

CHAPTER 15

ACCOUNTING FOR

FINANCIAL INSTRUMENTS

LEARNING OBJECTIVES

Upon completing this chapter readers should be able to:

- L01 define a financial instrument;
- L02 describe various types of financial instruments;
- L03 differentiate between a primary financial instrument and a derivative financial instrument;
- L04 differentiate between the debt and equity components of a financial instrument;
- L05 describe how to measure financial instruments;
- L06 account for the fact that some derivative financial instruments can significantly increase the risk exposure of an organisation, necessitating full disclosure in relation to such instruments;
- L07 provide accounting entries for various types of futures contracts, options, swap agreements and compound financial instruments;
- L08 describe how the debt and equity components of a compound equity instrument are to be determined; and
- L09 recall the requirements of NZ IFRS 7 'Financial Instruments: Disclosure', NZ IAS 32 'Financial Instruments: Disclosure and Presentation' and of NZ IAS 39 'Financial Instruments: Recognition and Measurement'.

INTRODUCTION TO ACCOUNTING FOR FINANCIAL INSTRUMENTS

Accounting for financial instruments has, in recent years, been a controversial area of accounting. In fact, so strong was the opposition in Europe to the accounting standard IAS 39 (upon which NZ IAS 39 is based) that the European Union's very adoption in 2005 of accounting standards released by the International Accounting Standards Board was jeopardised. In response to the concerns of the European Union—voiced particularly by European banks—the IASB made amendments to IAS 39. The amendments meant that NZ IAS 39 was, in turn, amended and re-released in September 2005, in part to appease the European banks.

NZ IFRS 7 'Financial Instruments: Disclosure', NZ IAS 32 'Financial Instruments: Presentation' and NZ IAS 39 'Financial Instruments: Recognition and Measurement' are complex and detailed standards. NZ IAS 32 (IAS 32) was developed before NZ IAS 39 (IAS 39) and NZ IFRS 7. It was initially entitled NZ IAS 32 'Financial Instruments: Presentation and Disclosure', but in late 2005 accounting standards were amended so that NZ IAS 32 covered presentation issues (for example, whether financial instruments should be classified and presented as debt or equity), and a new standard, NZ IFRS 7, provided detailed disclosure requirements for financial instruments. In explaining the objective of the revised standard (as issued in September 2005), and its relationship with both NZ IFRS 7 and NZ IAS 39, paragraphs 2 and 3 of the revised NZ IAS 32 'Financial Instruments: Presentation' state:

- 2. The objective of this Standard is to establish principles for presenting financial instruments as liabilities or equity and for offsetting financial assets and financial liabilities. It applies to the classification of financial instruments, from the perspective of the issuer, into financial assets, financial liabilities and equity instruments; the classification of related interest, dividends, losses and gains; and the circumstances in which financial assets and financial liabilities can be offset.*
- 3. The principles in this Standard complement the principles for recognising and measuring financial assets and financial liabilities in NZ IFRS 9 Financial Instruments and NZ IAS 39 Financial Instruments: Recognition and Measurement, and for disclosing information about them in NZ IFRS 7 Financial Instruments: Disclosures.*

As its name suggests, NZ IAS 39 addresses various recognition and measurement issues as they relate to financial instruments (as defined in NZ IAS 32). The three standards cover a range of issues—sometimes in quite complex terms—and contain extensive application guidance. NZ IAS 39 includes Implementation Guidance paragraphs (bearing the prefix IG). It is beyond the scope of this chapter to address all the requirements of the standards; our intention is to address the main ones. It is worth stressing that these standards, particularly NZ IAS 39, are relatively complex standards.

15.1 FINANCIAL INSTRUMENTS DEFINED

This chapter addresses issues associated with **financial instruments**. The definition of financial instruments adopted for the purposes of this discussion will be that provided at paragraph 11 of NZ IAS 32 'Financial Instruments: Disclosure and Presentation', namely: 'any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity'. If these components are absent, an item is not deemed to be a financial instrument.

It is stressed that a 'financial instrument' has two sides—one party to the contract must have a financial asset whereas the other party to the contract holds a financial liability or equity instrument. As the definition of 'financial instrument' just provided indicates, there must be a contractual right or obligation in existence for something to be deemed to be a financial instrument. If there is no contractual right or obligation then there is no financial instrument. For example, a liability for tax payable would not be considered to be a financial instrument.

The above definition of a financial instrument generates, in its turn, a need for definitions of **financial asset**, **financial liability** and equity instrument (given that these terms are used in the definition of financial instrument). According to NZ IAS 32, 'financial asset' means any asset that is:

- (a) cash;*
- (b) an equity instrument of another entity;*
- (c) a contractual right:*

financial instrument

Any contract that gives rise to both a financial asset of one entity and a financial liability or equity instrument of another entity.

financial asset

Any asset that is cash, or a contractual right to receive cash or another financial asset from another entity or to exchange financial instruments with another entity, or an equity instrument of another entity.

financial liability

Any liability that is a contractual obligation to deliver cash or another financial asset to or exchange financial assets or liabilities with another entity.

- (i) to receive cash or another financial asset from another entity; or
 - (ii) to exchange financial assets or financial liabilities with another entity under conditions that are potentially favourable to the entity; or
- (d) a contract that will or may be settled in the entity's own equity instruments and is:
- (i) a non-derivative for which the entity is or may be obliged to receive a variable number of the entity's own equity instruments; or
 - (ii) a derivative that will or may be settled other than by the exchange of a fixed amount of cash or another financial asset for a fixed number of the entity's own equity instruments. For this purpose the entity's own equity instruments do not include puttable financial instruments classified as equity instruments in accordance with paragraphs 16A and 16B, instruments that impose on the entity an obligation to deliver to another party a pro rata share of the net assets of the entity only on liquidation and are classified as equity instruments in accordance with paragraphs 16C and 16D, or instruments that are contracts for the future receipt or delivery of the entity's own equity instruments.

'Financial liability', on the other hand, means any liability that is:

- (a) a contractual obligation:
- (i) to deliver cash or another financial asset to another entity; or
 - (ii) to exchange financial assets or financial liabilities with another entity under conditions that are potentially unfavourable to the entity; or
- (b) a contract that will or may be settled in the entity's own equity instruments and is:
- (i) a non-derivative for which the entity is or may be obliged to deliver a variable number of the entity's own equity instruments; or
 - (ii) a derivative that will or may be settled other than by the exchange of a fixed amount of cash or another financial asset for a fixed number of the entity's own equity instruments. For this purpose, rights, options or warrants to acquire a fixed number of the entity's own equity instruments for a fixed amount of any currency are equity instruments if the entity offers the rights, options or warrants pro rata to all of its existing owners of the same class of its own non-derivative equity instruments. Also, for these purposes the entity's own equity instruments do not include puttable financial instruments that are classified as equity instruments in accordance with paragraphs 16A and 16B, instruments that impose on the entity an obligation to deliver to another party a pro rata share of the net assets of the entity only on liquidation and are classified as equity instruments in accordance with paragraphs 16C and 16D, or instruments that are contracts for the future receipt or delivery of the entity's own equity instruments.

As an exception, an instrument that meets the definition of a financial liability is classified as an equity instrument if it has all the features and meets the conditions in paragraphs 16A and 16B or paragraphs 16C and 16D.

An equity instrument is defined in NZ IAS 32 as 'any contract that evidences a residual interest in the assets of an entity after deducting all of its liabilities'. The most commonly issued equity instrument would be an ordinary share in a company. An attribute of an equity instrument is that the holder is not entitled to a fixed-rate return.

The above definitions make reference to derivatives (also termed derivative financial instruments). Derivatives (such as share options, futures, currency swaps) derive their value from other underlying items (such as receivables or ordinary shares). Derivatives are discussed in NZ IAS 32 at paragraph AG16. This paragraph states:

Derivative financial instruments create rights and obligations that have the effect of transferring between the parties to the instrument one or more of the financial risks inherent in an underlying primary financial instrument. On inception, derivative financial instruments give one party a contractual right to exchange financial assets or financial liabilities with another party under conditions that are potentially favourable, or a contractual obligation to exchange financial assets or financial liabilities with another party under conditions that are potentially unfavourable. However, they generally do not result in a transfer of the underlying primary financial instrument on inception of the contract, nor does such a transfer necessarily take place on maturity of the contract. Some instruments embody both a right and an obligation to make an exchange. Because the terms of the exchange are determined on inception of the derivative instrument, as prices in financial markets change those terms may become either favourable or unfavourable.

In determining the classification of a financial instrument as either a financial liability or an equity instrument, a central issue is the existence of a 'contractual obligation'. If a financial instrument does not give rise to a contractual obligation on the part of the issuer to deliver cash or another financial asset, or to exchange another financial instrument under conditions that are potentially unfavourable, it is considered to be an equity instrument. As NZ IAS 32 paragraph 17 states:

With the exception of the circumstances described in paragraphs 16A and 16B or paragraphs 16C and 16D, a critical feature in differentiating a financial liability from an equity instrument is the existence of a contractual obligation of one party to the financial instrument (the issuer) either to deliver cash or another financial asset to the other party (the holder) or to exchange financial assets or financial liabilities with the holder under conditions that are potentially unfavourable to the issuer. Although the holder of an equity instrument may be entitled to receive a pro rata share of any dividends or other distributions of equity, the issuer does not have a contractual obligation to make such distributions because it cannot be required to deliver cash or another financial asset to another party.

Evidently, then, the definitions of 'financial asset' and 'financial liability' are tied to a determination of whether one party to the contractual arrangement will be required to exchange financial assets or financial liabilities with another entity under conditions that are potentially favourable to the entity (meaning it would be a financial asset), or whether the party will be required to exchange financial assets or financial liabilities with another entity under conditions that are potentially unfavourable to the entity (in which case it would be a financial liability). But what is meant by favourable and unfavourable in this context? The distinction is illustrated in Worked Example 15.1 in which a contractual arrangement is entered into, with one party to a contract buying an option contract from another entity.

■ **WORKED EXAMPLE 15.1** SHARE OPTIONS AND DETERMINING WHETHER A FINANCIAL ASSET OR A FINANCIAL LIABILITY EXISTS

On 1 July 2012 Buyer Limited purchases an option contract from Seller Limited for \$1000 that gives Buyer Limited the right to acquire 10 000 shares in Bells Limited for a price (exercise price) of \$5.00 per share. When the contract was exchanged the price of Bells Limited's shares was \$4.50 each. The option entitles Buyer Limited to exercise the options to buy the shares any time within the next six months. If the options are not exercised within the six-month period, they will expire on 31 December 2012.

Required • Determine whether a financial liability or financial asset exists.

Solution to Worked Example 15.1

This options contract establishes a financial instrument that gives Buyer Limited the right to acquire 10 000 shares in Bells Limited for \$5.00 a share, and creates an obligation for Seller Limited to sell 10 000 shares in Bells Limited to Buyer Limited for \$5.00 a share.

From Buyer Limited's perspective it has a financial asset. The contract gives Buyer Limited the right to exchange financial assets (cash for shares) under conditions that are potentially favourable. Should the price of Bells Limited's shares increase beyond \$5.00, Buyer Limited would exercise the options and make a profit. The worst case scenario for Buyer Limited would be the shares in Bells Limited not increasing beyond \$5.00 (they would be 'out of the money') and Buyer Limited letting the options lapse.

From Seller Limited's perspective, it has a financial liability. Seller Limited has entered a contract to exchange financial assets (shares for cash) under conditions that are potentially unfavourable to the entity. For example, if the shares in Bells Limited increase to \$6.00, Seller Limited will be required to acquire 10 000 shares from the market for \$6.00 each and sell them to Buyer Limited for \$5.00 each.

It should be noted that the possibility in Worked Example 15.1 of Seller Limited having to transfer financial assets on unfavourable terms is sufficiently great for the contractual arrangement to lead to a financial liability being recognised. NZ IAS 32 paragraph AG17 notes that likelihood of the option being exercised does not impact on its classification as a financial liability. Consistent with the above discussion, paragraph AG17 states:

A put or call option to exchange financial assets or financial liabilities (i.e. financial instruments other than an entity's own equity instruments) gives the holder a right to obtain potential future economic benefits associated with changes in the fair value of the financial instrument underlying the contract. Conversely, the writer of an option assumes an obligation to forgo potential future economic benefits or bear potential losses of economic benefits associated with changes in the fair value of the underlying financial instrument. The contractual right of the holder and obligation of the writer meet the definition of a financial asset and a financial liability, respectively. The financial instrument underlying an option contract may be any financial asset, including shares in other entities and interest bearing instruments. An option may require the writer to issue a debt instrument, rather than transfer a financial asset, but the instrument underlying the option would constitute a financial asset of the holder if the option were exercised. The option-holder's right to exchange the financial asset under potentially favourable conditions and the writer's obligation to exchange the financial asset under potentially unfavourable conditions are distinct from the underlying financial asset to be exchanged upon exercise of the option. The nature of the holder's right and of the writer's obligation are not affected by the likelihood that the option will be exercised.

The introduction of the definitions of financial assets and financial liabilities as a result of the adoption of international accounting standards in New Zealand from 2007 (2005 for early adopters) meant that many reporting entities had to disclose various financial instruments as financial liabilities when they had not previously done so.

The Application Guidance paragraphs in NZ IAS 32 provide explanations of what kinds of items represent financial assets and financial liabilities. Some of these are reproduced in what follows.

AG3. Currency (cash) is a financial asset because it represents the medium of exchange and is therefore the basis on which all transactions are measured and recognised in financial statements. A deposit of cash with a bank or similar financial institution is a financial asset because it represents the contractual right of the depositor to obtain cash from the institution or to draw a cheque or similar instrument against the balance in favour of a creditor in payment of a financial liability.

AG4. Common examples of financial assets representing a contractual right to receive cash in the future and corresponding financial liabilities representing a contractual obligation to deliver cash in the future are:

- (a) trade accounts receivable and payable;*
- (b) notes receivable and payable;*
- (c) loans receivable and payable; and*
- (d) bonds receivable and payable.*

In each case, one party's contractual right to receive (or obligation to pay) cash is matched by the other party's corresponding obligation to pay (or right to receive).

AG5. Another type of financial instrument is one for which the economic benefit to be received or given up is a financial asset other than cash. For example, a note payable in government bonds gives the holder the contractual right to receive and the issuer the contractual obligation to deliver government bonds, not cash. The bonds are financial assets because they represent obligations of the issuing government to pay cash. The note is, therefore, a financial asset of the note holder and a financial liability of the note issuer.

AG10. Physical assets (such as inventories, property, plant and equipment), leased assets, and intangible assets (such as patents and trademarks) are not financial assets. Control of such physical and intangible assets creates an opportunity to generate an inflow of cash or another financial asset, but it does not give rise to a present right to receive cash or another financial asset.

At this point it should be stressed that because of implications for reported leverage (perhaps measured by dividing total debt by total assets) and the fact that leverage ratios are used as an indicator of the risk inherent in investing in an entity, an organisation will not be indifferent to whether an item is classified as debt or equity. All things being equal, firms will prefer an item to be classified as equity.

As the discussion so far has shown, the term 'financial instrument' encompasses a wide range of items, including cash at bank, bank overdrafts, term deposits, trade receivables and payables, dividends payable, borrowings, loans receivable, notes receivable, notes payable, bonds receivable, bonds payable, investments, options, forward foreign exchange agreements, foreign currency swaps and interest rate swaps. For example, cash at bank would be considered to be a financial instrument, given that it represents for one party a right to demand cash at a future date and an obligation by another party to provide cash (refer to the definitions applicable to financial instruments provided earlier). Similarly, trade receivables fits the definition of a financial instrument because it represents for one party a right to receive cash and an obligation on the part of another party to provide cash.

As the name 'financial instrument' would suggest, the ultimate transfer of a financial asset is involved: if an arrangement does not involve the ultimate transfer of a financial asset, it is not considered to be a financial instrument. For example, if a contractual commitment is to be satisfied through the delivery of a non-financial asset, such as inventory, or through the provision of services, it is not a financial instrument. Similarly, prepayments are not financial instruments because they typically provide a right to future goods or services and not to cash or another financial instrument.

Financial instruments can be further classified as either primary financial instruments or derivative (sometimes called 'secondary') financial instruments. Examples of primary financial instruments would include receivables, payables and equity securities such as ordinary shares. The accounting treatment of primary financial instruments is either fairly straightforward or is covered in other chapters of this book. Hence, this chapter will focus on accounting for **derivative financial instruments**. As previously indicated, NZ IAS 32 paragraph AG16 provides a general description of derivative financial instruments (paragraph AG16 was reproduced above).

derivative financial instrument
Instrument that creates rights and obligations with the effect of transferring one or more of the financial risks inherent in an underlying primary financial instrument.

Derivative financial instruments include financial options, futures, forward contracts and interest rate and currency swaps. (The accounting treatment of these instruments will be considered later in this chapter.) As an example of a derivative financial instrument, consider Worked Example 15.2.

■ WORKED EXAMPLE 15.2 A DERIVATIVE FINANCIAL INSTRUMENT

Assume that McCoy Limited imports fibreglass from the US. On 1 February 2012, it acquires the material at a cost denominated in US dollars, the amount being US\$500 000, payable in two months' time. The exchange rate at the time is NZ\$1 = US\$0.50. The actual debt would be considered to be a trade payable and a primary financial instrument.

Required •

- As the debt is payable in two months' time, describe the potential risk to McCoy Limited.
- Assuming that McCoy Limited is worried about possible adverse exchange rate movements, what action could the company take?

Solution to Worked Example 15.2

- As the debt is denominated in US dollars, fluctuations in the exchange rate, which typically occur daily, will change the amount that will ultimately be paid in New Zealand dollars. For example, if the exchange rate falls from NZ\$1 = US\$0.50 to NZ\$1 = US\$0.47, the payable denominated in New Zealand dollars will increase from \$1 000 000 (that is, US\$500 000 ÷ 0.50) to \$1 063 830 (that is, US\$500 000 ÷ 0.47).
- Assuming that McCoy Limited is worried about possible adverse exchange rate movements the company could approach a supplier of finance such as a bank and enter into a forward rate agreement. In the event this course of action is taken, the bank will agree to supply McCoy Limited with US\$500 000 in two months' time at an agreed forward rate of NZ\$1 = US\$0.48. Such an agreement means that if the exchange rate changes McCoy Limited will still receive US\$500 000 from the bank at an agreed cost of \$1 041 667. McCoy Limited has therefore 'locked in' the actual price of the material at \$1 041 667 (US\$500 000 ÷ 0.48) and the bank must absorb any adverse movements in the exchange rate. The agreement with the bank would be considered to be a derivative financial instrument, with the financial risks inherent in the underlying financial instrument having been transferred from McCoy Limited to the bank. McCoy Limited would have both a foreign currency receivable (a financial asset) and a foreign currency payable (a financial liability) with the overseas supplier. From the perspective of McCoy Limited, gains on one would be offset by losses on the other (and vice versa). McCoy Limited would be considered to have entered a hedging arrangement.

The use and development of alternative forms of financial instruments have increased markedly in the past decade—particularly the use of secondary, or derivative, financial instruments. This increase has provided accounting regulators with numerous issues to address. For many years it was common for many financial instruments to be kept 'off balance sheet', with minimal or no disclosure of their existence. This is now changing in response to the new disclosure requirements. In the past there was commonly minimal disclosure of instruments such as futures, swaps and options (all to be discussed further in this chapter). This meant that many readers of financial statements were unaware of the risks an organisation was exposed to, particularly if the instruments concerned were in the form of securities such as futures. Where organisations fail to disclose details of particular material financial instruments, it is difficult to understand how such financial statements would meet the true and fair criterion of the *Financial Reporting Act 1993*.

Financial Accounting in the News 15.1 is an article by Daniel Riorden entitled 'Hedging with futures, options and swaps', which appeared in the 30 June 1995 issue of *The Independent*. It describes the use of derivative financial instruments.

The newer forms of financial instruments seem to have been developed primarily in order to reduce risk, particularly where there are high levels of volatility in the values of the underlying instruments. They can also be useful as a means of attracting additional funds into an organisation. If interest rates or foreign currency exchange rates are expected to be volatile, instruments (typically derivative instruments) will likely be developed and used to minimise the financial impacts of the potential volatility. Parties that acquire financial instruments might also do so speculatively, with the potential to make substantial gains, or substantial losses. This can be the case particularly for parties that elect to speculate with various forms of futures contracts.

A derivative is a financial instrument—such as a swap, option or future—which derives its value from another, real financial instrument—such as a bond, share, commodity price or spot foreign exchange transaction.

Corporates and private investors use derivatives largely to hedge against fluctuations in interest rates, share or commodity prices and currencies. Some use derivatives to speculate.

An option is a contract that gives the owner the right to buy ('call') or sell ('put') a specific number of shares, bonds, foreign exchange or commodities, at a fixed price within an agreed time period. The price of the option, which is negotiated between the buyer and seller, is called the premium.

The holder of the option may exercise the option or may choose to let it expire, depending on how prices change between writing the option and the exercise date.

A potato chip maker, for example, might buy a potato option to insure against a rise in the price of his biggest production cost, potatoes.

If potatoes cost \$1 a kilo now, he might purchase an option that gives him the right to buy his potatoes for the same price a year later. If, in a year's time, spud prices have indeed risen, say to \$1.20 a kilo, under the option he can still buy at the old price of \$1. He saves 20c a kilo, less the cost of the option. Of course, if spud prices fall or stay the same, he lets his option lapse, given that his 'insurance policy' was in hindsight unnecessary.

A swap is an exchange of obligations between two parties. In an interest rate swap, one party borrows funds at a fixed interest rate, while another borrows funds at a variable or floating rate. The parties then swap the obligation without reference to the original lender, though in each case the original borrower is ultimately responsible for the original debt.

In a currency swap a borrower exchanges a stream of payments in one currency for a stream of payments in another. New Zealand companies borrowing in foreign currencies on offshore markets commonly swap those loans back into Kiwi dollar obligations.

A futures contract is an agreement to buy or sell a specific amount of a commodity (such as pork bellies or gold) or a financial instrument (shares or bonds) at a particular price on a stipulated future day. The contract obligates the buyer to purchase the underlying commodity or financial instrument and the seller to sell it, unless the contract is sold to another before settlement date, which may happen if a trader wants to take a profit or cut a loss.

Trading on regulated futures exchanges, such as the NZ Futures & Options Exchange, is conducted on a margin basis, which means for a small outlay traders can make huge profits or incur enormous losses.

Source

Daniel Riorden, 'Hedging with futures, options and swaps', *The Independent*, 30 June 1995.

15.2 SET-OFF OF FINANCIAL ASSETS AND FINANCIAL LIABILITIES

A set-off can be defined as the reduction of an asset by a liability or of a liability by an asset in the presentation of a statement of financial position (balance sheet), so that the net amount only is presented.

Set-off

The reduction of an asset by a liability or of a liability by an asset in the presentation of the statement of financial position so that the net amount is recognised.

Requirements relating to the **set-off** of assets and liabilities are incorporated within NZ IAS 32 'Financial Instruments: Presentation'. NZ IAS 32 requires assets and liabilities to be set off against each other for statement of financial position disclosure purposes when a legally recognised right of set-off for these items exists and the reporting entity intends to settle on a net basis, or to realise the asset and settle the liability simultaneously.

Specifically, NZ IAS 32 paragraph 42 states:

A financial asset and a financial liability shall be offset and the net amount presented in the statement of financial position when, and only when, an entity:

- (a) *currently has a legally enforceable right to set off the recognised amounts; and*
- (b) *intends either to settle on a net basis, or to realise the asset and settle the liability simultaneously.*

In accounting for a transfer of a financial asset that does not qualify for derecognition, the entity shall not offset the transferred asset and the associated liability (see NZ IAS 39, paragraph 36).

The above requirement makes reference to financial assets and financial liabilities. The definitions of a financial asset and a financial liability contained in NZ IAS 32 paragraph 11, have been provided earlier in this chapter on page 507 so are not repeated here. A review of the requirements of NZ IAS 32 paragraph 42 shows that a set-off may occur only where the entity has a legally enforceable right of set-off. According to NZ IAS 32 paragraph 45:

A right of set-off is a debtor's legal right, by contract or otherwise, to settle or otherwise eliminate all or a portion of an amount due to a creditor by applying against that amount an amount due from the creditor. In unusual circumstances, a debtor may have a legal right to apply an amount due from a third party against the amount due to a creditor provided that there is an agreement between the three parties that clearly establishes the debtor's right of set-off. Because the right of set-off is a legal right, the conditions supporting the right may vary from one legal jurisdiction to another and the laws applicable to the relationships between the parties need to be considered.

Apart from requiring a legal right of set-off, NZ IAS 32 paragraph 42 also requires that there be an intention to offset. In this regard, NZ IAS 32 paragraph 46 states:

The existence of an enforceable right to set off a financial asset and a financial liability affects the rights and obligations associated with a financial asset and a financial liability and may affect an entity's exposure to credit and liquidity risk. However, the existence of the right, by itself, is not a sufficient basis for offsetting. In the absence of an intention to exercise the right or to settle simultaneously, the amount and timing of an entity's future cash flows are not affected. When an entity intends to exercise the right or to settle simultaneously, presentation of the asset and liability on a net basis reflects more appropriately the amounts and timing of the expected future cash flows, as well as the risks to which those cash flows are exposed. An intention by one or both parties to settle on a net basis without the legal right to do so is not sufficient to justify offsetting because the rights and obligations associated with the individual financial asset and financial liability remain unaltered.

Assume, for example, that Entity A owes Entity B an amount of \$1.2 million and Entity B owes Entity A an amount of \$1 million. Assume also that both parties intend to settle on a net basis. As a result of the set-off, Entity A would be required to show a payable of only \$200 000 in its statement of financial position, and Entity B would show a receivable of \$200 000 in its statement of financial position. Whenever a right to offset exists, and it is intended that the right will be exercised, disclosure on a net basis is required.

Performing a set-off will improve an entity's gearing ratio, which might be of importance if a firm is subject to constraints imposed by debt agreements, as shown in Worked Example 12.1.

Many organisations in New Zealand offset their assets and liabilities. At times, significant amounts are involved. For example, for what Note 1: Accounting Policies to the 2009 Annual Report of New Zealand Post Limited states in relation to set-offs, see below.

OFFSETTING FINANCIAL INSTRUMENTS

Financial assets and financial liabilities are offset and the net amount reported in the statement of financial position when there is a legally enforceable right to offset the recognised amounts and there is an intention to settle on a net basis or realise the asset and settle the liability simultaneously.

■ WORKED EXAMPLE 15.3 SETTING OFF DEBT

Assume that Grommet Limited has the following statement of financial position before set-off:

Grommet Limited

Statement of financial position at 31 March 2012

	\$
Non-current assets	400 000
Loans receivable	600 000
	<u>1 000 000</u>
Loans payable	500 000
Equity	500 000
	<u>1 000 000</u>

Assume that Grommet Limited has an amount of \$200 000 owing to Goofyfoot Limited and an amount of \$240 000 receivable from Goofyfoot Limited. Assume also that a right of set-off exists and that Grommet Limited offsets the payable of \$200 000 against the receivable of \$240 000.

Required • Prepare a revised statement of financial position that incorporates the set-off.

Solution to Worked Example 15.3

Statement of financial position post-set-off

Grommet Limited

Statement of financial position at 31 March 2012

	\$
Non-current assets	400 000
Loans receivable	400 000
	<u>800 000</u>
Loans payable	300 000
Equity	500 000
	<u>800 000</u>

As a result of the set-off, the gearing ratio of debt to total assets has dropped from 50 per cent to 37.5 per cent. Utilising a right of set-off would constitute a reasonably inexpensive method of reducing a firm's gearing, compared with such activities as buying back the debt. As such, a set-off represents a low-cost way of loosening debt constraints (if they exist). More simply, it represents an easy way to produce a statement of financial position that shows an improved financial position in terms of such indicators as leverage.

15.3 DEBT VERSUS EQUITY COMPONENTS OF FINANCIAL INSTRUMENTS

When financial instruments are issued that are to be placed on the statement of financial position, the issuer is required to determine whether the item should be disclosed as a liability or as equity (or perhaps as part debt and part equity). All things being equal, corporate managers would prefer to disclose financial instruments as equity rather than debt. There are many reasons for this. Leverage ratios (for example, total debt divided by total assets) are often used as indicators of corporate risk, hence the lower the reported debt, the lower the apparent risk. Organisations also typically have numerous contracts with their debt providers, which include certain restrictions on the amount of additional debt the organisation can raise (see Chapter 3 for an overview of debt contracts and their related restrictions). Following the initial release of IAS 32 (and the corresponding release of NZ IAS 32), many corporations developed financial instruments to comply with the NZ IAS 32's definition of equity. In substance, many of the financial instruments were liabilities, but from a technical perspective they complied with the classifications of equity provided in NZ IAS 32. Many of these instruments were very complex, and the IASB responded by coming up with equally complicated rules to cover the complex financial instruments (many of these rules being quite difficult for many accountants to understand). The aim of the amendments to the standard was that if something was of the substance of a financial liability, then it should be disclosed as such. This culminated in new versions of IAS 32 (NZ IAS 32) and IAS 39 (NZ IAS 39) being issued.

In determining whether the financial instrument is debt or equity, consideration should be given to the economic substance of the instrument, rather than simply its legal form. Specifically, NZ IAS 32 paragraph 15 states:

The issuer of a financial instrument shall classify the instrument, or its component parts, on initial recognition as a financial liability, a financial asset or an equity instrument in accordance with the substance of the contractual arrangement and the definitions of a financial liability, a financial asset and an equity instrument.

NZ IAS 32 paragraph 16 provides further guidance on whether a financial instrument is debt or equity. For a financial instrument to be classified an equity instrument (the preferred outcome for most reporting entities) it must satisfy the conditions identified at both subparagraph (a) and (b) of paragraph 16, these being:

- (a) *The instrument includes no contractual obligation:*
 - (i) *to deliver cash or another financial asset to another entity; or*
 - (ii) *to exchange financial assets or financial liabilities with another entity under conditions that are potentially unfavourable to the issuer.*
- (b) *If the instrument will or may be settled in the issuer's own equity instruments, it is:*
 - (i) *a non-derivative that includes no contractual obligation for the issuer to deliver a variable number of its own equity instruments; or*
 - (ii) *a derivative that will be settled only by the issuer exchanging a fixed amount of cash or another financial asset for a fixed number of its own equity instruments. For this purpose, rights, options or warrants to acquire a fixed number of the entity's own equity instruments for a fixed amount of any currency are equity instruments if the entity offers the rights, options or warrants pro rata to all of its existing owners of the same class of its own non-derivative equity instruments. Also, for these purposes the issuer's own equity instruments do not include instruments that have all the features and meet the conditions described in paragraphs 16A and 16B or paragraphs 16C and 16D, or instruments that are contracts for the future receipt or delivery of the issuer's own equity instruments.*

A contractual obligation, including one arising from a derivative financial instrument, that will or may result in the future receipt or delivery of the issuer's own equity instruments, but does not meet conditions (a) and (b) above, is not an equity instrument. As an exception, an instrument that meets the definition of a financial liability is classified as an equity instrument if it has all the features and meets the conditions in paragraphs 16A and 16B or paragraphs 16C and 16D.

Consistent with subparagraph (b)(i) and (ii) above, paragraph 21 of NZ IAS 32 further emphasises that something is not an equity instrument simply because it may result in the delivery of an entity's equity instruments. According to NZ IAS 32 paragraph 21:

A contract is not an equity instrument solely because it may result in the receipt or delivery of the entity's own equity instruments. An entity may have a contractual right or obligation to receive or deliver a number of its own shares or other equity instruments that varies so that the fair value of the entity's own equity instruments to be received or delivered equals the amount of the contractual right or obligation. Such a contractual right or obligation may be for a fixed amount or an amount that fluctuates in part or in full in response to changes in a variable other than the market price of the entity's own equity instruments (e.g. an interest rate, a commodity price or a financial instrument price). Two examples are (a) a contract to deliver as many of the entity's own equity instruments as are equal in value to CU100 and (b) a contract to deliver as many of the entity's own equity instruments as are equal in value to the value of 100 ounces of gold. Such a contract is a financial liability of the entity even though the entity must or can settle it by delivering its own equity instruments. It is not an equity instrument because the entity uses a variable number of its own equity instruments as a means to settle the contract. Accordingly, the contract does not evidence a residual interest in the entity's assets after deducting all of its liabilities.

In considering paragraph 16(b)(i) above, assume, for example, that Bombora Limited has entered an agreement to provide Rocky Outcrop Limited with \$1 million of shares in Bombora Limited (based on market value at the time of payment). If the price of the shares was \$2.50 at the time the instrument was created Bombora Limited would have to provide 400 000 shares if the market price remains static. However, if the market price falls to \$2.00 Bombora Limited would have to provide 500 000 shares. The risk remains with Bombora Limited, and Rocky Outcrop Limited will receive \$1 million in shares regardless of the market price. Given these conditions the instrument that provides that Bombora Limited will transfer shares to Rocky Outcrop Limited would fail the test of paragraph 16(b)(i) and therefore would be considered to be a financial liability from Bombora Limited's perspective. From Rocky Outcrop Limited's perspective, it is a financial asset.

NZ IAS 32 provides a great deal of guidance for determining whether a financial instrument is a financial liability or an equity instrument. In further explanation of the above requirement, particularly as it applies to considerations of 'substance over form', NZ IAS 32 paragraph 18 states:

The substance of a financial instrument, rather than its legal form, governs its classification on the entity's statement of financial position. Substance and legal form are commonly consistent, but not always. Some financial instruments take the legal form of equity but are liabilities in substance and others may combine features associated with equity instruments and features associated with financial liabilities. For example:

- (a) a preference share that provides for mandatory redemption by the issuer for a fixed or determinable amount at a fixed or determinable future date, or gives the holder the right to require the issuer to redeem the instrument at or after a particular date for a fixed or determinable amount, is a financial liability.*
- (b) a financial instrument that gives the holder the right to put it back to the issuer for cash or another financial asset (a 'puttable instrument') is a financial liability, except for those instruments classified as equity instruments in accordance with paragraphs 16A and 16B or paragraphs 16C and 16D. The financial instrument is a financial liability even when the amount of cash or other financial assets is determined on the basis of an index or other item that has the potential to increase or decrease. The existence of an option for the holder to put the instrument back to the issuer for cash or another financial asset means that the puttable instrument meets the definition of a financial liability, except for those instruments classified as equity instruments in accordance with paragraphs 16A and 16B or paragraphs 16C and 16D. For example, open-ended mutual funds, unit trusts, partnerships and some co-operative entities may provide their unitholders or members with a right to redeem their interests in the issuer at any time for cash, which results in the unitholders' or members' interests being classified as financial liabilities, except for those instruments classified as equity instruments in accordance with paragraphs 16A and 16B or paragraphs 16C and 16D. However, classification as a financial liability does not preclude the use of descriptors such as 'net asset value attributable to unitholders' and 'change in net asset value attributable to unitholders' in the financial statements of an entity that has no contributed equity (such as some mutual funds and unit trusts) or the use of additional disclosure to show that total members' interests comprise items such as reserves that meet the definition of equity and puttable instruments that do not.*

As has been shown, the critical feature in differentiating a financial liability from an equity instrument is the existence of a contractual obligation on the part of one party to the financial instrument (the issuer) to deliver either cash or another financial asset to, or to exchange another financial instrument with, the other party (the holder).

To illustrate the process of determining whether a financial instrument is debt or equity, consider preference shares. If an entity issues preference shares that give the holder of the security (as opposed to the issuer of the security) an option to redeem the shares for cash, such securities should be classified as debt rather than equity. In further consideration of the issue of preference share disclosures, and the related substance over form issues, NZ IAS 32 paragraph AG26 states:

When preference shares are non-redeemable, the appropriate classification is determined by the other rights that attach to them. Classification is based on an assessment of the substance of the contractual arrangements and the definitions of a financial liability and an equity instrument. When distributions to holders of the preference shares, whether cumulative or non-cumulative, are at the discretion of the issuer, the shares are equity instruments. The classification of a preference share as an equity instrument or a financial liability is not affected by, for example:

- (a) a history of making distributions;*
- (b) an intention to make distributions in the future;*
- (c) a possible negative impact on the price of ordinary shares of the issuer if distributions are not made (because of restrictions on paying dividends on the ordinary shares if dividends are not paid on the preference shares);*
- (d) the amount of the issuer's reserves;*
- (e) an issuer's expectation of a profit or loss for a period; or*
- (f) an ability or inability of the issuer to influence the amount of its profit or loss for the period.*

A consequence of classifying a financial instrument as debt rather than as equity is that the related periodic payments would be classified as interest expenses, rather than as dividends (dividends being an appropriation of profits). Therefore, payments related to liabilities impact directly on reported profits or losses. Hence, not only will the classification of a financial instrument as a financial liability impact on the statement of financial position, it will also impact negatively on the statement of comprehensive income by making the associated payments an expense (interest expense), rather than distributions of profits (dividends). As NZ IAS 32 paragraph 35 states:

Interest, dividends, losses and gains relating to a financial instrument or a component that is a financial liability shall be recognised as income or expense in profit or loss. Distributions to holders of an equity instrument shall be debited by the entity directly to equity, net of any related income tax benefit. Transaction costs of an equity transaction shall be accounted for as a deduction from equity, net of any related income tax benefit.

Hence, payments related to liabilities impact directly on reported profits or losses. Payments made in relation to equity (dividends) do not impact on profits. The classification of interest, dividends, gains and losses as expenses or revenues or as direct debits or credits to equity must be consistent with the statement of financial position classification of the related financial instrument or component part as at the date on which the interest, dividends, gains or losses are recognised. As NZ IAS 32 paragraph 36 states:

The classification of a financial instrument as a financial liability or an equity instrument determines whether interest, dividends, losses and gains relating to that instrument are recognised as income or expense in profit or loss. Thus, dividend payments on shares wholly recognised as liabilities are recognised as expenses in the same way as interest on a bond. Similarly, gains and losses associated with redemptions or refinancings of financial liabilities are recognised in profit or loss, whereas redemptions or refinancings of equity instruments are recognised as changes in equity. Changes in the fair value of an equity instrument are not recognised in the financial statements.

convertible note
Debt that gives the holder the right to convert securities into ordinary shares of the issuer. Similar to a convertible bond, except less formal since there is no detailed deed.

While many financial instruments are wholly financial liabilities or equity instruments, an entity might also issue securities that have both equity and liability characteristics. For example, an organisation might issue **convertible notes**. These can be described as debt that gives the holder the right to convert the securities into ordinary shares of the issuer. Such securities are frequently classified as compound financial instruments as they can incorporate both equity instruments and financial liabilities. The debt and equity components of a compound security should be accounted for and disclosed separately on the basis of the economic substance of the security at the time of the initial recognition of the security. This is confirmed by NZ IAS 32 paragraph AG31 as follows:

A common form of compound financial instrument is a debt instrument with an embedded conversion option, such as a bond convertible into ordinary shares of the issuer, and without any other embedded derivative features.

Paragraph 28 requires the issuer of such a financial instrument to present the liability component and the equity component separately on the statement of financial position.

As noted previously, if the instrument is classified as a liability, the associated payments would generally be treated as expenses and not dividends. Later in this chapter the calculation of the debt and equity components of a compound financial instrument will be considered.

Where 'interest' is incurred (because the financial instrument is deemed to be a liability) in undertaking such activities as constructing assets, NZ IAS 32 does not preclude the entity's treating such costs as part of the cost of the asset under construction. Including interest in the cost of an asset under construction is also expressly permitted in NZ IAS 23 'Borrowing Costs'. The interest would ultimately be treated as an expense, either in the form of cost of goods sold or as part of an increased depreciation charge.

NZ IAS 32 does not allow a financial instrument, or the equity and liability components of a compound instrument, to be reclassified by the issuer after initial recognition, unless a transaction or other specific action by the issuer or holder of the instrument alters the substance of the financial instrument. In this regard, NZ IAS 32 paragraph 30 states:

Classification of the liability and equity components of a convertible instrument is not revised as a result of a change in the likelihood that a conversion option will be exercised, even when exercise of the option may appear to have become economically advantageous to some holders. Holders may not always act in the way that might be expected because, for example, the tax consequences resulting from conversion may differ among holders. Furthermore, the likelihood of conversion will change from time to time. The entity's contractual obligation to make future payments remains outstanding until it is extinguished through conversion, maturity of the instrument, or some other transaction.

So while revised probabilities will not lead to a change in classification of a financial instrument, a subsequent transaction may lead to a change in classification. To illustrate a transaction or action that changes the classification of an instrument, consider preference shares once again. As indicated in NZ IAS 32, if a preference share has no maturity or redemption date but gives an option to the issuer to redeem the share, the share will not satisfy the definition of a financial liability because the issuer does not have a present obligation to transfer financial assets to the shareholder or to take any other specific action. The issuer can keep such shares on issue without redemption. A financial liability arises, however, when the issuer of the shares exercises its option, usually by notifying the shareholders formally of the impending redemption of the shares. At that time, the instrument is reclassified from equity to liability.

The requirement that the issuer should not reclassify the instrument, unless a transaction or other specific action alters the substance of the financial instrument, represents a departure from the New Zealand 'Framework for the Preparation and Presentation of Financial Instruments' (the NZ Framework), which allows for the debt or equity classification to change from period to period on the basis of revisions of perceived probabilities. For example, if convertible notes are issued giving the holder the right to seek repayment in cash or to convert the notes to equity, and the market price of the shares is high, on the balance of probabilities the likelihood of conversion would be high. The securities would be considered to be equity according to the NZ Framework. Conversely, if the share price is low, application of the NZ Framework would see the securities classified as debt. With low share prices, the note holders would be unlikely to convert the notes to shares but would instead seek repayment.

In contrast, NZ IAS 32 would require convertible notes to be disclosed on the basis that the holder has the ability to contractually require the company to either repay the principal or convert to shares, regardless of the perceived likelihood of the respective actions. So NZ IAS 32 would require convertible notes to be classified as having both equity and liability components. The accounting treatment of convertible notes will be considered in greater depth later in this chapter. However, at this stage it should be appreciated, as already emphasised, that when a financial instrument has both a debt and an equity component, the debt and equity components must be recognised separately for statement of financial position purposes. As NZ IAS 32 paragraph 29 states:

An entity recognises separately the components of a financial instrument that (a) creates a financial liability of the entity and (b) grants an option to the holder of the instrument to convert it into an equity instrument of the entity. For example, a bond or similar instrument convertible by the holder into a fixed number of ordinary shares of the entity is a compound financial instrument. From the perspective of the entity, such an instrument comprises two components: a financial liability (a contractual arrangement to deliver cash or another financial asset) and an equity instrument (a call option granting the holder the right, for a specified period of time, to convert it into a fixed number of ordinary shares of the entity). The economic effect of issuing such an instrument is substantially the same as issuing simultaneously a debt instrument with an early settlement provision and warrants to purchase ordinary shares, or issuing a debt instrument with detachable share purchase warrants. Accordingly, in all cases, the entity presents the liability and equity components separately on its statement of financial position.

Since the debt and equity components must be recognised separately in the financial statements, the respective amounts to be recognised must be determined. The fair value of the liability component must be determined—which is recognised within the financial statements—and the difference between the fair value of the liability component and the fair value of the entire instrument allocated to the equity component. In other words, the amount attributed to the equity component is the residual. As NZ IAS 32 paragraphs 31 and 32 state:

31. *NZ IFRS 9 and NZ IAS 39 deal with the measurement of financial assets and financial liabilities. Equity instruments are instruments that evidence a residual interest in the assets of an entity after deducting all of its liabilities. Therefore, when the initial carrying amount of a compound financial instrument is allocated to its equity and liability components, the equity component is assigned the residual amount after deducting from the fair value of the instrument as a whole the amount separately determined for the liability component. The value of any derivative features (such as a call option) embedded in the compound financial instrument other than the equity component (such as an equity conversion option) is included in the liability component. The sum of the carrying amounts assigned to the liability and equity components on initial recognition is always equal to fair value that would be ascribed to the instrument as a whole. No gain or loss arises from initially recognising the components of the instrument separately.*
32. *Under the approach described in paragraph 31, the issuer of a bond convertible into ordinary shares first determines the carrying amount of the liability component by measuring the fair value of a similar liability (including any embedded non-equity derivative features) that does not have an associated equity component. The carrying amount of the equity instrument represented by the option to convert the instrument into ordinary shares is then determined by deducting the fair value of the financial liability from the fair value of the compound financial instrument as a whole.*

Therefore, if a compound financial instrument such as a convertible note (effectively a debt instrument, which provides an option for the holder to convert the debt to an equity share in the entity) was issued at a price of \$22.00 by an entity, and it was determined that a debt instrument of similar risk and yielding the same rate of interest—but without the option of converting to equity—could be sold for \$18.00, \$18.00 would be the liability component of the convertible note. The equity component would be the residual, which is \$4.00.

The various aspects of the measurement of financial instruments will now be considered. However, as a concluding comment on the disclosure of financial instruments, it should now be clear that there are numerous issues to consider in determining whether a financial instrument is a financial liability or an equity instrument from the perspective of the issuing entity. Clearly, too, the determination of whether a financial instrument is a financial liability or an equity instrument will have direct implications for the reported profits of the entity, given that periodic payments associated with financial liabilities will be considered to be expenses.

15.4 RECOGNITION AND MEASUREMENT OF FINANCIAL INSTRUMENTS

In November 2009 the IASB issued IFRS 9 'Financial Instruments' (in New Zealand NZ IFRS 9 'Financial Instruments'). The aim of the standard was to reduce the number of classification categories while providing a clearer rationale for measuring financial assets, applying a single impairment method to all financial assets not measured at fair value, and aligning the measurement attribute of financial assets to the way the entity manages its financial assets ('business model') and their contractual cash flow characteristics. The rationale behind revising the standard was to providing relevant and useful information to users for their assessment of the amounts, timing and uncertainty of the entity's future cash flows.

Recognition and measurement of financial instruments is currently covered by two accounting standards, NZ IAS 39 'Financial Instruments: Recognition and Measurement' and NZ IFRS 9 'Financial Instruments'. Within the suite of the four accounting standards dealing with financial instruments, these two standards stipulate how financial instruments are to be recognised and measured; NZ IAS 32 provides guidance on the presentation of financial instruments, while NZ IFRS 7 provides guidance on the detailed disclosures that are required.

DEFINITIONS OF CATEGORIES OF FINANCIAL INSTRUMENTS

To recap, NZ IAS 32 paragraph 11 defines financial instruments as 'any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity'. The definitions of financial assets, financial liabilities and equity instruments have previously been considered earlier in this chapter (page 507). As a consequence of issuing NZ IFRS 9, the categories of financial instruments originally included within the standard were reduced. The measurement requirements associated with each category of financial instruments depends upon the category to which the financial instrument belongs. There are two broad categories of financial instruments identified in NZ IAS 39:

1. financial asset or financial liability held for trading;
2. financial liability at fair value through profit or loss.

NZ IAS 39 paragraph 9 considered a financial asset or financial liability is held for trading if:

- (a) it is acquired or incurred principally for the purpose of selling or repurchasing it in the near term;
- (b) on initial recognition it is part of a portfolio of identified financial instruments that are managed together and for which there is evidence of a recent actual pattern of short-term profit-taking; or
- (c) it is a derivative (except for a derivative that is a financial guarantee contract or a designated and effective hedging instrument).

A financial liability at fair value through profit or loss is a financial liability that meets either of the following conditions:

- (a) It meets the definition of held for trading.
- (b) Upon initial recognition it is designated by the entity as at fair value through profit or loss. An entity may use this designation only when permitted by paragraph 11A, or when doing so results in more relevant information, because either:
 - (i) it eliminates or significantly reduces a measurement or recognition inconsistency (sometimes referred to as 'an accounting mismatch') that would otherwise arise from measuring assets or liabilities or recognising the gains and losses on them on different bases; or
 - (ii) a group of financial liabilities or financial assets and financial liabilities is managed and its performance is evaluated on a fair value basis, in accordance with a documented risk management or investment strategy, and information about the group is provided internally on that basis to the entity's key management personnel (as defined in IAS 24 Related Party Disclosures (as revised in 2009)), for example the entity's board of directors and chief executive officer.

In IFRS 7, paragraphs 10 and 11 require the entity to provide disclosures about financial liabilities it has designated as at fair value through profit or loss, including how it has satisfied these conditions (see paragraphs B4 and B5 of IFRS 7). For instruments qualifying in accordance with (ii) above, that disclosure includes a narrative description of how designation as at fair value through profit or loss is consistent with the entity's documented risk management or investment strategy.

It should be noted that paragraphs 48, 48A, 49 and Appendix A paragraphs AG69–AG82, which set out requirements for determining a reliable measure of the fair value of a financial liability, apply equally to all items that are measured at fair value, whether by designation or otherwise, or whose fair value is disclosed.

INITIAL RECOGNITION OF FINANCIAL ASSETS

The general principle applied for the initial recognition of financial assets is detailed in NZ IFRS 9 paragraph 3.1.1. This paragraph requires an entity to recognise a financial asset in its statement of financial position:

when, and only when, the entity becomes party to the contractual provisions of the instrument (see paragraphs AG34 and AG35 of NZ IAS 39). When an entity first recognises a financial asset, it shall classify it in accordance with paragraphs 4.1–4.5 and measure it in accordance with paragraph 5.1.1.

These paragraphs therefore require entities to recognise all their contractual rights and obligations under derivatives as assets and liabilities in their statement of financial position. An exception is derivatives that prevent a transfer of financial assets from being accounted for as a sale. Where a transfer of a financial asset does not qualify for derecognition, the transferee does not recognise the transferred asset as its asset.

NZ IAS 39 paragraph AG35 provides the following examples of how to apply the principles behind NZ IFRS 9 paragraph 3.1.1:

- (a) *unconditional receivables and payables are recognised as assets or liabilities when the entity becomes a party to the contract and, as a consequence, has a legal right to receive or a legal obligation to pay cash.*
- (b) *assets to be acquired and liabilities to be incurred as a result of a firm commitment to purchase or sell goods or services are generally not recognised until at least one of the parties has performed under the agreement. For example, an entity that receives a firm order does not generally recognise an asset (and the entity that places the order does not recognise a liability) at the time of the commitment but, rather, delays recognition until the ordered goods or services have been shipped, delivered or rendered. If a firm commitment to buy or sell non-financial items is within the scope of this Standard under paragraphs 5–7, its net fair value is recognised as an asset or liability on the commitment date (see (c) below). In addition, if a previously unrecognised firm commitment is designated as a hedged item in a fair value hedge, any change in the net fair value attributable to the hedged risk is recognised as an asset or liability after the inception of the hedge (see paragraphs 93 and 94).*
- (c) *a forward contract that is within the scope of this Standard (see paragraphs 2–7) is recognised as an asset or a liability on the commitment date, rather than on the date on which settlement takes place. When an entity becomes a party to a forward contract, the fair values of the right and obligation are often equal, so that the net fair value of the forward is zero. If the net fair value of the right and obligation is not zero, the contract is recognised as an asset or liability.*
- (d) *option contracts that are within the scope of this Standard (see paragraphs 2–7) are recognised as assets or liabilities when the holder or writer becomes a party to the contract.*
- (e) *planned future transactions, no matter how likely, are not assets and liabilities because the entity has not become a party to a contract.*

On initial recognition all financial assets must be classified into one of two measurement categories, namely amortised cost or fair value. This is confirmed by NZ IFRS 9 paragraph 4.1 which states:

- 4.1 *Unless paragraph 4.5 applies, an entity shall classify financial assets as subsequently measured at either amortised cost or fair value on the basis of both:*
- (a) *the entity's business model for managing the financial assets; and*
 - (b) *the contractual cash flow characteristics of the financial asset.*

The current requirement for financial instruments that are held for trading to be measured at fair value through profit or loss is retained by NZ IFRS 9 including all derivatives that are not designated in a hedging relationship. The Held to Maturity, Available for Sale and Loans and Receivables categories of financial assets previously considered under NZ IAS 39 are eliminated by NZ IFRS 9.

MEASUREMENT OF FINANCIAL ASSETS

The general measurement principle is that financial instruments are to be measured at fair value—although there are a limited number of exceptions to this rule (see paragraph 2 of NZ IAS 39 for details of its scope). The initial measurement of financial assets is to be at fair value, with fair value defined in NZ IAS 39 paragraph 9 as ‘the amount for which an asset could be exchanged or a liability settled, between knowledgeable, willing parties in an arm’s length transaction’. NZ IFRS 9 paragraph 5.1.1 requires a financial asset to initially be measured ‘at its fair value (see paragraphs 48, 48A and AG69–AG82 of IAS 39) plus, in the case of a financial asset not at fair value through profit or loss, transaction costs that are directly attributable to the acquisition of the financial asset’. The fair value of a financial asset is usually the transaction price, that is, the fair value of the consideration given or received unless the fair value of that instrument is evidenced by comparison with other observable current market transactions in the same instrument or based on a valuation technique whose variables include only data from observable markets. Where an active market does not exist for the financial asset other valuation techniques should be used including recent arm’s length market transactions between knowledgeable, willing parties, if available, reference to the current fair value of another instrument that is substantially the same, discounted cash flow analysis and option pricing models.

According to NZ IFRS 9 paragraph 4.2 a financial asset, for example a debt instrument, is measured at amortised cost only if it meets both the following conditions:

- (a) *the asset is held within a business model whose objective is to hold assets in order to collect contractual cash flows;*
- (b) *the contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.*

Debt instruments that do not meet both the following conditions must be measured at fair value through profit or loss. The conditions considered in NZ IFRS 9 paragraph 4.2 are dealt with in more detail in the sections that follow.

ENTITY’S BUSINESS MODEL FOR MANAGING FINANCIAL ASSETS (BUSINESS MODEL TEST)

Under the business model test, an entity is required to assess whether its business objective for a debt instrument is to collect contractual cash flows of the instrument rather than realising its fair value change from the sale of the instrument prior to its contractual maturity. This is assessed on the basis of the objective of the business model as determined by the entity’s key management personnel as defined in NZ IAS 24 ‘Related Party Disclosures’. The entity’s business model does not depend on the intentions of management for the individual asset. This is explained further by NZ IFRS 9 paragraph B4.2 as follows:

The entity’s business model does not depend on management’s intentions for an individual instrument. Accordingly, this condition is not an instrument-by-instrument approach to classification and should be determined on a higher level of aggregation. However, a single entity may have more than one business model for managing its financial instruments. Therefore, classification need not be determined at the reporting entity level. For example, an entity may hold a portfolio of investments that it manages in order to collect contractual cash flows and another portfolio of investments that it manages in order to trade to realise fair value changes.

The above paragraph recognises that an entity may have different business units that are managed differently. For example, an entity may have a business unit (A) where the objective is to collect the contractual cash flows of loan assets while the objective of another business unit (B) would be to realise fair value changes through the sale of loan assets prior to their maturity. The financial instruments that give rise to cash flows that are payments of principal and interest (see cash flow characteristic test below), in business unit (A) may qualify for amortised cost measurement even if similar financial instruments in business unit (B) do not. Instruments that would meet the existing trading definition in NZ IAS 39 would be measured at fair value through profit or loss as they are not held to collect the contractual cash flows of the instrument.

It should be noted that although the objective of an entity’s business model may be to hold financial assets in order to collect contractual cash flows, the entity need not hold all of those assets until maturity. This means that if an entity’s business model is to hold financial assets to collect contractual cash flows, this does not preclude the sales of financial assets. As an example, an entity’s assessment that it holds investments to collect their contractual cash flows remains valid even if the entity disposes of the investments to fund capital expenditure. However, if more than an infrequent number of sales are made out of a portfolio, the entity would need to assess whether and how such sales are consistent with an objective of collecting contractual cash flows.

The following examples of when the objective of the entity's business model may be to hold financial assets to collect the contractual cash flows adapted from NZ IFRS 9 Application Guidance include:

- An entity holding investments to collect their contractual cash flows but prepared to sell an investment in particular circumstances.
- An entity's business model is to purchase portfolios of financial assets, such as loans. Those portfolios may or may not include financial assets with incurred credit losses. If payment on the loans is not made on a timely basis, the entity attempts to extract the contractual cash flows through various means—for example, by making contact with the debtor by mail, telephone or other methods.

CONTRACTUAL CASH FLOWS THAT ARE SOLELY PAYMENTS OF PRINCIPAL AND INTEREST ON THE PRINCIPAL AMOUNT OUTSTANDING (CONTRACTUAL CASH FLOW CHARACTERISTICS TEST)

Having established which financial assets are held for the collection of contractual cash flows, NZ IFRS 9 paragraph B4.8 requires an entity to 'assess whether contractual cash flows are solely payments of principal and interest on the principal amount outstanding for the currency in which the financial asset is denominated'.

Should the contractual terms of the financial asset include leverage (for example a stand-alone option or a forward or swap contract), this will result in economic characteristics that are not interest. The reason for this is that leverage increases the variability of cash flows (for example one which changes an interest by a multiplier of a benchmark rate). Contracts that include leverage fail to meet the condition of being solely payments of principal and interest on the principal amount outstanding. Contracts containing leverage cannot be measured at amortised cost and should be measured at fair value through profit or loss.

Guidance on which contractual provisions and circumstances amount to payments of principal and interest on the principal amount is detailed in NZ IFRS 9 paragraph B4.10-B4.12:

- B4.10 Contractual provisions that permit the issuer (ie the debtor) to prepay a debt instrument (eg a loan or a bond) or permit the holder (ie the creditor) to put a debt instrument back to the issuer before maturity result in contractual cash flows that are solely payments of principal and interest on the principal amount outstanding only if:*
- (a) the provision is not contingent on future events, other than to protect:*
 - (i) the holder against the credit deterioration of the issuer (eg defaults, credit downgrades or loan covenant violations), or a change in control of the issuer; or*
 - (ii) the holder or issuer against changes in relevant taxation or law; and*
 - (b) the prepayment amount substantially represents unpaid amounts of principal and interest on the principal amount outstanding, which may include reasonable additional compensation for the early termination of the contract.*
- B4.11 Contractual provisions that permit the issuer or holder to extend the contractual term of a debt instrument (ie an extension option) result in contractual cash flows that are solely payments of principal and interest on the principal amount outstanding only if:*
- (a) the provision is not contingent on future events, other than to protect:*
 - (i) the holder against the credit deterioration of the issuer (eg defaults, credit downgrades or loan covenant violations) or a change in control of the issuer; or*
 - (ii) the holder or issuer against changes in relevant taxation or law; and*
 - (b) the terms of the extension option result in contractual cash flows during the extension period that are solely payments of principal and interest on the principal amount outstanding.*
- B4.12 A contractual term that changes the timing or amount of payments of principal or interest does not result in contractual cash flows that are solely principal and interest on the principal amount outstanding unless it:*
- (a) is a variable interest rate that is consideration for the time value of money and the credit risk (which may be determined at initial recognition only, and so may be fixed) associated with the principal amount outstanding; and*
 - (b) if the contractual term is a prepayment option, meets the conditions in paragraph B4.10; or (c) if the contractual term is an extension option, meets the conditions in paragraph B4.11.*
 - (c) if the contractual term is an extension option, meets the conditions in paragraph B4.11.*

Examples of contractual cash flows that are solely payments of principal and interest on the principal amount outstanding include:

- A bond with a stated maturity date where payments of principal and interest on the principal amount outstanding are linked to an inflation index of the currency in which the instrument is issued. The inflation link is not leveraged and the principal is protected.
- A variable interest rate instrument with a stated maturity date that permits the borrower to choose the market interest rate on an ongoing basis. For example, at each interest rate reset date, the borrower can choose to pay three-month Bank Bill Rate (BBR) for a three-month term or one-month BBR for a one-month term.
- A bond with a stated maturity date and pays a variable market interest rate. That variable interest rate is capped.
- A full recourse loan and is secured by collateral.

Examples of contractual cash flows that are not payments of principal and interest on the principal amount outstanding include:

- A bond that is convertible into equity instruments of the issuer.
- A loan that pays an inverse floating interest rate (that is, the interest rate has an inverse relationship to market interest rates. For example 8 per cent minus the BBR).

SUBSEQUENT MEASUREMENT OF FINANCIAL ASSETS

As indicated earlier the general measurement principle is that financial instruments are to be measured at fair value. The rules for subsequent measurement of financial assets is provided by NZ IFRS 9 as follows:

- 5.2.1 *After initial recognition, an entity shall measure a financial asset in accordance with paragraphs 4.1–4.5 at fair value (see paragraphs 48, 48A and AG69–AG82 of IAS 39) or amortised cost.*
- 5.2.2 *An entity shall apply the impairment requirements in paragraphs 58–65 and AG84–AG93 of IAS 39 to financial assets measured at amortised cost.*
- 5.2.3 *An entity shall apply the hedge accounting requirements in paragraphs 89–102 of IAS 39 to a financial asset that is designated as a hedged item (see paragraphs 78–84 and AG98–AG101 of IAS 39).*

GAINS AND LOSSES

A gain or loss on a financial asset measured at fair value and which is not part of a hedging relationship is recognised in profit or loss. However, if the financial asset is an investment in an equity instrument (see page 523) gains or losses on the investment may be recognised in other comprehensive income. If the financial asset is measured at amortised cost and is not part of a hedging relationship, gains or losses arising when the financial asset is derecognised, impaired or reclassified are recognised on profit or loss.

IMPAIRMENT OF FINANCIAL ASSETS MEASURED AT AMORTISED COST

At the end of each reporting period an entity is required to assess whether there is any evidence that a financial asset or group of financial assets measured at amortised cost has been impaired. According to NZ IAS 39 paragraph 59, impairment of a financial asset or group of financial assets may be evidenced by the following loss events:

- (a) *significant financial difficulty of the issuer or obligor;*
- (b) *a breach of contract, such as a default or delinquency in interest or principal payments;*
- (c) *the lender, for economic or legal reasons relating to the borrower's financial difficulty, granting to the borrower a concession that the lender would not otherwise consider;*
- (d) *it becoming probable that the borrower will enter bankruptcy or other financial reorganisation;*
- (e) *the disappearance of an active market for that financial asset because of financial difficulties; or*
- (f) *observable data indicating that there is a measurable decrease in the estimated future cash flows from a group of financial assets since the initial recognition of those assets, although the decrease cannot yet be identified with the individual financial assets in the group, including:*
 - (i) *adverse changes in the payment status of borrowers in the group (eg an increased number of delayed payments or an increased number of credit card borrowers who have reached their credit limit and are paying the minimum monthly amount); or*
 - (ii) *national or local economic conditions that correlate with defaults on the assets in the group (e.g. an increase in the unemployment rate in the geographical area of the borrowers, a decrease in property prices for mortgages in the relevant area, a decrease in oil prices for loan assets to oil producers, or adverse changes in industry conditions that affect the borrowers in the group).*

Where evidence of impairment exists in this regard, NZ IAS 39 paragraph 63 states:

If there is objective evidence that an impairment loss on loans and receivables or held-to-maturity investments carried at amortised cost has been incurred, the amount of the loss is measured as the difference between the asset's carrying amount and the present value of estimated future cash flows (excluding future credit losses that have not been incurred) discounted at the financial asset's original effective interest rate (i.e. the effective interest rate computed at initial recognition). The carrying amount of the asset shall be reduced either directly or through use of an allowance account. The amount of the loss shall be recognised in profit or loss.

In explanation of the above requirement, NZ IAS 39 paragraph AG8 states:

If an entity revises its estimates of payments or receipts, the entity shall adjust the carrying amount of the financial asset or financial liability (or group of financial instruments) to reflect actual and revised estimated cash flows. The entity recalculates the carrying amount by computing the present value of estimated future cash flows at the financial instrument's original effective interest rate. The adjustment is recognised in profit or loss as income or expense.

For the purposes of illustrating the application of the above requirement, assume that an entity acquires a three-year debenture in another entity at a cost of \$1 million, which pays interest at a rate of 10 per cent per annum and which provides an effective rate of interest of 10 per cent (meaning that the debenture has been issued at its face value with no premium or discount on issue). The carrying amount of this asset at the date of its original recognition would be \$1 million. If at the end of year 1 (with two years to go on the debenture) the issuer of the debenture gets into liquidity problems and an agreement is reached that only half of the principal and interest is to be paid, the present value of the future payments will be recalculated and the change will be taken to the period's profit and loss. In this case the present value of the future cash flows (and the original discount rate must be used) would amount to $\$500\,000 \times 0.8264$ (for the principal) plus $\$50\,000 \times 1.7355$ (for the two years of interest payments), which adds to \$500 000. The value of the debenture asset would be reduced from \$1 million to \$500 000 (either directly or through a provision for accumulated impairment losses) and a loss of \$500 000 would be recorded in the period's profit or loss.

INVESTMENTS IN EQUITY INSTRUMENTS

According to NZ IAS 32 paragraph 11, an equity instrument is defined as 'any contract that evidences a residual interest in the assets of an entity after deducting all of its liabilities'. Where an entity invests in equity instruments, NZ IFRS 9 paragraph 5.4.4 permits the entity on initial recognition to make an irrevocable election to present subsequent changes in the fair value of the equity instruments that are not *held for trading*, in other comprehensive income. This election can be made on an instrument-by-instrument (share-by-share) basis. Any dividends received on these equity instruments is recognised in profit or loss when the entity's right to receive payment of the dividends is established in accordance with NZ IFRS 18 'Revenue'. Any amounts recognised in other comprehensive income cannot be subsequently transferred to profit or loss. Where the entity disposes of these equity instruments, any cumulative gains or losses may be transferred within equity.

The general rules for the subsequent measurement of financial assets are detailed in Table 15.1.

FINANCIAL ASSET	NZ IFRS 9 CLASSIFICATION	IMPAIRMENT TESTING REQUIRED?
Debt instruments	Amortised cost	Yes
	Fair value through profit or loss	No
Equity investments	Fair value through other comprehensive income	No
	Fair value through profit or loss	No

Table 15.1

Rules for subsequent measurement of financial assets

INITIAL RECOGNITION OF FINANCIAL LIABILITIES

NZ IAS 39 paragraph 14 requires financial liabilities to be initially recognised in its statement of financial position 'when, and only when, the entity becomes a party to the contractual provisions of the instrument'. This paragraph requires entities to recognise all their contractual rights and obligations under derivatives assets and liabilities in their statement of financial position. An exception is derivatives that prevent a transfer of financial assets from being accounted for as a sale. Where a transfer of a financial asset does not qualify for derecognition, the transferee does not recognise the transferred asset as its asset. As indicated on page 523, NZ IAS 39 paragraph A35 illustrates how to apply the principles behind NZ IAS 39 paragraph 14. As these have been considered earlier, the paragraph is not reproduced here.

When a financial liability is initially recognised, it is measured at its fair value. The fair value of a financial liability is usually the transaction price, that is, the fair value of the consideration given or received unless the fair value of that instrument is evidenced by comparison with other observable current market transactions in the same instrument or based on a valuation technique whose variables include only data from observable markets. If the financial liability is not measured at fair value through profit or loss, in other words at amortised cost, any transaction costs directly attributable to the issue of the financial liability are deducted.

SUBSEQUENT MEASUREMENTS OF FINANCIAL LIABILITIES

NZ IAS 39 paragraph 47 provides the following rules for subsequent measurement of financial liabilities where it states:

- 47 *After initial recognition, an entity shall measure all financial liabilities at amortised cost using the effective interest method, except for:*
- (a) *financial liabilities at fair value through profit or loss. Such liabilities, including derivatives that are liabilities, shall be measured at fair value except for a derivative liability that is linked to and must be settled by delivery of an unquoted equity instrument whose fair value cannot be reliably measured, which shall be measured at cost (see Appendix A paragraphs AG80 and AG81).*
 - (b) *financial liabilities that arise when a transfer of a financial asset does not qualify for derecognition or when the continuing involvement approach applies. Paragraphs 29 and 31 apply to the measurement of such financial liabilities.*
 - (c) *financial guarantee contracts as defined in paragraph 9. After initial recognition, an issuer of such a contract shall (unless paragraph 47(a) or (b) applies) measure it at the higher of:*
 - (i) *the amount determined in accordance with NZ IAS 37; and*
 - (ii) *the amount initially recognised (see paragraph 43) less, when appropriate, cumulative amortisation recognised in accordance with NZ IAS 18.*
 - (d) *commitments to provide a loan at a below-market interest rate. After initial recognition, an issuer of such a commitment shall (unless paragraph 47(a) applies) measure it at the higher of:*
 - (i) *the amount determined in accordance with NZ IAS 37; and*
 - (ii) *the amount initially recognised (see paragraph 43) less, when appropriate, cumulative amortisation recognised in accordance with NZ IAS 18.*

Financial liabilities that are designated as hedged items are subject to the hedge accounting requirements in paragraphs 89–102.

Amortised cost, as required in the paragraph above, is defined by NZ IAS 39 paragraph 9 as follows:

The amortised cost of a financial asset or financial liability is the amount at which the financial asset or financial liability is measured at initial recognition minus principal repayments, plus or minus the cumulative amortisation using the effective interest method of any difference between that initial amount and the maturity amount, and minus any reduction (directly or through the use of an allowance account) for impairment or uncollectibility.

The effective-interest method is also referred to in paragraph 46 above. It is defined in NZ IAS 39 paragraph 9 as follows:

The effective interest method is a method of calculating the amortised cost of a financial asset or a financial liability (or group of financial assets or financial liabilities) and of allocating the interest income or interest expense over the relevant period. The effective interest rate is the rate that exactly discounts estimated future cash payments or receipts through the expected life of the financial instrument or, when appropriate, a shorter period to the net carrying amount of the financial asset or financial liability.

How a financial liability is recognised at amortised cost is demonstrated in Worked Example 15.4.

GAINS OR LOSSES

For a financial liability measured at fair value through profit or loss any gain or loss arising from a change in the fair value that is not part of a hedging relationship is recognised in profit or loss. Where the financial liability is measured at amortised cost, any gain or loss arising from derecognition of the financial liability and through the amortisation process, is recognised in profit or loss.

■ WORKED EXAMPLE 15.4 FINANCIAL LIABILITIES OTHER THAN THOSE MEASURED AT FAIR VALUE

On 1 July 2011, Slater Limited issued four-year bonds with a total face value of \$100 000 and a coupon interest rate of 10 per cent per annum, payable annually in arrears. The market interest rate for Slater's bonds was 12 per cent and so the company had to discount the issue price to its fair value of \$93 923. As explained in Chapter 10, whenever the market's required rate of return exceeds the coupon rate being offered, then bonds will be issued at a discount to their face value.

Required • Prepare the journal entry to issue the bond at 1 July 2011, and the entry at 30 June 2012 to record the interest paid.

Solution to Worked Example 15.4

Table 15.2 below..

YEAR ENDED	BEGINNING BOND PAYABLE \$	INTEREST PAYMENT \$	INTEREST AT 12% (COLUMN 2 × 12%) \$	INCREASE IN BOND PAYABLE (COLUMN 4 – COLUMN 3) \$	AMORTISED COST OF BOND PAYABLE (COLUMN 2 + COLUMN 5) \$
30 June 2012	93 923	10 000	11 272	1 272	95 195
30 June 2013	95 195	10 000	11 423	1 423	96 618
30 June 2014	96 618	10 000	11 594	1 594	98 212
30 June 2015	98 212	10 000	11 788	1 788	100 000

Table 15.2

Amortised cost using the effective-interest method

The interest cost is the difference between the proceeds received on issue and the principal repaid (the face value). The annual interest cost is measured by multiplying the effective interest rate by the amount of the liability at the beginning of each period. Any excess of interest cost over the amount of interest paid is accounted for as an increase in the carrying amount of the liability. By the maturity date, the liability will be increased to an amount equal to the principal, as the discount reduces to zero. Notice the similarity between accounting for financial liabilities at amortised cost using the effective-interest method and accounting for lease liabilities in Chapter 10.

Journal entries

1 July 2011	Dr	Cash	93 923	
		Cr	Bond payable	93 923
			<i>Issuing bonds for \$93 923</i>	
30 June 2012	Dr	Interest expense	11 272	
		Cr	Bond payable	1 272
		Cr	Bank	10 000

Interest payment and amortisation of bond payable using effective-interest rate of 12%

NZ IAS 39 also prescribes specific accounting treatment for financial assets and financial liabilities that are 'hedging instruments' or 'designated hedged items'. The balance of this chapter will concentrate on derivatives (as previously defined). As can be seen from the above requirement, unless the derivative has been acquired to 'hedge' the value of other financial instruments (and the entity has from the date of acquiring the derivative designated the derivative as a hedge and the hedge passes certain tests in relation to its 'effectiveness'), the derivative is to be measured at its fair value with any changes therein to be included within the period's profit or loss. The only exception to this treatment is where the entity designates the derivative as a cash-flow hedge. Where the derivative is a cash-flow hedge, the portion of the gain or loss on the hedging instrument that is determined to be an effective hedge is recognised in other comprehensive income, while the ineffective portion of the gain or loss on the hedging instruments is recognised in profit or loss.

15.5 DERIVATIVE FINANCIAL INSTRUMENTS

Derivative financial instruments can include futures contracts, options contracts, interest rate swaps, foreign currency swaps and forward-rate contracts. Each of these will be considered in the pages that follow. Derivative financial instruments are one type of financial instrument addressed in NZ IAS 39. Consistent with other financial instruments, derivatives are initially to be recognised at fair value in accordance with NZ IAS 39 paragraph 43. The value of a derivative is directly related to another underlying item. For example, a share option—which is a derivative—derives its value from the market value of the underlying shares. Derivatives transfer risks between the parties to the derivative-related contract in respect of the underlying securities concerned. According to NZ IAS 39 paragraph 9:

A derivative is a financial instrument or other contract within the scope of this Standard (see paragraphs 2–7) with all three of the following characteristics:

- (a) *its value changes in response to the change in a specified interest rate, financial instrument price, commodity price, foreign exchange rate, index of prices or rates, credit rating or credit index, or other variable, provided in the case of a non-financial variable that the variable is not specific to a party to the contract (sometimes called the ‘underlying’);*
- (b) *it requires no initial net investment or an initial net investment that is smaller than would be required for other types of contracts that would be expected to have a similar response to changes in market factors; and*
- (c) *it is settled at a future date.*

hedging
Action taken with the object of avoiding or minimising the possible adverse effects of movements in exchange rates or market prices.

hedge contract
Arrangement with another party in which that party accepts the risks associated with changing commodity prices or exchange rates.

From the above definition it can be seen that there are three characteristics that must all be established before an instrument is considered to be a derivative.

DERIVATIVES USED WITHIN A HEDGING ARRANGEMENT

Derivatives are often used as a means of **hedging** the gains or losses that might arise in the future in relation to other assets and liabilities—as will be demonstrated here. To minimise the risk associated with particular assets or liabilities, an entity may enter a **hedge contract**. By entering into an agreement that takes a position opposite to the original transaction, an entity can minimise its exposure to gains and losses on particular assets and liabilities.

As an example of a hedging arrangement, consider Worked Example 15.5.

■ WORKED EXAMPLE 15.5 AN EXAMPLE OF A HEDGING ARRANGEMENT

A New Zealand company, Mungo Limited, orders some inventory from a US supplier, Barry Inc., on 1 May 2012 for US\$200 000 (when the exchange rate is NZ\$1.00 = US\$0.75) at a cost in New Zealand dollars of NZ\$266 667 (US\$200 000 ÷ 0.75). The goods are to be supplied and paid for on 30 June 2012. At 1 May 2012 the forward rate for the delivery of US dollars on 30 June 2012 was NZ\$1.00 = US\$0.72.

Required •

- (a) How could Mungo Limited safeguard itself against exchange rate fluctuations?
- (b) Identify the hedged item and the hedging instrument.
- (c) What is a ‘forward rate’ and how would this benefit Mungo Limited?
- (d) Assuming that the New Zealand dollar decreases in value relative to the US dollar so that NZ\$1.00 buys only US\$0.60 on 30 June 2012, in the absence of a forward-rate agreement how would this affect Mungo Limited?

Solution to Worked Example 15.5

- (a) To safeguard against exchange rate fluctuations on the date it placed the order Mungo Limited could also enter into a forward exchange rate contract to buy US\$200 000 on 30 June 2012 from another party (typically a bank) at a forward rate of NZ\$1.00 = US\$0.72.
- (b) In this event, the amount to be paid by Mungo Limited to Barry Inc. is the *hedged item*. The forward-rate arrangement made by Mungo Limited with the bank is the *hedging instrument*.
- (c) A forward rate is the exchange rate for delivery of a currency at a specified date in the future. It is a guaranteed rate of exchange that will be provided at a future date regardless of what happens with exchange rates. With this forward-rate agreement, Mungo Limited has locked in the price of the goods at NZ\$277 778 (US\$200 000 ÷ 0.72). That is, it has hedged the future payment. The entity has contracted to buy a specified number of US dollars at a future date (probably from a bank) at a predetermined rate. This is sometimes referred to as a ‘buy hedge’.

- (d) Assume that the New Zealand dollar decreases in value relative to the US dollar so that NZ\$1.00 buys only US\$0.60 on 30 June 2012. In the absence of a forward-rate agreement (designated the hedging instrument), the entity would pay the US supplier NZ\$333 333 (US\$200 000 ÷ 0.60). This is NZ\$66 666 more than the original New Zealand dollar obligation. However, given the forward exchange rate agreement, the entity can obtain US\$200 000 at an agreed cost of NZ\$277 778. This amount is significantly below the fair value of the US dollars given the new exchange rate—so there is a gain on the agreement with the bank. The gain on the hedging instrument offsets the losses on the hedged item. Both gains and losses have to be accounted for separately.

According to NZ IAS 39 paragraph 85, the purpose of ‘hedge accounting’ is to recognise ‘the offsetting effects on profit or loss of changes in the fair values of the hedging instrument and the hedged item’. This definition refers to a hedging instrument and a hedged item—two terms considered in Worked Example 15.7. They are defined in NZ IAS 39 paragraph 9 as follows:

A hedging instrument is a designated derivative or (for a hedge of the risk of changes in foreign currency exchange rates only) a designated non-derivative financial asset or non-derivative financial liability whose fair value or cash flows are expected to offset changes in the fair value or cash flows of a designated hedged item (paragraphs 72–77 and Appendix A paragraphs AG94–AG97 elaborate on the definition of a hedging instrument).

A hedged item is an asset, liability, firm commitment, highly probable forecast transaction or net investment in a foreign operation that (a) exposes the entity to risk of changes in fair value or future cash flows and (b) is designated as being hedged (paragraphs 78–84 and Appendix A paragraphs AG98–AG101 elaborate on the definition of hedged items).

According to NZ IAS 39 paragraph 86, there are three principal types of hedges:

1. fair-value hedges;
2. cash-flow hedges; and
3. hedges of net investments in a foreign operation.

The most common forms of hedges are fair-value hedges and cash-flow hedges. Fair-value hedges would be used to hedge the value of particular assets or liabilities—for example to hedge the value of a share portfolio (the value of a share portfolio might be hedged by acquiring NZX 15 Index Future (FoX15) futures as a hedging instrument). A cash-flow hedge, on the other hand, would be used to hedge a future expected cash flow—for example an amount that is payable to a foreign supplier, where that amount is denominated in US dollars.

If a hedging instrument does not satisfy certain strict requirements identified in NZ IAS 39, any gains or losses on the hedging instrument must be taken to profit or loss as and when they occur (if they do satisfy the tests provided in NZ IAS 39 the gains or losses will initially be transferred directly to equity to the extent that the hedge is deemed to be a cash-flow hedge). NZ IAS 39 paragraph 88(a) stipulates the requirements for hedge accounting. Among these is the requirement that the financial instrument must be designated a hedging instrument at the initial point of recognition of the hedging instrument. This designation is constituted by documentation being in existence that covers issues associated with:

- the risk management *objective and strategy* for undertaking the hedge;
- the identification of the *hedging instrument* being used;
- the related transaction or *hedged item*;
- the nature of the risk being hedged; and
- how the entity will assess the *effectiveness* of the hedging instrument in offsetting the exposure to changes in the hedged item’s fair value or cash flows attributable to the hedged risk.

Hedges cannot be designated and/or documented on a retrospective basis.

The hedging instrument must also meet certain tests in relation to its effectiveness in hedging the movement in value of the hedged item (the guidance in NZ IAS 39 about hedge effectiveness is extensive). In relation to the requirements pertaining to hedge effectiveness, there are two tests:

1. Prospectively, at the inception of the hedge and throughout the life of the hedge, the hedge must be ‘highly effective’, which means that the changes in the fair value or cash flows of a hedged item (such as a payable relating to the purchase of inventory) must ‘almost fully’ offset the changes in the fair value or cash flows of the hedging instrument. If the hedging instrument (for example, a forward-rate agreement with a bank) is only for a small proportion of the amount of the hedged item (for example, an amount payable to an overseas supplier), this test would not be met.

2. Retrospectively, and as measured each financial period, the hedge is deemed to be highly effective so that actual results are in a range of between 80 and 125 per cent. For example, if there is a gain on a hedging instrument of \$100 and the loss on the hedged item is \$110 the effectiveness of the hedge in terms of offsetting the loss on the hedged item is 100/110, which equals 90.91 per cent. However, if the loss on the hedge item was, say, \$200 the test would not be met.

Given the above test for hedge accounting, it would appear that hedging a small proportion of a hedge will no longer comply with the requirements for hedge accounting.

The requirements pertaining to how gains and losses on the hedging are to be treated depends upon the type of hedge involved (and remember that, as noted above, NZ IAS 39 identifies three types of hedges).

A fair-value hedge is described by NZ IAS 39 paragraph 86(a) as a 'hedge of the exposure to changes in fair value of a recognised asset or liability or an unrecognised firm commitment, or an identified portion of such an asset, liability or firm commitment, that is attributable to a particular risk and could affect profit or loss'. According to NZ IAS 39 paragraph 89, fair value hedges are accounted for as follows:

- (a) *the gain or loss from remeasuring the hedging instrument at fair value (for a derivative hedging instrument) or the foreign currency component of its carrying amount measured in accordance with IAS 21 (for a non-derivative hedging instrument) shall be recognised in profit or loss; and*
- (b) *the gain or loss on the hedged item attributable to the hedged risk shall adjust the carrying amount of the hedged item and be recognised in profit or loss. This applies if the hedged item is otherwise measured at cost.*

Essentially what NZ IAS 39 paragraph 89 requires is that both the *hedged item* and the *hedging instrument* be valued at fair value, with any gains or losses owing to the fair-value adjustments to be treated as part of the period's profit or loss. If the gains or losses on the hedged item are 'perfectly hedged' the gains or losses on the *hedging instrument* will offset the gains or losses on the hedged item so that the net effect on the period's profit or loss could be \$nil.

A cash-flow hedge is described by NZ IAS 39 paragraph 86(b) as:

a hedge of the exposure to variability in cash flows that:

- (i) *is attributable to a particular risk associated with a recognised asset or liability (such as all or some future interest payments on variable rate debt) or a highly probable forecast transaction; and*
- (ii) *could affect profit or loss'.*

According to NZ IAS 39 paragraph 95, cash-flow hedges are accounted for as follows:

- (a) *the portion of the gain or loss on the hedging instrument that is determined to be an effective hedge (see paragraph 88) shall be recognised in other comprehensive income; and*
- (b) *the ineffective portion of the gain or loss on the hedging instrument shall be recognised in profit or loss.*

For a cash-flow hedge, the gain or loss on measuring the *hedged item* at fair value is to be treated as part of the period's profit or loss. The gain or loss on the *hedging instrument* is recognised in other comprehensive income (and transferred to equity), but subsequently treated as part of profit or loss as necessary to offset the gains or losses recorded on the hedged item. At the conclusion of the hedging arrangement, any amount still in equity relating to the *hedging instrument* is to be transferred to profit or loss.

FAIR-VALUE HEDGES

From the material provided above, a fair-value hedge arises when a hedging arrangement is undertaken to mitigate the risks associated with an entity being exposed to changes in the fair value of a recognised asset or liability. It can also arise in relation to commitments to buy or sell resources. As stated previously, and in accordance with NZ IAS 39 paragraph 89, for a fair-value hedge:

- The hedging instrument shall be measured at fair value with any gains or losses going to profit or loss;
- The hedged items shall be measured at fair value with any gains or losses going to profit or loss.

Worked Example 15.6 provides an example of a fair-value hedge.

■ WORKED EXAMPLE 15.6 FAIR-VALUE HEDGE

Goldblum Limited is a gold producer that has an inventory of gold. It wishes to insulate itself from potential adverse changes in the market price of gold. On 1 July 2011 Goldblum Limited enters in a forward contract which is indexed to move with the market price of gold. The gold contract matures on 30 June 2012. There is no requirement to make any upfront payment on the contract. The hedging instrument is deemed to be effective in protecting the entity from adverse movements in the price of gold.

For the six months to 31 December 2011 the fair value of the forward contract has increased by \$120 000 whereas the fair value of Goldblum Limited's inventory of gold had decreased by \$120 000.

In the six months to 30 June 2012 the fair value of the forward contract has increased by \$52 000 whereas the fair value of Goldblum Limited's inventory of gold had decreased by \$55 000.

Required • Provide the journal entries for the reporting period ended 30 June 2012. Ignore the time value of money.

Solution to Worked Example 15.6

There is a requirement that a financial asset or financial liability shall initially be measured at fair value. Specifically, NZ IAS 39 paragraph 43 states:

When a financial asset or financial liability is recognised initially, an entity shall measure it at its fair value plus, in the case of a financial asset or financial liability not at fair value through profit or loss, transaction costs that are directly attributable to the acquisition or issue of the financial asset or financial liability.

1 July 2011	There is no entry made on 1 July 2011 as the fair value of the contract is deemed to be zero and no deposits have been made in relation to the contract.		
31 Dec 2011	Dr	Loss on gold inventory (included in profit or loss)	120 000
		Cr Gold inventory	120 000
		<i>Recognising loss on gold inventory</i>	
31 Dec 2011	Dr	Forward contract—gold	120 000
		Cr Gain on forward contract (included in profit or loss)	120 000
		<i>Recognising gain on forward contract</i>	
30 Jun 2012	Dr	Loss on gold inventory (included in profit or loss)	55 000
		Cr Gold inventory	55 000
		<i>Recognising loss on gold inventory</i>	
30 Jun 2012	Dr	Forward contract—gold	52 000
		Cr Gain on forward contract (included in profit or loss)	52 000
		<i>Recognising gain on forward contract</i>	
30 Jun 2012	Dr	Cash	172 000
		Cr Forward contract—gold	172 000
		<i>The other party to the forward contract settles their debt with Goldblum Limited</i>	

CASH-FLOW HEDGES

As already indicated, a cash-flow hedge is undertaken to hedge the future cash flows associated with a particular recognised asset or liability, or perhaps for an unrecognised firm commitment, or for a highly probable forecast transaction. For example, it could be undertaken to hedge the amount payable to a foreign supplier of goods.

As stated previously, and in accordance with NZ IAS 39 paragraph 95, for a cash-flow hedge:

- The hedging instrument shall be measured at fair value with any gains or losses on the proportion of the hedge deemed as being effective recognised in other comprehensive income (and therefore transferred to equity rather than profit or loss);
- The hedged items shall be measured at fair value with any gains or losses going to profit or loss;
- Amounts previously recognised in equity (comprehensive income) in relation to the hedging instrument shall be transferred from equity to profit or loss in the same period as the cash flows on the hedged item occur so as to offset any

net gains or losses that otherwise would have gone to profit or loss. However, if the gains or losses on the hedged item were included in the cost of an asset being acquired then the amounts initially transferred to equity in relation to the hedging instrument will subsequently be transferred to the cost of the asset being acquired. This is consistent with NZ IAS 39 paragraphs 97 and 98.

Worked Example 15.7 provides an example of a cash-flow hedge.

■ WORKED EXAMPLE 15.7 CASH-FLOW HEDGE RELATING TO THE PURCHASE OF INVENTORY

Oz Limited manufactures electric cars. On 1 June 2012 Oz Limited enters into a non-cancellable purchase commitment with Vegas Limited for the supply of batteries, with those batteries to be shipped FOB on 30 June 2012. The total contract price was US\$2 000 000 and the full amount was due for payment on 30 August 2012.

Because of concerns about movements in foreign exchange rates, on 1 June 2012 Oz Limited entered into a forward-rate contract on US Dollars with a foreign exchange broker so as to receive US\$2 000 000 on 30 August 2012 at a forward rate of NZ\$1.00 = US\$0.80 (meaning NZ\$2 500 000 will be payable to the foreign currency broker).

The Worked Example assumed that Oz Limited prepares monthly financial statements and that it elects to treat the hedge as a cash-flow hedge. Further, assume that Oz Limited elects, according to NZ IAS 39 paragraph 98(b), to adjust the cost of the inventory as a result of the hedging transaction.

Additional information

The respective spot rates, with the spot rates being the exchange rates for immediate delivery of currencies to be exchanged, are provided below. The forward rates offered on particular dates, for delivery of US dollars on 30 August 2012 are also provided. It should be noted that on 30 August 2012, the last day of the forward-rate contract, the spot rate and the forward rate will be the same. Oz Limited uses a discount rate of 9 per cent per annum.

DATE	SPOT RATE	FORWARD RATES FOR 30 AUGUST DELIVERY OF US\$
1 June 2012	NZ\$1.00 = US\$0.83	NZ\$1.00 = US\$0.80
30 June 2012	NZ\$1.00 = US\$0.81	NZ\$1.00 = US\$0.78
31 July 2012	NZ\$1.00 = US\$0.80	NZ\$1.00 = US\$0.77
30 August 2012	NZ\$1.00 = US\$0.76	NZ\$1.00 = US\$0.76

Required • Provide the journal entries to account for the 'hedged item' and the 'hedging instrument' for the months ending 30 June, 31 July and 30 August 2012.

Solution to Worked Example 15.7

Given this has been designated as a cash-flow hedge, and it has also been assumed that the hedge is 'effective', then any gains or losses on the hedging instrument shall initially be recognised in equity (and therefore in 'other comprehensive income') and then ultimately transferred to the cost of inventory.

Gains/losses on the hedged item (the inventory purchase) are calculated as follows:

DATE	SPOT RATE	AMOUNT PAYABLE IN NZ\$	FOREIGN EXCHANGE GAIN/(LOSS) \$
1 June 2012	NZ\$1.00 = US\$0.83	–	
30 June 2012	NZ\$1.00 = US\$0.81	\$2 469 136	
31 July 2012	NZ\$1.00 = US\$0.80	\$2 500 000	(30 864)
30 August 2012	NZ\$1.00 = US\$0.76	\$2 631 579	(131 579)

Note: The purchase is not recognised until such time as the batteries are shipped FOB on 30 June 2012.

Gains/losses on the hedged instrument (the forward rate contract) are calculated as follows:

DATE	SPOT RATE	FORWARD RATE FOR DELIVERY OF US\$ ON 30 AUG 2012	AMOUNT RECEIVABLE ON FORWARD CONTRACT	AMOUNT PAYABLE IN NZ\$ ON FORWARD CONTRACT	FORWARD CONTRACT ^c	FAIR VALUE (DISCOUNTED CASH FLOW)	CHANGE IN FAIR VALUE OF FORWARD CONTRACT
1 June 2012	0.83	0.80	2 500 000	2 500 000	–	–	–
30 June 2012	0.81	0.78	2 564 103	2 500 000	64 103	^d 63 149	63 149
31 July 2012	0.80	0.77	2 597 403	2 500 000	97 403	^e 96 678	33 529
30 Aug 2012	0.76		2 631 579	2 500 000	131 579	131 579	34 901

- (A) Determined by dividing \$2 000 000 by the respective dates' forward rate. This right refers to the amount to be received from the bank, the value of which will fluctuate as the forward rate changes. Gains or loss in the value of this right will act to offset the gains or losses in the value of the amount payable to the overseas supplier.
- (B) The obligation represents the amount that must be paid to the bank using the forward rate negotiated with the bank and is fixed in absolute terms at the agreed forward rate.
- (C) This is the value of the forward-rate contract and represents the difference between the right (which represents the value of the funds to be received from the bank) and the obligation to the bank (which is measured using the forward rate negotiated with the bank). If the value of the right exceeds the value of the obligation then the forward contract represents an asset, otherwise it represents a liability.
- (D) There is a requirement that the forward contract be measured at its present value. The discounted forward contract represents the present values of future cash flows which represents the fair value of the financial instrument (see NZ IAS 39 paragraph 48A). On 30 June 2012, the discount rate of 9 per cent per annum is 0.75 per cent per month, which provides an effective interest rate for six months of 1.51 per cent $[(1 + 0.0075)^2]$. The fair value of the forward contract of \$64 103 discounted at the effective interest rate for two month = \$63 149.
- (E) On 31 July 2012, the discount rate at 9 per cent per annum provides an effective interest rate for one month of 0.75 per cent. The fair value of the forward contract of \$97 403 discounted at 0.75 per cent = \$96 678.

In the calculations above a fair value for the hedging instrument has been calculated (which, in this case, is the forward contract) at each reporting date. It is a requirement of NZ IAS 39 that a fair value be attributed to the forward contract. The changing fair value represents how much it would cost the entity to take out a forward-rate agreement for the delivery of US\$2 000 000. For example, if the entity, or perhaps another entity, was to negotiate the forward-rate agreement at 30 June 2012 it would have cost them \$2 564 103 for US\$2 000 000 rather than the \$2 500 000 they were able to 'lock in' on 15 June 2012. The change in the fair value represents the gain or loss on the forward contract. As can be seen from the above table, the amount payable for US\$2 000 000 (the commitment) has been locked in at \$2 500 000 regardless of what subsequently happens to spot rates and forward rates.

The required journal entries would be as follows:

1 Jun 2012	<i>No entry is required as the fair value of the forward-rate agreement is assessed as being zero given that the fair value of the foreign currency receivable is the same as the fair value of the commitment, both being \$2 500 000.</i>		
30 Jun 2012	Dr	Forward contract	63 149
		Cr	Gain on cash-flow hedge (other comprehensive income)
			63 149
	<i>Recognise the fair value of the forward contract which is the difference between the related receivable on the contract and the related commitment</i>		
30 Jun 2012	Dr	Inventory	2 469 136
		Cr	Foreign currency payable
			2 469 136
	<i>Recognise the acquisition of inventory using the relevant spot rate</i>		
30 Jun 2012	Dr	Gain on cash-flow hedge (other comprehensive income)	63 149
		Cr	Inventory
			63 149
	<i>Transfer the gain/loss on the forward contract to the cost of inventory as at the date of inventory acquisition</i>		

Following the date of acquisition of the inventory all gains and losses on the forward rate contract and the foreign currency payable with the supplier are transferred directly to profit or loss just as they would be for a fair-value hedge.

31 Jul 2012	Dr	Forward contract	33 529	
		Cr Gain on forward contract		33 529
		<i>Recording gain from change in forward contract</i>		
31 Jul 2012	Dr	Foreign exchange loss	30 864	
		Cr Foreign currency accounts payable		30 864
		<i>Recording foreign exchange loss on foreign currency accounts payable</i>		
30 Aug 2012	Dr	Forward contract	34 901	
		Cr Gain on forward contract		34 901
		<i>Recording gain from change in forward contract</i>		
30 Aug 2012	Dr	Foreign exchange loss	131 579	
		Cr Foreign currency accounts payable		131 579
		<i>Recording foreign exchange loss on foreign currency accounts payable</i>		
30 Aug 2012	Dr	Cash	131 579	
		Cr Forward rate contract		131 579
		<i>Recognition receipt of cash from forward contract</i>		
In this situation the other party to the forward rate contract has actually lost money on the transaction and therefore provides funds to the entity.				
30 Aug 2012	Dr	Foreign currency accounts payable	2 631 579	
		Cr Cash		2 631 579
		<i>Payment of foreign currency accounts payable</i>		

This represents the amount paid to the overseas battery supplier. As can be seen from the above two entries, the net amount paid for the batteries was \$2 500 000 (which is \$2 631 579 – \$131 579), which equates to the amount negotiated in the forward-rate contract.

In the section that follows some financial instruments that may (but need not) be used as hedging instruments are considered. However, before the accounting treatment for particular types of derivatives is considered, it would be worthwhile reviewing the newspaper article by Fiona Buffini called ‘Accounting chief slams standards’, which is reproduced in Financial Accounting in the News 15.2. The article, which appeared in *The Australian Financial Review* of 5 August 2003, documents concerns that were raised when IAS 39—the accounting standard upon which NZ IAS 39 is based—was released. Among the major concerns was that about the requirement that derivatives and other financial instruments had to be restated at fair value. The view was expressed that this requirement would introduce unwanted volatility into reported profits or losses. Read the article and consider the merits of the various concerns.

The global accounting regulator has rejected a push by local companies to water down new rules designed to improve the transparency of corporate reporting, slamming Australian accounting standards as 'deplorable'.

The chairman of the International Accounting Standards Board, Sir David Tweedie, has criticised the way most companies account for billions of dollars' worth of intangible assets on their balance sheets.

'Australia has got the worst record in intangible asset accounting in the world. I've looked at some of the things in your accounts and, actually, it's deplorable,' Sir David told *The Australian Financial Review*.

He also said Australia's failure to previously regulate the accounting of derivatives such as hedging instruments and superannuation liabilities to employees was a 'serious weakness'.

The comments come as debate rages over new IASB accounting rules that would force Australian companies to radically change the way they account for intangibles and financial instruments such as hedges, used to manage movements in interest rates, currencies and commodities.

Some of Australia's largest companies have called for changes to the derivative rules, which would hit the reported profits of Qantas, the Australian Gas Light Company, Origin Energy, goldminers, banks and insurers, all of which make extensive use of derivatives.

Under the new rules, many hedging contracts will need to be revalued and the gain or loss taken to the bottom line, which stockbroker JBWere predicts will cut profits of some major companies by more than 10 per cent.

The Australian Accounting Standards Board and parliamentary secretary Ian Campbell have also pressed the IASB for certain concessions on the implementation of new intangible rules.

While Sir David said the IASB would listen to 'real arguments', he warned that it would not be intimidated by political lobbying.

'If you've got a good argument, we will listen to it, but if you just don't want to do it, well tough. And that's a lot of what's happening at the moment: it's "we don't want to do it" and that's hard luck.'

Fellow IASB board member Warren McGregor said that unless local companies adopted global standards, international investors would reconsider investing in Australia.

'To be quite frank, analysts in other parts of the world looking to invest in Australia just won't make the effort. If they can't look at Australian accounts and see they are comparable to international standards, they will look elsewhere,' he said.

Sir David and Mr McGregor will hold talks this morning with the Australian Accounting Standards Board, which has twice failed to win transition concessions on the intangible rules.

He will also meet Treasurer Peter Costello and Senator Campbell, who last week said global accounting standards were 'crucial' but conceded many companies were concerned about the proposals.

The rules are due to come into effect in 2005, but Australian companies generally must provide comparative figures from January.

The European Union accounting committee recently postponed endorsement of the controversial derivative rules after lobbying by European banks, which claimed they would cause massive volatility in earnings, misleading accounts and damage to the economy.

Mr McGregor warned that Australia could not afford to pick and choose which global rules it would follow. America and Japan, the world's two largest economies, already had similar rules on derivatives.

Australia moved to adopt global standards to improve the transparency of financial statements after corporate collapses here and overseas. The shift by 2005 is shaping as the biggest event since the introduction of the goods and services tax. Within two years, Australian companies will be required to recognise derivatives, write off brand names, mastheads and reclassify hybrid equity instruments as debt, and expense executive options.

At the same time, amortisation of goodwill in takeovers will be abolished and financial statements may be reported in foreign currency.

However, Australian Bankers' Association chief executive David Bell said delaying the adoption of the derivative changes, which are contained in International Accounting Standards 32 and 39, should be considered.

'Australian banks agree with the European banking industry that [the rules] in their current forms can be improved substantially,' he said.

'If the European Union delays adoption of [the rules] in Europe we believe the Financial Reporting Council in Australia may need to consider following suit.'

For the banks, normal portfolio hedging practices will be redundant under the new rules, while some \$80 billion of securitised home loans may be shifted on balance sheet.

Source

Fiona Buffini, 'Accounting chief slams standards', *The Australian Financial Review*, 5 August 2003, p. 1.

FUTURES CONTRACTS

futures contract
Contract to buy or sell
an agreed quantity of
a particular item at an
agreed price on a specific
date.

A **futures contract** can be defined simply as a legally binding contract to buy or sell a specific quantity and quality of a particular item, at an agreed price, on a specific date in the *future*. The buy or sell price will be determined on the date the futures contract is entered into, even though the underlying buy or sell agreement will not be finalised for a particular period of time. If prices of the particular item that are subject to the futures contract rise, parties that have entered a contract to buy particular items or commodities (that is, taken a buy position) will record a gain on the futures contract, and those that have entered a contract to sell particular items or commodities (that is, taken a sell position) will record a loss on the futures contract. Futures contracts are normally traded on a futures exchange (although some are traded off market or ‘over the counter’) and, in the case of trading purely for financial

gain, do not normally require delivery of the actual item to which the futures contract relates. Rather, settlement is normally undertaken in the form of a cash payment or cash receipt.

In New Zealand, the first futures contracts were introduced in 1985 and related to the US Dollar, Prime Commercial Paper and Wool. Such futures provided a means for corporates, banks and farmers to minimise the risk associated with changing market prices of currency, interest rates and wool. Using wool as an example, a farmer might know that he is going to grow a specific quantity of wool of a given standard for delivery to market on a particular date. Without some form of hedging to avoid or minimise possible adverse effects of movements in such things as exchange rates or market prices, the farmer’s ultimate cash receipt could be very different from what was anticipated. Depending upon movements in the exchange rates or market prices, the ultimate receipt could be more or it could be less than expected. To eliminate or reduce this risk, the farmer could enter into an agreement on a futures exchange to deliver the wool on a specified date at a predetermined price. Such futures, however, relate to the delivery of commodities and not cash or other financial instruments and so would not be considered to be financial instruments.

Financial futures, on the other hand, will result in the ultimate transfer of cash or another financial instrument. They are covered by NZ IAS 32 and NZ IAS 39. Since their introduction in 1985, the use of financial futures within New Zealand has been limited owing primarily to an ‘illiquid’ market, that is, a lack of willing buyers and sellers of the contracts. Currently, the only such contract trading on market in New Zealand is the NZX 15 Index Futures (FoX15) contract, which is issued by the NZX and is listed on the Sydney Futures Exchange (SFE). The NZX has also recently listed equity options contracts on the SFE over shares on specific companies such as Carter Holt Harvey, Fletcher Building, Contact Energy, Telecom and The Warehouse. A number of other financial futures are also available. These include 90-day Bank Bill Futures, three-year Government Stock Futures and ten-year Government Stock Futures. These contracts do not trade on a listed market, rather they trade ‘over the counter’.

With futures contracts, traders typically have the ability to close out a position before the maturity of the contract (for example a bought contract can be offset by a sold contract and thus closed out). Therefore, many contracts do not reach maturity. Because of the high leverage involved, it is essential that parties using futures for speculative purposes scrutinise the daily movements in the value of the contracts. There have been numerous cases where individuals have become bankrupt or organisations have been wound up because of major losses made on the futures market. Significant losses (or gains) can be made even when the initial cash deposit on the contract is low—which is why they are considered to be highly levered instruments. Unless they used them for hedging purposes, risk-averse individuals or organisations would not undertake futures trading. Notable losses involving futures trading have included the following:

- a loss of US\$1.5 billion by Metallgesellschaft AG of Germany on oil futures contracts entered into by its US refining and marketing operation. This loss became known in January 1994;
- a loss of US\$1.4 billion by Barings plc of Britain on Japanese equity index futures trading. This loss led ultimately to the collapse of the bank in February 1995;
- a loss of \$360 million by National Australia Bank on currency options in 2003–04;
- a loss of US\$7.14 billion by the Paris-based international bank Société Générale early in 2008.

Clearing of futures contracts within New Zealand is undertaken through the SFE Clearing Corporation Pty Limited. All parties that trade in futures are required to deposit a specific amount (known as the initial margin) before they enter into a futures contract. On a daily basis variation margins are received or paid to cover any gains or losses made through daily price movements. This amount deposited can then be added to if the futures trader gains, or deducted from if the trader loses. If a significant proportion of the deposit is eroded through losses, the trader will be required to provide the exchange with additional funds to reinstate the original deposit. This requirement to provide further funds throughout the life of the contract is frequently referred to as a ‘margin call’. The futures are **marked to market** on a daily basis, which means that margin calls could be made on a daily basis.

mark to market
Valuing assets according
to their market prices.

As just noted, because the initial deposit might be low in relation to the underlying value of the futures contract, futures are considered to be ‘highly levered’—that is, they can lead to high percentage gains or losses. Worked Example 15.8 provides an example of a futures contract.

As another example of a share-related future consider Worked Example 15.9, which relates to share price index (SPI) futures. Within New Zealand a measure of the movements in the share market is provided by the **NZX All Index**. This index is calculated daily by the New Zealand Exchange (NZX) and is based on market prices of all equity securities listed on the NZSX Market (New Zealand’s main share market). In describing the development of share price index futures, Stoll and Whaley (1997, p. 140) state:

NZX All Index
Provides a measure of the movements in the share market within New Zealand.

Stock index futures contracts were, perhaps, the most successful financial innovation of the 1980s. The first contract was the Chicago Mercantile Exchange’s S&P 500 futures, which began trading in the US in April 1982. The contract design quickly spread to almost every major financial futures market worldwide—the Sydney Futures Exchange’s Australian All Ordinaries Share Price Index futures first traded in 1983; the London International Financial Futures Exchange’s FTSE 100 futures in 1984; the Hong Kong Futures Exchange’s Hang Seng Index futures in 1986; the MATIF’s CAC-40 index futures in 1988; the Osaka Stock Exchange’s Nikkei 225 futures in 1988; and DTB’s DAX index futures in 1990. The primary reason for the success of stock index futures markets is that index futures provide a fast and inexpensive means of changing stock market risk exposures internationally.

The NZX 15 Index, developed as the underlying index for the FoX15 futures contract, was introduced on 9 February 2004. It provides an indication of movements in the market value of the 15 largest and most liquid domestic securities listed on the NZSX Market. Constituent companies are weighted by free float market capitalisation and are reviewed every six months, with the weighting of any security in the index capped at 30 per cent.

■ WORKED EXAMPLE 15.8 USE OF FUTURES IN RELATION TO A SPECIFIC COMPANY’S SHARES

Jill Money had a rich friend who recently passed away in rather unusual circumstances. The rich friend had bequeathed 100 000 shares in Telecom Limited to Jill. Jill has decided to use the money from the sale of the shares to purchase a waterfront home on the Gold Coast of Queensland. The current price of Telecom Limited shares is \$8.50. Jill would like to sell the shares immediately as she has found a home she would like to acquire and she is concerned that the share price might fall and prevent her from making the acquisition. However, the shares cannot be legally transferred into her name for a month. On enquiry Jill is able to establish that the price of Telecom futures is \$8.70.

Required • Since she will not legally own the shares for one month, what action might Jill Money take to ensure that she can acquire the waterfront property?

Solution to Worked Example 15.8

As the shares cannot be legally transferred to her for one month, Jill could enter a futures contract on Telecom Limited shares in which she takes a ‘sell position’. In this event, the price of Telecom futures would be \$8.70 per share when she enters the futures contract. Therefore, regardless of what happens to the market price of the futures contract, Jill has ‘locked in’ the price that she will ultimately receive.

After the passing of one month the price of Telecom Limited’s shares has dropped to \$5.20, and the futures price to \$5.43. Jill has made a gain on the futures contract as she has an agreement to sell the futures at a price of \$3.27 above their current market price (\$8.70 – \$5.43). This gain offsets the loss of \$3.30 that she has made on the underlying security—the shares in Telecom Limited. Jill has effectively hedged her potential losses. The other party to the futures contract will have made a loss on the futures contract as they would have had an agreement to buy the Telecom futures for \$8.70, a figure over and above the current market price. The total gains and losses can be summarised as follows:

		\$
Loss on Telecom shares	100 000 × \$3.30	(330 000)
Gain on Telecom options	100 000 × \$3.27	327 000
Total net loss		<u>3 000</u>

FoX15 futures are directly related to the movement of equity securities in the NZX 15 Index. In other words, a unit contract in FoX15 futures is priced in co-relation to the movement of the NZX 15 Index (share price index) (which is a subset of securities in the NZX All Index). The relative pricing is multiplied by \$10.00 per index point. For example, on 2 September 2005 the FoX15 index was 6323.6. This means that the price of one FoX15 futures contract was \$63 236 ($6323.6 \times \10). As with other futures, participants can take buy or sell positions on the index contract. At the end of the contract period no actual shares need to be delivered. For the FoX15 trading ends on the third Thursday of the maturity month—with the contract months being March, June, September and December. Settlement for movements in the price of the index has to be made shortly thereafter. Traders can also ‘close’ positions throughout the life of futures contracts by selling their contracts to other parties at the available market price for the futures contracts. These prices are publicised on the exchange that the contracts are listed on—in this case the SFE. Worked Example 15.9 represents a futures trade where the trader in question has taken a buy position. Further details about the NZSX Index Futures can be found on the New Zealand Futures and Options Exchange (NZFOX) website, which is at <www.nzfox.nzx.com>. Details on NZFOX contract pricing can be found at <www.sfe.com.au>.

It should be noted that the NZFOX ceased trading in 2004. The FoX15 Futures Contract and NZFOX Share Options are listed and trade on the Sydney Futures Exchange. NZFOX products are based on New Zealand securities listed on NZX’s markets.

■ WORKED EXAMPLE 15.9 FUTURES TRADING TAKING A BUY POSITION

Johnny Risk believes that the share market is about to increase in value. On 1 March 2007 he acquires one NZX 15 Index Futures Contract (FoX15) in which he agrees to take a ‘buy’ position. The NZX 15 Index Futures Contract index is 5995 on 1 March, meaning that Johnny Risk has agreed to buy a NZX 15 Index Futures Contract at a price of $5995 \times \$10$. Any subsequent gain or loss will be directly dependent upon what he can ultimately sell the contract for. This amount will change daily and Johnny will be hoping that share prices will increase over time. Note that, as he might have paid only a small deposit on the contract, his gains or losses can represent a significant percentage of the initial deposit.

Just after his acquisition of the FoX15 futures contract, there is a general decline in the share market and the NZX 15 Index Futures Contract index falls to 5140. Worried about further falls he decides to close out his position by taking an opposite position—that is, he sells his futures contract. (Johnny had originally bought the contract—if he had taken out a contract in which he had taken a ‘sell position’, he would close it out by buying a futures contract, in which case he would have hoped for a falling market.)

Required • Calculate the amount that Johnny has lost on the contract.

Solution to Worked Example 15.9

Johnny’s loss can be calculated as follows:

Value of FoX15 futures contract at date of acquisition	$5995 \times \$10.00$	=	\$59 950
Value of FoX15 futures contract at date of position close	$5140 \times \$10.00$	=	\$51 400
Loss on the FoX15 futures contract			<u>\$8 550</u>

FoX15 futures may be used for hedging purposes or for speculation. In other words, if an investor believes they have certainty on which way the aggregated value of the constituent companies in the NZX 15 Index will move over time, they might choose to trade on that assumption to either make financial gain or minimise any losses in investments in the underlying securities. For example, if an organisation holds a portfolio of shares, it might hedge for movements in those shares by acquiring a ‘sell’ FoX15 futures contract in which it agrees up front at what price it will sell the FoX15 futures. If the share market falls, the party with the sell position will gain on the index because the price at which it contracted to sell the contract would be greater than the market price of the equivalent contract on the date of the subsequent sale. Therefore when a hedging strategy is adopted, what would be gained from the futures contract would offset any loss that would be made on the actual portfolio of shares held. Worked Example 15.10 provides another illustration of the use of FoX15 futures, including associated journal entries.

WORKED EXAMPLE 15.10 USE OF SHARE PRICE INDEX FUTURES

Boomtime Investments Limited holds a well-diversified portfolio of shares that has a market value of \$2 750 000. It is concerned about possible downturns in the share market and, on 1 March 2012, decides to take out a 'sell position' in 45 NZX 15 Index futures contract (FoX15) units when the NZX 15 Index is 5990. This means that another party has taken a 'buy position'. To enter the 45 contracts it makes an initial deposit of \$45 000 (45 contracts × \$1000) with the futures broker.

It is considered that movements in the NZX 15 Index futures contract will be reflective of changes in the value of the diversified share portfolio held by Boomtime Investments Limited. On 29 March the NZX 15 Index has fallen to 5940 and the value of the organisation's share portfolio has fallen to \$2 698 750.

Required •

- (a) Explain why the above contract would be considered to be a derivative as defined by NZ IAS 39.
- (b) Calculate the total gain or loss after hedging as a result of this contract.
- (c) Provide the accounting entries for Boomtime Investments' financial futures investments.

Solution to Worked Example 15.10

- (a) It is deemed to be a derivative as it satisfies the definition of a derivative provided by NZ IAS 39. As has been established, NZ IAS 39 paragraph 9 defines a derivative in the following manner (the above futures contract is consistent with this definition):

A derivative is a financial instrument or other contract within the scope of this Standard (see paragraph 2–7) with all three of the following characteristics:

- (a) *its value changes in response to the change in a specified interest rate, financial instrument price, commodity price, foreign exchange rate, index of prices or rates, credit rating or credit index, or other variable, provided in the case of a non-financial variable that the variable is not specific to a party to the contract (sometimes called the 'underlying');*
- (b) *it requires no initial net investment or an initial net investment that is smaller than would be required for other types of contracts that would be expected to have a similar response to changes in market factors; and*
- (c) *it is settled at a future date.*

- (b) The total gain or loss after hedging can be calculated as follows:

	\$	\$
<i>Loss on share portfolio</i>		
Market price at 1 March 2012	2 750 000	
Market price at 29 March 2012	2 698 750	51 250
<i>Gain on FoX15 futures</i>		
Price on 1 March 2012: 5990 × \$10 × 45 contracts	2 695 500	
Price on 29 March 2012: 5940 × \$10 × 45 contracts	2 673 000	22 500
Net loss		28 750

- (c) *Accounting entries for Boomtime Investments Limited*

- (i) How should the financial futures contracts of Boomtime Investments Limited be accounted for? NZ IAS 39 provides rules in this respect. As indicated above, a derivative can be accounted for at fair value through profit and loss. That is, derivatives can be periodically measured at fair value with any changes therein to be included in the calculation of that period's profit or loss. This approach has traditionally been referred to as 'marking to market'. An exception to this is where the entity elects to adopt hedge accounting and is able to satisfy the requirements for hedge accounting stipulated in NZ IAS 39. As indicated earlier in this chapter, there are three types of hedges identified in NZ IAS 39 paragraph 86, these being fair-value hedges, cash-flow hedges and hedges of net investments in foreign operations. The use of the above futures would constitute a fair-value hedge and would be accounted for in the manner described above for derivatives generally. That is, the hedging instrument (in this case, the futures contract) would be measured at fair value with changes going to the profit or loss. The hedged item, being the share portfolio, would also be valued at fair value with changes also going to the profit or loss. The gains or losses on the hedging item would offset the gains or losses on the hedging instrument. The required entries would be as follows:

1 March 2012

On 1 March the entity enters a forward contract. Effectively, on this date Boomtime Investments Limited has an obligation of \$2 695 500 payable on the futures contract. It also effectively has a receivable of \$2 695 500 because that is the amount it could receive from selling the contract on that date. Since the value of the right and that of the obligation are equal, the net fair value of the contract is zero. Hence, no accounting entry is necessary to record the right and the obligation.

Dr	Deposit on FoX15 Futures	45 000	
	Cr Cash		45 000
	<i>Deposit to enter contract</i>		

There is normally a requirement to make a percentage deposit with the futures broker.

Initial recognition

Under NZ IAS 39, an entity is required to recognise a financial asset or liability on its statement of financial position when, and only when, it becomes a party to the contractual provisions of the instrument.

Initial measurement

Financial assets and liabilities are initially measured at fair value. Usually this will be the same as the fair value of the consideration given (in the case of an asset) or received (in the case of a liability).

- (ii) After the initial recognition of the futures contract and the related deposit, the movements in the value of the futures and the share portfolio can be accounted for on the basis of movements in fair value. The entries would be:

29 March 2012	Dr	Loss on share portfolio	51 250	
		Cr Share portfolio		51 250
		<i>'Marking to market' the value of the organisation's share portfolio and treating the downward movement as a loss</i>		
	Dr	Deposit held by broker	22 500	
		Cr Gain on futures contract		22 500
		<i>Recognising gain on futures contract</i>		

This entry assumes that the gains are credited to the initial deposit held by the futures broker; it represents an aggregated entry, as in practice the adjustments to the deposit account might be made daily.

- (iii) If Boomtime Investments Limited decides to sell its shares and close out its futures contract on 30 March 2012, the accounting entries would be as shown below. This further assumes that the value of the portfolio of shares has fallen to \$2 650 000 and the FoX15 index has fallen to 5860:

30 March 2012	Dr	Cash	2 650 000	
	Dr	Loss on share portfolio	48 750	
		Cr Share portfolio		2 698 750
		<i>Receipt of cash on sale of portfolio and recognising loss</i>		
	Dr	Deposit held by broker	36 000	
		Cr Gain on futures contract		36 000
		<i>Recognising gain on futures contract</i>		

These entries again assume that the gains are credited to the initial deposit held by the futures broker; the gain on the futures contract is $(5940 - 5860) \times \$10.00 \times 45$, which equals \$36 000.

	Dr	Cash	103 500	
		Cr Deposit held by broker		103 500
		<i>Returning deposit by broker</i>		

This amount represents the total of the original deposit paid to the broker plus the accumulated gains of the FoX15 Future since the date of entering the contract; as can be seen, the return represents 130.0 per cent on the initial deposit.

Had the entity in Worked Example 15.10 not acquired the futures contract it would have lost \$100 000 on its share portfolio. However, given the gain of \$58 500 on the futures contract, the total result is a loss of \$41 500. The hedging activity insulates the entity from the full loss that would otherwise have occurred.

Apart from FoX15 futures, individuals might elect to transact in foreign currency futures. Worked Example 15.11 demonstrates the use of such futures.

■ WORKED EXAMPLE 15.11 USE OF CURRENCY FUTURES

On 1 July 2012, Hedgy Limited makes a sale to an overseas organisation and the sale is denominated in US dollars of US\$1 million. The item cost Hedgy Limited NZ\$1.4 million to manufacture. The spot rate on 1 July 2012 is NZ\$1 = US\$0.4485 so that the value of the receivable converted to New Zealand dollars on 1 July 2012 is \$2 229 654. The amount is due for receipt on 1 September 2012. Hedgy Limited is aware that it is exposed to fluctuations in exchange rates that could increase or decrease the amount of New Zealand dollars that is ultimately received. Being risk averse, Hedgy Limited decides to sell ten US-dollar futures contracts on the following terms: each contract is for an amount of US\$100 000 and the market rate for the futures contract on 1 July 2012 is NZ\$1 = 0.4385. This means that Hedgy Limited has agreed to sell US\$1 million for a predetermined price of \$2 280 502. In effect this 'locks in' the amount of New Zealand dollars that Hedgy Limited will receive from the sale. At the time of entering the futures contract, a deposit of NZ\$50 000 is made.

The futures contract is settled on 1 September 2012 when the value of the New Zealand dollar has increased, the spot rate is NZ\$1 = US\$0.4580 and the futures contract rate has moved to NZ\$1 = US\$0.4490.

Required • Provide the accounting entries for the sale made by Hedgy Limited to an overseas organisation on 1 July 2012, and for the futures contract settled on 1 September 2012. Ignore the time value of money.

Solution to Worked Example 15.11

The futures contracts that Hedgy Limited has entered would be classified as derivatives. Derivatives have been defined in this chapter. NZ IAS 39 paragraph 9 stipulates that derivatives are to be measured at fair value with any changes in fair value to be taken through the profit or loss. The only exception to this is where the entity, at its own option, designates an arrangement as a cash-flow hedge (and for hedge accounting to be allowed the hedge must be deemed to be 'effective'). The relevant part of NZ IAS 39 paragraph 9 states:

A financial asset or financial liability at fair value through profit or loss is a financial asset or financial liability that meets either of the following conditions:

- (a) *it is classified as held for trading. A financial asset or financial liability is classified as held for trading if it is:*
 - (i) *acquired or incurred principally for the purpose of selling or repurchasing it in the near term;*
 - (ii) *part of a portfolio of identified financial instruments that are managed together and for which there is evidence of a recent actual pattern of short-term profit-taking; or*
 - (iii) *a derivative (except for a derivative that is a designated an effective hedging instrument).*

The hedge in this case could be designated a cash-flow hedge as defined by NZ IAS 39 paragraph 86. Where a hedge is designated a cash-flow hedge, NZ IAS 39 paragraph 95 requires the gain or loss on the hedging instrument to be transferred initially to equity and subsequently to profit or loss to offset the gains or losses on the hedged item. This can be contrasted with a 'fair-value hedge' where the gains or losses on the hedging instrument are to be transferred to profit or loss as they occur. That is, if the entity meets the strict requirements set out in NZ IAS 39 paragraph 88, the gains and losses on the hedging instrument (in this case, on the futures) may initially be recognised in other comprehensive income (and transferred to equity) and subsequently transferred to profit or loss according to NZ IAS 39 paragraph 95 so as to offset the losses on the item that was the subject of the hedge (in this case, the receivable denominated in an overseas currency). If it was assumed that this is not a 'designated hedge' the gain or loss associated with the hedging arrangement would be taken directly to the period's profit or loss. A hedge can exist that is not a 'designated hedge'—it is up to the entity to explicitly document that it wants to adopt hedge accounting as stipulated within NZ IAS 39. If this course of action is not taken the hedging instrument is to be adjusted directly through profit or loss.

Assume that this transaction has been designated a hedge, and since the hedge has been undertaken to reduce the risks associated with future cash flows, the hedge can be classified as a cash-flow hedge. If the hedge meets the criteria stipulated in NZ IAS 39 (and these are fairly strict) the gain or loss on the hedging instrument is initially transferred to equity and then, at the end of the reporting periods, amounts are transferred out of equity to offset any gains or losses on the hedged item.

On the basis that this is a designated cash-flow hedge, the accounting entries to record Hedgy Limited's transactions are as follows:

1 July 2012	Dr	Accounts receivable	2 229 654	
	Dr	Cost of goods sold	1 400 000	
		Cr	Sales revenue	2 229 654
		Cr	Inventory	1 400 000

Recording the sale at the spot rate of NZ\$1 = US\$0.4485

On 1 July Hedgy Limited effectively has a futures receivable measured at \$2 280 502, as well as a futures payable of the same amount. As such, the contract on 1 July has a fair value of zero (the receivable and the payable offset one another) and no entries for the futures receivable or payable would be required.

1 July 2012	Dr	Deposit with futures broker	50 000	
		Cr Cash		50 000
		<i>Recording the deposit made with the futures broker</i>		
1 Sept. 2012	Dr	Cash	2 183 406	
	Dr	Loss on foreign exchange	46 248	
		Cr Account receivable		2 229 654
		<i>Recognising loss on contract</i>		

Hedgy Limited receives US\$1 000 000 from the overseas purchaser. As the exchange rate of the New Zealand dollar has risen the amount received has fallen in value; the US dollars buy fewer New Zealand dollars: $\$2\,183\,406 = \text{US}\$1\,000\,000 \div 0.4580$.

1 Sept. 2012	Dr	Deposit with futures broker	53 331	
		Cr Gain on futures contract—recorded in equity		53 331
		<i>Recognising gain on futures contract</i>		

The gain will equal the difference between the value of the futures contract on 1 July 2012 (\$2 280 502) and its value on 1 September 2012 (\$2 227 171 or $\text{US}\$1\,000\,000 \div 0.4490$). The organisation has locked in the sell price and is able to close out the position by taking a buy position at a lower price. The gain made on the futures contract offsets the loss made on the receivable denominated in US dollars.

1 Sept. 2012	Dr	Gain on futures contract—recorded in equity	53 331	
		Cr Gain on futures contract—in profit or loss		53 331
		<i>Transferring the gain from equity to offset the loss on the hedged item, which amounted to \$46 284</i>		
1 Sept. 2012	Dr	Cash	103 331	
		Cr Deposit with futures broker		103 331
		<i>Returning the original deposit made of \$50 000 and the gain of \$53 331 on the contract</i>		

If, for the purposes of this illustration, it were assumed that this is not a 'designated hedge', the gain or loss associated with the hedging arrangement would be taken directly to the period's profit or loss. A hedge can exist that is not a 'designated hedge'—it is up to the entity to explicitly document that it wants to adopt hedge accounting as stipulated within NZ IAS 39. If this course of action is not taken the hedging instrument is to be adjusted through the statement of comprehensive income.

OPTIONS

option
Commonly used form of derivative financial instrument entitling the holder to buy shares at a future time at a specified price.

put option
Gives the holder of the option the right to sell an asset, at a specified exercise price, on or before a specified date.

call option
Gives the holder of the option the right to buy an asset, at a specified exercise price, on or before a specified date.

Options are another commonly used form of derivative financial instrument. An options contract is the right, with no obligation for the option buyer, to buy or sell a specified quantity of an underlying instrument at a fixed price on or before a specified future date. Options can be classified as **put options** (the right to sell securities in the future) or **call options** (the right to buy securities in the future). A call option on a company's shares entitles the holder to buy shares at a future time for a specified price. This price is usually described as either the **exercise price** or the **strike price**. The right to buy these shares is paid for by way of an initial premium, which is usually a small fraction of the overall value of the transaction. Once the exercise price is determined it will remain fixed, regardless of variations in the market price of the underlying shares. The option can be traded and its sale price will fluctuate as the value of the underlying shares changes, with an increase in the price of the actual share leading to an increase in the price of the option (and vice versa).

A put option on shares entitles the holder of the option to require another party to buy a given quantity of shares at a future date for a specified price. The value of the put option will also depend on the market price of the underlying security. When an option is acquired in the marketplace (in the case of NZFOX options—they are purchased on the SFE market), an amount is paid for the option—known as the premium.

The holder of either a put or a call option acquires the right to exercise the option, but typically does not have to exercise it. In other words, an option holder may elect to let the option lapse thereby losing the premium amount that was initially paid for the option. For example, an individual might have paid a premium of \$0.20 to acquire a call option (the right to buy shares) in an organisation for an exercise price of \$1.00. If the market price of those shares falls below \$1.00, the option holder would not exercise the option, as they could obtain the shares

at lower cost directly from the market. Options have a finite life, the maximum duration generally being five years. Some options can be exercised at any time up to the date of their expiration, while others can be exercised only on the expiration date.

As trading in options only commenced in New Zealand equity securities during August 2005, an Australian option is illustrated here. Irrespective of the type or the origin of the option, the principle remains the same. As an example of an actual call option, consider the options available in BHP Billiton Limited shares. Table 15.3 shows some of the various options available in BHP Billiton Limited at 13 December 2006 (there were numerous BHP Billiton options that are not shown in the table).

On 13 December 2006 the last sale price of 'January 2007 \$25.00' options was \$1.37. That is, \$1.37 was the price buyers were prepared to pay for the right to acquire options. Holders of the options—normally the parcel of options would number at least 1000—could buy 1000 shares for \$25.00 in January 2007. The last sale price of a BHP ordinary share on 13 December 2006 was \$25.65.

The price of an option is expected to be greater than the difference between the market price of the share and the exercise price of the option. For example, if the market price of a BHP share is \$25.65 and the exercise price of the option is \$25.00, we would expect the sale price of the option to be greater than \$0.65 (which is \$25.65 less \$25.00). On 13 December 2006, the last sale price of the February 2007 \$25.00 option was \$1.83 (when the share price was \$25.65). Investors would be prepared to pay a greater amount, given that there is a possibility that the price of the shares will increase during the remaining life of the option (only 77 days' remaining life in the case of the option in Table 15.3, which expires at the end of February 2007). There is a 'time value' element in the option. Generally speaking, the more time until the expiration of the option, the higher the price of the option would be expected to be, all other things being equal. Worked Example 15.12 provides an illustration of how to account for share options.

exercise or strike price
Price the holder of an option will pay, despite any variations in market price, to buy a company's shares.

EXERCISE DATE	EXERCISE PRICE	LAST PRICE OFFERED BY BUYERS AT 13 DECEMBER 2006
January 07	0.01	25.95
January 07	23.50	2.52
January 07	25.00	1.30
January 07	25.50	0.96
January 07	26.00	0.69
January 07	26.50	0.52
January 07	27.00	0.33
January 07	27.50	0.23
January 07	28.00	0.15
January 07	28.50	0.11
January 07	29.00	0.06
February 07	25.00	1.83
February 07	25.50	1.56
February 07	26.00	1.27
February 07	26.50	1.08
February 07	27.00	0.86
February 07	27.50	0.80
February 07	28.00	0.55
February 07	28.50	0.41
February 07	29.00	0.34
February 07	30.00	0.18
February 07	30.50	0.06

Table 15.3

Options to BHP shares

■ **WORKED EXAMPLE 15.12** VALUATION OF OPTIONS AT NET MARKET PRICE

On 1 December 2011 Trader Limited acquires a parcel of 10 000 options in Telecom Limited. The options are acquired on the New Zealand Futures and Options Exchange at a price of \$0.40 each, and they give Trader Limited the right to acquire shares in Telecom Limited at any time in the next year for a price of \$14.00. Trader Limited's end of reporting period is 30 June. At 30 June 2012 the value of Telecom Limited shares has increased so that the value of the option has risen to \$0.85 each.

Required • Provide the accounting entries to record the transactions and subsequent end of reporting period adjustments.

Solution to Worked Example 15.12

The above transaction would not be considered to be a hedge. It would be accounted for by taking the changes in fair value directly to profit or loss as such changes occur. The entries to record the transactions and subsequent reporting date adjustments would be as follows:

1 Dec. 2011	Dr	Investment in share options	4 000	
		Cr	Cash	4 000
		<i>Investment in share options</i>		

The investment in the share options would be considered an asset as the options can be expected to generate future economic benefits.

30 June 2012	Dr	Investment in share options	4 500	
		Cr	Gain on share options	4 500
		<i>Increase in value of options</i>		

The share options are valued at their fair value in accordance with NZ IAS 39. The increase should be accounted for as a gain. This is often referred to as 'marking to market'.

swap agreement
Agreement between borrowers to exchange aspects of their respective loan obligations.

SWAPS

Another form of derivative financial instrument is the **swap agreement**. Swaps occur when borrowers exchange aspects of their respective loan obligations. Commonly used swaps are *interest rate swaps*—typically a fixed interest rate obligation is swapped for a variable rate obligation—and **foreign currency swaps**, where the obligation relating to a loan denominated in one currency is swapped for a loan denominated in another currency. First, foreign currency swaps will be considered.

foreign currency swap
Agreement under which an obligation relating to a loan denominated in one currency is swapped for a loan denominated in another currency.

FOREIGN CURRENCY SWAPS

Why would organisations want to swap a loan denominated in one currency for a loan denominated in another? If an organisation has receivables and payables that are both denominated in a particular foreign currency, changes in the **spot rate** will create gains on one but losses on the other. To the extent that the receivables and payables are for the same amount and denominated in the same currency, the losses on one monetary item (perhaps the foreign currency payable) will be offset by gains on the other monetary item (perhaps the foreign currency receivable).

spot rate
The exchange rate for immediate delivery of currencies to be exchanged.

For example, if Company A owes UK£100 000 to a supplier in the United Kingdom and the exchange rate is NZ\$1.00 = UK£0.30, Company A would currently owe the equivalent of NZ\$333 333. If Company A also has a customer in the United Kingdom that owes it UK£100 000, Company A would have a receivable currently valued at NZ\$333 333. If the exchange rate moves to NZ\$1.00 = UK£0.40, the value of the payable would fall to NZ\$250 000, which would represent a foreign currency gain of NZ\$83 333. However, this gain would be fully

offset by the reduction in the value of the receivable, which would also be valued at NZ\$250 000. The net result is that no foreign currency exchange gain or loss would be incurred.

If an organisation has a number of receivables that are denominated in a foreign currency, changes in spot rates might potentially create sizeable foreign currency gains or losses. If that same organisation is able to convert some of its domestic loans into foreign currency loans of the same denomination as its receivables, it will be able to effectively insulate or hedge itself against the effects of changes in spot rates. For example, a gain on the payable will effectively offset a loss on the other receivable, as demonstrated above. Such an organisation might seek to find another entity that is prepared to swap its foreign currency loans for the organisation's domestic loans.

When a swap is carried out, the primary borrower will still have a commitment to the primary lender should the other party to the swap default on the swap arrangement. Hence, it is not correct practice to eliminate a particular loan from the financial statements when a swap arrangement has been negotiated. That is, there would be no legal right of set-off. Consider Worked Examples 15.13 and 15.14, both of which illustrate foreign currency swaps.

■ **WORKED EXAMPLE 15.13** FOREIGN CURRENCY SWAP

On 1 July 2011 Byron Limited, a New Zealand company, borrows US\$2 million at a rate of 12 per cent from a US corporation, repayable in US dollars. The loan is for a period of three years. Byron Limited trades predominantly within Australia.

At the same time, Watego Limited, also a New Zealand company, borrows NZ\$2.5 million from a New Zealand bank, also at a fixed rate of 12 per cent and also for a period of three years. Watego Limited also has a number of receivables denominated in US dollars. As a result of perceived benefits to both parties, Byron Limited and Watego Limited decide to enter a swap contract in which they effectively swap their interest and principal obligations on the same date they take out the loans, that is, 1 July 2011.

Under the terms of the swap contract, Byron Limited will take responsibility for Watego Limited's New Zealand loan and related interest payments (that is, Byron Limited will effectively have a commitment pegged in New Zealand dollars), and Watego Limited will commit to take responsibility for Byron Limited's overseas loan and related interest payments (that is, Byron Limited will effectively have a receivable denominated in US dollars, the value of which will fluctuate as exchange rates change). From Byron Limited's perspective this means that as a result of the swap contract the overall net position will be that it will incur a net-total interest expense each period of \$300 000 each year, regardless of what happens to exchange rates, and will also make a loan repayment of \$2 500 000 at the end of three years regardless of what happens to exchange rates—that is, it has assumed the responsibilities for the loan originally borrowed by Watego Limited.

To keep this question relatively simply it will be assumed that the required market rates on both loans are equal to the coupon rates, that is, they are also 12 per cent (meaning there is no discount or premium on the loans), and it will further be assumed that the market rates remain at 12 per cent throughout the term of the loans. Cash payments related to each loan are to be made on 30 June of each year. The relevant exchange rates are:

1 July 2011	NZ\$1.00 = US\$0.80
30 June 2012	NZ\$1.00 = US\$0.70
30 June 2013	NZ\$1.00 = US\$0.75
30 June 2014	NZ\$1.00 = US\$0.77

Required •

- (a) Provide the accounting entries in the books of Byron Limited for the reporting periods ending 30 June 2012, 2013 and 2014.
- (b) Provide the accounting entries in the books of Watego Limited for the reporting period ended 30 June 2013.

Solution to worked example 15.13

(a) *Accounting entries in the books of Byron Limited*

For this illustration it is assumed that the entity has elected to account for the swap as a cash-flow hedge. Provided the conditions in paragraph 88 of NZ IAS 39 are met, for a cash-flow hedge the gains and losses on the hedging instrument would initially be deferred in equity and then transferred to profit or loss to offset gains and losses on the financial instrument.

That was the reason for the hedge (the hedged item). As the gains and losses on the hedged item (the loan) and the hedging instrument (the swap) fully offset each other in this example, the net effect on equity or profits is \$nil. The foreign loan is considered to be perfectly hedged (the gains fully offset the losses). Hence, the gains and losses on the swap agreement shall be taken directly to profit or loss as they arise. These gains or losses will represent the change in the fair value of the swap agreement. The following table is used to determine the fair value of the swap from Byron Limited's perspective.

DATE	FAIR VALUE OF FOREIGN CURRENCY RECEIVABLE COMPONENT OF SWAP	FAIR VALUE OF THE NEW ZEALAND PAYABLE COMPONENT OF SWAP*	FAIR VALUE OF SWAP	GAIN/(LOSS) ON HEDGE
1 July 2011	$[(2\ 000\ 000 \div 0.8) \times 0.12 \times 2.401831] + [(2\ 000\ 000 \div 0.8) \times 0.7117801] = 2\ 500\ 000$	2 500 000	–	–
30 June 2012	$[(2\ 000\ 000 \div 0.70) \times 0.12 \times 1.6900509] + [(2\ 000\ 000 \div 0.70) \times 0.7971938] = 2\ 857\ 143$	2 500 000	357 143	357 143
30 June 2013	$[(2\ 000\ 000 \div 0.75) \times 0.12 \times 0.8928571] + [(2\ 000\ 000 \div 0.75) \times 0.8928571] = 2\ 666\ 667$	2 500 000	166 667	(190 476)
30 June 2014	$2\ 000\ 000 \div 0.77 = 2\ 597\ 403$	2 500 000	97 403	(69 264)

* Because the interest paid on the New Zealand loan (the coupon rate) is 12 per cent which also matches the required market rate, the face value of the loan also equates to the present value—that is, there is no premium or discount on the loan.

The swap agreement and the overseas loan will be accounted for separately.

1 July 2011	Dr	Cash	2 500 000	
		Cr	Foreign loan	2 500 000
				<i>Recognise the initial loan received from the US company of \$2 500 000 = \$2 000 000 ÷ 0.80 at the 1 July 2011 spot rate</i>

There is no entry to recognise the swap as the fair value of the swap agreement is deemed to be zero on 1 July 2011 as shown in the table above.

By virtue of the swap—which in this worked example can be considered to be a cash-flow hedge—Byron Limited now effectively has a foreign loan and a foreign currency receivable of the same magnitude. The receivable element has arisen because Watego Limited has agreed to take responsibility for the overseas loan in exchange for Byron Limited taking responsibility for the New Zealand loan. Because Byron Limited effectively has both a payable and a receivable that are of the same amount and denominated in the same foreign currency, it is insulated from any foreign currency gains or losses that might result from changes in the exchange rates.

30 June 2012	Dr	Foreign exchange loss	357 143	
		Cr	Foreign loan	357 143
				<i>Recognise the loss on the loan with the US corporation</i>

				\$
Value of loan as at 1 July 2011		$\$2\,000\,000 \div 0.80 =$	2 500 000	
Value of loan as at 30 June 2012		$\$2\,000\,000 \div 0.70 =$	2 857 143	
Foreign exchange loss			<u>357 143</u>	

Again, it should be noted that because it has been assumed that the respective loans offer a rate that also equates to the required market rate (which would be used for present value purposes using the effective interest method) the present value of the loan with the US corporation is the same as the numbers provided above (that is, the present value of the loan at 30 June 2012 is \$2 857 143).

30 June 2012	Dr	Swap asset	357 143	
		Cr	Cash-flow hedge reserve (Other comprehensive income)	357 143
				<i>Recognise the gain on the swap contract negotiated with Watego Limited—see table above. The swap would be considered to represent a financial asset</i>

As can be seen above, the change in the fair value of the swap contract exactly equals the exchange loss on the foreign loan meaning that the overseas loan is perfectly hedged. Whilst this might be designated as a cash-flow hedge, meaning that gains or loss on the hedging contract (the swap agreement in this case) shall initially go to equity as explained earlier, because the gains or losses on the hedge contract will exactly match the gains or losses on the foreign loan as to timing and amount, any gains on the hedging contract shall be taken directly to profit or loss such that the total foreign exchange gain or loss will be zero.

As can be seen, because the risk of the foreign currency exposure has been shifted fully to Watego Limited, Byron Limited does not have any net foreign currency gains or losses. The gains and losses cancel each other out.

30 June 2012	Dr	Interest expense	342 857	
		Cr	Cash	342 857
				<i>Recognise the payment made to the US corporation of \$342 857 [(\$2 000 000 × 0.12) ÷ 0.7]</i>
30 June 2012	Dr	Cash	42 857	
		Cr	Interest expense	42 857
				<i>Recognise the payment made by Watego Limited. Byron Limited has taken responsibility for the New Zealand loan as part of the swap, whereas Watego has taken responsibility for the US loan (\$2 000 000 ÷ 0.7 × 0.12) – (\$2 500 000 × 0.12) = \$42 857.</i>

Byron Limited initially has to make the payment to the US company for the funds it borrowed. That is, even in the presence of the agreement with Watego Limited, Byron Limited will still comply with its contractual commitment with the overseas capital supplier. However, Watego Limited has agreed to take responsibility for the overseas loan, while Byron Limited has agreed to take responsibility for Watego Limited's domestic loan. The interest payment on the domestic loan is \$300 000 (that is, \$2 500 000 × 12 per cent). Watego Limited will pay Byron Limited \$42 857, with the result that Byron Limited's total interest expense (\$342 857 – \$42 857) is the amount payable on the domestic loan (\$300 000), the loan for which Byron Limited has agreed to take responsibility.

30 June 2013	Dr	Foreign loan	190 476	
		Cr Foreign exchange gain		190 476
		<i>Recognise the loss on the loan with the US corporation</i>		
				\$
		Value of loan as at 1 July 2012	$2\,000\,000 \div 0.70 =$	2 857 143
		Value of loan as at 30 June 2013	$2\,000\,000 \div 0.75 =$	2 666 667
		Foreign exchange gain		190 476
30 June 2013	Dr	Cash-flow hedge reserve (Other comprehensive income)	190 476	
		Cr Swap asset		190 476
		<i>Recognise the loss on the swap contract negotiated with Watego Limited—see table provided earlier.</i>		
30 June 2013	Dr	Interest expense	320 000	
		Cr Cash		320 000
		<i>Recognise the payment made to the US corporation of \$285714 $[(\\$2\,000\,000 \times 0.12) \div 0.75]$</i>		
30 June 2013	Dr	Cash	20 000	
		Cr Interest expense		20 000
		<i>Recognise the payment made by Watego Limited. Byron Limited has taken responsibility for the New Zealand loan as part of the swap, whereas Watego has taken responsibility for the US loan $(\\$2\,000\,000 \div 0.75 \times 0.12) - (\\$2\,500\,000 \times 0.12) = \\$20\,000$</i>		
30 June 2014	Dr	Foreign Loan	69 264	
		Cr Foreign exchange gain		69 264
		<i>Recognise the loss on the loan with the US corporation</i>		
				\$
		Value of loan as at 1 July 2013	$2\,000\,000 \div 0.75 =$	2 666 667
		Value of loan as at 30 June 2014	$2\,000\,000 \div 0.77 =$	2 597 403
		Foreign exchange gain		69 264
30 June 2014	Dr	Cash-flow hedge reserve (Other comprehensive income)	69 264	
		Cr Swap asset		69 264
		<i>Recognise the loss on the swap contract negotiated with Watego Limited—see table provided earlier</i>		
30 June 2014	Dr	Interest expense	311 688	
		Cr Cash		311 688
		<i>Recognise the payment made to the US corporation of \$311 688 $[(\\$2\,000\,000 \times 0.12) \div 0.77]$</i>		
30 June 2014	Dr	Cash	11 688	
		Cr Interest expense		11 688
		<i>Recognise the payment made by Watego Limited. Byron Limited has taken responsibility for the New Zealand loan as part of the swap, whereas Watego has taken responsibility for the US loan $[(\\$2\,000\,000 \div 0.77 \times 0.12) - (\\$2\,500\,000 \times 0.12) = \\$11\,688]$</i>		
30 June 2014	Dr	Loan	2 597 403	
		Cr Cash		2 597 403
		<i>Repayment of overseas loan</i>		
30 June 2014	Dr	Cash	97 403	
		Cr Swap		97 403
		<i>Recognise the completion of the swap contract and to record the amount paid to Byron Limited by Watego Limited</i>		

The effect of the above two entries is that Byron Limited will make a net payment of \$2 500 000 which equals the commitment relating to the New Zealand loan.

(b) Accounting entries in the books of Watego Limited

1 July 2011	Dr	Cash	2 500 000	
		Cr	Loan	2 500 000

Recognise the domestic loan taken out by Watego Limited

There is no entry to recognise the swap as the fair value of the swap agreement is deemed to be zero as shown in the table provided below.

DATE	FAIR VALUE OF FOREIGN CURRENCY PAYABLE COMPONENT OF SWAP	FAIR VALUE OF THE NEW ZEALAND RECEIVABLE COMPONENT OF SWAP	FAIR VALUE OF SWAP	GAIN/(LOSS) ON HEDGE
1 July 2011	2 500 000	2 500 000	–	–
30 June 2012	2 857 143	2 500 000	(357 143)	357 143
30 June 2013	2 666 667	2 500 000	(166 667)	190 476
30 June 2014	2 597 403	2 500 000	(97 403)	69 264

1 July 2012	Dr	Cash-flow hedge reserve (Other comprehensive income)	357 143	
		Cr	Swap liability	357 143

Recognise the domestic loan taken out by Watego Limited

Watego Limited has recorded a loss as a result of entering the swap contract. But, as indicated earlier, the reason Watego Limited sought to enter the swap was so that it effectively would create a payable denominated in US dollars which in turn could be used to offset any gain or losses on the foreign currency receivables it already has. Adjustments to the value of these receivables (not shown in this example owing to lack of information) will offset, fully or partially, the gains or losses on the hedge contract.

1 July 2012	Dr	Interest expense	300 000	
		Cr	Cash	300 000

Recognise the interest payment made by Watego Limited on the domestic loan; as per the swap agreement, however, Byron Limited will take responsibility for the domestic loan commitments of \$300 000 [$\$2\,500\,000 \times 12$ per cent]

1 July 2012	Dr	Interest expense	42 857	
		Cr	Cash	42 857

Recognise the domestic loan taken out by Watego Limited

An adjustment payment between Watego Limited and Byron Limited is made so that, in total, Watego Limited will make payments equivalent only to the interest on the overseas loan, the loan for which it has taken responsibility as part of the swap.

			\$
Cash flows associated with domestic loan	$\$2\,500\,000 \times 12$ per cent =		300 000
Cash flows associated with overseas loan	$(\$2\,000\,000 \times 12$ per cent) $\div 0.70$ =		342 857
Amount to be transferred to Byron Limited from Watego Limited			42 857

It should be remembered that in swap arrangements the other parties to loans—that is, the overseas and domestic financial institutions—might not know about the swap arrangements that have been negotiated, such as that negotiated between Watego Limited and Byron Limited in Worked Example 15.13. The contractual relationship between each company and its lending institution remains unchanged by the swap arrangement. Should one party to the swap default on the arrangement, the obligation for repayment vests with the primary borrower. Generally, the interest and principal repayments will be made by the party that entered the initial contract with the financial institution. Cash adjustments will then be made between the parties to the swap. Worked Example 15.14 considers a further illustration of a foreign currency swap.

■ WORKED EXAMPLE 15.14 FURTHER ILLUSTRATION OF A FOREIGN CURRENCY SWAP

On 1 July 2011, Bronte Limited, a New Zealand company, borrows UK£2 million at a rate of 8 per cent from a British bank, repayable in UK pounds. The loan is for a period of five years.

At the same time Bondi Limited, also a New Zealand company, borrows NZ\$5 million from a New Zealand bank at a fixed rate of 9 per cent. This loan is also for a period of five years.

As a result of perceived benefits, Bronte Limited and Bondi Limited decide to swap their interest and principal obligations. Both organisations have a 30 June reporting date, and interest is paid on 30 June.

The relevant exchange rates are:

1 July 2011	NZ\$1.00 = £0.40
30 June 2012	NZ\$1.00 = £0.45

Following the swap, Bronte Limited's foreign currency principal obligation is effectively pegged at the rate in place at the time of the swap.

Required •

- Provide the accounting entries for the books of Bronte Limited.
- Provide the accounting entries for the books of Bondi Limited.

Solution to Worked Example 15.14

(a) *Accounting entries in the books of Bronte Limited*

Again, it is assumed that the entity has decided to treat the swap contract as a cash-flow hedge. Because the gains or losses on the hedged item (the overseas loan) will equal the gains or loss on the hedging instrument (the swap contract), the gains or losses on the swap will be taken to profit and loss at the same time as the gains or losses on the foreign loan are recognised. We use the following table to determine the fair value of the swap from Bronte Limited's perspective (only the first year of the swap is provided).

DATE	FAIR VALUE OF FOREIGN CURRENCY RECEIVABLE COMPONENT OF SWAP	FAIR VALUE OF THE NEW ZEALAND PAYABLE COMPONENT OF SWAP*	FAIR VALUE OF SWAP	GAIN/(LOSS) ON HEDGE
1 July 2011	$[(\$2\,000\,000 \div 0.45) \times 0.08 \times 2.5770967]$ $+ [(\$2\,000\,000 \div 0.45) \times 0.7938321] =$ \$4 444 444	4 444 444	–	–
30 June 2012	$[(\$2\,000\,000 \div 0.50) \times 0.08 \times 1.7832646]$ $+ [(\$2\,000\,000 \div 0.50) \times 0.8573387] =$ \$4 000 000	4 444 444	(444 444)	(444 444)

* Because the interest paid on the New Zealand loan (the coupon rate) is 8 per cent which also matches the required market rate, the face value of the loan also equates to the present value—that is, there is no premium or discount on the loan.

The following entries would be recorded in the books of Bronte Limited:

1 July 2011	Dr	Cash	4 444 444	
		Cr	Foreign loan	4 444 444
				<i>Recognise the initial loan received from the British Bank of \$4 444 444 = £2 000 000 ÷ 0.45) at the 1 July 2011 spot rate</i>

There is no entry to recognise the swap as the fair value of the swap agreement is deemed to be zero on 1 July 2011 as shown in the above table.

30 June 2012	Dr	Foreign loan	444 444	
		Cr Foreign exchange gain		444 444

Recognise foreign exchange gain

\$

Value of loan as at 1 July 2011	£2 000 000 ÷ 0.45 =	4 444 444
Value of loan as at 30 June 2012	£2 000 000 ÷ 0.50 =	4 000 000

Decrease in loan		<u>444 444</u>
------------------	--	----------------

30 June 2012	Dr	Loss on swap contract	444 444	
		Cr Swap		444 444

Recognise the loss on the swap contract negotiated with Watego Limited—see table above. The swap would be considered to represent a financial liability.

30 June 2012	Dr	Interest expense	320 000	
		Cr Cash		320 000

To recognise payment made to British bank \$320 000 [$\$2\,000\,000 \div 0.50 \times 8$ per cent]

30 June 2012	Dr	Interest expense	35 556	
		Cr Cash		35 556

To recognise payment made to British bank \$320 000 [$\$2\,000\,000 \div 0.50 \times 8$ per cent]

Bronte Limited has taken responsibility for the interest expense pertaining to the New Zealand loan. Because the interest expense on the New Zealand loan (\$355 556) exceeds the interest pertaining to the British loan (\$320 000), a net amount of \$35 556 is payable to Bondi Limited by Bronte Limited. ($\$4\,444\,444 \times 0.08$) – ($2\,000\,000 \div 0.5 \times 0.08$) = 35 556

(b) *The books of Bondi Limited could show the following accounting entries:*

1 July 2011	Dr	Cash	4 444 444	
		Cr Loan		4 444 444

Recognise the domestic loan taken out by Bondi Limited

There is no entry to recognise the swap as the fair value of the swap agreement is deemed to be zero on 1 July 2011.

30 June 2012	Dr	Swap	444 444	
		Cr Gain on swap contract		444 444

30 June 2012	Dr	Interest expense	356 556	
		Cr Cash		356 556

Recognise amount paid by Bondi Limited to the New Zealand bank of \$355 556 [$\$4\,444\,444 \times 8$ per cent]

30 June 2012	Dr	Cash 35 556		
		Cr Interest expense		35 556

Acknowledge the amount transferred by Bronte Limited to cover the interest expense differential

INTEREST RATE SWAPS

Interest rate swaps occur when an entity with borrowings subject to variable or floating interest rates is concerned about its exposure to future increases in the variable rate. To reduce this risk, the entity may enter into an interest rate swap. When an interest rate swap is made, there is no exchange of principal. Rather, one party exchanges its interest payments of a specified amount with another party. This generally involves swapping one stream of interest payments, which are charged at a variable or floating rate, with another stream of interest payments, which are at a fixed amount. For a swap to proceed, both parties to the swap will need to receive benefits in the form of reductions in total interest payments. In this regard, consider Worked Example 15.15.

■ **WORKED EXAMPLE 15.15** ILLUSTRATION OF AN INTEREST RATE SWAP

Beachmere Limited is able to borrow money at either a fixed rate of 12 per cent or at the 120-day bank bill rate (BBR) (which fluctuates, but is currently 10 per cent). Bombi Limited can borrow funds either at a fixed rate of 14 per cent or at the 120-day BBR plus 0.5 per cent. In part, the difference in interest rates each organisation is being charged is due to differences in the organisations' credit ratings.

Beachmere Limited borrows \$1 million in funds for four years at a fixed rate of interest on 1 July 2011, whereas Bombi Limited borrows \$1 million for four years at the floating BBR plus 0.5 per cent. After the organisations have committed themselves to their respective lenders, Beachmere Limited considers that it would prefer a variable interest rate, while Bombi Limited decides that it would prefer a fixed interest rate. They agree to swap their obligations. Assume that all interest payments are made at the end of the financial year, which is 30 June 2012.

Even though Beachmere Limited has an interest rate advantage in both the variable and fixed interest rate markets, a swap rate can be agreed upon so that both Beachmere Limited and Bombi Limited can benefit. Under the swap agreement, Beachmere will make floating rate payments to Bombi Limited at the BBR plus 0.5 per cent, and Bombi Limited will make fixed rate payments to Beachmere Limited at 13 per cent.

Required • What would the net interest payments for each company be after the agreement?

Solution to Worked Example 15.15

The net interest payments of each company after the agreement would be as follows:

<i>Beachmere Limited</i>	<i>Bombi Limited</i>
Pays 12% to primary lender	Pays BBR + 0.5% to primary lender
Pays BBR + 0.5% to Bombi Limited	Pays 13% to Beachmere Limited
Receives 13% from Bombi Limited	Receives BBR + 0.5% from Beachmere Limited
Net interest cost = BBR – 0.5%	Net interest cost = 13%

Assuming that this arrangement has been designated a cash-flow hedge, the requirements of NZ IAS 39 paragraph 95 would apply. As NZ IAS 39 paragraph AG103 states:

An example of a cash flow hedge is use of a swap to change floating rate debt to fixed rate debt (i.e. a hedge of a future transaction; the future cash flows being hedged are the future interest payments).

For a cash-flow hedge, changes in the value of the hedging instrument are to be recorded initially in equity and subsequently transferred to the statement of comprehensive income to offset gains or losses on the hedged item.

After the above interest rate swap, both organisations have their preferred type of borrowing (that is, either fixed or variable) and both have made a net saving on the rates that were available in the marketplace on that preferred means of borrowing.

Interest rate swaps can be accounted for as either fair-value hedges or cash-flow hedges. As indicated earlier, a fair-value hedge is defined in NZ IAS 39 paragraph 86(a) as:

A hedge of the exposure to changes in fair value of a recognised asset or liability or an unrecognised firm commitment, or an identified portion of such an asset, liability or firm commitment, that is attributable to a particular risk and could affect profit or loss.

If such an arrangement is designated a fair-value hedge, the requirements of NZ IAS 39 paragraph 89 will apply. As NZ IAS 39 paragraph AG102 states:

An example of a fair value hedge is a hedge of exposure to changes in the fair value of a fixed rate debt instrument as a result of changes in interest rates. Such a hedge could be entered into by the issuer or by the holder.

For a fair-value hedge, any gain or loss from remeasuring the hedging instrument at fair value is recognised in profit or loss, and the gain or loss on the hedged item attributable to the hedged risk is to adjust the carrying amount of the hedged item and be recognised in profit or loss. Additional guidance is provided by NZ IAS 39 paragraph 89A, which states:

For a fair value hedge of the interest rate exposure of a portion of a portfolio of financial assets or financial liabilities (and only in such a hedge), the requirement in paragraph 89(b) may be met by presenting the gain or loss attributable to the hedged item either:

- (a) in a single separate line item within assets, for those repricing time periods for which the hedged item is an asset; or*
- (b) in a single separate line item within liabilities, for those repricing time periods for which the hedged item is a liability.*

The separate line items referred to in (a) and (b) above shall be presented next to financial assets or financial liabilities. Amounts included in these line items shall be removed from the statement of financial position when the assets or liabilities to which they relate are derecognised.

A cash-flow hedge is defined in NZ IAS 39 paragraph 86(b) as:

a hedge of the exposure to variability in cash flows that (i) is attributable to a particular risk associated with a recognised asset or liability (such as all or some future interest payments on variable rate debt) or a highly probable forecast transaction and (ii) could affect profit or loss.

If such an arrangement is designated a cash-flow hedge, the requirements of NZ IAS 39 paragraph 95 will apply. As NZ IAS 39 paragraph AG103 states:

An example of a cash flow hedge is the use of a swap to change floating rate debt to fixed rate debt (i.e. a hedge of a future transaction where the future cash flows being hedged are the future interest payments).

For a cash-flow hedge, changes in the value of the hedging instrument are to be recorded initially in other comprehensive income and subsequently transferred to the statement of comprehensive income to offset gains or losses on the hedged item. An example of an interest rate swap that has been accounted for as a cash-flow hedge is provided in Worked Example 15.16.

■ WORKED EXAMPLE 15.16 INTEREST RATE SWAP

On 1 January 2012 Grommet Limited issues NZ\$5 million of three-year variable-rate debt. The variable-rate on the debt is the Bank Bill Rate (BBR) plus 1 per cent. The initial BBR is 5 per cent. Interest on the debt is paid on an annual basis.

Grommet Limited wishes to hedge its interest-rate exposure on this debt so enters into a three-year pay fixed, receive BBR interest-rate swap. The swap has a notional amount of NZ\$5 million. Grommet Limited designates the swap as a cash-flow hedge.

The terms of the interest rate swap are as follows.

Notional amount	\$NZ5 000 000
Trade date	1 January 2012
Start date	1 January 2012
Maturity date	31 December 2014
Grommet Limited pays	5 per cent
Grommet Limited receives	BBR + 1 per cent
First pay/receive date	31 December 2012
Last pay/receive date	31 December 2014

Under the terms of the swap, Grommet Limited will receive the Bank Bill Rate (BBR) plus 1% and pay a fixed rate of 5%. For the purposes of this worked example the interest rate swap is assumed to be highly effective. Grommet Limited's reporting period ends on 31 December.

The BBR rates, plus 1%, over the term of the swap are as follows:

31 December 2012 (average and ending)	7%
31 December 2013 (average and ending)	4%
31 December 2014 (average and ending)	6%

Required • Prepare the journal entries for the reporting period ending 31 December 2012, 31 December 2013 and 31 December 2014 to account for the interest rate swap.

Solution to Worked Example 15.16

Grommet Limited will have an asset (a liability) position in the swap when the BBR plus 1% is greater than (less than) 5%. For reporting purposes, Grommet Limited estimates the fair value of swaps by projecting future settlement amounts using the current year's variable rate and discounting these expected future cash flows for time value using the same variable rate.

1 Jan 2012	Dr	Cash	5 000 000	
		Cr	Debt	5 000 000
		<i>Recognise issue of debt</i>		
1 Jan 2012	No entries are necessary to record the value of the interest rate swap as at inception it has a value of \$nil at inception			
31 Dec 2012	Dr	Interest expense	350 000	
		Cr	Cash	350 000
		<i>Recognising interest expense at 7 per cent on \$5 000 000</i>		
31 Dec 2012	Dr	Interest rate swap	262 430	
		Cr	Cash-flow hedge reserve (Other comprehensive income)	262 430
		<i>Recognising interest rate swap</i>		
	Note that although IAS 39 IGF.5.5 requires a yield curve to be used when calculating the fair value of an interest rate swap, for the sake of simplicity the value of the interest rate swap is calculated as follows.			
	The balance on the interest rate swap is calculated by taking the notional amount of \$5 000 000 multiplied by the difference between the BBR + 1% fixed rate of interest. As this is the cash flow that is expected for three years (from 1 January 2012) it must be discounted at the variable rate of interest (7 per cent) for three years. $\$5\,000\,000 \times (0.07 - 0.05) \times 2.6243$ (Appendix B) = \$262 430. As the BBR + 1 per cent is greater than 5 per cent, the interest rate swap is an asset.			
31 Dec 2012	Dr	Cash-flow hedge reserve (Other comprehensive income)	100 000	
		Cr	Interest expense	100 000
		<i>Recognising effective decrease in interest expense for reporting period ending 31 December 2012</i> $[\$5\,000\,000 \times (0.07 - 0.05)] = \text{NZ}\$100\,000$.		
31 Dec 2012	Dr	Cash	100 000	
		Cr	Interest rate swap	100 000
		<i>Recognising net settlement for reporting period ending 31 December 2012</i> $[\$5\,000\,000 \times (0.07 - 0.05)] = \text{NZ}\$100\,000$.		
31 Dec 2013	Dr	Interest expense	200 000	
		Cr	Cash	200 000
		<i>Recognising interest expense at 4 per cent on \$5 000 000</i>		
31 Dec 2013	Dr	Cash flow hedge reserve (Other comprehensive income)	256 735	
		Cr	Interest rate swap	256 735
		<i>Recognising interest rate swap</i>		
	The balance on the interest rate swap is calculated by taking the notional amount of \$5 000 000 multiplied by the difference between the BBR + 1% fixed rate of interest. As this is the cash flow that is expected for two years (from 1 January 2013) it must be discounted at the variable rate of interest (4 per cent) for two years. $\$5\,000\,000 \times (0.04 - 0.05) \times 1.8861$ (Appendix B) = \$94 305. As the BBR + 1 per cent is less than 5 per cent, the interest rate swap is a liability. As the balance on the interest rate swap on 31 December 2012 amounted to \$162 430 (\$262 430 - \$100 000), the interest rate swap must be credited with \$256 735.			
31 Dec 2013	Dr	Interest expense	50 000	
		Cr	Cash-flow hedge reserve (Other comprehensive income)	50 000
		<i>Recognising effective increase in interest expense for reporting period ending 31 December 2013</i> $[\$5\,000\,000 \times (0.04 - 0.05)] = \text{NZ}\$50\,000$.		
31 Dec 2013	Dr	Interest rate swap	50 000	
		Cr	Cash	50 000
		<i>Recognising net settlement for reporting period ending 31 December 2013</i> $[\$5\,000\,000 \times (0.04 - 0.05)] = \text{NZ}\$50\,000$.		

31 Dec 2014	Dr	Interest expense	300 000	
		Cr Cash		300 000
		<i>Recognising interest expense at 6 per cent on \$5 000 000</i>		
31 Dec 2014	Dr	Interest rate swap	94 305	
		Cr Cash-flow hedge reserve (Other comprehensive income)		94 305
		<i>Recognising interest rate swap</i>		
		The balance on the interest rate swap is calculated by taking the notional amount of \$5 000 000 multiplied by the difference between the BBR + 1% fixed rate of interest. As this is the cash-flow that is expected at the end of the year it is not discounted. $\$5\,000\,000 \times (0.06 - 0.05) \times 1.00 = \$50\,000$. As the BBR + 1 per cent is less than 5 per cent, the interest rate swap is an asset. As the balance on the interest rate swap on 31 December 2013 amounted to \$44 305 (\$94 305 – \$50 000), the interest rate swap must be debited with \$94 305.		
31 Dec 2014	Dr	Cash-flow hedge reserve (Other comprehensive income)	50 000	
		Cr Interest expense		50 000
		<i>Recognising effective decrease in interest expense for reporting period ending 31 December 2014</i> <i>[\$5 000 000 × (0.06 – 0.05)] = NZ\$50 000.</i>		
31 Dec 2014	Dr	Cash	50 000	
		Cr Interest rate swap		50 000
		<i>Recognising net settlement for reporting period ending 31 December 2014</i> <i>[\$5 000 000 × (0.06 – 0.05)] = NZ\$50 000.</i>		

COMPOUND INSTRUMENTS

As has been noted, a *compound instrument* is a financial instrument that contains both a financial liability and an equity element. NZ IAS 39 requires that the debt and equity components of a compound instrument be accounted for separately. Compound instruments include such things as convertible notes. As NZ IAS 32 paragraph 29 states, the economic effect of issuing a compound instrument is:

substantially the same as issuing simultaneously a debt instrument with an early settlement provision and warrants to purchase ordinary shares, or issuing a debt instrument with detachable share purchase warrants. Accordingly, in all cases, the entity presents the liability and equity components separately on its statement of financial position.

Remember, NZ IAS 39 paragraph 31 requires that when the initial carrying amount of a compound financial instrument is allocated to its equity and liability components, the equity component is to be assigned the residual amount after deducting from the fair value of the instrument as a whole the amount separately determined as the fair value of the liability component.

The treatment required by NZ IAS 32—that the residual amount be assigned to equity—represents a departure from what many organisations have done in the past. If conversion of the securities to shares is the *probable* outcome, the securities would not meet the criteria for recognition as liabilities in the New Zealand ‘Framework for the Preparation and Presentation of Financial Statements’ (the NZ Framework). That is, since it would not be probable that a sacrifice of future economic benefits would be required to settle the present obligation, the securities would, according to the NZ Framework, be classified as equity. If redemption of the securities is the probable outcome, they would be classified as liabilities. As noted above, however, NZ IAS 32 does not rely upon probabilities and so, contrary to the requirements of the NZ Framework, the classification of securities as debt or equity would not change along with the perceived probabilities of conversion. As stated earlier in the chapter, NZ IAS 32 paragraph 30 states:

Classification of the liability and equity components of a convertible instrument is not revised as a result of a change in the likelihood that a conversion option will be exercised, even when exercise of the option may appear to have become economically advantageous to some holders.

Consistent with the NZ Framework, it would seem logical that when determining how to disclose securities such as convertible notes, consideration should be given to the most likely future outcome. This view has not, however, been adopted by the accounting standard setters. Is the position taken by the accounting standard setters correct? Worked Example 15.17 describes how to account for compound instruments.

■ WORKED EXAMPLE 15.17 ACCOUNTING FOR COMPOUND INSTRUMENTS

Grommett Limited issues \$10 million of convertible bonds on 1 July 2011. The bonds have a life of eight years and a face value of \$10.00 each, and they offer interest, payable at the end of each financial year, at a rate of 6 per cent per annum. The bonds are issued at their face value and each bond can be converted into one ordinary share in Grommett Limited at any time in the next eight years. Organisations of a similar risk profile have recently issued debt with similar terms, without the option for conversion, at a rate of 8 per cent per annum.

Required •

- Identify the present value of the bonds and, allocating the difference between the present value and the issue price to the equity component, provide the appropriate accounting entries.
- Calculate the stream of interest expenses across the eight years of the life of the bonds.
- Provide the accounting entries if the holders of the options elect to convert the options to ordinary shares at the end of the third year of the debentures.
- Assume that on 1 July 2014, Grommett Limited makes a tender offer to repurchase the convertible bonds for \$13 000 000 which the bond holders accept. At the date of repurchase Grommett Limited could have issued similar debt without the option for conversion for a five-year term at 4 per cent per annum. Prepare the journal entries necessary to account for the repurchase of the bonds.
- In order to persuade the convertible bond holders to convert the bonds promptly, on 1 June 2014, Grommett Limited reduced the conversion price to \$8.665 if the bonds are converted before 1 July 2014. The market price of Grommett Limited's shares on the day the terms of the convertible bonds is amended is \$15.00. Conversion occurs on 1 July 2014. Prepare the journal entries necessary to account for the early conversion.

Solution to Worked Example 15.17

- NZ IAS 32 paragraph 28 requires that:

The issuer of a non-derivative financial instrument shall evaluate the terms of the financial instrument to determine whether it contains both a liability and an equity component. Such components shall be classified separately as financial liabilities, financial assets or equity instruments.

In considering how to measure the liability and equity components of the convertible bonds, the present value of the cash flows at the market's required rate of return can be determined. This amount would represent the liability component of the convertible bonds. The difference between the liability component and the total issue price of the bonds would represent the equity component. This is consistent with the requirements of NZ IAS 32. NZ IAS 32 paragraph AG31 states:

A common form of compound financial instrument is a debt instrument with an embedded conversion option, such as a bond convertible into ordinary shares of the issuer, and without any other embedded derivative features. Paragraph 28 requires the issuer of such a financial instrument to present the liability component and the equity component separately on the statement of financial position, as follows:

- The issuer's obligation to make scheduled payments of interest and principal is a financial liability that exists as long as the instrument is not converted. On initial recognition, the fair value of the liability component is the present value of the contractually determined stream of future cash flows discounted at the rate of interest applied at that time by the market to instruments of comparable credit status and providing substantially the same cash flows, on the same terms, but without the conversion option.*
- The equity instrument is an embedded option to convert the liability into equity of the issuer. The fair value of the option comprises its time value and its intrinsic value, if any. This option has value on initial recognition even when it is out of the money.*

Following the above requirement, the present value of the bonds can be identified, and then the difference between the present value of these bonds and the issue price of \$10 million can be allocated to the equity component. In determining the present value, the rate of 8 per cent will be used, which is the rate of interest paid on debt of a similar nature and risk that does not provide an option to convert the liability to ordinary shares.

Present value of bonds at the market rate of debt	
Present value of principal to be received in eight years discounted at 8%	
\$10 000 000 × 0.5403 (Appendix A)	= \$5 403 000
Present value of interest stream discounted at 8% for 8 years	
\$600 000 × 5.7466 (Appendix B)	= \$3 447 960
Total present value	\$8 850 960
Equity component	\$1 149 040
Total face value of convertible bonds	\$10 000 000

The accounting entries could therefore be:

1 July 2011	Dr	Cash	10 000 000	
		Cr	Convertible bonds (liability)	8 850 960
		Cr	Convertible bonds (equity component)	1 149 040

Recording the issue of the convertible bonds and the recognition of the liability and equity components—the equity component in this case would be \$1 149 040

30 June 2012	Dr	Interest expense	708 077	
		Cr	Cash	600 000
		Cr	Convertible bonds (liability)	108 077

Recognising the interest expense, where the expense equals the present value of the opening liability multiplied by the market rate of interest; see Table 15.4.

- (b) The stream of interest expenses across four years can be summarised as in Table 15.4, where interest expense for a given year is calculated by multiplying the present value of the liability at the beginning of the period by the market rate of interest, this being 8 per cent.

Table 15.4

Stream of interest expenses over four-year life of debentures

DATE	PAYMENT \$	INTEREST EXPENSE 8% \$	INCREASE IN BOND LIABILITY \$	BOND LIABILITY \$
01 July 2011				8 850 960
30 June 2012	600 000	708 077	108 077	8 959 037
30 June 2013	600 000	716 723	116 723	9 075 760
30 June 2014	600 000	726 061	126 061	9 201 821
30 June 2015	600 000	736 146	136 146	9 337 967
30 June 2016	600 000	747 037	147 037	9 485 004
30 June 2017	600 000	758 800	158 800	9 643 804
30 June 2018	600 000	771 504	171 508	9 815 308
30 June 2019	600 000	*784 692	184 692	10 000 000

* Includes a rounding error of \$533 (as present value tables are only to four decimal places).

- (c) If the holders of the options elect to convert the options to ordinary shares at the end of the third year of the debentures (after receiving their interest payments), the entries in the third year would be:

30 June 2014	Dr	Interest expense	726 061	
		Cr	Cash	600 000
		Cr	Convertible bonds (liability)	126 061

Recognising interest expense for the period

30 June 2014	Dr	Convertible bonds liability	9 201 821	
	Dr	Convertible bonds (equity component)	1 149 040	
	Cr	Contributed equity		10 350 861

Recognising the conversion of the bonds into shares of Grommet Limited

- (d) On 1 July 2014, Grommet Limited makes a tender offer to repurchase the convertible bonds for \$13 000 000, which is accepted by the bond holders.

Where a tender offer has been made to repurchase the convertible bonds through an early redemption or repurchase where the original conversion privileges are unchanged, Grommet Limited allocates the consideration paid and any transaction costs for the repurchase or redemption to the liability and equity components of the instrument at the date of the transaction. The method used to allocate the consideration paid into its separate components must be consistent with that used to originally allocate the separate components of the proceeds received by the entity when the convertible instrument was originally issued.

Once the allocation of the consideration has been made, any resulting gain or loss is accounted for as follows (NZ IAS 32 paragraph AG 34):

- the amount of gain or loss relating to the liability component is recognised in profit or loss; and
- the amount of consideration relating to the equity component is recognised in equity.

In this illustration, Grommit Limited first needs to calculate the fair value of similar debt. The difference between the fair value of the liability at 4 per cent and the amount of the repurchase \$13 000 000 is allocated to equity.

	Fair value 8% \$	Fair value 4% \$	Difference \$
Present value of five remaining annual interest payments of \$600 000 discounted at 4 per cent		2 671 093	
Present value of \$10 000 000 due in 5 years discounted at 4 per cent		8 219 271	
Fair value of remaining debt at 8 per cent from Table 15.3	9 201 821	10 890 364	(1 688 543)
Equity component	1 149 040	*2 109 636	(960 596)
	<u>10 350 861</u>	<u>13 000 000</u>	<u>(2 649 139)</u>

* The difference between the fair value amount allocated to the liability component and the repurchase price of \$13 000 000

1 July 2014	Dr	Convertible bonds liability	9 201 821	
	Dr	Interest expense (Debt settlement expense)	1 688 543	
		Cr Cash		10 890 364

Recognising the repurchase of the liability component

1 July 2014	Dr	Equity	2 109 636	
		Cr Cash		2 109 636

Recognising the cash paid for the equity component

The equity component remains as equity, but may be transferred from one line item within equity to another.

- (e) When the terms of the convertibles bonds have been amended to induce early conversion, the fair-value of the incremental consideration paid by Grommit Limited needs to be calculated.

An entity may offer convertible bond holders a more favourable conversion ratio or pay additional consideration to persuade them to convert their bonds before the due date. Where the terms of the convertible bonds have been changed, NZ IAS 32 paragraph AG 35 requires the difference, at the date the terms are amended, between the fair-value of the consideration the holder receives on conversion of the instrument under the revised terms and the fair-value of the consideration the holder would have received under the original terms to be recognised as a loss in profit or loss.

Number of ordinary shares to be issued to convertible bond holders under the **amended** conversion terms

Face amount	10 000 000	
New conversion price	\$8.665	
Number of ordinary shares to be issued on conversion		1 154 068

Number of ordinary shares to be issued to convertible bond holders under original conversion terms

Face amount	10 000 000	
New conversion price	\$10.00	
Number of ordinary shares to be issued on conversion		1 000 000

Number of incremental ordinary shares issued upon conversion		<u>154 068</u>
Value of incremental ordinary shares issued upon conversion (\$15.00 × 154 068)		<u>\$2 311 020</u>

The incremental consideration of \$2 311 020 is recognised as a loss in profit or loss.

The journal entry is

1 July 2014	Dr	Convertible bonds liability	9 201 821	
	Dr	Loss on conversion of convertible bond	2 311 020	
	Dr	Convertible bonds – equity	1 149 040	
		Cr Contributed equity		12 661 881

Recognising the early conversion of the bonds into shares of Grommit Limited

15.6 DISCLOSURE REQUIREMENTS

As its name would suggest, Accounting Standard NZ IFRS 7 'Financial Instruments: Disclosure' provides the disclosure requirements relating to financial instruments. Previously, the disclosure requirements relating to financial instruments were included in NZ IAS 32. In explaining the rationale for the disclosure requirements now embodied within NZ IFRS 7, paragraphs 1 and 2 state:

1. *The objective of this Standard is to require entities to provide disclosures in their financial statements that enable users to evaluate:*
 - (a) *the significance of financial instruments for the entity's financial position and performance; and*
 - (b) *the nature and extent of risks arising from financial instruments to which the entity is exposed during the period and at the end of the reporting period, and how the entity manages those risks.*
2. *The principles in this Standard complement the principles for recognising, measuring and presenting financial assets and financial liabilities in NZ IAS 32 Financial Instruments: Presentation, NZ IAS 39 Financial Instruments: Recognition and Measurement and NZ IFRS 9 Financial Instruments.*

The disclosure requirements within NZ IFRS 7 are extensive. In part, the relatively large number of disclosure requirements is probably a direct consequence of the significant losses many organisations have incurred recently in relation to financial instruments or, in particular, derivative financial instruments. A most notable case is the collapse of the UK merchant bank Barings plc. As mentioned previously, Barings plc lost US\$1.4 billion on Japanese equity index futures as a result of trading undertaken by one of its employees. This loss came to light in February 1995. Closer to home, the National Australia Bank made losses of approximately \$360 million on foreign currency options in 2003/2004. Such losses increase the concerns of investors who, in turn, demand greater disclosures about such instruments.

NZ IFRS 7 specifies numerous disclosures that entities must make in relation to all financial instruments (to the extent that such information is considered to be material to the users of the entity's reports). While there are many specific disclosure requirements in the standard, some general principles are also provided by NZ IFRS 7 paragraphs 7 and 31. These paragraphs state:

7. *An entity shall disclose information that enables users of its financial statements to evaluate the significance of financial instruments for its financial position and performance.*
31. *An entity shall disclose information that enables users of its financial statements to evaluate the nature and extent of risks arising from financial instruments to which the entity is exposed at the end of the reporting period.*

There are numerous disclosure requirements in NZ IFRS 7 and the best way to appreciate their extent is to review the standard itself. While the intention is not to discuss many of the standard's disclosure requirements, the disclosures required in relation to 'risks' associated with financial instruments will, however, be briefly considered. NZ IFRS 7 paragraphs 32 to 35 state:

32. *The disclosures required by paragraphs 33–42 focus on the risks that arise from financial instruments and how they have been managed. These risks typically include, but are not limited to, credit risk, liquidity risk and market risk.*

Qualitative disclosures

33. *For each type of risk arising from financial instruments, an entity shall disclose:*
 - (a) *the exposures to risk and how they arise;*
 - (b) *its objectives, policies and processes for managing the risk and the methods used to measure the risk; and*
 - (c) *any changes in (a) or (b) from the previous period.*

Quantitative disclosures

34. *For each type of risk arising from financial instruments, an entity shall disclose:*
 - (a) *summary quantitative data about its exposure to that risk at the end of the reporting period. This disclosure shall be based on the information provided internally to key management personnel of the entity (as defined in NZ IAS 24 Related Party Disclosures), for example the entity's board of directors or chief executive officer;*
 - (b) *the disclosures required by paragraphs 36–42, to the extent not provided in (a), unless the risk is not material (see paragraphs 29–31 of NZ IAS 1 for a discussion of materiality); and*
 - (c) *concentrations of risk if not apparent from (a) and (b).*
35. *If the quantitative data disclosed as at the end of the reporting period are unrepresentative of an entity's exposure to risk during the period, an entity shall provide further information that is representative.*

Clearly, the disclosure requirements relating to 'risks' associated with financial instruments are quite extensive. NZ IFRS 7 imposes further detailed disclosure requirements in relation to credit risk (the risk that one party to a financial instrument will cause a financial loss for the other party by failing to discharge an obligation), liquidity risk (the risk that an entity will encounter difficulty in meeting obligations associated with financial liabilities) and market risk (the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market prices). NZ IFRS 7 further explains that market risk comprises three other types of risk, these being currency risk, interest rate risk and other price risk. Disclosures are also required in relation to these components of risk.

SUMMARY

The chapter addressed accounting issues associated with financial instruments. Financial instruments are defined as contracts that give rise to both a financial asset of one entity and a financial liability or equity instrument of another entity. Such a definition, in turn, depends on knowledge of the definitions of a financial asset, a financial liability and an equity instrument, all of which are provided.

The term 'financial instruments' encompasses a wide range of items, including cash at bank, bank overdrafts, term deposits, trade receivables and payables, borrowings, loans receivable, notes receivable, notes payable, bonds receivable, options, forward-rate exchange agreements and interest-rate swaps. Financial instruments can be classified as primary financial instruments (such as receivables, payables and equity securities) and derivative financial instruments. Derivative financial instruments create rights and obligations that have the effect of transferring one or more of the financial risks inherent in the underlying primary financial instrument. The value of the contract normally reflects changes in the value of the underlying financial instrument. Derivative financial instruments cause many difficulties for accountants with regard to recognition, measurement and disclosure.

Derivative financial instruments include currency futures, share price index futures, share options, foreign currency swaps and interest-rate swaps. Accounting standard NZ IFRS 7 provides numerous disclosure requirements for financial instruments, some of which relate specifically to derivative financial instruments. For example, an entity is required to disclose its objectives for holding or issuing derivative financial instruments, the context needed to understand its objectives and the entity's strategies for achieving its objectives.

NZ IAS 39 provides the requirements pertaining to the recognition and measurement of financial instruments. As established in this chapter, the general rule is that financial instruments are to be measured at fair value.

The requirements incorporated in NZ IFRS 7, NZ IAS 32 and NZ IAS 39 include the following:

- All derivatives are required to be recognised and measured at fair value. Whether gains and losses go directly to profit or loss will depend upon whether there is an associated hedge that has been designated as a hedge and that has been deemed to be 'effective'.
- Where there is a designated cash-flow hedge the gain or loss on the hedging instrument (for example, a futures contract) is initially recorded as other comprehensive income (and transferred to equity). It can subsequently be recognised in profit or loss by means of a reclassification adjustment so as to offset the impact on profit or loss of any change in value of the hedged item (for example, an amount owing to an overseas supplier).
- Where an item is designated a fair-value hedge the change in value of the hedged item and the change in value of the hedging instrument are both immediately recognised in profit or loss.
- NZ IAS 32 stipulates requirements for measuring the debt and equity components of a compound financial instrument, with the equity component to be determined as the residual amount after deducting the fair value of the liability component from the fair value of the instrument in its entirety.
- NZ IAS 32 emphasises that a critical feature in distinguishing an equity instrument from a liability is the existence of a contractual obligation. An equity instrument cannot involve a contractual obligation. This requirement caused many financial instruments, such as many preference shares, to be reclassified as debt.
- Following on from the above point, NZ IAS 32 confines its assessment of debt versus equity to the contractual terms of the arrangement. Other known factors that are not included within the terms of a financial instrument (such as the probability that an equity option will be exercised) must be ignored.
- NZ IFRS 7 requires extensive disclosure in relation to the risks associated with financial instruments held or issued by an entity.

KEY TERMS

call option	542	hedge contract	528
convertible note	518	hedging	528
derivative financial instrument	510	mark to market	536
exercise or strike price	543	NZX All Index	537
financial asset	507	option	542
financial instrument	507	put option	542
financial liability	508	set-off	512
foreign currency swap	544	spot rate	544
futures contract	536	swap agreement	544

END-OF-CHAPTER EXERCISE

On 1 July 2011 Supertubes Limited issues \$50 million of convertible bonds to Magnatubes Limited. The bonds have a life of three years, a face value of \$10.00 each, and they offer interest, payable at the end of each financial year, at a rate of 8 per cent per annum.

The bonds are issued at their face value and each bond can be converted into two ordinary shares in Supertubes Limited at any time in the next three years. Organisations of a similar risk profile have recently issued debt with similar terms, but without the option for conversion. The market requires a rate of return of 10 per cent per annum on such securities. It is considered that investors in Supertubes are prepared to take a lower return (8 per cent) as a result of the facility to convert the bonds to equity.

Require • Provide the journal entries to account for:

- the issue of the above securities;
- the payment of the first year's interest; and
- the conversion of the securities to equity, assuming that the conversion takes place two years after the bonds are issued.

Solution to end-of-chapter exercise

(a) *Journal entries to account for the issue of the securities*

As discussed in this chapter, the above financial instruments are convertible bonds, which would be classified as compound instruments. A compound instrument is a financial instrument that contains both a financial liability and an equity element. In accordance with NZ IAS 32, the debt and equity components of a compound instrument must be accounted for separately.

The treatment required by NZ IAS 32 is not consistent with the guidance provided in the NZ Framework. However, as you know, accounting standards take precedence over the NZ Framework. If the NZ Framework were applied, and if the conversion of the convertible bonds to shares were the probable outcome, the bonds would be classified as equity. If, on the other hand, redemption of the securities were the probable outcome, they would be classified as liabilities. As noted in this chapter, however, NZ IAS 32 differs from the NZ Framework in that it does not rely upon probabilities and so the classification as debt or equity does not change along with the perceived probabilities of conversion.

NZ IAS 32 requires that a reporting entity assign the residual amount to the equity instrument—after deducting from the instrument as a whole the amount separately determined for the liability component. The present value of the bonds can be identified and then the difference between the present value of these bonds and the issue price of \$50 million can be allocated to the equity component.

Present value of bonds at the market rate of debt	
Present value of principal discounted at 10% for three years:	
\$50 000 000 × 0.7513 (Appendix A)	= \$37 565 000
Present value of interest stream discounted at 10% for three years:	
\$4 000 000 × 2.4869 (Appendix B)	= \$9 947 600
Total present value	\$47 512 600
Equity component (by deduction)	\$2 487 400
Total face value of convertible bonds	\$50 000 000

If the convertible bonds did not provide an option to convert to ordinary shares, the bonds would be expected to have been issued at a price of \$47 512 600. This is considered to represent the present value of the liability component of the compound instrument.

The accounting entries to account for the above issue would be:

1 July 2011	Dr	Cash	50 000 000	
		Cr	Convertible bonds liability	47 512 600
		Cr	Convertible bonds (equity component)	2 487 400
<i>Recording the issue of the convertible bonds and recognising the liability and equity components</i>				

(b) Journal entries for the payment of the first year's interest would be as follows:

30 June 2012	Dr	Interest expense	4 751 260	
		Cr	Cash	4 000 000
		Cr	Convertible bonds liability	751 260
<i>Recognising the interest expense, where the expense equals the present value of the opening liability multiplied by the market rate of interest—see Table 15.5 below</i>				

The stream of interest expenses across three years can be summarised as in Table 15.5, where interest expense for a given year is calculated by multiplying the present value of the liability at the beginning of the period by the market rate of interest, this being 10 per cent.

DATE	PAYMENT	INTEREST EXPENSE	BOND LIABILITY
01 July 2011			47 512 600
30 June 2012	400 000	4 751 260	48 263 860
30 June 2013	400 000	4 826 386	49 090 246
30 June 2014	400 000	4 909 025	*50 000 000

Table 15.5

Stream of interest expenses over three-year life of debentures

* Includes a rounding error of \$729 (as present value tables are only to four decimal places).

(c) If the holders of the options elect to convert the options to ordinary shares at the end of the second year of the debentures (after receiving their interest payments), the entries in the third year would be:

30 June 2013	Dr	Interest expense	4 826 386	
		Cr	Cash	4 000 000
		Cr	Convertible bonds liability	826 386
<i>Recognising interest expense for the period</i>				
30 June 2013	Dr	Convertible bonds liability	49 090 246	
	Dr	Convertible bonds (equity component)	2 487 400	
		Cr	Contributed equity	51 577 646
<i>Recognising the conversion of the bonds into shares of Supertubes Limited</i>				

REVIEW QUESTIONS

- 1 Define 'financial instrument'.
- 2 Which of the following could be considered financial instruments:
 - (a) prepaid expenses?
 - (b) equity shares held in another entity?
- 3 What is a primary financial instrument? Provide some examples.
- 4 What is a derivative financial instrument? Provide some examples.
- 5 What is a call option and what is a put option?
- 6 What is a compound financial instrument? Provide some examples.
- 7 What does 'mark to market' mean?
- 8 Explain how a currency swap operates.
- 9 Explain how an interest rate swap operates.

- 10 Futures contracts are considered to be highly leveraged instruments, with the result that considerable gains or losses can be incurred. What does this mean?
- 11 Reef Limited wants to sell its portfolio of shares given that the market appears to be at a 'high point'. However, there are restrictions in place that mean that it must wait for one month before it can sell its shares. Worried about possible movements in the share market, Reef Limited decides to enter a futures contract.
Required • What position would it take in such a contract and how would doing so insulate it from possible fluctuations in the market prices of its share portfolio?
- 12 Contrast the disclosure requirements of the NZ Framework and of NZ IAS 32 in relation to such instruments as convertible notes, particularly considering issues associated with the probability of conversion.
Required • Are you more inclined to agree with the requirements of NZ IAS 32 or the suggestions provided by the NZ Framework? Why?
- 13 Should interest on financial liabilities always be treated as an expense?
- 14 Would it ever be appropriate to classify the distributions to holders of preference shares as interest expense rather than dividends? Explain.
- 15 NZ IAS 32 requires the issuing entity to classify a financial instrument, or its component parts, as a liability or as equity in accordance with the economic substance of the instrument at the time of initial recognition. What does this requirement actually mean?
- 16 NZ IAS 32 and NZ IFRS 7 are concerned primarily with ensuring extensive disclosure of financial instruments. Why do you think this is the case?
- 17 In the past a number of organisations have disclosed convertible bonds just below the total of equity and therefore have not really disclosed them as debt or equity.
Required •
(a) Is the approach described above permitted under NZ IAS 32?
(b) Would it be costly for companies to change how they disclose their convertible notes? Explain.
- 18 Lehman Limited sells some printed material to an organisation in the United States on 1 July 2011. The price is denominated in US dollars and is US\$500 000. It is to be paid on 1 September 2011. The amount is guaranteed by a local bank so that payment is deemed to be very certain. The spot rate on the date of the transaction is NZ\$1 = US\$0.70.
Worried about fluctuations in the value of the New Zealand dollar, Lehman decides to enter a forward-rate agreement with the bank in which the latter agrees to buy US\$500 000 from Lehman Limited on 1 September at an agreed forward rate of US\$0.72.
Required •
(a) Describe how entering a forward-rate agreement will reduce the risk of Lehman Limited.
(b) How much money, in New Zealand dollars, will Lehman Limited ultimately receive from the sale?
- 19 Dorothy Wax has 10 000 shares in Skeg Limited. The current price per share in Skeg Limited is \$9.50. Dorothy would like to sell the shares immediately, but certain restrictions have been imposed upon her that mean she will have to wait one month.
Concerned about fluctuating prices, she decides to enter a futures contract on Skeg Limited shares in which she takes a sell position. The price of a Skeg Limited future is \$9.70 and her futures contract is for 10 000 units.
One month later the price of Skeg Limited shares has risen to \$12.10, and a Skeg Limited future costs \$12.29. Dorothy closes out her futures contract and sells her shares.
Required • How much does Dorothy ultimately receive from the above transactions?
- 20 On 1 July 2011 Billy Limited, a New Zealand company, borrows US\$1.5 million at a rate of 6 per cent from a United States bank for a period of three years. On the same date Rip Limited, also a New Zealand company, borrows NZ\$2.2 million from a New Zealand bank at a rate of 5 per cent for three years.
Both companies have a 30 June reporting date. The companies decide to swap their interest and principal obligations.
The relevant exchange rates are:
- | | |
|--------------|---------------------|
| 01 July 2011 | NZ\$1.00 = US\$0.70 |
| 30 June 2012 | NZ\$1.00 = US\$0.67 |
- Required** • Provide the journal entries in the books of both Billy Limited and Rip Limited for 1 July 2011 and 30 June 2012.

CHALLENGING QUESTIONS

- 21 (a) What is 'hedge accounting' and what are the three types of hedges identified in NZ IAS 39?
(b) What is a 'hedged item' and what is a 'hedging instrument'?
(c) For the different types of hedges, how are gains and losses on the hedging instrument to be treated for accounting purposes?
- 22 On 1 July 2012 Busta Limited holds a very well diversified portfolio of shares that is valued at \$1.55 million. On this date it enters into 60 futures contracts on FoX15 futures in which it takes a sell position. The FoX15 index on 1 July 2012 is 2500 and the total price of the futures contract is calculated as $2500 \times 60 \times \$10$ contracts = \$1 500 000. A total deposit of \$100 000 is paid on the futures contracts.
On 29 July 2012 Busta Limited decides to sell its portfolio of shares and to close out its futures contract. On this date, the market value of the share portfolio is \$1.725 million and the FoX15 index is 2720.
Required • Provide the journal entries to record the above transactions assuming that the above transaction is not designated a cash-flow hedge.
- 23 Mamb Limited has been able to arrange a loan from the bank at either a 10 per cent fixed rate or at the variable 90-day bank bill rate plus 0.5 per cent. Bong Limited can borrow funds at either 13 per cent or at the bank bill rate plus 2 per cent. The bank bill rate is currently 8 per cent.
Mamb decides to borrow \$1 million in funds at a fixed rate of 10 per cent, while Bong Limited decides to borrow the funds at the variable bank bill rate plus 2 per cent. Immediately following their borrowings, Mamb decides it would prefer a variable interest rate while Bong decides it would prefer a fixed rate.
Required • How would the parties agree on an appropriate rate for a swap? Calculate a rate that would be favourable to both parties.
- 24 Woodie Limited issues \$5 million in convertible bonds on 1 July 2011. They are issued at their face value and pay an interest rate of 4 per cent. The interest is paid at the end of each year. The bonds may be converted to ordinary shares in Woodie Limited at any time in the next three years. Organisations similar to Woodie Limited have recently issued similar debt instruments but without the option for conversion to ordinary shares. These instruments issued by the other entities offer interest at a rate of 6 per cent.
On 1 July 2012 all the holders of the convertible notes decide to convert the bonds to shares in Woodie Limited.
Required • Provide the journal entries to:
(a) record the issue of the securities on 1 July 2011;
(b) recognise the interest payment on 30 June 2012; and
(c) recognise the conversion of the bonds to ordinary shares on 1 July 2012.
- 25 Read the newspaper article in Financial Accounting in the News 15.2 entitled 'Accounting chief slams standards' (p. 532) and answer the following questions:
(a) What would be the basis of the argument by the chairman of the IASB that Australian accounting standards are 'deplorable'?
(b) In the article, why did some of Australia's largest companies call for changes in how derivatives should be accounted for?
(c) Do you accept the argument by Warren McGregor that 'unless local companies adopted global standards, international investors would reconsider investing in Australia'? Explain your view and, in doing so, consider the further claim made by McGregor that 'analysts in other parts of the world looking to invest in Australia just won't make the effort'. Would the claim by McGregor hold true in New Zealand?
- 26 Read the newspaper article entitled 'Accounts set for a shake-up' in Financial Accounting in the News 15.3. A number of issues are raised in the article, from an Australian perspective, about the introduction of IAS 39 (upon which NZ IAS 39 is based), including:
(a) many hedging contracts will need to be valued at fair value with any resulting gains and losses having to go to the statement of comprehensive income;
(b) many derivatives will appear on the statement of financial position for the first time;
(c) many financial instruments will need to be reclassified from debt to equity; and
(d) there will be major cuts to corporate profits as a result of the introduction of the accounting standard.
Required • Explain why the above issues are likely to be of concern to many organisations.

Australian companies have moved a step closer to a radical overhaul of the way they account for financial instruments such as the hedges that are used to manage movements in interest rates, currencies and commodities.

The London-based International Accounting Standards Board yesterday issued final rules for derivatives that will potentially affect profits, gearing ratios and loan covenants of Australian companies.

The move is a step closer to uniform accounting standards and comes as United States politicians prepare proposals, due next week, which will also shift American accounting closer to international norms.

The IASB's revised financial instruments standard, IAS 39, will force companies to classify popular hybrid securities as debt rather than equity. It will also bring derivatives and securitised assets back onto companies' balance sheets increasing assets and liabilities.

The new Australian Securities and Investments Commission chairman, Jeffrey Lucy, has been a prime mover behind Australia's move to global standards in a bid to improve the transparency of financial statements after corporate collapses here and overseas.

Under the new rules, many hedging contracts will need to be revalued and the gain or loss taken to the bottom line.

Stockbroker JBWere has predicted that will cut profits of some major companies by more than 10 per cent.

'The release of [the standards] brings the capital markets closer to having one global language of financial reporting,' said PricewaterhouseCoopers lead financial reporting partner Jan McCahey.

'The IASB has tried to improve the clarity of the rules. Is the Australian business community going to be happy? Probably not, but that's because it imposes for the first time very significant restrictions around hedging that companies haven't had to deal with before.'

For the banks, normal portfolio hedging practices will be redundant under the new rules, while some \$80 billion of securitised home loans may be shifted on balance sheet.

KPMG director Patricia Stebbens said the revisions to IAS 39 meant many Australian companies would potentially have to bring securitisations back on balance sheet with no transitional relief.

This could have significant cost implications as entities might breach their debt covenant requirements.

She said under a proposed Australian standard, companies doing securitisation via a special-purpose vehicle would have to quantify and disclose the effect of the changes as early as June 2004 accounts.

Source

Fiona Buffini, 'Accounts set for a shake-up', *The Australian Financial Review*, 19 December 2003, p. 4.

- 27 On 1 November 2012 Sandy Limited issued 10 000 convertible notes with the following features:

Face value	\$1000
Term	4 years
Issue price	Par (face value)
Interest	Coupon rate of 10% payable annually in arrears
Conversion option	Each note is convertible into 100 ordinary shares
Market interest rate	12% for similar debt with no conversion option

Required •

- (a) Prepare the journal entry to record the issue of the convertible notes.
- (b) Describe the effect, if any, of the issue of the convertible notes on each of the three components of the statement of financial position, that is, assets, liabilities and equity.
- 28 Melbourne Limited manufactures electric skateboards. On 1 June 2012 Melbourne Limited enters into a non-cancellable purchase commitment with Miami Limited for the supply of wheels, with the wheels to be shipped on 30 June 2012. The total contract price was US\$3 000 000 and the full amount was due for payment on 30 August 2012.
- Because of concerns about movements in foreign exchange rates, on 1 June 2012 Melbourne Limited entered into forward rate contract on US dollars with a foreign exchange broker so as to receive US\$3 000 000 on 30 August 2012 at a forward rate of NZ\$1.00 = US\$0.78.
- Melbourne Limited prepares monthly financial statements and it elects to treat the hedge as a cash-flow hedge. Further, Melbourne Limited elects, according to NZ IAS 39 paragraph 98(b), to adjust the cost of the inventory as a result of the hedging transaction. Melbourne Limited used a discount rate of 8 per cent.

Additional information

The respective spot rates are provided below. The forward rates offered on particular dates, for delivery of US dollars on 30 August 2012 are also provided.

DATE	SPOT RATE	FORWARD RATES FOR 30 AUGUST 2012 DELIVERY OF US\$
1 June 2012	NZ\$1.00 = US\$0.80	NZ\$1.00 = US\$0.78
30 June 2012	NZ\$1.00 = US\$0.78	NZ\$1.00 = US\$0.76
31 July 2012	NZ\$1.00 = US\$0.75	NZ\$1.00 = US\$0.74
30 August 2012	NZ\$1.00 = US\$0.72	NZ\$1.00 = US\$0.72

Required • Provide the journal entries to account for the 'hedged item' and the 'hedging instrument' for the months ending 30 June, 31 July and 30 August 2012.

REFERENCE

- STOLL, H. & WHALEY, R., 'Expiration-Day Effects of the All Ordinaries Share Price Index Futures: Empirical Evidence and Alternative Settlement Procedures', *Australian Journal of Management*, vol. 22, no. 2, December 1997, pp. 139–74.