 plus GST of $20 (Chq. 310)
24	Purchased 50 footballs from Sherrin Australia at $66 each, including $6 GST (Inv. 7412)
25	Credit sale to Chanel Sports Club: 10 basketballs @ $64 each, plus $6.40 GST (Inv. 3003)
26	Bought stationery products from Carlton Computers $300 plus $30 GST (Chq. 311)
27	Paid wages: C. Cook $160 (Chq. 312)
28	Sold goods for cash: 2 cricket bats @ $300 each, plus GST of $30 each (Inv. 3004)
29	The owner withdrew $500 (Chq. 313)
30	The business received a cheque from Lower Plenty Football Club for $2 508 (Rec. 254)
30	Cash sale: 1 cricket bat: $300 plus 10% GST (Rec. 255)
31	Credit sales to Eltham High School and Chanel Sports Club Invoice 3005: EHS—10 footballs at $114 each (plus GST) Invoice 3006: CSC—5 cricket bats @ $300 each (plus GST) and 10 basketballs @ $64 each (plus GST)

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Using a computer software package:

a Establish an appropriate chart of accounts for Brownlow Sports Store.

b Set up all required details for suppliers, customers and stock records.

c Record all transactions for the month shown.

d Print an income statement for the month.

e Print a balance sheet as at the end of the month.

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