

Accounting Business and Society

Accounting Business and Society

*RINA DHILLON; DIXON COOPER;
MITCHELL FRANKLIN; AND PATTY
GRAYBEAL*

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Preface

RINA DHILLON; DIXON COOPER; MITCHELL FRANKLIN; AND
PATTY GRAYBEAL

Welcome to *Accounting, Business and Society* – an open textbook provided through the University of Technology Sydney. This textbook was created using material from a range of open sources including [Principles of Accounting Volume 1](#) and [Principles of Accounting Volume 2](#) – both edited by Franklin, Greybeal and Cooper and distributed through OpenStax – under the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International (CC BY-NC-SA) license.

Please note that this book is being used in DRAFT format in Spring session, 2022 and is yet to be peer reviewed, finalised and issued an ISBN.

About Accounting, Business and Society

This textbook was designed to support Accounting students at UTS in the subject 22208 Accounting, Business and Society. Why make a textbook and distribute it free to students and the general public? It all comes back to who UTS is as an institution:

“UTS is a public university of technology defined by our support for the economic, social and cultural prosperity of our communities.” ([UTS website](#), accessed 1 July 2022)

And in addition:

“As public purpose institutions, universities have a critical responsibility to contribute to the community through research, education and practice. At UTS, the concept of social justice is key to our core and purpose – we are committed to driving social change in the world beyond our campus.” ([UTS Social Impact Framework](#), accessed 1 July 2022)

One way that we can support the success of our student community is to reduce the barriers to attending university by providing this free text.

Acknowledgement of country

We gratefully acknowledge the Gadigal people of the Eora nation – the traditional custodians of the land on which the University of Technology of Sydney stands. The Gadigal people have cared for their community, land and waters for thousands of generations, based on their deep knowledge of their country. We pay our respects to their Ancestors, their Elders and acknowledge their ongoing status as the First Peoples of this land – land that was never ceded.

We (Amanda and Rina) would also like to gratefully acknowledge the Dharug people, on whose lands this book was edited and parts written by us.

Coverage and scope

This textbook covers the basics of accounting from an information and decision making perspective. Students who understand business information, and know how to use and interpret it, make

better business decisions and thus will be suitable for all business students – not just those intending on doing an accounting major. While you may dread doing an accounting core subject as part of your degree, the knowledge of basic accounting will help you better manage your personal finances and some general knowledge of accounting will also enable you to make better financial and investment decisions as a future business manager and leader.

A chapter outline for this textbook is as follows:

Chapter 1: Accounting in business and society

Chapter 2: Recording accounting information

Chapter 3: Recording economic events

Chapter 4: Recording adjusting entries and the trial balance

Chapter 5: Accounting for different business structures

Chapter 6: Receivables

Chapter 7: Inventory

Chapter 8: Property, plant and equipment

Chapter 9: Cash flow statements

Chapter 10: Law and ethics

Chapter 11: Performance measurement and evaluation

Chapter 12: Sustainability, accounting and decision making

About the authors

This open textbook has many contributors and you can find the attributions to the various open resources used throughout the text.

The primary author and editor for Accounting, Business and Society is Dr Rina Dhillon. Rina is a qualified chartered accountant and has 10 years of teaching and research experience at the University of Technology Sydney (UTS), University of New South Wales (UNSW) and University of Sydney (USyd). She holds a PhD in Accounting from the University of New South Wales, with research publications in international accounting journals. Rina also has 8

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You can find out more about Rina on her [university profile](#).

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Errata

Accounting, Business and Society is currently in its draft format. The authors welcome any comments on this draft. The book will undergo peer review in 2022 before being officially published and registered with an ISBN.

Format

You can access this textbook for free in web view on Pressbooks or as a PDF download. You can also select a PDF option that you can take to a printing company to create a professionally bound book.

PART I

CHAPTER 1: ACCOUNTING, BUSINESS AND SOCIETY

Introduction

Welcome to *Accounting, Business and Society*! Chapter 1 will provide an understanding of accounting in business and society. Many people have a misconception of what accounting is and what an accountant does. Some associate accounting as just a dull process of recording transactions in journals and ledgers, while others view the accountant as a boring bookkeeper with repetitive tasks such as data entry and balancing the books. However, accounting is a lot more than just recording and reporting transactions, it is also about what we do with the information created which has many uses in business and our everyday living.

Chapter outline

After reading this chapter, you should be able to:

1. Have an understanding of the role of in business and society
2. Describe how accounting systems play a role in providing information to enable informed decision making
3. Analyse the effect of accounting transactions on the accounting equation

1.1 The role of accounting in business and society

RINA DHILLON

Accounting is the language of business and we may not realise it but we use accounting daily in our personal lives. Businesses affect almost every aspect of our lives. Think for a moment about your usual everyday activities. How many businesses did you directly encounter just today? Suppose you started your day by purchasing a cup of coffee at your favourite cafe. This purchase you made involves accounting for both you (as a consumer) and the cafe (as a business). You exchange money via cash, debit or credit, in exchange for a desired product and the business receives the cash and provides the product (a yummy hot beverage) to the customer, i.e. you!

While an everyday consumer of products and services may not record every purchase they make, a business records each transaction using double entry accounting, which you will learn more about in Chapter 2, but simply put double entry accounting requires the business to record two items that has taken place – for example a sale (impacting the revenue account) and cash received (cash account) – in the **accounting system**.

1.2 The accounting system

RINA DHILLON

The accounting information system

An accounting information system is a means by which accounting information about a business's activities is identified, recorded, analysed and reported so that it can be summarised in accounting reports. Recall from the Accounting and Accountability textbook that accounting is the process by which a business records its inflows and outflows of resources (p.9). Accounting can be viewed as a vital part of the information system for a business. Internal and external stakeholders of the business have to decide how to allocate scarce resources and to do so in an efficient and effective manner, requires important financial and non-financial information. It is the role of the accounting system to provide much of this information. There are generally four processes involved in an accounting system:

1. identifying and capturing relevant accounting information (information identification);
2. recording the information in a systematic manner (information recording);
3. analysing and interpreting the information (information analysis); and
4. reporting the information in a manner that is useful and meets the needs of users (information reporting).



There are 3 major components in the process of capturing accounting information:

1. Accounting transactions which are economic events that affect a company's assets, liabilities or equity.
2. An account which is an accounting record that accumulates the business activity of a specific item and yields the item's balance.
3. Chart of accounts (COA) which are the various accounts that a company uses to capture its business activities, i.e. list of all asset, liability, equity, revenue, expense, and dividend accounts which are used by the business

An example of these 3 components is provided below, using the chart of accounts from the MYOB software, a popular accounting system used by many small businesses in practice:

Account Number	Account Name	Type	Balance	Current Balance
1-0000	Current Assets	Asset		\$1,000,000.00
1-0010	Cash	Asset	10.0	\$10,000.00
1-0020	Accounts Receivable	Asset	10.0	\$10,000.00
1-0030	Inventory	Asset	10.0	\$10,000.00
1-0040	Prepaid Expenses	Asset	10.0	\$10,000.00
1-0050	Other Assets	Asset	10.0	\$10,000.00
2-0000	Current Liabilities	Liability		\$1,000,000.00
2-0010	Accounts Payable	Liability	10.0	\$10,000.00
2-0020	Accrued Liabilities	Liability	10.0	\$10,000.00
2-0030	Other Liabilities	Liability	10.0	\$10,000.00
3-0000	Equity	Equity		\$1,000,000.00
3-0010	Owner's Equity	Equity	10.0	\$10,000.00
3-0020	Retained Earnings	Equity	10.0	\$10,000.00
3-0030	Other Equity	Equity	10.0	\$10,000.00
4-0000	Revenue	Revenue		\$1,000,000.00
4-0010	Sales Revenue	Revenue	10.0	\$10,000.00
4-0020	Other Revenue	Revenue	10.0	\$10,000.00
5-0000	Expense	Expense		\$1,000,000.00
5-0010	Cost of Sales	Expense	10.0	\$10,000.00
5-0020	Operating Expenses	Expense	10.0	\$10,000.00
5-0030	Other Expenses	Expense	10.0	\$10,000.00

A business usually sets up its COA, starting off with the cash account (usually assigned the lowest number), followed by all other asset accounts, all liability accounts, the owner's equity account,

revenue accounts and the expenses account. A numbering system is used in the COA as it helps identify and classify an account.

The type of accounting systems that you will find in businesses can vary widely. It ranges from manual to more complex cloud-based systems. In general, there are two types of accounting systems: (1) single entry system where a business records transaction as a line item in a ledger and (2) double entry system where every accounting transaction is recorded both as a debit and a credit (you will be introduced to debits and credits in the next chapter) in separate accounts. The second system is more commonly used as it ensures that a business' books balance. Irrespective of the types, all accounting systems are built to capture and report the effects of a business' accounting transactions.

1.3 Accounting transactions and the accounting equation

RINA DHILLON

From the previous section, we learned that all accounting transactions are recorded in the accounting information system. But how do we go about recording these transactions in the accounting system? The best way to understand how transactions are recorded is by beginning with the accounting equation (first introduced in Accounting and Accountability – refer to [Chapter 2](#)):

$$\text{Assets} = \text{Liabilities} + \text{Owner's Equity}$$

The equation asserts that a business' assets must equal the sum of its liabilities and equity. This means to keep the accounting equation in balance, any change to the left side of the equation must be accompanied by a change to the right side. A business must make at least two changes in its assets, liabilities or equity when it records an accounting transaction, known as the dual nature of accounting. For example, when an owner invests \$30,000 in a business, assets (cash) are increased by \$30,000 and equity (owner's capital) is increased by \$30,000. This accounting transaction affects at least two accounts: one in the asset section of the business' balance sheet, and one in the owner's equity section of its balance sheet. Because both the left side and the right side both increase by the same amount, the accounting equation (Assets = Liabilities + Owner's Equity) stays in balance.

It is important to note that this dual effect of accounting transactions does not necessarily mean that every transaction will affect both sides of the equation or even two elements of the equation. A transaction may only affect one side, for example by increasing one asset and decreasing another asset by the same amount. For instance, when a business buys a computer for \$2000 cash, asset (Computer equipment) increases by \$2000 and asset

(cash) decreases by \$2000. The accounting equation still balances after the business records this transaction as the net effect of the total for assets on the left side of the equation remains unchanged and the transaction does not affect the right side of the equation. For every accounting transaction, there is a source (money comes from somewhere) and a use (money goes somewhere).

To revisit how accounting transactions affect the accounting equation, please refer to what you learnt in Accounting and Accountability Topic 2 and Section 2.7 (p.38–41) of the AAA textbook. It is essential to return and visit the section on [Analysing and recording business transactions](#) so that when you are introduced to debits and credits in the next chapter, you will be able to better follow how T-accounts and debits and credits are used in a dual-entry accounting system.

Test yourself



An interactive H5P element has been excluded from this version of the text. You can view it online here:

<https://oer.pressbooks.pub/utsaccounting2/?p=870#h5p-5>



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<https://oer.pressbooks.pub/utsaccounting2/?p=870#h5p-8>

I. Chapter I Practice Questions

RINA DHILLON

Practice Questions

1. Which of the following is a correct fundamental accounting equation?

-
- a. $\text{Assets} + \text{Liabilities} = \text{Equity}$
 - b. $\text{Assets} + \text{Retained Earnings} = \text{Equity}$
 - c. $\text{Assets} + \text{Equity} = \text{Liabilities}$
 - d. $\text{Assets} = \text{Liabilities} + \text{Equity}$
-

2. The assets and liabilities of the company are \$175 000 and \$40 000, respectively. Equity should equal:

-
- a. \$215 000
 - b. \$135 000
 - c. \$175 000
 - d. \$40 000
-

3. During March, Musk purchased supplies for cash. The supplies will be used in April. What effect does this transaction have on the accounting equation at the time the supplies are purchased?

-
- a. Assets increase and shareholders' equity decreases
 - b. Assets and liabilities increase
 - c. There is no effect on the accounting equation, as one asset account increases while another asset account decreases
 - d. There is no effect on the accounting equation, as the transaction should not be recognised until April
-

4. Elvin made cash sales to customers. What effect does this transaction have on the accounting equation?

-
- a. Liabilities and retained earnings increase
 - b. Assets and liabilities increase
 - c. Assets and retained earnings increase
 - d. There is no effect on the accounting equation, as one asset account increases while another asset account decreases
-

5. When a business borrows money, one effect on the accounting equation is:

-
- a. a decrease in contributed equity
 - b. an increase in assets
 - c. a decrease in liabilities
 - d. a decrease in assets
-

6. The Gates Company purchased equipment for \$60 000 cash. What is the effect on assets?

-
- a. An increase
 - b. A decrease
 - c. No net effect
 - d. Cannot be determined from this limited information.
-

7. A list of all asset, liability, equity, revenue, expense, and dividend accounts which are used by the company is called a:

-
- a. chart of accounts
 - b. general journal
 - c. general ledger
 - d. trial balance
-

8. The system of accounting in which there are at least two accounts affected in every transaction so that the accounting equation stays in balance is called:

-
- a. a debit
 - b. a credit
 - c. full disclosure
 - d. the dual nature of accounting
-

9. All of the following are external transactions **except**, when a grocery store:

-
- a. recognises losses from spoilage
 - b. runs an ad in a local newspaper
 - c. purchases produce from a local farmer
 - d. sells groceries to customers on credit
-

10. Which of the following transactions affects the liabilities for the Xero business?

-
- a. Services are provided for a customer for credit
 - b. Payment is made on a bank loan
 - c. Equipment is purchased for cash
 - d. Shares are issued
-

Solutions:

(1) d - $A=L+OE$;

(2) b - $A= L+OE$; $\$175000 = \$40000 + OE$, thus $OE = \$175000 - 40000 = \135000 ;

(3) c - As cash leaves the business, asset decreases and supplies

enter the business, asset increases, thus no effect on accounting equation;

(4) c – Cash enters the business, so asset increases and so does revenue which increases retained earnings; (5) b – When the bank loans money, cash enters the business and thus asset increases;

(6) c – no net effect because cash leaves the business in the form of payment for the equipment and the equipment enters the business, increasing assets;

(7) a – refer to Chapter 1.2;

(8) d – refer to Chapter 1.3;

(9) a – spoilage within the grocery store does not involve an external party and thus is an internal transaction;

(10) b – a bank loan is classified as a liability and a payment to reduce the bank loan will reduce liability

PART II

CHAPTER 2: RECORDING ECONOMIC EVENTS

Introduction

Chapter 2 will provide an understanding of how business transactions are recorded by the accounting system so that the financial statements can be prepared. As financial statements are prepared periodically, the process of recording and reporting information is a repetitive process or cycle known as the accounting cycle.

Chapter outline

After reading this chapter, you should be able to:

1. Understand how debits and credits and T-accounts are used in a dual entry accounting system
2. Describe the purpose and structure of debits and credits
3. Explain the purpose of the journal, ledger, and trial balance.
4. Record and post accounting transactions and prepare a trial balance and financial statements

2.1 Dual-entry accounting system and T-Accounts

RINA DHILLON

While transactional analysis (first introduced in [Chapter 2](#) of the AAA textbook) is a great way to understand and visualise the effect of accounting transactions, in reality, accounting transactions are not recorded using pluses and minuses in a spreadsheet. The reason for this is that while this analysis can be very accurate and easy to do with a small number of transactions, it becomes very unmanageable when a business, especially large ones, can have hundreds of accounting transactions a day. In practice, accounting systems are based on a system of recording known as double-entry accounting or book-keeping.

The dual entry accounting system is based on the dual (two-sided) nature of accounting – that is every accounting transaction affects at least two accounts and thus the accounting system records every accounting transaction with a dual or double entry in the appropriate accounts. This universally used system, which are mostly now computerised, offers a logical method for recording business transactions. It also provides a means of ensuring the accuracy of the amounts recorded in the system through the use of T-accounts.

The T-Account

All accounts in the accounting system can be represented using a T-account. It is called a T-account because it resembles the letter T. In its simplest form, an account comprises of three parts: (1) the name of the account; (2) a left, or debit, side; and (3) a right, or

credit, side. As shown in the T-account below, the left side records **debit** entries and the right side records **credit** entries:

Account name	
Left (debit) side	Right (credit) side

The left (debit) side and the right (credit) sides of each account are used for recording and accumulating the financial information from business transactions. T-account are useful to help analyse how individual transactions flow and accumulate within various accounts, be it assets, liabilities and owner's equity, as well as revenues and expenses. In general, T-accounts work as follows. When a transaction affects an account balance, the financial amount of the transaction is entered on the account's debit or credit side, depending on what the transaction relates to.

Once all transactions have been entered, the balance in an account is determined by individually adding up all the debits and all the credits, and subtracting the smaller total from the larger total. The difference between the large and small totals will determine the account balance and will be placed on the side of the T-account that is larger. Essentially, when the totals of both sides of a T-account are compared, an account will have a debit balance if the total of the debit amounts is more than the total of the credits. On the contrary, an account will have a credit balance if the total of the credit amounts is more than total of the debit amounts. The **type** of account determines whether an increase or a decrease in a

particular transaction is represented by a debit or credit. Let us now look closely at what a debit and credit is and how they are used to record accounting transactions.

2.2 Purpose and structure of debits and credits

RINA DHILLON

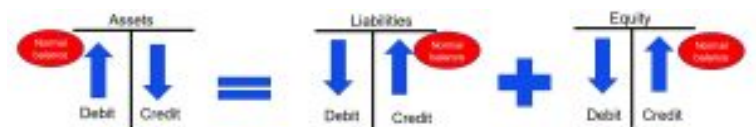
Debits and Credits

A debit entry is a financial amount recorded (debited) on the left hand side of an account. The word debit comes from the Latin word *debitum*, which means what is due to the business. Debit is commonly abbreviated with a Dr. A credit entry, on the other hand, is a financial amount recorded (credited) on the right hand side of an account. Credit comes from the Latin word *creditum*, which means what is entrusted to a business. Credit is commonly abbreviated with a Cr. Debits and credits do not mean increase or decrease or good or bad as is commonly thought, instead they are directional signs that are used repeatedly in the recording process to describe where entries are made in accounts. We are said to be debiting an account when we enter an amount on the left hand side of an account and crediting an account when we make an entry to the right hand side of an account.

As mentioned in the previous section, whether a business records increases or decreases on the left or right side of an account depends on the type of account, specifically where the account “sits” within the accounting equation, and is based on the rules of debit and credit. Let’s examine the accounts within the accounting equation and the debit and credit rules that apply to these accounts.

Rules of debits and credits

The rules of debits and credits for assets, liabilities and owner's equity relate to the side of the accounting equation on which the account is located:



(1) Asset accounts (accounts on the **left** hand side of the accounting equation) are increased by debit (Dr) entries (amounts recorded on the **left** hand side of the T-account) and decreased by credit (Cr) entries.

(2) Liability and equity accounts (accounts on the **right** hand side of the accounting equation) are increased by credit (Cr) entries (amounts recorded on the **right** hand side of the T-account) and decreased by debit (Dr) entries.

These two rules can appear to be simple, however applying them can be daunting at first because different account types have different normal balances. At any given time, an account may have a number of debit and credit entries. The balance of an account is determined by the difference between the total increases and total decreases in the account. In general, total increases are more than total decreases and thus asset accounts normally have debit balances (total increases or debits exceeds total decreases or credits in the account) and liability and equity accounts normally have credit balances (total increases or credits exceeds total decreases or debits in the account).

The equity in relation to rule 2 above is further complicated by temporary owner's equity accounts – revenues, expenses and dividends (or owner's withdrawals). For revenue, expense and

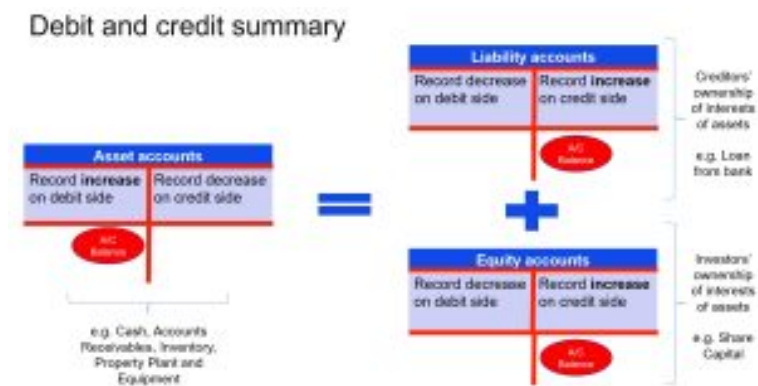
dividend accounts, the debit and credit rules relate to whether the transaction increases or decreases owner's equity. Temporary owner's equity accounts have the following rules:

a) Revenue accounts have normal credit balances and are increased by credit (Cr) entries and decreased by debit (Dr) entries (as revenues increase owner's equity)

b) Expense accounts have normal debit balances and are increased by debit (Dr) entries and decreased by credit (Cr) entries (as expenses decrease owner's equity)

c) Dividends accounts have normal debit balances and are increased by debit (Dr) entries and decreased by credit (Cr) entries (as dividends decrease owner's equity)

Remember that debits and credits are opposite of each other, so whichever rule is applied to one, the opposite rule must be applied to the other. Thus in summary, to record an increase in an account balance: record on the same side as the normal balance and to record a decrease to an account balance: record on the opposite side of the normal balance:



As introduced in the previous section, a business uses a dual entry system for recording accounting transactions. The double entry rule states that in recording a transaction, the total amount of debit entries must equal the total amount of credit entries for the

transaction. Thus to ensure that the accounting equation remains balanced at all times, we must always ensure that:

$$\text{Debits (Dr)} = \text{credits (Cr)}$$

$$\text{Transaction debits} = \text{Transaction credits}$$

$$\text{Sum of all debits posted} = \text{Sum of all credits posted}$$

Now that you are familiar with the rules of recording transactions in various accounts using the rules of debits and credits, we will turn our attention to the actual process of recording accounting transactions in a dual-entry system. Accounting transactions are not directly recorded in T-accounts. Instead businesses complete an eight step process during each accounting period to identify, record and report the accounting information from its transactions. These steps are also known as the accounting cycle:



The major steps involved in the accounting cycle include: (1) identifying business transactions; (2) recording or journalising transactions in the general journal; (3) posting the journal entries to the accounts in the general ledger; (4) preparing a trial balance; (5)

recording and posting adjusting entries; (6) preparing an adjusted trial balance; (7) preparing the financial statements; and (8) recording and posting closing entries.

In this chapter, we will look closely at steps 2-4. We will better understand the processes related to steps 5-8 in Chapter 3.

2.3 Purpose of the journal, ledger and trial balance

RINA DHILLON; MITCHELL FRANKLIN; PATTY GRAYBEAL; AND
DIXON COOPER

When we introduced debits and credits in the last section, you learned about the usefulness of T-accounts as a graphic representation of any account in the general ledger. But before transactions are posted to the T-accounts, they are first recorded as *journals* (Step 2 of the Accounting Cycle).

Journals

A journal is a chronological record of transactions. Entries recorded in a journal are called journal entries. We use journals to keep track of business transactions. A journal is the first place information is entered into the accounting system and is often referred to as the book of original entry because it is the place the information originally enters into the system. A journal keeps a historical account of all recordable transactions with which the business has engaged. In other words, a journal is similar to a diary for a business. When you enter information into a journal, we say you are journalising the entry. A journal entry (also known as a general journal) include the following information about a transaction:

- the date of the transaction
- the accounts to be debited and credited
- the amounts of the debit and credit entries
- a brief explanation of each transaction

Date		
Date of transaction	DR Account ABC	\$X
	CR Account XYZ	\$X
	(Brief explanation of transaction)	

Formatting When Recording Journal Entries

- Include a date of when the transaction occurred.
- The debit account always come first and on the left.
- The credit account always come after all debit accounts are entered, and on the right.
- The credit accounts will be indented below the debit accounts.
- You will have at least one debit (possibly more).
- You will always have at least one credit (possibly more).
- The dollar value of the debits must equal the dollar value of the credits or else the accounting equation will go out of balance.
- You will write a short description after each journal entry.
- Skip a space after the description before starting the next journal entry.

We will show an example of transactions and how they are recorded in a general journal in an example later in the chapter.

Keeping it real: QE Food Stores

QE Food Stores is a chain of grocery stores in Sydney that carries a variety of staple items such as meat, milk, eggs, bread, and so on. As a smaller grocery store, **QE Food Stores** do not offer the variety of products found in a larger supermarket chains such as Woolworths and Coles. However, it records journal entries in a similar way.

Grocery stores of all sizes must purchase product and track inventory. While the number of entries might differ, the recording process does not. For example, **QE Food Stores** might purchase food items in one large quantity at the beginning of each month, payable by the end of the month. Therefore, it might only have a few accounts payable and inventory journal entries each month. Larger grocery chains might have multiple deliveries a week, and multiple entries for purchases from a variety of suppliers on their accounts payable weekly.

This similarity extends to other retailers, from clothing stores to sporting goods to hardware. No matter the size of a business and no matter the product a business sells, the fundamental accounting entries remain the same.

While the general journal is useful in providing a record in time order of all accounting transactions of a business, it does not provide the account balance of a particular account. If a business

is trying to determine the balance of a specific account, it would have to find all the journal entries affecting that account and then calculate a balance. Reviewing journal entries individually can be tedious and time consuming. To avoid doing this, the information recorded in the general journal is posted (or transferred) to a ledger, which is Step 3 of the Accounting Cycle: post journal information to the ledger.

Ledger

A ledger is a record of each account and its balance. While most businesses have various types of ledgers containing different accounts, the most basic type of ledger in practice is the general ledger. The general ledger is simply a collection of all T-accounts for a business, providing both the activity and balances of all accounts within the business. Posting refers to the process of transferring data from the journal to the general ledger. It is important to understand that T-accounts are only used for illustrative purposes in a textbook, classroom, or business discussion. They are not official accounting forms. Businesses will use ledgers for their official books, not T-accounts. The general ledger is helpful in that a business can easily extract account and balance information.

When calculating balances in ledger accounts, one must take into consideration which side of the account increases and which side decreases. To find the account balance, you must find the difference between the sum of all figures on the side that increases and the sum of all figures on the side that decreases. For example, the Cash account is an asset. We know from the accounting equation that assets increase on the debit side and decrease on the credit side. If there was a debit of \$5,000 and a credit of \$3,000 in the Cash account, we would find the difference between the two, which is

\$2,000 (5,000 – 3,000). The debit is the larger of the two sides (\$5,000 on the debit side as opposed to \$3,000 on the credit side), so the Cash account has a debit balance of \$2,000.

Another example is a liability account, such as Accounts Payable, which increases on the credit side and decreases on the debit side. If there were a \$4,000 credit and a \$2,500 debit, the difference between the two is \$1,500. The credit is the larger of the two sides (\$4,000 on the credit side as opposed to \$2,500 on the debit side), so the Accounts Payable account has a credit balance of \$1,500.

We will show an example of transactions and how they are transferred from the journal and posted to the ledger in an example later in the chapter. In discussing the journalising and posting process above, procedures have been put in place to ensure that the double entry rule is followed – that is, the total amount of debit entries equals the total amount of the credit entries in both the general journal and general ledger accounts. By doing this, we will ensure that the accounting equation remains in balance and errors are minimised. However the procedure of ensuring total debits equal total credits do not detect errors related to journalising or posting incorrectly in the accounting system. Such errors can be detected by preparing a trial balance, which is Step 4 of the Accounting Cycle, and this step involves proving the equality of the debit and credit balances in the accounts which will examine below.

Trial Balance

A trial balance is a listing of all accounts and their balances at a specific point in time. It lists the titles of all the accounts in a business' general ledger in a column on the left, followed by the debit or credit balance of each account and the totals of the debit and credit columns. Asset accounts are usually listed first, followed by liability accounts, equity accounts and then revenue, expense and dividend accounts. A trial balance is prepared at the end of the

period and is done so to assist in the preparation of the financial statements and to check the accuracy of the ledger or journal entries. It is important to note that the trial balance is unable to detect all recording errors. For example, if an expense paid of \$500 is incorrectly recorded as \$5000 both in the expense and cash accounts, both sides of the trial balance will still be equal. Thus care must be taken to check and confirm that the correct accounts and amounts are being recorded for each transaction.

Despite not being able to detect all errors, the trial balance serves three important functions. First it summarises in one place all accounts of a business and their respective balances, and it is from these balances that form the basis on which the financial statements are prepared. Second it proves that total debit balances equal total credit balances which means the accounting equation is in balance. If this is unequal, it means the accounting equation is out of balance and a correction would be needed. Lastly, a trial balance would be helpful in making any required adjustments to account balances at the end of the accounting period which will be illustrated in Chapter 3 Recording Adjusting Entries.

To prepare a trial balance, list the account numbers, names and their balances. Then total the debit and credit columns to determine their equality:

Trial Balance		
	Debit	Credit
Asset account(s)	Amount	
Liability account(s)		Amount
Equity account(s)		Amount
Revenue account(s)		Amount
Expense account(s)	Amount	
Dividends	Amount	
Total	<u>Total debits</u>	<u>Total credits</u>

Let us now return to the 6 transactions of the startup mobile app developer, Kids Learn Online (KLO), that you analysed in AAA (please refer to p.38-41 of [Chapter 2](#) of the AAA textbook) and how these transactions impacted the accounting equation. We will now record each of the transactions for KLO using Steps 2 to 4 of the Accounting Cycle and discuss how this impacts the financial statements in the next section.

2.4 Record and post accounting transactions and prepare a trial balance and financial statements

RINA DHILLON; MITCHELL FRANKLIN; PATTY GRAYBEAL; AND
DIXON COOPER

The following section uses the Kids Learn Online (KLO) transactions recorded in [Chapter 2](#) of the AAA textbook to demonstrate how to record transactions in the journal, post information to the ledger, prepare a trial balance and financial statements.

Recording transactions in the journal and posting to the ledger

KLO entered into 6 transactions:

1. Issues \$20,000 of share equity in exchange for cash.
2. Purchases computer equipment on account (to be paid for later) for \$3,500, payment due within the month.
3. Receives \$4,000 cash in advance from a customer for an app not yet developed (we will offer these services at a later date).
4. Provides \$5,500 in app development services to a customer on credit (the customer will pay the business at a later date)
5. Pays a \$300 electricity bill with cash.
6. Distributed \$100 cash in dividends to shareholders.

A three-step process will be used to demonstrate how to record each transaction and post it to the ledger. First, the accounts affected by the transaction will be identified (Step 1 of Accounting Cycle) and the relevant debit and credit rules will be applied. Second, the transaction will be recorded in the journal (Step 2 of Accounting Cycle). Third, the transaction will be posted to the ledger (Step 3 of Accounting Cycle). This three-step process can be used when recording and posting any accounting transaction.

Transaction 1: Issues \$20,000 of share equity for cash

Step 1: The business has received cash, so the cash account increases. Cash is an asset, so the cash account needs to be debited to increase it. In exchange for the cash, the business has issued shares, so the share capital account also increases. Share capital is an equity account, so the Share Capital account needs to be credited to increase it.

Step 2: The following journal entry will be recorded (please note as there is no transaction date, we have omitted it below but if a date was provided, it will be the first thing we document)

DR Cash	\$20000
CR Share Capital	\$20,000
(Investment of cash into business)	

Step 3: The following information will be posted to the ledger

Cash	Share Capital
20000	20000
20000	20000

Transaction 2: Purchases computer equipment on account (to be paid for later) for \$3,500, payment due within the month.

Step 1: The business purchased computer equipment, which is an asset, so the equipment account are debited to increase it. The purchase of the equipment was made on account, meaning it did not pay for the equipment immediately and asked for payment to be billed instead and paid later. Since the business owes money and has not yet paid, this is a liability, specifically labeled as *accounts payable*, and thus needs to be credited to increase it.

Step 2: The following journal entry will be recorded

DR Equipment	\$3500
CR Accounts Payable	\$3500
(Purchase of computer)	

Step 3: The following information will be posted to the ledger

Equipment
3500
3500

Accounts Payable
3500
3500

Transaction 3: Receives \$4,000 cash in advance from a customer for an app not yet developed

Step 1: We receive cash so the cash account increases. Cash is an asset, so we debit the cash account to increase it. Because KLO has not yet developed the required service (the app), there is a liability

to the customer to provide the service called unearned revenue. Unearned revenue is a liability and therefore needs to be credited to increase it.

Step 2: The following journal entry will be recorded

DR Cash	\$4000
CR Unearned revenue	\$4000
(Cash received in advance of providing service to customer)	

Step 3: The following information will be posted to the ledger

Cash	Unearned revenue
20000	4000
4000	4000
24000	

Transaction 4: Provides \$5,500 in app development services to a customer who asks to be billed for the services

Step 1: KLO has provided the service to the customer so its revenue increases. Revenues increase equity and so the revenue account needs to be credited to increase it. The customer asked to be billed for the service, meaning the customer owes money and has not yet paid, signaling an accounts receivable. Accounts receivable is an asset, so the accounts receivable account needs to be debited to increase it.

Step 2: The following journal entry will be recorded

DR Accounts Receivable	\$5500
CR Revenue	\$5500
(Cash received in advance of providing service to customer)	

Step 3: The following information will be posted to the ledger

Accounts Receivable
5500
5500

Revenue
5500
5500

Transaction 5: Pays a \$300 electricity (utility) bill with cash.

Step 1: Cash is paid so the cash account decreases. Cash is an asset, so the cash account needs to be credited to decrease it. The decrease in cash results from utility payments for services that were used and paid for within the accounting period, thus recognised as an expense. Expenses decreases equity, so debit electricity expense account to increase it. Recall that equity accounts have normal credit balances so to show a decrease we would do the opposite which is to debit as we have for the electricity expense account.

Step 2: The following journal entry will be recorded

DR Electricity expense	\$300
CR Cash	\$300
(Paid for electricity)	

Step 3: The following information will be posted to the ledger

Cash	
20000	300
<u>4000</u>	
23700	

Electricity Expense	
<u>300</u>	
300	

Transaction 6: Distributed \$100 cash in dividends to stockholder

Step 1: Cash is paid so the cash account decreases. Cash is an asset, so the cash account needs to be credited to decrease it. The cash payment is a distribution of business assets to the owners, so the dividend account increases. Similar to expenses, dividends decrease equity, so the dividends account needs to be debited to increase it.

Step 2: The following journal entry will be recorded

DR Dividends	\$100
CR Cash	\$100
(Paid dividends to shareholders)	

Step 3: The following information will be posted to the ledger

Cash	
20000	300
<u>4000</u>	100
23600	

Dividends	
<u>100</u>	
100	

Let's summarise the transactions and make sure the accounting equation is balanced by collating a summary of all the T-accounts and checking it against the accounting equation.

T-Accounts Summary

Once all journal entries have been posted to T-accounts, we can check to make sure the accounting equation remains balanced. A summary showing the T-accounts, analysed using the accounting equation, for Kids Learn Online is presented below.

Assets	=	Liabilities	+	Equity																				
<table><tr><th colspan="2">Cash</th></tr><tr><td>20000</td><td>300</td></tr><tr><td>4000</td><td>100</td></tr><tr><td>23600</td><td></td></tr></table>	Cash		20000	300	4000	100	23600			<table><tr><th colspan="2">Accounts Payable</th></tr><tr><td></td><td>3500</td></tr><tr><td></td><td>3500</td></tr></table>	Accounts Payable			3500		3500		<table><tr><th colspan="2">Share Capital</th></tr><tr><td></td><td>20000</td></tr><tr><td></td><td>20000</td></tr></table>	Share Capital			20000		20000
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<table><tr><th colspan="2">Equipment</th></tr><tr><td>3500</td><td></td></tr><tr><td>3500</td><td></td></tr></table>	Equipment		3500		3500			<table><tr><th colspan="2">Unearned revenue</th></tr><tr><td></td><td>4000</td></tr><tr><td></td><td>4000</td></tr></table>	Unearned revenue			4000		4000		<table><tr><th colspan="2">Revenue</th></tr><tr><td></td><td>5500</td></tr><tr><td></td><td>5500</td></tr></table>	Revenue			5500		5500		
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Dividends																								
100																								
100																								

The sum on the assets side of the accounting equation equals \$32,600, found by adding together the final balances in each asset account (23600 + 3500 + 5500). To find the total on the liabilities and equity side of the equation, we need to find the difference between debits and credits. Credits on the liabilities and equity side of the equation total \$33,000 (3500 + 4000 + 20,000 + 5500). Debits on the liabilities and equity side of the equation total \$400 (100 + 300). The difference \$33,000 – \$400 = \$32,600. Thus, the equation

remains balanced with \$32,600 on the asset side and \$32,600 on the liabilities and equity side. Now that we have the T-account information, and have confirmed the accounting equation remains balanced, we can create the trial balance.

Preparing a trial balance

Once all the monthly transactions have been analyzed, journalised, and posted to the ledger (in practice this is performed on a continuous day-to-day basis over the accounting period), we are ready to start working on preparing a trial balance. Preparing a trial balance is the fourth step in the accounting cycle. As discussed in the previous section, a trial balance is a list of all accounts in the general ledger that have balances. Preparing a trial balance is an important step in the accounting process, because it helps identify any computational errors throughout the first three steps in the cycle.

Note that for this step, we are considering our trial balance to be unadjusted, which means it includes accounts before they have been adjusted. As you see in step 6 of the accounting cycle, we create another trial balance that is adjusted after posting adjusting entries in step 5. We will delve into these processes in the next chapter.

When constructing a trial balance in practice, we must consider a few formatting rules, akin to those requirements for financial statements:

- The header must contain the name of the company, the label of a Trial Balance, and the accounting period.
- Accounts are listed in the accounting equation order with assets listed first followed by liabilities and finally equity.

- Amounts at the top of each debit and credit column should have a dollar sign.
- When amounts are added, the final figure in each column should be underscored.
- The totals at the end of the trial balance need to have dollar signs and be double-underscored.

Transferring information from T-accounts to the trial balance requires consideration of the final balance in each account. If the final balance in the ledger account (T-account) is a debit balance, you will record the total in the left column of the trial balance. If the final balance in the ledger account (T-account) is a credit balance, you will record the total in the right column. Once all ledger accounts and their balances are recorded, the debit and credit columns on the trial balance are totaled to see if the figures in each column match each other. The final total in the debit column must be the same dollar amount that is determined in the final credit column. For example, if you determine that the final debit balance is \$33,000 then the final credit balance in the trial balance must also be \$33,000. If the two balances are not equal, there is a mistake in at least one of the columns. A trial balance for Kids Learn Online (KLO) is provided below:

Kids Learn Online (KLO) Trial Balance Current month		
	Debit	Credit
Cash	\$23600	
Equipment	3500	
Accounts Receivable	5500	
Accounts Payable		\$3500
Unearned Revenue		4000
Share Capital		20000
Revenue		<u>5500</u>
Electricity Expense	300	
Dividends	<u>100</u>	
Total	\$33000	\$33000

Let's now take a closer look at the T-accounts and trial balance for KLO to see how the information is transferred from the T-accounts to the trial balance. For example, Cash has a final balance of \$23,600 on the debit side. This balance is transferred to the Cash account in the debit column on the trial balance. Equipment (\$3500), Accounts Receivable (\$5500), Electricity Expense (\$300) and Dividends (\$100) also have debit final balances in their T-accounts, so this information will be transferred to the debit column on the trial balance. Accounts Payable (\$3500), Unearned Revenue (\$4000), Share Capital (\$20000) and Revenue (\$5500) all have credit final balances in their T-accounts. These credit balances would transfer to the credit column on the trial balance.

Once all balances are transferred to the trial balance, we will sum each of the debit and credit columns. The debit and credit columns both total \$33000, which means they are equal and in balance. However, just because the column totals are equal and in balance, we are still not guaranteed that errors are not present. In other words, as long as equal debits and credits are posted, even to the incorrect account or in the incorrect amount, the total debits

will equal the total credits. Thus, numerous mistakes may exist even though the trial balance columns agree. For example, the trial balance may balance even when any of the following occurs:

- (a) a transaction is not journalised
- (b) a journal entry is posted twice
- (c) errors are made in recording the amount of a transaction
- (d) a correct journal entry is not posted to the ledger
- (e) incorrect accounts are used in journalising or posting

Thus it is very important to make sure that in every step of the accounting cycle that all transactions are entered correctly and accurately to minimise the occurrences of the above errors. Once the trial balance is completed, the final output of the accounting system can be prepared – the financial statements.

Preparing financial statements

As demonstrated in [Chapter 5](#) of the AAA textbook, the income statement must be prepared first, followed by the statement of changes in equity and then the balance sheet. The income statement illustrates a business' revenues and expenses. KLO's trial balance contains only one revenue account and one expense account, therefore its income statement for the current month would appear as follows:

Kids Learn Online (KLO) Income Statement Current month	
Revenue	5500
Electricity expense	300
Profit	5200

With net profit calculated, KLO's retained earnings section of the statement of changes in equity (SoCiE) can be prepared. Recall from Chapter 5 of the AAA textbook, that the statement takes the beginning balance of retained earnings, adds profits and subtracts dividends to result in the current balance in retained earnings. For the purpose of preparing the SoCiE for the current month, we will assume the beginning balance of retained earnings is zero. KLO's trial balance shows a \$100 balance in dividends. Putting these two balances with profit, as calculated in the income statement above, yields the following SoCiE for KLO:

Kids Learn Online (KLO) Statement of change in equity Current month	
Retained earning, Beginning of month	0
+ Profit	5200
- Dividends	100
Retained earning, Closing of month	5100

With retained earnings calculated, the business' balance sheet can be prepared. A balance sheet shows the position of the business at a single point in time – in other words it provides a snapshot of the balances of the business' assets, liabilities and equity. KLO's trial balance shows three asset accounts (Cash, equipment and accounts receivables), two liability accounts (accounts payable and unearned revenue) and one equity account (share capital). These six accounts, together with the amounts of retained earnings from the SoCiE above, will be included on the balance sheet. Thus, the current month balance sheet for KLO would be depicted as follows:

Kids Learn Online (KLO) Balance Sheet Current month	
Cash	23600
Equipment	3500
Accounts Receivable	<u>5500</u>
Total assets	<u>32600</u>
Accounts Payable	3500
Unearned Revenue	4000
Share Capital	20000
Retained earnings	<u>5100</u>
Total liabilities and equity	<u>32600</u>

After the unadjusted trial balance and financial statements are prepared, a business might look at its financial statements to get an idea of the business' position before adjustments are made to certain accounts. A more complete picture of the business' position develops after adjustments occur, and an adjusted trial balance has been prepared. These next steps in the accounting cycle are covered in the next chapter: [Recording adjusting entries](#).

Test yourself



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2. Chapter 2 Practice Questions

RINA DHILLON

Practice Questions

1. The two-column record used to accumulate monetary increases and decreases for individual assets, liabilities, equity, revenue, expense, and dividends items is a:

-
- | | |
|----|-------------------|
| a. | chart of accounts |
| b. | T-account |
| c. | trial balance |
| d. | posting |
-

2. The process of transferring amounts from the book of original entry (journal) into the ledger is referred to as:

-
- | | |
|----|--------------|
| a. | Journalising |
| b. | Posting |
| c. | Analysing |
| d. | Classifying |
-

3. A list of all active accounts and their balances at a particular date, which is used to prove the equality of debits and credits, is a:

-
- | | |
|----|-------------------|
| a. | chart of accounts |
| b. | general ledger |
| c. | journal |
| d. | trial balance |
-

4. The correct term for the entry made on the left side of a T-account is:

-
- | | |
|----|--------------|
| a. | Debit |
| b. | Credit |
| c. | Posting |
| d. | Journalising |
-

5. A credit means the event had:

-
- | | |
|----|---|
| a. | a favourable impact on the entity's financial statements |
| b. | an unfavourable impact on the entity's financial statements |
| c. | an effect on the right side of the T-account |
| d. | the effect of increasing the account balance |
-

6. The chronological record (time order) in which transactions are initially recorded in the order in which they occur is called a:

-
- | | |
|----|-------------------|
| a. | T-account |
| b. | chart of accounts |
| c. | trial balance |
| d. | journal |
-

7. Credit entries are used to:

-
- | | |
|----|-----------------------------|
| a. | increase asset accounts |
| b. | increase liability accounts |
| c. | increase expense accounts |
| d. | increase dividends |
-

8. Which of the following accounts is decreased by a debit entry?

-
- | | |
|----|-------------------|
| a. | Cash |
| b. | Prepaid insurance |
| c. | Accounts payable |
| d. | Insurance expense |
-

9. Which of the following accounts is increased by a credit entry?

-
- | | |
|----|---------------------|
| a. | Accounts receivable |
| b. | Dividends |
| c. | Service revenue |
| d. | Salary expense |
-

10. A list of all active accounts and their balances at a particular date, which is used to prove the equality of debits and credits, is a:

-
- | | |
|----|-------------------|
| a. | chart of accounts |
| b. | general ledger |
| c. | journal |
| d. | trial balance |
-

11. Which pair of accounts has the same set of rules for debit and credit entries?

-
- a. Contributed equity and accounts payable
 - b. Salary expense and retained earnings
 - c. Cash and notes payable
 - d. Sales revenue and accounts receivable
-

12. Transactions for Bravada Enterprises are provided below.

-
- | | |
|-----------|---|
| 1
Sep | Bills are sent to clients for services provided in August equalling \$800 |
| 9
Sep | Barlue Furnishings delivers \$1060 of office furniture and \$160 of office supplies to Bravada, leaving an invoice for \$1220 |
| 15
Sep | Payment is made to Barlue for the office furniture and supplies delivered on 9 September |
| 23
Sep | A \$430 bill for advertising for the month of September is received. |
| | It will be paid on its due date in October |
| 30
Sep | Salaries of \$850 are paid to employees |
-

The journal entry to record the transactions from 1 September will include a debit of \$800 to:

-
- a. service revenue
 - b. cash
 - c. accounts receivable
 - d. retained earnings
-

13. Refer to 12., the journal entry to record the transaction on 9 September will include a credit of \$1220 to:

-
- a. furniture and supplies
 - b. cash
 - c. accounts payable
 - d. delivery expense
-

14. Refer to 12., the journal entry to record the transaction on 15 September will include a debit of \$1220 to:

-
- a. salary expense
 - b. salaries payable
 - c. prepaid expenses
 - d. accounts payable
-

15. Refer to 12., the journal entry to record the transaction on 30 September will include a credit to:

-
- a. salary expense
 - b. salary payable
 - c. prepaid salaries
 - d. cash
-

16. Transactions for Hesson Properties are provided below.

1 Nov	Hesson purchases two new maintenance carts on credit at \$375 each. The carts are added to Hesson's property, plant and equipment records. Payment is due in 30 days
8 Nov	Hesson accepts \$75 of advance payments from customers for services to be provided in December
15 Nov	Hesson receives the electricity bill for \$150. Payment is due in 30 days
20 Nov	Customers are billed \$750 by Hesson for property services.
	Payment is due from the customers in 30 days
30 Nov	Hesson received \$500 from customers who were billed on 20 November

The journal entry to record the transaction on 1 November is:

	Equipment 750
a.	Accounts payable 750
	Equipment 750
b.	Cash 750
	Cash 750
c.	Equipment 750
	Accounts payable 750
d.	Equipment 750

17. Refer to 16., what is the journal entry to record the transaction on 15 November?

-
- a. Electricity expense 150
Cash 150
 - b. Accounts receivable 150
Electricity expense 150
 - c. Electricity expense 150
Accounts payable 150
 - d. Cash 150
Electricity expense 150
-

18. Refer to 16., what is the journal entry to record the transaction on 20 November?

-
- a. Cash 750
Accounts Receivable 750
 - b. Accounts Receivable 750
Service Revenue 750
 - c. Service Revenue 750
Cash 750
 - d. Cash 750
Accounts Payable 750
-

19. Refer to 16., what is the journal entry to record the transaction on 30 November?

-
- a. Cash 500
Accounts Receivable 500
 - b. Accounts Receivable 500
Service Revenue 500
 - c. Accounts Payable 500
Cash 500
 - d. Service Revenue 500
Cash 500
-

20. An account is said to have a debit balance if:

-
- a. the amount of the debits exceeds the amount of the credits
 - b. there are more entries on the debit side than on the credit side
 - c. its normal balance is in debit without regard to the amounts or number of entries on the debit side
 - d. the first entry of the accounting period was posted on the debit side
-

Solutions:

- (1) b – by definition;
- (2) b – by definition;
- (3) d- by definition;
- (4) a- by definition;
- (5) c – credits can be favourable (e.g. increase in revenue) or unfavourable (e.g. increase in liability) and a credit can also mean

decreasing an account balance (e.g. cash payments) so only c is the best option;

(6) d – by definition;

(7) b – recall ADEX (i.e. Debit) LER (i.e. Credit);

(8) c – recall ADEX (i.e. Debit) LER (i.e. Credit), when cash which is an asset account decreases it is a credit, when prepaid insurance which is an asset account decreases it is a credit, when insurance expense which is an expense account decreases it is a credit, thus accounts payable is correct as being a liability account which has a normal credit balance, a decrease would mean a debit entry;

(9) c – recall ADEX (i.e. Debit) LER (i.e. Credit), accounts receivables which is an asset account, dividends and salary expense which is an expense account are debited when increased thus service revenue is correct as it is a revenue account that when increased is denoted by a credit entry ;

(10) d – by definition;

(11) a – recall ADEX (i.e. Debit) LER (i.e. Credit), contributed equity (the E in LER) and ;

(12) c – accounts receivables as a bill is sent to the customer and thus the amount is owing to the business;

(13) c – accounts payable as an invoice was left by the supplier which is an amount owing by the business, i.e. a liability;

(14) d – since payment is made of the invoice, this reduces the liability (i.e. the amount owing by the business), hence debit accounts payable;

(15) d – a payment is made of salaries which is usually paid in cash, thus an outgoing of cash which is an asset account means a credit to that account;

(16) a – company purchased equipment which is an asset to the business DR Equipment for the amount $\$375 \times 2 \text{ equipment} = \750 AND the payment is due in 30 days which mean the business is still owing the \$750 which results in a liability CR Accounts Payable \$750;

(17) c – received a bill that is payable in 30 days. As the business

has already consumed the electricity, the expense has already occurred thus DR Electricity expense \$150 and as payment has not been made thus the business is still owing \$150 which results in a liability CR Accounts Payable \$150;

(18) b – the business has billed a customer for services provided and provided payment terms of 30days, thus the bill amount of \$750 is still owing to the business DR Accounts Receivable \$750 and as the service has already been provided and thus the revenue earned, CR Service Revenue \$750;

(19) a – the business has now received the amount owing of \$750 which means that cash which is an asset is coming into the business DR Cash \$750 and we want to reverse the initial accounts receivables to show that the amount is no longer owed to the business CR Accounts Receivables \$750;

(20) a – when we calculate the balance of an account, if the amount of the debits exceeds the amount of the credits, then it has a debit balance ($DR\$ > CR\$$). If $CR\$ > DR\$$, the account has a credit balance (this is irrespective of what the normal balance of the account is)

PART III

CHAPTER 3: RECORDING ADJUSTING ENTRIES

Introduction

Chapter 2 introduced the first four steps in the accounting cycle: identifying transactions, recording transactions, posting transactions in the ledger and preparing a trial balance from which financial statements are prepared. This chapter builds on those initial steps and examines the remaining four steps in the accounting cycle. These steps include the adjusting process that results in accrual based financial statements and the closing process that prepares the accounting system for the next accounting period. Both these processes occur at the end of an accounting period.

Chapter outline

After reading this chapter, you should be able to:

1. Explain how profit is measured and reported under the accrual and cash bases of accounting
2. Identify the four major circumstances in which adjusting journal entries are necessary
3. Record and post adjusting journal entries and prepare an adjusted trial balance and financial statements
4. Describe the purpose of the closing process and prepare closing entries

3.1 How profit is measured and reported under the accrual and cash bases of accounting

RINA DHILLON; MITCHELL FRANKLIN; PATTY GRAYBEAL; AND
DIXON COOPER

Accrual versus cash basis of accounting

When recording transactions, it is important and necessary to record them in the correct accounting period. To do otherwise would result in a misstatement of assets, liabilities, equity, revenues and expenses. If you recall from the previous chapter, we prepare the income statement first where the profit flows into the statement of change in equity (SoCiE) and the ending retained earnings from the SoCiE to the balance sheet. Given the importance of the profit figure in ensuring that the financial statements represent the true economic reality of the business, it is essential that revenues and expenses are recorded correctly and that the revenue and expense account balances are up to date.

Revenues and expenses can be recorded or recognised on either a cash or an accrual basis. In cash-basis accounting, expenses and revenue are recorded when cash is paid or received.

By contrast, the accrual basis of accounting records revenue and expenses when the transaction happens, such as before a cash settlement. This is an application of the *revenue recognition principle* and the *expense recognition principle* (also known as the

matching principle) introduced and discussed in Chapter 2, [Section 2.4](#) of the Accounting and Accountability textbook.

Keep in mind that there are several factors that a business should consider before picking an accounting method. Variables like the size of the business and the industry play a determining role in the way the accounting books should be kept. In addition, think about:

- how complicated the business transactions and processes are
- whether the business has the resources to manage accrual accounting
- whether using a computerised accounting system will make a difference.

The following sections expand on these accounting methods and outline the types of businesses best suited to each one.

The Cash Accounting Method

The cash accounting method is quite simple in its application. In fact, the core concept is similar to that of a personal bank account. Income/Revenues such as salary are recorded only when you are paid. Expenses such as paying your credit card are recorded only when you transfer the money. Recognising transactions after cash changes hands allows a business to track its financial activity in real time and provides the business with a current picture of its current cash flow status.

There are plenty of advantages to using this accounting method. Besides allowing for real-time cash flow management, this method offers several potential tax benefits. In fact, a business can legally lower its tax liability by simply controlling the timing of the cash payments. This method doesn't come without disadvantages, though. Since cash-basis accounting doesn't show liabilities (what

a business is owing to others), a cash-rich business with a high accounts payable can appear more solvent than it actually is.

Due to its simplicity, the cash accounting method is ideal for small businesses or sole proprietorship (discussed in detail in Chapter 4, but essentially a business owned and controlled by one owner) that don't sell goods or handle inventory management. Cash accounting tracks the actual money coming in and out of your business. In cash accounting, when a business:

- gets an invoice for something – it does not record the cost until the invoice has been paid
- sends an invoice to a customer – it does not record the sale until payment has been received.

For example, if a business sends an invoice on Tuesday, and does not get payment in the account until Thursday, the business will record the income under Thursday's date in the accounting system.

Advantages and Disadvantages of cash accounting

Cash accounting:

- is a simple system that keeps track of a business' cash flow
- suits smaller businesses if they mostly have cash transactions (for example, a hairdresser or small restaurants)
- gives a picture of how much money a business has in its cash register and bank accounts.

However, it doesn't show money that is owed to the business or money the business owes to others.

The Accrual Accounting Method

Compared to the cash-basis method, accrual accounting is relatively more complex. Recording income and expenses as the transaction occurs involves the use of accounts payable and accounts receivable and involves accounting for long-term liabilities, such as unearned revenue. Moreover, the accrual method requires monthly bank reconciliation to ensure that the amount in the bank account matches the closing balance.

Unlike cash-basis accounting, payments expected to be received in the future are recognised as present income. This provides a more accurate picture of a business's financial health and its long-term profitability. The disadvantage of this method is that it doesn't do a great job of tracking cash flow, which can lead to cash shortages when a business is experiencing a downturn.

Accrual accounting is the preferred method for businesses ranging from e-commerce to manufacturing. If a business uses accrual accounting, it records expenses and sales when they take place, instead of when cash changes hands. This way of accounting shows the amounts a business owes to others (i.e. liabilities – usually in the form of accounts payable) and the amounts owing to the business (i.e. assets – usually in the form of accounts receivable). For example, if you're a builder and send an invoice for a project you've completed, you record the sale in your books even though you haven't been paid yet.

Advantages and Disadvantages of accrual accounting

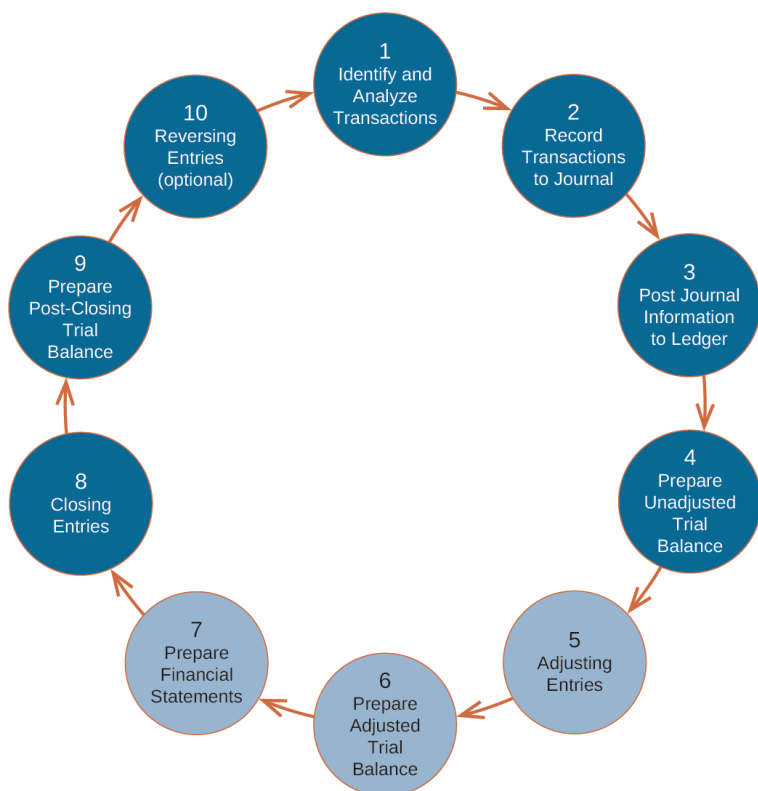
Accrual accounting:

- is more complicated than cash accounting

- suits businesses that does not get paid straight away (for example, lawyers who provide a service then invoice for it later)
- tracks the business' true financial position by showing money owed to the business and money the business owes others

As the accrual basis provides a better representation of income for a given accounting period, the accrual basis of accounting is required by Generally Accepted Accounting Principles (GAAP). The accrual method is considered to better match revenues and expenses and standardises reporting information for comparability purposes. Having comparable information is important to external users of information trying to make investment or lending decisions, and to internal users trying to make decisions about company performance, budgeting, and growth strategies. Because GAAP require the accrual basis, income statements report accrual-based profits/losses.

To ensure that revenues and expenses (and hence profit) are properly recorded under an accrual basis, adjusting journal entries are used. Adjusting journal entries are entries made in the general journal to record revenues that have been earned and expenses that have been incurred but not recorded in the accounting system. The process of recording and posting adjusting entries is the *fifth* step in the accounting cycle (see diagram below) and occurs at the end of each accounting period. In [Section 3.3](#), we will examine Steps 5, 6 and 7 of the accounting cycle in detail which cover adjusting entries (journalise and post), preparing an adjusted trial balance, and preparing the financial statements. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)



In every industry, adjusting entries are made at the end of the period to ensure revenue matches expenses. Even businesses with an online presence need to account for items sold that have not yet been shipped or are in the process of reaching the end user. Adjusting journal entries occur after the unadjusted trial balance (i.e. trial balance without adjusting entries) is prepared. After adjusting entries are journalised and posted, an *adjusted* trial balance is then generated, and from which financial statements are prepared.

While adjusting entries can significantly differ across businesses, there are four basic scenarios in which adjusting journal entries are necessary. We now turn our attention to these four basic circumstances.

3.2 Four major circumstances in which adjusting journal entries are necessary

RINA DHILLON; MITCHELL FRANKLIN; PATTY GRAYBEAL; AND
DIXON COOPER

As mentioned in the previous section, while adjusting entries can vary significantly across businesses, these entries come about because the earning of revenue or incurrence of expenses does not always occur concurrently with the exchange of cash. For example:

Scenario 1: The business may receive the cash **before** revenue is earned (i.e. before the goods are provided or the services performed) – also known as unearned revenue

Scenario 2: The business may receive the cash **after** revenue is earned – also known as accrued revenue

Scenario 3: The business may pay cash **before** an expense is incurred (i.e. goods are used or services consumed) – also known as prepaid expenses

Scenario 4: The business may pay cash **after** an expense is incurred – also known as accrued expenses

This timing issues between when cash is received/paid and when revenue/expenses are earned/incurred make adjusting entries necessary. Let's examine why the need for adjusting entries arises before we discuss the four scenarios listed above in further detail.

The Need for Adjusting Entries

Adjusting entries update accounting records at the end of a period for any transactions that have not yet been recorded. These entries

are necessary to ensure the income statement and balance sheet present the correct, up-to-date numbers. Adjusting entries are also necessary because the initial trial balance may not contain complete and current data due to several factors:

- The inefficiency of recording every single day-to-day event: some events are not journalised daily because it would not be useful or efficient to do so. Examples are the use of supplies and the earnings of salary and wages by employees
- Some costs are not recorded during the period but must be recognised at the end of the period: Costs such as depreciation, insurance and rent are not journalised during the accounting period because the economic benefit is consumed / expire over time rather than as a result of recurring daily business transactions.
- Some items are forthcoming for which original source documents have not yet been received, for example an electricity bill (most billing cycle is between one and three months) that will not be received until the next accounting period.

There are a few accounting guidelines that also support the need for adjusting entries:

- *Revenue recognition principle*: Adjusting entries are necessary because the revenue recognition principle requires revenue recognition when earned, thus the need for an update to unearned revenues (Scenario 1).
- *Expense recognition (matching) principle*: This requires matching expenses incurred to generate the revenues earned, which affects prepayment accounts such as insurance expense and supplies expense (Scenario 3).
- *Time period assumption*: This requires useful information be presented in shorter time periods such as quarters or months. This means a business must recognise revenues and expenses

in the proper period, requiring adjustment to certain accounts to meet these criteria.

The required adjusting entries depend on what types of transactions the business has, but as briefly introduced above, there are four major circumstances/scenarios in which adjusting journal entries are necessary. Adjusting entries requires updates to specific account types at the end of the period. Not all accounts require updates, only those not naturally triggered by an original source document such as a sales invoice or a payment bill. Before we look at recording and posting these four common types of adjusting entries, we discuss each scenario further below.

Scenario 1: Unearned revenues

Recall that unearned revenue (sometimes known as deferred revenue or revenue received in advance) represents a customer's advanced payment for a product or service that has yet to be provided by the business. Since the business has not yet provided the product or service, it cannot recognise the customer's payment as revenue but instead must record a liability. Recording the revenue must be deferred until the revenue is earned (i.e goods are provided or services performed). At the end of a period, the business will review the account to see if any of the unearned revenue has been earned. If so, this amount will be recorded as revenue in the current period.

For example, let's look at a simple example using Netflix. Netflix offers TV series, documentaries and feature films across various genres and languages. The company provides members the ability to receive streaming content through a host of internet-connected devices, including TVs, digital video players, television set-top boxes, and mobile devices. It has approximately 222 million paid subscription members in 190 countries. When Netflix sells an annual (12 months) basic subscription to its monthly video-streaming

service to a customer on 1st July, receiving \$120, it will debit cash and credit unearned revenue for \$120:

1 July	DR Cash	\$120
	CR Unearned revenue	\$120
	(To record cash received for future streaming services)	

In this case, Unearned revenue, which is a liability, increases (credit) and Cash, which is an asset, increases (debit) for \$120.

Suppose, Netflix prepares financial statements at the end of each month. As of 31 July, Netflix has provided one month of streaming service and has therefore earned one month of revenue. At the end of the month, after analyzing the unearned revenue account, 1/12 or \$10 of the unearned revenue has been earned and as the accounting system does not yet reflect this earned revenue, the following adjusting entry would be made on 31 July to recognise and record the \$10 ($\$120 \times 1/12$) of revenue:

31 July	DR Unearned revenue	\$10
	CR Revenue	\$10
	(To record revenue earned during July)	

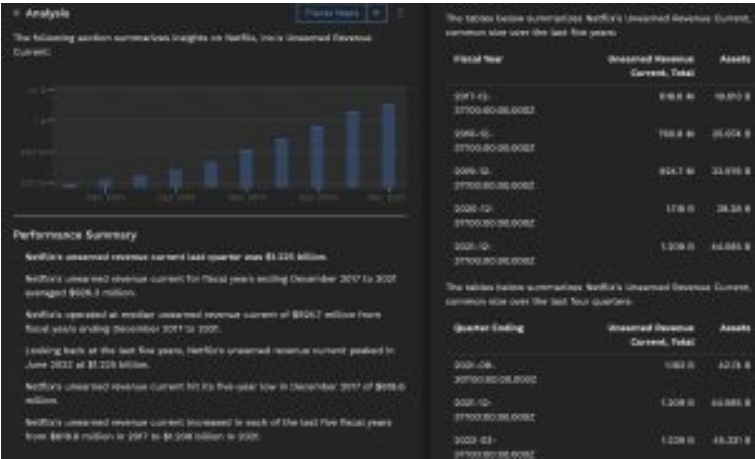
The entry would then be posted to the relevant T-accounts as follows:

Cash		Unearned revenue		Revenue	
	120	10	120		10
Bal	120		Bal 110		Bal 10

After posting, the revenue T-account reflects the \$10 earned in the current accounting period while the unearned revenue T-account reflects the remaining \$110 liability still owing and to be earned over the next 11 months. These two accounts have been adjusted to reflect revenues earned during July (which will be depicted in the income statement) and liabilities owed on 31 July (which will be shown in the balance sheet). The cash account is not affected by the adjusting entry – it was recorded on 1 July, the date cash was exchanged.

Keeping It Real

The above Netflix example only provides a glimpse of how unearned revenues would be recorded for a single customer with a basic subscription. In reality, Netflix reported unearned revenue totalling \$1.225 B for the latest quarter ending June 30, 2022 on its balance sheet:



Source: Finbox (https://finbox.com/NASDAQGS:NFLX/explorer/unearn_rev_current), assessed 7th July 2022

Imagine if Netflix recorded the amounts received as revenue instead of a liability, revenues would be grossly overstated and liabilities understated! As a general rule, when a business receives cash before it provides the goods/services, the business should always increase a liability account for the amount received. As the business provides the service/goods, the liability account is reduced (adjusted down) and the corresponding revenue account is increased (adjusted up).

Scenario 2: Accrued revenues

Accrued revenues are revenues earned in an accounting period but have yet to be recorded, and no money has been collected. Accrued revenues may accumulate (accrue) over time, some examples include interest, and services completed but a bill has yet to be sent to the customer at the end of the accounting period. Interest revenues does not involve daily transactions (accumulating during the period and needs to be adjusted to reflect interest earned at the end of the period) and thus would be unrecorded at the end of the period and revenue related to services / fees may be unrecorded because only a portion of the total service has been provided and the clients will not be invoiced until the service has been completed.

An adjusting entry is required to show the receivable that exists at the end of the accounting period and to recognise and record the revenue for the period. Since there was no bill to trigger a transaction, an adjustment is required to recognise revenue earned at the end of the period. Accordingly, an adjusting entry for accrued revenues results in an increase (a debit) to an asset account and an increase (a credit) to a revenue account.

For example, assume a legal firm provides services to a client to appeal a parking fine for \$500, completing its work on 23 May. They bill the client on 10 June and receive payment on 21 June. The

legal firm closes its books on 31 May. Note that this service has not been paid at the end of the period, only earned. This aligns with the revenue recognition principle to recognise revenue when earned, even if cash has yet to be collected. At the end of the month, the following adjusting journal entry occurs:

31 May	DR Accounts Receivable	\$500
	CR Revenue	\$500
	(To record revenue earned during May)	

The entry increases the Accounts Receivable (asset) account for the amount that the client owes the legal firm and increases the Revenue (equity) account for the same amount that the firm has earned but had been previously unrecorded. This entry would be posted to the relevant T-accounts as follows:

Accounts Receivable		Revenue	
	500		500
Bal	500	Bal	500

After posting, the Revenue T-account illustrates the \$500 earned in the current accounting period and the Accounts Receivable T-account shows the \$500 of expected cash receipts from the client. These two accounts have been adjusted to accurately reflect revenues earned during May (which will be shown in the income statement) and receivables held on 31 May (which will be depicted in the balance sheet).

When the client eventually pays the cash on 21st June, the following entry is made in the accounting system:

21 June	DR Cash	\$500
	CR Accounts Receivable	\$500
	(To record receipt of cash for client services)	

This entry will increase the Cash account and decrease the Accounts Receivable account for the amount collected. It is important to note that although individual asset accounts are changing, there is no change to total assets. No revenue is also recorded on 21 June as it was already recorded in the prior accounting period when it was earned. This entry would be posted to the relevant T-accounts as follows:

Accounts Receivable	
500	
	500
Bal	0

Cash	
	500
Bal	500

Now that we have examined the two common revenue-related adjusting entries, let's move on to the two scenarios that are related to expenses.

Scenario 3: Prepaid Expenses

Businesses often pay cash for goods/services before it uses or consumes it (i.e. incur an expense), also known as prepaid (sometimes known as deferred) expenses or prepayments. The term prepaid is used because the business has yet to use or consume the goods/services it purchases and thus cannot recognise and record an expense in the accounting system. In other words, the recording of the expense must be deferred until the expense is incurred. It is important to note and understand that prepaid expenses are payments of amounts that will provide future benefits for more than the current accounting period. Given the future benefits over time,

when such a cost/expense is incurred, an asset account is increased (debited) to show the benefit or service that would be received in the future.

As soon as the asset has provided benefit to the company, the value of the asset used is transferred from the balance sheet to the income statement as an expense. Some common examples of prepaid expenses are insurance, supplies, depreciation, and rent. Essentially prepaid expenses expire as the services is provided to the business over time (for example insurance and rent) or through use (for example supplies). The expiration of these benefits does not require daily journal entries – it would be very impractical to record every time someone uses supplies (for example a pencil or piece of paper) during the period, so at the end of the period, adjusting entries are made to recognise and record the expenses (value of what has been used) applicable to the current accounting period and the remaining values in the asset accounts. Let's look at an example of how this is applies to insurance.

Insurance policies can require advanced payment of premiums for several months at a time, twelve month, for example. The business does not use all twelve months of insurance immediately but over the course of the year. At the end of each month, the company needs to record the amount of insurance expired during that month.

For example, a business purchased a 12-month public liability insurance policy for \$2400 on 1 July. It is the end of the first month and the company needs to record an adjusting entry to recognise the insurance used during the month. The following entries show the initial payment for the policy and the subsequent adjusting entry for one month of insurance usage:

1 July	DR Prepaid expense	\$2400
	CR Cash	\$2400
	(To record purchase of public liability insurance)	
31 July	DR Insurance expense	\$200
	CR Prepaid expense	\$200
	(To record insurance expense incurred in July)	

In the first entry, Cash decreases (credit) and Prepaid expenses (which is an asset account) increases (debit) for \$2400. In the second entry, Prepaid expense decreases (credit) and Insurance Expense increases (debit) for one month's insurance usage found by taking the total \$2400 and dividing by twelve months ($2400/12 = 200$). The entry would be posted to the relevant T-accounts as follows, and for illustration purposes, assume that the cash account has an opening balance of \$5000 prior to entry:

Cash		Prepaid expense		Insurance expense	
Cr/Bal	5000	2400		0	
	2400		200	200	
Bal	2600	Bal	2200	Bal	200

After posting, the Insurance expense T-account depicts the \$200 of insurance that was consumed in the current accounting period (month of July) while the Prepaid expense T-account reflects the remaining \$2200 of insurance to be consumed over the next 11 months. These two accounts have been adjusted so that they reflect expenses incurred during July (which will be depicted in the income statement) and unexpired assets on 31 July (which will be shown in the balance sheet). The cash account is not affected by the adjusting entry – it was recorded on 1 July, the date cash was paid for the insurance policy.

Scenario 4: Accrued Expenses

Accrued expenses are expenses incurred in a period but have yet to be recorded, and no money has been paid. Some examples include interest, tax, and salary expenses. Accrued expenses result from the same factors as accrued revenues – in reality, an accrued expense in the records of one business is likely to be accrued revenue to another business. For example, the \$500 accrual of service revenue by the law firm in Scenario 2 is an accrued expense to the client who received the legal service.

Accrued expenses adjusting entries are necessary to record the obligations that exist (liabilities) at the end of the reporting period and to recognise the expenses that apply to the current accounting period. In general, an adjusting entry for accrued expenses results in an increase (a debit) to an expense account and an increase (a credit) to a liability account.

For example, many utility companies bill their customers once a month or every three months and the bills usually relate to utility consumption for the prior's month / quarter. Thus an adjusting entry is needed during the month to show utility expenses incurred but unrecorded and unpaid at the end of the month.

Let's say Barangaroo Construction consumes \$5000 of electricity in July. They receive the electricity bill on 31 July with payment required on 28 August. Barangaroo construction closes its books on 31 July. Because the accrual basis requires that expenses be recorded in the period in which they are incurred, Barangaroo must record the \$5000 of expense on 31 July with the following adjusting journal entry:

31 Jul	DR Electricity expense	\$5000
	CR Electricity Payable	\$5000
	(To record electricity incurred in July)	

The preceding journal entry increases the Electricity expense account for the \$5000 of electricity incurred during the month of July and increases the Electricity Payable account for the same since it is owing its utility provider \$5000. Thus, equity is decreasing and liabilities are increasing, with the following updated ledger balances after posting the adjusting entry:

Electricity expense		Electricity Payable	
	5000		5000
Bal	5000	Bal	5000

When Barangaroo eventually pays the electricity bill on 28th August, the following entry is made in the accounting system:

28 Aug	DR Electricity Payable	\$5000
	CR Cash	\$5000
	(To record payment of electricity bill)	

The entry decreases the Cash account for the \$5000 paid to the utility provider and decreases the liability (Electricity Payable) account by the same amount. No expenses is recorded as it was already recorded in the prior period when the expense was incurred. Thus both liabilities and assets are decreasing, with the following T-accounts, assuming an opening cash balance of \$10000 prior to entry:

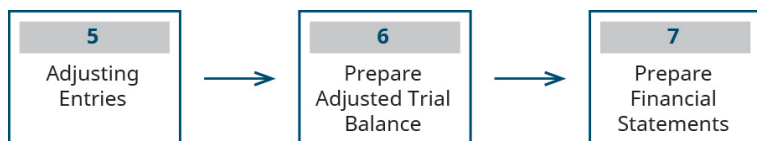
Electricity Payable		Cash	
	5000	O/Bal	10000
5000			5000
Bal	0	Bal	5000

Summary of adjusting journal entries

Important information on each of the four major types of adjusting entries are summarised in the table below. Take some time to study and analyse the adjusting entries. Note that each adjusting entry affects one revenue/expense (income) account and one balance sheet account.

Scenario	Explanation	Entry before period end	Adjusting entry at period end	Entry after period end
Revenue				
Unearned	When cash is received before revenue is earned	DR Cash CR Liability	DR Liability CR Revenue	-
Accrued	When cash is received after revenue is earned	-	DR Receivable CR Revenue	DR Cash CR Receivable
Expense				
Prepaid	When cash is paid before expenses is incurred	DR (Prepaid) Asset CR Cash	DR Expense CR (Prepaid) Asset	-
Accrued	When cash is paid after expense is incurred	-	DR Expense CR Payable	DR Payable CR Cash

In the next section, we explore these four major adjustments specifically to Kids Learn Online (KLO) – introduced in Chapter 2 – and show how these entries affect Steps 5, 6 and 7 in the accounting cycle: record adjusting entries (journalising and posting), prepare an adjusted trial balance, and prepare the financial statements respectively (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license).



As we progress through these steps, we will explore why the trial balance in this phase of the accounting cycle is referred to as an “adjusted” trial balance.

3.3 Record and post adjusting journal entries and prepare an adjusted trial balance and financial statements

RINA DHILLON; MITCHELL FRANKLIN; PATTY GRAYBEAL; AND
DIXON COOPER

To illustrate the process of making adjusting journal entries from a trial balance and then preparing an adjusted trial balance, the Kids Learn Online (KLO) example from Chapter 2 will be continued. As a result of the business transactions entered into by KLO, the following unadjusted trial balance was prepared (this is taken from [Chapter 2](#)):

Kids Learn Online (KLO) Trial Balance Current month		
	Debit	Credit
Cash	\$23600	
Equipment	3500	
Accounts Receivable	5500	
Accounts Payable		\$3500
Unearned Revenue		4000
Share Capital		20000
Revenue		<u>5500</u>
Electricity Expense	300	
Dividends	<u>100</u>	
Total	\$33000	\$33000

Notice that it is an 'unadjusted' trial balance because adjusting entries have yet to be made. In addition to these accounts and balances, the following information was available on the last day of the month:

- (1) KLO developed a quizlet app for the customer who paid \$4000 at the beginning of the month
- (2) KLO developed the first half (50%) of an app. The other half of the app will be developed mid-next month. The customer has agreed to pay \$3000 for the whole app.
- (3) At the beginning of the month, KLO purchased an annual professional indemnity insurance for \$3600
- (4) KLO's daily payroll is \$1000 a day (5 day work week). It pays its employees on Saturday for the previous Monday to Friday. The last day of the current month is a Friday.

Before we record the adjusting entries for KLO, you might question the purpose of more than one trial balance. There are several steps in the accounting cycle that require the preparation of a trial balance: step 4, preparing an unadjusted trial balance; step 6, preparing an adjusted trial balance; and step 9, preparing a post-closing trial balance. You might ask why can we not go from the unadjusted trial balance straight into preparing financial statements for users of these statements? What is the purpose of the adjusted trial balance? Does preparing more than one trial balance mean a mistake was made earlier in the accounting cycle? To answer these questions, let's first explore the (unadjusted) trial balance, and why some accounts have incorrect balances.

Why Some Accounts Have Incorrect Balances on the Trial Balance

The unadjusted trial balance may have incorrect balances in some accounts. Let's look at Unearned Revenue as an example. In transaction 3, KLO received \$4000 from a customer for an app to be developed. KLO recorded this as a liability because it received payment without providing the service. To clear this liability, the company must perform the service. Assume that as of the end of the month when the accounting books are closed, some of the app development services have been provided. Is the full \$4000 still a liability? Since a portion of the service was provided, a change to unearned revenue should occur. KLO needs to correct this balance in the Unearned Revenue account (this is illustrated below).

Having incorrect balances in Unearned Revenue on the unadjusted trial balance is not due to any error on the business' part. The business followed all of the correct steps of the accounting cycle up to this point. So why are the balances still incorrect?

Journal entries are recorded when an activity or event occurs that triggers the entry. Usually the trigger is from an original source. Recall that an original source can be a formal document substantiating a transaction, such as an invoice, purchase order, or employee time sheet. Not every business transaction produces an original source document that will alert the need to make an entry in the accounting system.

For unearned revenue, for example, when the business receives an advance payment from the customer for services yet provided, the cash received will trigger a journal entry. When the business provides the services for the customer, the customer will not send the business a reminder that revenue has now been earned. Situations such as these are why businesses need to make adjusting entries.

Before beginning adjusting entry examples for KLO, let's consider some rules governing adjusting entries:

- Every adjusting entry will have at least one income statement account and one balance sheet account.
- Cash will never be in an adjusting entry.
- The adjusting entry records the change in amount that occurred during the period.

What are “income statement” and “balance sheet” accounts? Income statement accounts include revenues and expenses. Balance sheet accounts are assets, liabilities, and equity accounts, since they appear on a balance sheet. The second rule tells us that cash can never be in an adjusting entry. This is true because paying or receiving cash triggers a journal entry. This means that every transaction with cash will be recorded at the time of the exchange. We will not get to the adjusting entries and have cash paid or received which has not already been recorded. If accountants find themselves in a situation where the cash account must be adjusted, the necessary adjustment to cash will be a *correcting entry* and not an adjusting entry.

With an adjusting entry, the amount of change occurring during the period is recorded. For example, for unearned revenues, the business would record how much of the revenue was earned during the period. Let us now turn our attention to recording the adjusting entries for KLO.

Recording Common Types of Adjusting Entries

Adjustment 1: Unearned revenue

KLO developed a quizlet app for the customer who paid \$4000 at the beginning of the month.

Analysis:

- The customer from Transaction 3 ([Chapter 2](#)) gave KLO \$4000

in advanced payment for services. By the end of month, KLO had completed the service (developed the quizlet app) and thus earned the whole \$4000 of the advanced payment.

- Since the unearned revenue is now earned, Unearned Revenue would decrease and as it is a liability account, it decreases on the debit side.
- KLO can now recognize the \$4000 as earned revenue. Revenue increases (credit) for \$4000.

DR Unearned revenue	\$4000
CR Revenue	\$4000
(To record revenue earned)	

The entry would be posted to the relevant T-accounts as follows (updating the initial T-accounts created in Chapter 2):

Unearned revenue	
	4000
4000	
	0

Revenue	
	5500
	4000
	9500

In the journal entry, Unearned Revenue has a debit of \$4000. This is posted to the Unearned Revenue T-account on the debit side (left side). You will notice there is already a credit balance in this account from the initial customer payment. The \$4000 credit (liability has a normal balance of credit) is subtracted from the \$4000 debit to get a final balance of \$0 (credit). Revenue has a credit balance of \$4000. This is posted to the Revenue T-account on the credit side (right side). You will notice there is already a credit balance in this account

from other revenue transactions during the month. The \$4000 is added to the previous \$5500 balance in the account to get a new final credit balance of \$9500.

Impact on the financial statements: Unearned revenue is a liability account and will decrease total liabilities and equity by \$4000 on the balance sheet. Revenue will increase overall revenue on the income statement by \$4000, which increases net income.

Adjustment 2: Accrued revenue

KLO developed the first half (50%) of an app. The other half of the app will be developed mid-next month. The customer has agreed to pay \$3000 for the whole app.

Analysis:

- KLO has developed the first half of an app (i.e. provided 50% of a service). The unadjusted trial balance will not reflect this because KLO has not issued an invoice to the customer so an adjusting journal entry is needed to adjust receivables and revenues up.
- KLO can recognize the \$1500 ($\$3000 \times 50\%$) as revenue. Revenue increases (credit) for \$1500.
- The other half of the service is not provided yet so the revenue cannot be recognised yet. However as the customer has agreed to pay \$3000 for the whole app (i.e. service), there is an outstanding receivable of \$1500 ($\$3000 - \1500). Receivable is an asset, increases (debit) for \$1500. Note that the customer has not paid the \$3000 yet thus there is no impact on cash.

DR Accounts Receivable	\$1500
CR Revenue	\$1500
(To record revenue earned)	

The entry would be posted to the relevant T-accounts as follows (updating the initial T-accounts created in Chapter 2):

Accounts Receivable	
5500	
<u>1500</u>	
7000	

Revenue	
	5500
	4000
	<u>1500</u>
	11000

In the journal entry, Accounts Receivable has a debit of \$1500. This is posted to the Accounts Receivable T-account on the debit side (left side). You will notice there is already a debit balance in this account from Transaction 4 in Chapter 2. The \$1500 debit is added to the \$5500 debit to get a final balance of \$7000 (debit). Revenue has a credit balance of \$1500. This is posted to the Revenue T-account on the credit side (right side). You will notice there is already a credit balance in this account from other revenue transactions during the month and the \$4000 from adjustment 1 above. The \$1500 is added to the previous \$9500 balance in the account to get a new final credit balance of \$11000.

Impact on the financial statements: Accounts Receivable is an asset account and will increase total assets by \$1500 on the balance sheet. Revenue will increase overall revenue on the income statement by \$1500, which increases net income.

Adjustment 3: Prepaid expense

At the beginning of the month, KLO purchased an annual professional indemnity insurance for \$3600.

Analysis:

- KLO has paid in advance \$3600 for insurance. With this payment KLO has not received the benefits of the insurance yet and thus this future benefits that they will receive should

be recognised as an asset in the account Prepaid expense. Prepaid expense would increase and as it is an asset account, it increases on the debit side.

- By the end of month, KLO has received one month's worth of insurance coverage and thus incurred \$300 ($3600 \times 1/12$) of insurance expense. KLO can now recognise this expense as insurance expense. Expense increases (debit) for \$300.
- With the recognition of the expense, there is also a reduction of future benefits related to the insurance coverage (we have received this benefit already) and thus prepaid expense needs to be reduced by \$300 to reflect this. Prepaid expense (asset) decreases on the credit side by \$300.

DR Prepaid Expense	\$3600
CR Cash	\$3600
(To record purchase of professional indemnity insurance)	
DR Insurance expense	\$300
CR Prepaid expense	\$300
(To record insurance expense incurred in current month)	

The entry would be posted to the relevant T-accounts as follows (updating the initial T-accounts created in Chapter 2):

Prepaid expense	Insurance expense	Cash
3600	300	20000
	300	300
3300		4000
		3600
		20000

In the journal entry, Prepaid expense has a debit of \$3600. This

is posted to the Prepaid expense T-account on the debit side (left side). As KLO has incurred one month of insurance expense, the prepaid expense account must be reduced to reflect the reduction in future benefits related to the prepayment, with \$300 posted on the credit side (right side) to reduce the account by the amount of insurance expense. This \$300 credit is deducted from the \$3600 debit (asset accounts have normal debit balances) to get a final debit balance of \$3300.

Expense has a debit balance of \$300. This is posted to the Insurance expense T-account on the debit side, with a final debit balance of \$300. The cash payment for the insurance policy will be posted to the Cash T-account on the credit side as a payment reduces the Cash (asset). You will notice there is already a debit balance of \$23600 in this account from other cash transactions during the month. The \$3600 is deducted from this previous \$23600 balance in the account to get a new final debit balance of \$20000.

Impact on the financial statements: Prepaid expense is an asset account, and will increase total assets by \$3300 (\$3600-\$300) on the balance sheet. Cash is also an asset account, and will reduce total assets by \$3600. Insurance expense will increase overall expenses on the income statement by \$300, which reduces net income. Notice that the net effect of this adjustment on the balance sheet is also \$300.

Adjustment 4: Accrued expense

KLO's daily payroll is \$1000 a day (5 day work week). It pays its employees on Saturday for the previous Monday to Friday. The last day of the current month is a Friday.

Analysis:

- Salaries have accumulated for the week and will not be paid in the current period. Since the salaries expense occurred within the accounting period, the expense recognition principle requires recognition in the accounting period.

- Salaries Expense is an expense account that is increasing (debit) for \$5000.
- Since KLO has not yet paid salaries for this time period, the business owes the employees this money. This creates a liability for KLO. Salaries Payable increases (credit) for \$5000.

DR Salary Expense	\$5000
CR Salary Payable	\$5000
(To record salaries incurred during current month)	

The entry would be posted to the relevant T-accounts as follows (updating the initial T-accounts created in Chapter 2):

Salary expense	Salary Payable
5000	5000
5000	5000

In the journal entry, Salaries Expense has a debit of \$5000. This is posted to the Salaries Expense T-account on the debit side (left side). Salaries Payable has a credit balance of \$5000. This is posted to the Salaries Payable T-account on the credit side (right side). As there were no previous transactions related to these accounts, the final balances are \$5000 debit and \$5000 credit respectively.

Impact on the financial statements: Salaries Payable is a liability account and will increase total liabilities and equity by \$5000 on the balance sheet. Salaries expense will increase overall expenses on the income statement, which decreases net income.

Let's now summarise the transactions and make sure the accounting

equation is balanced by collating a summary of all the T-accounts and checking it against the accounting equation.

T-accounts Summary

Once all adjusting journal entries have been posted to T-accounts, we can check to make sure the accounting equation remains balanced. Following is a summary showing the T-accounts for Kids Learn Online including adjusting entries:

Assets		=	Liabilities	+	Equity																											
<table><tr><td>Cash</td><td>Equipment</td></tr><tr><td>20000</td><td>3500</td></tr><tr><td>4000</td><td>3500</td></tr><tr><td></td><td></td></tr><tr><td></td><td>3600</td></tr><tr><td>20000</td><td></td></tr></table>	Cash	Equipment	20000	3500	4000	3500				3600	20000			<table><tr><td>Accounts Payable</td></tr><tr><td>3500</td></tr><tr><td>3500</td></tr><tr><td></td></tr><tr><td></td></tr><tr><td></td></tr></table>	Accounts Payable	3500	3500					<table><tr><td>Share Capital</td><td>Revenue</td></tr><tr><td>20000</td><td>5500</td></tr><tr><td>20000</td><td>4000</td></tr><tr><td></td><td>1500</td></tr><tr><td></td><td>11000</td></tr></table>	Share Capital	Revenue	20000	5500	20000	4000		1500		11000
Cash	Equipment																															
20000	3500																															
4000	3500																															
	3600																															
20000																																
Accounts Payable																																
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Share Capital	Revenue																															
20000	5500																															
20000	4000																															
	1500																															
	11000																															
<table><tr><td>Accounts Receivable</td><td>Prepaid expense</td></tr><tr><td>5500</td><td>3000</td></tr><tr><td>1500</td><td></td></tr><tr><td>7000</td><td>300</td></tr><tr><td></td><td>3300</td></tr></table>	Accounts Receivable	Prepaid expense	5500	3000	1500		7000	300		3300		<table><tr><td>Salary Payable</td></tr><tr><td>5000</td></tr><tr><td>5000</td></tr><tr><td></td></tr><tr><td></td></tr><tr><td></td></tr></table>	Salary Payable	5000	5000					<table><tr><td>Electricity Expense</td><td>Insurance Expense</td></tr><tr><td>300</td><td>300</td></tr><tr><td>300</td><td>300</td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr></table>	Electricity Expense	Insurance Expense	300	300	300	300						
Accounts Receivable	Prepaid expense																															
5500	3000																															
1500																																
7000	300																															
	3300																															
Salary Payable																																
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Electricity Expense	Insurance Expense																															
300	300																															
300	300																															
		<table><tr><td>Unearned revenue</td></tr><tr><td>4000</td></tr><tr><td>4000</td></tr><tr><td></td></tr><tr><td></td></tr><tr><td>0</td></tr></table>	Unearned revenue	4000	4000			0		<table><tr><td>Salary Expense</td><td>Dividends</td></tr><tr><td>5000</td><td>100</td></tr><tr><td>5000</td><td>100</td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr></table>	Salary Expense	Dividends	5000	100	5000	100																
Unearned revenue																																
4000																																
4000																																
0																																
Salary Expense	Dividends																															
5000	100																															
5000	100																															

The sum on the assets side of the accounting equation equals \$33800, found by adding together the final balances in each asset account (20000 + 3500 + 7000 + 3300). To find the total on the liabilities and equity side of the equation, we need to find the difference between debits and credits. Credits on the liabilities and equity side of the equation total \$39500 (3500 + 5000 + 0 + 20000 + 11000). Debits on the liabilities and equity side of the equation total \$5700 (300 + 300 + 5000 + 100). The difference \$39500 – \$5700 = \$33800. Thus, the equation remains balanced with \$33800 on the asset side and \$33800 on the liabilities and equity side. Now that we have the T-account information, and have confirmed the accounting

equation remains balanced, we can create the adjusted trial balance in our sixth step in the accounting cycle.

Preparing an adjusted trial balance

Once all of the adjusting entries have been posted to the general ledger, we are ready to start working on preparing the adjusted trial balance. Preparing an adjusted trial balance is the sixth step in the accounting cycle. An adjusted trial balance is a list of all accounts in the general ledger, including adjusting entries, which have nonzero balances. This trial balance is an important step in the accounting process because it helps identify any computational errors throughout the first five steps in the cycle.

As with the unadjusted trial balance, transferring information from T-accounts to the adjusted trial balance requires consideration of the final balance in each account. If the final balance in the ledger account (T-account) is a debit balance, you will record the total in the left column of the trial balance. If the final balance in the ledger account (T-account) is a credit balance, you will record the total in the right column.

Once all ledger accounts and their balances are recorded, the debit and credit columns on the adjusted trial balance are totaled to see if the figures in each column match. The final total in the debit column must be the same dollar amount that is determined in the final credit column.

Let's now take a look at the adjusted T-accounts and adjusted trial balance for KLO to see how the information is transferred from these T-accounts to the adjusted trial balance.

Kids Learn Online (KLO) Adjusted Trial Balance Current month		
	Debit	Credit
Cash	20000	
Equipment	3500	
Accounts Receivable	7000	
Prepaid Expense	3300	
Accounts Payable		3500
Salary Payable		5000
Unearned Revenue		0
Share Capital		20000
Revenue		11000
Electricity Expense	300	
Insurance expense	300	
Salary Expense	5000	
Dividends	100	
Total	<u>\$39500</u>	<u>\$39500</u>

Once all balances are transferred to the adjusted trial balance, we sum each of the debit and credit columns. The debit and credit columns both total \$39500, which means they are equal and in balance. Why Is the Adjusted Trial Balance So Important? As you have learned, the adjusted trial balance is an important step in the accounting process. But outside of the accounting department, why is the adjusted trial balance important to the rest of the organisation? An employee or customer may not immediately see the impact of the adjusted trial balance on his or her involvement with the business.

The adjusted trial balance is the key point to ensure all debits and credits are in the general ledger accounts balance before information is transferred to financial statements. Financial statements drive decision-making for a business. Budgeting for

employee salaries, revenue expectations, sales prices, expense reductions, and long-term growth strategies are all impacted by what is provided on the financial statements. So if the business skips over creating an adjusted trial balance to make sure all accounts are balanced or adjusted, it runs the risk of creating incorrect financial statements and making important decisions based on inaccurate financial information.

Once the adjusted trial balance has been prepared, we are ready to prepare the financial statements. Preparing financial statements is the seventh step in the accounting cycle. Let's look at this step closely.

Preparing financial statements

To prepare the financial statements, a business will look at the adjusted trial balance for account information. From this information, the business will begin constructing each of the statements, beginning with the income statement. Income statements will include all revenue and expense accounts. The statement of change in equity will include beginning retained earnings, any net income (loss) (found on the income statement), and dividends. Lastly, the balance sheet is going to include assets, liabilities, and equity accounts, including ending retained earnings and shareholder capital.

Income Statement

An income statement shows the business' financial performance for a given period of time. When preparing an income statement, revenues will always come before expenses in the presentation. For KLO, the following is its current month Income Statement, after adjusting entries.

Kids Learn Online (KLO) Income Statement Current month	
Revenue	11000
Electricity expense	300
Insurance expense	300
Salary expense	5000
Total expenses	5600
Profit	5400

Total revenues are \$11000, while total expenses are \$5600. Total expenses are subtracted from total revenues to get a net income or profit of \$5400. If total expenses were more than total revenues, KLO would have a net loss rather than a net income. This net income figure is used to prepare the statement of retained earnings.

Statement of Change in Equity

The statement of change in equity shows how the equity (or value) of the business has changed over a period of time. It is prepared second to determine the ending retained earnings balance for the period and is prepared before the balance sheet because the ending retained earnings amount is a required element of the balance sheet. The following is the Statement of Change in Equity for KLO:

Kids Learn Online (KLO) Statement of change in equity Current month	
Retained earning, Beginning of month	0
+ Profit	5400
- Dividends	100
Retained earning, Closing of month	5300

Net income information is taken from the income statement, and dividends information is taken from the adjusted trial balance. The statement of change in equity always leads with beginning retained earnings. Beginning retained earnings carry over from the previous period's ending retained earnings balance. Since this is the first month of business for KLO, there is no beginning retained earnings balance. Notice the net income of \$5400 from the income statement is carried over to the statement of change in equity. Dividends are taken away from the sum of beginning retained earnings and net income to get the ending retained earnings balance of \$5300 for the current month. This ending retained earnings balance is transferred to the balance sheet.

Balance Sheet

The balance sheet is the third statement prepared after the statement of change in equity and lists what the business owns (*assets*), what it owes (*liabilities*), and what the shareholders control (*equity*) on a specific date. Remember that the balance sheet represents the accounting equation, where assets equal liabilities

plus stockholders' equity. The following is the Balance Sheet for KLO:

Kids Learn Online (KLO) Balance Sheet Current month	
Cash	20000
Equipment	3500
Accounts Receivable	7000
Prepaid Expense	3300
Total assets	33800
Accounts Payable	3500
Unearned revenue	0
Salary Payable	5000
Share Capital	20000
Retained earnings	5300
Total liabilities and equity	33800

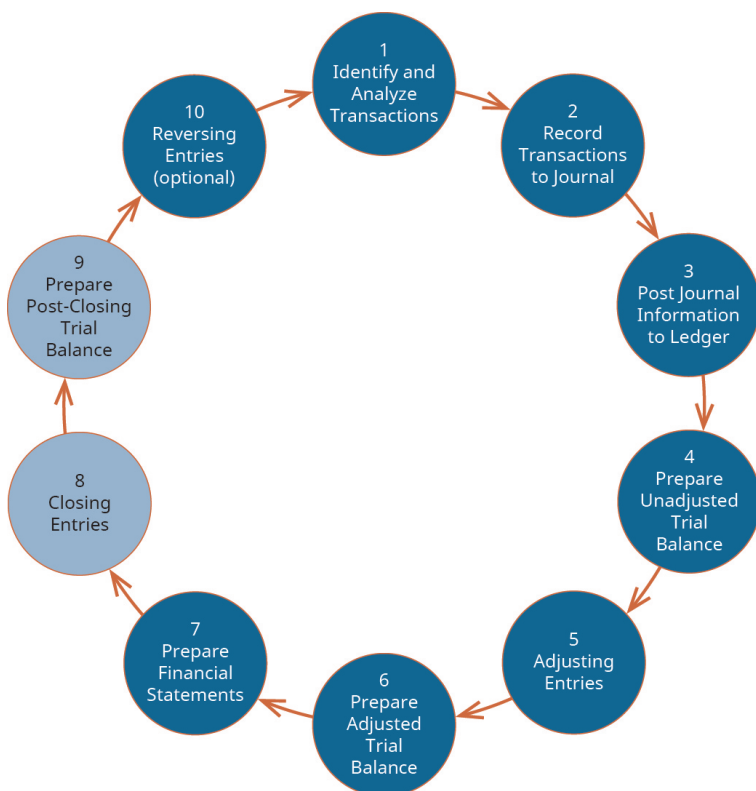
Ending retained earnings information is taken from the statement of change in equity, and asset, liability, and shareholder capital information is taken from the adjusted trial balance. The accounting equation is balanced, as shown on the balance sheet, because total assets equal \$33800 as do the total liabilities and equity. One important accounting principle to remember is that just as the accounting equation ($\text{Assets} = \text{Liabilities} + \text{Owner's equity}$) must be equal, it must remain equal after you make adjusting entries.

In the next section, we look at the final step of the accounting cycle: the closing process.

3.4 Purpose of the closing process and prepare closing entries

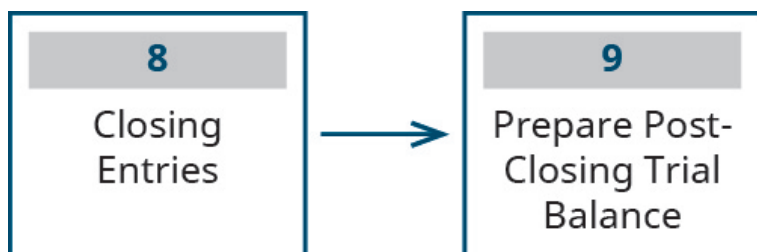
RINA DHILLON; MITCHELL FRANKLIN; PATTY GRAYBEAL; AND
DIXON COOPER

In this section, we explore the final steps (steps 8 and 9) of the accounting cycle, the closing process. We do not cover step 10, reversing entries. This is an optional step in the accounting cycle that you will learn about in future courses should you decide to do an accounting major/minor. Steps 1 through 4 were covered in [Chapter 2](#) and Steps 5 through 7 were covered in Section 3.3.



This process begins with journalising and posting the closing entries. These posted entries will then translate into a post-closing trial balance, which is a trial balance that is prepared after all of the closing entries have been recorded.

Final steps in the accounting cycle. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)



Introduction to the Closing Entries

After financial statements are prepared, businesses conduct the closing process. Businesses are required to close their books at the end of each accounting period. Closing entries prepare a company for the next accounting period by clearing any outstanding balances in certain accounts that should not transfer over to the next period. Closing, or clearing the balances, means returning the account to a zero balance. Having a zero balance in these accounts is important so a business can compare performance across periods, particularly with income. It also helps the business keep thorough records of account balances affecting retained earnings. Revenue, expense, and dividend accounts affect retained earnings and are closed so they can accumulate new balances in the next period. This transfer to retained earnings is required for three main reasons.

First, revenue, expense and dividend accounts are temporary accounts, which means they accumulate balances only for the current accounting period. After the period ends and the financial statements are generated, all temporary accounts must reset to zero for the start of the next accounting period.

Second, the closing process updates the retained earnings account to its correct end of period balance. Recall that the balance in the retained earnings comes from the statement of change in equity and not the adjusted trial balance. The transfer to retained earnings is the mechanism that updates the actual retained earnings account balance in the general ledger.

Lastly, the closing entries leave the revenue, expense and dividend accounts with zero balances to begin the next accounting period and transaction amounts that are entered in these temporary accounts relate only to the new accounting period. To further clarify this, balances are closed to ensure all revenues and expenses are recorded in the proper period and then start over the following period. The revenue and expense accounts should start at zero each period because we are measuring how much revenue is

earned and expenses incurred during the period. However, the cash balances, as well as the other balance sheet (permanent) accounts, are carried over from the end of a current period to the beginning of the next period.

For example, a store has an inventory account balance of \$100,000. If the store closed at 11:59 p.m. on January 31, 2022, then the inventory balance when it reopened at 12:01 a.m. on February 1, 2022, would still be \$100,000. The balance sheet accounts, such as inventory, would carry over into the next period, in this case February 2022. The accounts that need to start with a clean or \$0 balance going into the next accounting period are revenue, expense, and any dividends from January 2022. To determine the income (profit or loss) from the month of January, the store needs to close the income statement information from January 2022. Zeroing January 2022 would then enable the store to calculate the income (profit or loss) for the next month (February 2022), instead of merging it into January's income and thus providing invalid information solely for the month of February.

The closing process is carried out with several journal entries, known as closing entries. These entries, which are made in the journal and posted to the ledger, eliminates the balances in all temporary accounts and transfer those balances to the retained earnings account. The usual practice is one entry is made for revenue, one for expenses and a final entry for dividends. Thus, three entries usually occur during the closing process. The first entry closes revenue accounts to the retained earnings account. The second entry closes expense accounts to the retained earnings account. The third entry closes the dividend account to the retained earnings account. The information needed to prepare closing entries comes from the adjusted trial balance.

To illustrate, the temporary accounts from Kids Learn Online (KLO)'s adjusted trial balance is closed below through the eighth step in the accounting cycle, which includes journalising and posting the entries to the ledger.

Journalising and Posting Closing Entries

KLO's adjusted trial balance for the current month is presented below and the temporary accounts are highlighted to demonstrate how these accounts will be closed.

Kids Learn Online (KLO) Adjusted Trial Balance Current month		
	Debit	Credit
Cash	20000	
Equipment	3500	
Accounts Receivable	7000	
Prepaid Expense	3300	
Accounts Payable		3500
Salary Payable		5000
Unearned Revenue		0
Share Capital		20000
Revenue		11000
Electricity Expense	300	
Insurance expense	300	
Salary Expense	5000	
Dividends	100	
Total	<u>\$39500</u>	<u>\$39500</u>

The first entry requires revenue accounts to close to the retained earnings account. KLO has only one revenue account with a \$11000 credit balance. To eliminate that balance and transfer it to retained earnings account, the following closing entry is required:

DR Revenue	\$11000
CR Retained earnings	\$11000
(To close revenue account)	

The second entry requires expense accounts to close to the retained earnings account. KLO has three expense accounts with a total debit balance of \$5600 (300 + 300 + 5000). To eliminate that balance and transfer it to retained earnings account, the following closing entry is required:

DR Retained earnings	\$5600
CR Electricity expense	\$300
CR Insurance expense	\$300
CR Salary expense	\$5000
(To close expense accounts)	

Finally, the third entry requires dividends to close to the retained earnings account. Expense and dividend accounts are closed in a similar fashion. If dividends were not declared, closing entries would cease at this point. If dividends are declared, to get a zero balance in the dividends account, the entry will show a credit to dividends and a debit to retained earnings. KLO has \$100 of dividends with a debit balance on the adjusted trial balance and thus the closing entry will be as follows:

DR Retained earnings	\$100
CR Dividends	\$100
(To close dividends account)	

All three closing entries would be posted to the appropriate T-accounts as follows:

Retained earnings	Revenue	Electricity expense	Dividends
5800 11000	11000 11000	300 300	100 100
100	0	0	0
5300			

Insurance expense
300 300
0

Salary expense
5000 5000
0

Notice that after the closing entries are posted, all revenue, expense and dividend accounts have a zero balance and are now ready to begin the next accounting period. In addition, retained earnings has a \$5300 credit balance. This is the same figure found on the statement of change in equity and balance sheet prepared in the previous section. The statement of change in equity shows the period-ending retained earnings after the closing entries have been posted. When you compare the retained earnings ledger (T-account) to the statement of change in equity, the figures must match (i.e. the retained earnings account now has the correct balance at the end of the period). It is important to understand retained earnings is *not* closed out, it is only updated. Retained Earnings is the only account that appears in the closing entries that does not close.

Now that we have closed the temporary accounts, as a final check that all accounts have been closed properly, a new trial balance – called a post-closing trial balance – is prepared as part of step 9 in the accounting cycle.

Preparing a Post-closing trial balance

The ninth, and typically final, step of the process is to prepare a post-closing trial balance. The word “post” in this instance means “after.” You are preparing a trial balance *after* the closing entries are complete. Like all trial balances, the post-closing trial balance has the job of verifying that the debit and credit totals are equal. The post-closing trial balance has one additional job that the other trial balances do not have. The post-closing trial balance is also used to double-check that the only accounts with balances after the closing entries are permanent accounts. If there are any temporary accounts on this trial balance, you would know that there was an error in the closing process. This error must be fixed before starting the new period.

The process of preparing the post-closing trial balance is the same as you have done when preparing the unadjusted trial balance and adjusted trial balance. Only permanent account balances should appear on the post-closing trial balance. These balances in post-closing T-accounts are transferred over to either the debit or credit column on the post-closing trial balance. When all accounts have been recorded, total each column and verify the columns equal each other.

The post-closing trial balance for KLO is shown below:

Kids Learn Online (KLO) Post-closing Trial Balance Current month		
	Debit	Credit
Cash	20000	
Equipment	3500	
Accounts Receivable	7000	
Prepaid Expense	3300	
Accounts Payable		3500
Salary Payable		5000
Unearned Revenue		0
Share Capital		20000
Retained Earnings		5300
Total	<u>\$33800</u>	<u>\$33800</u>

Notice that only permanent accounts are included. All temporary accounts with zero balances were left out of this trial balance. Unlike previous trial balances, the retained earnings figure is included, which was obtained through the closing process.

At this point, the accounting cycle is complete, and the business can begin a new cycle in the next accounting period. It is worth mentioning that there is one step in the process that a business may or may not include, step 10, reversing entries. Reversing entries reverse an adjusting entry made in a prior period at the start of a new period. We do not cover reversing entries in this chapter, but you might approach the subject in future accounting courses.

Concluding Remarks: The Importance of Understanding How to Complete the Accounting Cycle

Many students who enroll in an introductory accounting course do not plan to become accountants. They will work in a variety of jobs in the business field, including managers, sales, and finance. In a real company, most of the mundane work is done by computers. Accounting software can perform such tasks as posting the journal entries recorded, preparing trial balances, and preparing financial statements. Students often ask why they need to do all of these steps by hand in their introductory class, particularly if they are never going to be an accountant. It is very important to understand that no matter what your position, if you work in business you need to be able to read financial statements, interpret them, and know how to use that information to better your business. If you have never followed the full process from beginning to end, you will never understand how one of your decisions can impact the final numbers that appear on your financial statements. You will not understand how your decisions can affect the outcome of your business.

As mentioned previously, once you understand the effect your decisions will have on the bottom line on your income statement and the balances in your balance sheet, you can use accounting software to do all of the mundane, repetitive steps and use your time to evaluate the business based on what the financial statements show.

Test Your Knowledge



An interactive H5P element has been excluded from this version of the text. You can view it online here:

<https://oer.pressbooks.pub/utsaccounting2/?p=256#h5p-17>



An interactive H5P element has been excluded from this version of the text. You can view it online here:

<https://oer.pressbooks.pub/utsaccounting2/?p=256#h5p-18>

Additional Resources (optional)

Several internet sites can provide additional information for you on adjusting entries. One very good site where you can find many tools to help you study this topic is [Accounting Coach](#) which provides a tool that is available to you free of charge. Visit the website and take a [quiz on accounting basics](#) to test your knowledge.

If you like quizzes, crossword puzzles, fill-in-the-blank, matching exercise, and word scrambles to help you learn the material in this course, go to [My Accounting Course](#) for more. This website covers a variety of accounting topics including financial accounting basics, accounting principles, the accounting cycle, and financial statements, all topics introduced in the early part of this textbook.

Chapter 3 Practice Questions

RINA DHILLON

Practice Questions

1. Under accrual accounting:

-
- a. revenues are recorded when they are received and expenses are recorded when they are paid
 - b. revenues are recorded when they are received and expenses are recorded when they are incurred
 - c. revenues are recorded when they are earned and expenses are recorded when they are incurred
 - d. revenues are recorded when they are earned and expenses are recorded when they are paid
-

2. Revenues and expenses are recognised in the same accounting period that cash receipts and payments occur under the:

-
- a. cash basis of accounting
 - b. accrual basis of accounting
 - c. adjusting method of accounting
 - d. finance method of accounting
-

3. MoonTrack is a local package delivery service. Conceptually, MoonTrack should recognise revenue from its package delivery service at the date the:

-
- a. customer places the order
 - b. packages are delivered
 - c. invoice is mailed to the customer
 - d. customer's payment is received
-

4. Which one of the following is an example of unearned revenue?

-
- a. Sales made to customers on credit
 - b. Revenue earned but not yet recorded
 - c. Payments received prior to providing the services to customers
 - d. Cash sales made to customers
-

5. Clarks Pty Ltd received advance payments from customers during January 2022 of \$240 000. At 30 June 2022, \$20 000 of the advance payments still had not been earned. After the adjustments are recorded and posted at 30 June 2022, the balances in the unearned service revenue and service revenue accounts will be:

-
- a. Unearned service revenue: \$20 000, Service revenue accounts: \$220 000
 - b. Unearned service revenue: \$220 000, Service revenue accounts: \$20 000
 - c. Unearned service revenue: \$0, Service revenue accounts: \$240 000
 - d. Unearned service revenue: \$240 000, Service revenue accounts: \$0
-

6. Adjusting journal entries are made at the end of the period when:

-
- a. The cash basis of accounting is used for all accounting periods
 - b. Cash receipts and payments occur before or after the point in time when revenues and expenses should be recognised under the accrual basis of accounting
 - c. Management reports its adjustments on the statement of cash flows
 - d. The company reports revenue in the same period cash is collected
-

7. What happens to the accounting equation when the adjustment is recorded to recognise earned revenue previously recorded as unearned revenue?

-
- a. Assets increase and liabilities increase
 - b. Liabilities decrease and shareholders' equity increases
 - c. Assets decrease and liabilities decrease
 - d. Shareholders' equity increases and decreases by the same amount
-

8. Dhillon Incorporated recorded salary expense of \$120 000 in the 2022 financial year. However, additional salaries of \$9000 had been earned, but not paid or recorded at 30 June 2022. After the adjustments are recorded and posted at 30 June 2022, the balances in the salaries expense and salaries payable accounts will be

-
- a. Salaries expense: \$129 000, Salaries payable \$9000
 - b. Salaries expense: \$120 000, Salaries payable \$0
 - c. Salaries expense: \$120 000, Salaries payable \$9000
 - d. Salaries expense: \$111 000, Salaries payable \$0
-

9. On 1 April 2022, Tesla paid \$90000 rent in advance. The rent per month is \$10000. If Tesla's accounting period ends on 30 June 2022, what will be reported on the financial statements?

-
- a. Prepaid rent of \$60000 on its balance sheet at 30 June 2022
 - b. Prepaid rent of \$90000 on its balance sheet at 30 June 2022
 - c. Rent expense of \$90000 on its 2022 income statement
 - d. Rent revenue of \$60000 on its 2022 income statement
-

10. Which of the following adjusting entries involves the cash account?

-
- a. Unearned revenues
 - b. Accrued expenses
 - c. Deferred liabilities
 - d. None of these answers is correct
-

11. Which of the following does not occur during the closing process?

-
- a. Journal entries are made to return the balance in all temporary accounts to zero
 - b. Journal entries are made to transfer the net income or loss to retained earnings
 - c. Journal entries are made to return the balance in all permanent accounts to zero
 - d. Journal entries are made to transfer the dividends to retained earnings
-

12. Which of the following entries properly closes a temporary account?

Retained earnings 40000

- a. Service revenue 40000

Dividends 400

- b. Retained earnings 400

Depreciation expense 3200

- c. Retained earnings 3200

Retained earnings 800

- d. Salaries expense 800
-

13. Hair and Nail Salon Pty Ltd sells six-month subscriptions to its monthly magazine. On 1 January, they receive a total of \$600 for 10 subscriptions. To record this transaction, cash was debited for \$600 and unearned subscription revenue was credited for \$600. As of 31 January, the business has provided one month of magazines and has earned one month of revenue. What adjusting entry is necessary at 31 January?

Unearned subscription revenue 600

- a. Subscription revenue 600

Subscription revenue 100

- b. Unearned subscription revenue 100

Unearned subscription revenue 100

- c. Subscription revenue 100

Subscription revenue 600

- d. Unearned subscription revenue 600
-

14. Ponds Corporation makes adjusting entries monthly. As of 31 March, the general ledger shows prepaid rent as a debit

balance of \$6000. Rent is charged at a rate of \$1200. No entry for rent has been recorded in the month of March. What adjusting entry is necessary at 31 March?

- Prepaid rent 5000

a. Cash 5000

Rent expense 1200

b. Cash 1200

Rent expense 1200

c. Prepaid rent 1200

Prepaid rent 6000

d. Prepaid rent 6000

Rent expense 6000

15. Suppose that a business purchases a six-month general liability insurance policy for \$36000 on 1 January. To record this transaction, the company debits 'prepaid insurance' for \$36000 and credits 'cash' for \$36000. As of 31 January, the company has consumed one month of insurance. What adjusting entry is necessary at 31 January?

- Insurance expense 3000

a. Prepaid insurance 3000

Insurance expense 6000

b. Cash 6000

Prepaid insurance 36000

c. Insurance expense 36000

Insurance expense 6000

d. Prepaid insurance 6000

**Solutions: (1) c; (2) a; (3) b; (4) c; (5) a; (6) b; (7) b; (8) a; (9) a; (10) d;
(11) c; (12) d; (13) c; (14) c; (15) d**

PART IV

CHAPTER 4: ACCOUNTING FOR DIFFERENT BUSINESS STRUCTURES

Introduction

This chapter introduces the three forms of business – sole proprietorship, partnership and company – that we see in society, providing a description of the characteristics of each form of business structure and how equity is recorded and reported in each business structure. It then examines the accounting for partnerships and shareholders' equity. This is followed by an examination of how the corporate form of business account for issuing shares and cash or share dividends distributed on those shares. Lastly interesting aspects of shares such as share buybacks are explored.

Chapter outline

After reading this chapter, you should be able to:

1. Explain the three major forms of business structures
2. Describe the characteristics of each form of business structure
3. Describe the characteristics of equity and how it is recorded and reported in each business structure
4. Describe various business transactions that can happen in a

partnership

5. Describe various business transactions that can happen in a company
6. Understand how cash and share dividends are issued
7. Describe the characteristics of share buybacks and how they are recorded and reported.

4.1 Three major forms of business structures

RINA DHILLON AND ADAPTED BY STEPHEN SKRIPAK WITH RON POFF

The Ice Cream Men

Who would have thought it? Two ex-hippies with strong interests in social activism would end up starting one of the best-known ice cream companies in the world—Ben & Jerry's. Perhaps it was meant to be. Ben Cohen (the “Ben” of Ben & Jerry's) always had a fascination with ice cream. As a child, he made his own mixtures by smashing his favorite cookies and candies into his ice cream. But it wasn't until his senior year in high school that he became an official “ice cream man,” happily driving his truck through neighbourhoods filled with children eager to buy his ice cream pops.



Figure 4.1: Ben Cohen and Jerry Greenfield

In the meantime, Jerry Greenfield (the “Jerry” of Ben & Jerry’s) was following a similar path. He majored in pre-med at Oberlin College (US) in the hopes of one day becoming a doctor. But he had to give up on this goal when he was not accepted into medical school. On a positive note, though, his university education steered him into a more lucrative field: the world of ice cream making. He got his first peek at the ice cream industry when he worked as a scooper in the student cafeteria at Oberlin. So, 14 years after they first met on the junior high school track team, Ben and Jerry reunited and decided to go into ice cream making full time. They moved to Burlington, Vermont (US) —a college town in need of an ice cream parlour—and completed a \$5 correspondence course on making ice cream. With their life savings of \$8,000 and \$4,000 of borrowed funds they set up an ice cream shop in a made-over petrol station on a busy street corner in Burlington.

The next big decision was which form of business

ownership was best for them. This chapter introduces you to their options.

Factors to Consider

If you're starting a new business, you have to decide which legal form of ownership is best for you and the strategy you plan on pursuing. Do you want to own the business yourself and operate as a sole proprietorship or trader? Or, do you want to share ownership, operating as a partnership or a company? Before we discuss the advantages and disadvantages of these three main types of ownership, let's address some of the questions that you'd probably ask yourself in choosing the appropriate legal form for your business.

1. In setting up your business, do you want to minimise the costs of getting started? Do you hope to avoid complex government regulations and reporting requirements?
2. How much control would you like? How much responsibility for running the business are you willing to share? What about sharing the profits?
3. Do you want to avoid special taxes?
4. Do you have all the skills needed to run the business?
5. Are you likely to get along with your co-owners over an extended period of time?
6. Is it important to you that the business survives you?
7. What are your financing needs and how do you plan to finance your company?
8. How much personal exposure to liability are you willing to accept? Do you feel uneasy about accepting personal liability for the actions of fellow owners?

No single form of business structure will give you

everything you desire. You'll have to make some trade-offs given that each structure has both advantages and disadvantages. Your job is to decide which one offers the features that are most important to you. In the following section, we'll compare three business structures – namely sole proprietorship, partnership and company – on these eight characteristics.

4.2 Characteristics of each form of business structure

RINA DHILLON AND ADAPTED BY STEPHEN SKRIPAK WITH RON POFF

Sole Proprietorship

In a sole proprietorship or a sole trader, as a single owner, you have complete control over your business. You make all important decisions and are generally responsible for all day-to-day activities. The cost of establishing and running a sole trading business is also low. In exchange for assuming all the risk of failure and reaping all the rewards of success, you get all the income earned by the business. The income from the business is reported on the owner's personal tax return, along with other income like salaries.

For many people, however, being a sole trader is not suitable. The flip side of enjoying complete control is having to supply all the different talents that may be necessary to make the business a success. And when you are gone, the business dissolves. You also have to rely on your own resources for financing; in effect, you are the business and any money borrowed by the business is loaned to you personally. Even more important, the sole proprietor bears unlimited liability for any losses incurred by the business. The principle of unlimited personal liability means that if the business incurs a debt or suffers a disaster (say, getting sued for causing an injury to someone), the owner is personally liable. As a sole proprietor, you put your personal assets (your bank account, your car, sometimes even your home) at risk for the sake of your business. You can lessen your risk with insurance, yet your liability exposure can still be substantial. Given that Ben and Jerry decided

to start their ice cream business together (and therefore the business was not owned by only one person), they could not set their company up as a sole proprietorship.

Partnership

A partnership is a business that is formed when two or more proprietors join together to own a business. Though the vast majority of partnerships are small, some are quite large. For example, the big four public accounting firms are partnerships. There are about 2900 partners between the big four as of July 2021, with Deloitte remaining the largest partnership – 900 partners at the start of the 2021 financial year, then PwC – 777, EY – 638 and KPMG – 604 ([Tadros and Wootton, 2022](#)). Setting up a partnership is more complex than setting up a sole proprietorship, but it is still relatively easy and inexpensive. The cost varies according to size and complexity. It's possible to form a simple partnership without the help of a lawyer or an accountant, though it's usually a good idea to get professional advice. Professionals can help you identify and resolve issues that may later create disputes among partners.

The Partnership Agreement

The impact of disputes can be lessened if the partners have executed a well-planned partnership agreement that specifies everyone's rights and responsibilities. The agreement might provide such details as the following:

- Amount of cash and other contributions to be made by each partner
- Division of partnership income (or loss)

- Partner responsibilities—who does what
- Conditions under which a partner can sell an interest in the business
- Conditions for dissolving the partnership
- Conditions for settling disputes

A major problem with partnerships, as with sole proprietorships, is unlimited liability: in this case, each partner is personally liable not only for his or her own actions but also for the actions of all the partners. If your partner in an architectural business makes a mistake that causes a structure to collapse, the loss your business incurs impacts you just as much as it would him or her. And here's the really bad news: if the business doesn't have the cash or other assets to cover losses, you can be personally sued for the amount owed. In other words, the party who suffered a loss because of the error can sue you for your personal assets.

A partnership has several advantages over the sole proprietorship. First, it brings together a diverse group of talented individuals who share responsibility for running the business. Second, it makes financing easier: the business can draw on the financial resources of a number of individuals. The partners not only contribute cash to the business but can also use personal resources to secure bank loans. Finally, continuity need not be an issue because partners can agree legally to allow the partnership to survive if one or more partners die.

Still, there are some negatives. First, as discussed earlier, partners are subject to unlimited liability. Second, being a partner means that you have to share decision making, and many people aren't comfortable with that situation. Not surprisingly, partners often have differences of opinion on how to run a business, and disagreements can escalate to the point of jeopardising the continuance of the business. Third, in addition to sharing ideas, partners also share profits. This arrangement can work as long as all partners feel that they're being rewarded according to their efforts and accomplishments, but that isn't always the case. While

the partnership form of ownership is viewed negatively by some, it was particularly appealing to Ben Cohen and Jerry Greenfield. Starting their ice cream business as a partnership was inexpensive and let them combine their limited financial resources and use their diverse skills and talents.

Company

A company (also commonly known as corporation) differs from a sole proprietorship and a partnership because it is a legal entity that is entirely separate from the parties who own it. It can enter into binding contracts, buy and sell property, sue and be sued, be held responsible for its actions, and be taxed. Once businesses reach any substantial size, it is advantageous to organise as a company so that its owners can limit their liability. Companies tend to be far larger, on average, than businesses using other forms of ownership.

Companies are owned by shareholders who invest money in the business by buying shares. The portion of the company they own depends on the percentage of shares they hold. For example, if a company has issued 100 shares, and you own 30 shares, you own 30 percent of the company. The shareholders elect a board of directors, a group of people (primarily from outside the company) who are legally responsible for governing the company. This governance comes from the board overseeing the major policies and decisions made by the company, setting company goals and holding management accountable for achieving them, and hiring and evaluating the top executives. The board also approves the distribution of profit to shareholders in the form of cash payments called dividends (which will be explored in Section 4.6).

The corporate form of business offers several advantages, including limited liability for shareholders, greater access to financial resources, and continuity. The most important benefit is

the limited liability to which shareholders are exposed: they are not responsible for the obligations of the corporation, and they can lose no more than the amount that they have personally invested in the company. If the company did not have enough money to pay the debt, the individual shareholders will not be obligated to pay anything. They would have lost all the money that they had invested in the business, but no more.

Incorporation also makes it possible for businesses to raise funds by selling shares. This is a big advantage as a company grows and needs more funds to operate and compete. Depending on its size and financial strength, the company also has an advantage over other forms of business in getting bank loans. An established company can borrow its own funds, but when a small business needs a loan, the bank usually requires that it be guaranteed by its owners.

Another advantage of incorporation is continuity. As a company has a legal life separate from the lives of its owners, it can (at least in theory) exist forever. Transferring ownership of a company is also easier: shareholders simply sell their shares to others. Some owners, however, want to restrict the transferability of their shares and so choose to operate as a privately-held corporation. The shares in these companies are held by only a few individuals, who are not allowed to sell it to the general public. Companies with no such restrictions on selling shares are called public companies – shares are publicly traded on the stock exchange (like the Australian Stock Exchange) and are available for sale to the general public.

Like sole proprietorships and partnerships, companies have both positive and negative aspects. In sole proprietorships and partnerships, for instance, the individuals who own and manage a business are the same people. Management may not necessarily own shares in the company, and shareholders may not necessarily work for the company and thus this situation can be troublesome if the goals of the two groups differ significantly. Managers, for example, are often more interested in career advancement than

the overall profitability of the company. Shareholders, on the other hand, might care more about profits without regard for the well-being of employees. This situation is known as the agency problem, a conflict of interest inherent in a relationship in which one party is supposed to act in the best interest of the other. It is often quite difficult to prevent self-interest from entering into these situations.

Another drawback to companies—one that often discourages small businesses from incorporating—is the fact that they are more costly to set up. Additionally, companies are subject to levels of regulation and governmental oversight that can place a burden on small businesses. Finally, companies are subject to what is generally called “double taxation.” Companies are taxed by the government’s tax office on their profits. When these profits are distributed as dividends, the shareholders pay taxes on these dividends. Company profits are thus taxed twice—the company pays the taxes the first time and the shareholders pay the taxes the second time.

Five years after starting their ice cream business, Ben Cohen and Jerry Greenfield evaluated the advantages and disadvantages of the corporate form of ownership, and the advantages won. The primary motivator was the need to raise funds to build a \$2 million manufacturing facility. Not only did Ben and Jerry decide to switch from a partnership to a corporation, but they also decided to issue shares to the public (and thus become a public corporation). Ben and Jerry was acquired by Unilever in 2000.

Other Types of Business Ownership

In addition to the three commonly adopted forms of business structures —sole proprietorship, partnership, and companies—some business owners select other forms of organisation to meet their particular needs such as association

(Unincorporated and Incorporated), Cooperative, Franchise, Joint Venture, Not-For-Profit (NFP) and Trust.

Summary of characteristics of each form of business structure

The table below provides a summary of the main characteristics of the three forms of business structure, discussed above.

Characteristics	Sole Trader	Partnership	Company
Size of business	Small	Most are small but some professional partnerships may have several hundred partners	Large (some may have shares traded on a public exchange)
Establishment and costs	Low	Low	High
Number of owners	One	Two or more	Many
Liability of owners	Unlimited	Unlimited (and joint)	Limited
Ability to raise funds	Limited	Limited	High
Who makes business decisions	Owner	Depends on partnership agreement	Decided by board of directors and managed by business professional

In the next section, we turn our attention to how equity is recorded and reported in each type of business structure.

4.3 Characteristics of equity and how it is recorded and reported in each business structure

RINA DHILLON

The section provides a brief overview of the main components of the financial statement for a sole proprietorship, partnership and company business structure. Most accounting transactions applies to the 'business', and is the same regardless of the way the business is structured. However, from an accounting perspective the major difference between the different forms of businesses is in the equity section of the balance sheet. This is summarised in the diagram below:



Each form of business structure records and reports business transactions separately from the personal transactions of the owner(s). If the owner uses business funds for personal use, this will be shown as a reduction in cash and a distribution of profits (i.e. reducing equity) and not an expense for the business. In addition, how we represent equity is slightly different, in a sole proprietorship, it is called owner's equity, in a partnership, it is called partners' equity and in a company, it is called shareholder's equity. Let's look at the business reports for each type of structure to better understand how equity is recorded and reported in each business structure.

Sole Proprietorship Reports

The simplified financial statements presented below has been prepared for a sole trading business, Advantage Accounting Tutoring. This business is owned by a sole trader, Nicola Poulos, and the income statement shows revenues less expenses for Poulos' Advantage Accounting Tutoring business.

Advantage Accounting Tutoring Income Statement Current month	
Revenue	\$22300
Expenses	\$5930
Profit	\$16370

The income statement reports a profit of \$16370 for the current

month, the first month of operations. Below the balance sheet in the current month is provided:

Advantage Accounting Tutoring Balance Sheet Current month	
Cash	\$71270
Accounts Receivable	\$6800
Total assets	\$78070
Accounts Payable	\$41700
Total liabilities	\$41700
Capital – Nicola Poulos	\$20000
Profit	\$16370
Total owner's equity	\$36370

As illustrated above, the profit is reported on the balance sheet as an addition to capital. The capital represent the contribution by the owner of the business (N Poulos) and the profit (loss) shown belongs to this sole owner.

Partnership Reports

The financial statements presented below illustrates the financial performance (income statement) and financial position (balance sheet) of the partnership, Christian and Wolff – Accountants. In comparison to a sole trader, the main difference in the distribution

of profit (loss) here is split according to each of the partner's original capital contributions, as would be agreed upon and written in a partnership agreement.

Christian and Wolff - Accountants Income Statement Current month	
Revenue	\$40000
Expenses	\$9800
Profit	\$30200
Distribution to partners	
Salary	
- Christian	8000
- Wolff	6000
Distribution of remaining profits (30200 – 8000 – 6000 = 16200) to current a/cs	
- Christian (60% x 16200)	9720
- Wolff (40% x 16200)	6480
Total distribution to partners	\$30200

The partnership made a profit of \$30200 and after deducting the salaries of the two partners – Christian and Wolff – \$16200 remained to be distributed based on each partner's capital invested into the business. Upon examining the balance sheet for Christian and Wolff – Accountants, Christian contributed 60%, calculated as $\$60000 / (\$60000 + \$40000)$ and Wolff contributed 40%, calculated as $\$40000 / (\$60000 + \$40000)$:

Christian and Wolff - Accountants Balance Sheet Current month	
Cash	\$6200
Property, plant and equipment	\$120000
Total assets	\$126200
Accounts Payable	\$10000
Total liabilities	\$10000
Capital – Christian (60%)	60000
Capital – Wolff (40%)	40000
Current – Christian	9720
Current – Wolff	6480
Total partner's equity	\$116200

The main difference in the balance sheet for a partnership, when compared to a sole trader, is that there are two capital accounts – one for each partner. If there are three partners, the balance sheet would show three capital accounts. There are also two current accounts which represents the combined sum of all years' profits that have been left in the partnership less the drawings taken out of the business by each partner.

Company Reports

The simplified financial statements below illustrates the income

statement and balance sheet of Sydney Accounting Pty Ltd for the current month. Here, the company's income statement shows tax being directly deducted from the company's profit. As discussed in Section 4.2, sole proprietorships and partnerships do not pay tax directly on the business profits – it is up to the individual owners to include the business income in their individual tax returns.

Sydney Accounting Pty Ltd Income Statement Current month	
Revenue	\$500000
Expenses	\$380000
Profit before tax	\$120000
Income tax expense*	\$36000
Profit after tax	\$84000
*Tax deducted directly from company's profit	

Sydney Accounting Pty Ltd Balance Sheet Current month	
Cash	\$100000
Accounts Receivable	\$25210
Property, plant and equipment	\$200000
Total assets	\$325210
Accounts Payable	\$10000
Dividends Payable	\$25000
Total liabilities	\$35000
Share capital	200000
Retained earnings	90210
Total shareholder's equity	\$290210

In a company's balance sheet, the shareholder's equity section shows share capital instead of owners' or partners' capital and also reports retained earnings, which represent the sum of the profits retained in the business after the deduction of dividends or allocation to another equity account.

The above company reports are for private companies. Public companies that are limited by shares prepare their financial statements in accordance with the Corporation Act and accounting standards – including the Australian equivalents to International Financial Reporting Standards (IFRS). The Big Four Accounting Firm, KPMG, provides the format for financial statements based on a fictitious for-profit multinational corporation in accordance with Australian Accounting Standards [here](#). The balance sheet can be found on pages 32-33 and the income statement on pages 34-36.

We now shift our focus on partnership accounting by exploring the various business transactions that can happen in a partnership in Section 4.4.

4.4 Describe various business transactions that can happen in a partnership

RINA DHILLON; MITCHELL FRANKLIN; PATTY GRAYBEAL; AND
DIXON COOPER

Commencement of a Partnership

One of the characteristics of a partnership is multiple owners (some Big 4 Accounting Firms in Australia have hundreds of partners – some of which are equity partners while others salaried partners). Unlike shareholders in a company who contribute cash and are not involved in the day to day running of the business beyond attending and voting at the annual general meetings, partners contribute assets and liabilities and thus are entitled to participate in the management of the business (although in larger professional partnerships like the Big 4 Accounting Firms, this management functions might be delegated to a senior management team).

Partnerships are often the result of combining two existing businesses (like Ben and Jerry) with assets such as cash, accounts receivables, property, plant and equipment and liabilities such as accounts payable and bank loans. Each partner will contribute assets and liabilities as initial contribution to the business and each partner's initial contribution is recorded on the partnership's books at the fair value of the net asset at the date of transfer. The value of these initial contributions before the partnership is irrelevant – what is important is the value of these contributions to the partnership. The new partnership is buying the assets and assuming the responsibility of liabilities and thus we value each contribution at the current (and agreed) value.

As an example, let's go back to Christian and Wolff. On January 1, they combined their resources into a general partnership named Christian and Wolff – Accountants. They agree that Christian contributes cash of \$100000, equipment that has a cost of \$30000, accumulated depreciation of \$3000, and current market value of \$50000 (the current price at which it would sell), and a note payable \$90000. Wolff contributes cash of \$25000 and accounts receivables of \$15000.

Note this point about the commencement of a partnership when its assets' fair market value differs from their book value: it wouldn't make sense to base the value of the capital contribution of assets (or liabilities) on their book value. To see why, consider the equipment contribution made by Christian. The equipment had a book value of \$27000 (Cost of \$30000 less accumulated depreciation of \$3000) and a fair value of \$50000. Why should Dale get credit for a contribution of only the \$27000 book value when he could have sold the equipment for \$50000 and contributed \$50000 in cash, instead for the equipment with a fair value of \$50000?

Likewise, if the partnership were to assume liabilities from one of the partners, the liability would be recorded at the current value. And, as demonstrated above, any non-cash assets contributed to the partnership should be valued at their current values. In addition, when used fixed assets are contributed, depreciation is calculated based on their fair value and the partnership's estimate of their useful life. Fixed assets are contributed at their fair value, not the book value on the partner's individual books before the commencement of the partnership.

Given that in a partnership, each partner may contribute different assets (and liabilities), receive different amounts of profit or loss, and withdraw different amounts at different times, these transactions are tracked by giving each partner their own partnership capital account. The capital account of each partner records the fair value of net asset contributed. Following from the contributions of Christian and Wolff above, we would record the following journal entries for Christian and Wolff's contribution

DR Cash	\$100000
DR Equipment	\$50000
CR Notes Payable	\$90000
CR Capital - Christian	\$60000
(To record Christian's investment in the partnership)	

DR Cash	\$25000
DR Accounts Receivable	\$15000
CR Capital - Wolff	\$40000
(To record Wolff's investment in the partnership)	

It is important to note that the equipment was entered at the current market value – no accumulated depreciation was recorded because the partnership was buying the asset from Christian, and with the purchase of any asset, the previous owner's accumulated depreciation is irrelevant.

Allocation of profits and losses

At the end of each financial year, partners would meet to review the income and expenses. Once that has been done, they need to allocate the profit or loss based upon their agreement. If there is no partnership agreement or the agreement does not explicitly stipulate the sharing of profits and losses, then it would be shared equally.

Not every partnership allocates profit and losses on a 50:50 basis. In a partnership, each partner usually contributes different resources and skills and would like to be rewarded for each of them. These may include:

- the amount of capital invested.
- the amount of labour contributed.
- other intangible factors (e.g. goodwill) brought to the partnership such as an ability to attract clients

That is why it is very important for the partnership agreement to delineate how the partners will share net income and net losses. The partnership needs to find a methodology that is fair and will equitably reflect each partner's service and financial commitment to the partnership. The following are examples of typical ways to allocate income:

1. A fixed ratio where income is allocated in the same way every period. The ratio can be expressed as a set percentage (for example 80% and 20%), a proportion (7:3) or a fraction ($\frac{1}{4}$, $\frac{3}{4}$).
2. A ratio based on beginning-of-year capital balances, end-of-year capital balances, or an average capital balance during the year.
3. Partners may receive a guaranteed salary, and the remaining profit or loss is allocated on a fixed ratio.
4. Income can be allocated based on the proportion of interest in the capital account. If one partner has a capital account that equates to 75% of capital, that partner would take 75% of the income.
5. Some combination of all or some of the above methods.

A fixed ratio is the easiest approach because it is the most straightforward. As an example, assume that Christian and Wolff contributed the same amount of capital. However, Christian works full time for the partnership and Wolff works part time. As a result,

the partners agree to a fixed ratio of 0.75:0.25 to share the net income.

Selecting a ratio based on capital balances may be the most logical basis when the capital investment is the most important factor to a partnership. These types of ratios are also appropriate when the partners hire a management team to run the partnership in their place and do not take an active role in daily operations. The last three approaches on the list recognise differences among partners based upon factors such as time spent on the business or capital invested in it.

Let's return to the partnership with Christian and Wolff to see how profits would be allocated. Let's assume that Christian and Wolff make \$360000 profit in their first year. The partnership agreements states the following allocation rules:

The first \$100000 is based on service. Christian performs 80% of the total service. The next \$100000 is shared based on capital contributed. Remaining profits (or losses) are shared equally.

Allocating the \$360000 profit to Christian and Wolff becomes a mathematical exercise in following what was stipulated in the partnership agreement and allocating the profits accordingly:

	Christian	Wolff	Total
Total Profits			360000
Based on service	80000	20000	(100000)
Based in capital (60:40)	60000	40000	(100000)
Balance remaining			160000
Remaining shared equally (50:50)	80000	80000	(160000)
Profits allocated to partners	220000	140000	(360000)

As the first \$100000 is allocated based on service and Christian provides 80% of the service (thus Wolff provides 100-80 = 20%), Christian will receive \$80000 and Wolff \$20000. The next \$100000 is shared based on initial capital contributed. On commencement

of the partnership above, Christian contributed \$60000 and Wolff contributed \$40000. The total initial contribution is $\$60000 + \$40000 = \$100000$, thus Christian contributed 60% ($60000/100000$) and Wolff 40% ($40000/100000$) giving a 60:40 ratio of allocating the next \$100000. Therefore, Christian will receive \$60000 and Wolff \$40000. Lastly the remaining profits are shared equally. What remains after allocating the \$200000 is \$160000 ($\$360000 - \200000) which will be allocated 50:50, thus both Christian and Wolff will receive \$80000 ($\$160000 \times 50\%$). After this mathematical exercise, Christian will be allocated a total of \$220000 ($\$80000 + \$60000 + \80000) of the \$360000 profit and Wolff will be allocated a total of \$140000 ($\$20000 + \$40000 + \80000).

The journal entry would be as follows:

DR Income Summary	\$360000
CR Capital – Christian	\$220000
CR Capital – Wolff	\$140000
(To record profit allocation)	

Now, consider the same scenario for Christian and Wolff – Accountants, but instead of a profit, they realise a loss of \$120000. The distribution process for allocating a loss is the same as the allocation process for distributing a profit, as demonstrated above. The calculation for the sharing of the loss between the partners is shown below:

	Christian	Wolff	Total
Total Loss			(120000)
Based on service	(80000)	(20000)	(100000)
Based in capital (60:40)	(12000)	(8000)	(20000)
Losses allocated to partners	(92000)	(28000)	(120000)

The journal entry would be as follows:

DR Capital – Christian	\$92000
DR Capital – Wolff	\$28000
CR Income Summary	\$120000
(To record loss allocation)	

As we have already seen in the previous section, the balance sheet shows a capital account for each partner. In the income statement, the allocation of profits is shown at the bottom. The statement of change in equity is the most informative statement of each partner's relationship to the partnership. This statement begins with the opening balance of each partner's capital. Any additional capital and profits allocated are added and drawings are deducted to obtain the closing balance. Complexity arises when partners join or leave, assets are revalued, or the partnership dissolves but these matters are beyond the scope of this textbook and 22208 Accounting, Business and Society.

We now turn our attention to the various business transactions that can happen in a company.

4.5 Describe various business transactions that can happen in a company

RINA DHILLON

Company and the issuance of shares

One of the characteristics of a company is its ability to sell shares to investors to raise funds. The amount raised by the issuance of shares is called shareholder capital (or issued capital) because the cash contributed by investors in exchange for the company issuing shares is also in exchange for an ownership claim on the company's assets.

The most common type of shares are called ordinary shares. Investors who purchase ordinary shares are called shareholders and are effectively owners of the company. When a company issues ordinary shares, it usually grants to shareholders the following rights:

(1) The right to vote

This right ensures that a shareholder can vote on major issues. This voting powers include electing company directors, approving (or not) remuneration report, and proposals for fundamental changes affecting the company such as mergers or liquidation. Voting usually takes place at the company's annual general meeting (AGM). If the shareholder cannot attend, they can do so via proxy.

(2) The right to receive dividends in proportion to ownership

This right ensures that a shareholder has a claim on a portion of the assets owned by the company. As these assets generate profits and as the profits are reinvested in additional assets, shareholders

see a return in the form of dividends and as the value of their shares increases as share prices rise. Shareholders will receive an appropriate amount of any dividends declared by the company. For example, if a shareholder owns 15% of a company's ordinary shares, they have the right to receive 15% of any dividends the company distributes.

(3) The right to residual claim over company assets in proportion to ownership

Should the company wound up, this right ensures that a shareholder receives an appropriate amount of assets upon liquidation. For example, if a shareholder owns 15% of a company's ordinary shares when the company ceases operations, they have the right to receive 15% of all residual assets.

(4) The right of preemption

This right allows shareholders to subscribe for new shares or purchase existing shares that another shareholder sells before the shareholder offers them to third parties. This right ensures that shareholders can maintain their ownership percentage when new shares are issued.

Recording the issuance of shares

To illustrate how shares are recorded, assume Sydney Accounting Pty Ltd issues 100000 shares for \$6 per share. The issue will be recorded as follows:

DR Cash	\$600000
CR Ordinary Share Capital	\$600000
(To record issue of 100000 shares at \$6 per share)	

This journal entry increases cash for the amount received ($100000 \times \$6 = \600000) and increases Ordinary Share Capital by the same amount. Ordinary Share Capital represents equity of a company and therefore its issuance is recorded as part of the equity reserves

in the balance sheet. This recording represents a full share issue. An alternative is issuing shares by instalment which we discuss in detail below.

Issuing shares by instalment

Sometimes companies issue shares by instalment, requiring applicants for shares (investors) to pay some money on application and more money later in the process. There are three key reasons why companies might issue shares that require payment in instalments. First, this method of issuing shares ensures only serious applicants submit requests for shares, with their intention signaled by an initial payment of the instalment. Second, the issuance of shares by instalment increases the pool of potential shareholders, with the lower initial payment being more affordable to more investors. Lastly, receiving the money for shares in instalment allows the company to receive capital over time, instead of all immediately and this can be a great benefit when projects are funded over a period of time and thus timing the instalment payments to be received in conjunction with project timelines.

The issuance of shares by instalment usually has payment for the shares in 3 stages, summarised and depicted in the diagram below:



Stage 1 involves prospective shareholders (investors) filling out an

application form that comes with the prospectus issued by the company inviting the public to apply for shares. The investor will provide the appropriate application money with their application and thus this payment is called Application.

Stage 2 involves the company allotting the shares to applicants after receiving their share application money. The allotment of shares implies that the company has accepted the application and have decided to accept them as shareholders and thus give shares to them. A letter of allotment is sent to applicants and will provide information regarding the number of shares allotted to the shareholder and the amount to be paid by them – this payment is called Allotment

Stage 3 is known as call on share, where the remaining amount of shares allotted are called up by the company. The company requests a final call (third) payment and issues the remainder of the shares.

Now let us see how we record the journal entries for application, allotment and call using Sydney Accounting as an example but instead of a full share issue of 100000 shares at \$6, let us assume a share issue by instalment and that the \$6 is received in the following manner: \$3 payable on application, \$2 on allotment and \$1 on call.

Stage 1: Application

When the company receives the application money, this money should be initially banked in a separate bank account – a trust account, which we will call Cash Trust – because some of this money may be refunded (for example if there was an oversubscription, where more shares were applied for that are available for sale). The money received is called Application and thus the following journal entry would be recorded when the application money is received:

DR Cash Trust	\$300000
CR Application	\$300000
(Received application for 100000 shares)	

This entry increases the asset Cash Trust and increases the liability Application. Application is a liability because the money has an obligation attach to it in the form of either paying it back or giving the applicants shares.

Stage 2: Allotment

When the shares are allotted, the applications are accepted as purchasing the shares and thus these shares are issued to these accepted shareholders. Once the shares are allotted, the application cash that is in the Cash Trust account can be transferred to the company's normal bank account as now Sydney Accounting can claim the application money as theirs and thus debit Cash and credit Cash Trust:

DR Cash	\$300000
CR Cash Trust	\$300000
(Received application money)	

At the same time, the allotment money ($\$2 \times 100000 = \200000) becomes due and thus the journal entry will be as follows:

DR Application	\$300000
DR Allotment	\$200000
CR Ordinary Share Capital	\$500000
(Allotted 100000 shares)	

This entry decreases (debit) the liability Application because we no longer have that obligation to refund the application money having accepted those applicants as shareholders and allotting them with shares. There is an increase to the asset Allotment and equity Ordinary Share Capital. Allotment is an asset because once the shares are issued, the company has a legal right to receive that money, which is a future benefit owing to the company (similar to an accounts receivable). Issuing the shares increases equity and thus credit Ordinary Share Capital.

When Sydney Accounting receives the allotment money, the following journal will be entered:

DR Cash	\$200000
CR Allotment	\$200000
(Received allotment money)	

This entry reduces the asset Allotment and increases the asset Cash (similar to the receipt of account receivable).

Stage 3: Call

When a call is made, it follows the same concept as allotment.

When the call is made, the following would be recorded:

DR Call	\$100000
CR Ordinary Share Capital	\$100000
(Called 100000 shares)	

This entry increases the asset Call and equity Ordinary Share Capital. Call, like allotment, is an asset because once the shares are issued, the company has a legal right to receive that money. Issuing the shares increases equity and thus credit Ordinary Share Capital. When Sydney Accounting receives the call money, the following journal will be entered:

DR Cash	\$100000
CR Call	\$100000
(Received call money)	

This entry reduces the asset Call and increases the asset Cash (similar to allotment).

The net effect of the instalment process (looking at all the debits to Cash and all the credits to Ordinary Share Capital is similar to a full share issue detailed above:

DR Cash \$600000 (\$300000+200000+100000)

CR Ordinary Share Capital \$600000 (\$500000+100000)

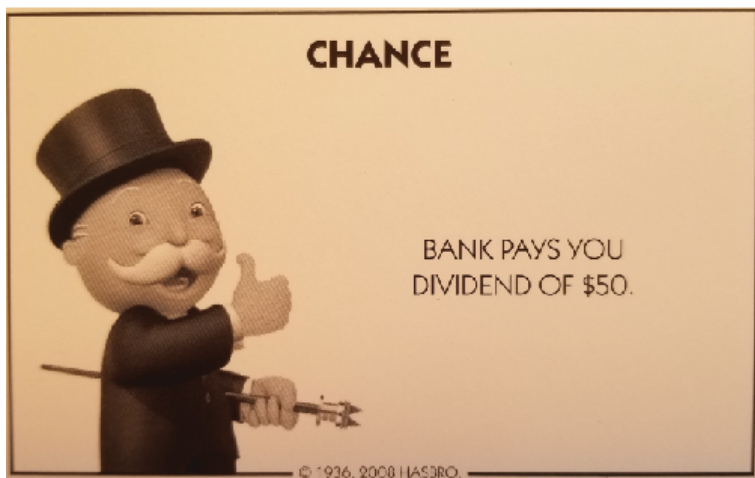
Once shares are fully issued, a company would need to decide if they would like to share profits with their shareholders in the form of a dividend payment. Dividends are paid on a regular basis, and they are one of the ways shareholders earn a return from investing in shares. We examine the two most common types of dividends – cash and share – in the next section.

4.6 Cash and Share Dividends

RINA DHILLON; MITCHELL FRANKLIN; PATTY GRAYBEAL; AND
DIXON COOPER

The Nature and Purposes of Dividends

Do you remember playing the board game Monopoly when you were younger? If you landed on the Chance space, you picked a card. The Chance card may have paid a \$50 dividend. At the time, you probably were just excited for the additional funds. A Chance card from a Monopoly game indicates that the bank pays you a dividend of \$50. (credit: modification of “Monopoly Chance Card” by Kerry Ceszyk/ Flickr, CC BY 4.0)



Similarly, shareholders who invest in companies are typically driven by two factors—a desire to earn income in the form of dividends and a desire to benefit from the growth in the value of their investment. The board of directors of companies understand the need to

provide shareholders with a periodic return, and as a result, often declare dividends usually two times a year. For example, Woolworths Group Limited generally pays an interim dividend in April and a final dividend in September or October each year.

However, companies can declare dividends whenever they want and are not limited in the number of annual declarations. Dividends are a distribution of a companies' earnings. It is important to note that dividends are not considered expenses, and they are not reported on the income statement. They are a distribution of the net income of a company and are not a cost of business operations.

Some companies choose not to pay dividends and instead reinvest all of their earnings back into the company. One common scenario for situation occurs when a company experiencing rapid growth. The company may want to invest all their retained earnings to support and continue that growth. Another scenario is a mature business that believes retaining its earnings is more likely to result in an increased market value and share price. In other instances, a business may want to use its earnings to purchase new assets or branch out into new areas. Most companies like Woolworths, however, attempt dividend smoothing, the practice of paying dividends that are relatively equal period after period, even when earnings fluctuate. When dividends are distributed, they are stated as a per share amount and are paid only on fully issued shares.

For companies, there are several reasons to consider sharing some of their earnings with shareholders in the form of dividends. Many shareholders view a dividend payment as a sign of a company's financial health and are more likely to purchase its shares. In addition, companies use dividends as a marketing tool to remind investors that their share is a profit generator.

This section explains the two types of dividends—cash dividends and share dividends—showing the journal entries involved and the reason why companies declare and pay dividends, and the relevant dates that are important when issuing dividends.

Dividend Dates

A company's board of directors has the power to formally vote to declare dividends. The date of declaration is the date on which the dividends become a legal liability, the date on which the board of directors votes to distribute the dividends. Cash dividends become liabilities on the declaration date because they represent a formal obligation to distribute economic resources (assets) to shareholders. On the other hand, share dividends distribute additional shares, and because shares are part of equity and not an asset, share dividends do not become liabilities when declared.

At the time dividends are declared, the board establishes a date of record and a date of payment. The date of record establishes who is entitled to receive a dividend; shareholders who own shares on the date of record are entitled to receive a dividend even if they sell it prior to the date of payment. Investors who purchase shares after the date of record but before the payment date are not entitled to receive dividends since they did not own the share on the date of record. These shares are said to be sold ex-dividend. The date of payment is the date that payment is issued to the shareholder for the amount of the dividend declared.

Cash Dividends

Cash dividends are earnings that companies pass along to their shareholders. To pay a cash dividend, the company must meet two criteria. First, there must be sufficient cash on hand to fulfill the dividend payment. Second, the company must have sufficient retained earnings; that is, it must have enough residual assets to cover the dividend such that the Retained Earnings account does not become a negative (debit) amount upon declaration. On the day

the board of directors votes to declare a cash dividend, a journal entry is required to record the declaration as a liability.

Accounting for Cash Dividends

Assume that on 3rd July, Sydney Accounting’s board of directors declares a \$0.25 per share dividend. As of the date of declaration, the company has 100000 ordinary shares issued. The dividend is owed to shareholders on record on 21 July and paid on 30 July. The total cash dividend to be paid is based on the number of shares outstanding is:

$100000 \times \$0.25 = \25000

The journal entry to record the declaration of the cash dividends involves a decrease (debit) to Retained Earnings (a shareholders’ equity account) and an increase (credit) to Dividends Payable (a liability account):

Date		
3 July	DR Retained Earnings	\$25000
	CR Dividend Payable	\$25000
	(Record declaration of dividends)	

While a few companies may use a temporary account, Dividends Declared, rather than Retained Earnings, most companies debit Retained Earnings directly. Ultimately, any dividends declared cause a decrease to Retained Earnings.

The second significant dividend date is the date of record, 21st July. The date of record determines which shareholders will receive the dividends. There is no journal entry recorded; the company creates a list of the shareholders that will receive dividends.

The date of payment is the third important date related to dividends. This is the date that dividend payments are prepared and

sent to shareholders who owned shares on the date of record. The related journal entry is a fulfillment of the obligation established on the declaration date – 30th July; it reduces the Dividends Payable account (with a debit) and the Cash account (with a credit).

Date		
30 July	DR Dividend Payable	\$25000
	CR Cash	\$25000
	(Record payment of dividends)	

Reporting Cash Dividends

Companies usually report their dividends on three financial statements. Dividends declared during the year are reported on the (1) Statement of changes in Equity and (2) Balance Sheet. Recall that dividends reduce retained earnings which is summarised and reported in the retained earnings column of the balance sheet. Dividends paid during the year are reported on the (3) Cash Flow Statement. As cash dividends are cash outflows, they are shown as negative numbers in the financing section of the cash flow statement (examined in detail in Chapter 8). To illustrate this, the reporting of dividends for Woolworths Group Limited, as provided in their 2021 annual report, is extracted and shown below:

Consolidated Statement of Changes in Equity

2021	ATTRIBUTABLE TO EQUITY HOLDERS OF THE PARENT ENTITY						TOTAL EQUITY \$M
	SHARE CAPITAL \$M	SHARES HELD BY TRUST \$M	RESERVES \$M	RETAINED EARNINGS \$M	TOTAL \$M	NON-CONTROLLING INTERESTS \$M	
Balance at 28 June 2020	6,197	(175)	391	2,329	8,742	250	9,002
Profit for the period	-	-	-	2,074	2,074	65	2,139
Other comprehensive income/(loss) for the period, net of tax	-	-	13	(11)	2	(2)	-
Total comprehensive income for the period, net of tax	-	-	13	2,063	2,076	63	2,139
Dividends paid	-	-	-	(1,277)	(1,277)	(50)	(1,327)
Demerger distribution (issue/transfer) of shares to satisfy employee long-term incentive plans	(904)	-	(6,946)	-	(7,850)	-	(7,850)
Issue of shares to satisfy the dividend reinvestment plan	-	139	(139)	-	-	-	-
Purchase of shares by the Woolworths Employee Share Trust	173	-	-	-	173	-	173
Recognition of non-controlling interest from acquisition of subsidiary	-	(177)	-	-	(177)	-	(177)
Recognition of put options over non-controlling interest	-	-	(390)	-	(390)	-	(390)
Share-based payments expense	-	-	102	-	102	1	103
Balance at 27 June 2021	5,466	(210)	(6,989)	3,115	1,379	360	1,739

Consolidated Statement of Cash Flows

	NOTE	2021 \$M	2020 \$M
Cash flows from operating activities			
Receipts from customers		72,688	68,893
Payments to suppliers and employees		(86,826)	(82,831)
Payments for the interest component of lease liabilities	3.3.4	(687)	(703)
Finance costs paid on borrowings		(183)	(155)
Income tax paid		(738)	(623)
Net cash provided by operating activities	4.5.2	4,624	(1,561)
Cash flows from investing activities			
Proceeds and advances from the sale of property, plant and equipment		389	287
Payments for property, plant and equipment and intangible assets		(2,188)	(2,188)
Proceeds from the sale of subsidiaries and investments, net of cash disposed		19	34
Payments for the purchase of businesses, net of cash acquired		(209)	(81)
Payments for the purchase of investments		(35)	(93)
Proceeds from/(net) advances to related parties		12	(4)
Dividends received		19	4
Net cash used in investing activities		(2,200)	(1,945)
Cash flows from financing activities			
Repayment of the principal component of lease liabilities	3.3.4	(1,158)	(1,064)
Proceeds from borrowings	4.6.3	871	1,554
Repayment of borrowings	4.6.3	(1,525)	(793)
Dividends paid	4.2	(5,104)	(1,133)
Dividends paid to non-controlling interests		(50)	(86)
Payments for shares held in trust		(177)	(122)
Net cash used in financing activities		(3,043)	(1,612)
Net (decrease)/increase in cash and cash equivalents		(699)	1,004
Effects of exchange rate changes on cash and cash equivalents		(3)	(2)
Cash and cash equivalents at start of period		2,068	1,066
Cash and cash equivalents at end of period	4.5.1	1,366	2,068

The above Consolidated Statement of Cash Flows should be read in conjunction with the accompanying Notes to the Consolidated Financial Statements.

4.2 DIVIDENDS



Dividends are distributions of the Group's profit after tax before significant items and assets to its shareholders.

	2021			2020		
	CENTS PER SHARE	TOTAL AMOUNT (\$M)	DATE OF PAYMENT	CENTS PER SHARE	TOTAL AMOUNT (\$M)	DATE OF PAYMENT
Current year interim	53	677	14 April 2021	46	590	9 April 2020
Prior year final	48	606	6 October 2020	57	717	30 September 2019
Dividends paid during the period	101	1,277		103	1,297	
Issue of shares to satisfy the dividend reinvestment plan		(173)			(164)	
Dividends paid in cash		1,104			1,133	

All dividends are fully franked at a 30% tax rate.

On 26 August 2021, the Board of Directors declared a final dividend of 55 cents per share in respect of the 2021 financial period, fully franked at a 30% tax rate. The amount will be paid on or around 6 October 2021 and is expected to be \$697 million. As the dividends were declared subsequent to 27 June 2021, no provision had been made at 27 June 2021.

Dividend Reinvestment Plan (DRP)

The DRP remains active. Eligible shareholders may participate in the DRP in respect of all or part of their shareholding. There is currently no DRP discount applied and no limit on the number of shares that can participate in the DRP.

Shares will be allocated to shareholders under the DRP for the 2021 final dividend at an amount equal to the average of the daily volume weighted average market price of ordinary shares of the Company traded on the ASX over the period of 10 trading days commencing on 7 September 2021. The last date for receipt of election notices for the DRP is 6 September 2021. The Company intends to issue new shares to satisfy its obligations under the DRP.

During the period, 14.0% (2020: 12.6%) of the dividends paid were reinvested in shares of the Company.

You will note in the above extracts of the statement of change in equity and cash flow statements that the dividends paid is \$1277M and \$1104M respectively. The difference of \$173M (\$1277-1104) is explained in Note 4.2 of the annual report as part of a Dividend Reinvestment Plan (DRP). A DRP allows a shareholder to take some, or all, of their dividend in the form of additional shares, and usually offered at a discount. The shareholder can nominate what percentage they wish to split between cash and shares. DRP are similar to share dividends but it is the shareholder's decision to receive shares not cash rather than it being decided by the company and imposed on all shareholders with a share dividend. We now turn our focus on share dividends to better understand how they are recorded in the accounting system.

Share Dividends

Companies that do not want to issue cash dividends (usually when the company has insufficient cash) but still want to provide some benefit to shareholders may choose to issue share dividends. When a company issues a share dividend, it distributes additional shares (ordinary shares) to existing shareholders. Share dividends are declared by a company's board of directors and may be stated in dollar or percentage terms. Shareholders do not have to pay income taxes on share dividends when they receive them; instead, they are taxed when the shareholder sells them in the future. A share dividend distributes shares so that after the distribution, all shareholders have the exact same percentage of ownership that they held prior to the dividend.

Let's look at an example using Sydney Accounting. Assume that Sydney Accounting Pty Ltd declares a 15% share dividend on 1 July to be distributed immediately. Sydney Accounting has 100000 ordinary shares originally issued for \$6 and the share is currently trading at \$10 per share.

This means that Sydney Accounting will distribute 15,000 new shares ($100,000 \times 15\%$), each worth \$10 (current market price). So the value of the share dividend is = \$150,000 ($\$10 \times 15,000$ shares) and will be recorded as follows:

Date		
3 July	DR Retained Earnings	\$150000
	CR Ordinary Share Capital	\$150000
	(Record distribution of share dividends)	

From a shareholder's perspective, a 15% share dividend means that the company will issue additional shares equal to 15% of the current issued shares. So, a shareholder owning 10000 shares will receive $10000 \times 15\% = 1500$ additional shares. Note that there is no

cash provided to the shareholder for these additional shares and there is no cash outflow for the company as well.

Like any shareholder, a company can not only issue additional shares in the form of a share dividend but can also purchase (or buy back) shares of their own in the marketplace. This practice is called share buybacks which is examined in detail in the next section.

4.7 Share Buybacks

RINA DHILLON

The practice of a company buying back its own shares is common in publicly listed companies and companies do this for several reasons. First, share buybacks are a tax effective way of returning capital to some shareholders, while reducing the overall cost of capital. Each ordinary share represents a small stake in the ownership of the issuing company, including the right to vote on the company policy and financial decisions. If a business has a managing owner and one million shareholders, it actually has 1,000,001 owners. Companies issue shares to raise equity capital to fund expansion, but if there are no potential growth opportunities, holding on to all that unused equity funding means sharing ownership for no good reason. Many shareholders demand returns on their investments in the form of dividends, which is a cost of equity —so the business is essentially paying for the privilege of accessing funds it isn't using. Therefore, buying back some or all of the outstanding shares can be a simple way to pay off (i.e. return capital to) investors and reduce the overall cost of capital.

Second, share buybacks is an efficient way to reduce the number of outstanding shares on the market, which increases the ownership stake of shareholders – in other words to consolidate ownership. Companies issue shares to raise funding for projects. Several types of shares can be issued, but the two most popular are ordinary and preferred shares. Ordinary shares come with voting privileges and ownership. Preferred shares differ in that dividends are paid out to these shareholders before ordinary shareholders, and these shareholders are higher in the priority queue for payout during a bankruptcy proceeding. A company with thousands of stocks issued essentially has thousands of voting owners. A buyback reduces the number of owners, voters, and claims to capital.

Thirdly, a company might buyback shares because it believes the

market has discounted its share value too much (i.e. company's shares are undervalued) or to improve its financial ratios (for example earnings per share (EPS), which is an indicator of a company's profitability, is calculated as a company's profit divided by the average number of ordinary shares issued). Undervaluation occurs for several reasons, often due to investors' inability to see past a business' short-term performance, sensationalist news items, or a general bearish sentiment. If a stock is dramatically undervalued, the issuing company can repurchase some of its shares at this reduced price and then re-issue them once the market has corrected, thereby increasing its equity capital without issuing any additional shares.

Lastly, share buybacks might be part of an employee share or management incentive scheme. Details of a recent buyback by Qantas Group can be found [here](#).

Share buybacks are usually done “off-market” where a company offers to buy and the shareholder need to simply sign the buyback form and all transfer details are handled by the company. A recent example of this is when the Commonwealth Bank of Australia (CBA) completed a \$6 billion off-market buy-back of CBA ordinary shares in October 2021.

“On-market” share buybacks involve the company purchasing shares that are available for sale on the Australian Securities Exchange (ASX). In early 2022, the National Australian Bank (NAB) successfully completed a \$2.5 billion on-market share buy-back, which resulted in the buy-back of 86,925,469 ordinary shares.

Recording Share Buyback

Let's assume that Sydney Accounting Pty Ltd purchases 1,000 shares of its own ordinary shares on 3 July when the share is trading for \$10 per share. Sydney Accounting would record the purchase as follows:

Date		
3 July	DR Ordinary Share Capital	\$10000
	CR Cash	\$10000
	(Record share buyback)	

Test your knowledge



An interactive H5P element has been excluded from this version of the text. You can view it online here:

<https://oer.pressbooks.pub/utsaccounting2/?p=1167#h5p-2>



An interactive H5P element has been excluded from this version of the text. You can view it online here:

<https://oer.pressbooks.pub/utsaccounting2/?p=1167#h5p-19>

Chapter 4 Practice Questions

RINA DHILLON

Practice Questions

1. A partnership capital account is opened for each partner to:

-
- a. keep track of the partners' share of profits
 - b. keep track of the partners' original and subsequent contributions
 - c. keep track of the partners' drawings from the partnership
 - d. all of the options given
-

2. If two sole proprietors come together to form a partnership, with each contributing assets and liabilities from their previous businesses, these are brought into the partnership at:

-
- a. value as recorded in the books of the original businesses
 - b. current market value
 - c. discounted cash flow value
 - d. independent valuation of non-cash assets and liabilities
-

3. If A and B form a partnership, the investment in the partnership will be recorded with:

-
- a. credits to each partner's capital account
 - b. debit to cash
 - c. credit to contributed capital
 - d. debits to any liabilities brought into the partnership
-

4. E&R Partnership agrees to share profits 40 per cent to E and 60 per cent to R. How will losses be shared?

-
- a. 40% E, 60% R
 - b. By E&R initial capital contribution
 - c. 50% E, 50% R
 - d. Losses are not shared in partnerships
-

5. XYZ partnership shares profits and losses in a 5:4:3 ratio respectively. This means:

-
- a. partner X receives $\frac{1}{5}$ of the profits
 - b. partner Y receives $\frac{1}{4}$ of the profits
 - c. partner Z receives $\frac{1}{3}$ of the profits
 - d. partner X receives $\frac{5}{12}$ of the profits
-

6. When Peter joined with partner Mary, Peter contributed a printing press with a current market value of \$75000, accounts receivable of \$25000. The partnership also agrees to take over his \$10000 of accounts payable. The amount credited to Peter's capital account would be:

-
- a. \$75000
 - b. \$90000
 - c. \$100000
 - d. \$110000
-

7. Procter and Gamble are partners. They have agreed to share profits based on a formula where the first \$100 000 is based on service and Procter is to receive \$60 000 and Gamble \$40 000. The next \$100 000 is based on capital contributed where Procter invested \$350 000 and Gamble \$150 000. Any remaining profits are shared equally.

If profits before distributions were \$400 000 how much will Gamble receive?

-
- a. \$200 000
 - b. \$170 000
 - c. \$160 000
 - d. \$120 000
-

8. All of the following are reasons that a company may buy back shares, except:

-
- a. if it needs the shares for its employees' share bonus program
 - b. if it desires to make an investment in its own shares
 - c. to buy out the ownership of shareholders
 - d. to increase the reported amount of earnings per share
-

9. When a company declares a cash dividend:

-
- a. cash decreases
 - b. liabilities decrease
 - c. equity decreases
 - d. no entry is necessary
-

10. The shareholders' equity section of the 30 June 2022 balance sheet for Shah Interiors before its recent share dividend:

Ordinary shares, 100 000 shares	\$600000
Retained earnings	725000
Total shareholders' equity	\$1 325000

Shah declared a 10% share dividend when the market price per

share was \$8.00. After the share dividend, the components of Shah's shareholders' equity section were:

-
- a. Ordinary shares \$600000; Retained earnings \$725000
 - b. Ordinary shares \$650000; Retained earnings \$805000
 - c. Ordinary shares \$710000; Retained earnings \$805000
 - d. Ordinary shares \$680000; Retained earnings \$645000
-

11. On 15 July 2022, Tech Systems Limited paid a cash dividend that had been declared prior to the end of its 30 June 2022 financial year. The entry to pay the dividends includes a debit to:

-
- a. cash and a credit to dividends payable
 - b. dividends payable and a credit to cash
 - c. retained earnings and a credit to dividends payable
 - d. dividends payable and a credit to retained earnings
-

12. A liability for cash dividends is created at the:

-
- a. end of each financial year
 - b. date of declaration
 - c. date of record
 - d. date of payment
-

13. In which of the following organisation forms is the owners' legal responsibility for the debt of the business limited to the amount they invested in the business?

-
- a. Sole proprietorship
 - b. Company
 - c. Partnership
 - d. Cooperative
-

14. Dhillon Company issues 1000 shares. \$10 per share is payable on application and \$6 per share on allotment. When the application money is received, cash trust is debited, and the credit is made to:

-
- a. issued shares
 - b. application
 - c. Ordinary share capital
 - d. retained earnings
-

15. When a company issues a share dividend:

-
- a. cash decreases
 - b. equity remains the same
 - c. equity decreases
 - d. retained earnings increases
-

16. The number of shares issued is important because it determines the amount of _____ that will be paid.

-
- a. cash
 - b. retained earnings
 - c. dividends
 - d. profit
-

17. The financial statements of a partnership are different from that of a sole trader because of:

-
- a. more government regulation
 - b. accounting for inventory at the lower of cost and net realisable value.
 - c. more complex business transactions
 - d. separate capital accounts for each partner.
-

18. Which of the following statements is true regarding a company's buy-back of shares?

-
- a. The cost of re-purchased shares is a reduction in shareholders' equity
 - b. Dividends must still be paid on re-purchased shares because they are still issued
 - c. Re-purchased shares are reported as an asset because it is considered an investment in the company's own shares
 - d. Re-purchased shares are still entitled to a vote at annual general meetings
-

19. Which of the following is not characteristic of a company?

-
- a. Companies are organised as a separate legal taxable entity
 - b. Ownership is divided into share
 - c. Companies are usually able to obtain large amounts of resources by issuing shares
 - d. A company's resources are limited to their individual shareholders' resources
-

20. Issued shares represent the:

-
- a. number of previously issued shares that have been repurchased by the company
 - b. number of shares that the company will distribute to owners
 - c. number of shares that are currently held by shareholders
 - d. maximum number of shares that can be sold by the company
-

Solutions: (1) d; (2) b; (3) a; (4) c; (5) d; (6) b; (7) b; (8) b; (9) c; (10) d;
(11) b; (12) b; (13) b; (14) b; (15) b; (16) c; (17) d; (18) a; (19) d; (20) c

PART V

CHAPTER 5: RECEIVABLES

Introduction

Business success is realised with effective receivable management. This chapter examines the accounting for receivables, focusing on how businesses account for the recording, reporting and collection (or non-collection) of accounts receivables. It explains and demonstrates the methods of estimating and recording bad debt expenses that apply under generally accepted accounting principles (GAAP).

Chapter outline

After reading this chapter, you should be able to:

1. Describe the recording of receivables
2. Describe the reporting of receivables
3. Understand the methods used to account for uncollectible receivables (bad debts), estimate bad debt expense and manage the provision for doubtful debts

5.1 Describe the recording of receivables

RINA DHILLON

A receivable represents a business' claim on the assets of another entity. The most significant receivables for most businesses are accounts receivable. An account receivable is an amount owed by a customer who has purchased a business' product or service. Sometimes these receivables are referred to as trade receivables because they arise from the trade of the business. Two accounting problems associated with accounts receivables are:

- (1) recognising and recording accounts receivable
- (2) valuing accounts receivable

In this section, we focus on how accounts receivables are recorded.

Recording accounts receivables

Initial recognition of accounts receivables is relatively simple – receivables are recorded at the time of the sale. For a service business, this means a receivable is recorded when a service is provided on account. For a merchandise business, accounts receivables are recorded at the point of sale of goods on account. To illustrate, suppose that on 2nd July, Kenco Ltd sells \$1,000 of products to a customer on account (ignore the effects on Kenco's inventory and cost of goods sold). Kenco would record the revenue and receivable arising from the sale with the following journal entry:

2 nd July	DR Accounts Receivable	\$1000
	CR Sales Revenue	\$1000
	(To record sale on account)	

With this sale, both asset (Accounts Receivable) and equity (Sales Revenue) are increased by debiting Accounts Receivable and crediting Sales Revenue. When Kenco collects the receivable, it will increase cash (debit) and eliminate the receivable (credit):

When receivable is collected	DR Cash	\$1000
	CR Accounts Receivable	\$1000
	(To record collection of receivable)	

Effect of sales returns and allowances on accounts receivables

Receivables are also reduced as a result of sales discounts and sales returns. In some cases, a customer will return a product instead of pay for it and this affects the accounts receivable balance. Assume on 8th July, the customer returned \$200 of products that were the wrong colour (again ignore the effects on Kenco's inventory and cost of goods sold). This transaction will reduce accounts receivable by \$200 upon the receipt of the returned goods and will be recorded as follows:

8 th July	DR Sales returns and allowances	\$200
	CR Accounts Receivable	\$200
	(To record sales return)	

The entry decreases accounts receivable (credit) for the sales price of the goods. However, instead of decreasing the Sales revenue account directly, the entry increases Sales returns and allowances. Sales returns and allowances is a contra-revenue account, meaning that its balance is subtracted from sales, thus debit to show the reduction in sales. Businesses use this account to keep record of returns in each period and like the sales revenue account, the Sales return and allowances is a temporary account that is closed (i.e. made zero) at the end of each period.

In addition to returns, some businesses sometimes provide discounts to customers if they pay within a certain time period. This practice of providing a discount encourages early payment by the buyer. For example, terms of 3/7, n/30 provides the buyer with a 3% discount if paid within 7 days and nothing (n actually means net) if paid in the 30 days as required. If the buyer chooses to pay within the discount period, the seller's accounts receivable is reduced.

To illustrate this, assume Kenco grants terms of 2/10, n/30. The terms mean the buyer will get a 2% discount if paid within 10 days of purchase. On 10th July, the customer pays the remaining \$800 (\$1000 – \$200 return above) bill. By paying within 8 days (recall from above that the sale was made on 2nd July), the customer qualifies for a 2% discount and thus saves \$16 (\$800 x 2%) and pays only \$784 (\$800-16). Kenco would record the receipt of payment by raising the following entry:

10 th July	DR Cash	\$784
	DR Sales Discount	\$16
	CR Accounts Receivable	\$800
	(To record sales return)	

The entry increases Cash for the \$784 payment and decreases Accounts Receivable for the full \$800 balance. The difference of \$16, which relates to the discount for timely payment, goes to the Sales Discount account. Like the Sales return and allowance account, Sales Discount is a contra-revenue account that is subtracted from sales revenue when calculating net sales. Businesses use this temporary account to keep record of discounts in each period and this account balance is closed at the end of each period.

5.2 Reporting accounts receivable

RINA DHILLON

As accounts receivable are expected to be collected quickly (usually within a month or 2 with most payment terms being n/30 or n/60), they are classified and reported as current assets on the balance sheet. However, in reality, businesses do not collect all their receivables because customers do not always pay their bills (on time or in full). There are many reasons why this might happen: (1) the customer might be facing financial difficulties (this is especially true for small businesses in recent times with the covid-19 pandemic: refer to the Reserve Bank of Australia Report [here](#)); (2) relocated or closed down without paying; and (3) just refuses to pay for various [common reasons](#).

Given the above, businesses must follow the conservatism principle and report their accounts receivables at net realisable value (or at fair value). Net realisable value is the amount of cash that a business expects to collect from its total or gross accounts receivable balance, calculated by subtracting from gross receivables the amount that a business does not expect to collect (known as uncollectible receivables).

For example, if we return to the Kenco example before, let's assume that Kenco has \$3000 of gross receivables but does not expect to collect \$200 of them and thus has accounts receivable with a net realisable value of \$2800 (\$3000-200).

Keeping It Real

To illustrate the reporting of receivables, let's examine the receivables balance of James Hardie Industries, a global building materials company and the largest global manufacturer of fibre cement products, in the balance sheet and the notes to the financial statements:

	31 March 2022	31 March 2021
Assets		
Current assets:		
Cash and cash equivalents	\$ 125.8	\$ 206.6
Restricted cash and cash equivalents	0.0	0.0
Restricted cash and cash equivalents - Advances	141.3	134.9
Restricted short-term investments - Advances	119.7	26.6
Accounts and other receivables, net	398.4	333.2
Inventories	216.7	218.3
Prepaid expenses and other current assets	40.2	38.8

4. Accounts and Other Receivables

Accounts and other receivables consist of the following components:

	2022	31 March 2021
Trade receivables	\$ 336.4	\$ 290.7
Income taxes receivable	29.8	29.4
Other receivables and advances	35.6	17.2
Provision for doubtful trade receivables	(3.4)	(6.1)
Total accounts and other receivables	\$ 398.4	\$ 333.2

The following are changes in the provision for doubtful trade receivables:

	2022	31 March 2021	2020
Balance at beginning of period	\$ 6.1	\$ 4.4	\$ 2.9
Adjustment to provision	(2.2)	3.1	1.7
Write-offs, net of recoveries	(6.5)	(1.4)	(0.2)
Balance at end of period	\$ 3.4	\$ 6.1	\$ 4.4

As depicted above, the total receivables balance is \$398.4M and this comprises trade receivables of \$336.4M, income tax receivables of \$29.8M, other receivables of \$35.6M less a provision for doubtful

trade receivables of 3.4M. This 3.4M was derived by an opening balance from March 2021 of \$6.1M less an adjustment to provision of \$2.2M and a bad debt write off of \$0.5M. The amount that a company does not expect to collect can be termed in many ways: Provision for bad and doubtful debts, allowance for bad debts, allowance for doubtful debts, provision for impairment loss, etc. How businesses estimate and record the allowance or provision for uncollectible receivables will be examined in the next section.

5.3 Understand the methods used to account for uncollectible receivables (bad debts), estimate bad debt expense and manage the provision for doubtful debts

RINA DHILLON; MITCHELL FRANKLIN; PATTY GRAYBEAL; AND
DIXON COOPER

As stated in the previous section, accounts receivable are reported on the balance sheet as an asset. But at what amount? The amount owed by a customer? Not always! Although each customer must satisfy a business' credit requirements before a credit sale is approved, inevitably some accounts receivable will not be collected – the customer defaults and never pays the account – known as uncollectible receivable or uncollectible accounts.

Uncollectible accounts, which is more commonly known as bad debt expense, is included in the calculation of profits (or losses). An uncollectible account is written-off (the asset is removed) and an expense is recognised. Because uncollectible accounts are a normal part of any business, bad debt expense is considered an operating expense. Bad debt negatively affects accounts receivable. When future collection of receivables cannot be reasonably assumed, recognising this potential nonpayment is required. When the expense is recognised depends on the method of accounting for uncollectible accounts. There are two methods a business may use to recognise bad debt: (1) the direct write-off method and (2) the allowance method. Let's look at these methods closely.

Direct write-off method

The direct write-off method delays recognition of bad debt until the specific customer accounts receivable is identified. Once this account is identified as uncollectible, the business will record a reduction to the customer's accounts receivable and an increase to bad debt expense for the exact amount uncollectible.

Under generally accepted accounting principles (GAAP), the direct write-off method is not an acceptable method of recording bad debts, because it violates the matching principle. For example, assume that a credit transaction occurs in September 2021 and is determined to be uncollectible in February 2022. The direct write-off method would record the bad debt expense in 2022, while the matching principle requires that it be associated with a 2021 transaction, which will better reflect the relationship between revenues and the accompanying expenses. This matching issue is the reason accountants will typically use one of the two accrual-based accounting methods introduced to account for bad debt expenses.

It is important to consider other issues in the treatment of bad debts. For example, when a business accounts for bad debt expenses in their financial statements, it will use an accrual-based method; however, they are required to use the direct write-off method on their income tax returns. This variance in treatment addresses taxpayers' potential to manipulate when a bad debt is recognised. Because of this potential manipulation, the Australian Taxation Office (ATO) requires that the direct write-off method must be used when the debt is determined to be uncollectible, while GAAP still requires that an accrual-based method be used for financial accounting statements.

For the taxpayer, this means that if a business sells an item on credit in October 2021 and determines that it is uncollectible in June 2022, it must show the effects of the bad debt when it files its 2022 tax return. This application probably violates the matching

principle, but if the ATO did not have this policy, there would typically be a significant amount of manipulation on company tax returns. For example, if the business wanted the deduction for the write-off in 2021, it might claim that it was actually uncollectible in 2021, instead of in 2022. This method also does not provide the best estimate of how accounts receivable affect expected cash inflow for the business.

The final point relates to businesses with very little exposure to the possibility of bad debts, typically, entities that rarely offer credit to its customers. Assuming that credit is not a significant component of its sales, these sellers can also use the direct write-off method. The companies that qualify for this exemption, however, are typically small and not major participants in the credit market. Thus, virtually all of the remaining bad debt expense material discussed here will be based on an allowance method that uses accrual accounting, the matching principle, and the revenue recognition rules under GAAP.

For example, assume Kenco makes a \$5000 credit sale to Bennards on 28th March. On 30th August, Kenco Ltd determines that it will be unable to collect from Bennards. When the account defaults for non-payment on 30th August, Kenco would record the following journal entry to recognise bad debt.

30 th August	DR Bad Debt Expense	\$5000
	CR Accounts Receivable	\$5000
	(To record bad debt expense and write off receivable)	

Bad Debt Expense increases (debit), and Accounts Receivable decreases (credit) for \$5000. If, in the future, any part of the debt is recovered, a reversal of the previously written-off bad debt, and the collection recognition is required. Let's say this customer

unexpectedly pays in full on 1st December, the business would record the following journal entries:

1 st Dec	DR Accounts Receivable	\$5000
	CR Bad Debt Expense	\$5000
	(To reverse previous bad debt write off)	

1 st Dec	DR Cash	\$5000
	CR Accounts Receivable	\$5000
	(To record payment on account)	

The first entry reverses the bad debt write-off by increasing Accounts Receivable (debit) and decreasing Bad Debt Expense (credit) for the amount recovered. The second entry records the payment in full with Cash increasing (debit) and Accounts Receivable decreasing (credit) for the amount received of \$5000.

As you've learned above, the delayed recognition of bad debt violates GAAP, specifically the matching principle. Therefore, the direct write-off method is not used for publicly listed companies; the allowance method is used instead.

Allowance method

The allowance method is the more widely used method because it satisfies the matching principle. The allowance method estimates bad debt during a period, based on certain computational approaches. The calculation matches bad debt with related sales during the period. The estimation is made from past experience and industry standards. Essentially, the allowance method splits the

- 5.3 Understand the methods used to account for uncollectible receivables (bad debts), estimate bad debt expense and manage the provision for

accounting into two entries, firstly an entry to record an estimate of bad debt expense and secondly an entry to write off receivables **when** they become uncollectible. When the estimation is recorded at the end of a period, the following entry occurs:

Date	DR Bad Debt Expense	\$XXX
	CR Allowance for Bad Debts	\$XXX
	(To record bad debt expense)	

The journal entry for the Bad Debt Expense increases (debit) the expense balance, and the Allowance for Doubtful Accounts increases (credit) the balance in the Allowance. When setting up the allowance, the allowance account is a contra asset account, and is subtracted from Accounts Receivable to determine the Net Realisable Value of the Accounts Receivable account on the balance sheet. This means that when it is subtracted from Accounts Receivable, the difference represents an estimate of the cash value of accounts receivable. The contra account may also be called the Provision for Bad Debts or the Allowance for Bad Debts in practice.

A contra account has an opposite normal balance to its paired account, thus reducing or increasing the balance in the paired account at the end of a period; the adjustment can be an addition or a subtraction from a controlling account. In the case of the Allowance for bad debts, it is a contra account that is used to reduce the Controlling account, Accounts Receivable. At the end of an accounting period, the Allowance for bad debts reduces the Accounts Receivable to produce Net Accounts Receivable. Note that allowance for bad debts reduces the overall accounts receivable account, not a specific accounts receivable assigned to a customer.

Because it is an estimation, it means the exact amount that is (or will become) uncollectible is not yet known.

To calculate the most accurate estimation possible, a company may use one of three approaches for bad debt expense recognition: the percentage of credit sales approach, the percentage of receivables approach, or aging of receivables approach. Let's examine each of these approaches in detail.

Percentage-of-credit sales approach

The percentage of credit sales approach (also known as the income statement approach) estimates bad debt expenses based on the assumption that at the end of the period, a certain percentage of sales during the period will not be collected. The estimation is typically based on credit sales only, not total sales (which include cash sales). In this example, assume that any credit card sales that are uncollectible are the responsibility of the credit card company. It may be obvious intuitively, but, by definition, a cash sale cannot become a bad debt, assuming that the cash payment did not entail counterfeit currency.

The percentage of credit sales approach is a simple way to calculate bad debt, but it may be more imprecise than other measures because it does not consider how long a debt has been outstanding and the role that plays in debt recovery. In addition, under the percentage of credit sales approach, we ignore any existing balance in the allowance when calculating the amount of the year-end adjustment.

To illustrate, let's continue to use Kenco Ltd as the example. Suppose Kenco Ltd has made \$500,000 of sales and estimates that it will not collect 2 per cent of those sales. The following adjusting journal entry at the end of the financial year for bad debt would be:

EOFY	DR Bad Debt Expense	\$10000
	CR Allowance for Bad Debts	\$10000
	(To record bad debt expense)	

Bad Debt Expense increases (debit), and Allowance for bad debts increases (credit) for \$10000 ($\$500000 \times 2\%$). This means that Kenco believes \$10000 will be uncollectible debt. As mentioned above, a second entry to write off receivables is made when they become uncollectible. To illustrate a receivables write off, assume that the credit manager of Kenco Ltd authorises a write off of the \$5000 balance owed by Bennards on 1st August. The entry to record the write off is:

1 st August	DR Allowance for Bad Debts	\$5000
	CR Accounts Receivable - Bennards	\$5000
	(To record write off of Bennards account)	

Bad debt expense is not increased when a write off occurs. Under the Allowance method, every bad debt write off is debited to the Allowance for Bad Debts account as a debit to Bad Debt Expense would be incorrect given that the expense has already been recognised when the adjusting entry was made for the estimated bad debts. Instead, the entry to record the write off of an uncollectible account reduces both Accounts Receivables and the Allowance for Bad Debts.

Percentage-of-receivables approach

The percentage of receivables approach (also known as the balance sheet approach) estimates bad debt expenses based on the balance in accounts receivable. This approach looks at the balance of accounts receivable at the end of the period and assumes that a certain amount will not be collected. Accounts receivable is reported on the balance sheet; thus, it is also known as the balance sheet approach.

This approach is less straightforward and requires working out what the closing balance should be and then depending on the current balance, the adjustment is the bad debt expense. This approach is calculated in two steps:

- (1) Calculate what the balance in the Allowance for Bad Debts account should be by multiplying accounts receivables by a percentage set by the business;
- (2) Adjust the Allowance for Bad Debts account to the balance calculated in step (1).

Thus it is important to note that the percentage of receivables approach considers any existing balance in the allowance when calculating the amount of bad debt expense. To illustrate, let's assume that Kenco has a receivables balance of \$25000 at the end of the financial year. Based on past experience, the business expects that 1% of its receivables balance will be uncollectible.

As a result, the balance in the allowance account at year end should be 1% of receivables, or a \$250 credit balance ($\$25000 \times 1\%$) which provides us with the final calculation for Step 1. Suppose the Allowance for Bad Debts account already has an existing balance of \$100 credit. To get the balance to a \$250 credit requires a \$150 credit entry and thus the adjustment required to reflect the bad debt expense is \$150 ($\$250 - 100$). This is illustrated as follows:

Allowance for Bad Debts	
100	Existing balance
150	Step 2 – Calculate the bad debt expense; Adjustment required
250	Step 1 – Calculate the desired balance (\$25000 x 1%)

EOFY	DR Bad Debt Expense	\$150
	CR Allowance for Bad Debts	\$150
	(To record bad debt expense)	

Bad Debt Expense increases (debit), and Allowance for Doubtful Accounts increases (credit) for \$150. This journal entry takes into account a credit balance of \$100 and subtracts the prior period's balance from the estimated balance in the current period of \$250.

The percentage of receivables approach is another simple approach for calculating bad debt, but it too does not consider how long a debt has been outstanding and the role that plays in debt recovery. However, there is a variation on the balance sheet approach, called the aging of receivables approach that does consider how long accounts receivable have been owed, and it assigns a greater potential for default to those debts that have been owed for the longest period of time. We turn our attention to this approach now.

Aging of Receivables Approach

Many businesses use a more refined version of the percentage-of-receivables approach, known as the Aging of receivables approach. This approach estimates bad debt expenses based on the balance

in accounts receivable, but it also considers the uncollectible time period for each account. The longer the time passes with a receivable unpaid, the lower the probability that it will get collected. An account that is 90 days overdue is more likely to be unpaid than an account that is 30 days past due.

With this approach, accounts receivable is organised into categories by length of time outstanding, and an uncollectible percentage is assigned to each category. The length of uncollectible time increases the percentage assigned. For example, a category might consist of accounts receivable that is 1–30 days past due and is assigned an uncollectible percentage of 3%. Another category might be 31–60 days past due and is assigned an uncollectible percentage of 15%. All categories of estimated uncollectible amounts are summed to get a total estimated uncollectible balance. That total is reported in Bad Debt Expense and Allowance for Doubtful Accounts, if there is no carryover balance from a prior period. If there is a carryover balance, that must be considered before recording Bad Debt Expense.

The aging of receivables approach is more complicated than the other two approaches, but it tends to produce more accurate results. This is because it considers the amount of time that accounts receivable has been owed, and it assumes that the longer the time owed, the greater the possibility that individual accounts receivable will prove to be uncollectible. Looking at Kenco Ltd, it has an accounts receivable balance of \$25000 at the end of the year. Kenco splits its past-due accounts into four categories: 1–30 days past due, 31–60 days past due, 61–90 days past due and over 90 days past due. The uncollectible percentages and the accounts receivable breakdown are shown in the table below:

Customer	Current	1-30 days	31-60 days	61-90 days	Over 90 days	Total
Bennards			\$4800			\$4800
Coral Ltd					\$3600	\$3600
Tyobi				\$1200		\$1200
Others	\$8100	\$900	\$2800	\$3000	\$600	\$12300
Totals	\$8100	\$900	\$7600	\$4200	\$4200	\$25000
% Uncollectible	1%	3%	15%	30%	50%	
Allowance Balance	\$81	\$27	\$1140	\$1260	\$2100	\$4608

* The % will depend on the business' past experience, credit policy and current economic conditions

For each of the individual categories, we would multiply the uncollectible percentage by the accounts receivable total for that category to get the total balance of estimated accounts that will prove to be uncollectible for that category. Then all of the category estimates are added together to get one total estimated uncollectible balance for the period. The entry for bad debt would be as follows, if there was no carryover balance from the prior period.

EOFY	DR Bad Debt Expense	\$4608
	CR Allowance for Bad Debts	\$4608
	(To record bad debt expense)	

Bad Debt Expense increases (debit) as does Allowance for Doubtful Accounts (credit) for \$4608. Kenco believes that \$4608 will be uncollectible debt.

Let's consider a situation where Kenco had a \$2000 debit balance from the previous period. The adjusting journal entry would recognise the following:

EOFY	DR Bad Debt Expense	\$6608
	CR Allowance for Bad Debts	\$6608
	(To record bad debt expense)	

This journal entry takes into account a debit balance of \$2000 and adds the prior period's balance to the estimated balance of \$4608 in the current period, providing for a bad debt of \$6608 (\$4608+2000).

You may notice that all three approaches use the same accounts for the adjusting entry; only the approach changes the financial outcome. Also note that it is a requirement that the estimation approach be disclosed in the notes of financial statements so stakeholders can make informed decisions.

Writing off specific accounts using the allowance method

When a business decides that a particular customer account is uncollectible, that account is removed by debiting the allowance for bad debts and crediting accounts receivable for that specific customer. This process is called 'writing off the bad debt' or 'writing off the account'. Let's assume Kenco determines at the end of the financial year that a \$3600 receivable from Coral Ltd is uncollectible and decides to write it off. The journal entry will be as follows:

DR Allowance for Bad Debts	\$3600
CR Accounts Receivable	\$3600
(To write off bad debt – Coral Ltd)	

This entry has no effect on Kenco's carrying amount of receivables. This is because both the asset account and the contra-asset account are decreasing by the same amount, thereby offsetting one another.

Recovery of a write-off

At times, a business will collect a receivable previously written off. When this payment occurs, two entries are made: (1) the first entry reverses the original write off and (2) the second entry records the collection of cash and the reduction of the receivable. Suppose Coral Ltd pays their bill in full. When the payment is made, the following two entries are created:

Payment date	DR Accounts Receivable	\$3600
	CR Allowance for Bad Debts	\$3600
(To reverse original write off)		

Payment date	DR Cash	\$3600
	CR Accounts Receivable	\$3600
(To collect the receivable – Coral Ltd)		

Notice that once again that there is no effect on total assets by either of the above two entries.

Test your knowledge



An interactive H5P element has been excluded from this version of the text. You can view it online here:

<https://oer.pressbooks.pub/utsaccounting2/?p=377#h5p-20>

5.3 Understand the methods used to account for uncollectible receivables (bad debts), estimate bad debt expense and manage the provision for

Chapter 5 Practice Questions

RINA DHILLON

Practice Questions

1. Which one of the following is an accurate description of the allowance for bad debts?

 - a. Contra account
 - b. Liability account
 - c. Revenue account
 - d. Expense account

2. United Pty Ltd uses the direct write-off method to account for bad debts. What are the effects on the accounting equation of the entry to record the write-off of a customer's account balance?

 - a. Assets and liabilities decrease
 - b. Assets and shareholders' equity decrease
 - c. Shareholders' equity and liabilities decrease
 - d. Assets increase and shareholders' equity decrease

3. If a business uses the allowance method of accounting for bad debts:

-
- a. it uses a liability account called the allowance for doubtful accounts
 - b. it will record bad debts only when an account is determined to be uncollected
 - c. it does not have to reduce accounts receivable when the account is written off
 - d. it will report accounts receivable in the balance sheet at their net realisable value
-

4. Which one of the approaches for the allowance procedure emphasises matching bad debts expense with revenue on the income statement?

-
- a. The percentage-of-receivables approach
 - b. The percentage-of-sales approach
 - c. The percentage of accounts written off approach
 - d. The direct write off method
-

5. Coral Ltd's accounts receivable balance after posting net collections from customers for 2022 is \$150 000. Management feels that uncollected accounts should be based on the following ageing of accounts receivable and uncollected percentages. There is \$100 000 that is 1 to 30 days past due at 2 per cent and \$50 000 that is 31 to 60 days past due at 10 per cent. The net realisable value of the accounts receivable is:

-
- a. \$147 500
 - b. \$148 000
 - c. \$150 000
 - d. \$143 000
-

6. Data for the Traffic Management Company for the year ended 30 June 2022, are presented below.

Sales (credit)	\$2 500 000
Sales returns and allowances	50 000
Accounts receivable (30 June 2022)	640 000
Allowance for bad debts (Before adjustment at 30 June 2022)	20 000
Estimated amount of uncollected accounts based on ageing analysis	45 000

If Traffic Management estimates its bad debts at 2 per cent of net credit sales, what amount will be reported as bad debt expense for the financial year ended 30 June 2022?

- a. \$50 000
- b. \$49 000
- c. \$29 000
- d. \$25 000

7. Data for the Traffic Management Company for the year ended 30 June 2022, are presented below.

Sales (credit)	\$2 500 000
Sales returns and allowances	50 000
Accounts receivable (30 June 2022)	640 000
Allowance for bad debts (Before adjustment at 30 June 2022)	20 000
Estimated amount of uncollected accounts based on ageing analysis	45 000

If Traffic Management uses the ageing of accounts receivable approach to estimate its bad debts, what amount will be reported as bad debt expense for the financial year ended 30 June 2022?

-
- a. \$25 000
 - b. \$45 000
 - c. \$20 000
 - d. \$49 000
-

8. Which of the following statements is true regarding the two allowance approaches used to estimate bad debts?

-
- a. The percentage-of-sales approach takes into account the existing balance in the allowance for bad debts account
 - b. The direct write-off method takes into account the existing balance in the allowance for bad debts account
 - c. The percentage-of-receivables approach takes into account the existing balance in the allowance for bad debts account
 - d. The direct write-off method does a better job of matching revenues and expenses
-

9. The following data concern Tech Corporation for the 2022 financial year.

Credit sales during the year	\$2 400 000
Accounts receivable 30 June 2022	410 000
Allowance for bad debts 30 June 2022	55 000
Bad debt expense for the year	70 000

What amount will Tech Corporation show on its year-end balance sheet for the net realisable value of its accounts receivable?

-
- a. \$410 000
 - b. \$285 000
 - c. \$340 000
 - d. \$355 000
-

10. On 1 June 2022, Warehouse Chemists concluded that a customer's \$325 account receivable was uncollectible and that the account should be written off. What effect will this write-off have on Warehouse Chemist's 2022 profits and balance sheet totals assuming the allowance method is used to account for bad debts?

-
- a. Decrease in income; decrease in total assets
 - b. Increase in income; no effect on total assets
 - c. No effect on income; decrease in total assets
 - d. No effect on income; no effect on total assets
-

11. One of the weaknesses of the direct write-off method is that it:

-
- a. understates accounts receivable on the balance sheet
 - b. violates the matching principle
 - c. is too difficult to use for many businesses
 - d. is based on estimates
-

12. If the allowance method of accounting for uncollectible receivables is used, what general ledger account is credited to write off a customer's account as uncollectible?

-
- a. Uncollectible accounts expense
 - b. Accounts receivable
 - c. Allowance for bad debts
 - d. Bad debt expense
-

13. Bathing Company uses the percentage of receivables method for recording bad debts expense. The accounts receivable balance is \$300 000 and credit sales are \$1 000 000. An ageing of accounts receivable shows that five per cent will be uncollectible. What adjusting entry will Bathing Company make if the allowance for doubtful accounts has a credit

balance of \$2000 before adjustment?

-
- Bad debts expense 13 000
 - a. Allowance for bad debts 13 000
 - Bad debts expense 15 000
 - b. Allowance for bad debts 15 000
 - Bad debts expense 13 000
 - c. Accounts receivable 13 000
 - Bad debts expense 15 000
 - d. Accounts receivable 15 000
-

14. Excel Department Store's accounts receivable balance after posting net collections from customers for 2022 is \$180000. The customers took advantage of sales discounts of \$15000. Management aged the accounts receivable and estimate for uncollected account percentages as follows:

\$90 000	Current at 2 per cent
\$50 000	1–30 days past due at 5 per cent
\$30 000	31–60 days past due at 10 per cent
\$10 000	60+ days past due at 25 per cent

The net realisable value of the accounts receivable is:

-
- a. \$173 200
 - b. \$170 200
 - c. \$172 700
 - d. \$180 000
-

15. The following information was presented in Dhillon Company's balance sheet as of 30 June 2022:

Trade accounts receivable, **net** of allowance for doubtful accounts of \$255 000 is \$1 700 000

Which one of the following statements is true?

-
- a. Dhillon expects that \$1 955 000 of accounts receivable will be collected after year end
 - b. The balance in the accounts receivable account in Dhillon's general ledger is \$1 700 000
 - c. The net realisable value of Dhillon's accounts receivable is \$1 700 000
 - d. Dhillon expects to collect only \$1 445 000 from its customers
-

Solutions: (1) a; (2) b; (3) d; (4) b; (5) d; (6) b; (7) a; (8) c; (9) d; (10) d; (11) b; (12) b; (13) a; (14) b; (15) c

PART VI

CHAPTER 6: INVENTORY

Introduction

Accounting for inventory is a critical function of management. Inventory accounting is significantly complicated by the fact that it is an ongoing process of constant change, in part because (1) most businesses offer a large variety of products for sale, (2) product purchases occur at irregular times, (3) products are acquired for differing prices, and (4) inventory acquisitions are based on sales projections, which are always uncertain and often sporadic. This chapter examines inventory accounting, focusing on how businesses record their inventory and how they determine the cost of the inventory that is sold (cost of goods sold). It also analyses the effects of inventory errors and examines how inventory can be estimated if required.

Chapter outline

After reading this chapter, you should be able to:

1. Describe inventory and how it is recorded, expensed, and reported
2. Calculate the cost of goods sold using the perpetual and periodic inventory recording systems
3. Analyse the effects of inventory errors
4. Demonstrate how inventory is estimated

6.1 Describe inventory and how it is recorded, expensed, and reported

RINA DHILLON; MITCHELL FRANKLIN; PATTY GRAYBEAL; AND
DIXON COOPER

The importance of inventory accounting



Inventory. (credit: modification of “warehouse pallet food” by “jaymethunt”/Pixabay, CC0)

Did you ever decide to start a healthy eating plan and meticulously planned your shopping list, including foods for meals, drinks, and snacks? Maybe you stocked your pantry and fridge with the best healthy foods you could find, including lots of fresh fruit and vegetables, to make sure that you could make tasty and healthy smoothies when you got hungry. Then, at the end of the week, if everything didn't go as you had planned, you may have discovered that a lot of your produce was still uneaten but not very fresh anymore. Stocking up on goods, so that you will have them when

you need them, is only a good idea if the goods are used before they become worthless.

Just like with someone whose preparation for healthy eating can backfire in wasted produce, businesses have to balance a fine line between being prepared for any volume of inventory demand that customers request and being careful not to overstock those goods so the company will not be left holding excess inventory they cannot sell. Not having the goods that a customer wants available is bad, of course, but extra inventory is wasteful. That is one reason why inventory accounting is important. But first what is inventory?

What is inventory?

Inventory is a tangible resource that is held by a business which is intended for resale, in the normal course of operations. What is considered inventory is dependent on the type of business. For a retailer such as Woolworths or Myer, inventory is the stock (merchandise) on the shelves or stored in their distribution centres or warehouses. For manufacturers, inventory also includes the raw materials and work in process related to producing a finished good. In addition, what is classified as inventory for one type of business might be classified as something else in another type of business. Let's take the example of a car dealership like Toyota, cars are their inventory (current asset) while for most of other businesses, cars are non-current assets that are not considered inventory as there is no intention to resell the car. The phrase "intended for resale" differentiates inventory from other assets.

The verb "inventory" refers to the act of counting or listing goods. As an accounting term, inventory refers to all stock in the various production stages (especially in the case of a manufacturer) and is a current asset. By keeping stock, both retailers and manufacturers can continue to sell or manufacture goods. Inventory is a major

asset for most businesses and thus recording it correctly is very important.

Recording inventory

Following the cost principle, inventory is recorded at its acquisition cost. Acquisition cost includes all costs incurred to get the inventory delivered and prepared for resale. It also includes any reductions provided by the seller or vendor after purchase. Items affecting the cost of inventory include, but are not limited to:

- (1) purchase price
- (2) any taxes or duties paid, costs for shipping the product and insurance during transit
- (3) labour required to assemble the product
- (4) returns and allowances
- (5) purchase discounts from the vendor (seller)

While inventory is recorded at cost, how it is recorded in the accounting system depends on the inventory system that a business uses. There are two primary systems used to account for inventory: the periodic inventory system and the perpetual inventory system.

Perpetual Inventory System

A perpetual inventory system updates the inventory account balance on an ongoing basis, each time an inventory is bought and sold – that is perpetually. Thus, purchases of inventory are recorded directly into the inventory account and the cost of goods sold is updated each time inventory is sold. As transactions occur, the perpetual system requires that every sale is recorded with two entries, first recording the sales transaction as an increase to Cash

or Accounts Receivable (if sale is on account) and an increase to Sales Revenue, and then recording the cost associated with the sale as an increase to Cost of Goods Sold (which is an expense account) and a decrease to Inventory. The journal entries made at the time of sale immediately shift the costs relating to the goods being sold from the inventory account on the balance sheet to the cost of goods sold account on the income statement. Little or no adjustment is needed to inventory at period end because changes in the inventory balances are recorded as both the sales and purchase transactions occur. These are example entries for an inventory sales transaction when using perpetual inventory system:

Date	DR Cash (or Accounts Receivable)	\$X
	CR Sales Revenue	\$X
	(To record sale of inventory)	

Date	DR Cost of Goods Sold	\$X
	CR Inventory	\$X
	(To record sale of inventory)	

A purchase of inventory for sale by a business under the perpetual inventory system would necessitate the following journal entry:

Date	DR Inventory	\$X
	CR Cash (or Accounts Payable)	\$X
	(To record purchase of inventory)	

Periodic Inventory Method

A periodic inventory system, in contrast, updates the inventory balances at the end of the reporting period – that is periodically. At that point, a journal entry is made to adjust the inventory asset balance to agree with the physical count of inventory, with the corresponding adjustment to the expense account, cost of goods sold. This adjustment shifts the costs of all inventory items that are no longer held by the company to the income statement, where the costs offset the revenue from inventory sales, as reflected by the gross margin. As sales transactions occur throughout the period, the periodic system requires that only the sales entry be recorded because costs will only be updated during end-of-period adjustments when financial statements are prepared.

However, any additional goods for sale acquired during the month are recorded as purchases. Thus instead of recording purchases into the inventory account, they are recorded in an account called Purchases – which is a temporary account that is closed to Inventory at the end of the period. The following are examples of typical journal entries for periodic transactions. The first is an example entry for an inventory sales transaction and the second records the purchase of additional inventory when using the periodic inventory system.

Note: Periodic system requires no corresponding cost entry at the time of sale, since the inventory is adjusted only at period end.

Date	DR Cash (or Accounts Receivable)	\$X
	CR Sales Revenue	\$X
	(To record sale of inventory)	

A purchase of inventory for sale by a business under the periodic inventory system would necessitate the following journal entry:

Date	DR Purchases	\$X
	CR Cash (or Accounts Payable)	\$X
	(To record purchase of inventory)	

While this section will focus on how inventory is recorded using the perpetual system, we will demonstrate how cost of goods sold is calculated using both inventory systems in the next section.

To illustrate the recording of inventory, assume In Style Fashion purchases \$20000 of inventory on account (on credit) on 12th July. The purchase would be recorded as follows:

12 th Jul	DR Inventory	\$20000
	CR Accounts Payable	\$20000
	(To record purchase of inventory)	

In this entry, inventory (asset) increases and so does accounts payable (liability).

In certain instances, a business must pay for the transportation related to the purchase of the inventory. Like buying from Amazon, we are interested in how it costs in total, not just the price. Such additional costs of purchasing inventory is called transportation-in and are added to the overall cost of inventory. To demonstrate, assume In Style Fashion pays a third-party carrier \$300 to transport

the inventory to its warehouse. In Style Fashion records the payment as follows:

12 th Jul	DR Inventory	\$300
	CR Cash	\$300
	(To record transportation-in)	

In some cases (and like sales returns and allowances – expect now it is from the perspective of the buying business rather than the business that sells), a business will return inventory to the seller or supplier – called a purchase return – or seek a decrease in the cost of the inventory due to defects – called a purchase allowance. Both instances will reduce the cost of the inventory purchased. To illustrate, assume that on 14th July, In Style Fashion is granted a \$1000 reduction in the cost of the merchandise due to blemishes on the inventory. In Style Fashion records the reduction of the inventory cost and payable as follows:

14 th Jul	DR Accounts Payable	\$1000
	CR Inventory	\$1000
	(To record purchase allowance granted by supplier)	

Even though In Style Fashion still keeps the inventory, the cost of inventory has decreased due to the purchase allowance and this is recognised by reducing the amount payable to the supplier in Accounts payable (debit) and reducing the cost of inventory (credit).

Additionally, similar to businesses providing sales discounts,

business who purchase goods sometimes receive discounts from suppliers if payments are made within a certain time period. This purchase discounts would reduce the cost of the inventory. To demonstrate, assume, In Style Fashion pays its remaining \$19,000 (\$20000-1000) bill to the vendor on 19th July and qualifies for a 1% early payment discount (or $\$19,000 \times 1\% = \190). The entry to record payment would be as follows:

14 th Jul	DR Accounts Payable	\$19000
	CR Inventory	\$190
	CR Cash	\$18810
	(To record payment)	

The above entry decreases Accounts Payable (debit) for the full \$19000 and decreases Cash (credit) by the \$18810 paid. The difference is a reduction to the cost of inventory by \$190 because of the purchase discount.

Given the above, In Style Fashion's net purchases of inventory can be calculated as follows:

Summary of Net Purchases	
Gross purchases	\$20000
Add: Transportation-in	300
Less: Purchase returns and allowances	(1000)
Less: Purchase discounts	(190)
Net purchases (Inventory balance)	<u>\$19110</u>

Expensing inventory

Inventory becomes an expense when it is sold. The account 'cost of goods sold' or 'cost of sales' is used to capture the amount of inventory expensed during a period. To illustrate the expensing of inventory, assume on 2nd August In Style Fashion sells inventory that cost the business \$400 to a customer for \$600 cash. In Style Fashion would record the sale with the following two entries:

2 nd Aug	DR Cash	\$600
	CR Sales Revenue	\$600
	(To record sale of inventory)	

2 nd Aug	DR Cost of Goods Sold	\$400
	CR Inventory	\$400
	(To record sale of inventory)	

The first entry records the effect of the sale on In Style Fashion's cash and revenues. Both Cash (asset) and Sales Revenue (equity) increase by the amount of sale (\$600). The second journal records the effects of the sale on In Style Fashion's inventory and expense. Cost of Goods Sold (expense) increases by the same amount as the cost of the inventory sold. Inventory (asset) decreases by the same amount.

The net effect of these two entries on assets and equity is a \$200 (\$600-400) increase which equal to the gross profit (Revenue \$600 – Expense \$400) that In Style Fashion earned on the sale.

Reporting inventory

A business' financial statements report the combined cost of all items sold as an offset to the proceeds from those sales, producing the net number referred to as gross margin (or gross profit). This is presented in the first part of the results of operations for the period on the income statement. The unsold inventory at period end is an asset to the company and is therefore included on the balance sheet. As inventory is expected to be sold within a year, it is reported on the balance sheet as a current asset.

The total cost of all the inventory that remains at period end, reported as inventory on the balance sheet, plus the total cost of the inventory that was sold or otherwise removed (through shrinkage, theft, or other loss), reported as cost of goods sold on the income statement represent the entirety of the inventory that the business had to work with during the period, or goods available for sale.

Keeping It Real

To illustrate the reporting of inventory, let's examine the cost of sales and inventory balances of CSL, an Australian multinational specialty biotechnology company, in the income statement and balance sheet respectively:

Consolidated Statement of Comprehensive Income

For the year ended 30 June 2021

	Notes	Consolidated Entity	
		2021 US\$m	2020 US\$m
Continuing operations			
Sales and service revenue		9,979.5	8,766.6
Influenza pandemic facility reservation fees		160.1	145.4
Royalties and license revenue		33.7	88.9
Other income		44.9	50.3
Total operating revenue		10,318.0	9,150.8
Cost of sales		(4,466.7)	(3,804.4)
Gross profit		5,843.3	5,295.4
Research and development expenses	6	(1,005.4)	(971.8)
Selling and marketing expenses		(880.2)	(886.2)
General and administration expenses		(731.7)	(659.9)
Total expenses		(2,713.3)	(2,509.9)
Operating profit		3,130.0	2,796.5
Finance costs	2	(770.8)	(750.8)
Finance income		3.8	7.0
Profit before income tax expense		2,363.1	2,052.7
Income tax expense	3	(588.1)	(479.2)
Net profit for the year		2,375.0	2,300.5

Consolidated Balance Sheet

As at 30 June 2021

	Notes	Consolidated Entity	
		2021 US\$m	2020 (restated) US\$m
CURRENT ASSETS			
Cash and cash equivalents	14	1,858.8	1,394.4
Receivables and contract assets	15	1,781.2	1,795.9
Inventories	4	3,780.6	3,609.6
Current tax assets		84.3	35.1
Other financial assets		4.8	5.3
Total Current Assets		7,509.7	6,440.2
NON-CURRENT ASSETS			
Property, plant and equipment	8	6,434.3	5,366.0
Intangible assets	7	2,669.7	2,299.0
Right of use assets	8	1,808.7	889.4
Deferred tax assets	1	529.5	543.6
Other receivables	15	6.6	14.3
Other financial assets		25.6	14.7
Retirement benefit assets	18	3.9	1.4
Total Non-Current Assets		10,769.2	9,169.3
TOTAL ASSETS		18,198.9	15,609.5

As depicted above, the total cost of sales for 2021 was \$4466.7M and the inventory balance as at 30th June 2021 was \$3780.6M. In order to better understand what this \$3780.6M comprises, we can look at Note 4 to the financial statements:

Note 4: Inventories

	2021 US\$M	2020 US\$M
Raw materials	1,309.1	875.5
Work in progress	1,249.6	1,361.3
Finished goods	1,221.9	1,271.6
Total inventories	3,780.6	3,508.4

Raw Materials

Raw materials comprise collected and purchased plasma, chemicals, fillers and other inputs to production that will be further processed into saleable products but have yet to be allocated to manufacturing.

Work in Progress

Work in progress comprises all inventory items that are currently in use in manufacturing and intermediate products such as plasmids generated from the initial stages of the plasma production process.

Finished Products

Finished products comprise material that is ready for sale and has passed all quality-control tests.

Inventories generally have expiry dates and the Group provides for product that is short dated. Expiry dates for raw material are no longer relevant once the materials are used in production. The relevant expiry date at this point then becomes that of the resultant intermediate or finished product.

Inventories are carried at the lower of cost or net realisable value. Cost includes direct material and labour and an appropriate proportion of variable and fixed overheads. Fixed overheads are allocated on the basis of normal operating capacity.

Net realisable value is the estimated revenue that can be earned from the sale of a product less the estimated costs of both completion and selling. The Group assesses net realisable value of plasma derived products on a basket of products basis given their joint product nature.



Key Judgements and Estimates – Inventory

Various factors affect the assessment of recoverability of the carrying value of inventory, including regulatory approvals and future demand for the Group's products. These factors are taken into account in determining the appropriate level of provisioning for inventory.

Note 4 illustrates that the inventory balance is made up of 1309.1M of raw material inventory, 1249.6M of work in process inventory and 1221.9M of finished goods inventory. This is expected as CSL does not only market biomedical products to treat and prevent serious human medical conditions, but it also manufactures their own products. In the manufacturing environment, there would be separate inventory calculations for the various process levels of inventory, such as raw materials, work in process, and finished goods. The manufacturer's finished goods inventory is equivalent to the retailers' inventory account in that it includes finished goods that are available for sale.

The next section examines how businesses determines the cost of inventory sold, the 'Cost of Goods Sold' (sometimes also referred to as Cost of Sales, as is the case in CSL above).

6.2 Calculate the cost of goods sold using the perpetual and periodic inventory recording systems

RINA DHILLON; MITCHELL FRANKLIN; PATTY GRAYBEAL; AND
DIXON COOPER

Inventory costing

Inventory costing is accomplished by one of three specific costing methods: (1) first-in, first-out (FIFO), (2) last-in, first-out (LIFO), and (3) weighted-average (WA) cost methods. All three methods are techniques that allow management to distribute the costs of inventory in a logical and consistent manner, to facilitate matching of costs to offset the related revenue item that is recognised during the period, in accordance with expense recognition and matching concepts. In Australia, AASB 102 does not allow the use of the second method, LIFO. Nevertheless, LIFO is still used globally by other countries such as Japan and US.

Note that a company's cost allocation process represents management's chosen method for expensing product costs, based strictly on estimates of the flow of inventory costs, which is unrelated to the actual flow of the physical inventory. Use of a cost allocation strategy eliminates the need for often cost-prohibitive individual tracking of costs of each specific inventory item, for which purchase prices may vary greatly.

In this section, you will be provided with a basic demonstration of each of the three allocation methods, and then further delineation

of the application and nuances of the two costing system – perpetual and periodic – introduced in the previous section.

To illustrate each method, the following example from In Style Fashion will be used. Assume that In Style Fashion has the following inventory activity for September:

		Units	Unit cost	Total
1 Sep	Beginning inventory	40	\$12	\$480
4 Sep	Purchase	60	\$13	\$780
10 Sep	Sale	(65)	?	
15 Sep	Purchase	30	\$14	\$420
23 Sep	Purchase	45	\$15	\$675
30 Sep	Sale	(50)	?	

We will begin exploring each of the allocation methods using the perpetual inventory system.

Cost Allocation Methods, but Specific to Perpetual Inventory System

As you've learned, the perpetual inventory system is updated continuously to reflect the current status of inventory on an ongoing basis. Modern sales activity commonly uses electronic identifiers—such as bar codes and RFID technology—to account for inventory as it is purchased, managed/monitored, and sold.

Regardless of which cost assumption is chosen, recording inventory sales using the perpetual method involves recording both the revenue and the cost from the transaction for each individual sale. As additional inventory is purchased during the period, the cost of those goods is added to the inventory account. Normally, no significant adjustments are needed at the end of the period (before

financial statements are prepared) since the inventory balance is maintained to continually parallel actual counts. Let's look closely at how inventory purchases and sales during the period are calculated using the first-in, first-out (FIFO) method.

First-in, First-out (FIFO)

The FIFO method of cost allocation assumes that the earliest units purchased are also the first units sold. For In Style Fashion, using the perpetual inventory system, the first sale of 65 units is assumed to be the 40 units from the beginning inventory, which had cost \$12 per unit, and the remaining 25 units from the purchase made on 4th September, which had cost \$13 per unit, bringing the total cost of these units to \$805 $[(40 \times 12) + (25 \times 13)]$. Once those units were sold, there remained 35 more units of the 4th September purchased inventory. The company bought 30 more units for \$14 per unit and 45 more units for \$15 per unit on 15th September and 23rd September respectively. At the time of the second sale of 50 units, the FIFO assumption directs the company to cost out the last 35 units of the 4th September purchased inventory, plus 15 of the units that had been purchased for \$14 on 15th September. Ending inventory was made up of 15 units at \$14 each, and 45 units at \$15 each, for a total FIFO perpetual ending inventory value of \$885.

The FIFO costing assumption tracks inventory items in the order that they were acquired, so that when they are sold the earliest acquired items are used to offset the revenue from the sale. For many businesses, the FIFO assumption may match the actual physical flow of their inventory. It is important to note that this is an assumption – the actual items sold cannot be identified, they could be the oldest, the newest or any combination. The table below illustrates the calculation of cost of goods sold and ending inventory under the FIFO method:

Cost of Goods Sold (COGS)									
Transaction	Inventory purchased	Inventory sold		Inventory on hand					
1 Sep Beginning inventory				40	\$12	\$480			
4 Sep Purchase #1	60 \$12 \$720			40	\$12	\$480			
				50	\$13	\$650			
				100		\$1,130			
18 Sep Sold 80 units		40 of \$12 is	\$480	8	\$12	\$96			
		22 of the rest is	\$286	35	\$13	\$455			
			\$766	25		\$455			
18 Sep Purchase #2	30 \$14 \$420			35	\$13	\$455			
				30	\$14	\$420			
				65		\$875			
23 Sep Purchase #3	45 \$15 \$675			30	\$13	\$390			
				30	\$14	\$420			
				45	\$15	\$675			
				105		\$1,485			
30 Sep Sold 50 units		25	\$13	\$325	8	\$12	\$96		
		15	\$14	\$210	15	\$14	\$210		
			\$535	40	\$15	\$600			
				50		\$750			
						\$1,350			
						\$1,350			

Description of Journal Entries for Inventory Sales, Perpetual, First-in, First-out (FIFO)

Journal entries are not shown, but the following discussion provides the information that would be used in recording the necessary journal entries. Each time a product is sold, a revenue entry would be made to record the sales revenue and the corresponding accounts receivable or cash from the sale. When applying perpetual inventory system, a second entry made at the same time would record the cost of the item based on FIFO, which would be shifted from inventory (an asset) to cost of goods sold (an expense).

Last-in, First-out (LIFO)

The last-in, first-out method (LIFO) of cost allocation assumes that the last units purchased are the first units sold. For In Style Fashion, using perpetual inventory system, the first sale of 65 units is assumed to be the 60 units from the 4th September purchase, which had cost \$13 per unit and 5 units from the beginning inventory,

which had cost \$12 per unit, bringing the total cost of these units in the first sale to \$840 $[(60 \times \$13) + (5 \times \$12)]$. Once those units were sold, there remained 35 more units of beginning inventory. The company bought 30 more units for \$14 per unit and 45 more units for \$15 per unit on 15th September and 23rd September respectively. At the time of the second sale of 50 units, the LIFO assumption directs the company to cost out the 45 units from the latest purchased units, which had cost \$15 per unit and the remaining 5 units from the earlier purchase on 15th September at \$14 per unit, for a total cost on the second sale of \$745 $[(45 \times \$15) + (5 \times \$14)]$. Ending inventory was made up of 25 units at \$14 each and 35 units at \$12 each, for a total LIFO perpetual ending inventory value of \$770.

The LIFO costing assumption tracks inventory items in the order that they were acquired, so that when they are sold, the latest acquired items are used to offset the revenue from the sale. The table below illustrates the calculation of cost of goods sold and ending inventory under the LIFO method:

			Cost of Goods Sold (COGS)		
Transaction	Inventory purchased	Inventory sold		Inventory on hand	
1 Sep: Beginning inventory				60	\$12 \$480
4 Sep: Purchase #1	60 \$13 \$780			45 \$13 \$585	
				55 \$13 \$715	
				180	\$1280
18 Sep: Sell 95 units	Then 5 of the most recent All 60 of the most recent	5 \$12 \$60 60 \$13 \$780 55	60	35 \$12 \$420	
				0 \$13 0	
				35	\$420
15 Sep: Purchase #2	30 \$14 \$420			35 \$12 \$420	
				35 \$14 \$490	
				65	\$910
23 Sep: Purchase #3	45 \$15 \$675			35 \$12 \$420	
				30 \$14 \$420	
				45 \$15 \$675	
				115	\$1515
30 Sep: Sell 80 units		5 \$14 \$70 45 \$15 \$675 50	70	35 \$12 \$420	
				20 \$14 \$280	
				55	\$660
				55	\$715 Ending inventory

Description of Journal Entries for Inventory Sales, Perpetual, Last-in, First-out (LIFO)

Journal entries are not shown, but the following discussion provides the information that would be used in recording the necessary journal entries. Each time a product is sold, a revenue entry would be made to record the sales revenue and the corresponding accounts receivable or cash from the sale. When applying perpetual inventory system, a second entry made at the same time would record the cost of the item based on LIFO, which would be shifted from inventory (an asset) to cost of goods sold (an expense).

Weighted-Average Cost (WA)

Weighted-average cost allocation requires computation of the average cost of all units in goods available for sale at the time the sale is made for perpetual inventory calculations. For In Style, the first sale of 65 units is assumed to be the units from the beginning inventory of 40 units, which had cost \$12 per unit, and the purchase of 60 units on 4th September at a cost of \$13 per unit. At this juncture, an average cost will be calculated using the following formula:

Average unit cost = Cost of Goods Available for Sale / Units Available for Sale

$$\$12.60 = [(40 \times 12) + (60 \times 13)] / (40+60)$$

This brings the total cost of these units in the first sale to \$819 (65 x \$12.60). Once those units were sold, there remained 35 more units of the inventory, which still had a \$12.60 average cost. The company bought 30 more units for \$14 per unit and 45 more units for \$15 per unit on 15th September and 23rd September respectively. Recalculating the average cost, after these purchases, is accomplished by dividing total cost of goods available for sale (which totalled \$1536 at that point) by the number of units held, which was 110 units, for an average cost of \$13.96 per unit. At the time of the second sale of 50 units, the WA assumption directs the company to cost out the 50 at \$13.96 for a total cost on the second sale of \$698 (50 x \$13.96). Ending inventory was made up of 60 units

at \$13.96 each for a total WA perpetual ending inventory value of \$838 (60 x \$13.96).

The WA costing assumption tracks inventory items based on lots of goods that are combined and re-averaged after each new acquisition to determine a new average cost per unit so that, when they are sold, the latest averaged cost items are used to offset the revenue from the sale. The table below illustrates the calculation of cost of goods sold and ending inventory under the WA method:

						Cost of Goods Sold (COGS)	
Transaction	Inventory purchased		Inventory sold		Inventory on hand		
1 Sep Beginning inventory					40	\$12	\$480
4 Sep Purchase #1	60	\$13	\$780		40	\$12	\$480
					60	\$13	\$780
					100		\$1260
10 Sep Sell 85 units			65	\$12.80	55	\$12.80	\$704
15 Sep Purchase #2	30	\$14	\$420		55	\$12.80	\$704
					30	\$14	\$420
					65		\$924
25 Sep Purchase #3	45	\$15	\$675		55	\$12.80	\$704
					30	\$14	\$420
					85	\$15	\$1275
					110		\$1999
30 Sep Sell 50 units			50	\$13.96	60	\$13.96	\$838
							Ending inventory

Description of Journal Entries for Inventory Sales, Perpetual, Weighted Average (AVG)

Journal entries are not shown, but the following discussion provides the information that would be used in recording the necessary journal entries. Each time a product is sold, a revenue entry would be made to record the sales revenue and the corresponding accounts receivable or cash from the sale. When applying perpetual inventory system, a second entry would be made at the same time to record the cost of the item based on the WA costing assumptions, which would be shifted from inventory (an asset) to cost of goods sold (an expense).

Keeping it Real

Perpetual Inventory's Advancements through Technology

Perpetual inventory has been seen as the wave of the future for many years. It has grown since the 1970s alongside the development of affordable personal computers. Universal product codes, commonly known as UPC barcodes, have advanced inventory management for large and small retail businesses, allowing real-time inventory counts and reorder capability that increased popularity of the perpetual inventory system. These UPC codes identify specific products but are not specific to the particular batch of goods that were produced. Electronic product codes (EPCs) such as radio frequency identifiers (RFIDs) are essentially an evolved version of UPCs in which a chip/identifier is embedded in the EPC code that matches the goods to the actual batch of product that was produced. This more specific information allows better control, greater accountability, increased efficiency, and overall quality monitoring of goods in inventory. The technology advancements that are available for perpetual inventory systems make it nearly impossible for businesses to choose periodic inventory and forego the competitive advantages that the technology offers.

Visit this [Amazon inventory video for a little insight into some of the inventory challenges experienced by retail giant Amazon](#) to learn more.

We will now turn to exploring each of the allocation methods using the periodic inventory system.

Cost Allocation Methods, but Specific to Periodic Inventory System

As you've learned in the previous section, the periodic inventory system is updated at the end of the period to adjust inventory numbers to match the physical count and provide accurate inventory values for the balance sheet. The adjustment ensures that only the inventory costs that remain on hand are recorded, and the remainder of the goods available for sale are expensed on the income statement as cost of goods sold. Since a periodic system does not update the inventory and the cost of goods sold accounts during the period, balances in these accounts must be calculated at the end of the period using the following 3 steps:

- 1. Count the inventory on hand at the end of the period
- 2. Use an inventory costing method to assign a cost to the ending inventory
- 3. Calculate cost of goods sold using the cost of goods sold model

Here we will demonstrate the mechanics used to calculate the ending inventory values using the three cost allocation methods and the periodic inventory system. The following is a summary of In Style Fashion's inventory purchases for September:

		Units	Unit cost	Total
1 Sep	Beginning inventory	40	\$12	\$480
4 Sep	Purchase	60	\$13	\$780
15 Sep	Purchase	30	\$14	\$420
23 Sep	Purchase	45	\$15	\$675

First-in, First-out (FIFO)

The first-in, first-out method (FIFO) of cost allocation assumes that

the earliest units purchased are also the first units sold. For In Style Fashion, considering under the FIFO method, the earliest inventory acquisitions are considered sold first, then the units that remain under FIFO are those that were purchased last. Following that logic, ending inventory included 45 units purchased at \$15 and 15 units purchased at \$14 each, for a total FIFO periodic ending inventory value of \$885. Subtracting this ending inventory from the \$2355 total of goods available for sale leaves \$1470 in cost of goods sold/cost of sales this period.

	Units	Unit cost	Total cost
23 Sep purchase	45	\$15	\$675
15 Sep purchase	15	\$14	<u>\$210</u>
Ending inventory	60		\$885

	Units	Cost
Cost of goods available for sale	175	\$2355
- Ending inventory	<u>60</u>	<u>885</u>
= Cost of sales	115	<u>\$1470</u>

Last-in, First-out (LIFO)

The last-in, first-out method (LIFO) of cost allocation assumes that the last units purchased are the first units sold. For In Style Fashion, considering under the LIFO method, the latest inventory acquisitions are considered sold first, then the units that remain under LIFO are those that were purchased first. Following that logic, ending inventory included 40 units purchased at \$12 and 20 units purchased at \$13 each, for a total LIFO periodic ending inventory value of \$740. Subtracting this ending inventory from the \$2355 total of goods available for sale leaves \$1615 in cost of goods sold/cost of sales this period.

	Units	Unit cost	Total cost
Beginning inventory	40	\$12	\$480
4 Sep purchase	20	\$13	\$260
Ending inventory	60		\$740

	Units	Cost
Cost of goods available for sale	175	\$2355
- Ending inventory	60	740
= Cost of sales	115	\$1615

Weighted-Average Cost (AVG)

Weighted-average cost allocation requires computation of the average cost of all units in goods available for sale at the time the sale is made. For In Style Fashion, considering the entire period, the weighted-average cost is computed by dividing total cost of goods available for sale (\$2355) by the total number of available units (175) to get the average cost of \$13.46. Note that 60 of the 175 units available for sale during the period remained in inventory at period end. Following that logic, ending inventory included 60 units at an average cost of \$13.46 for a total WA periodic ending inventory value of approximately \$808. Subtracting this ending inventory from the \$2355 total of goods available for sale leaves \$1547 in cost of goods sold/cost of sales this period. It is important to note that final numbers can often differ by one or two cents due to rounding of the calculations. In this case, the cost comes to \$13.4571 but rounds up to the stated cost of \$13.46.

$$\text{Weighted average unit cost} = \frac{\text{Cost of goods available for sale}}{\text{Units available for sale}}$$

$$\frac{\$2355}{175} = \$13.46 \rightarrow \$13.46 \times 60 = \$807.60 \text{ (or approximately \$808)}$$

	Units	Cost
Cost of goods available for sale	175	\$2355
- Ending inventory	60	<u>808</u>
= Cost of sales	115	<u>\$1547</u>

Summary of inventory costing methods

The above illustrations show that a business' choice of inventory costing method affects its cost of goods sold/cost of sales and its ending inventory. The table below compares the results of each of the three cost allocation assumptions under the perpetual system and summarises these effects for In Style Fashion:

	Units	FIFO	WA	LIFO
Beginning inventory	40	\$480	\$480	\$480
Add: Net Purchases	135	\$1875	\$1875	\$1875
Cost of goods available for sale	175	\$2355	\$2355	\$2355
Less: Ending inventory	60	<u>\$895</u>	<u>\$838</u>	<u>\$770</u>
Cost of goods sold	115	<u>\$1470</u>	<u>\$1517</u>	<u>\$1585</u>

The above table utilises the cost of goods sold model which summarises a business' inventory activity during a period. This model starts with the beginning inventory and adds the purchases to yield the cost of goods available for sale. This total cost of inventory that is available to the business to sell during the period is

then allocated to what was sold during the period (i.e. cost of goods sold / cost of sales) and any remaining is allocated to what was not sold during the period (i.e. ending inventory).

For In Style Fashion, it began the month with 40 units costing \$480 and purchased an additional 135 units for a cost of \$1875 during the month. This meant that In Style Fashion had 175 units with a total cost of \$2355 available to sell during the month. This scenario would be the same regardless of the inventory costing system chosen by the business. However, the cost of the 115 units that the business ended up selling during the month and the 60 remaining inventory on hand at the end of the month depends on the cost allocation assumptions used.

The FIFO method assigns the costs of the first and, in this case, less expensive units purchased to Cost Of Good Sold (hereafter COGS), thereby giving the lowest COGS. Additionally, FIFO assigns the costs of the last and more expensive units to ending inventory, thereby yielding the highest ending inventory.

The LIFO method, on the other hand, assigns the costs of the last, and in this case, more expensive units to COGS, resulting in the highest COGS. Additionally, LIFO assigns the costs of the first and less expensive units to ending inventory, thereby yielding the lowest ending inventory.

Lastly, the Weighted Average (WA) assigns the average costs of all units purchased to COGS. Thus, WA yields COGS and ending inventory that fall in between FIFO and LIFO.

Thus when a business experiences rising prices (especially in the current post-pandemic climate where [inflation is at an all time high](#)) for its inventory, these differences between the cost allocation methods will persist. These differing relationships are summarised in the table below:

	FIFO	Weighted Average	LIFO
Method	<ul style="list-style-type: none"> - Assigns the costs of the first and, in this case, less expensive units purchased to COGS, thereby giving the lowest COGS. - Assigns the costs of the last and more expensive units to ending inventory, thereby yielding the highest ending inventory. 	<ul style="list-style-type: none"> - Assigns the average costs of all units purchased to COGS. - Yields COGS and ending inventory that fall in between the FIFO and LIFO extremes. 	<ul style="list-style-type: none"> - Assigns the costs of the last, and in this case, more expensive units to COGS, resulting in the highest COGS. - Costs of the first and less expensive units are assigned to ending inventory.
Summary:			
Cost of Goods Sold	Lowest	Middle	Highest
Ending Inventory	Highest	Middle	Lowest

We now turn our attention to what happens when there are inventory errors.

6.3 Analyse the effects of inventory errors

MITCHELL FRANKLIN; PATTY GRAYBEAL; DIXON COOPER; AND
RINA DHILLON

The effects of inventory errors

Because of the dynamic relationship between cost of goods sold and inventory, errors in inventory counts have a direct and significant impact on the financial statements of the business. Errors in inventory valuation cause mistaken values to be reported for inventory and cost of goods sold due to the toggle effect that changes in either one of the two accounts have on the other. As explained, the business has a finite amount of inventory that they can work with during a given period of business operations, such as a year. This limited quantity of goods is known as goods available for sale and is sourced from

1. beginning inventory (unsold goods left over from the previous period's operations); and
2. purchases of additional inventory during the current period.

These available inventory items (goods available for sale) will be handled in one of two ways:

1. be sold to customers (normally) or be lost due to shrinkage, spoilage, or theft (occasionally), and reported as cost of goods sold on the income statement; OR
2. be unsold and held in ending inventory, to be passed into the next period, and reported as inventory on the balance sheet.

Fundamentals of the Impact of Inventory Valuation Errors on the Income Statement and Balance Sheet

Understanding this interaction between inventory assets (inventory balances) and inventory expense (cost of goods sold) highlights the impact of errors. Errors in the valuation of ending inventory, which is on the balance sheet, produce an equivalent corresponding error in the company's cost of goods sold for the period, which is on the income statement. When cost of goods sold is overstated, inventory and net income are understated. When cost of goods sold is understated, inventory and net income are overstated.

Further, an error in ending inventory carries into the next period, since ending inventory of one period becomes the beginning inventory of the next period, causing both the balance sheet and the income statement values to be wrong in year two as well as in the year of the error. Over a two-year period, misstatements of ending inventory will balance themselves out. For example, an overstatement to ending inventory overstates net income, but next year, since ending inventory becomes beginning inventory, it understates net income. So over a two-year period, this corrects itself. This is an example of counterbalancing errors, or errors whose effects on profits (income) are corrected in the period after the error. However, financial statements are prepared for one period, so all this means is that two years of cost of goods sold are misstated (the first year is overstated/understated, and the second year is understated/overstated.). However not all inventory errors are counterbalancing. For example, if a particular warehouse of inventory is not counted year after year, the error will not work itself out.

In periodic inventory systems, inventory errors commonly arise from careless oversight of physical counts. Another common cause of periodic inventory errors results from management neglecting to take the physical count. Both perpetual and periodic inventory

systems also face potential errors relating to losses in value due to shrinkage, theft, or obsolescence.

6.4 Demonstrate how inventory is estimated

RINA DHILLON; MITCHELL FRANKLIN; PATTY GRAYBEAL; AND
DIXON COOPER

A business must sometimes estimate inventory values. These estimates could be needed for interim reports, when physical counts are not taken. The need could result from a natural disaster that destroys part or all of the inventory or from an error that causes inventory counts to be compromised or omitted (for example theft or spoilage). Some specific industries (such as retail businesses) also regularly use these estimation tools to determine cost of goods sold.

In the above cases, businesses can estimate its ending inventory using the gross profit (margin) method or the retail method. Although these methods are predictable and simple, and both rely on gross profit margins (also known as mark ups), it is also less accurate since it is based on estimates rather than actual cost figures. Let's look at each of this method closely.

Gross profit method


The gross profit method is used to estimate inventory values by applying a standard gross profit percentage to the company's sales totals when a physical count is not possible. The resulting gross profit can then be subtracted from sales, leaving an estimated cost of goods sold. Then the ending inventory can be calculated by subtracting cost of goods sold from the total goods available for sale. To illustrate the gross profit method, assume that In Style Fashion is preparing financial statement and need to estimate the cost of

goods sold and ending inventory. In Style Fashion has generated \$400000 of sales and historically, the gross profit percentage has averaged 45%. Assuming that this financial period is similar to previous periods, In Style Fashion can estimate that gross profit on current sales is \$180000:



Current quarter sales (actual)	\$400000
Historical gross profit percentage	X 45%
Gross profit (estimated)	<u>\$180000</u>

In Style Fashion can then use this estimated gross profit to estimate the cost of goods sold for the period to be \$220000:



Current quarter sales (actual)	\$400000
Gross profit (estimated)	<u>(180000)</u>
Cost of goods sold (estimated)	<u>\$220000</u>

With this estimated cost of goods sold, In Style Fashion can calculate its ending inventory using the general cost of goods model. Based on prior financial reports, In Style Fashion can determine that the business started the period with \$200000 in inventory. Looking at purchase records, they can make out how much inventory they purchased during the period, in this instance \$90000 of inventory. This means that In Style Fashion has \$290000 in inventory available for sale during the period. With the estimated \$220000 cost of goods sold, they can estimate ending inventory to be \$70000:



Beginning inventory (actual)	\$200000
Add: Net purchases (actual)	90000
Cost of goods <u>available</u> for sale (actual)	\$290000
Less: Cost of goods sold (estimated)	(220000)
Ending inventory (estimated)	\$70000

Let's now turn our attention to the retail inventory method.

Retail Inventory method

Likewise, the retail inventory method estimates the cost of goods sold, much like the gross profit method does, but uses the retail value of the portions of inventory rather than the cost figures used in the gross profit method. Essentially, once ending inventory is counted (usually through a stock take), the total sales value of the inventory is reduced by the profit margin. Clothing shops often use the retail inventory method, utilising the current selling price of the garment (say a dress) and reducing prices to cost by the application of average department mark-up ratios. We can usually determine the selling price from price list or cash register or Point Of Sale (POS) system. To illustrate using a simple example, if a business has a gross profit margin of 45.25% (calculated by gross profit/operating revenue), then cost of goods sold is 54.75% (100%-45.25%).

You can read more about the retail method in [AASB 102 Inventories](#) paragraph 22.

Lower-of-Cost-and-Net-Realisable-Value

Reporting inventory values on the balance sheet using the accounting concept of conservatism (which discourages overstatement of net assets and net income) requires inventory to be calculated and adjusted to a value that is the lower of the cost calculated using the business' chosen valuation method or the market value based on the market or replacement value of the inventory items.

Thus, if traditional cost calculations produce inventory values that are overstated, the lower-of-cost-and-net-realisable-value LCNRV (sometimes called the lower of cost or market) requires that the balance in the inventory account should be decreased to the more conservative replacement value rather than be overstated on the balance sheet.

LCNRV is applied at the end of each accounting period by comparing inventory costs to net realisable value (NRV). AASB 102 Inventories does not allow decreases in one category of inventory to be offset against gains in another. In addition, the loss on inventory is usually reported as part of cost of goods sold in the income statement, and in the balance sheet, inventory is reported as a current asset at LCNRV.

Test your knowledge



An interactive H5P element has been excluded from this version of the text. You can view it online here:

<https://oer.pressbooks.pub/utsaccounting2/?p=479#h5p-21>



An interactive H5P element has been excluded from this version of the text. You can view it online here:

<https://oer.pressbooks.pub/utsaccounting2/?p=479#h5p-22>

Chapter 6 Practice Questions

RINA DHILLON

Practice Questions

1. To determine inventory in the balance sheet, a company must count the inventory at the end of its accounting period according to:

-
- a. the periodic inventory system
 - b. the perpetual inventory system
 - c. both the periodic and perpetual inventory systems
 - d. neither the periodic nor perpetual inventory systems
-

2. Which of the following statements is false?

-
- a. The inventory account is updated after every sale and after every inventory purchase under the perpetual inventory system
 - b. The inventory account is updated only at the end of the accounting period under the periodic inventory system
 - c. A cost of goods sold account is updated after each sale of inventory under the periodic inventory system
 - d. A purchases account is used only under the periodic inventory system
-

3. Grace Brothers is a retail organisation that uses the periodic inventory system. Selected account balances are listed below.

Sales	\$175 000
Gross purchases	90 000
Beginning inventory	23 000
Ending inventory	17 000
Purchase Returns and Allowances	3 000
Purchase discounts	7 000
Transportation-in	4 000
Sales discounts	8 000
Sales Returns and Allowances	5 000

Calculate Grace Brothers' net purchases:

-
- a. \$84 000
 - b. \$90 000
 - c. \$103 000
 - d. \$117 000
-

4. GPJ Couture buys designer clothing to sell in its retail stores. Since much of the inventory comes from Milan and Paris, GPJ must pay freight charges to get the inventory shipped in. Which of the following statements must be true?

-
- a. Transportation-in, paid by GPJ, is added to the inventory account
 - b. Transportation-in, paid by GPJ, is subtracted from purchases
 - c. Freight charges are only paid by the buyer
 - d. Transportation-in is included in the total cost of purchases used to determine cost of goods sold
-

5. The following journal entry was included in the accounting records of Avesta Bespoke.

15 Oct.	Accounts payable	4 000	
	Inventory	40	
	Cash	3 960	

Based on this information, it is likely that Avesta:

-
- a. Purchased inventory for cash
 - b. Paid for inventory purchased on credit, and took advantage of a 1 per cent purchase discount
 - c. Sold inventory for cash
 - d. Collected cash for inventory sold on credit, and recognised a 1 per cent sales discount
-
6. Which inventory cost allocation method assigns the cost of the most recent items purchased to ending inventory?
-
- a. Cost Of Goods Sold (COGS)
 - b. Weighted average (WA)
 - c. FIFO
 - d. LIFO
-
7. Which inventory cost flow method assigns the cost of the most recent items purchased to cost of goods sold?
-
- a. Cost Of Goods Sold (COGS)
 - b. Weighted average cost
 - c. FIFO
 - d. LIFO
-
8. ABS uses a perpetual inventory system and had the following inventory transactions for the month of August.

1	Aug	On hand, 50 units at \$18.00 each	\$ 900.00
4		Purchased 115 units at \$18.20 each	2 093.00
5		Sold 100 units	
10		Purchased 75 units at \$18.25 each	1 368.75
24		Sold 40 units	
		Total cost of goods available for sale	\$4 361.75
30		On hand, 100 units	

If ABS uses the FIFO inventory costing method, the amount of ending inventory reported on the balance sheet is:

- a. \$ 800.00
- b. \$1810.00
- c. \$1823.75
- d. \$1825.00

9. ABS uses a perpetual inventory system and had the following inventory transactions for the month of August.

1	Aug	On hand, 50 units at \$18.00 each	\$ 900.00
4		Purchased 115 units at \$18.20 each	2 093.00
5		Sold 100 units	
10		Purchased 75 units at \$18.25 each	1 368.75
24		Sold 40 units	
		Total cost of goods available for sale	\$4 361.75
30		On hand, 100 units	

If ABS uses the FIFO inventory costing method, cost of goods sold for the month of August is:

-
- a. \$2520.00
 - b. \$2538.00
 - c. \$2540.00
 - d. \$2550.00
-

10. ABS uses a perpetual inventory system and had the following inventory transactions for the month of August.

1	Aug	On hand, 50 units at \$18.00 each	\$ 900.00
4		Purchased 115 units at \$18.20 each	2 093.00
5		Sold 100 units	
10		Purchased 75 units at \$18.25 each	1 368.75
24		Sold 40 units	
		Total cost of goods available for sale	\$4 361.75
30		On hand, 100 units	

If ABS uses the LIFO inventory costing method, the amount of ending inventory reported on the balance sheet is:

-
- a. \$1823.75
 - b. \$1810.00
 - c. \$1811.75
 - d. \$1806.25
-

11. ABS uses a perpetual inventory system and had the following inventory transactions for the month of August.

1	Aug	On hand, 50 units at \$18.00 each	\$ 900.00
4		Purchased 115 units at \$18.20 each	2 093.00
5		Sold 100 units	
10		Purchased 75 units at \$18.25 each	1 368.75
24		Sold 40 units	
		Total cost of goods available for sale	\$4 361.75
30		On hand, 100 units	

If ABS uses the LIFO inventory costing method, cost of goods sold for the month of August is:

-
- a. \$2538.00
 - b. \$2550.00
 - c. \$2551.25
 - d. \$2555.00
-

12. Dhillon Ltd. has a gross profit of \$400000. This is based on sales of \$1000000. If cost of goods sold available for sale is \$730,000 and beginning inventory is \$320,000, calculate the estimated value of ending inventory under the gross profit method.

-
- a. \$600000
 - b. \$450000
 - c. \$130000
 - d. \$280000
-

13. Which inventory costing method results in the highest inventory balance during a period of rising purchase prices?

-
- a. Weighted average cost
 - b. FIFO
 - c. LIFO
 - d. Both FIFO and LIFO result in the same inventory balance.
-
14. During a period of increasing purchase prices, which inventory costing method will yield the lowest cost of goods sold?
-
- a. Any method in which the company uses a periodic system.
 - b. FIFO
 - c. LIFO
 - d. Weighted average cost
-
15. If the cost of an item of inventory is \$50 and the market value is \$57, the amount included in inventory according to the lower-of-cost-and-net-realizable-value is:
-
- a. \$7
 - b. \$50
 - c. \$57
 - d. \$107
-

Solutions:

(1) a – refer to Section 6.1;

(2) c – refer to Section 6.1;

(3) a – refer to Section 6.1

Gross purchases + Transportation-in – Purchase returns and allowances – Purchase discounts = Net Purchases

$$\$90000 + 4000 - 3000 - 7000 = \$84000;$$

(4) d – refer to Section 6.1;

(5) b – refer to Section 6.1: Since $40/4000 = 1\%$ going to a reduction in inventory cost (CR Inventory), there must have been a 1% purchase discount and the DR Accounts Payable shows payment for purchases (in this instance inventory) on credit;

(6) c – refer to Section 6.2;

(7) d – refer to Section 6.2;

(8) c – refer to Section 6.2;

Given FIFO would means selling inventory that was first in, what would be left in the ending inventory which this question is asking for is:

All the beginning inventory and initial purchases would be sold except for 25 units ($50 + 115 - 100 - 40$). So what is left is the 25 units @ \$18.20 (all the beginning inventory that costed \$18 would have been sold already) and the 75 units purchased on 10th August leaving ending inventory to be:

$$(25 \times \$18.20) + (75 \times \$18.25) = \$1823.75;$$

(9) b – refer to Section 6.2

Looking back at Q8, since this question focuses on COGS and we sold 140 units during the period, the inventory that was sold and its costs are:

$$(50 \times \$18) + (90 \times \$18.20) = \$2538;$$

(10) c – refer to Section 6.2

Given LIFO would means selling inventory that was last in, what would be left in the ending inventory is all that was in the beginning inventory, the remaining 15 units that is from the inventory purchases on 4th August and the remaining 35 units from the inventory purchases on 10th August , which this question is asking for is:

$$(50 \times 18) + (15 \times \$18.20) + (35 \times \$18.25) = \$1811.75;$$

(11) b – refer to Section 6.2

Looking back at Q10, since this question focuses on COGS and we sold 140 units during the period, the inventory that was sold and its costs are:

$$(40 \times \$18.25) + (100 \times \$18.20) = \$2550;$$

(12) c – refer to Section 6.4

Sales – COGS = Gross Profit

$$\$1000000 - X = \$400000$$

$$\text{COGS (X)} = \$600000$$

Cost of goods available for sale – COGS = ending inventory

$$\$730000 - \$600000 = \$130000;$$

(13) b – refer to Section 6.2;

(14) b – refer to Section 6.2;

(15) b – refer to Section 6.4

PART VII

CHAPTER 7: PROPERTY, PLANT AND EQUIPMENT

Introduction

This chapter examines the accounting for non-current assets (hereafter NCA) – specifically property, plant and equipment. For most businesses, the objective of having NCA relates to acquiring NCA, using them productively for a certain time period and then disposing of them. This chapter examines in detail these three primary activities for property, plant and equipment (main non-current assets): (1) acquisition of NCA; (2) depreciation of NCA over their useful lives and (3) disposal of NCA.

Chapter outline

After reading this chapter, you should be able to:

1. Describe non-current assets and how they are recorded, expensed and reported
2. Calculate and compare depreciation expense using straight-line, reducing-balance and units-of-activity methods.
3. Understand the effects of adjustments that may be made during a non-current asset's useful life.
4. Understand and record the disposal of non-current assets.

7.1 Describe non-current assets and how they are recorded, expensed and reported

RINA DHILLON; MITCHELL FRANKLIN; PATTY GRAYBEAL; AND
DIXON COOPER

Assets are items a business owns. For accounting purposes, assets are categorised as current versus non-current. Assets that are expected to be used by the business for more than one year are considered non-current assets (hereafter NCA). They are not intended for resale and are anticipated to help generate revenue for the business in the future. Some common NCA are land, buildings, equipment, furniture and fixtures and vehicles.

To be considered a NCA, the item needs to be used in the normal operation of the business for more than one year, not be near the end of its useful life, and the business must have no plan to sell the item in the near future. The useful life is the time period over which an asset cost is allocated. NCA are also commonly known as fixed assets.

Businesses typically need many different types of these assets to meet their objectives. These assets differ from the businesses' products. For example, the computers that Apple Inc. intends to sell are considered inventory (a short-term asset), whereas the computers Apple's employees use for day-to-day operations are non-current assets. Non-current assets are listed on a business' balance sheet. Typically, these assets are listed under the category of Property, Plant, and Equipment (PPE), but they may be referred to as fixed assets.

Apple Inc. lists a total of \$39,440,000,000 in total Property, Plant and Equipment (net) on its 2021 consolidated balance sheet:

Apple Inc.
CONSOLIDATED BALANCE SHEETS
(In millions, except number of shares which are reflected in thousands and par value)

	September 25, 2021	September 26, 2020
ASSETS:		
Current assets:		
Cash and cash equivalents	\$ 34,940	\$ 38,516
Marketable securities	27,669	52,827
Accounts receivable, net	26,278	16,120
Inventories	6,580	4,881
Vendor non-trade receivables	26,228	21,326
Other current assets	14,111	11,264
Total current assets	134,806	143,713
Non-current assets:		
Marketable securities	127,877	106,887
Property, plant and equipment, net	39,440	36,766
Other non-current assets	40,849	42,522
Total non-current assets	208,166	186,175
Total assets	\$ 351,060	\$ 329,888

As shown in the notes to the financial statements (see figure below), this net total includes land and buildings, machinery, equipment and internal-use software, and leasehold improvements, resulting in a gross PPE of \$109,723,000,000—less accumulated depreciation and amortisation of \$70,283,000,000—to arrive at the net amount of \$39,440,000,000.

Property, Plant and Equipment, Net

	2021	2020
Land and buildings	\$ 20,041	\$ 17,952
Machinery, equipment and internal-use software	78,656	75,391
Leasehold improvements	11,025	9,263
Gross property, plant and equipment	109,722	102,606
Accumulated depreciation and amortization	(70,283)	(65,760)
Total property, plant and equipment, net	\$ 39,440	\$ 36,766

When a business purchases a NCA (used for more than one year), it classifies the asset based on whether the asset is used in the business's operations. If a NCA is used in the business operations, it will belong in property, plant, and equipment. Let's now turn our

attention to how NCA are recorded when a business purchases a NCA.

Recording non-current assets

Non-current assets should be recorded at the cost of acquiring/purchasing them, and include the costs of bringing the asset into use. When recording an asset, the total cost of acquiring the asset is included in the cost of the asset. This includes additional costs beyond the purchase price, such as shipping costs, taxes, assembly, and legal fees. For example, if a real estate broker is paid \$8,000 as part of a transaction to purchase land for \$100,000, the land would be recorded at a cost of \$108,000.

Essentially, acquisition cost includes all necessary costs incurred in purchasing the asset and having it delivered, installed and ready to use. Examples of costs that should be included are:

- Purchase price
- Taxes and duties paid on the purchase
- Delivery and related transit insurance costs
- Installation costs
- Any costs that are specific to the asset and provide future value are also included (e.g. laptop case for a laptop)

To illustrate, suppose that MAAS Corporation buys a delivery truck on 1st July. Purchase price is \$60000, plus additional import duty (\$2400), stamp duty (\$1800), GPS system (\$800) and non-compulsory insurance (\$1400). Given this costs, the cost of MAAS' delivery truck is determined as follows:

Purchase Price \$60000

Import duty \$2400

Stamp duty \$1800

GPS system \$800

Total cost \$65000

All costs expect for the insurance are necessary to get the asset

into its condition and location for intended use and thus included in the cost of the truck. The insurance covers the truck during its operations and is thus an operating expense during the year (debit Prepaid Insurance or Insurance Expense \$1400, credit cash \$1400). The entry to record the purchase of the truck, assuming payment by cash, is:

1 st July	DR Delivery Truck	\$65000
	CR Cash	\$65000
	(To record purchase of truck)	

Expensing non-current assets

A NCA converts to an expense as it is used or consumed. Over time as the asset is used to generate revenue, the business will need to depreciate the asset. Depreciation, or the expensing of NCA is the process of allocating the cost of a NCA over its useful life, or the period of time that the business believes it will use the asset to help generate revenue. Depreciation is an application of the matching principle; because a non-current asset is used to generate revenues period after period, some of its cost should be expensed in, or matched to, those same periods.

The amount of expense recognised in each period is known as depreciation expense. The cumulative amount of depreciation expense recognised to date is known as accumulated depreciation. Accumulated depreciation is a contra account, meaning it is attached to another account and is used to offset the main account balance that records the total depreciation expense for a fixed asset over its life. In this case, the asset account stays recorded at the historical value but is offset on the balance sheet by accumulated

depreciation. Accumulated depreciation sits just below the non-current asset, and its balance is subtracted from the asset account to yield the carrying amount (net book value) of the non-current asset. The carrying amount gets lower over time. Accumulated depreciation is subtracted from the historical cost of the asset on the balance sheet to show the asset at book value – i.e. the amount of the asset that has not been allocated to expense through depreciation:

Example of Assets on a Balance Sheet:	
Inventory	\$ 10 000
Accounts Receivable	\$ 14 000
Building	\$ 150 000
Accumulated Depreciation -Building	(\$ 50 000)

In this case, the asset's book value is \$100000: the historical cost of \$150000 less the accumulated depreciation of \$50000. Depreciation expense is calculated at the end of an accounting period and recorded with an adjusting journal entry. The general form of the entry to record depreciation is:

Date	DR Depreciation expense	\$X
	CR Accumulated depreciation	\$X
	(To record depreciation expense)	

Regardless of the NCA being depreciated, the general form of

the entry is the same – depreciation expense and accumulated depreciation is increased. Depreciation records an expense for the value of an asset consumed and removes that portion of the asset from the balance sheet.

Reporting non-current assets

Like other expenses, depreciation expense is a common operating expense that appears on the income statement. Most businesses report depreciation expense as a separate line item in the notes to the accounts. For example, Apple Inc. provided the following information about how they depreciate their PPE and reported \$9.5 billion in depreciation and amortisation expense :

Property, Plant and Equipment

Depreciation on property, plant and equipment is recognized on a straight-line basis over the estimated useful lives of the assets, which for buildings is the lesser of 40 years or the remaining life of the building; between one and five years for machinery and equipment, including product tooling and manufacturing process equipment; and the shorter of lease term or useful life for leasehold improvements. Capitalized costs related to internal-use software are amortized on a straight-line basis over the estimated useful lives of the assets, which range from five to seven years. Depreciation and amortization expense on property and equipment was \$9.5 billion, \$9.7 billion and \$11.3 billion during 2021, 2020 and 2019, respectively.

Some businesses report the depreciation expense as a separate line item on the income statement. For example, in 2022 Westfarmers reported depreciation and amortisation expenses of \$1575 million as one of the expenses in the income statement:

Income statement

For the year ended 30 June 2022

	Notes	Consolidated	
		2022	2021
		\$m	\$m
Revenue	7	30,638	33,843
Expenses			
Raw materials and inventory		(23,438)	(20,877)
Employee benefits expense	8	(5,640)	(5,500)
Freight and other related expenses		(898)	(848)
Occupancy-related expenses	2	(442)	(461)
Depreciation and amortisation	2	(1,878)	(1,808)
Impairment expenses	3	(32)	(78)
Other expenses	2	(1,848)	(1,457)
Total expenses		(33,848)	(30,419)
Other income	2	187	89
Share of net profits of associates and joint ventures	21	173	703
		348	782
Earnings before finance costs and income tax expense		3,638	3,717
Interest on lease liabilities	11	(217)	(258)
Other finance costs	8	(96)	(118)
Profit before income tax expense		3,325	3,373
Income tax expense	3	(868)	(893)
Profit attributable to members of the parent		2,457	2,380
Earnings per share attributable to ordinary equity holders of the parent	16	0.478	0.461
Basic earnings per share		281.8	270.4
Diluted earnings per share		281.8	270.2

Non-current assets are reported on the balance sheet just below current assets. For example in 2022 Westfarmers reported \$3621 million in Property, Plant and Equipment, and in the accompanying note 8, accumulated depreciation is reported under each depreciable non-current asset.

Balance sheet

As at 30 June 2022

	Notes	Consolidated	
		2022	2021
		\$m	\$m
ASSETS			
Current assets			
Cash and cash equivalents	4	705	3,023
Trade and other receivables	5	2,094	1,340
Inventories	6	4,054	4,502
Income tax receivable		6	-
Derivatives	19	452	152
Other		294	172
Total current assets		9,605	9,089
Non-current assets			
Investments in associates and joint ventures	21	934	775
Other financial assets	7	607	1,124
Deferred tax assets	8	572	613
Property, plant and equipment	9	3,621	3,436
Goodwill and intangible assets	10	4,881	3,812
Mine properties	10	1,150	865
Right-of-use assets	11	5,014	6,008
Derivatives	19	8	260
Other		29	26
Total non-current assets		17,886	17,118
Total assets		27,491	26,214

Notes to the financial statements: Group balance sheet

For the year ended 30 June 2022

3. PROPERTY, PLANT AND EQUIPMENT

	Land \$m	Buildings \$m	Leasehold improvements \$m	Plant, vehicles and equipment \$m	Total \$m
Consolidated					
Year ended 30 June 2022					
Gross carrying amount - at cost	321	489	804	7,268	9,112
Accumulated depreciation and impairment	-	(192)	(548)	(4,758)	(5,498)
Net carrying amount	321	297	256	2,510	3,621
Movement					
Net carrying amount at beginning of year	368	324	377	2,428	3,499
Additions	37	80	98	438	621
Disposals and write-offs	(67)	(83)	(7)	(7)	(162)
Impairment	-	-	(9)	(8)	(17)
Depreciation and amortisation	-	(15)	(73)	(362)	(450)
Acquisition of controlled entities	4	3	18	168	127
Transfers	-	18	-	29	47
Other including foreign exchange movements	(2)	-	(1)	(4)	(7)
Net carrying amount at the end of the year	321	297	256	2,510	3,621
Assets under construction included above:	-	45	17	334	397
Year ended 30 June 2021					
Gross carrying amount - at cost	368	406	870	6,986	9,130
Accumulated depreciation and impairment	-	(182)	(493)	(4,508)	(5,234)
Net carrying amount	368	224	377	2,478	3,499
Movement					
Net carrying amount at beginning of year	302	404	408	2,411	3,625
Additions	42	155	62	452	621
Disposals and write-offs	(86)	(218)	(18)	(18)	(321)
Impairment	-	-	-	(15)	(15)
Depreciation and amortisation	-	(15)	(73)	(374)	(468)
Acquisition of controlled entities	-	-	-	1	1
Transfers	-	5	-	(38)	(21)
Other including foreign exchange movements	-	-	-	(7)	(7)
Net carrying amount at the end of the year	368	224	377	2,478	3,499
Assets under construction included above:	-	120	45	254	419

In note 8 above, the \$3621 million is described as net carrying amount, which represents the cost of the PPE that has not been depreciated or amortised yet. It is calculated by subtracting the accumulated depreciation to date from the cost of PPE. So if the cost of the asset is \$500 with \$100 of accumulated depreciation, the carrying amount or net book value of the asset would be \$400 (\$500-100).

From the above, we can see that land is not subject to depreciation. While depreciation applies to NCA, not all NCA are depreciated. Depreciation only applies to those assets with limited useful lives, i.e. the asset's revenue generating ability is limited by

wear and tear and/or obsolescence. As land has an unlimited useful life, depreciation is not applied to it.

We will now turn to the process of calculating depreciation, detailed in Section 7.2.

7.2 Calculate and compare depreciation expense using straight-line, reducing-balance and units-of-activity methods.

RINA DHILLON; MITCHELL FRANKLIN; PATTY GRAYBEAL; AND
DIXON COOPER

When a business owns depreciable assets, it must calculate depreciation expense each period. For example, if we buy a delivery truck to use for the next five years, we would allocate the cost and record depreciation expense across the entire five-year period. The calculation of the depreciation expense for a period is not based on anticipated changes in the fair market value of the asset; instead, the depreciation is based on the allocation of the cost of owning the asset over the period of its useful life. The following items are important in determining and recording depreciation:

- **Cost:** the asset's original or historical cost being depreciated. This is essentially the amount that was recorded when the asset was purchased – acquisition cost
- **Useful life:** the length of time the asset will be productively used within operations
- **Salvage (residual) value:** the price the asset will sell for or be worth as a trade-in or scrapped, when its useful life expires. The determination of salvage value can be an inexact science, since it requires anticipating what will occur in the future. Often, the salvage value is estimated based on past experiences with similar assets.

- **Depreciable amount (base):** the depreciation expense over the asset's useful life. For example, if we paid \$50,000 for an asset and anticipate a salvage value of \$10,000, the depreciable base is \$40,000. It is the total amount that should be depreciated over the (useful) life of the asset.

Once it is determined that depreciation should be accounted for, there are three **depreciation methods** that are most commonly used to calculate the allocation of depreciation expense: the *straight-line method*, the *reducing-balance method* and *units-of-activity method*.

To illustrate how depreciation expense is calculated under each method, let's use the following scenario involving MAAS Corporation to work through these three methods.

Assume that on 1st July, MAAS Corporation purchased a truck for \$65000. It has an estimated residual value of \$15000 and a useful life of 5 years. Recall that determination of the costs to be depreciated requires including all costs that prepare the asset for use by the business. The total cost would be \$65000, and, after allowing for an anticipated salvage value of \$15000 in five years, the business could take \$50000, also known as depreciable base, in depreciation over the truck's economic life.

Straight-Line Depreciation Method

Straight-line depreciation is a method of depreciation that evenly splits the depreciable amount across the useful life of the asset. This method is commonly used as it is a simple technique of dividing the depreciable cost of the asset by the useful life of the asset (in years) to yield the amount of depreciation expense per period.

Straight Line Depreciation:

$$\text{Depreciation Expense} = \frac{\text{Cost} - \text{Residual Value}}{\text{Useful Life}}$$

Therefore, in the case of MAAS Corporation, we can determine the yearly depreciation expense by dividing the depreciable base of \$50000 (\$65000-15000) by the economic life of five years, giving an annual depreciation expense of \$10000. At the end of the financial year, MAAS Corporation will record the following entry:

30 th June	DR Depreciation expense	\$10000
	CR Accumulated depreciation - Truck	\$10000
	(To record depreciation expense)	

After the journal entry in year one, the truck would have a carrying amount (also called Net Value or Book Value or Written-down Value) of \$55000. This is the original cost of \$65,000 less the accumulated depreciation of \$10000.

$$\text{Carrying amount} = \text{Cost} - \text{Accumulated Depreciation}$$

MAAS records an annual depreciation expense of \$10000. Each year, the accumulated depreciation balance increases by \$10000,

and the truck's book value decreases by the same \$10000. At the end of five years, the asset will have a book value of \$15000, which is calculated by subtracting the accumulated depreciation of \$50000 ($5 \times \10000) from the cost of \$65,000. This calculation is depicted in the depreciation schedule below:

Year	Calculation	Depreciation expense	Accumulated depreciation	Carrying amount
0			\$0	\$65000
1	$(\$65000 - 15000) / 5$	\$10000	10000	55000
2	$(\$65000 - 15000) / 5$	\$10000	20000	45000
3	$(\$65000 - 15000) / 5$	\$10000	30000	35000
4	$(\$65000 - 15000) / 5$	\$10000	40000	25000
5	$(\$65000 - 15000) / 5$	\$10000	50000	15000

The depreciation schedule highlights three key things. First, depreciation expense is the same in each period. This will always be the case using the straight-line method. Second the accumulated depreciation account grows each year by \$10000 until the balance equals the depreciable amount of the asset (\$50000). A key takeaway here is the final balance in accumulated depreciation is the total of all depreciation expense recorded during the asset's useful life and hence should equal the asset's depreciable amount. Lastly, the carrying amount decreases by \$10000 each year until it equals the residual value (\$15000) estimated for the asset. Carrying amount represents the remaining unexpired cost of the asset and thus should always equal the estimated residual value at the end of the asset's useful life.

Reducing-Balance Depreciation Method

The reducing-balance depreciation method is the most complex of the three methods because it accounts for both time and usage and

takes more expense in the first few years of the asset's life. It is an accelerated method that results in more depreciation expense in the early years of an asset's life and less depreciation expense in the later years.

Reducing-balance considers time by determining the percentage of depreciation expense that would exist under straight-line depreciation. To calculate this, divide 100% by the estimated life in years. For example, a five-year asset would be $100/5$, or 20% a year. A four-year asset would be $100/4$, or 25% a year.

Next, because assets are typically more efficient and “used” more heavily early in their life span, the reducing-balance method takes usage into account by doubling the straight-line percentage. For a four-year asset, multiply 25% ($100\%/4\text{-year life}$) $\times 2$, or 50%. For a five-year asset, multiply 20% ($100\%/5\text{-year life}$) $\times 2$, or 40%.

Reducing Balance Depreciation:

$$\text{Depreciation Expense} = 2 * (1/\text{Useful life}) * \text{Carrying Amount}$$

The above formula is referred to as 2 times the straight-line rate.

Note: We sometimes use 1.5 times the straight-line rate

$$\text{Depreciation Expense} = (2 \text{ or } 1.5) * (1/\text{Useful life}) * \text{Carrying Amount}$$

For tax purposes in Australia, reducing-balance at twice the straight-line rate is often used and referred to as the ‘double declining balance’ method. It is important to note that just because a business uses one method for taxation does not mean it has to use that method in its financial statements. This method may match expenses to revenues better than the straight-line method, because more depreciation expense is recorded when the asset is more useful but it also provide larger expenses (and if used for tax purposes larger tax-deductible expenses) in earlier years of a non-current asset's life.

One unique feature of the reducing-balance method is that in the first year, the estimated salvage value is not subtracted from the total asset cost before calculating the first year's depreciation

expense. Instead the total cost is multiplied by the calculated percentage. However, depreciation expense is not permitted to take the book value below the estimated salvage value. Let's better understand this through an example using MAAS Corporation. Let's assume MAAS Corporation purchased a truck on 1st July for \$65000. It has an estimated residual value of \$15000 and a useful life of 5 years. The straight-line rate is 1/5 or 20 per cent.

If we use 1.5 times the straight-line rate for the current year, depreciation would be [$\$65\,000 \times (1.5 \times 20\%) = \$19\,500$] and recorded as follows:

30 th June	DR Depreciation expense	\$19500
	CR Accumulated depreciation - Truck	\$19500
	(To record depreciation expense)	

A depreciation schedule for all five years is shown below:

Year	Calculation	Depreciation expense	Accumulated depreciation	Carrying amount
0			\$0	\$65000
1	$(20\% \times 1.5) \times \65000	\$19500	19500	45500
2	$30\% \times 45500$	13650	33150	31850
3	$30\% \times 31850$	9555	42705	22295
4	$30\% \times 22295$	6689	49394	15606
5	Cannot be $30\% \times 15606$	606 only	50000	15000

The depreciation schedule provides three key observations. First, there is more depreciation expense in the early years and less in the later years. Second, over an asset's life, an entity cannot record more total depreciation than the asset's depreciable cost. Notice that in the 5th year, the remaining carrying amount of \$15606 was not multiplied by 30%. This is because the expense would have been \$4681.80, and since we cannot depreciate the asset below

the estimated salvage value of \$15000, the expense cannot exceed \$606, which is the amount left to depreciate (difference between the carrying amount of \$15606 and the salvage value of \$15000). Lastly, the depreciation rate is applied to the carrying amount of the asset. In this example, the first year's reducing-balance depreciation expense would be $\$65000 \times 30\%$, or \$19500. Note that we ignore the residual value when calculating the depreciation expense. For the remaining years, the reducing balance percentage is multiplied by the remaining carrying amount of the asset. MAAS would continue to depreciate the asset until the carrying amount and the estimated salvage value are the same (in this case \$15000).

The net effect of the differences in straight-line depreciation versus reducing-balance depreciation is that under the reducing-balance method, the allowable depreciation expenses are greater in the earlier years than those allowed for straight-line depreciation. However, over the depreciable life of the asset, the total depreciation expense taken will be the same, no matter which method the business chooses. For example, in the current example both straight-line and reducing-balance depreciation will provide a total depreciation expense of \$50000 over its five-year depreciable life.

Units-of-Activity Depreciation Method

While the straight-line depreciation is efficient in accounting for assets used consistently over their lifetime, what about assets that are used with less regularity? The units-of-activity depreciation method bases depreciation on the actual usage of the asset, which is more appropriate when an asset's life is a function of usage instead of time. For example, this method could account for depreciation of a truck for which the depreciable base is \$50000 (as in the straight-line method), but now the number of kilometres the van is driven is important. Because units-of-activity relies on an estimate of an

asset's lifetime activity, the method is limited to assets whose units-of-activity can be measured.

Units of activity depreciation:

$$\text{Depreciation expense per unit} = (\text{Cost} - \text{Salvage Value}) \div \text{Useful life in units}$$

↓

$$\text{Depreciation Expense} = \text{Depreciation expense per unit} * \text{Actual units of activity}$$

Let's return to the example of MAAS Corporation and the truck it purchased for \$65000 on 1st July. It has an estimated residual value of \$15000 and a life of 200000 km. This means that the truck will have total depreciation of \$50000 over its useful life of 200000km. Thus,

Depreciation per km is \$0.25 per km $(\$65000 - \$15000) \div 200000$. If the truck is driven 48000 km in the current year, depreciation expense would be \$0.25 per km x 48000 km, or \$12000, and recorded as follows:

30 th June	DR Depreciation expense	\$12000
	CR Accumulated depreciation - Truck	\$12000
	(To record depreciation expense)	

The journal entry to record this expense would be the same as with straight-line and reducing-balance depreciation: only the dollar amount would have changed. The presentation of accumulated depreciation and the calculation of the book value would also be the same. MAAS would continue to depreciate the asset until a total of \$50000 in depreciation was taken after the truck travelled a total of 200000

(48000+44000+54000+34000+20000) km, as depicted in the depreciation schedule below:

Year	Calculation	Depreciation expense	Accumulated depreciation	Carrying amount
0			\$0	\$85000
1	$\$0.25 \times 48000\text{km}$	\$12000	12000	53000
2	$\$0.25 \times 44000\text{km}$	11000	23000	42000
3	$\$0.25 \times 54000\text{km}$	13500	36500	28500
4	$\$0.25 \times 34000\text{km}$	8500	45000	20000
5	$\$0.25 \times 20000\text{km}$	5000	50000	15000

Summary and comparison of depreciation methods

The table below compares the three methods discussed. Note that although each method's annual depreciation expense is different, after five years the total amount depreciated (accumulated depreciation) is the same. This occurs because at the end of the asset's useful life, it was expected to be worth \$15000: thus, all three methods depreciated the asset's value by \$50000 over that time period.

Year	Straight line		Reducing balance		Unit-of-Activity	
	Depreciation expense	Carrying amount	Depreciation expense	Carrying amount	Depreciation expense	Carrying amount
1	\$10000	\$50000	\$19500	\$40500	\$12000	\$53000
2	\$10000	40000	13650	40000	11000	42000
3	\$10000	30000	9555	22295	13500	28500
4	\$10000	20000	6689	19806	8500	20000
5	\$10000	15000	506	15000	5000	15000
Total	\$50000		\$50000		\$50000	

However, each method arrives at the \$50000 differently. The straight line method depreciates the same amount (\$10000) each

year. The reducing balance method accelerates depreciation into the early years of the asset's life. The units of activity method depreciates different amounts annually depending on the asset's usage. No method is right or wrong, just different. Businesses choose a method for different reasons, including tax benefits, to report the 'best' profit number, and so on. Regardless of the method chosen, businesses should disclose their choice of depreciation method in the notes of their financial statements so that comparisons can be made among different companies. As seen in Section 7.1, the disclosure is usually provided in a note related to PPE (as shown in the Westfarmers example in Section 7.1).

When analysing depreciation, accountants are required to make a supportable estimate of an asset's useful life and its salvage value. Accountants need to analyse depreciation of an asset over the entire useful life of the asset. As an asset supports the cash flow of the business, expensing its cost needs to be allocated, not just recorded as an arbitrary calculation. An asset's depreciation may change over its life according to its use. If asset depreciation is arbitrarily determined, the recorded gains or losses on the disposition of depreciable property assets (covered in Section 7.4) seen in financial statements are not true best estimates. Due to operational changes, the depreciation expense needs to be periodically reevaluated and adjusted. We now turn our attention to understanding the effects of adjustments that may be made during a non-current asset's useful life.

7.3 Understand the effects of adjustments that may be made during a non-current asset's useful life

RINA DHILLON

Since non-current assets (hereafter NCA) are used over many years, businesses sometimes account for some events for NCA that are less routine than recording purchase and depreciation. For example, a business may realise that its original estimate of useful life or salvage value is no longer accurate. Or a NCA may lose its value. In such cases, the business must make adjustments as new information is available or as new activity happens. These adjustments may arise from the following three instances:

- (1) Changes in estimates (e.g. useful life or residual value)
- (2) Additional expenditures which improve the non-current asset's use and value
- (3) Significant declines in the asset's net realisable value (e.g. manufacturer recall)

Let's examine each of these instances closely.

(1) Changes in estimates

As you have learned, depreciation is based on estimating both the useful life of an asset and the salvage value of that asset. Over time, these estimates may be proven inaccurate and need to be adjusted based on new information. When this occurs, the depreciation expense calculation should be changed to reflect the new (more

accurate) estimates. For this entry, the remaining depreciable balance of the asset's carrying value is allocated over the new useful life of the asset. To work through this process with data, let's return to the example of MAAS Corporation.

MAAS Corporation purchased a machine for \$100000 on 1st January, with a 10-year useful life and \$10000 residual value. Using straight-line, MAAS Corporation records \$9000 depreciation expense each year, calculated and recorded as follows:

$$\text{Depreciation} = (100000 - 10000) / 10 = \$9000$$

1 st January	DR Depreciation expense	\$9000
	CR Accumulated depreciation - Machine	\$9000
	(To record depreciation expense)	

At the start of Year 5, MAAS determines that the estimated useful life of the machine would have been more accurately estimated at eight years, and the salvage value at that time would be \$4000. The revised depreciation expense can be calculated using three steps. First, we must calculate the carrying amount of the asset on the date of revision, which represents the unexpired cost of the asset:

Step 1: Calculate carrying amount revision time	
Carrying amount at the time of estimate revision:	
Cost of asset, 1 January, Year 0	\$100000
Less: Accumulated depreciation for 4 years (4 x \$9000)	\$36000
Carrying amount on 1 January, Year 5	\$64000

In the second step, we subtract the asset's residual value (new estimate) from the carrying amount calculated in Step 1 which will result in the asset's remaining depreciable amount:

Step 2: Calculate depreciable cost for future depreciation	
Depreciable amount for future depreciation:	
Carrying amount on 1 January, Year 5	\$64000
Less: Estimated residual value	\$4000
Remaining depreciable amount	\$60000

Finally, under the straight line method, we calculate depreciation expense by dividing the remaining depreciable amount, calculated in Step 2, by the remaining useful life. In this example, the useful life is now 8 years instead of 10 years which means there are only 4 (8-4) years remaining instead of 6 years.

Step 3: Calculate revised depreciation expense	
Depreciation expense under revised estimates:	
Remaining depreciable amount	\$60000
Divided by remaining useful life (8-4)	4
Annual depreciation expense	\$15000

These revised calculations show that MAAS should now be recording a depreciation of \$15000 per year for the next four years. It is important to note that when an estimate is revised, the change is made prospectively. This means that the change affects only the calculation of current and future depreciation expense, it will not correct prior years (in the example, the first four years). Once the estimate is changed, prospective (current and future) depreciation expense is calculated with the new estimate.

(2) Additional expenditures which improve the non-current asset's use and value

Most non-current assets require expenditures throughout their useful lives. The purchasing price of a truck is only the initial cost. Expenditures such as servicing, minor/major repairs, etc is part of owning the asset. The accounting treatment for expenditures made during the useful life of a non-current asset depends on whether they are classified as 'capital' or 'revenue' expenditures. A capital expenditure increases the expected useful life or productivity of the asset (i.e. increases the asset value), while a revenue expenditure maintains the expected useful life or productivity of the asset (i.e. does not enhance the asset and is therefore expensed).

Whether an expenditure made is capitalised (capital expenditures) or expensed in the period in which they are incurred (revenue expenditures) depends on whether the expenditure meets the recognition criteria in [AASB 116 Property, Plant and Equipment](#), paragraph 7:

The cost of an item of property, plant and equipment shall be recognised as an asset if, and only if: (a) it is probable that future economic benefits associated with the item will flow to the entity; and; (b) the cost of the item can be measured reliably.

To illustrate, suppose MAAS Corporation purchases equipment for \$100000 on 1st July, with a five-year useful life and no residual (salvage) value. During the fifth and final year of the asset's life, the company incurs \$8000 for upgrades that extend the asset's life for three years, from 5 to 8 years. The \$8000 for upgrades meet the recognition criteria in AASB 116 as the asset's useful life is extended by 3 years and thus should be capitalised with the following entry:

1 st July	DR Equipment	\$8000
	CR Cash	\$8000
	(To record upgrade to asset)	

The above entry increases the equipment (asset) account and decreases cash (asset). It does not change equity because the business is capitalising the expenditure rather than expensing it.

With this addition to the cost of the asset, depreciation expense must be recalculated. To do so, the business follows the same steps used in the change of estimate example illustrated above:

Step 1: Calculate net book value after capital expenditure	
Carrying amount after the capital expenditure:	
Cost of asset, 1 January, Year 0	\$100000
Less: Accumulated depreciation for 4 years (4 x \$20000)	\$80000
Carrying amount on 1 January, Year 5	\$20000
Add: Upgrades made on 1 January, Year 5	\$8000
Updated carrying amount on 1 January, Year 5	\$28000
Step 2: Calculate depreciable expense	
Depreciation expense after the capital expenditure:	
Updated carrying amount on 1 January, Year 5	\$28000
Less: Estimated residual value	0
Remaining depreciable amount on 1 January, Year 5	\$28000
Divided by remaining useful life (8-4)	4
Annual depreciation expense	\$7000

First, MAAS corporation calculates the carrying amount of the asset and then adds the capital expenditure to obtain the updated carrying amount which is \$28000. Next the business subtracts the asset's residual value from the updated carrying amount to calculate the remaining depreciable amount. Under the straight line method

of depreciation, the depreciable amount is divided by the remaining useful life to obtain depreciation expense – in this case it would \$7000 each year.

Let us now assume that during the fifth and final year of the equipment's life, MAAS Corporation incurs \$2000 in ordinary maintenance. In this scenario, the \$2000 is a revenue expenditure and should be expensed as follows:

1 st July	DR Maintenance Expense	\$2000
	CR Cash	\$2000
	(To record normal maintenance)	

The above entry increases maintenance expense (debit) and decreases cash (credit). Repairs and maintenance maintain, rather than increase or enhance, the productivity or useful life of the asset and thus should not be added to the cost of the asset, but expensed in the period in which they are incurred.

(3) Significant declines in the asset's net realisable value

Sometime technological improvements or changing market conditions causes a non-current asset's recoverable amount to fall substantially. When a non-current asset's recoverable amount (i.e. how much it can be sold for in the market) falls below its carrying amount, the asset is considered impaired. [AASB 136 Impairment of Assets](#), para 18 defines recoverable amount as:

the higher of an asset's or cash-generating unit's fair value less costs of disposal and its value in use.

Under AASB 136, businesses apply conservatism by writing these assets down from their carrying amount to their recoverable amount (through use or sale). An impairment is an expense that

lowers the value of a non-current asset and thus the following journal entry will be recorded (for example if a building was impaired):

Date	DR Impairment Expense - Building	\$X
	CR Building	\$X
	(To record asset impairment)	

In the above entry, impairment expense is increased to reflect the decline in value of the asset, which reduces equity. This impairment expense is considered to be part of the income statement and would be included in other expenses. In addition, the NCA account (in this example the NCA is a building) decreases to reflect the reduced value. This reduces assets. After the impairment entry, depreciation expense would be calculated based on the revised depreciable amount and over the remaining useful life of the asset.

Asset impairments are not uncommon in practice. AASB 136, paragraph 9 requires entities to *‘assess at the end of each reporting period whether there is any indication that an asset may be impaired. If any such indication exists, the entity shall estimate the recoverable amount of the asset’*.

7.4 Understand and record the disposal of non-current assets

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DIXON COOPER

Disposal of NCA

When a business decides that it no longer needs a non-current asset (NCA), it usually disposes of the asset in one of three ways depending on whether the asset has value or no value. When a NCA has no value, it will be disposed of and sometime there will be a cost related to this disposal. When a NCA still has value, it will either be sold or traded in for another asset, often a newer model. In this section, we focus on what happens when a NCA is sold. Essentially, the accounting for the disposal of a non-current asset consists of the following three steps:

1. Update accumulated depreciation on the asset
2. Calculate gain or loss on the disposal
3. Record the disposal

When an asset is sold, the business must account for its depreciation up to the date of sale. This means that as a first step, the business may be required to record a depreciation entry before the sale of the asset to ensure it is current. An important thing to take note of is partial-year depreciation. A business may only own depreciable assets for a portion of a year in the year disposal (or even purchase). Businesses must be consistent in how they record depreciation for assets owned for a partial year. A common method is to allocate depreciation expense based on the number of months the asset is owned at time of disposal. For example, a business

with a 30th June financial year, disposes an asset with an annual depreciation of \$10000 on 1st January. In this instance, the depreciation expense would thus be \$5000 ($\$10000 \times 6/12$), instead of \$10000.

After ensuring that the carrying amount of an asset is current, the second step is the business must determine if the asset has sold at a gain, at a loss, or at book value. This is determined by comparing the asset's carrying amount to the proceeds from the asset's sale, if any. When the proceeds exceed the carrying amount, a gain on disposal is recognised. When the carrying amount exceeds the proceeds, a loss on disposal is recognised. An important takeaway from this is that a non-current asset may be sold for more or less than its recorded book value (i.e. carrying amount), which will result in a gain or loss, which must be recognised.

The third and final step is to prepare the journal entry that decreases the asset account and its related accumulated depreciation. If the asset is sold and cash is received, the journal entry must also record the increase in cash. Finally, any gain or loss on disposal must be recorded. The general format of the journal entry would be as follows:

Date	DR Cash (Received from sale)
	DR Accumulated Depreciation
	Dr <u>Loss</u> on Sale or Cr <u>Gain</u> on Sale
	CR Non-current asset

Let us look at an example of a gain and loss alternative using the MAAS Corporation data.

Recall that MAAS' truck has a depreciable base of \$50000 and an economic life of five years. If MAAS sells the truck at the end of the third year, the business would have taken three years of

depreciation amounting to \$30000 ($\10000×3 years). With an original cost of \$65000, and after subtracting the accumulated depreciation of \$30000, the truck would have a book value of \$35000. If the business sells the truck for \$37,000, it would realise a gain of \$2000 as shown below:

Cost of Truck \$65000

Less: Accumulated Depreciation \$30000

Carrying amount \$35000

Proceeds from sale \$37000

Less: Carrying amount \$35000

Gain on Sale \$2000

Because the sale proceed of \$37000 exceeds the asset's carrying amount of \$35000, the business generates a \$2000 gain (revenue). The journal entry to record the sale is shown below:

Date of disposal	DR Cash \$37000
	DR Accumulated Depreciation \$30000
	CR Gain on Sale \$2000
	CR Truck \$65000

The above entry decreases the Truck account by \$65000 (removing the asset from the books) and decreases the truck's accumulated depreciation account by \$30000 to eliminate the account. As the business no longer has the asset, it should no longer maintain accumulated depreciation for the asset. It also increase cash by \$37000 to reflect the proceeds (asset) received from selling the truck. Finally, the entry increases the Gain on Sale account to reflect the gain on sale.

Suppose instead of selling the truck for \$37000, MAAS was only able to sell it for \$30000. In this instance, the asset's carrying amount of \$35000 exceeds the sale proceeds of \$30000 and thus the business

will generate a \$5000 loss (expense). The journal entry to record the sale is shown below:

Date of disposal	DR Cash \$30000
	DR Accumulated Depreciation \$30000
	DR Loss on Sale \$5000
	CR Truck \$65000

Like the gain example, the above entry first decreases the Truck account by \$65000 to eliminate the account (i.e. remove the asset from the books). A common mistake is to think that the NCA, in this instance truck, should be decreased by its carrying amount of \$35000. It is important to remember that NCA are recorded and maintained at costs (as discussed in Section 7.1) and thus the balance in the truck account is \$65000 prior to disposal. The entry also decreases the truck's accumulated depreciation by \$30000 to eliminate the account. The entry increases the cash account by \$30000 to reflect the proceeds (asset) received from selling the truck. Lastly, a debit to the loss on sale account reflects the loss on sale (expense or decrease in equity).

What if MAAS sells the truck at exactly book value? In this case, the business will realise neither a gain nor a loss and the journal entry to record the sale would be as follows:

Date of disposal	DR Cash	\$35000
	DR Accumulated Depreciation	\$30000
	CR Truck	\$65000

Keeping It Real

The management of non-current/fixed assets can be quite a challenge for any business, from sole proprietorships to global corporations. Not only do businesses need to track their asset purchases, depreciation, sales, disposals, and capital expenditures, they also need to be able to generate a variety of reports. Read this [Finances Online post for more details on software packages](#) that help businesses steward their fixed assets no matter what their size.

Test your knowledge



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Chapter 7 Practice Questions

RINA DHILLON

Practice Questions

1. Drew Shannon purchased a boat at a cost of \$12000. The boat has an estimated residual value of \$2000 and an estimated life of five years, or 100 000 hours of operation. The boat was purchased on 1 July 2022, and was used 27 000 hours in 2022/23 and 26 000 hours in 2023/24.

If Shannon uses the straight-line method, what is the carrying amount (book value) at 30 June 2025?

-
- a. \$8000
 - b. \$6000
 - c. \$10 000
 - d. \$4000
-

2. Drew Shannon purchased a boat at a cost of \$12000. The boat has an estimated residual value of \$2000 and an estimated life of five years, or 100 000 hours of operation. The boat was purchased on 1 July 2022, and was used 27 000 hours in 2022/23 and 26 000 hours in 2023/24.

If Shannon uses the units-of-activity method, what is the depreciation rate per hour for the equipment?

-
- a. \$1.00
 - b. \$1.10
 - c. \$.10
 - d. \$.12
-

3. Drew Shannon purchased a boat at a cost of \$12000. The boat has an estimated residual value of \$2000 and an estimated life of five years, or 100 000 hours of operation. The boat was purchased on 1 July 2022, and was used 27 000 hours in 2022/23 and 26 000 hours in 2023/24.

If Shannon uses the reducing-balance depreciation method, at double the straight-line rate, what amount is the depreciation expense for 2024?

-
- a. \$4800
 - b. \$2880
 - c. \$1728
 - d. \$2000
-

4. Which of the following accounts would not be reported in the non-current asset section of a balance sheet?
- a. Accumulated depreciation – buildings
 - b. Buildings
 - c. Depreciation expense – buildings
 - d. Land

5. On the balance sheet, the cumulative amount of depreciation expense recognised to date on a non-current asset is called:

- a. accumulated amortisation
- b. accumulated depreciation
- c. amortisation expense
- d. depreciation expense

6. Meriton Company purchased land and incurred the following costs:

Purchase price	\$1000000
Excavation costs	100000
Removing old building	25000
Broker fees	20000
Cost of a parking lot	50000

What is the cost of the land?

- a. \$1100000
- b. \$1195000
- c. \$1145000
- d. \$1125000

7. Which of the following costs related to the purchase of production equipment incurred by ABS Company during 2022 would be considered an expense (revenue expenditure)?

- a. Installation costs for equipment
- b. Purchase price of the equipment less the cash discount
- c. Repair and maintenance costs during the equipment's first year of service
- d. Transportation charges to deliver the equipment to ABS Company

8. On 1 July 2022, Lee Company sold a machine for \$10000 that it had used for several years. The machine cost \$22000 and had accumulated depreciation of \$9000 at the time of sale. What gain or loss will be reported on the income statement for the sale of the machine?
- a. Gain of \$10000
 - b. Loss of \$13000
 - c. Loss of \$3000
 - d. Gain of \$3000
9. On 1 July 2022, Banderas Corporation sold a piece of equipment for \$30000 which it had used for several years. The equipment had cost \$45000 and its accumulated depreciation amounted to \$20000 at the time of the sale. What are the net effects on the accounting equation of selling the equipment?
- a. Assets and equity increase \$30000
 - b. Assets decrease and equity increases \$5000
 - c. Assets and equity increase \$5000
 - d. Assets and equity decrease \$5000
10. Land is not depreciated because it:
- a. appreciates in value
 - b. does not have an established depreciable life
 - c. has a useful life that is limited to the period of time a company is in business
 - d. will provide future benefits for a company for an unlimited period of time

11. Assets classified as property, plant and equipment are reported at:
- a. each asset's estimated market value at the balance sheet date less depreciation
 - b. each asset's estimated market value at the balance sheet date
 - c. the estimated residual value at the date
 - d. each asset's original cost less depreciation since acquisition
12. Alberts Company purchased equipment at the beginning of July 2022 for \$500000. The company decided to depreciate the equipment over a 10-year period using the straight-line method. The company estimated the equipment's residual value at \$50000. The journal entry to record depreciation expense for the financial year ended 30 June 2023 is a debit to:
- a. Depreciation expense and a credit to accumulated depreciation for \$50 000
 - b. Accumulated depreciation and a credit to equipment for \$50 000
 - c. Depreciation expense and a credit to equipment for \$45 000
 - d. Depreciation expense and a credit to accumulated depreciation for \$45000
13. Medina Apartments purchased an apartment building to rent to university students on 15 December 2021. The tenants moved in on 1 January 2022. During the third cricket test, a student punched a hole in the wall when the Australian captain was out for a duck (again). It cost the landlord \$400 to repair the hole. How should this cost be recorded?
- a. It should be recorded as part of the asset account
 - b. It should be recorded as repair and maintenance expense

c. It should not be recorded as the tenants will be charged for the damage

d. It should not be recorded since this is an immaterial amount to the landlord

14. United Salvage Company sold an old machine on 30 June 2022, for \$22000 cash. The following data was available when the machine sold:

Acquisition cost \$100 000

Estimated residual value at time of acquisition 8 000

Accumulated depreciation on 30 June 2022, after adjustment 85 000

When this transaction is recorded, the journal entry will be

a. DR Cash \$22000

DR Accumulated depreciation \$85000

CR Gain on Sale \$7000

CR Old machine \$100000

b. DR Old machine \$100000

DR Gain on Sale \$7000

CR Accumulated depreciation \$85000

CR Cash \$22000

c. DR Cash \$22000

DR Accumulated depreciation \$85000

CR Loss on Sale \$7000

CR Old machine \$100000

d. DR Old machine \$100000

DR Loss on Sale \$7000

CR Accumulated depreciation \$85000

CR Cash \$22000

15. On 1 July 2022, United Marine Salvage purchased a ship for \$1000000. It has a ten-year useful life and a residual (salvage) value of \$100000. The company uses the reducing-balance depreciation method at twice the straight-line rate.

What would be the carrying amount of the ship after ten years?

- a. \$200 000
- b. \$400 000
- c. \$0
- d. \$100 000

Solutions:

1. b

$(12000 - 2000) / 5 = 2000$ per year

To 2025, 3 years of depreciation, $\$2000 \times 3 = \6000

2. c

$(12000 - 2000) / 100000 = \0.10 per hour

3. b

$$2022/3 = 12000 \times (1/5) \times 2 = 4800 \text{ Carrying amount} = 12000 - 48000 \\ = 7200$$

$$2023/4 = 7200 \times (1/5) \times 2 = 2880$$

4. c

Depreciation expense is reported in the income statement

5. b

6. c

$1000000 + 100000 + 25000 + 20000 = \1145000 . The cost of the parking lot is not included as it is not related to making the land ready for use.

7.c

All other costs are acquisition cost which should be capitalised

8. c

$$\text{Carrying amount} = \text{Cost} - \text{Accumulated Depreciation} = \$22000 - \$9000 = \$13000$$

$$\text{Proceeds from Sale} = \$10000$$

$$\text{Sale} - \text{Carrying amount} = 10000 - 13000 = (\$3000) \text{ Loss}$$

$$\text{Since carrying amount} > \text{Proceeds, Loss} = \$3000$$

9. c

Carrying amount = Cost - Accumulated Depreciation = \$45000 - \$20000 = \$25000

Proceeds from Sale = \$30000

Sale - Carrying amount = 30000 - 25000 = \$5000 Gain

Since Proceeds > Carrying amount, Gain = \$5000

Receive cash (asset increase), Gain (equity increase)

10. d

Land has unlimited useful life and hence is not depreciated

11. d

Refer to Section 7.1 of textbook - NCA reported at Acquisition Cost and separate line for accumulated depreciation (depreciation since acquisition)

12. d

Straight line depreciation same annually = $(500000 - 50000) / 10 = 45000$

DR Depreciation expense \$45000 (expense-debit)

CR Accumulated Depreciation \$45000 (contra-asset - credit)

13. b

Repair and maintenance are revenue expenditure that should be expensed.

14. a

Carrying amount of old machine = $\$100000 - 85000 = \15000

Proceeds from Sale = $\$22000$

Proceeds > Carrying amount, thus Gain on Sale = $\$22000 - 15000 = \7000

Journal entry:

DR Cash \$22000 (cash coming in from sale, asset increase debit)

DR Accumulated depreciation \$85000 (Elimination of accumulated depreciation as asset no longer belongs to company – debit)

CR Gain on Sale \$7000 (A gain increases equity – credit)

CR Old machine \$100000 (Remove old machine from books, decrease asset credit)

15. d

At the end of an asset's useful life, carrying amount = residual/salvage value

PART VIII

CHAPTER 8: CASH FLOWS

Introduction

This chapter examines the purpose and format of the statement of cash flows and illustrates how the statement is prepared. In this chapter, we focus on the two methods – direct and indirect – used to prepare the operation section of the statement of cash flows. We then briefly explore the investing and financing sections of the statement of cash flows before concluding with an analysis of how to use the statement of cash flows to evaluate a business and its cash.

Chapter outline

After reading this chapter, you should be able to:

1. Describe the purpose and format of the statement of cash flows
2. Describe the process of preparing the statement of cash flows
3. Prepare the operating activities section of the statement of cash flows using the direct method
4. Prepare the operating activities section of the statement of cash flows using the indirect method
5. Prepare the investing and financing activities sections of the statement of cash flows
6. Bring it all together into a complete statement of cash flows

8.1 Describe the purpose and format of the statement of cash flows

RINA DHILLON; MITCHELL FRANKLIN; PATTY GRAYBEAL; AND
DIXON COOPER

Cash. (credit: modification of “Money” by “Tax Credits”/Flickr, CC BY 2.0)



Most financial accounting processes focus on the accrual basis of accounting, which reflects revenue earned, regardless of whether that revenue has been collected or not, and the related costs involved in producing that revenue, whether those costs have been paid or not. Yet the single-minded focus on accrued revenues and expenses, without consideration of the cash impact of these transactions, can jeopardise the ability of users of the financial statements to make well-informed decisions.

You may have heard of the phrase “cash is king,” meaning that a business’ cash flow is more important than its net income in determining investment opportunities. An important resource of any business is cash – if a business cannot generate sufficient cash, its ability to continue operations is very limited. In practice, poor

cash flow management skills or a lack of understanding of [cash flow is the reason 82% of small businesses fail](#). Financial statement users should be able to develop a picture of how well a business' net income generates cash and the sources and uses of a business' cash.

From the statement of cash flows, it becomes possible to reconcile income on the income statement to the cash actually generated during the same period. Having cash is not only important, but the source and use of cash are also important, specifically where the cash is coming from. If the business is generating cash from operations (selling products and services), that is positive. If the business only has cash as it is taking out loans and selling assets, one must be careful in such instances.

Statement of Cash Flows

The statement of cash flows (cash flow statement) is a financial statement listing the cash inflows and cash outflows for the business for a period of time. The cash flow statement is a financial statement that summarises a company's inflows and outflows of cash over a period of time. Cash flow represents the cash receipts and cash disbursements as a result of business activity. Cash Inflows represent money *coming in* from operations, investments and financing arrangements (cash 'received') and cash Outflows represents money *going out* for operations, investments and financing arrangements (cash 'paid'). This statement enables users of the financial statements to determine how well a business' income generates cash and to predict the potential of a business to generate cash in the future.

As demonstrated in [Chapter 3](#), accrual accounting creates timing differences between income statement accounts and cash. A revenue transaction may be recorded in a different accounting period than the accounting period the cash related to that revenue is received. One purpose of the statement of cash flows is that users

of the financial statements can see the amount of cash inflows and outflows during a year in addition to the amount of revenue and expense shown on the income statement. This is important because cash flows often differ significantly from accrual basis net income. For example, in 2021 Uber showed a loss of approximately \$485 million, yet Uber's cash balance increased by \$65 million. Much of the change can be explained by timing differences between income statement accounts and cash receipts and distributions.

UBER TECHNOLOGIES, INC. CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS (In millions)				
	Year Ended December 31,			
	2019	2020	2021	
Net loss including non-controlling interests	\$ (8,512)	\$ (8,788)	\$ (570)	
Other comprehensive income (loss), net of tax:				
Change in foreign currency translation adjustment	(3)	(350)	57	
Change in unrealized gain (loss) on investments in available-for-sale securities	4	2	(46)	
Other comprehensive income (loss), net of tax	1	(348)	11	
Comprehensive loss including non-controlling interests	(8,511)	(9,136)	(559)	
Less: comprehensive loss attributable to non-controlling interests	(45)	(28)	(74)	
Comprehensive loss attributable to Uber Technologies, Inc.	\$ (8,556)	\$ (9,164)	\$ (633)	

The accompanying notes are an integral part of these consolidated financial statements.

UBER TECHNOLOGIES, INC. CONSOLIDATED STATEMENTS OF CASH FLOWS (In millions)				
	Year Ended December 31,			
	2019	2020	2021	
Proceeds from issuance and sale of subsidiary preferred stock units	1,080	247	675	
Proceeds from the issuance of common stock under the Employee Stock Purchase Plan	49	125	197	
Issuance of term loan and notes, net of issuance costs	1,189	2,628	1,484	
Principal repayment on term loan and notes	(27)	(527)	(27)	
Principal repayment on Current Notes	—	(881)	(307)	
Principal payments on finance leases	(138)	(124)	(228)	
Other financing activities	(34)	35	191	
Net cash provided by financing activities	8,959	1,379	1,780	
Effect of exchange rate changes on cash and cash equivalents, and restricted cash and cash equivalents	(4)	(97)	169	
Net increase (decrease) in cash and cash equivalents, and restricted cash and cash equivalents	3,824	(4,127)	85	
Cash and cash equivalents, and restricted cash and cash equivalents				
Beginning of period	8,289	12,087	7,381	
Reclassification from (to) assets held for sale during the period	34	(149)	349	
End of period, including cash identified within assets held for sale	\$ 12,147	\$ 7,811	\$ 7,815	

A related use of the statement of cash flows is that it provides

information about the quality of a business' net income. A business that has records that show significantly less cash inflow on the statement of cash flows than the reported net income on the income statement could very well be reporting revenue for which cash will never be received from the customer or underreporting expenses.

A third use of the statement of cash flows is that it provides information about a business' sources and uses of cash not related to the income statement. For example, in 2021 Uber spent \$298 million on purchasing property and equipment and \$2314 million acquiring other businesses (refer to p.80-81 of [Uber's 2021 annual report](#)), indicating that Uber was expanding even as it was losing money. The statement of cash flows identifies the sources of cash as well as the uses of cash, for the period being reported, which leads the user of the financial statement to the period's net cash flows, which is a method used to determine profitability by measuring the difference between an entity's cash inflows and cash outflows.

The statement answers the following two questions: What are the sources of cash (where does the cash come from)? What are the uses of cash (where does the cash go)? A positive net cash flow indicates an increase in cash during the reporting period, whereas a negative net cash flow indicates a decrease in cash during the reporting period. The statement of cash flows is also used as a predictive tool for external users of the financial statements, for estimated future cash flows, based on cash flow results in the past.

Purpose and Format of Statement of Cash Flows

Essentially, the statement of cash flows provides information about cash inflows and cash outflows during a period and provides information about net cash changes between two balance sheet dates.

$$\text{Net Cash Flow} = \text{Cash Inflows} - \text{Cash Outflows}$$

Net cash flow informs users how and why a company's cash changed during the period by reporting cash flows into three categories: Operating, Investing and Financing. A business is said to have a net cash inflow if the total amount of money coming into the business (cash inflows) is more than the total amount of money going out of the business (cash outflows) and a net cash outflow is cash outflows is more than cash inflows

Net Cash INFLOW = Cash Inflows > Cash Outflows

= (More money coming in than going out)

Net Cash OUTFLOW = Cash Inflows < Cash Outflows

= (More money going out than coming in)

The basic structure of the statement of cash flows is as follows:

Business Name
Cash Flow Statement
Accounting Period
+/- Cash flows provided (used) by operating activities
+/- Cash flows provided (used) by investing activities
+/- Cash flows provided (used) by financing activities
<hr/>
- Net increase (decrease) in cash
+ Cash, beginning of year (i.e. Opening balance)
<hr/>
- Cash, end of year (i.e. Closing balance)

The statement of cash flows is prepared by following these steps:

Step 1: Determine Net Cash Flows from Operating Activities

Operating net cash flow includes cash received and cash paid relating to the business' operations

Step 2: Determine Net Cash Flows from Investing Activities

Investing net cash flow includes cash received and cash paid relating to long-term assets.

Step 3: Present Net Cash Flows from Financing Activities

Financing net cash flow includes cash received and cash paid relating to long-term liabilities and equity.

Step 4: Reconcile Total Net Cash Flows to Change in Cash Balance during the Period

To reconcile beginning and ending cash balances:

- The net cash flows from the first three steps are combined to be total net cash flow.
- The beginning cash balance is presented from the prior year balance sheet.
- Total net cash flow added to the beginning cash balance equals the ending cash balance.

Step 5: Present Non cash Investing and Financing Transactions

Transactions that do not affect cash but do affect long-term assets, long-term debt, and/or equity are disclosed, either as a notation at the bottom of the statement of cash flow, or in the notes to the financial statements.

Note that from this point of this chapter, the term cash represents cash and cash equivalents (include, but are not limited to bank certificates of deposit, banker's acceptances, treasury bills, and other money market instruments with maturity periods of 90 days or less).

8.2 Describe the process of preparing the statement of cash flows

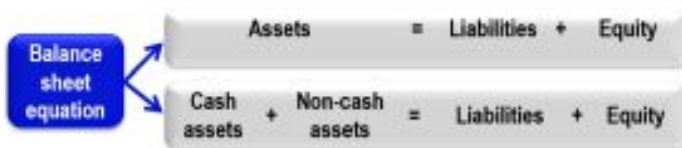
RINA DHILLON; MITCHELL FRANKLIN; PATTY GRAYBEAL; AND
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Preparing the Cash Flow Statement

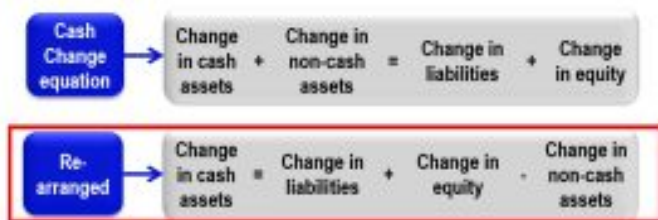
As you would have learnt in [Chapter 3](#), the income statement, statement of changes in equity and balance sheet are prepared with numbers from an adjusted trial balance. However, the statement of cash flows is prepared with information collected from a variety of sources, including examination of the changes in all non-cash accounts.

In order to explain a business' change in cash, we must first explain the changes in the business' non-cash accounts. To do that, you need information from the following sources: (1) comparative statement of financial position (balance sheet); (2) statement of comprehensive income (income statement); and (3) additional information on changes in account balances, for example the change in dividends account would require us to know if the business distributed dividends in cash (which will impact the cash flow statement) or shares (no impact on cash).

Let's us break this three sources detailed above by first considering the accounting (balance sheet) equation:



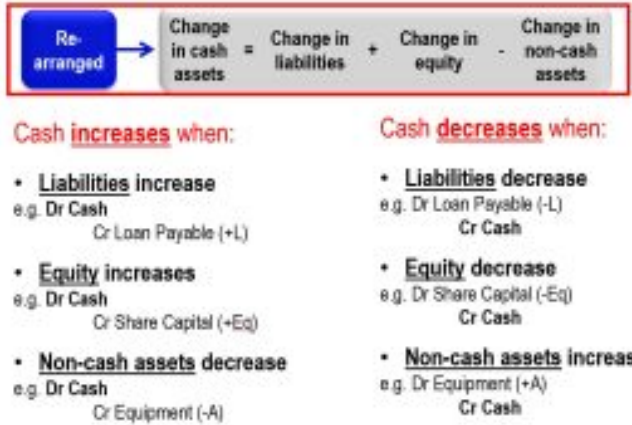
We can isolate cash from the accounting equation by breaking it out from other non-cash assets. Focusing on the change in account balances and moving non-cash assets from the left side of the equation to the right side, the above equation can be rewritten as follows:



The above re-arranged equation shows that the change in cash for a given accounting period is equal to the changes in all other non-cash (liabilities, equity and non-cash assets) accounts.

The balance sheet will provide the beginning and ending balances of all accounts, but here we focus on the non-cash accounts from which changes for the accounting period are calculated. The income statement provides the business' revenue and expense balances for the accounting period and are important for preparing the operating activities section of the cash flow statement. As mentioned above, additional information on changes in account balances is also needed to determine if a change in account balance is a cash or non-cash transaction. The understanding of whether

a transaction is cash or non-cash enables the preparer of the cash flow statement to correctly only include changes in account balances that affect cash. This is illustrated in the summary below:



As shown above, cash increases when liabilities increase, equity increase and non-cash assets decrease. Why is this so? Let's start with when liabilities increase. For example, if a business borrows money from the bank, the bank provides the business with cash (cash inflow) and with this cash increase, the business has a legal obligation (i.e. liability) to pay it back at a mutually agreed date. This is similar in the case of when equity increases. For example, if a business issues shares in exchange for cash, shareholders provide the business with cash (cash inflow) and with this cash, the business gives the shareholder ownership interest (i.e. equity) in the business. In the instance of when non-cash assets such as non-current assets decreases, this would happen if for example the business sell their equipment (non-current asset). When the business sells their asset, the buyer will provide the business with cash (cash inflow) in exchange for purchasing the equipment.

On the other hand, cash decreases when liabilities decrease, equity decrease and non-cash assets increase. Why is this so? Let's

start with when liabilities decrease. For example, if a business pays back the loan that it borrows from the bank, there will be a cash outflow (decrease) from the business to the bank to settle the loan obligation (i.e. liability). This is similar in the case of when equity decreases. For example, if a business buy backs its shares, there is a cash outflow from the business to the shareholders for the purchase of shares by the business. In the instance of when non-cash assets such as non-current assets increases, this would happen if for example the business buys new equipment (non-current asset). When the business buys the equipment, there is a cash outflow from the business to the seller of the asset for the purchase of the equipment by the business.

Another way of thinking of cash flows is to ask what is happening to CASH? Is cash coming into the business (cash receipts) or going out of the business (cash payments)?

Cash Inflows (increases) include *cash receipts* from:

- Customers who purchased inventory on credit (Accounts Receivable)
- Sale of Property, Plant and Equipment (PPE)
- Issuance of shares or bonds
- Borrowing money in the form of a loan

Cash Outflows (decreases) include *cash payments* for:

Purchase of inventory
Payment to employees for their services
Purchase of Property, Plant and Equipment (PPE)
Repayment of loans or bonds
Buy-back of shares
Payment of cash dividends

So that the statement of cash flows is as informative as possible, the cash flow statement groups and reports the cash inflows and outflows outlines above in three distinct activities: *cash flows from operating activities*, *cash flows from investing activities*, and *cash flows from financing activities*. Financial statement users are able to

assess a company's strategy and ability to generate a profit and stay in business by assessing how much a company relies on operating, investing, and financing activities to produce its cash flows. Let's look at each of these activities closely.

Cash Flows from Operating Activities

Cash flows from operating activities arise from the activities a business uses to produce net income – i.e. cash inflows and outflows arising from the business' operations. For example, operating cash flows include cash sources from sales and cash used to purchase inventory and to pay for operating expenses such as salaries and utilities. Operating cash flows also include cash flows from rent paid, interest revenue, interest expense, and tax paid. Basically, any cash flow associated with a business' revenues and expenses should be considered an operating cash flow (net cash flow from operating activities can be thought of a net profit or loss on a cash basis). Operating cash flows are reported first on the statement of cash flows. This is followed by cash flows from investing activities.

Cash Flows from Investing Activities

Cash flows from investing activities are cash business transactions related to a business' investments in long-term assets – i.e. cash inflows and outflows arising from the acquisition and disposal of non-current assets. They can usually be identified from changes in the property, plant and equipment (PPE or Fixed Assets) section of the balance sheet. Some examples of investing cash flows are payments for the purchase of land, buildings, equipment, and other investment assets and cash receipts from the sale of land, buildings,

equipment, and other investment assets. After reporting on investing cash flows, cash flows from financing activities are reported.

Cash Flows from Financing Activities

Cash flows from financing activities are cash transactions related to the business raising money from debt or shares, or repaying that debt – i.e. cash inflows and outflows associated with the generation and return of capital. They can be identified from changes in non-current liabilities and equity (other than interest payments which are reported in operating cash flows). Examples of financing cash flows include cash inflows from issuance of shares or borrowings, cash payments for dividend distributions, principal repayment or redemption of notes or loans payable, or repurchase of shares.

Net Increase (Decrease) in Cash

After a business reports its operating, investing and financing cash flows, it sums the three and reconciles the business' beginning and ending cash balances. Below the Cash Flow Statement for the period ending 30th June 2022 is provided for Westfarmer Group, an Australian listed company with diverse business operations within the residential, apparel and general merchandise, office supplies, health and beauty, chemicals, energy and safety industries:

Cash flow statement

For the year ended 30 June 2022

	Notes	Consolidated	
		2022	2021
		\$m	\$m
Cash flows from operating activities			
Receipts from customers		48,307	37,433
Payments to suppliers and employees		(36,754)	(32,773)
Dividends and distributions received from associates		43	51
Dividends received from other investments		34	40
Interest received		5	12
Interest component of lease payments		(217)	(229)
Governing costs		(60)	(139)
Income tax paid		(1,309)	(1,095)
Net cash flows from operating activities	4	2,303	3,383
Cash flows from investing activities			
Payments for property, plant and equipment and intangibles	4	(802)	(643)
Payments for mineral exploration	4	(4)	(22)
Payments for mine properties and development	4	(338)	(31)
Proceeds from sale of property, plant and equipment and intangibles	4	260	284
Net proceeds from sale of businesses		-	5
Net proceeds from disposals of interests in associates and other investments		505	-
Net investments in associates and joint ventures		(35)	(8)
Acquisition of subsidiaries, net of cash acquired	23	(773)	(53)
Purchase of other financial assets		(7)	(5)
Net cash flows used in investing activities		(1,191)	(642)
Cash flows from financing activities			
Proceeds from borrowings		838	1,080
Repayment of borrowings		(1,766)	(803)
Net proceeds from/(repayment of) revolving facilities		3,393	(71)
Principal component of lease payments		(1,828)	(888)
Equity dividends paid		(1,857)	(2,034)
Capital return paid		(2,267)	-
Net cash flows used in financing activities		(2,423)	(2,631)
Net (decrease)/increase in cash and cash equivalents		(2,318)	110
Cash and cash equivalents at beginning of period		3,823	3,883
Cash and cash equivalents at end of period	4	705	3,023

In 2022, Westfarmers showed a substantial decrease in cash. Westfarmers in 2022 reports a net cash inflow from operating activity of \$2301 million, a net cash outflow from investing activities of \$1191 million and a net cash outflow from financing activities of \$3428 million. This resulted in a net decrease in cash of \$2318 (\$2301-1191-3428) million and is largely driven by the distribution of surplus cash by way of a \$2.3 billion capital return to shareholders and the payment of \$1.9 billion of dividends as reported in the financing section of the cash flow statement.

Methods to Preparing the Statement of Cash Flows

The statement of cash flows can be prepared using the direct or indirect method. Like most companies, Westfarmers reports operating cash flows using the direct method (as depicted in the statement above). [AASB 107 paragraph 18](#) allows businesses to report cash flows from operating activities using either:

(a) the direct method, whereby major classes of gross cash receipts and gross cash payments are disclosed; or

(b) the indirect method, whereby profit or loss is adjusted for the effects of transactions of a non-cash nature, any deferrals or accruals of past or future operating cash receipts or payments, and items of income or expense associated with investing or financing cash flows.

While AASB 107 allows the indirect method, the standard encourages businesses to “report cash flows from operating activities using the direct method”. The reason for this is “the direct method provides information which may be useful in estimating future cash flows and which is not available under the indirect method” ([AASB 107, paragraph 19](#)).

In Australia, when businesses use the direct method, they are required to provide a reconciliation of cash flows from operating activities to profit and loss, which is similar to the calculation of cash flows from operations used under the indirect method. For example, Westfarmers’ reconciliation was disclosed in Note 4 of their financial statements and provided below:

Reconciliation of net profit after tax to net cash flows from operations		
Net profit	2,352	2,380
Adjusted for		
Depreciation and amortisation	1,575	1,509
Impairment of assets	33	70
Net (gain)/loss on disposal of non-current assets including investments and associates	(53)	36
Share of net profits of associates and joint ventures	(173)	(103)
Dividends and distributions received from associates	48	51
Loss on disposal of business	-	2
Discount adjustment in borrowing costs	2	2
Amortisation of debt establishment costs	5	8
Other	13	(9)
(Increase)/decrease in assets		
Trade and other receivables	(212)	(226)
Inventories	(1,163)	(665)
Prepayments	(60)	(16)
Deferred tax assets	29	21
Other assets	(10)	(4)
Increase/(decrease) in liabilities		
Trade and other payables	322	214
Current tax payable	(360)	(43)
Provisions	(68)	115
Other liabilities	41	38
Net cash flows from operating activities	2,301	3,383

As illustrated above, the indirect method reconciles net profit to cash flows by subtracting non cash expenses and adjusting for changes in current assets and liabilities, which reflects timing differences between accrual-based net income and cash flows. A non cash expense is an expense that reduces net income but is

not associated with a cash flow; the most common example is depreciation expense (which was discussed in [Chapter 7](#)).

Indirect method: (Cash Flow = Net Profit +/- Non-cash transactions)

The direct method, on the other hand, lists net cash flows from revenue and expenses, whereby accrual basis revenue and expenses are converted to cash basis receipts and payments.

Direct method: (Cash Flow = Cash Receipts +/- Cash Payments)

It is important to note that both indirect and direct methods will yield the same net cash flows from operating activities as seen above in the example of Westfarmers – \$2301 million. The only difference between the methods is the manner in which cash flows are reported. Because AASB 107 encourages businesses to use the direct method, but also to disclose the reconciliation of cash flows from operations to net profit, we will discuss the direct method first in [Section 8.3](#), followed by the indirect method in [Section 8.4](#) which will calculate cash flows from operations in the same manner that the cash flow reconciliation is prepared.

8.3 Preparing the operating activities section of the statement of cash flows using the direct method

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DIXON COOPER

The direct method is used by most reporting entities in Australia. Businesses using this method need to also prepare a reconciliation of cash flows from operations to profits or losses, which has the same information as is shown in the indirect method (discussed in detail in Section 8.4). As previously mentioned, the net cash flows for all sections of the statement of cash flows are identical when using the direct method or the indirect method. The difference is just in the way that net cash flows from operating activities are calculated and presented.

The direct method requires that each item of income and expense be converted from the accrual basis value to the cash basis value for that item. Businesses calculate and report cash receipts from operating activities and cash payments for operating activities. Cash receipts are calculated by converting revenues from the income statement to cash collections. Cash payments are calculated by converting expenses from the income statement to cash payments. This is accomplished by adjusting the accrual amount for the revenue or expense by any related current operating asset or liability. Revenue and expense items that are not related to those current asset and liability accounts would not need an adjustment.

When reporting Operating Cash Flows under the Direct Method, businesses calculate and report cash receipts and cash payments according to transaction types:

Cash receipts from Customers (i.e. Cash collected from Sales)
Less: Cash payments for Inventory (i.e. to Suppliers)
Less: Cash payments for Operations (e.g. salaries, rent, etc.)
Less: Cash payments for Interest (i.e. to the Bank)
Less: Cash payments for Taxes (i.e. to the Government)
= Net Cash Flow from Operating Activities

In the following section, we demonstrate the calculations needed to assess the component pieces of the operating section using the direct method above with the following information from the income statement, balance sheet and notes:

Income Statement items:

Sales Revenues	\$500,000
COGS	(\$200,000)
Interest Revenue	\$20,000
Depreciation Expense	(\$15,000)
Taxation Expense	(\$20,000)
Amortisation Expense	(\$5,000)
Gain on Sale of Equipment	\$7,000
Loss on Sale of Machinery	(\$2,000)
Salary Expense	(\$125,000)

Prior Year & Current Year Balance Sheet:

	Prior Year	Current Year
Inventory	\$12,000	\$20,000
Accounts Receivable	\$20,000	\$10,000
Interest receivable	\$12,000	\$5,000
Machinery and Equipment	\$355,000	\$150,000
Accumulated Depreciation	\$100,000	\$65,000
Accounts Payable	\$4,000	\$7,000
Salary Payable	\$17,000	\$10,000
Share Capital	\$150,000	\$100,000

Notes:

- On 1 July, equipment and machinery was sold for a total \$150,000. Shares were repurchased for cash on 15 January.
- Cash was \$20,000 at the start of the year and \$300,000 at the end of the year.

Cash Receipts from Customers (i.e. cash collected from sales)

Cash receipts from customers is different from the sales revenue that is recorded on the accrual basis financial statements. To reconcile the amount of sales revenue reported on the income statement to the cash collected from sales, calculate the maximum amount of cash that could have been collected this period (potential cash collected) by combining (a) the amount that was due from customers on the first day of the period (beginning accounts receivable) and (b) total sales revenue recorded this period. If there were no outstanding accounts receivable balance at the end of the period, then one could reasonably assume that this total was collected in full during this period. Thus, the amount of cash collected from customers this period can be determined by subtracting the ending accounts receivable balance from the total potential cash that could have been collected.

Cash receipts from customers	
Beginning balance, Accounts Receivables	\$20000
Add: Accrual basis Sales Revenues	\$500000
= Potential Cash Collected	\$520000
Less: Ending balance, Accounts Receivables	\$10000
= Cash collected from customers this period	\$510000

The above calculation logic would apply for any cash collected for receipts related to a receivable, including cash collected from interest.

Cash Paid to Suppliers for Inventory

Cash paid for inventory is different from the cost of goods sold that is recorded on the accrual basis financial statements. To reconcile the amount of cost of goods sold reported on the income statement to the cash paid to suppliers for inventory, it is necessary to perform two calculations. The first part of the calculation determines how much inventory was purchased, and the second part of the calculation determines how much of those purchases were paid for during the current period.

First, calculate the maximum amount of inventory that was available for sale this period by combining (a) the amount of inventory that was on hand on the last day of the period (ending inventory) and (b) total cost of goods sold recorded this period. If there were no inventory balance at the beginning of the period, then one could reasonably assume that this total was purchased entirely during the current period. Thus, the amount of inventory purchased this period can be determined by subtracting the beginning inventory balance from the total goods (inventory) available for sale.

Second, calculate the maximum amount of cash that could have been paid for inventory this period (total payment required for inventory costs) by combining (a) the amount that was due to suppliers on the first day of the period (beginning accounts payable) and (b) total inventory purchases this period, from the first inventory calculation. If there were no outstanding accounts payable balance at the end of the period, then one could reasonably assume that this total was paid in full during this current period. Thus, the amount paid for inventory can be determined by subtracting the ending accounts payable balance from the total payment required for inventory. The final number of the second calculation is the actual cash paid to suppliers for inventory.

Cash payment to suppliers	
Cash paid for inventory purchases: Step 1	
Ending balance, Inventory	\$20000
Add: COGS	\$200000
= Goods Available for Sale	\$220000
Less: Beginning balance, Inventory	\$12000
= Inventory Purchased this period	\$208000
Cash paid for inventory purchases: Step 2	
Beginning balance, Accounts Payable	\$4000
Add: Inventory Purchased (from Step 1)	\$208000
= Total Payment required for inventory	\$212000
Less: Ending balance, Accounts Payable	\$7000
= Cash paid for inventory this period	\$205000

Cash Paid for Salaries

Cash paid for salaries is different from the salaries expense that is recorded on the accrual basis financial statements. To reconcile the amount of salaries expense reported on the income statement to the cash paid for salaries, calculate the maximum amount of cash that could have been paid for salaries this period (total payment

required for salaries) by combining (a) the amount that was due to employees on the first day of the period (beginning salaries payable) and (b) total salaries expense recorded this period. If there were no outstanding salaries payable balance at the end of the period, then one could reasonably assume that this total was paid in full during this current period. Thus, the amount of cash paid for salaries in this accounting period can be determined by subtracting the ending salaries payable balance from the total payment required for salaries.

Cash paid for expenses related to a current liability	
Beginning balance, Salaries Payable	\$17000
Add: Current period salary expense on income statement	\$125000
= Total payment required for salaries	\$142000
Less: Ending balance, Salaries Payable	\$10000
= Cash paid for salaries this period	\$132000

The above calculation logic would apply for any cash payments for expenses related to a current liability such as taxes, as well as prepaid assets such as cash paid for insurance.

Based on the above calculations, the operating activities section of the statement of cash flows would be shown as follows:

<div>Business Name</div> <div>Cash Flow Statement</div> <div>Accounting Period</div>	
Cash from Operating Activities (OA)	
Cash collected from Sales <small>(= 500000 Rev + 10000 Acc. Rec)</small>	\$510000
Cash collected from Interest <small>(= 20000 Rev + 7000 Int. Rec)</small>	\$27000
Less: Cash Payments:	
For Inventory <small>(= 200000 COGs + 8000 Inv – 3000 AP)</small>	(\$205000)
For Taxes <small>(= 20000 TaxExp + 0 TP)</small>	(\$20000)
For Operations <small>(= 125000 SalExp + 7000 SP)</small>	(\$132000)
= Net Cash from Operating Activities	\$180000

A summary of adjustments used to generate the numbers (and as explained in detail using the calculation logic for cash receipts and cash payments above) is provided below:

Balance from Income Statement	Adjustment				Balance from Statement of Cash Flows
Sales	- Increase in accounts receivable	OR	+ Decrease in accounts receivable		= Cash collected from sales
Costs of goods sold	+ Increase in inventory	OR	- Decrease in inventory		
		and			
	- Increase in accounts payable	OR	+ Decrease in accounts payable		= Cash paid for inventory
Operating expenses	+ Increase in current asset	OR	- Decrease in current asset		= Cash paid for operations
		or			<i>Calculate this component of the rest</i>
	- Increase in current liability	OR	+ Decrease in current liability		
Income tax expense	- Increase in taxes payable	OR	+ Decrease in taxes payable		= Cash paid for taxes
Interest expense	- Increase in interest payable	OR	+ Decrease in interest payable		= Cash paid for interest

Let's look at the adjustments listed above and walk through the rationalisation behind each calculation.

Cash collected from sale = Sales Revenue – Increase in A/R or + Decrease in A/R

The accounts receivable account increases when sales are made but no cash is collected, thus we will minus an increase in A/R as we have not collected the cash yet. The reverse is true when accounts receivable decreases in that a decrease would signal the receipt of cash from customers and thus we will plus a decrease in A/R.

Treatment of other Income Statement items

There are a number of non-cash transactions which appear in the Income Statement. These include depreciation expense, amortisation expense; and gain/loss on sale of non-current assets (which will be reported as a cash inflow from investing activities).

These items are ignored under the Direct Method, because they do not have an impact on cash. Depreciation and amortisation expense is a non-cash charge, meaning that cash is not affected (a business does not pay cash when they depreciate an asset) when depreciation and amortisation is recorded in the accounting system. Thus it is always the case that depreciation and amortisation expense is not included when preparing the operating activities section under the direct method.

With a gain or loss on the sale of a non-current asset, because the sale is an investing activity, all cash received from the sale will be reported as a cash inflow from investing activities, and not included when preparing the operating activities section under the direct method.

However, these items are included in the preparation of the reconciliation, which is identical to the Indirect Method and discussed in the next section. When reporting operating cash flows under the indirect method, businesses calculate and report net cash flows from operating activities by adjusting the net profit/loss from an accrual basis to a cash basis. This requires three main types of adjustments – (1) non-cash effects on net income; (2) gains and losses from investing and/or financing activities; and (3) changes in current assets and liabilities. Section 8.4 will illustrate and discuss these adjustments by preparing the operating activities section of the statement of cash flows using the indirect method.

8.4 Preparing the operating activities section of the statement of cash flows using the indirect method

RINA DHILLON; MITCHELL FRANKLIN; PATTY GRAYBEAL; AND
DIXON COOPER

In this section, specific entries are explained to demonstrate the items that support the preparation of the operating activities section of the Statement of Cash Flows (Indirect Method) for the same financial data presented in Section 8.3 – Preparing the operating activities section of the statement of cash flows using the direct method. The general structure of a cash flow statement prepared using the indirect method is as follows:

Net Profit (Revenues - Expenses)
Then remove all non-cash transactions:
Add: Depreciation Expense (and/or Amortisation Expense)
Add: Loss from Sale of Non-current Asset
Less: Gain from Sale of Non-current Asset
Then adjust for changes in current assets and liabilities:
Add: Decreases in Current Assets (excluding cash)
Add: Increases in Current Liabilities
Less: Increases in Current Assets (excluding cash)
Less: Decreases in Current Liabilities
= Net Cash Flow from Operating Activities

The income statement, balance sheet and notes used in Section 8.3

is replicated below followed by an explanation of specific entries that would relate to reporting cash flows from operating activities under the indirect method.

Income Statement items:

Sales Revenues	\$500,000
COGS	(\$200,000)
Interest Revenue	\$20,000
Depreciation Expense	(\$15,000)
Taxation Expense	(\$20,000)
Amortisation Expense	(\$5,000)
Gain on Sale of Equipment	\$7,000
Loss on Sale of Machinery	(\$2,000)
Salary Expense	(\$125,000)

Prior Year & Current Year Balance Sheet:

	Prior Year	Current Year
Inventory	\$12,000	\$20,000
Accounts Receivable	\$20,000	\$10,000
Interest receivable	\$12,000	\$5,000
Machinery and Equipment	\$355,000	\$150,000
Accumulated Depreciation	\$100,000	\$65,000
Accounts Payable	\$4,000	\$7,000
Salary Payable	\$17,000	\$10,000
Share Capital	\$150,000	\$100,000

Notes:

– On 1 July, equipment and machinery was sold for a total \$150,000.
 Shares were repurchased for cash on 15 January.

– Cash was \$20,000 at the start of the year and \$300,000 at the end of the year.

Start with Net Profit

The operating activities cash flow is based on the company's net profit, with adjustments for items that affect cash differently than they affect net profit. The net profit on the income statement can be calculated by adding all the revenues which totals \$527000 (\$500000+20000+7000) and subtracting all the expenses which totals \$367000 (\$200000+15000+20000+5000+2000+125000) is \$160000. On the statement of cash flows, this amount will be shown in the Cash Flows from Operating Activities section as Net Profit.

Cash Flow from <u>Operating Activities</u>	
Net Profit	\$160000

Add back non-cash expenses

Net profit includes deductions for non-cash expenses. To reconcile net profit to cash flow from operating activities, these non-cash items must be added back, because no cash was expended relating to that expense. The non-cash expenses on the income statement, which must be *added back*, is the depreciation expense of \$15000 and the amortisation expense of \$5000. On the statement of cash flows, these amounts will be shown in the Cash Flows from Operating Activities section as an adjustment to reconcile net profit to net cash flow from operating activities.

Cash Flow from Operating Activities

Net Profit	\$160000
Then remove all <u>non-cash transactions</u>:	
Add: Depreciation Expense	\$15000
Add: Amortisation Expense	\$5000

Reverse the Effect of Gains and/or Losses

Gains and/or losses on the disposal of non-current assets are included in the calculation of net profit, but cash obtained from disposing of non-current assets is a cash flow from an investing activity. The entire cash inflow associated with the transaction will be reported as an investing cash flow and thus the effect of the gain or loss must be removed from net profit so that operating cash flows are not affected by the transaction (i.e. to avoid double counting). Because the disposition gain or loss is not related to normal operations, the adjustment needed to arrive at cash flow from operating activities is a reversal of any gains or losses that are included in the net profit total.

A gain is subtracted from net profit and a loss is added to net profit to reconcile to cash from operating activities. The income statement includes a gain on sale of equipment, in the amount of \$7000, so a reversal is accomplished by *subtracting* the gain from net profit. In addition, the income statement includes a loss on sale of machinery of \$2000, so a reversal is carried out by *adding* the loss from net profit. On the statement of cash flows, these amounts will be shown in the Cash Flows from Operating Activities section as Loss from Sale of Non-current Asset and Gain from Sale of Non-current Asset.

Cash Flow from Operating Activities

Net Profit	\$160000
<u>Then remove all non-cash transactions:</u>	
Add: Depreciation Expense	\$15000
Add: Amortisation Expense	\$5000
Add: Loss from Sale of Non-current Asset	\$2000
Less: Gain from Sale of Non-current Asset	(\$7000)

Adjust for Changes in Current Assets and Liabilities

Because the balance sheet and income statement reflect the accrual basis of accounting, whereas the statement of cash flows considers the incoming and outgoing cash transactions, there are continual differences between (1) cash collected and paid and (2) reported revenue and expense on these statements. Changes in the various current assets and liabilities can be determined from analysis of the company's comparative balance sheet, which lists the current period and previous period balances for all assets and liabilities. The following four possibilities offer explanations of the type of difference that might arise, and demonstrate examples from the statement of cash flows, which represent typical differences that arise relating to these current assets and liabilities.

Increase in Non-cash Current Assets

Increases in current assets indicate a decrease in cash, because either (1) cash was paid to generate another current asset, such as inventory, or (2) revenue was accrued, but not yet collected, such as accounts receivable. In the first scenario, the use of cash to increase the current assets is not reflected in the net profit reported on the income statement. In the second scenario, revenue is included in the net profit on the income statement, but the cash has not been

received by the end of the period. In both cases, current assets increased and net income was reported on the income statement greater than the actual net cash impact from the related operating activities. To reconcile net profit to cash flow from operating activities, *subtract* increases in current assets.

The comparative balance sheet had one instance of increases in current assets – an increase of \$8000 in inventory. This increase can be explained as additional cash that was spent, but which was not reflected in the expenses reported on the income statement.

Decrease in Non-cash Current Assets

Decreases in current assets indicate lower net profit compared to cash flows from (1) prepaid assets and (2) accrued revenues. For decreases in prepaid assets, using up these assets shifts these costs that were recorded as assets over to current period expenses that then reduce net profit for the period. Cash was paid to obtain the prepaid asset in a prior period. Thus, cash from operating activities must be increased to reflect the fact that these expenses reduced net profit on the income statement, but cash was not paid this period. Secondly, decreases in accrued revenue accounts indicates that cash was collected in the current period but was recorded as revenue on a previous period's income statement. In both scenarios, the net profit reported on the income statement was lower than the actual net cash effect of the transactions. To reconcile net profit to cash flow from operating activities, *add* decreases in current assets.

The comparative balance sheet shows a decrease of \$10000 in accounts receivable during the period, which normally results only when customers pay the balance they owe the business. The balance sheet also shows a decrease of \$7000 in interest receivable during the period, which happens only when the business receives the interest in cash. Thus, the decrease in receivable identifies that more cash was collected than was reported as revenue on the

income statement. Thus, an add back is necessary to calculate the cash flow from operating activities.

Increase in Current (Operating) Liability

Increases in current liabilities indicate an increase in cash, since these liabilities generally represent (1) expenses that have been accrued, but not yet paid, or (2) unearned revenues that have been collected, but not yet recorded as revenue. In the case of accrued expenses, costs have been reported as expenses on the income statement, whereas the unearned revenues would arise when cash was collected in advance, but the revenue was not yet earned, so the payment would not be reflected on the income statement. In both cases, these increases in current liabilities signify cash collections that exceed net profit from related activities. To reconcile net profit to cash flow from operating activities, *add* increases in current liabilities.

The comparative balance sheet had an increase in the current operating liability for accounts payable, in the amount of \$3000. The payable arises, or increases, when an expense is recorded but the balance due is not paid at that time. An increase in accounts payable therefore reflects the fact that expenses on the income statement are greater than the cash outflow relating to that expense. This means that net cash flow from operating is greater than the reported net profit, regarding this cost.

Decrease in Current (Operating) Liability

Decreases in current liabilities indicate a decrease in cash relating to (1) accrued expenses, or (2) unearned revenues. In the first instance, cash would have been expended to accomplish a decrease in liabilities arising from accrued expenses, yet these cash payments

would not be reflected in the net profit on the income statement. In the second instance, a decrease in unearned revenue means that some revenue would have been reported on the income statement that was collected in a previous period. As a result, cash flows from operating activities must be decreased by any reduction in current liabilities, to account for (1) cash payments to creditors that are higher than the expense amounts on the income statement, or (2) amounts collected that are lower than the amounts reflected as income on the income statement. To reconcile net income to cash flow from operating activities, *subtract* decreases in current liabilities.

The comparative balance sheet had a decrease of \$7000 in the current operating liability for salaries payable. The fact that the payable decreased indicates that the business paid down on amounts payable from previous periods. Therefore, the business had to have paid more in cash payments than the amounts shown as expense on the Income Statements, which means net cash flow from operating activities is lower than the related net profit.

On the statement of cash flows, the above increases and decreases in current assets and current liabilities will be shown in the Cash Flows from Operating Activities section as an adjustment to reconcile net profit to net cash flow from operating activities:

<u>Cash Flow from Operating Activities</u>	
Net Profit	\$160000
<u>Then remove all non-cash transactions:</u>	
Add: Depreciation Expense	\$15000
Add: Amortisation Expense	\$5000
Add: Loss from Sale of Non-current Asset	\$2000
Less: Gain from Sale of Non-current Asset	(\$7000)
<u>Then adjust for changes in current assets and liabilities:</u>	
Add: Decrease in Accounts Receivable	\$10000
Add: Decrease in Interest Receivable	\$7000
Add: Increase in Accounts Payable	\$3000
Less: Increase in Inventory	(\$8000)
Less: Decrease in Salary Payable	(\$7000)
= Net Cash Flow from Operating Activities	\$180000 (As per direct method)

For the above scenario, beginning with net profit of \$160000, and reflecting adjustments of \$20000 ($\$15000 + 5000 + 2000 - 7000 + 10000 + 7000 + 3000 - 8000 - 7000$), delivers a net cash flow from operating activities of \$180000. This \$180000 is the same amount as calculated under the direct method in Section 8.3.

In summary, using the indirect method, operating net cash flow is calculated as follows:

- Begin with net profit from the income statement.
- Add back non cash expenses, such as depreciation and amortisation
- Remove the effect of gains and/or losses from disposal of long-term assets, as cash from the disposal of long-term assets is shown under investing cash flows.
- Adjust for changes in current assets and liabilities to remove accruals from operating activities, i.e. to reflect how changes in current assets and liabilities impact cash in a way that is different than is reported in net profit.

Net cash flow from operating activities is the net profit of the company, adjusted to reflect the cash impact of operating activities. Positive net cash flow generally indicates adequate cash flow margins exist to provide continuity or ensure survival of the business. The magnitude of the net cash flow, if large, suggests a comfortable cash flow cushion, while a smaller net cash flow would signify an uneasy comfort cash flow zone.

When a business' net cash flow from operations reflects a substantial negative value, this indicates that the company's operations are not supporting themselves and could be a warning sign of possible impending downfall for the business. Alternatively, a small negative cash flow from operating might serve as an early warning that allows management to make needed corrections, to

ensure that cash sources are increased to amounts in excess of cash uses, for future periods.

After preparing the operating activities section of the cash flow statement, we then prepare the investing activities section which is illustrated in the next section, [Section 8.5](#).

8.5 Preparing the investing and financing activities sections of the statement of cash flows

RINA DHILLON; MITCHELL FRANKLIN; PATTY GRAYBEAL; AND
DIXON COOPER

Preparation of the investing and financing sections of the statement of cash flows is an identical process for both the direct and indirect methods, since only the technique used to arrive at net cash flow from operating activities is affected by the choice of the direct or indirect method. The following section discusses specifics regarding preparation of these two non-operating sections. Changes in the various non-current assets, non-current liabilities, and equity can be determined from analysis of the company's comparative balance sheet, which lists the current period and previous period balances for all assets and liabilities.

Investing Activities

Cash flows from investing activities always relate to non-current asset transactions and may involve increases or decreases in cash relating to these transactions. The most common of these activities involve purchase or sale of property, plant, and equipment, but other activities, such as those involving investment assets and lending of loans as investments, also represent cash flows from investing. Changes in non-current assets for the period can be identified in the Non-Current Assets section of the business'

comparative balance sheet, combined with any related gain or loss that is included on the income statement and notes to the financial statements.

To calculate cash flows from investing activities, all changes in non-current assets must be examined. An increase in a non-current asset suggests a purchase and therefore a cash outflow. Examples of cash outflows include cash payments for:

- Purchase of Property, Plant and Equipment (PPE)
- Purchase of other company securities (shares and bonds), and
- Lending of loans as investments.

A decrease in non-current assets, on the other hand, suggests a sale and therefore a cash inflow. Examples of cash inflows include cash receipts from:

- Sale of Property, Plant and Equipment (PPE)
- Sale of other company securities (shares and bonds), and
- Receipt of loan payments (where the business has lent money to others).

In the example used in Section 8.3 and 8.4, the investing section includes one transaction involving the sale of non-current assets, which increased cash for a total net cash flow from investing of \$150000. Analysis of the notes to the financial statements revealed that on 1 July, equipment and machinery was sold for a total \$150000. Details relating to the treatment of this transaction in the investing activities section of the cash flow statement are provided below.

Cash Flow from Investing Activities

Add: Sale of Non-Current Assets

\$150,000

= Net cash from Investing activities

\$150,000

After preparing the investing activities section of the cash flow

statement, the financing activities section is prepared. We now turn our attention to the calculation of cash flows from financing activities.

Financing Activities

Cash flows from financing activities always relate to either long-term debt (non-current liabilities) or cash inflows and outflows from/to shareholders/investors (equity) transactions and may involve increases or decreases in cash relating to these transactions. Shareholders' equity transactions, like issuing of shares, payment of dividends, and share buybacks are very common financing activities. Debt transactions, such as issuance of debt, and the related repayment of debt, are also frequent financing events. It is important to note that although dividend payments to shareholders are considered as a financing activity, payments of interest to creditors are not. The reason for this is interest is an expense that is reported on the income statement, and are considered to be part of a business's daily operations, therefore payments for interest are reported as operating instead of financing activities. Changes in non-current liabilities and equity for the period can be identified in the Non-Current Liabilities section and the Shareholders' Equity section of the company's comparative balance sheet, and in the financial statement notes.

To calculate cash flows from financing activities, the balances for non-current liabilities, equity accounts and dividends must be examined. An increase in a liability or an equity account suggests a cash inflow. Examples of cash inflows include cash receipts from:

- Issuance of Shares
- Borrowing money on a long-term basis from a bank
- Issuance of bonds (debentures) to raise cash.

A decrease in a liability suggests a cash outflow from payments to

creditors. Examples of cash outflows include cash payments for:

- Repayment of loans or bonds
- Repurchase (buy-back) of Shares
- Payment of cash dividends.

In the example used in Section 8.3 and 8.4, the financing section included one transaction related to equity, and which decreased cash, for a total net cash flow from financing of \$50000.

Analysis of the notes to the financial statements revealed shares were repurchased for cash on 15 January and changes in shareholders' equity (share capital) in the comparative balance sheet from \$150000 to \$100000 would mean that the business repurchased (bought back) shares for \$50000 (\$150000-100000) cash. Details relating to the treatment of this transaction in the financing activities section of the cash flow statement are provided below.

Cash Flow from Financing Activities

Less: Decreases in Capital (buy back of shares)	(\$50,000)
= Net cash from Financing activities	(\$50,000)

Summary of Investing and Financing Transactions on the Cash Flow Statement

Investing and financing transactions are critical activities of business, and they often represent significant amounts of company equity, either as sources or uses of cash. Common activities that must be reported as investing activities are purchases of property,

plant and equipment, shares, and bonds, while financing activities normally relate to the business' funding sources, namely, creditors (debt) and investors (equity). These financing activities could include transactions such as borrowing or repaying loans, or issuing shares or share buybacks, to name a few examples.

The next section, [Section 8.6](#), brings together the complete statement of cash flows, using the direct method.

8.6 Bringing it all together – Statement of Cash Flows

RINA DHILLON

Complete Statement of Cash Flows: Direct Method

<u>Cash Flow from Operating Activities (OA)</u>	
Cash collected from Sales	\$510,000
Cash collected from Interest	\$27,000
Less: Cash Payments:	
For Inventory	(\$205,000)
For Taxes	(\$20,000)
For Operations	(\$132,000)
= Net Cash Flow from Operating Activities	<u>\$180,000</u>
<u>Cash Flow from Investing Activities (IA)</u>	
Add: Sale of Non-Current Assets	\$150,000
= Net cash from Investing activities	<u>\$150,000</u>
<u>Cash Flow from Financing Activities (FA)</u>	
Less: Decreases in Capital (buy back of shares)	(\$50,000)
= Net cash from Financing activities	<u>(\$50,000)</u>
Net Change in Cash (OA +/- IA +/- FA)	<u>\$280,000</u>
Add: Beginning Cash Balance	<u>\$20,000</u>
= Ending Cash	<u>\$300,000 (as given in the question)</u>

The complete statement of cash flows, using the direct method, is shown above. The net change in cash of \$280000 (\$180000+150000-50000) is calculated by adding the cash flows from operating activities, investing activities and financing activities. This net change in cash is added to the opening cash balance of \$20000 to get to an ending cash balance of \$300000 which corresponds to the notes to the financial statements which stipulated that “Cash was \$20,000 at the start of the year and

\$300,000 at the end of the year”. The net increase in cash of \$280,000 (\$300,000-20,000) coincides with the net change in cash in the cash flow statement.

As mentioned from the very start of this chapter, cash is the most important asset for a business as it is needed for almost all business transactions (to buy inventory, pay employees, repay loans, etc.). While cash is important to a business, where a business' cash comes from (the source) is equally important. Net cash inflows from operating activities (e.g. cash from customers) are generally better than cash inflows from financing activities (e.g. cash from a bank loan).

Managing cash is important in any type of business. Without cash, a business can no longer survive and must declare bankruptcy. Poor cash management, and as a result a lack of cash, is the main reason why most small businesses fail. In addition, the few constraints that managers must work around in any business project is a limited budget of cash. Thus, it helps to know how to manage these cash flows. Lastly, large cash reserves are a strong measure of financial success and are valued on the stock market.

Additional resources

(1) This [video from Khan Academy explains cash flows](#) in a unique way.

(2) [AccountingCoach](#) is a great resource for many accounting topics, including [cash flow](#) issues.

Test Your Knowledge



An interactive H5P element has been excluded from this version of the text. You can view it online here:

<https://oer.pressbooks.pub/utsaccounting2/?p=816#h5p-27>



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Chapter 8 Practice Questions

RINA DHILLON

Practice Questions

1. The information in the statement of cash flows helps investors, creditors and others do all of the following except:

-
- a. assess a company's ability to produce future cash inflows
 - b. judge a company's ability to meet its obligations and pay dividends
 - c. estimate the company's needs for external financing
 - d. show the inflows and outflow of income (profits) on the accrual basis
-

2. Which of the following statements regarding the statement of cash flows is true?

-
- a. The statement of cash flows analyses the changes in consecutive balance sheets in conjunction with the income statement
 - b. The statement of cash flows is organised to present classifications for total cash inflows and cash outflows
 - c. The statement of cash flows analyses only the changes in current assets and current liabilities
 - d. The statement of cash flows is an optional financial statement
-

3. The primary purpose of the statement of cash flows is to provide information about the:

-
- a. financial position of the company
 - b. profitability of the company
 - c. investing and financing activities of the company
 - d. cash inflows and outflows of the company
-

4. Which of the following is not an operating activity?

-
- a. Cash collections from credit customers
 - b. Cash payments for operating expenses
 - c. Cash receipts for interest earned
 - d. Cash payments for dividends to shareholders
-

5. Which balance sheet accounts are most affected by financing activities?

-
- a. Current assets
 - b. Current liabilities
 - c. Non-current assets
 - d. Non-current liabilities and shareholders' equity
-

6. Upon review of CKA statement of cash flows, the following was noted:

Cash flows from operating activities	\$60 000
Cash flows from investing activities	(125 000)
Cash flows from financing activities	115 000

From this information, the most likely explanation is that CKA is using:

-
- a. cash from operations and selling non-current assets to pay back debt
 - b. cash from operations and borrowing to purchase non-current assets
 - c. profits to expand growth
 - d. cash from investors to provide for operations
-

7. Harry's Pies had the following results for 30 June 2022 and 2023, respectively:

	2022	2023
Cash	\$40 000	\$50 000
Non-cash current assets	160 000	190 000
Cash flows from financing activities		210 000
Cash flows from operating activities		90 000

What was the amount of cash flows from investing activities for 2023?

-
- a. Cash inflow of \$290 000
 - b. Cash outflow of \$290 000
 - c. Cash outflow of \$10 000
 - d. Cash outflow of \$30 000
-

8. The following items were reported on the balance sheets and income statement for Custombox.com:

Accounts receivable, 30 June 2021	\$250 000
Accounts receivable, 30 June 2022	225 000
Sales for financial year ended 30 June 2022	1 000 000

What amount would be reported in the operating activities section of Custombox.com’s statement of cash flows for collections from customers under the direct method, assuming that all sales are on credit?

-
- a. \$975 000
 - b. \$1 025 000
 - c. \$1 225 000
 - d. \$1 250 000
-

9. The following items were reported on the balance sheets and income statement for Tech Geeks, a service company:

Accrued liabilities, 30 June 2021	\$92 000
Accrued liabilities, 30 June 2022	55 000
Operating expenses – for financial year ended 30 June 2022	200 000

What amount would be reported in the operating activities section of Tech Geeks’ statement of cash flows for payments for operating expenses under the direct method?

-
- a. \$237 000
 - b. \$163 000
 - c. \$200 000
 - d. \$292 000
-

10. During 2022, the accounts receivable balance of Big Duck Tour Business increased. On Big Duck’s statement of cash flows, we would conclude that this increase:

-
- a. indicates that Big Duck sold more than it collected in cash during the period
 - b. is added to net profit in the operating activities section of a statement of cash flows prepared under the indirect method
 - c. is added to sales recognised on the income statement to determine the cash payments during the period
 - d. is considered only when the operating activities section of a statement of cash flows is prepared under the indirect method
-

11. How is depreciation expense recorded on the statement of cash flows if the operating activities section is prepared under the indirect method?

-
- a. As an operating activity
 - b. As an investing activity
 - c. As a financing activity
 - d. Not reported on the statement of cash flows as depreciation is a non-cash expense
-

12. Codsil Company reported the following information for 2021 and 2022.

Salaries payable, 30 June 2021	\$20 000
Salaries payable, 30 June 2022	15 000
Salaries expense—2021/22 financial year	80 000

How much cash was paid for salaries during 2021/22 financial year?

a.	\$60 000
b.	\$65 000
c.	\$75 000
d.	\$85 000

13. Patagonia reported the following information for 2021 and 2022.

	2021	2022
Accounts receivable	\$50 000	\$ 65 000
Inventories	43 000	40 000
Accounts payable	29 000	39 000
Net Profit		100 000
Depreciation expense		11 000

If Patagonia uses the indirect method to prepare the operating activities section of the statement of cash flows, what amount will be reported as net cash inflow from operating activities for 2022?

a.	\$98 000
b.	\$139 000
c.	\$119 000
d.	\$109 000

14. The current period statement of cash flows includes the following:

Cash balance at the beginning of the period	\$310 000
Cash flow from operating activities	185 000
Cash flow from investing activities	(43 000)
Cash flow from financing activities	(97 000)

The cash balance at the end of the period is

-
- a. \$45 000
 - b. \$635 000
 - c. \$355 000
 - d. \$125 000
-

15. The following information is available from the current period financial statements:

Net Profit	\$150 000
Depreciation expense	28 000
Increase in accounts receivable	16 000
Decrease in accounts payable	21 000

The net cash flow from operating activities using the indirect method is:

-
- a. \$141 000
 - b. \$173 000
 - c. \$117 000
 - d. \$215 000
-

Solutions:

1. d

The cash flow statement shows the inflows and outflow of CASH, instead of income (profits) on the accrual basis.

2. a

3. d

4. d

5. d

6. b

7. b

Net change in cash = $\$50000 - 40000 = 10000$

Operating Activities + Investing Activities + Financing Activities =
10000

$$210000 + X + 90000 = 10000$$

$$X = 290000 \text{ cash outflow (i.e. } -\$290000)$$

8. b

Cash collected from customers = Opening A/R balance + Sales -
Closing A/R balance = 250000+1000000-225000 = 1025000

9. a

Cash payments for operating expenses = Opening Accrued
Liabilities balance + OPEX - Closing Accrued Liabilities balance =
92000+200000-55000=237000

10. a

11. a

12. d

Cash paid for salaries = Opening Salaries Payable balance + Salary
expense - Closing Salaries Payable balance =
20000+80000-15000=85000

13. d

Net Profit \$100000

Add back: Depreciation \$11000

Less: Increase in Accounts receivables \$15000 (as cash not received yet)

Add: Decrease in inventory \$3000 (inventory sold, cash inflow)

Add: Increase in accounts payable \$10000 (cash not paid yet)

= Net cash inflow from operating activities \$109000

14. c

OA+IA+FA+Opening Cash Balance = Ending Cash Balance

$185000 - 43000 - 97000 + 310000 = 355000$

15. a

Net Profit \$150000

Add back: Depreciation \$28000

Less: Increase in Accounts receivables \$16000 (as cash not received yet)

Less: Decrease in accounts payable \$21000 (cash paid to suppliers)

= Net cash inflow from operating activities \$141000

PART IX

CHAPTER 9: LAW AND ETHICS

Introduction

Accountants deal with the intimate financial details of individuals and organisations. Some execute million-dollar transactions, and others assist with safeguarding superannuation (retirement) funds of everyday people such as nurses, retail workers and teachers. Law and ethics are the fundamental principles that accounting professionals choose to abide by to enhance their profession, maintain public trust and demonstrate honesty and fairness. People who join organisations and secure the credentials to present themselves to the public as Chartered Accountants (CA) or Certified Public Accountants (CPA) or Chartered Certified Accountants (CCA) strive to protect the reputation of the profession. Unfortunately, not everyone who works in the accounting field is trustworthy. Daily violations of public and private trust occur, and resolving ethical dilemmas does not always end favorably. In this chapter, we examine APES 110 Code of Ethics for Professional Accountants and the five ethical principles that deserve the attention of anyone considering working in the accounting profession, and discuss its implication for current (and future) accountants.

Chapter outline

After reading this chapter, you should be able to:

1. Understand legal considerations in business and accounting
2. Understand the need for accountants to be ethical and independent
3. Define and describe the principles of ethical conduct
4. Define and describe the threats to ethical conduct
5. Identify various safeguards to the practice of ethics in organisations

9.1 Understand legal considerations in business and accounting

RINA DHILLON

There are usually three legal considerations in business and accounting: (1) Sources of Law; (2) Contracts and (3) Consumer Protection. This section will briefly address each of these legal considerations and its implications for business.

Sources of Law



There are two main sources of law in Australia, statutory law, the law made by Parliament, and case law or common law, based on the decisions of judges in the superior courts. The dominant source is parliament, where elected politicians make laws. Laws made by parliaments are called statutes, Acts or legislation. Australia has a federal system of government. There is the Commonwealth

Parliament (in Canberra) and a separate parliament in each of the states and territories. All parliaments make laws.

There are also two court systems. The federal court system comprises the Federal Circuit Court, Federal Court, Family Court and High Court. The state court system consists of Magistrates', County and Supreme Courts. As well, there are a range of tribunals and boards that make decisions about individual disputes, but they do not have the same power as courts to 'make law'. For example, in the New South Wales, the [NSW Civil and Administrative Tribunal](#) provides affordable access to justice for civil matters. Judges make law through their decisions in court cases. Judges usually decide each similar case along the lines of earlier decisions made. If the facts of the earlier cases were not exactly the same, the judge could still compare the situations and apply a common principle or develop a new, reasonably similar principle for the new facts – known as the doctrine of precedent. The principles and rules contained in the collection of judgments and court procedures is also known as the common law. Each part of the system – the courts, the parliament and the executive (ministers and public service) – has a separate role to play. In particular, the courts are independent of the parliament.

These sources of law fit together to create the Australian legal system. Students who would like a more in-depth understanding of the sources of law in Australia can turn to the following **optional** reading resource: [The Australian Legal System](#).

Contracts

A contract is a promise (or a set of promises) that is legally binding and can be anything from a formal written document to a verbal promise, as well as implied by conduct. Contracts reflect the set of expectations of each party within a business relationship. A business

is essentially a 'nexus of contracts' and thus contract law is applicable and relevant, especially in the event of a breach.

Contract law defines the elements of a contract (i.e. contractual formation -what we need to do to create a contract), determines if contracts are valid and enforceable (i.e. scope and content of contracts), aids with the interpretation of contracts (i.e. avoidance of contractual obligations or performance and termination of contracts – if they are unclear or there is a dispute) and determines what happens if contracts are breached (i.e. remedies for breach of contract – when one party fails to act out a promise).

Students who would like a more in-depth understanding of contract law can read the following **optional** resource: [Australian contract law](#)

Consumer Law

Since the early 70s, consumer legislation has seen a major shift from buyer beware to seller beware particularly for large organisations selling goods and services to a multitude of customers. The relevant legislation is the Competition and Consumer Act 2010 (Cth) (CCA) and is enforced by the Australian Competition & Consumer Commission (ACCC). The provisions within consumer law can be grouped into four broad categories:

1. Product safety provisions, which provide for mandatory consumer standards, product information and notification of voluntary recalls, and the power to order mandatory recalls;
2. Prohibitions against unconscionable, misleading or deceptive conduct in trade or commerce, which are extremely wide-ranging;
3. A prohibition on the manufacture of defective products, which are restricted to consumer goods; and

4. A strict liability prohibition on manufacturers and importers of defective goods.

Keeping It Real: ACCC takes action against Volkswagen over diesel emission claims

1 September 2016

The Australian Competition and Consumer Commission has instituted proceedings in the Federal Court of Australia against German company Volkswagen Aktiengesellschaft (VWAG) and its Australian subsidiary, Volkswagen Group Australia Pty Ltd (VGA) (together, Volkswagen), alleging they engaged in misleading or deceptive conduct, made false or misleading representations and engaged in conduct liable to mislead the public in relation to diesel vehicle emission claims.

The ACCC alleges that between 2011 and 2015:

- VWAG engaged in misleading conduct by installing and not disclosing the existence and operation of 'defeat' software, which controlled the operation of the vehicles' exhaust gas recirculation system. The software caused the vehicles to produce lower nitrogen oxide (NOx) emissions when subject to test conditions in a laboratory, but switched to a different mode under normal on-road driving conditions resulting in significantly higher NOx emissions being produced by the vehicles.
- Both VGA and VWAG engaged in misleading conduct by representing that the vehicles complied

with Australian and European standards and all Australian regulatory requirements when, because of the defeat software, that was not the case.

- Using information provided by VWAG, VGA marketed the vehicles in Australia as being environmentally friendly, clean burning, low emission and compliant with stringent European standards when this was not the case under normal driving conditions.

“The ACCC alleges that Volkswagen engaged in multiple breaches of the Australian Consumer Law by concealing software in their vehicles to cheat emissions testing and misleading consumers about the vehicle’s compliance with standards and emission levels during on-road conditions,” ACCC Chairman Rod Sims said.

“Consumers rightly expect that their vehicle’s emissions would operate as advertised during their day-to-day use and we allege that this was not the case with more than 57 000 vehicles sold in Australia by Volkswagen over a five-year period.”

“These allegations involve extraordinary conduct of a serious and deliberate nature by a global corporation and its Australian subsidiary misleading consumers and the Australian public. We expect higher standards of behaviour from all companies that supply to Australian consumers,” Mr Sims said.

The ACCC is seeking declarations, pecuniary penalties, corrective advertising, findings of fact and costs.

Release number:

Keeping It Real: Optus in court for allegedly misleading 20,000 customers about moving to the NBN

15 December 2017

The ACCC has instituted proceedings in the Federal Court against Optus Internet Pty Ltd (Optus), alleging it misled customers about the need to move quickly from its existing HFC network to the National Broadband Network (NBN).

The ACCC alleges that between October 2015 and March 2017, Optus made false and misleading representations by writing to its customers to advise it would disconnect their HFC service within a specified time period as the NBN was coming to their area.

However, the timeframes were earlier than Optus was contractually allowed to cancel the customers' services.

"We allege that Optus' misrepresentations put pressure on customers to move to the NBN sooner than they were required to. This is particularly concerning as Optus received a significant financial payment from NBN Co for each customer that moved from its cable network to the NBN," ACCC Chairman Rod Sims said.

It is also alleged that between October 2015 and September 2016, Optus misled some of its customers about their options for purchasing an NBN plan.

“Optus created the impression that its customers were required to obtain NBN services from Optus, when they could have chosen to switch to any internet service provider.”

“We are also concerned that Optus cut off some of its customers’ internet services when it had no contractual right to do so. Telephone and internet are essential utilities and it is unacceptable for Optus to treat its customers this way,” Mr Sims said.

“As the NBN rollout continues throughout Australia, people will be making decisions about which provider to go with. ISPs must not mislead consumers when competing for business. We are keeping a close eye on this sector and will take action where we see wrongdoing.”

The ACCC is seeking declarations, injunctions, pecuniary penalties, a publication order, compliance orders and costs.

Release number:
MR 245/17

In addition to goods and services, Australian Consumer Law also apply to Financial Products and Services. Failure by financial professionals to provide timely and accurate information to those they bear responsibility toward is also an offence. This includes false or misleading statements, inappropriate financial advice and insider trading and apply to financial statements, forecasts and other disclosures made by accountants, which are required to be a complete, true and fair reflection of the company’s financial performance. Investigations are brought by the Australian corporate regulator, the Australian Securities and Investments Commission (ASIC).

Keeping It Real:

21-063MR ASIC sues CBA for misleading conduct over monthly access fees

ASIC has commenced civil penalty proceedings in the Federal Court against the Commonwealth Bank of Australia (CBA), alleging that it charged monthly access fees to customers when it was not entitled to do so.

ASIC alleges that, between 1 June 2010 and 11 September 2019, CBA incorrectly charged monthly access fees to customers who were entitled to fee waivers because they met certain criteria under their contracts with the bank. Almost \$55 million in fees were charged to nearly one million customers and more than 800,000 accounts.

For the period between 1 April 2015 and 11 September 2019, the period for which the Court can impose a penalty, ASIC alleges that CBA incorrectly charged monthly access fees on approximately 2.4 million occasions, totaling around \$11.5 million.

ASIC alleges that CBA incorrectly charged monthly access fees to customers entitled to fee waivers due to systems and processes that were inadequate or improperly configured in 30 different ways, as well as due to manual errors made by CBA staff.

ASIC also alleges that each time CBA charged the fees or

notified a customer via bank statement of the charging of each fee, it made false or misleading representations that it was contractually entitled to charge the fees when it was not.

Further, ASIC alleges that each time CBA entered into a contract with a customer to establish an account where a fee waiver may apply, it made false or misleading representations that it would have adequate systems and processes in place to provide the fee waivers, when it did not.

By engaging in the above conduct, ASIC alleges that CBA also engaged in misleading or deceptive conduct and contravened its obligation as an Australian financial services licensee to comply with financial services laws.

ASIC also alleges that CBA failed to provide financial services efficiently, honestly and fairly by:

- failing to apply monthly access fee waivers to customer accounts after it had represented it would do so;
- failing to maintain systems and processes that were capable of meeting obligations to customers; and
- failing to undertake an appropriate review of the multiple systemic issues that contributed to the ongoing failure of its systems to apply monthly access fee waivers in accordance with the bank's contract with its customers.

ASIC commenced this proceeding because financial institutions need to have robust compliance systems to meet their obligations to customers. Financial institutions need to put customers first, and customers should have

confidence that the banks they deal with charge fees correctly.

The proceeding will be listed for a case management hearing on a date yet to be set.

Keeping It Real:

21-364MR Mayfair 101 Group to pay \$30 million penalty for misleading advertising

The Federal Court has ordered four companies in the Mayfair 101 Group to pay a combined penalty of \$30 million for misleading advertising.

In March 2021, the Court found Mayfair Wealth Partners Pty Ltd and Online Investments Pty Ltd (trading as Mayfair 101), M101 Nominees Pty Ltd and M101 Holdings Pty Ltd engaged in misleading or deceptive conduct and made false or misleading representations when promoting the M+ and M Core Fixed Income Notes ([21-055MR](#)).

Mayfair 101 Group products were advertised in newspapers, on websites and via Google search advertising, when potential investors searched for terms such as 'bank term deposits' and 'best term deposit'.

ASIC Deputy Chair Sarah Court said ‘This penalty makes clear that firms must do the right thing by their investors, irrespective of whether they are wholesale or retail investors. Failing to accurately advertise financial products can result in significant penalties for firms.’

The Court found that the Mayfair companies represented that:

- the Notes were comparable to, and of similar risk profile to, bank term deposits, when they were of significantly higher risk,
- the Notes carried no risk of default, when in fact there was a risk that investors could lose some, or all, of their principal investment,
- the principal investment would be repaid in full on maturity, when this might not occur because Mayfair could extend the time for repayment for an indefinite period, and/or
- the M Core Notes were fully secured products when they were not.

The Court imposed the following penalties:

- Mayfair Wealth Partners: \$10 million
- M101 Holdings: \$8 million
- M101 Nominees (in liquidation): \$8 million
- Online Investments: \$4 million

James Mawhinney is the director of each of the Mayfair companies. In April 2021, the Federal Court restrained Mr Mawhinney from advertising and raising funds through financial products for 20 years ([21-076MR](#)).

In handing down the decision, Justice Anderson found that, ‘the Defendants deliberately mislead investors into

investing in the Mayfair Products under the belief that they would be of low risk when in fact the Mayfair Products were highly speculative and carried very substantial risk.’

His Honour also found that Mr Mawhinney had shown no remorse ‘for the loss and harm caused to investors in the Mayfair Products.’

The Court also permanently restrained the companies from using certain words and phrases (such as ‘term deposit’ and ‘certainty’) in any future advertising.

Students who would like a more in-depth understanding of consumer law can read the following **optional** resource: [Australian Consumer Law](#)

While this section has set out the legal expectations of businesses and accountants, they do not fully capture the scope of the accounting profession’s responsibility. The next section provides an understanding of the need for accountants to be ethical and independent.

9.2 Understand the need for accountants to be ethical and independent

RINA DHILLON

One of the key traits of a professional accountant is the adherence to a rigorous set of ethical guidelines. Accounting ethics refers to following specific rules and principles set by governing bodies that every person associated with accounting should follow to prevent misuse of the financial information or their management position. Before we present these ethical guidelines and principles that relate to the practices of an accountant, let's first define what ethics is.

Defining ethics

The Oxford Dictionary definition of ethics is:

“NOUN – [USUALLY TREATED AS PLURAL] **moral principles that govern a person's behaviour or the conducting of an activity**”. Thus when we speak about ethics in the context of business, we can look at business ethics as the application of this ethics definition to business behaviour.

According to the Chartered Institute of Management Accountants (CIMA), “ethics is all about right and wrong, and the systems of belief which drive our moral compasses”. They define ethics as “taking decisions for the right moral reasons, taking into account the wider needs of all stakeholders”.

In some cases, ethics can be black and white, in that it can be clear from the onset that a particular conduct is ethically wrong and most times, that behaviour is illegal as well. For example, if an accountant

steals from the business that employs him/her, it would ethically wrong and illegal to do so.

Keeping It Real: ING takes a \$30m hit in accountancy fraud case

The multinational insurance and finance company ING suffered a \$30 million net loss from the massive fraud committed by its senior accountant, Rajina Subramaniam, court documents reveal.

Files released after Subramaniam was sentenced to at least seven years' jail last week, show the company has recovered only a third of the \$45.3 million the 42-year-old stole over five years. While most of the incredible haul of luxury goods and property purchased with the money – including \$16 million worth of Paspaley Pearls jewellery and eight waterfront apartments – has been recovered and resold by the company, it has taken a substantial hit. 'There is no realistic possibility that the full cost of those items can be fully recovered,' documents tendered by the prosecution state.

This is due, in part, to the fact that Subramaniam paid well above market rates for the properties she purchased. The court documents also paint a less-than-flattering picture of internal security at the section of ING where Subramaniam worked, ING Australia Holdings. During her

interview with police shortly after being arrested, Subramaniam said: 'My manager is so slack, he didn't care, so I was sort of doing it to see when I would get caught [but] you know, he just left it open for me.' She said the manager – who cannot be named – would come in at 10 am and appeared not to be interested in the job.

It is understood Subramaniam did not have any formal accounting qualifications but had worked her way up from the position of assistant accountant. As a senior accountant she made 200 illegal transfers into her personal accounts or directly to shops and real estate agents. She then used the computer log-ins of former staff to delete the records or alter them so the transactions appeared legitimate.

Source: 'ING takes a \$30m hit in accountancy fraud case', by Paul Bibby from The Sydney Morning Herald

However, in most cases ethics is 'grey', whereby acceptable, legal actions may not be ethical, or on rare occasions, ethical actions may be illegal! Illegal refers to breaking laws (e.g. fraud) and unethical refers to (be it legal or illegal) acts where the accountant avoids reporting the most accurate information (e.g. reporting lower expenses whether due to omission or underestimation), even though it is still following the accounting rules (e.g. earnings management). For example as we recently learnt picking the reducing balance depreciation method can maximise tax savings in the short run (more expenses in the early years of an asset's life) and is certainly within the accounting rules. However if an asset is used evenly throughout its useful life, the straight-line depreciation method would be a more appropriate accounting decision as it would more accurately suit the spread of the asset's cost consistent with its usage, as per the rationale behind depreciation. An

accountant who knows this but still chooses a depreciation method that saves short-term taxes would be said to be acting unethically even though he or she has not acted illegally.

At the end of the day, the duty of an accountant is, critically, towards the public interest. This is a distinguishing mark of the accountancy profession – its acceptance of the responsibility to act in the public interest. In accounting, the public interest is generally defined as the collective well-being of people and institutions the profession serves and to protect the economic interests of third parties by facilitating an efficient and effective economic decision making process through the provision of relevant and reliable accounting information. This community of people rely on the objectivity and integrity of members to assist in maintaining the orderly functioning of commerce. Thus a member's responsibility is not exclusively to satisfy the needs of an individual client or employer. Why is accounting important to the public? Superannuation funds and investors use accounting information to evaluate investments with the goal of increasing their wealth and accurate numbers allow for better decision making in meeting this goal.

The premise underlying the accountants' duty to protect the public interest is based on accountants being independent so as to avoid being influenced to make inappropriate choices. In order to provide more directions to accountants, the Accounting Professional and Ethical Standards Board (APESB) developed professional and ethical principles that bind the conduct of accountants and sets out the requirements for ethical behaviour – known as APES 110 – Code of Ethics for Professional Accountants. This code are applicable to all members (professional accountants) of Certified Practising Accountants (CPA), Chartered Accountants Australia and New Zealand (CAANZ), Institute of Public Accountants (IPA) and Association of Chartered Certified Accountants (ACCA). These standards guides the conduct of most practising accountants in Australian businesses and penalties for breaching these standards include loss of membership to professional bodies, fines and

possible prosecution if unethical conduct is also fraudulent and illegal.

In the next section, we will discuss the five APESB ethical principles, followed by the five threats that illustrate why an accountant may not behave according to the ethical principles in Section 9.4.

9.3 Define and describe the principles of ethical conduct

RINA DHILLON

This section is largely based on [APES 110 Code of Ethics for Professional Accountants](#). Students should take some time to read the relevant sections within APES 110 so as to better understand each of the five ethical principles summarised in this section. These principles indicate how accountants (also referred to as Members) should behave (i.e. ideal behaviour).

There are 5 Fundamental Principles of Ethics under APES 110:

1. Integrity
2. Objectivity
3. Professional competence and due care
4. Confidentiality
5. Professional behaviour

Integrity

The principle of integrity requires that accountants are 'straightforward and honest in all professional and business relationships' (Section 100.5a). This means that an accountant, while dealing with accountants and non-accountants, must communicate information surrounding the effect of accounting concepts in a way that does not intentionally mislead or drive behaviours in affected individuals. Accountants should not misrepresent through sleight of meaning – for example using terminology to confuse, or influence other stakeholders in ways that benefit a business or a particular individual, at the expense of another, without their knowledge.

Integrity also implies fair dealing, truthfulness, and having the strength of character to act appropriately, even when facing pressure to do otherwise. Acting appropriately involves:

- (a) Standing one's ground when confronted by dilemmas and difficult situations; or
- (b) Challenging others as and when circumstances warrant, in a manner appropriate to the circumstances.

In other words, accountants/auditors should not be associated with information that:

- (a) Contains a materially false or misleading statement;
- (b) Contains statements or information furnished recklessly; or
- (c) Omits or obscures information required to be included where such omission or obscurity would be misleading.

Keeping It Real: ASIC win in Westpac super row threatens banks' cross-sell model

The Australian Securities and Investments Commission's victory in a dispute with Westpac over unlicensed financial advice poses a revenue threat to other large financial services firms including Commonwealth Bank.

The landmark decision of a Federal Court full bench to grant ASIC's appeal in a case involving Westpac's rollover of \$640 million of customer super balances to in-house funds may dramatically affect the sale of financial products.

A three-judge panel of the court unanimously ruled on

Monday that ASIC's appeal of a 2018 decision finding Westpac's recommendations to 15 customers to switch super funds did not constitute "personal" financial advice be allowed with costs. It also threw out a counter-appeal by Westpac subsidiary BT Funds Management.

The successful appeal is a major victory for the regulator, which had been hoping to use its dispute with Westpac Securities and BT Funds Management as a "test case" providing clarity on the legal line between personal and general advice.

If general advice is not dead, then it's on life support.

— Michael Vrisakis, Herbert Smith Freehills

It potentially also poses a revenue threat for financial services firms, particularly the large bank-owned vertically integrated wealth managers, and could affect their ability to market and cross-sell investment products via branches and call centres relying on the general advice allowance under the law.

The threat is particularly acute for Westpac – which has announced it is exiting the business of face-to-face personal financial advice, but is retaining BT's superannuation and funds management business – and Commonwealth Bank, which has shelved plans to divest from wealth management. NAB and ANZ by contrast are selling both investment management and financial advice.

Justice Jacqueline Gleeson ruled in December 2018 that Westpac was in breach of its duty to provide financial services "efficiently, honestly and fairly", but she did not find that the recommendation to transfer the balances to Westpac-owned, BT-branded funds constituted personal advice.

ASIC alleged that the telephone-based campaigns of Westpac's so-called Super Activation Team, commenced in 2014, crossed the line from general to personal financial product advice, which the relevant bank subsidiaries, Westpac Securities and BT Funds Management, were not licensed to provide. It appealed Justice Gleeson's decision in February 2019.

To give personal financial advice, the provider must be licensed and registered with ASIC and has a fiduciary duty to consider the broad financial circumstances and best interests of a customer when making product recommendations.

General advice, by contrast, is subject to relatively less stringent requirements to consider broad customer needs.

General advice on 'life support'

The business model of recommending or selling financial products on the basis of general advice, which is widespread in the financial services industry, has been badly injured by ASIC's successful appeal, according to legal experts.

"If general advice is not dead, then it's on life support," Herbert Smith Freehills partner Michael Vrisakis told The Australian Financial Review.

The implications of the judgment were that employees recommending a product to a customer, especially if they have an existing relationship with the firm as was the case with the Westpac rollover, could mean that they very easily "stray into personal advice", even though they may not be licensed to do so, Mr Vrisakis said.

"Even if you haven't [strayed into personal advice

territory], if the advice relates to a matter of significant financial importance to a client, then you may be treated as not acting efficiently honestly and fairly in accordance with community expectations.”

The experienced financial services lawyer described this as an “evolving standard of fairness” being set into legal precedent as courts test the law for the first time.

While the provision of general advice after this case could still be “viable”, the terms upon which it is provided have narrowed and firms will need to be conscious of broader ethical duties to the customer going forward, he said.

Always be closing

In overturning Justice Gleeson’s 2018 decision, Chief Justice James Allsop, Justice Jayne Jagot and Justice Michael O’Bryan exposed a flaw in the marketing and product distribution strategy of the big wealth managers.

“Westpac’s attempts to have customers transfer funds from their external accounts with other superannuation funds into their BT accounts were carefully calculated to bring about this desired result by giving no more than general advice,” Chief Justice Allsop wrote in the published decision.

“The difficulty is that the decision to consolidate superannuation funds into one chosen fund is not a decision suitable for marketing or general advice ... this was personal advice.”

Had customers been given the opportunity to consider their personal circumstances and communicate their acceptance of Westpac’s offer at a later date, then the bank

might have avoided the conclusion that it had effectively provided personal advice, Justice Allsop wrote.

“This was, however, not the intended model of engagement,” he said. “‘Closing’ was to take place, if at all possible, on the call over the phone.”

The dividing line

ASIC welcomed the court’s decision, which it said “provides clarity and certainty concerning the difference between general and personal advice for consumers and financial services providers”.

Westpac told the ASX it was reviewing the decision.

The Federal Court’s original finding did not provide ASIC with the ammunition it required to take action against unlicensed personal advice across the industry.

The regulator had described its dispute with Westpac as a crucial “test case” whereby the courts were ruling on Section 766B of the Act for the first time, which should have set out clearly a definition industry, legal advisers and regulators could rely on.

“The dividing line between personal and general advice is one of the most important provisions within the financial services laws. It directly impacts the standard of advice received by consumers,” ASIC deputy chairman Daniel Crennan, QC, said at the time of the appeal’s announcement.

“This is why ASIC brought this test case and ASIC believes further consideration by the Full Court of the Federal Court is necessary.”

An ASIC report released in March found widespread

consumer confusion over the definitions of personal and general financial advice.

‘Opportunity to do more’

Justice Gleeson’s 2018 decision had been welcomed by the financial services industry, read not only as a vindication of the existing widespread practice of recommending investment products under a general advice allowance, but also potentially widening that authorisation.

Mills Oakley partner Mark Bland said the verdict had significant implications for the way in which financial services firms engage with consumers, and that it effectively broadened the definition of general advice.

“This judgment presents an opportunity to do more under general advice communication channels, allowing greater personalisation in a single, transactional context,” Mr Bland said, following the initial judgment.

“However, if firms expand their general advice models, they will need to ensure to recognise what is in a client’s best interests and ensure that they are given the appropriate warnings.”

Source: ‘ASIC win in Westpac super row threatens banks’ cross-sell model’, by Aleks Vickovich, October 28 2019, *Australian Financial Review*

Objectivity

The objectivity principle refers to accountants avoiding ‘bias, conflict of interest or the undue influence of others to override

professional or business judgements' (Section 100.5b). There are three components to this principle:

(a) Bias refers to the inclination to disproportionately favour one entity over another.

(b) Conflict of interest exists when an individual is burdened by competing interests that oppose, but which are under the control of, the same individual.

(c) Undue influence refers to entities impacting our judgement owing to the presence of a material dependence that impairs our reasoning of their actions.

A Member may be exposed to situations that may impair objectivity and it is impracticable to define and prescribe all such situations. Essentially, relationships that are bias or unduly influence the professional judgment of the Member should be avoided. An example of a breach of the principle of objectivity can be found here: [Determination of the Disciplinary Tribunal of Chartered Accountants Australia and New Zealand, Case D-1199, July 31st 2019](#)

Professional Competence and Due Care

The principle of professional competence and due care requires an accountant to '...maintain professional knowledge and skill at the level required to ensure that a client or employer receives competent Professional Services based on current developments in practice, legislation and techniques and act diligently and in accordance with applicable technical and professional standards' (Section 100.5c).

The lack of knowledge and proper discharging of one's work as an accountant is not just symptomatic of a lack of knowledge, but unethical conduct. The accountant must act with professional

competence, continuing awareness and an understanding of relevant technical professional and business developments. This is achieved through practises of knowledge, skills and attitude that attain and maintain professional competence.



Keeping It Real: Bondholders launch class action against PwC

The country’s largest blue-chip company auditor, PwC, is

facing a class action from bondholders of its collapsed audit client Axsesstoday over allegations of shoddy accounting work by the big four consultancy.

The action, filed in the Federal Court last month, is the seventh time in the past decade that the firm has been sued over its work on audit clients that later collapsed. It has so far settled four of these.

Listed lending company Axsesstoday went into voluntary administration in April 2019 after breaching its loan term conditions and was later sold to an affiliate of private investment firm Cerberus Capital Management for almost \$260 million.

But a prospectus given to bondholders in June 2018 suggested Axsesstoday was not at risk of breaching any loan or debt obligations, and those investors now want compensation.

The bondholders allege that the audit giant failed to adequately consider changes to accounting standards that would see the financial assets and liabilities of lenders such as Axsesstoday measured and classified differently.

Expected losses would also be recorded on a prospective basis, rather than the incurred loss model used before the rule change. These changes would ultimately contribute to Axsesstoday's collapse.

The bondholders allege that PwC either failed to tell Axsesstoday that it had not assessed the likely effect of the rule change on the company's financials, or wrongly assessed it.

They also claim that by doing the accounting work

behind the flawed prospectus, PwC engaged in misleading or deceptive conduct.

They say that without these misrepresentations, they would not have entered into the bonds.

The lead applicant, Compumod Investments, is seeking damages for the more than \$36,000 in bonds it lost when the company collapsed. It had invested in the bonds as trustee for its staff super fund.

Other group members in the class action will also be entitled to damages if their case is successful, though the quantum of these amounts will not be known until everyone who plans to join the action has done so.

Audit issues

PwC failed to raise any concerns about Axesstoday's continued survival in its initial audit of the company's last financial statements before its collapse, [but did so in its restated annual report](#).

In August 2018, PwC signed off on Axesstoday's financials without flagging any concerns about the lender's ability to continue trading.

Axesstoday shares were suspended two weeks later in September 2018. The initial reason for the halt was for the board to review company strategy, but it was followed by senior executive departures.

At the end of November 2018, the company reissued its annual report to take into account breaching its lending

agreements during the 2017-18 period. The restatement cut the company's net profit and earnings per share in half.

In the reissued report, signed off in November 2018, PwC flagged a "material uncertainty related to going concern" for Axsesstoday.

The newly launched class action is not in relation to this audit work.

The firm settled a case related to its audit work at Centro Properties for around \$67 million in 2012, and has also settled cases related to its audits of Provident Capital, Great Southern Finance and Ausbil Investment Management.

It continues to fight one case related to a former audit client, a class action over failed education provider Vocation, in the federal court.

Source: 'Bondholders launch class action against PwC', by Hannah Wootton, September 8 2020, *Australian Financial Review*

Confidentiality

The principle of confidentiality requires accountants to '...respect the confidentiality of information acquired as a result of professional and business relationships and, therefore, not disclose any such information to third parties without proper and specific authority, unless there is a legal or professional right or duty to

disclose, nor use the information for the personal advantage of the Member or third parties' (Section 100.5d). This principle balances the duty of an accountant to ethically maintain the secrets of an organisation, while at the same time acting in the public interest should the need arise. The principle of confidentiality imposes an obligation on Members to refrain from:

- (a) Disclosing outside the Firm or employing organisation confidential information acquired as a result of professional and business relationships without proper and specific authority from the Client or employer or unless there is a legal duty to disclose; and
- (b) Using confidential information acquired as a result of professional and business relationships to their personal advantage or the advantage of third parties.

Keeping It Real: Pizza accountant to pay \$2M for insider trading

A former accountant at pizza giant Domino's Pizza Inc. has agreed to pay almost \$2 million to settle allegations of insider trading from the Securities and Exchange Commission.

The SEC alleges that from 2015 to 2020, Bernard L. Compton traded ahead of a dozen of Domino's earnings announcements based on confidential information he acquired while working as an accountant in the company's corporate office. The commission's complaint said that Compton spread his trading across a number of different

brokerage accounts that belonged to himself and various members of his family, and that his illicit profits topped \$960,000.

“The SEC investigation uncovered that Compton allegedly accessed and reviewed Domino’s confidential data to prepare financial performance reports for senior management,” said Joseph Sansone, the chief of the SEC’s market abuse unit, in a statement. “Using innovative analytical tools, SEC staff exposed the defendant’s repeated misuse of this inside information and are now holding him accountable.”

Source: ‘Pizza accountant to pay \$2M for insider trading’, by Daniel Hood, April 22 2022, *Accounting Today*

Professional behaviour

The fifth and final principle of professional behaviour requires accountants to ‘...comply with relevant laws and regulations and avoid any action that discredits the profession’ (Section 100.5e). This principle broadly requires accountants to engage in behaviours that are not only ethical from the perspective of other stakeholders relating to a business (customers, suppliers, employees, etc.), but also more generally behave in a way that will not bring the accounting profession into disrepute. Whatever the context, if an accountant is acting in a way that might bring his profession into disrepute, the accountant will be considered as being in breach of this principle.

Accountants must behave in a manner consistent with the

profession's responsibility to act in the public interest in all professional activities and business relationships and avoid any action or omission that may bring discredit to the profession. This includes actions or omissions which a reasonable and informed third party, having knowledge of all relevant information, would conclude negatively affects the good reputation of the profession. In addition, in marketing and promoting themselves and their work, members should not bring the profession into disrepute. Members should be honest and truthful and should not:

(a) Make exaggerated claims for the services they are able to offer, the qualifications they possess, or experience they have gained; or

(b) Make disparaging references or unsubstantiated comparisons to the work of others.

Practically, what does this mean? Accountants cannot speak negatively of other accountants' practices in promoting their own, thus indirectly upholding the high reputational standard of the profession. An example of a breach of the principle of professional behaviour can be found here: [Determination of the Disciplinary Tribunal of Chartered Accountants Australia and New Zealand, Case DT-1280, May 17th , 2022](#)

Having considered the five principles, the next section looks at the five threats that accountants should avoid (threats) in order to more easily engage in ethical behaviours (i.e. the ethical principles discussed above).

9.4 Define and describe the threats to ethical conduct

RINA DHILLON

This section is largely based on [APES 110 Code of Ethics for Professional Accountants](#). Students should take some time to read the relevant sections within APES 110 so as to better understand each of the five ethical threats summarised in this section. These threats indicate why accountants may not behave according to the ethical principles: 'When a relationship or circumstance creates a threat, such a threat could compromise, or could be perceived to compromise, a Member's compliance with the fundamental principles. A circumstance or relationship may create more than one threat, and a threat may affect compliance with more than one fundamental principle.' (Section 100.12)

APES 110 specifies a series of threats to ethical conduct:

1. Self-interest
2. Self-review
3. Advocacy
4. Familiarity
5. Intimidation

Self-interest

Section 110.12a defines self interest as '...the threat that a financial or other interest will inappropriately influence the Member's judgement or behaviour'. Accountants who place personal gain at the expense of the broader organisational objectives put themselves in positions where they might act unethically – these

gain is usually in the form of a Financial (or other) Interest in a client (individual/company). Some examples include undue (financial) dependence on total fees from a Client; financial concern about the possibility of losing a Client; potential employment with a Client; and a loan to or from a Client or any of its Directors or Officers.

Self-review

The self review threat exists when ‘... a Member will not appropriately evaluate the results of a previous judgement made or service performed by the Member, or by another individual within the Member’s Firm or employing organisation, on which the Member will rely when forming a judgement as part of providing a current service’ (Section 100.12b). It is only natural when evaluating our own work, or making judgements surrounding aspects of a decision that involved our prior contribution, that we might be inclined to evaluate more loosely, without being as stringent as we ordinarily might (i.e. the bias inherent in judging one’s own work). This threat would arise when an accountant/auditor having undertaken professional work that is directly related to subject matter (i.e. financial statements) are also directly involved in independently evaluating. Some examples include independently verifying the quality of a client’s financial reporting control system after working with the client to develop the system or auditing the financial statements of a client after being involved in the preparation of the client’s accounting.

Advocacy

The advocacy threat is defined in Section 100.12c as ‘the threat that

a Member will promote a client's or employer's position to the point that the Member's objectivity is compromised'. This threat would result from an accountant/auditor portraying a positive viewpoint of a client that may compromise their ability to provide an independent evaluation of the subject matter relating to these parties. For example when the auditor promotes a position or opinion to the point where subsequent objectivity on the financial statements may be compromised, promoting the shares in a Listed Entity when that entity is a Financial Statement Audit Client and acting as an advocate on behalf of an Assurance Client in litigation or disputes with third parties. This threat could also be linked to the self interest threat whereby an accountant might push the agenda of a related entity, as it furthers the positive perception of the accountant.

Familiarity

The threat of familiarity is defined in Section 100.12d as 'the threat that due to a long or close relationship with a client or employer, a Member will be too sympathetic to their interests or too accepting of their work'. It includes circumstances where an accountant/auditor may have a close relationship or connection with a client/superior that may undermine their ability to act objectively. As in the case of the Domino's accountant where both his family and himself benefited from \$960000 through insider trading (discussed in Section 9.3), this threat exists when an accountant acts in a way that benefits another individual or institution that is familiar to the accountant. Examples include a close or immediate Family relationship with a client who is in a position to exert direct and significant influence over the subject matter, accepting gifts or preferential treatment from a Client, unless the value is clearly

insignificant and long association of senior personnel with the Assurance Client. The familiarity threat is also related to the objectivity principle, in that the presence of familiarity in our dealings with another party can compromise our ability to act impartially, hence causing us to compromise our ethical choices.

Intimidation

The last threat is intimidation, which is defined by Section 100.12e as ‘the threat that a Member will be deterred from acting objectively because of actual or perceived pressures, including attempts to exercise undue influence over the Member’. This threat arises in instances in which an accountant/auditor is subject to undue influence by a superior/client and encouraged to engage in unethical or illegal behaviour. This threat is also concerning, in that it might manifest as an unsafe or undesirable work environment for the accountant. Senior management might pressure an accountant to act unethically, such that the company benefits at the expense of the broader public interest. Even though the accountant knows the behaviour is unethical, he/she is pressured to do so by intimidation. Examples of this include the threat of dismissal or replacement in relation to a Client Engagement, being threatened with litigation and being pressured to ignore specific accounting issues identified with a significant material impact. An interesting question to ask – if the victim of intimidation acts in a manner that is undesirable and illegal, because he or she felt intimidated, is that act unethical? A grey area...

Having considered the threats provided in APES 110, the next section discusses safeguards that accountants and businesses can use or put in place to ensure that threats are less likely to arise or influence ethical principles.

9.5 Identify various safeguards to the practice of ethics in organisations

RINA DHILLON

Addressing threats

Accountants and businesses can use a number of measures to address threats, including applying safeguards. Essentially, safeguards are measures that can be put in place to counter the threats, assuming the accountant considers that the threats will not compromise the member's adherence to any of the five principles. As stipulated in Section 100.2c 'Safeguards are necessary when the Member determines that the threats are not at a level at which a reasonable and informed third party would be likely to conclude, weighing all the specific facts and circumstances available to the Member at that time, that compliance with the fundamental principles is not compromised.'

Safeguards fall into two broad categories:

(a) safeguards created by the profession, legislation or regulation (as per Section 100.14). These include, but not limited to:

1. Educational, training and experience requirements, whereby accountants undertake training in university, then professionally through a professional accounting body, and concurrently work in an accounting capacity while doing so. This exposes and educate accountants on the acceptable norms that relate to their role.
2. Continuing professional development (CPD) requirements,

refers to the ongoing annual training that accountants must undertake in order to maintain their professional certification as a CA, CPA, etc. These requirements, and to the extent that the accountants does keep up with their CPD hours, remind them and make them aware of what is acceptable ethical conduct and keep them informed of relevant standards (both technical and ethical) that apply to their role.

3. Corporate governance regulations identify norms surrounding the proper management and direction with which senior officers are expected to discharge their duties when managing organisations. This safeguard implicitly controls or constrains the behaviour of accountants, in senior management roles, that perform a governance role in their business.
4. Professional standards, professional or regulatory monitoring and disciplinary procedures act as deterrents to accountants, minimising any unethical conduct that might take place.
5. An external review by a legally empowered third party who independently judges the actions of an accountant or firm, making a determination on the accountant's ethical conduct and behaviour.

(b) safeguards in a work environment including internal systems, practices, perspectives or structures within organisations that reduce the likelihood of threats (independent of external regulations, adapted from Section 300.14). These include, but not limited to:

1. Organisation's own monitoring/oversight systems – as you would have learnt in AAA, businesses create their own internal controls and monitoring systems which may reduce or eliminate unethical behaviours by employees
2. Organisational ethics and conduct programs – these programs makes employees aware and is a barrier to act in an unethical manner.
3. Recruitment procedures that sources for high calibre

competent staff. In general, recruiting high quality and recommended (known to not breach ethics in order to achieve objectives) staff aligns strongly to ethical conduct

4. Strong internal controls (e.g. segregation of duties) that ensure that employees behave in alignment to the business objectives and goals.
5. Appropriate disciplinary processes that employees are aware of so that they know the consequences of not acting ethically and thus in line with business' expectations.
6. Leadership – When leaders set a good example and conduct themselves ethically, junior staff will follow. Also leadership must signal that unethical conduct will not be tolerated and is seen as undesirable with stringent consequences.
7. Monitor the quality of employee performance – it is very important for businesses to not only observe employee performance, but how it was attained. Were (unethical) compromises made to achieve targets? Were any individuals or stakeholders impacted by the action of the employee's performance?
8. Timely communication of an organisation's policies and procedures, and training on these policies and procedures. This will enable employees to be aware that unethical conduct is not tolerated or accepted by the business.
9. Senior management open to hearing ethical grievances (whistleblowing, etc.) and that such reporting would not penalise the employee who reports the unethical conduct.
10. Consultation with another accountant member who is able to act as an objective third party (not directly involved and affected by the unethical behaviour) so as to obtain another viewpoint on the possible unethical conduct.

Ethical thinking/conceptual framework

The APESB has developed a conceptual framework to help members resolve accounting ethical problems. Section 100.6 provides a conceptual framework that requires a member to identify, evaluate and address threats to compliance with the fundamental principles, rather than merely comply with a set of specific rules which may be arbitrary. When initiating either a formal or informal conflict resolution process, a Member should consider the following, either individually or together with others, as part of the resolution process (Section 100.18):

1. Relevant facts – what do we know of the matters concerning the problem at hand? In other words, the factual content and (un) ethical conduct of the events that happened
2. Ethical issues involved –ethical matters that relate to the relevant facts of the issue at hand.
3. Fundamental principles related to matter in question, including the identification of threats to those principles – the five principles and threats are assessed against the matter investigated.
4. Established internal procedures which might represent safeguards against the identified threats – what went wrong in the case concerned, and how might we mitigate the likelihood of its re-occurring? With this step, the internal procedures established will improve controls within the business.
5. Alternative courses of action – can we change how we do things so this problem is avoided, whoever is the accountant in the future? This final step relates to other actions that can be put in place to prevent such an occurrence from happening in the future.

When applying the conceptual framework ([applicable from 31st December 2021](#)), the Member shall:

- 9.5 Identify various safeguards to the practice of ethics in organisations | 393

- (a) Have an inquiring mind when identifying, evaluating and addressing threats to the fundamental principles. This represents the need to consider the source, relevance and sufficiency of information obtained taking into account the nature, scope and outputs of the professional activity being undertaken and being open and alert to a need for further investigation or other action.
- (b) Exercise professional judgement, which involves the application of relevant training, professional knowledge, skill and experience commensurate with the facts and circumstances, taking into account the nature and scope of the particular professional activities, and the interests and relationships involved.; and
- (c) Use the reasonable and informed third party test which is a consideration by the member about whether the same conclusions would likely be reached by another party. Such consideration is made from the perspective of a reasonable and informed third party, who weighs all the relevant facts and circumstances that the member knows, or could reasonably be expected to know, at the time the conclusions are made. The reasonable and informed third party does not need to be a member, but would possess the relevant knowledge and experience to understand and evaluate the appropriateness of the member's conclusions in an impartial manner.

Overall the conceptual framework to ethical conflict resolution seeks to identify the problem and provide solutions to enable a business to meet their responsibility to act in the public interest. This framework is very important in businesses, as it provides the basis from which entities may seek to prevent, manage or rectify an ethical conflict.

Test Your Knowledge



An interactive H5P element has been excluded from this version of the text. You can view it online here:

<https://oer.pressbooks.pub/utsaccounting2/?p=1493#h5p-31>



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Chapter 9 Practice Questions

RINA DHILLON

Practice Questions

1. What ethical principle relates to accountants having to discharge their duties in a straightforward, honest way?

-
- a. Integrity
 - b. Objectivity
 - c. Professional behaviour
 - d. Professional competence and due care
-

2. What ethical principle relates to accountants avoiding bias, conflict of interest or undue influence?

-
- a. Integrity
 - b. Objectivity
 - c. Professional behaviour
 - d. Professional competence and due care
-

3. What ethical principle relates to accountants maintaining their level of knowledge base through training and education?

-
- a. Integrity
 - b. Objectivity
 - c. Professional behaviour
 - d. Professional competence and due care
-

4. What ethical principle relates to accountants generally acting in a manner that upholds the reputation of the accounting profession?

-
- a. Integrity
 - b. Objectivity
 - c. Professional behaviour
 - d. Professional competence and due care
-

5. What ethical principle relates to accountants having to maintain the secrets of an organisation, while also acting in the public interest should the need arise?

-
- a. Integrity
 - b. Confidentiality
 - c. Objectivity
 - d. Professional competence and due care
-

6. What ethical threat relates to accountants placing their personal gain over that of the organisation or others?

-
- a. Self-review
 - b. Self-interest
 - c. Advocacy
 - d. Familiarity
-

7. What ethical threat relates to accountants not evaluating work in which they have played a part in generating?

-
- a. Self-review
 - b. Self-interest
 - c. Advocacy
 - d. Familiarity
-

8. What ethical threat relates to accountants promoting an employer's position to the point that their objectivity is compromised?
-
- a. Self-review
 - b. Self-interest
 - c. Advocacy
 - d. Familiarity
-
9. What ethical threat relates to an accountant who acts in a way that benefits another entity that is known to, and personally related to, the accountant in a way that impairs his or her objectivity?
-
- a. Self-review
 - b. Self-interest
 - c. Advocacy
 - d. Familiarity
-
10. What ethical threat relates to accountants forcing other individuals in a corporation to accomplish a transaction against their will in a manner that does not benefit the corporation?
-
- a. Integrity
 - b. Self-review
 - c. Intimidation
 - d. Professional competence and due care
-
11. If an employee provides a supplier with a contract in order to receive tickets to sports games from the supplier, without thought for the actual quality of the contract or price offered by the supplier, what ethical threat is most likely relevant?

-
- a. Self-interest
 - b. Self-review
 - c. Objectivity
 - d. Familiarity
-

12. Which of the following is most likely a safeguard to counter ethical threats?

-
- a. Paying employees higher salaries
 - b. Ensuring education and training on ethical themes relating to the organisation
 - c. Giving employees more breaks at work.
 - d. Both b. and c.
-

13. Work policies around the refusal of gifts from external stakeholders most likely affect the ethical behaviour of which stakeholder category?

-
- a. Work environment
 - b. Profession/legislation
 - c. Suppliers
 - d. Customers
-

14. Which of the following is not a safeguard to counter ethical threats from a work environment perspective?

-
- a. Recruitment procedures
 - b. Strong governmental standards on corporate governance
 - c. Leadership setting an example for others to follow
 - d. Appropriate disciplinary processes
-

15. Which of the following practices might make ethical behaviour harder to manifest?

-
- a. Loose controls in an organisation
 - b. Reduction in monitoring activities
 - c. Sound recruitment and hiring policies
 - d. A focus on high profitability and cost control
-

16. What is an ethical conceptual framework?

-
- a. A framework that helps members resolve accounting ethical problems
 - b. A method that provides answers to all ethical problems in firms
 - c. A method that ensures employees behave ethically, moving forward
 - d. Both a. and c.
-

17. In the ethical conceptual framework, what do relevant facts refer to?

-
- a. What we know of the matters concerning the problem at hand
 - b. Fundamental principles relating to the matter in question
 - c. Understanding what went wrong and how we mitigate the likelihood of its occurrence
 - d. Other actions that can be mobilised so that problem does not happen again
-

18. In the ethical conceptual framework, what do established internal procedures refer to?

-
- a. What we know of the matters concerning the problem at hand
 - b. Fundamental principles relating to the matter in question
 - c. Understanding what went wrong and how we mitigate the likelihood of its occurrence
 - d. Other actions that can be mobilised so that problem does not happen again
-

19. In the ethical conceptual framework, what do alternative

courses of action refer to?

-
- a. What we know of the matters concerning the problem at hand
 - b. Fundamental principles relating to the matter in question
 - c. Understanding what went wrong and how we mitigate the likelihood of its occurrence
 - d. Different actions that can be mobilised so that problem does not happen again
-

20. Which of the following statements is *not* true regarding the ethical conceptual framework?

-
- a. It can help businesses resolve ethical problems.
 - b. It helps businesses think of establishing better internal procedures.
 - c. It helps us understand the relevant facts relating to ethical matters at hand.
 - d. It assures that ethical problems will be tackled better than before.
-

Solutions:

For Q1-10: Refer to the Code of Ethics or Sections 9.3 and 9.4 of the textbook for the answers.

1. a

2. b
3. d
4. c
5. b
6. b
7. a
8. c
9. d
10. c
11. a – given the employees stands to benefit from a sports game ticket, this represents a self-interest threat.
12. b – a and c are not safeguards as paying employees a higher salary and giving them more breaks will not reduce the likelihood of the employee behaving unethically.
13. c – a and b are categories of safeguards, customers usually do not provide gifts to benefit from the business, suppliers which is the answer as it is common for suppliers to provide gifts to employees so as to gain business.
14. b – b represents a safeguard created by regulation, rather than work environment
15. c – a,b and d are not safeguards
16. a
17. a
18. c
19. d
20. d

For Q16-17: Refer to the ethical conceptual framework in Section 9.5 of the textbook for the answers

PART X

CHAPTER 10: PERFORMANCE MEASUREMENT AND EVALUATION

Introduction

The operations of businesses involve managers with different levels of responsibility and authority making decisions guiding the day to day operation. Accounting information plays a key role in enabling this decision making and accountability in managers. In this chapter, we explore how accounting information is used to measure performance outcomes, monitor managers and employees' performance and motivate them to act in the best interest of the business.

Chapter outline

After reading this chapter, you should be able to:

1. Describe the structure and management of decentralised organisations and evaluate the benefits and drawbacks of decentralisation
2. Evaluate how responsibility accounting is used to help manage a decentralised organisation

3. Define cost, revenue, profit and investment centres and explain why managers of each must be evaluated differently
4. Compute and interpret segment margin in an organisation
5. Compute, interpret and compare return on investment (ROI) and residual income
6. Describe the balanced scorecard and its key dimensions
7. Discuss the importance of using incentives to motivate managers

10.1 Describe the structure and management of decentralised organisations and evaluate the benefits and drawbacks of decentralisation.

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Decentralised Organisations

As businesses grow in size, top management have an increasingly hard time maintaining control over decision making. When the right to make or authorise decision lies with top management, that business is said to be a centralised organisation. When decision making is decentralised, the rights and responsibilities for decision making permeate all levels of the organisation. The challenge for businesses is to find tools that allow the evaluation of managers at all levels in the organisation and one way to do this and react more quickly to changing market conditions is through a decentralised structure. Essentially, decentralisation is when decision making authority in a company is spread out among more individuals. It can be viewed as an extension of delegation. Thus, decentralisation is concerned with the decentralisation of decision-making authority to lower levels in managerial hierarchy. Managers make business decisions that are evaluated based on performance measures under

their control, and are rewarded according to their positive impact on the measure.



Decentralisation varies from businesses to businesses. Most businesses are decentralised to some degree. At one end of the spectrum, managers are given complete authority to make decisions at their level of operations. At the other extreme, managers have little, if any, authority to make decisions (i.e. centralised). Most businesses will fall somewhere in the middle. However, the tendency is to move toward more, rather than less, decentralisation due to its various benefits which we will discuss below.

Benefits of decentralisation



There are several advantages to decentralisation as summarised in the diagram above and detailed below:

(1) Decentralisation brings decision making process closer to the scene of action. This leads to quicker decision-making at lower level by those closest to a problem are most familiar with the problem and its root causes.

(2) Decentralisation relieves the top executives of the burden of much of the day-to-day decision making. This frees up the time for top management to concentrate on long-term strategic issues.

(3) As local managers are given a large degree of authority and local autonomy, this improves the morale and motivation of managers and employees as they get involved in the decision-making process. In addition, [studies](#) have shown that managers allowed to make decisions in a decentralised environment have higher job satisfaction than do managers in centralised organisations.

(4) Within a decentralised organisation, managers in the business will get the opportunity to develop their talents by taking initiative which will also make them ready for managerial positions.

(5) Decisions are often made in a more timely fashion because decisions do not have to be referred up to top management through the hierarchy, which can not only cause delay but can be costly transferring knowledge about day to day operations and customers to top managers for decision-making and then back to lower level managers and employees to carry out operationally.

Disadvantages of decentralisation



Decentralisation can also have its disadvantages as depicted in the diagram above and explained below:

(1) When decision-making authority is spread among too many

managers, a lack of business focus can occur. Because of this lack of focus on the business as a whole, managers may tend to make decisions benefiting their own sub-units, but not meet the goals of the business.

(2) Decentralisation requires the employment of trained employees to accept authority, and Managers may not be adequately trained in decision making at the early stages of their careers. Thus it involves more financial burden to train managers as the cost of bad decisions (even while the managers are being trained) can be high.

(3) Decentralisation of authority creates problems of coordination as authority lies dispersed widely throughout the business. There may also be a lack of coordination and communication between different sub-units.

(4) . As each sub-unit have their own innovations and may not understand or agree with the business strategies, decentralisation may make it difficult to share unique and innovative ideas between segments.

(5) A lack of coordination among segments may lead to the duplication of products, services, costs and efforts. For example each sub-unit might have its own accounting, HR, cleaning, etc. department which duplicates costs and efforts.

An example of a decentralised organisation is Wesfarmers Group. Wesfarmers Limited is an Australian [conglomerate](#), headquartered in [Perth](#), Western Australia. It has interests predominantly in Australia and New Zealand, operating in retail, chemical, fertiliser, industrial and safety industries. With revenue of A\$36.8 billion in the 2022 financial year, it is one of Australia's largest companies by revenue. Wesfarmers is also one of the largest private employers in Australia, with approximately 107,000 employees.



Wesfarmers utilises a decentralised approach due to the size and complexity of the company, as illustrated in their group structure above. Decentralisation ensures information flows efficiently and effectively throughout and coordinates people, activities and resources allowing for timely decisions to be made.

In order to improve and enable effective decision making in a decentralised business, responsibility accounting is used which is discussed in the next section.

10.2 Evaluate how responsibility accounting is used to help manage a decentralised organisation.

RINA DHILLON

Responsibility Accounting

The key to effective decision making in a decentralised business is responsibility accounting. Responsibility accounting is the process of assigning authority and responsibility to managers of sub-units and then measuring and evaluating their performance against targets set, by identifying any variance between actual and planned performance. Under responsibility accounting, managers are only held responsible for things under their control. To enhance the use of responsibility accounting for decision making, responsibility centres are established within organisations. Responsibility centres are sub-units (be it departments, divisions, segments, etc) in which managers are responsible and accountable for specific types of operating activities. Organisations typically identify the different segments, or levels of responsibility, as cost, revenue, profit, or investment centres and attach different levels of responsibility to each segment. These four common types of responsibility centres are summarised in the diagram below and detailed in Section 10.3:

Cost Centre	Revenue Centre	Profit Centre	Investment Centre
Responsible only for reducing or maintaining costs	Responsible only for increasing or maintaining revenues	Responsible for both costs and revenues to maximise Profit	Responsible for return and investments in Property, Plant and Equipment

10.3 Define cost, revenue, profit and investment centres and explain why managers of each must be evaluated differently.

RINA DHILLON

Cost centres

A cost centre manager has control over costs but not over revenue or capital investment (long-term purchasing) decisions. Managers in cost centres are only held responsible for costs under their control. Performance reports for cost centres typically focus on differences between budgeted and actual costs using variance analysis. Other performance measures used include comparison to benchmark cost per unit / service, industry benchmarks (for example R&D costs as a percentage of sales) and efficiency measures such as days to order fulfillment. The purchasing manager of a store, the production manager for a particular type of product in manufacturing departments, the maintenance manager in a hotel, and the human resources manager of a CPA firm would likely be considered managers of cost centres. The manager of a cost centre should be evaluated on how well he or she controls costs in the respective segment. Cost centre managers are expected to minimise cost for certain level of output or maximise output for a certain level of cost.

Revenue centres

A revenue centre manager has control over the generation of revenue but not costs. Revenue centres frequently sell products from manufacturing sub-units and have no control of the costs incurred while manufacturing. Performance reports of a revenue centre often focus on sales price variances. Other performance measures used include growth in revenues and customer satisfaction. Examples of managers of revenue centres include the sales manager of a retail store, the sales department of a production facility, and the reservation department of an airline. Managers here are expected to maximise sales.

Profit centres

A profit centre manager has control over both cost and revenue but not capital investment decisions. As profit centres include both revenues and costs, performance reports typically focus on income (revenue – costs) measures, such as segment margins. Other performance measures used include revenue and cost budgets and variances, operating income or EBIT. While the purchasing manager of a retail store is a cost centre manager, the overall manager of the store will probably be a profit centre manager. Likewise, the manager of an entire product line in a factory, the manager of a particular location of a hotel chain, and the partner in charge of the tax department at a CPA firm would be considered profit centre managers. So here managers need to maximise sales but also minimise costs.

Investment centres

Lastly, an investment centre is a separate business with its own value chain, commonly referred to as strategic business units (SBUs). Investment centre managers can be evaluated similar to profit centres, but tools are adjusted for the amount of assets or investments they also control. Investments here include any assets related to the investment centre such as PPE, intangible assets, etc. Examples of investment centre managers include the core division manager of an international company or a corporate headquarters in a large decentralised organisation. Because investment centres include revenue, costs and investment, performance measures need to consider all factors such as the amount of assets invested in generating income. We will learn two of the commonly used measures: Return on investment (ROI) and Residual Income later in Section 10.5.

In the next section, we explore profit centres and how segmented income statements can be a useful management accounting tool to measure the performance of sub-units within a business.

10.4 Compute and interpret segment margin in an organisation.

RINA DHILLON

Profit centres and Segmented Income Statements

Profit centres are evaluated using Segmented Income Statements which calculate profit for each segment of a business in addition to the company as a whole. Although it is relatively easy to keep track of sales by segment, tracing costs to a particular segment and deciding how to treat costs (variable or fixed) that may benefit more than one segment can be complicated. Variable costs are typically traced directly to a segment, since they vary in direct proportion to sales volume and can be allocated to a segment on that basis. On the other hand, fixed costs that can be easily and conveniently traced to a segment are usually assigned to that segment, while common costs, benefiting multiple segments, are not allocated for performance evaluation purposes. The reason for this is that segment costs should only include all costs actually caused by the segment – traceable fixed costs, not all costs attributable to that segment.

Traceable fixed costs arise because of the existence of a particular segment, and therefore can be traced to that segment. An example of this is the salary of the segment manager, his or her salary arises due to the segment. Common fixed costs, to the contrary, arise because of the overall operation of the company and benefit multiple segments. This means they cannot be traced to a single segment. As a result, they are included only at the total company

level. For example, the salary of the company's CEO – the incurrence of this salary is for an employee that oversees many segments with the company and given it cannot be directly traced to a particular segment, it should be treated as a common cost and not allocated to a particular segment. A good test for deciding whether to allocate indirect fixed costs, such as the salary of a business' CEO, is to determine whether the cost would be reduced or eliminated if the segment were eliminated. Even if we eliminated a particular segment, the CEO will still be drawing a salary as he or she will be overseeing other segments. Thus if the cost cannot be reduced or eliminated, it is referred to as a common cost.

In practice, companies sometimes allocate a portion of common costs from headquarters to segments without using them for performance evaluation purposes. This practice has the advantage of making the segment manager aware that the cost is being incurred and that the cost must ultimately be paid for by revenue generated by the segment. If other indirect costs are to be allocated to segments, there should be sufficient causal relationships between the costs and the segments. Arbitrary allocations may lead to less-than-optimal decisions about a segment.

Let us now turn our attention to segment income reports and how they can be used to make decisions and evaluate the performance of sub-units operating as profit centres. Below a segmented income statement is provided for a hypothetical accounting firm offering services in three departments: tax, audit and consulting:

SEGMENTED INCOME STATEMENT				
	(Segments Defined as Departments)			
	Total Firm	Tax Department	Audit Department	Consulting Department
Client billings	\$1,000,000	\$500,000	\$400,000	\$100,000
Less: Variable expenses	400,000	200,000	160,000	40,000
Contribution margin	\$ 600,000	\$300,000	\$240,000	\$ 60,000
Less: Traceable fixed expenses	200,000	100,000	75,000	25,000
Segment margin	\$ 400,000	\$200,000	\$165,000	\$ 35,000
Less: Common fixed expenses	200,000			
Net income	\$ 200,000			

SEGMENTED INCOME STATEMENT			
	(Segments Defined as Divisions)		
	Tax Department	Individual Tax Division	Business Tax Division
Client billings	\$500,000	\$ 100,000	\$400,000
Less: Variable expenses	200,000	80,000	120,000
Contribution margin	\$300,000	\$ 20,000	\$280,000
Less: Traceable fixed expenses	80,000	30,000	50,000
Divisional segment margin	\$220,000	\$ (10,000)	\$230,000
Less: Common fixed expenses	20,000		
Departmental segment margin	\$200,000		

As illustrated in the segmented income statement above, the accounting firm has a total client billings of \$1 million, with 50% (500000/1000000) provided by the services rendered by the tax department, 40% (400000/1000000) contributed by the audit department and the remaining 10% (100000/1000000) from the consulting department. The tax department is further broken down into individual (specialising in individual tax returns) and business (specialising in business tax returns) divisions.

Let us assume that the \$100000 traceable fixed costs to the tax department comprises of \$20000 of advertising promoting the tax department as a whole, \$75000 for the salary of the tax department manager and \$5000 for computer software used for tax preparation. Note that although \$100000 of fixed costs were traced to the tax department in the first segmented income statement above, only \$80000 are subsequently traced to the individual and business tax divisions. \$20000 of traceable costs have become common costs because the advertising costs for the tax division cannot be directly traced to either the individual or the business division.

The standard format for a segmented income statement is provided below:

	Division A	Division B	TOTAL COMPANY
Sales Revenue	\$	\$	\$
Less: Variable Costs	(\$)	(\$)	(\$)
= Contribution Margin	= \$	= \$	= \$
Less: Traceable Fixed Costs	(\$)	(\$)	(\$)
= Segment Profit Margin	= \$	= \$	= \$
Less: Common Fixed Costs	Don't include Common Fixed Costs to individual segments!		(\$)
= Total Net Profit/Income			= \$\$

Contribution margin, highlighted in yellow above, is primarily a measure of short-run profitability, as it ignores fixed costs (as you would have learnt in CVP and special order analyses in AAA). Conversely, segment margin which is highlighted in red above, is a measure of long-term profitability and is more appropriate in addressing long-term decisions, such as whether to drop divisions, product lines, stores, etc. In the case of the hypothetical accounting firm above, the segment margin of the tax department is positive but the segment margin of the individual tax division is negative. In the long-run, the individual tax division is not profitable. The accounting firm may consider eliminating the individual tax division but before doing so, they should consider all factors – both quantitative and qualitative – including if eliminating the individual tax division would have any impact on the profits earned by the business tax division. For example, if most of the clients of the tax department are small business owners running companies who want to engage an accounting firm that provides a full tax service of individual tax returns (from the perspective of individual employees) and business tax returns (from the perspective of the company's earnings), they might still want to retain the loss-making individual

Keeping It Real: Wesfarmers Group Segment Report

Notes to the financial statements: Segment information

For the year ended 30 June 2022

Notes to the financial statements: Segment information

For the year ended 30 June 2022

SEGMENT INFORMATION

	CHARTER FLIGHTS				TRAVEL		HOTELS/TOURISM		RENTAL FLIGHTS		RENTAL		OTHER		TOTAL	
	2022	2021	2020	2019	2022	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020	2019
Revenue from contracts with customers	9,700	7,600	5,200	5,210	8,000	6,110	-	-	6,100	5,210	5,000	5,000	-	-	50	50
Revenue from other contracts	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Revenue from other sources	2,100	2,100	2,100	2,100	2,100	2,100	-	-	2,100	2,100	2,100	2,100	-	-	20	20
Revenue from other sources	2,100	2,100	2,100	2,100	2,100	2,100	-	-	2,100	2,100	2,100	2,100	-	-	20	20
Revenue from other sources	2,100	2,100	2,100	2,100	2,100	2,100	-	-	2,100	2,100	2,100	2,100	-	-	20	20
Revenue from other sources	2,100	2,100	2,100	2,100	2,100	2,100	-	-	2,100	2,100	2,100	2,100	-	-	20	20
Revenue from other sources	2,100	2,100	2,100	2,100	2,100	2,100	-	-	2,100	2,100	2,100	2,100	-	-	20	20
Revenue from other sources	2,100	2,100	2,100	2,100	2,100	2,100	-	-	2,100	2,100	2,100	2,100	-	-	20	20
Revenue from other sources	2,100	2,100	2,100	2,100	2,100	2,100	-	-	2,100	2,100	2,100	2,100	-	-	20	20
Revenue from other sources	2,100	2,100	2,100	2,100	2,100	2,100	-	-	2,100	2,100	2,100	2,100	-	-	20	20
Revenue from other sources	2,100	2,100	2,100	2,100	2,100	2,100	-	-	2,100	2,100	2,100	2,100	-	-	20	20
Revenue from other sources	2,100	2,100	2,100	2,100	2,100	2,100	-	-	2,100	2,100	2,100	2,100	-	-	20	20
Revenue from other sources	2,100	2,100	2,100	2,100	2,100	2,100	-	-	2,100	2,100	2,100	2,100	-	-	20	20
Revenue from other sources	2,100	2,100	2,100	2,100	2,100	2,100	-	-	2,100	2,100	2,100	2,100	-	-	20	20
Revenue from other sources	2,100	2,100	2,100	2,100	2,100	2,100	-	-	2,100	2,100	2,100	2,100	-	-	20	20
Revenue from other sources	2,100	2,100	2,100	2,100	2,100	2,100	-	-	2,100	2,100	2,100	2,100	-	-	20	20
Revenue from other sources	2,100	2,100	2,100	2,100	2,100	2,100	-	-	2,100	2,100	2,100	2,100	-	-	20	20
Revenue from other sources	2,100	2,100	2,100	2,100	2,100	2,100	-	-	2,100	2,100	2,100	2,100	-	-	20	20
Revenue from other sources	2,100	2,100	2,100	2,100	2,100	2,100	-	-	2,100	2,100	2,100	2,100	-	-	20	20
Revenue from other sources	2,100	2,100	2,100	2,100	2,100	2,100	-	-	2,100	2,100	2,100	2,100	-	-	20	20
Revenue from other sources	2,100	2,100	2,100	2,100	2,100	2,100	-	-	2,100	2,100	2,100	2,100	-	-	20	20
Revenue from other sources	2,100	2,100	2,100	2,100	2,100	2,100	-	-	2,100	2,100	2,100	2,100	-	-	20	20
Revenue from other sources	2,100	2,100	2,100	2,100	2,100	2,100	-	-	2,100	2,100	2,100	2,100	-	-	20	20
Revenue from other sources	2,100	2,100	2,100	2,100	2,100	2,100	-	-	2,100	2,100	2,100	2,100	-	-	20	20
Revenue from other sources	2,100	2,100	2,100	2,100	2,100	2,100	-	-	2,100	2,100	2,100	2,100	-	-	20	20
Revenue from other sources	2,100	2,100	2,100	2,100	2,100	2,100	-	-	2,100	2,100	2,100	2,100	-	-	20	20
Revenue from other sources	2,100	2,100	2,100	2,100	2,100	2,100	-	-	2,100	2,100	2,100	2,100	-	-	20	20
Revenue from other sources	2,100	2,100	2,100	2,100	2,100	2,100	-	-	2,100	2,100	2,100	2,100	-	-	20	20
Revenue from other sources	2,100	2,100	2,100	2,100	2,100	2,100	-	-	2,100	2,100	2,100	2,100	-	-	20	20
Revenue from other sources	2,100	2,100	2,100	2,100	2,100	2,100	-	-	2,100	2,100	2,100	2,100	-	-	20	20
Revenue from other sources	2,100	2,100	2,100	2,100	2,100	2,100	-	-	2,100	2,100	2,100	2,100	-	-	20	20
Revenue from other sources	2,100	2,100	2,100	2,100	2,100	2,100	-	-	2,100	2,100	2,100	2,100	-	-	20	20
Revenue from other sources	2,100	2,100	2,100	2,100	2,100	2,100	-	-	2,100	2,100	2,100	2,100	-	-	20	20
Revenue from other sources	2,100	2,100	2,100	2,100	2,100	2,100	-	-	2,100	2,100	2,100	2,100	-	-	20	20
Revenue from other sources	2,100	2,100	2,100	2,100	2,100	2,100	-	-	2,100	2,100	2,100	2,100	-	-	20	20
Revenue from other sources	2,100	2,100	2,100	2,100	2,100	2,100	-	-	2,100	2,100	2,100	2,100	-	-	20	20
Revenue from other sources	2,100	2,100	2,100	2,100	2,100	2,100	-	-	2,100	2,100	2,100	2,100	-	-	20	20
Revenue from other sources	2,100	2,100	2,100	2,100	2,100	2,100	-	-	2,100	2,100	2,100	2,100	-	-	20	20
Revenue from other sources	2,100	2,100	2,100	2,100	2,100	2,100	-	-	2,100	2,100	2,100	2,100	-	-	20	20
Revenue from other sources	2,100	2,100	2,100	2,100	2,100	2,100	-	-	2,100	2,100	2,100	2,100	-	-	20	20
Revenue from other sources	2,100	2,100	2,100	2,100	2,100	2,100	-	-	2,100	2,100	2,100	2,100	-	-	20	20
Revenue from other sources	2,100	2,100	2,100	2,100	2,100	2,100	-	-	2,100	2,100	2,100	2,100	-	-	20	20
Revenue from other sources	2,100	2,100	2,100	2,100	2,100	2,100	-	-	2,100	2,100	2,100	2,100	-	-	20	20
Revenue from other sources	2,100	2,100	2,100	2,100	2,100	2,100	-	-	2,100	2,100	2,100	2,100	-	-	20	20
Revenue from other sources	2,100	2,100	2,100	2,100	2,100	2,100	-	-	2,100	2,100	2,100	2,100	-	-	20	20
Revenue from other sources	2,100	2,100	2,100	2,100	2,100	2,100	-	-	2,100	2,100	2,100	2,100	-	-	20	20
Revenue from other sources	2,100	2,100	2,100	2,100	2,100	2,100	-	-	2,100	2,100	2,100	2,100	-	-	20	20
Revenue from other sources	2,100	2,100	2,100	2,100	2,100	2,100	-	-	2,100	2,100	2,100	2,100	-	-	20	20
Revenue from other sources	2,100	2,100	2,100	2,100	2,100	2,100	-	-	2,100	2,100	2,100	2,100	-	-	20	20
Revenue from other sources	2,100	2,100	2,100	2,100	2,100	2,100	-	-	2,100	2,100	2,100	2,100	-	-	20	20
Revenue from other sources	2,100	2,100	2,100	2,100	2,100	2,100	-	-	2,100	2,100	2,100	2,100	-	-	20	20
Revenue from other sources	2,100	2,100	2,100	2,100	2,100	2,100	-	-	2,100	2,100	2,100	2,100	-	-	20	20
Revenue from other sources	2,100	2,100	2,100	2,100	2,100	2,100	-	-	2,100	2,100	2,100	2,100	-	-	20	20
Revenue from other sources	2,100	2,100	2,100	2,100	2,100	2,100	-	-	2,100	2,100	2,100	2,100	-	-	20	20
Revenue from other sources	2,100	2,100	2,100	2,100	2,100	2,100	-	-	2,100	2,100	2,100	2,100	-	-	20	20
Revenue from other sources	2,100	2,100	2,100	2,100	2,100	2,100	-	-	2,100	2,100	2,100	2,100	-	-	20	20
Revenue from other sources	2,100	2,100	2,100	2,100	2,100	2,100	-	-	2,100	2,100	2,100	2,100	-	-	20	20
Revenue from other sources	2,100	2,100	2,100	2,100	2,100	2,100	-	-	2,100	2,100	2,100	2,100	-	-	20	20
Revenue from other sources	2,100	2,100	2,100	2,100	2,100	2,100	-	-	2,100	2,100	2,100	2,100	-	-	20	20
Revenue from other sources	2,100	2,100	2,100	2,100	2,100	2,100	-	-	2,100	2,100	2,100	2,100	-	-	20	20
Revenue from other sources	2,100	2,100	2,100	2,100	2,100	2,100	-	-	2,100	2,100	2,100	2,100	-	-	20	20
Revenue from other sources	2,100	2,100	2,100	2,100	2,100	2,100	-	-	2,100	2,100	2,100	2,100	-	-	20	20
Revenue from other sources	2,100	2,100	2,100	2,100	2,100	2,100	-	-	2,100	2,100	2,100	2,100	-	-	20	20
Revenue from other sources	2,100	2,100	2,100	2,100	2,100	2,100	-	-	2,100	2,100	2,100	2,100	-	-	20	20
Revenue from other sources	2,100	2,100	2,100	2,100	2,100	2,100	-	-	2,100	2,100	2,100	2,100	-	-	20	20
Revenue from other sources	2,100	2,100	2,100	2,100	2,100	2,100	-	-	2,100	2,100	2,100	2,100	-	-	20	20
Revenue from other sources	2,100	2,100	2,100	2,100	2,100	2,100	-	-	2,100	2,100	2,100	2,100	-	-	20	20
Revenue from other sources	2,100	2,100	2,100	2,100	2,100	2,100	-	-	2,100	2,100	2,100	2,100	-	-	20	20
Revenue from other sources	2,100	2,100	2,100	2,100	2,100	2,100	-	-	2,100	2,100	2,100	2,100	-	-	20	20
Revenue from other sources	2,100	2,100	2,100	2,100	2,100	2,100	-	-	2,100	2,100	2,100	2,100	-	-	20	20
Revenue from other sources	2,100	2,100	2,100	2,100	2,100	2,100	-	-	2,100	2,100	2,100	2,100	-	-	20	20
Revenue from other sources	2,100	2,100	2,100	2,100	2,100	2,100	-	-	2,100	2,100	2,100	2,100	-	-	20	20
Revenue from other sources	2,100	2,100	2,1													

The above picture is a snapshot of Wesfarmers Group's 2022 segment report for their sub-units: Bunnings, Kmart Group, WesChemicalEnergy&Fertiliser, Officeworks, Industrial and Safety, Health and Other (which includes dividends earned from their continuing interest as shareholders of Coles Limited which they demerged from in 2018). All segments performed well except for Health which had non-cash expenses of \$11 million relating to amortisation and trade through of the incremental asset value

recognised as part of the acquisition and impairment costs of \$21 million relating to Priceline company owned stores.

In the next section, we move on to investment centres and better understand the basis for evaluating the performance of investment centre managers.

10.5 Compute, interpret and compare return on investment (ROI) and residual income.

RINA DHILLON

Return on Investment (ROI)

As explained earlier, an important characteristic of an investment centre is that the manager can control or significantly influence the investment funds available for use. Thus the main basis for evaluating the performance of a manager of an investment centre is return on investment (hereafter ROI). ROI measures the rate of return generated by an investment centre's assets. ROI is the ratio of operating income to average operating assets. Operating income is calculated as earnings before interest and taxes (EBIT). Interest and taxes are typically omitted from the measure of income in the ROI calculation because they may not be controllable by the manager of the segment being evaluated. Operating assets typically includes all assets used in the production of goods or services such as cash, accounts receivable, inventory, and the property, plant and equipment.

When we want to evaluate an entire business' performance, all assets would be included because owners want to evaluate their return based on the entire investment. However when evaluating the performance of a sub-unit, any assets included must be under the control of the managers being evaluated. The average of beginning and ending operating assets is calculated for two key

reasons: (1) ROI is intended to capture operations over time, not just at the end of the time period; and (2) ROI could be manipulated by temporarily reducing investment at the time performance is measured.

The calculation of ROI is generally broken down into two components that provide additional information about performance – a measure of operating performance (called margin, i.e. profit that is earned on each dollar of sales) and a measure of how effectively assets are used during a period (called asset turnover; i.e. sales that is generated for a given level of assets). This decomposition of ROI into margin and asset turnover is often referred to as the [DuPont Analysis](#) which recognised that the performance of an investment centre must consider the level of investment along with the profit generated from that investment.

The formula for ROI is as follows:

Margin
Turnover

$$\text{ROI} = \frac{\text{Net operating income}}{\text{Sales}} \times \frac{\text{Sales}}{\text{Average operating assets}}$$

$$\text{ROI} = \frac{\text{Net operating income}}{\cancel{\text{Sales}}} \times \frac{\cancel{\text{Sales}}}{\text{Average operating assets}}$$

$$\text{ROI} = \frac{\text{Net operating income}}{\text{Average operating assets}}$$

As the above diagram indicates, the calculation for return on investment can be simplified as net operating income divided by

average operating assets. Let's now look at an example of applying ROI.

Entertainment Games Company has two separate but related divisions in their computer games segment: digital video and analog video. The digital video division has sales of \$900000, net operating profit of \$150000 and average operating assets of \$1 million. Calculate the ROI for the digital division.

$$\text{ROI} = (\text{Net operating income} / \text{Average operating assets}) = \$150000 / \$1000000 = 15\%$$

Residual Income (RI)

As an alternative to ROI, the manager of an investment centre can be evaluated on the basis of the residual income (hereafter RI) generated by the investment centre. RI is the amount of income earned (actual return) in excess of a predetermined minimum rate of return on assets (expected return). Residual income is calculated as net operating income minus the product of average operating assets times the minimum required rate of return:

$$\text{Residual Income} = \text{Net operating income} - \left(\text{Average operating assets} \times \text{Minimum required rate of return} \right)$$

Actual Return **Expected return**

Essentially RI measures the dollar amount of profits in excess of a required rate of return (commonly referred to as capital charge which is usually set by management). Many businesses set a minimum return expectation for operations and new investments. RI takes this expected return into consideration. The size of

investment affects RI less than ROI because it is used only to value the dollar amount of expected return, not as a denominator like ROI. All other things being equal, the higher the residual income of an investment centre, the better.

Let's return to Entertainment Games Company to see how RI is applied in evaluating investments.

Entertainment Games Company is trying to determine which of the two gaming stores would be a more beneficial investment. The minimum required rate of return is 7 per cent and the following information about the two gaming stores have been collected:

	Store A	Store B
Sales	\$900000	\$900000
Net operating profit	50000	70000
Average operating assets	500000	1000000

Calculate the residual income for each store and determine which is a better investment.

Store A Residual Income: $\$50\,000 - (500\,000 \times 7\%) = \$15\,000$

Store B Residual Income: $\$70\,000 - (1\,000\,000 \times 7\%) = \0

While the residual income of Store A is higher than that of Store B, and since the stores have different levels of operating assets, it is misleading to compare the two amounts. We would need to calculate the ROI to get a better picture:

ROI Store A: $(\$50\,000 / \$500\,000) = 10\%$

ROI Store B: $(\$70\,000 / \$1\,000\,000) = 7\%$

Store A is a better investment as it has a higher ROI. It is also important to note that if your ROI equals your desired return, then your residual income is 0 (as observed for Store B). This means that you earned a profit equal to what was expected, so you did not over-deliver or under-deliver – hence zero residual income!

Comparing ROI and RI – Advantages and

Disadvantages

A division's ROI is easily compared with internal and external benchmarks and with other divisions' ROI. By holding managers responsible for some level of ROI, it reduces the tendency of managers to overinvest (as mentioned above, average operating assets is the denominator in the formula so the bigger the investment, the lower the ROI assuming the same profits) in projects. ROI also encourages and motivates managers to increase sales, decrease costs (factors affecting numerator component) and minimise asset investments (factor affecting denominator component).

However, ROI also discourages managers from investing in projects that reduce the division's ROI, even though they might improve the ROI of the overall business. For example, if the current ROI at a facility is 25 per cent and a manager is evaluated on this measure, they may reject potential projects/investments that would be profitable but lower the location's overall ROI. Let's assume a manager has achieved an ROI of 25% using \$5 million in assets in an existing project. If they invest \$5 million in a new project with an ROI of 15%, the average ROI will become 20% $[(25+15)/2]$. As a result, the manager would rather not invest in the new project even though the 15% is an acceptable return.

Using RI here would avoid this problem. Using RI, a manager with a required rate of return of 10% would accept the new projects as it increases the overall residual income by \$250000 $[(15\% - 10\%) * \$5 \text{ million}]$. Even though the investment reduces the division's ROI, the company will lose out on \$250000 if the project is not undertaken.

RI is also not without its disadvantages. In some cases, evaluating the performance of an investment centre and its manager using RI can cause problems. Since residual income is an absolute measure (dollar value), it should not be used to compare the performance of investment centres of different sizes. Larger sub-units are more likely to have larger residual income and thus residual income is

more useful as a performance measure for a single investment centre. Given ROI is independent of size, it is better suited as a comparative measure of performance across sub-units.

Despite these limitations, businesses still use ROI and RI to assist with the evaluation of divisional performance. We have so far focused our attention on financial performance measures. In the next section, we briefly explore the balanced scorecard which provides the use of multiple measures – both financial and non-financial – in combination to measure performance.

10.6 Describe the balanced scorecard and its key dimensions

RINA DHILLON

Balanced Scorecard

A balanced scorecard (hereafter BSC) is a strategic planning framework that businesses use to assign priority to their products, projects, and services; communicate about their targets or goals; and plan their day to day operational activities. The BSC enables businesses to monitor and measure the success of their strategies to determine how well they have performed. The BSC uses a set of financial and non-financial measures that relate to the overall strategy of the business. By integrating financial and non-financial performance measures, the BSC helps to keep management focused on all of a company's critical success factors, not just its financial ones. One of the key benefit of the BSC is that short-term operating results stay in line with long-term strategic focus. This is done via four key perspectives – financial, internal business, learning and growth and customer – as depicted in the BSC and discussed in detail below:



1. Financial perspective

Under the financial perspective, the goal of a business is to ensure that it earns a return on the investments made and manages key risks involved in running the business. The goals can be achieved by satisfying the needs of all stakeholders involved within the business, such as shareholders, customers, and suppliers, by asking the question “How do we create value for our stakeholders”? The shareholders are an integral part of the business since they are the providers of capital; they should be happy when the business achieves financial success. They want to be sure that the business is continually generating revenues and that the business meets goals such as improving profitability and developing new revenue sources. Steps taken to achieve such goals may include introducing new products and services, and cutting down on the costs of doing business.

2. Internal business processes perspective

A business' internal processes determine how well the organisation runs by asking the question "How do we continue to improve, learn and grow"? A BSC puts into perspective the measures and objectives that can help the business run more effectively. Also, the scorecard helps evaluate the business' products or services and determine whether they conform to the standards that customers desire. A key part of this perspective is aiming to answer the question, "At what business processes must we excel?" The answer to that question can help the business formulate marketing strategies and pursue innovations that lead to the creation of new and improved ways of meeting the needs of customers.

3. Learning and growth perspective

Learning and growth is important in optimising goals and objectives to achieve favourable results. Managers and employees are required to demonstrate high performance in terms of leadership, the business' culture, application of knowledge, and skill sets. Proper infrastructure of learning and growth is required to support and allow the objectives of the other three perspectives within the BSC. If learning improves, internal business processes will improve, leading to increased customer value and satisfaction and ultimately to better financial performance.

4. Customer perspective

The customer perspective monitors how the business is providing value to its customers and determines the level of customer

satisfaction with the business' products and services. Customer satisfaction is an indicator of the business success. How well a company treats its customers can obviously affect its profitability. The BSC considers the business' reputation versus its competitors, with a key question being "How do customers view us vis-à-vis our competitors? It enables the business to step out of its comfort zone to view itself from the customer's point of view rather than just from an internal perspective. Some of the strategies that a company can focus on to improve its reputation among customers include improving product quality, enhancing the customer shopping experience, and adjusting the prices of its main products and services to make it more competitive.

In summary, the ultimate goal of the BSC is to use a set of financial and non-financial performance measures that relate to the overall strategy of the business.

10.7 Discuss the importance of using incentives to motivate managers

RINA DHILLON

The choice of the specific incentive structure is very important for goal congruence – where employees and managers in multiple levels of a business share the same goal – between the individual manager and the company and its owners. It also makes good tax sense, since compensation based on performance-related measures provides an unlimited amount that can be deducted.

There are three main types of compensation:

1. Cash Compensation
2. Stock-based Compensation
3. Non-cash benefits

Let's examine each of these compensation types closely.

1. Cash Compensation

Cash compensation can be paid in the form of salary or end-of-period bonuses. Many companies use a combination of the two in which a base salary is paid without regard to meeting individual or company performance criteria and bonuses are paid if managers meet or exceed established goals. For example, in 2021, the CEO of Qantas Group, Alan Joyce, received a base pay of \$1.78 million with other benefits totalling an extra \$201,000. These benefits can be in the form of bonuses if Alan as part of the senior management

team meets certain pre-established goals set by the company. These goals can include meeting or exceeding profit targets, success in attracting and retaining key employees and customers and even increasing the overall value of the company including share price. However, bonuses tied to a single performance measure, say for example increasing net profit by a certain dollar amount or percentage, are problematic and can lead to manager manipulation (a manager can increase profit by reducing costs through unethical means such as reducing quality).

2. Stock-based Compensation

To encourage managers to take a longer-term view, many companies provide compensation to top managers and executives in the form of stock-based compensation, such as stock options or restricted stock compensation plans. Stock-based compensation is a way of paying employees, executives, and directors of a company with equity in the business. It is typically used to motivate employees beyond their regular cash-based compensation (salary and bonus) and to align their interests with those of the company's shareholders – i.e. both want to see the company prosper and the share price rise. Shares issued to employees are usually subject to a vesting period before they are earned and can be sold. Thus another advantage of this type of compensation is that it creates an incentive for employees to stay with the company (as they have to wait for shares to vest). However, stock options may have disadvantages if managers focus on increasing the share price in the short term rather than focus on the longer-term success of the business.

3. Non-cash benefits

Non-cash benefits include club memberships, company cars, a corner office, health insurance and so on, depending on the desires of the particular manager. Benefits and perks such as these can be used to motivate managers to strive to attain the goals of the organisation. A recent workforce survey held in 2020 (depicted in the diagram below) showed that a competitive cash compensation is the most important benefit for employees. However, cash isn't the only benefit that's important to employees. The other 60% of benefits related to factors such as career development, training opportunities, and a good work environment which played a part in their loyalty to the company:



Test your knowledge



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Chapter 10 Practice Questions

RINA DHILLON

Practice Questions

1. A local chain electronics store does not allow its store or district managers to make important decisions about their stores. The main role of store managers is to supervise employees and make sure day-to-day transactions run smoothly while district managers supervise store managers and report profitability data back to top-level management. Not allowing store or district managers decision-making authority is most likely to be found in which type of organisation?

 - a. Segmented
 - b. Centralised
 - c. Desegmented
 - d. Decentralised

2. Which of the following statements regarding the structure of organisations is false?

-
- a. When decision-making authority is spread among too many managers, managers may become so concerned with their own area of responsibility that they lose sight of the company's overall focus.
 - b. In a decentralised organisation, decision-making authority is confined to top-level management.
 - c. In a decentralised organisation, there may be a lack of coordination and communication between segments.
 - d. Decentralisation may make it difficult for managers to share unique and innovative ideas.
-

3. Which of the following is often not a disadvantage of decentralisation?

-
- a. Decreased job satisfaction for lower-level managers.
 - b. Lack of coordination and communication between segments.
 - c. Lack of company focus as lower-level managers may make decisions that benefit their own particular segment.
 - d. Higher training costs for lower-level managers.
-

4. 'Responsibility accounting' is the concept that says:

-
- a. managers should be held entirely responsible for all investment decisions that impact the particular segment in which they are in charge.
 - b. managers should be held responsible for only those things under their control.
 - c. managers should never be held entirely responsible for things that happen within the particular segment of which they are in charge.
 - d. managers should be responsible for both revenues and costs of their particular segment.
-

5. The manager of a profit centre should not be responsible for which of the following types of decisions?

-
- a. Deciding which supplier should be used for the purchase of direct materials.
 - b. Establishing the number of employees that will need to work each day.
 - c. Deciding whether or not their segment should purchase additional machinery.
 - d. Deciding whether or not to accept a special order from a customer.
-

6. Which of the following would be the best measure of performance for a profit centre?

-
- a. Residual income
 - b. Return on investment (ROI)
 - c. Segment margin
 - d. Economic value added (EVA)
-

7. In the decision-making process, which of the following situations would be best addressed by managers using a segmented income statement rather than a contribution margin format income statement?

-
- a. The decision on whether or not a one-time special order for a customer should be accepted
 - b. The calculation of the break-even point for the upcoming month
 - c. The decision on whether or not an entire product line should be discontinued
 - d. The decision on whether or not to process a product further or sell 'as is'
-

8. Costs that cannot be traced or reasonably allocated to a particular segment are called:

-
- a. variable costs.
 - b. common costs.
 - c. segment costs.
 - d. fixed costs.
-

9. Ecovacs Products has two product lines: R-100 and R-200. Revenue and cost information for each of the product lines are as follows:

	R-100	R-200
Selling price per unit	\$45	\$60
Variable costs per unit	15	24
Traceable fixed expenses	\$250000	\$360000

Ecovacs has common fixed expenses of \$250 000 per year. Last year, the company produced and sold 30 000 units of R-100 and 20 000 units of R-200.

What is the segment margin of the R-100 product line?

-
- a. \$650 000
 - b. \$900 000
 - c. \$525 000
 - d. \$400 000
-

10. Refer to Q9 data: What is the segment margin ratio of the R-200 product line?

-
- a. 50 per cent
 - b. 30 per cent
 - c. 60 per cent
 - d. 20 per cent
-

11. Refer to Q9 data: What is the company's overall net income?

-
- a. \$1 260 000
 - b. \$ 510 000
 - c. \$1 010 000
 - d. \$ 760 000
-

12. When defining net operating income for return on investment (ROI) purposes, which of the following items should not be included?

-
- a. Sales revenue
 - b. Cost of goods sold
 - c. Interest expense
 - d. Salaries expense
-

13. Hardcastle Ltd had sales of \$3 000 000 and net operating income of \$800 000. Operating assets during the year averaged \$1 500 000. The manager of Hardcastle is considering the purchase of a new machine, which is expected to increase average operating assets by 5 per cent. If the new machine is purchased, the company's new return on investment (ROI) would be:

-
- a. 190.5 per cent
 - b. 52.5 per cent
 - c. 196.9 per cent
 - d. 50.8 per cent
-

14. Which of the following statements comparing ROI and residual income is correct?

-
- a. ROI is more useful as a performance measure for a single investment centre.
 - b. Residual income is a better comparative measure than ROI.
 - c. ROI and residual income are equally good performance measures for a single investment centre.
 - d. Residual income is more useful as a performance measure for a single investment centre.
-

15. Covid Pharmaceuticals has the following information available for one of its divisions in the current year:

Sales revenue	\$6000000
Operating expenses	3800000
Average operating assets	2000000

Duncan requires each of its divisions to generate a minimum return of 25 per cent. What is this division's residual income?

-
- a. \$ 200 000
 - b. \$1 450 000
 - c. \$1 700 000
 - d. \$5 500 000
-

16. ABS Pty Ltd has the following information available for one of its divisions:

Average operating assets	\$5000000
Return on investment (ROI)	40%
Sales	\$8000000

If ABS requires a minimum return on its investments of 25 per cent, what is their residual income?

-
- a. \$1 950 000
 - b. \$4 500 000
 - c. \$6 750 000
 - d. \$ 750 000
-

17. Which of the following forms of manager compensation most likely encourages managers to take a long-term view of how their performance ties in with the long-term goals of a company?

-
- a. Year-end cash bonus
 - b. Base salary
 - c. Share options
 - d. Use of a company car
-

18. Which of the following statements about management compensation is correct?

-
- a. Compensating managers with year-end cash bonuses always motivates managers.
 - b. From a manager's standpoint, cash compensation is always preferable over share-based compensation.
 - c. Manager compensation should always be either cash-based or share-based.
 - d. Share-based manager compensation does not guarantee a future cash benefit.
-

19. Which of the following statements about the balanced scorecard approach is true?

-
- a. It helps management focus on only non-financial measures of performance.
 - b. It helps management focus on critical success factors that may be financial and non-financial in nature.
 - c. It helps management ignore short-term operating performance in favour of long-term operating performance.
 - d. It helps management focus on only financial measures of performance.
-

20. Which of the following statements about the balanced scorecard approach is false?

-
- a. It requires managers to focus on financial measures more than non-financial measures.
 - b. It looks at performance from the following perspectives: financial, customer, internal business, and learning and growth.
 - c. It helps balance short-term operating performance with long-term strategies.
 - d. It recognises that traditional measures of performance are often not adequate to fully assess a company's performance.
-

Solutions:

1. b
2. b
3. a
4. b
5. c
6. c
7. c
8. b
9. a – Contribution margin = $(45-15) \times 30000 = 900000$ less traceable fixed costs $\$250000 = \650000
10. b – Contribution margin = $(60-24) \times 20000 = 720000$ less traceable fixed costs $\$360000 = \360000 ; Ratio = $\$360000 / \text{Sales} = \$360000 / (60 \times 20000) = 0.3$ or 30%
11. d – from 9 and 10, segment margin for R-100 is $\$650000$ and R-200 is $\$360000$. Overall company margin = $\$650000 + \$360000 = \$1010000$ less common fixed costs of $\$250000 = \760000 net income of Company
12. c
13. d – ROI = Net income / Average operating assets = $800000 / (1500000 \times 1.05 \text{ due to } 5\% \text{ increase}) = 50.8\%$ (rounded up)
14. d
15. c – RI = Actual return – expected return (calculated as Average operating assets x minimum rate of return) = $(6000000 - 3800000) - (2000000 \times 0.25) = 1700000$
16. d – Given the question tells us what ROI is and we know $\text{ROI} = \text{Net Income} / \text{Average Operating Assets}$, substituting we will have $40\% = X / \$5\text{M}$. When we solve for X, it is = $\$2\text{M}$. RI = Actual return – expected return (calculated as Average operating assets x minimum rate of return) = $\$2\text{M} - (5000000 \times 0.25) = \750000
17. c
18. d
19. b
20. a

PART XI

CHAPTER 11: SUSTAINABILITY, ACCOUNTING AND DECISION-MAKING

Introduction

Traditionally, (management) accountants were concerned with reducing economic costs and increasing organisational efficiencies to generate better profits and increase market value for shareholders. Today there is increasing focus on meeting the demands of a wider stakeholder group than just shareholders, this includes, suppliers, creditors, communities, society and of course consumers. Therefore, gaining an understanding of the demands and expectations of these stakeholders, and determining how the organisation can meet them, becomes a critical undertaking by management and management accountants. This chapter explores the changing environment of management accounting with respect to sustainability reporting and the critical contributions they make to developing solutions for organisational accountability. In this chapter, we attempt to provide accounting tools and frameworks that encourage (management) accountants to more actively contribute to the environmental accounting debate. Through accounting systems we are able to tell a story about the impact of businesses on the environment and allows businesses (and interested stakeholders) to better understand the consequences of this impact.

Chapter outline

After reading this chapter, you should be able to:

1. Understand the role of management accounting in documenting sustainability practices
2. Understand externalised costs for which organisations are responsible
3. Appreciate the role of sustainability value chains and its link to management accounting
4. Consider triple bottom line reporting and sustainability-related KPIs
5. Identify and understand environmental costs in organisations.

11.1 Understand the role of management accounting in documenting sustainability practices

LEANNE GAUL AND RINA DHILLON

In 1987 the World Commission on Environment and Development released a report titled *Our Common Future*^[1] which explored issues over climate change. This culminated in a call for action to combat accelerating environmental deterioration and adverse social impacts. It gave rise to the concept of *sustainable development* which “meets the needs of the present without compromising the ability of future generations to meet their own needs”.^[2] This definition indicates the importance of present generations meeting their own needs in a manner that does not impair future generations entitlement to the same, ensuring a balance between economic growth, environmental care and social well-being. This was the first time future generations were considered as stakeholders. Authors of the *Our Common Future* report indicated a need for technology and social organisation to be managed and enhanced for the benefit of all stakeholders both in the present and future. Sustainability can be maintained at a certain rate or level, as in sustainable economic growth, and can also be upheld or defended, as in sustainable definitions of good corporate practice, i.e. sustainability practices. As businesses derive profit from the environment and society, and has society as its ‘market’, the environment, society and businesses are interconnected. This link between business, society and the environment is also represented in the [Sustainable Development Goals \(SDG\) ‘Wedding Cake’](#), depicted below, where the biosphere is the foundation of economies

and societies, adopting an integrated view of social, economic, and environmental development:



From a global context to the Australian experience, escalating natural disasters such as bush fires (Black summer 2019-2020[3]) and flooding have resulted in citizens calling out for accountable leadership in the mitigation and prevention of climate change and related events.[4] The Australian community at large is a consumer of goods and services and increasingly are making purchase choices based upon the sustainability practices of associated firms, which is progressively being recognised by organisations today.[5] In recognising the importance of sustainability, from both a business and consumer context, it is critical to define what it actually means. Escalating demands for greater direction have led to numerous influencers in the sustainability field, but to pinpoint a specific origination point for world-wide recognition this would coincide with the publication of the Our Common Future report in 1987.[6] From this time the concept of sustainability, sustainable

development and sustainability reporting have been iteratively developed and, like the changing nature of the world's ecosystems from the impacts of climate change, these living concepts will continue to develop and mature.

A widely recognised contributor to the sustainability reporting field was a British corporate environmentalist by the name of John Elkington[7] who introduced the concept of Triple Bottom Line (TBL) reporting in his seminal article “Accounting for the triple bottom line”.[8] He conceived the idea that reporting should incorporate not only economic or financial information but also environmental and social disclosures.[9] Financial reporting includes the traditional accounting disclosures; Balance Sheet, Income Statement, Cash Flow Statement, Statement of Changes in Equity, and associated notes. Environmental reporting reflects an organisation's accountability over impacts of its operations on natural capital such as the extraction and use of environmental resources, the creation of by-products such as carbon emissions and any consequential damage to flora and fauna. This may be offset by the use of renewables or environmental remediation.[10] The social bottom line is associated with social capital which can be connected to inflows and outflows to the organisation, such as community philanthropy, improved working conditions and so on.[11] The incorporation of economic, environmental and social accounting can also be transactional, inflows, outflows, debits and credits, hence the integration of these three capitals into one report informs its user of not only the financial outcomes, but its environmental and social performance.[12] This has implications for all interested parties or users of the sustainability report, as it provides increased transparency and accountability over organisational operations, allowing these stakeholders to make more informed decisions such as; purchasing choices (consumers), supply chain relationships (suppliers), prospective employment opportunities (employees) and even allowing organisations to operate in different jurisdictions (government, regulators and

communities). The extent of influence these reports have over internal and external stakeholder decision-making are therefore significant, and businesses are increasingly recognising this.^[13] We will explore the notion of TBL in detail later in Section 11.4.

So how does this relate to management accounting? Increasingly, corporate and broader society around which organisations exist are beginning to acknowledge the importance of valuing the physical environment within which we exist, in order to better appreciate the true cost of our actions, at both a corporate and individual level. Businesses have started thinking more deeply about how they might use accounting to identify and measure their environmental costs and broadly conceptualise the sustainability of their pursuits. For example, Qantas provides customers with a '[Fly Carbon Neutral](#)' option to pay for their share of carbon emissions from flights. Management accounting measures, analyses, and reports financial and non-financial information that helps managers make decisions to fulfil the goals of an organisation.^[14] Financial information is disclosed in financial reporting and takes a quantitative form, whereas non-financial information incorporates environmental and social data which can take a qualitative or quantitative form. Cost accounting also has a bearing here as it measures, analyses, and reports financial and non-financial information relating to the costs of acquiring or using resources in an organisation.^[15] Hence the true costs of operations can include for example, raw materials (economic), damage to the environment (environmental), adverse impacts to communities (social) and so on.

Organisations can absorb benefits from recognising and mitigating negative impacts of environmentally and socially adverse outcomes caused by their operations. For example, in 1991 to 1992 DuPont was helped by the US Environmental Protection Agency to reduce its toxic emissions by 50%, costing around US\$3.8 million, however savings were found to be US\$15.8 million per year as they avoided environmental compliance costs.^[16] Without managerial cooperation and organisational restructuring of systems, processes,

practices and performance measurement these improvements would not have been made. Understanding the associated costs of poor sustainability behaviours requires risk assessment, strategy development, followed by the establishment of key performance indicators, systems development including methods to capture and analyse relevant data, culminating in the reporting of sustainability performance.[17] Risk assessment (phase 1) identifies sustainability risk exposures across the organisation. Strategy development (phase 2) requires the organisation to determine their overall approach to sustainability, which often requires a collaborative approach with various stakeholders, both internal and external, thus connecting and committing stakeholders to an organisational direction.[18] Development of Key Performance Indicators (KPI) (phase 3) provides links between the business's sustainability values/strategies and organisational performance in meeting those values/strategies. As such KPI is defined as *a factor(s) by reference to which the development, performance, or position of the business of the company can be measured effectively*. [19] Systems development (phase 4) requires organisations to adapt systems, policies, and practices to capturing relevant sustainability data in order to interpret and analyse performance then compare this information to pre-assigned targets. This aids managers in determining organisational effectiveness in achieving sustainability targets and if falling short of the mark, provides opportunities to redefine goals and objectives which are achievable and meaningful.[20] The final part (phase 5) is reporting the information, which is the primary focus of this topic. The monitoring and review phase (6) determines the effectiveness of the cycle including the sustainability report itself and provides opportunities to improve the process.[21] These phases are represented in the sustainability reporting cycle (diagram 1) below:



Source: adapted from Schaltegger and Wagner (2006)

Those organisations seeking to become sustainable must embed sustainability practices into all aspects of their organisation's operations, commencing with their mission statement, vision and/or values. Sustainability practices are any pursuit that prolongs the use of, reduces or eliminates resources being consumed in performing transactions to achieve an individual or organisational objective. Such practices have the twin effect of lowering consumption for environmental preservation reasons, but also impacting cost structures in organisations. Within this context, management accounting helps organisations understand these costs next to the benefits brought about by sustainability practices. For example, reduced resource consumption (e.g. reduction in electricity usage) leads to lower costs (i.e. lower electricity expense) and higher profit (assuming same revenue, a reduction in

costs would increase overall profit).

Businesses do not have to sacrifice profit in order to be sustainable, and here management accounting can provide concrete analyses to highlight how in the medium to longer term, using less resources or using them smarter has fundamental economic benefits! Sustainability can plausibly co-exist with profitability ([World Economic Forum, 2020](#)) and investments in sustainability practices can in fact even add to shareholder return as illustrated in the flowchart below:



Through pricing power (a sustainable brand has the ability to price its goods and services at a higher price), cost savings (through greater operational efficiencies and more efficient use of resources), easier employee recruitment (employees are increasingly likely to apply for and accept jobs from companies they view as environmentally sustainable – [IBM Survey](#)), higher market share (due to increased customer loyalty), access to broader markets ([sustainability as a market differentiator](#)) and lower risk premiums ([sustainable companies get a lower cost of capital](#)), sustainability investments have the potential to fundamentally change how businesses perform economically.

Keeping It Real: Deloitte 2022 CxO Sustainability Report – Australia

In a survey of 750 Australian company key executives performed in January to February 2021 by Deloitte Touche Tohmatsu (Deloitte) a majority of Australian executives say their companies (75%) are very concerned about climate change and almost all (95%) contended their companies had been adversely impacted by climate change related events, including disruptions to supply chains.^[1] Despite the doom and gloom, there is a feeling of hope as 89% of survey respondents indicated immediate action could mitigate these deleterious outcomes.^[2] To combat these escalating issues these surveyed organisations are:

1. Developing sustainable goods and services.
2. Updating and/relocating organisational facilities to resist climate impacts.
3. Incorporating managerial compensation to sustainability performance.
4. Requiring supply chain businesses and partners to meet sustainability requirements.
5. Taking a considered approach to lobbying and political support through focussed donations to political representatives taking a leadership role in climate change.^[3]

These efforts indicate a need for organisations to embed sustainability practices into organisational culture commencing with sound leadership in executive level staff which informs organisational direction for all employees.[4]

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[10] *ibid*

[11] *ibid*

[12] *ibid*

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11.2 Understand externalised costs for which organisations are responsible

LEANNE GAUL

External costs are those which arise during the course of an organisation's operations, but their existence may or may not be known to the entity. Additionally, in a traditional financial report, these are typically not recognised. To get a better understanding of this phenomenon it is best to use an example.

UIC, a worldwide professional association representing the railway sector, conducted a study of external costs generated by transport users including impacts such as congestion, air pollution, climate change, accidents, noise and supply chain process costs on the environment.^[1] The difficulty in accurately reporting this information is directly related to the measurement of these external costs. Reporting boundaries required that some identified external costs were excluded such as air and noise pollution and congestion due to the difficulty of gathering data to adequately reflect the extent of these externalities.^[2] UICs method for measuring performance over external costs was to use an external cost calculator which mimicked the capabilities of a competitors tool. Adverse consequences relate to the effectiveness of the tool, if its' methods for calculation are erroneous this will impact the integrity of reporting for all users, internal and external.

The importance of accurately measuring an organisations external costs cannot be understated as it impacts organisational decision making processes.^[3] Flawed data and consequently information (managerial reporting) with which an organisation approaches the reduction of external costs may result in ineffective

outcomes, wasting an organisation's limited resources. Inadequate managerial reporting may lead organisations to underestimate the impact of their external costs which may lead to a breach of Australian environmental law. The New South Wales Environment Protection Authority (NSW EPA) administers the EPA Regulatory strategy, policy, and compliance plan.^[4] Under the protection of the *Environment Administration Act 1991*, the NSW EPA is responsible for investigating and reporting issues or allegations of non-compliance with relevant legislation. NSW EPA may use the following two penalty instruments against breaching companies:

1. an enforceable undertaking, which is a voluntary legally binding written agreement between the NSW EPA and the relevant company;
2. fines commensurate with the financial advantage the offending company has gained over competitors by committing the environmental breach (*Protection of the Environment Operations Act 1997 – POEO Act*).^[5] An example of this breach occurred in 2017 when Acciona Infrastructure Australia Pty Ltd polluted a creek in Nambucca Heads by discharging sediment laden water into a nearby creek, breaching s120 of the POEO Act. This discharge can lead to the decimation of localised aquatic plants and marine life and other adverse impacts to the ecosystem.^[6] The fine awarded against Acciona was \$15,000.^[7] In Australia the Environment Protection Authority comes under different jurisdictions; the national/commonwealth agency (Department of Agriculture, Water and the Environment) and each state and territory has their own EPA.^[8]

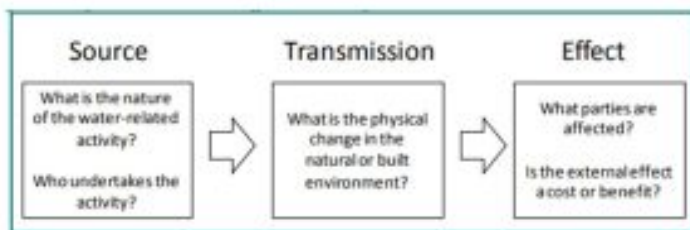
The risk of breaching environmental legislation not only has a direct cost but may also impact reputation and profitability. Hence it is in the best interest of a business to be proactive in its approach to sustainability and operate transparently. How might a company

like Acciona become more proactive and avoid the fines that was imposed on them by the EPA? Acciona could have treated the sediment laden water to clean water prior to discharging it or to have a third-party organisation do this for them. It may prove expensive to purchase equipment to treat the water so the latter option may be best in the short term. In going with the latter option, Acciona would need to ensure the third party properly treats the waste, so they would need a clear outline of the process. The business would seek a contractor that has high quality standards, reputation and appropriate accreditations. To be sustainable does not mean a firm ceases to be responsible once it leaves their premises. Relationships with poor waste management facilities can lead to reputational damage to customers. In addition, the NSW EPA has various guidance's on [managing liquid waste](#) to help businesses meet compliance requirements. As breaches are added to the NSW EPA websites, simple searches can lead interested parties to find this information. So, it is in the best interests of the company to be accountable for their actions and be as transparent as possible to reduce impacts to their reputation and relationships.

It is important to note that quantifying external costs can be difficult as they fall into both quantitative and qualitative measures. For example, quantifying clean up costs is a simple job of accounting. However, loss of ecosystems beyond remediation, loss of recreational areas for communities, loss of indigenous traditional sites and loss of biodiversity has a broader effect. Putting a figure on external costs can be difficult as it varies by location and may be extensive when considering social costs. The National Water Commission in Australia has released a report titled [Externality pricing in the Australian water sector](#). The report noted issues including a failure to define positive (when a benefit spills over) and negative (when a cost spills over) externalities, calling on government intervention to improve outcomes for society. As it currently stands there is limited or no existing guidance over

organisations measuring and transparently reporting pollution and the associated costs. Additionally, quantification of impacts may be difficult to value for broader society, however it may still be material to stakeholders and should be included in reports.

One way in which this can be done is by identifying the externalities. The diagram below provides a method to define the key elements of an externality:



Let's apply the case of Acciona to the above method:

Source: Discharge of sediment laden water into the local water supply.

Transmission: Destruction of local aquatic plant life and marine life and damage to downstream ecosystems.

Effect: The affected parties include marine and local fauna biodiversity (they are a stakeholders), local community and residents along the creek and attached waterways – downstream inhabitants. These are external costs.

This method indicates an importance of measuring and reporting these negative externalities to better understand the true cost of Acciona's actions.

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[7] *ibid*

[8] National Environment Protection Council. (n.d.). Jurisdictional Agencies. <http://www.nepc.gov.au/about-us/jurisdictional-agencies>. (accessed 26 September 2022).

11.3 Appreciate the role of sustainability value chains and its link to management accounting

LEANNE GAUL

The concept of value is an implied promise by companies to deliver value to their customers.^[1] Each measurement of unique value that can be delivered to a good or service is measured and contributed to the value chain.^[2] The concept of value chains was developed by Michael Porter in 1985, which allows an organisation to map added value at each step of the production process from inbound logistics to operations, outbound logistics, marketing and sales, and finally service. The value chain also incorporates supporting activities of human resource management, technology, and procurement (see diagram below).



Source: Presutti and Mawhinney (2004) ³

The value chain represents a set of progressive, interdependent activities depicted by linkages within the value chain. These interrelationships mean the value created by one activity bears a cost or impact to performance on another in the chain.[1] An additional insight is the corporate culture, found in the human resources practices of the support activities, which provides a basis to establishing a highly effective value chain.[2] All of the business activities detailed in Porter's Value Chain provide opportunities for adding value to goods or services not only within the organisation's operations but externally as well.

Given that organisations might be responsible for external costs that are not ordinarily acknowledged within traditional financial reporting methods as prescribed by accounting standards, the traditional value chain put forward by Porter (1985) might not sufficiently explain the true costs incurred and value contributed by organisations. To this extent, sustainability value chains have been developed to better capture these effects. The notion of sustainability considers the idea that business success and societal welfare must coexist.[3] This recognises an organisation's need to embed TBL into their processes not only considering economic, environmental and social impacts of their operations from an internal perspective, but also impacts to the environment and society at large.[4] Some multinational firms have resorted to building their own value chains, incorporating sustainability related elements alongside the more traditional value chain categories described by Porter (1985). In essence, sustainability value chains attempt to show how organisational sustainability activities can lead to superior business outcomes.

Hasan et al. (2019) developed a framework for a value chain incorporating support activities – Green Management, Green information, Green technology, Green Accounting, Green 3R – reduce, reuse and recycle – and Green marketing, which supports the supply chain – product/service design, purchasing, production and logistics, as depicted in the diagram below, providing

interconnection of the value chain across the organisation from a sustainability perspective across all stages :



This value chain extends beyond traditional categories introduced by Porter above. The coloured lines demonstrate connectivity between activities of the organisation with green management, technology and information all feeding into accounting and each department through Green 3R.[5] Moving to the Green supply chain management (SCM) this is the process of producing the output, commencing with design. To complement the Green design, sustainable sources will be located in the Green purchasing portion of the SCM leading to Green production. The final part of the diagram Green Logistics is provided below:



We can see the value chain is cutting out non-value adding activities to become more sustainable across the activities in the

diagram above. Reducing excess water consumption, recycling, increased training, improved performance through innovations and lowering energy consumption. As we can see from this framework the sustainability value chain can convey organisational sustainability strategy in a simple, easy to understand method to provide an organisation-wide approach to improved sustainability practices. A sustainability value chain incorporates organisational practices that can improve sustainability performance and provide systems and processes that can accurately capture performance data for reporting purposes. Communications lead to a more informed organisational workforce, improved performance, greater efficiencies, and better overall outcomes. Linking these factors to employee remuneration, which may be embedded in Key Performance Indicators, will provide a higher likelihood of better sustainability outcomes for businesses.

[1] Presutti, W. D., & Mawhinney, J. (2013). *Understanding the dynamics of the value chain* (1st ed.). Business Expert Press. <https://doi.org/10.4128/9781606494516>

[2] *ibid*

[3] Presutti, W. D., & Mawhinney, J. (2013). *Understanding the dynamics of the value chain* (1st ed.). Business Expert Press. <https://doi.org/10.4128/9781606494516>

[4] *ibid*

[5] Hasan, M. M., Nekmahmud, M., Yajuan, L., & Patwary, M. A.

(2019). Green business value chain: a systematic review. *Sustainable Production and Consumption*, 20, 326–339. <https://doi.org/10.1016/j.spc.2019.08.003>

[1] Bititci, U. S., Martinez, V., Albores, P., & Parung, J. (2004). Creating and managing value in collaborative networks. In D., Walters, & M. Rainbird (Eds.). (2004). *Value chain*. (251-268). Emerald Publishing Limited.

[2] *ibid*

11.4 Consider triple bottom line reporting and sustainability-related KPIs

LEANNE GAUL AND RINA DHILLON

Integrating all sustainability capitals (economic, environmental, and social) into one report provides a holistic perspective of a company's approach to their overall performance, this is called Triple Bottom Line (TBL) reporting and is reflected in the Integrated Reporting method (<IR>).[1] <IR> uses integrated thinking to consider how an organisation creates value from financial, environmental and social perspectives over the short, medium and long term.[2] Its aim is to productively allocate capital, promote cohesive and efficient approaches to reporting and enhance accountability.[3]

The TBL system puts forward that in order to better understand an organisation's performance, a consideration of its financial performance must be judged against its social and environmental impacts (positive and negative), in order to more completely appreciate its impact on broader societies. Given this, TBL focuses on three perspectives:

1. Economic perspective – Broadly relates to the financial performance of an organisation, incorporating its profit and loss statement, and other economic indicators such as market share price.
2. Social perspective – The degree to which societies within physical, financial and influential proximity of an organisation has been impacted by its operations.
3. Environmental perspective – The degree to which natural

environments have been impacted by an organisation's operations.

Let's us look at an Australian example of TBL Reporting

Cbus is an Australian industry super fund founded in 1984. This organisation produced its Cbus Annual Integrated Report 2020 which incorporates disclosures on strategy, governance, performance, and prospects for the benefit of members and stakeholders. Their strategy (vision and mission statement) puts the interests of their members at the centre of organisational decision making and also aims to provide strong returns for investors.^[4] Cbus stakeholders are categorised in three levels as demonstrated below:



In order to support their corporate strategy, Cbus incorporates numerous KPIs (defined in [Section 11.1](#)) into their sustainability reporting agenda which are informed by the United Nations Sustainable Development Goals or SDGs. By identifying target levels of performance and relating them to performance indicators, organisations, like Cbus, form perceptions of their actual performance. In this way, accounting numbers drive desirable behaviours among employees and increase the likelihood that organisational outcomes are achieved. In terms of meeting business' goals and outcomes, they can be simply communicated through a Sustainability Balanced Scorecard like Cbus has. The

snapshot of Cbus' Balanced Scorecard is provided below and it allows stakeholders to get an understanding of what is critical to the organisation, associated targets and results and if they are meeting desired results (progress column):

Value creation strategy	Messure	Target	Result	Progress	More info
Growth					
Trust and satisfaction of Cbus members, employees and our industry partners	Total members with balance as at 30.6.20	733,818	758,294		See page 29
	Total employees as at 30.6.20	148,752	157,868		
A growing pool of capitalised lower economy	Funds under management (FUM)	\$36.3bn	\$34.28bn		See page 43
Our people					
Cbus people who are engaged and productive	Employee engagement score	76	75		See page 57
Risk and governance					
Best practice systems and governance	Material breaches of risk appetite	Zero	Zero		See pages 53 and 55
Cbus Property					
Employment opportunities for members	Jobs created since inception	App. 100,000*	App. 105,000*		See page 55
Climate change mitigation					
Investments that contribute to lower carbon emissions	Cbus Property Holdings using	5.5 star	5.5 star		See page 59
	Emissions in property portfolio	Zero emissions by 2030	Measures being developed		
	Emissions in total portfolio	40% reduction by 2030 Zero emissions by 2050	Measures being developed		

Source: Cbus (2020)¹

Sustainability Balanced Scorecard

How might sustainability indicators be developed and operationalised (made to work)? A measured approach must be taken in developing KPIs for an organisation to ensure the mission statement and associated goals and objectives are supported. As such a 7-step checklist for the development of aligned sustainability KPIs in organisations is considered below. The checklist elements have been matched to the climate change action KPI from Cbus SDGs in the diagram below to gain a deeper understanding of how they are applied:

Our reporting suite

Our Annual Integrated Report is produced in accordance with the International **ESG** Framework. It is a concise communication about how our strategy, governance, performance and prospects create value for our members and other stakeholders. It focuses on material matters and focuses on how we manage risk and make investment decisions. It reviews developments and achievements at Club over the last 12 months.

Sustainable Development Goals



Gender equality
Achieve gender equality and empower all women and girls



Affordable & clean energy
Ensure access to affordable, reliable, sustainable and modern energy for all



Decent work & economic growth
Promote sustained, inclusive and sustainable economic growth, full and productive employment, and decent work for all



Industry, innovation & infrastructure
Build resilient infrastructure, promote inclusive and sustainable industrialisation, and foster innovation



Sustainable cities and communities
Make cities and human settlements inclusive, safe, resilient and sustainable



Climate action
Take urgent action to combat climate change and its impacts



Partnerships for the goals
Strengthen the means of implementation and revitalize the global partnership for sustainable development

We have also highlighted how our work contributes to the United Nations Sustainable Development Goals (SDGs). The United Nations has developed 17 SDGs to empower, protect the planet and ensure prosperity for all. Achieving these goals is a shared responsibility for governments, industry and the community. As a super fund we have an important role in driving each of these goals and create development opportunities for members who are active for our members. It is important to use the SDGs to focus where we can contribute to their achievement.

For further information on our contribution to the SDGs please see our [Responsible Investment Supplement](#).

[Download our report at responsible-investment.com](#)

Our six Capitals

Throughout the report we use the following icons to highlight where we are, transform and produce the six other Capitals.



Financial Capital
Fund available to Club



Human Capital
Our people



Manufactured Capital
Our buildings and infrastructure



Intellectual Capital
Our systems and processes



Social and Relationship Capital
Our partnerships and networks



Natural Capital
The earth's resources

1. *Identifying a strategic imperative*– Align goals consistent with an organisation’s strategy. An organisation’s strategy defines how it pursues the attainment of its objectives. Therefore, whatever indicators we devise must be consistent with an

organisation's strategy. In the case of Cbus, members are the nexus of decision making. Cbus is creating desirable outcomes for its members by operating sustainably, protecting the environment and community in which they live and providing better returns on investment supports the 3Ps, profit, planet, and people.^[1]

2. *Broad operational categories relating to strategic imperatives*– Focuses on broad areas relating to that strategic imperative. In order to achieve an organisation's strategy, management usually focuses on broad areas relating to that strategic imperative. For example, an organisation that seeks to maximise profits might focus on customers to raise revenues, as well as processes to reduce costs by minimising non-value-adding activities. Here, Cbus provides a broad range of economic, environmental, and social factors which reflect their mission statement, as outlined in the diagram above. For examples, take urgent action on climate change SDG 13, which benefits members and society.
3. *Selecting financial and operating information to help chart the operational categories*– Within each of these categories, we select key pieces of information. It might be revenues, number of customers, overall production costs, wastage, staff hours lost through employee injury, etc. Any financial or operating number that we think contributes to telling a story about our performance. As indicated in Cbus' balanced scorecard above, action on climate change is required to meet a rating of 5.5 stars (target column). Some aspects continue to be developed.
4. *Assess relationships between the information selected to create performance indicators for categories* – By combining different information pieces to create ratios, or by simply using individual information as raw numbers, we populate each category with a series of indicators that paint a picture of our performance in that category. As indicated in Cbus' balanced scorecard above, the progress on this climate action KPI is meeting set targets (results and progress columns). The first

four steps above lead us to establishing sustainability performance indicators and these indicators must be SMART – **S**pecific; **M**easurable; **A**chievable/Attainable; **R**ealistic/**R**elevant; **T**imely. How do we make these sustainability KPIs work in businesses, Steps 5 to 7 is required and detailed below:

5. *Identify levels of performance for indicators*– Having determined a raw number or ratio as being an indicator, what levels do you believe necessarily define ‘good’ performance? The setting of a sufficient level is extremely important as good measures can be rendered irrelevant by target levels being too difficult or too easy to attain. For example, Cbus has zero emission in property portfolio by 2030 as good performance related to progress and action on climate change.
6. *Defining rewards for their attainment*– If employees attain these indicators, how are you going to reward them? Reward systems usually motivate employees. In the instance of Cbus, the business has not indicated or disclosed a reward basis and this is not discussed within this KPI as it is a question of relevance to climate change action. It would be incorporated with KPIs over employee performance (for example Cbus provides open and inclusive relationships and good working conditions resulting in reduced staff turnover ~ 4.29% when compared with industry standard ~12%.
7. *Identify feedback systems to manage success/failure in attaining indicators*– At the end of a period, what do we do when a target is or isn’t met? It is as important to reflect on the extent to which we might improve targets that have been met, as it is to consider how we might change our practices to ensure the future attainment of targets that have not been met. In Cbus case, its [sustainability balanced scorecard](#) provides clear advice on whether targets are, or are not, being met and links to other parts of the report with a deeper discussion on outcomes.

The financial reports produced in the <IR>, provided below, are very similar to an annual reports, as compliance requirements over Australian Accounting Standards and the Corporations Act 2001 (Cth) must still be met:

Statement of Financial position as at 30 June 2020		
	2020 \$'000	2019 \$'000
Equity and liability	94,275,740	92,812,332
Cash and cash equivalents	21,243	29,819
Other assets	292,423	48,219
Other liabilities	15,821,088	15,746,418
Net assets available for member benefits	22,654,425	62,286,547
Less: Members' liability	(11,398,988)	(10,891,148)
Net assets	4,433,138	966,399
Assets		
Equity and cash assets	141,889	147,899
Other resources	488,249	258,585
Total equity	632,138	386,484
Income statement for the year ended 30 June 2020		
	2020 \$'000	2019 \$'000
Superannuation as defined income		
Interest income	268,596	248,254
Dividends and dividend income	1,291,649	1,616,810
Charges on fair valued financial instruments	(884,703)	(1,386,875)
Other income	23,628	24,875
Total superannuation as defined income	595,570	5,072,069
Expenses		
Investment expenses	(188,612)	(188,231)
Administrative and other operating expenses	(125,810)	(184,582)
Other direct operating expenses	(74,802)	(6,182)
Total expenses	(489,224)	(378,995)
Result of net superannuation as defined before other operating expenses	985,758	5,290,840
Other operating expenses	(147,612)	(154,387)
Result of net income tax	248,349	1,088,659
Less: Net benefit allocated to members' accounts	(131,384)	(1,712,292)
Expanding as well as other resources	24,717	875,980

Source: Cbus (2020)³

This does not mean these figures do not incorporate the costs and benefits of a more sustainability driven organisation, merely that they are not as obvious in this form of disclosure. You will need to look beyond this scope into the other disclosures which can incorporate qualitative and/or quantitative measures. For example; gender equality was a given KPI in line with SDG5, which is reported

on page 60 incorporating 2019 and 2020 performance and the related target:



Disclosure of the gender equity issue (diagram above) ensure that Cbus is behaving in a transparent and accountable manner to disclose to report users the decline and improvements in areas of performance within this KPI and how it is being addressed.

For a more interactive approach [Patagonia](#), an American clothing manufacturer, has a digital sustainability report. They have taken a sustainability approach to operations with a view to reducing the use of plastic fibres in their clothing range. For example polyester is a manmade fibre made from plastic, these fibres infiltrate our ecosystems and waterways and become embedded within the aquatic food chain. If the clothes do make it to land fill, which is called municipal solid waste (MSW), it causes an increasing problem for waste management facilities, with 500,000 tonnes of leather and textiles being disposed of by Australians in the 2009 to 2010 financial year.[1] Globally 87% of all textiles are added to landfill or incinerated, of the remaining 13%, 12% is recycled into insulation or rags and only 1% is treated and reused as raw materials.[2] In terms of incineration other issues arise, such as the releasing of toxic pollutants into the air.[3] To reduce clothing waste issues significant research and development must be considered by supply chains. Alternative actions could involve sourcing natural fibres, using recycled materials and offering a recycling service for returning customers.

Additional factors in driving a more sustainable clothing industry

are those savvy consumers making more informed decisions.[4] Returning to the Patagonia example, this company is sourcing preferred materials (89%) including a mixture of natural fibres and recycled materials.[5] From a supply chain perspective 87% of the Patagonia line is Fair Trade compliant which seeks to protect workers' rights in the supply chain.[6] Patagonia is a Certified B corporation achieving an overall impact score of 151.4, which is outstanding from a sustainability perspective as the median score for businesses completing the B corporation assessment is 50.9.[7] Patagonia has achieved best in community and environment over the last two years, as awarded by B corporation.[8] Patagonia's TBL report is provided below:



Another clothing manufacturer is a well-known brand Shein and, in terms of its apparel factory workers, most of its 700 suppliers, identified through an audit of factory processes, required corrective action (83%). Only 2% of suppliers met performance requirements with minor flaws and 15% having a moderate performance with some general risks, improvements advised.[9] The top breaches include fire and emergency preparedness (27%) and working hours (14%).[10] In terms of protecting the environment, Shein's disclosure does not include performance data, only prospective practices, or language such as “increasing use of recycled materials in packaging”. Without definitive performance measures these reports are

ineffective and can be viewed as green washing rather than effective sustainability reporting.[11]

The three companies discussed in this section provide very different views toward sustainability reporting and help us to understand the variations in these disclosures. With increasing demands for climate change action, customer expectations are going to increasingly turn toward greater organisational transparency over sustainability impacts. Businesses will have to develop reporting that conveys appropriate and relevant information about their operational impacts on the environment and society, hence the accountant's role will continue to expand beyond the traditional scope of financial reporting to meeting the accountability demands of stakeholders.[12]

[1] Ross, G. (2019, Aug 27). Australia recycles paper and plastics. So why does clothing end up in landfill? *The Guardian*. <https://www.theguardian.com/commentisfree/2019/aug/27/australia-recycles-paper-and-plastics-so-why-does-clothing-end-up-in-landfill>. (accessed 30 September 2022).

[2] ibd

[3] Baraniuk, C. (n.d.). Will fashion firms stop burning clothes? *BBC Earth*. <https://www.bbcearth.com/news/will-fashion-firms-stop-burning-clothes>. (accessed 30 September 2022).

[4] Petro, G. (2022, March 11). Consumers demand sustainable products and shopping formats. *Forbes*. <https://www.forbes.com/>

[sites/gregpetro/2022/03/11/consumers-demand-sustainable-products-and-shopping-formats/?sh=28d9d2406a06](https://www.patagonia.com/sites/gregpetro/2022/03/11/consumers-demand-sustainable-products-and-shopping-formats/?sh=28d9d2406a06). (accessed 30 September 2022).

[5] Patagonia. (2022). Environmental responsibility. <https://www.patagonia.com/environmental-responsibility-materials/>. (accessed 26 September 2022).

[6] Patagonia. (2022). Environmental responsibility. <https://www.patagonia.com/social-responsibility/>. (accessed 26 September 2022).

[7] B Corporation. (2022). Patagonia works. <https://www.bcorporation.net/en-us/find-a-b-corp/company/patagonia-inc>. (accessed 26 September 2022)

[8] Ibid.

[9] Shein. (2021). Shein: 2021 Sustainability and social impact report. <https://us.shein.com/2021-Sustainability-and-Social-Impact-Report-a-1218.html>. (accessed 26 September 2022). p. 11.

[10] Ibid. p. 12.

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11.5 Identify and understand environmental costs in organisations

LEANNE GAUL AND RINA DHILLON

Environmental costs arise because of an interaction between economic and environmental activities. A positive relationship exists between the degree of impact and the extent of environmental damage. This underscores the importance of sustainability reporting, or even more specifically environmental accounting in this case, which seeks to identify environmental risks and consequently improve organisational efficiencies to reduce their impact. Environmental costs can present as traditional accounting expenses such as employee expenses, general expenses, service charges (taxes, fees, and levies), depreciation and amortisation expenses, maintenance expenses, education and training expenses and research and development expenses. All of these items appear in the income statement and as noted in Cbus income statement in the previous section of this chapter, can be undetectable without more specific information. Therefore, the <IR> reduces information asymmetry for stakeholders and provides for greater accountability to external stakeholders over environmental and social impacts. Let's look at an example to get a deeper understanding of how environmental costs can be accounted for in the income statement.

There are four categories of environmental costs that can be used to better understand how environmental resource consumption is managed. These are:

1.Prevention costs

2.Appraisal costs

3.Internal failure costs

4.External failure costs

The first two categories relate to costs of avoiding environmental problems/disasters and the latter two categories relate to costs of allowing environmental problems/disasters. Let's look at each of these categories more closely:

Prevention costs

Prevention costs are costs incurred by a business to ensure that environmental problems do not arise, or the likelihood of environmental problems arising is minimised. For example, an organisation that implements a filtration system to eliminate chemical spillage into river streams is undertaking a preventative measure that eliminates the possibility of future environmental pollution impacting the eco-system around which it conducts its operations. Prevention costs avoid future problems from arising, and is seen as being a longer term, increasingly sustainable and more engaging method of environmental investment.

Appraisal costs

Appraisal costs are costs incurred by a business to monitor an organisation's environmental exposures. Essentially, these are costs of monitoring the effects of business operations in relation to environmental performance. For example, an airline might invest a few hundred thousand dollars to implement electronic monitoring systems that measure fuel emissions of its aircraft as they age. When older airplanes start to show higher fuel emission, they may be retired from service. Monitoring systems don't prevent problems from arising. If an environmental problem eventuates, monitoring

systems allow for their prompt detection and subsequent management.

Internal failure costs

Internal failure costs are costs incurred by a business to address problems that arise within the company, resulting from negative sustainability related events affecting any company resource (people, materials, processes, etc.). These costs include the cost to fix technologies or care for employees owing to environmental incidents that may have occurred. For example, PT Industri Kereta Api (Persero) an East Javanese government company producing trains and carts, has numerous waste by-products including solid waste, liquid waste and noise/air pollution. It clearly has issues over noise, vibration, smell and emissions, as it pays a cost of nuisance permit, but how are the employees impacted by these issues? Some may not be mitigated and any costs that the company incurs for respiratory and health impacts to inhalation of emissions, physical impacts of vibration and noise which may lead to deafness and other side-effects to its employees would be categorised as internal failure costs.

External failure costs

External failure costs are costs incurred by a business to cover the costs or incur fines relating to environmental breaches that have impacted stakeholders outside of the business. Because organisations and broader communities share the environment collectively, the environmental problems caused by an organisation often have broader societal impacts. External failure costs are expenditures incurred to alleviate these broader societal and

environmental impacts. For example, PT INKA pays a cost of nuisance permit each year for the purpose of protecting residents from noise, vibration, smell and emissions, however it is not clear how this mitigates these issues. Additionally, the company produces a large range of waste by-products which may cause highly impactful environmental damage if handled inappropriately. Thus any costs related to cleaning and maintain protected forest nearby, due to the emissions it produces or physical and consequently financial damage to local community residents would be categorised as external failure costs.

Keeping It Real: PT Industri Kereta Api (Persero) (PT INKA)

[Basuki et al. \(2018\)](#) conducted an investigation into PT Industri Kereta Api (Persero) (PT INKA) an East Javanese government company that produces trains and carts. This company produces three forms of waste; solid waste, liquid waste, and noise/air pollution. Within the PT INKA income statement, general and administrative expenses included numerous environmental costs and as it is not a requirement to clearly label these under environmental expenses the user of the report is not aware without further investigation. To get a deeper understanding of the environmental costs we are going to divide these into four main types:

(1) *Prevention costs* – activities that when put in place seek to avoid prospective environmental damage. Examples from PT INKA include:

1. Facility maintenance fees: these are used to maintain facilities

and equipment in the management of hazardous and toxic waste.

2. Safety signage and barriers to prevent accidents
3. Employee education and training costs related to environmental monitoring and other activities.

(2) *Appraisal* – monitor environmental risks with the intention to avoid exposure to damage through the occurrence of a risk event. Examples include:

1. Coordination fee with environmental division team: this is to coordinate internal environmental team with local government officials.
2. Cost of wastewater test for quality control
3. Cost of air analysis and stack emissions
4. Audit fees related to health and safety checks
5. Installation of equipment to detect emissions

(3) *Internal failure costs* – environmental issues that arise within the company.

Whilst the company did **not** have any listed internal failure costs an example of this might be ineffective training in safety protocols over storing hazardous waste causing a breach of containment.

(4) *External failure costs* – are those adverse environmental impacts that affect the broader society. Examples include:

1. Cleaning and maintaining protected forest due to emissions released by mills and dust particles from grid blasting and pigmentation processes. As this impacts the community surrounding the business premises it is an external failure cost.

2. Additionally the cost of nuisance permit could also be viewed as an external failure cost, as there is a failure to mitigate the effects on the surrounding community of increased noise, vibration, smell, and pollutants.

This exploration of external costs generated by an organisation's daily operations indicates a need for greater transparency and accountability to concerned stakeholders. By reporting this information, stakeholders are able to make more informed decisions, which does not only include those adversely impacted such as the local community, but customers of PT INKA, who place importance of operating sustainably. If this were the case, to maintain trade relationships broad transformative consequences would occur at PT INKA, including changes to operating processes and practices and the scope of reporting extended to greater environmental and social disclosures.

PT INKA focuses more on prevention and detection activities as indicated by the prevention and appraisal costs, rather than the internal and external failure costs. This indicates that this company is successful in avoiding internal and external environmental damage, which may be attributable to their prevention and detection activities, or they may not be reporting breaches, which may not be required under law in their jurisdiction. Ideally, organisations should focus on prevention and appraisal costs as opposed to internal and external failure costs. However, failure costs are not always clear. For example, would you invest \$100 million into a prevention system to avoid an accident that happens once in a thousand years? These are difficult questions to answer and require careful analysis. Good cost-benefit analysis using accounting can better help to identify the failure costs to be weighed up against the costs of investment into problem prevention or appraisal.

Conclusion

For an organisation to become sustainable it requires substantive change commencing with an engaged, supportive, and communicative culture. In the exploration of sustainability reporting throughout this chapter it is clear that reporting is not merely an additional organisational practice, it is a whole new way of thinking, acting, and communicating. It is not limited to managers and employees, but across the supply chain. Whilst this type of reporting is relatively new when compared with traditional financial reporting, there are numerous sustainability tools, frameworks, standards, and advisory professionals entering the industry and providing greater choice for organisations.

Test your knowledge



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Chapter 11 Practice Questions

RINA DHILLON

Practice Questions

1. Sustainability is referred to as being:

-
- a. organisations that can last longer than others.
 - b. the pursuit of endeavours that prolong the use of resources.
 - c. any activity that is of a higher than average standard.
 - d. the pursuit of green policies at all costs.
-

2. A large part of sustainability accounting practices involves the measurement of:

-
- a. units produced.
 - b. units sold.
 - c. government policy.
 - d. resource consumption.
-

3. Which of the following would not be considered an external cost?

-
- a. Direct labour cost
 - b. Community degradation from an organisation's operations
 - c. Lowering school completion rates in village communities – youths choosing to work instead in factories
 - d. Environmental degradation from organisational operations
-

4. Triple bottom line reporting considers:

-
- a. economic, social and psychological performance.
 - b. social, economic and environment performance.
 - c. psychological, economic and social performance.
 - d. social, economic and management performance.
-

5. Sustainability value chains attempt to show how:

-
- a. profit can be earned from being more efficient.
 - b. costs can be minimised by focusing on productivity.
 - c. organisational sustainability activities can lead to superior business outcomes.
 - d. all of these responses are correct.
-

6. Which of the following elements does *not* relate to the economic aspect of triple bottom line reporting?

-
- a. Expenses
 - b. Profit
 - c. Donations to community
 - d. Exports
-

7. Which of the following elements does *not* relate to the social aspect of triple bottom line reporting?

-
- a. Labour standards
 - b. Revenues
 - c. Donations to community
 - d. Health and safety
-

8. Which of the following elements does *not* relate to the environmental aspect of triple bottom line reporting?

-
- a. GHG emissions
 - b. Water use
 - c. Spills onto waterways
 - d. Exports
-

9. Which of the following is an example of a prevention cost?

-
- a. Fines for breach of environmental standards
 - b. Employee health costs
 - c. Implementation costs of new technology to minimise risk of environmental damage
 - d. Costs to monitor existing environmental systems in the organisation
-

10. Which of the following is an example of an appraisal cost?

-
- a. Fines for breach of environmental standards
 - b. Employee health costs
 - c. Implementation costs of new technology to minimise risk of environmental damage
 - d. Costs to monitor existing environmental systems in the organisation
-

11. Which of the following is an example of an internal failure cost?

-
- a. Fines for breach of environmental standards
 - b. Employee health costs
 - c. Implementation costs of new technology to minimise risk of environmental damage
 - d. Costs to monitor existing environmental systems in the organisation
-

12. Which of the following is an example of an external failure cost?

-
- a. Fines for breach of environmental standards
 - b. Employee health costs
 - c. Implementation costs of new technology to minimise risk of environmental damage
 - d. Costs to monitor existing environmental systems in the organisation
-

Solutions: (answers are directly linked to definitions in Chapter 11 textbook content)

- 1. b
- 2. d
- 3. a
- 4. b
- 5. c
- 6. c
- 7. b
- 8. d
- 9. c
- 10. d
- 11. b
- 12. a