



Applying IFRS

Extract from

*International GAAP® 2018*

*Generally Accepted Accounting  
Practice under International Financial  
Reporting Standards*

**Chapter 52 Financial instruments:  
Hedge accounting (IAS 39)**

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## Introduction

These extracts on hedge accounting under IAS 39 - *Financial Instruments: Recognition and Measurement* (IAS 39) from EY's *International GAAP*® 2018 have been republished in order to provide guidance when IAS 39 continues to be applicable.

IAS 39 was superseded by IFRS 9 - *Financial Instruments* (IFRS 9) for annual periods beginning on or after 1 January 2018. However, in certain instances IAS 39 continues to be wholly or partly applicable:

1. Insurers that meet the criteria in IFRS 4 - *Insurance Contracts* to apply the temporary exemption to IFRS 9 are permitted to elect to continue applying IAS 39 in full until their first accounting period beginning on or after 1 January 2023.
2. Until the IASB's project on dynamic risk management is finalised and becomes effective, all entities are permitted an accounting policy choice to continue applying the full hedge accounting requirements of IAS 39 instead of those in IFRS 9.
3. Similarly, all entities may, for a fair value hedge of the interest rate exposure of a portfolio of financial assets or financial liabilities (and only for such a hedge), apply the related hedge accounting requirements in IAS 39 instead of those in IFRS 9. This choice relates only to a fair value portfolio hedge as described in paragraphs 81A and 89A and AG114-AG132 of IAS 39. A decision to continue to apply this IAS 39 guidance is not part of the accounting policy choice to defer IAS 39 mentioned in 2. above.
4. Lastly, entities reporting under IFRS for SMEs have a policy choice to apply the recognition and measurement requirements in IAS 39 instead of those in sections 11 and 12 of IFRS for SMEs. This policy choice was not affected by IFRS 9 superseding IAS 39.

## Health warning

As noted above, readers should be aware that these cases are limited. Readers should note that the extracts have been republished as they appeared in EY's *International GAAP*® 2018; they have not been updated to take into account any changes in understanding or interpretation which may have arisen subsequently.

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# Chapter 52      Financial instruments: Hedge accounting (IAS 39)

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## 1 INTRODUCTION

### 1.1 Background

Chapter 42 provides a general background to the development of accounting for financial instruments and notes the fundamental changes that have been experienced in international financial markets. The markets for derivatives, especially, have seen remarkable and continued growth over the past two to three decades. This reflects the increasing use of such instruments by businesses, commonly to 'hedge' their financial risks. Accordingly, the accounting treatment for derivatives and hedging activities has taken on a high degree of importance. Historically, however, the accounting guidance has struggled to keep up with business practices and, at best, issues were dealt with very much on a piecemeal basis. Therefore, until the development of standards such as IAS 39 – *Financial Instruments: Recognition and Measurement*, entities were left largely to their own devices in developing accounting policies for hedges so that their financial statements reflected the objectives for entering into such transactions.

'Hedging' itself is a much wider topic than hedge accounting and is *not* the primary subject of this chapter. It is an imprecise term although standard setters frequently describe hedging in terms of designating a hedging instrument that has a value that is expected, wholly or partly, to offset changes in the value or cash flows of a 'hedged position'.<sup>1</sup> In this context, hedged positions normally include those arising from recognised assets and liabilities, contractual commitments and expected, but uncontracted, future transactions. Whilst this may be an appropriate description for many hedges, it does not necessarily capture the essence of all risk management activities involving financial instruments. Nevertheless, it forms the basis for the hedge accounting requirements under IFRS.

## 1.2 What is hedge accounting?

Hedge accounting is often seen as ‘correcting’ deficiencies in the accounting requirements that would otherwise apply to each leg of the hedge relationship. These deficiencies are an inevitable consequence of using a mixed-measurement model of accounting. Typically, hedge accounting involves recognising gains and losses on a hedging instrument in the same period(s) and/or in the same place in the financial statements as gains or losses on the hedged position. It may be used in a number of situations, for example to adjust (or correct) for:

- *Measurement differences*

These might arise where the hedge is of a recognised asset or liability that is measured on a different basis to the hedging instrument. An example might be inventory that is recorded in the financial statements at cost, but whose value is hedged by a forward contract that enables inventory of the same nature to be sold at a predetermined price. In this case, both the hedging instrument and the hedged position exist and are recognised in the financial statements, but they are likely to be measured on different bases.

Avoiding the measurement difference could in this situation theoretically be achieved in a number of ways. One alternative would be not to recognise unrealised gains or losses on the forward contract, and realised gains or losses could be deferred (e.g. separately as assets or liabilities or by including them within the carrying amount of the inventory) until the inventory is sold. On the other hand, if unrealised gains or losses on the forward contract were recognised in profit or loss, the measurement basis of the inventory could be changed to reflect changes in its fair value in profit or loss.

- *Performance reporting differences*

Even if the measurement bases of the hedging instrument and hedged item are the same, performance reporting differences might arise if gains and losses are reported in a different place in the financial statements. An example might be where an investment in shares is classified as available-for-sale (see Chapter 46 at 5) and whose value is hedged by a put option. The investment and the put option are both measured at fair value. However, gains or losses on the investment are recognised in other comprehensive income whilst those on the put option are recognised in profit or loss, therefore resulting in a mismatch in the income statement (or statement of comprehensive income). Similarly, gains or losses on retranslating the net assets of a foreign operation are recorded in other comprehensive income whilst retranslation gains or losses on a borrowing used to hedge that net investment are, absent any form of hedge accounting, recorded in profit or loss.

In the case of the inventory and the forward contract, hedge accounting might involve reporting gains and losses on the inventory in profit or loss, or gains and losses on the forward contract in other comprehensive income. For the foreign operation, hedge accounting normally involves reporting the retranslation gains and losses on both the borrowing and the foreign operation in other comprehensive income.

- *Recognition differences*

These might arise where the hedge is of contractual rights or obligations that are not recognised in the financial statements. An example is a foreign currency denominated operating lease where the unrecognised contractual commitment to pay lease rentals in another currency is hedged by a series of forward currency contracts (i.e. each payment is effectively 'fixed' in functional currency terms).

In this case, one solution might be to treat the lease as a 'synthetic' functional currency denominated lease. A similar outcome would be obtained if unrealised gains and losses on each forward contract remained unrecognised until the accrual of the lease payment it was hedging.

- *Existence differences*

These might arise where the hedge is of cash flows arising from an uncontracted future transaction, i.e. a transaction that does not yet exist. An example is a foreign currency denominated sale expected next year that is hedged by a forward currency contract.

Again, a solution to this issue might involve treating the future sale as a 'synthetic' functional currency sale or it might involve deferring the gain or loss on the forward contract until the sale is recognised in profit or loss.

### 1.3 Development of hedge accounting standards

The first comprehensive hedge accounting requirements issued by the IASB were contained in IAS 39. This standard was published in 1999 (see Chapter 42 at 1.2), and since then has been subject to numerous amendments.

In November 2013, as part of its project to replace IAS 39, the IASB published amendments to IFRS 9 – *Financial Instruments* – including revised requirements for hedge accounting. IFRS 9 is effective for periods beginning on or after 1 January 2018 and will replace substantially all of IAS 39, including the hedge accounting requirements. However, IFRS 9 allows entities an accounting policy choice to continue applying the hedge accounting requirements of IAS 39 instead of those in IFRS 9. [IFRS 9.7.2.21]. The hedge accounting requirements of IFRS 9 are discussed in Chapter 53.

IFRS 9 does not provide any particular solutions specifically tailored to so-called 'macro hedge' accounting, the term used to describe the more complex risk management practices used by entities such as banks. In May 2012 the Board decided to decouple accounting for macro hedging from IFRS 9, and a separate project was set up to develop an accounting solution for dynamic risk management. In consideration of this fact, for a fair value hedge of the interest rate exposure of a portfolio of financial assets or financial liabilities (and only for such a hedge), an entity may apply the hedge accounting requirements in IAS 39 instead of those in IFRS 9. This choice relates only to a fair value portfolio hedge as described in IAS 39 81A, 89A and AG114-AG132 of IAS 39. A decision to continue to apply this IAS 39 guidance is not part of the accounting policy choice to defer IAS 39 mention above.

In April 2014, the IASB issued the Discussion Paper – *Accounting for Dynamic Risk Management: a Portfolio Revaluation Approach to Macro Hedging*. The six-month comment period ended in October 2014. Most respondents supported the need for the

project, but there was no consensus on a solution. In July 2016 the IASB decided that the project should remain in the research phase, with the aim of publishing a second discussion paper (see 6 below).

## 2 HEDGING INSTRUMENTS AND HEDGED ITEMS

In the terminology of IAS 39, the two main ingredients of a hedge are the hedging instrument and the hedged item. The definition of these and related terms are as follows:

- *Hedging instrument*: 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.
- *Hedged item*: 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.
- *Firm commitment*: a binding agreement for the exchange of a specified quantity of resources at a specified price on a specified future date or dates.

In addition to simple agreements to purchase a given quantity of units on a given date for a given amount of money, other arrangements may also be firm commitments, for example construction contracts under which payments are made periodically based on documented progress or achievement of milestones.

- *Forecast transaction*: an uncommitted but anticipated future transaction. [IAS 39.9].

### 2.1 Hedging instruments

There are a number of restrictions on what type of item may be used as the hedging instrument in a 'valid' hedge, i.e. one that can qualify for hedge accounting, and these operate on many levels as set out below. One of these restrictions stems from the definition of a hedging instrument and requires an entity to have an expectation that its fair value or cash flows will offset changes in the fair value or cash flows of the hedged item attributable to the hedged risk. This requirement principally manifests itself in the provisions on hedge effectiveness, which are dealt with at 5.3 below. Hedging instruments must also involve a party that is external to the reporting group. [IAS 39.73]. More detail is provided on this point at 2.3 below.

#### 2.1.1 Derivative financial instruments

The distinction between derivative and non-derivative financial instruments is covered in Chapter 44. With the exception of certain written options (see 2.1.1.A below), the circumstances in which a derivative may be designated as a hedging instrument are not restricted, provided the conditions for hedge accounting set out at 5 below are met. [IAS 39.72]. Those conditions mean that a derivative that is not carried at fair value, because it is linked to and must be settled by delivery of an unquoted equity instrument whose fair value cannot be reliably measured (see Chapter 49 at 2.6), cannot be designated as a hedging instrument. [IAS 39.AG96].

In order to be able to qualify as a hedging instrument, the derivative must be accounted for as such under IAS 39. Therefore, an embedded derivative that is

accounted for separately from its host contract (see Chapter 44 at 4) can be used as a hedging instrument. However, a contract that is considered a normal sale or purchase, and is therefore accounted for as an executory contract, cannot (see Chapter 43 at 4). [IAS 39.F.1.2].

*Example 52.1: Hedging with a sales commitment*

Company J has the Japanese yen as its functional currency. J has issued a fixed-rate debt instrument with semi-annual interest payments that matures in two years with principal due at maturity of US\$5 million. It has also entered into a fixed price sales commitment for US\$5 million that matures in two years and is not accounted for as a derivative because it qualifies for the normal sales exemption.

Because the sales commitment is accounted for as a firm commitment rather than a derivative instrument it cannot be a hedging instrument in a hedge of the foreign currency risk associated with the debt instrument. However, if the foreign currency component of the sales commitment was required to be separated as an embedded derivative (essentially a forward contract to buy US dollars for yen) that component could be designated as the hedging instrument in such a hedge. [IAS 39.F.1.2].

Similarly, a forecast transaction or planned future transaction cannot be the hedging instrument as it is not a recognised financial instrument, [IAS 39.AG35(e), F.1.6], and is therefore not a derivative.

*2.1.1.A Options and collars*

It is explained in IAS 39 that an option an entity writes is not effective in reducing the profit or loss exposure of a hedged item. In other words, the potential loss on a written option could be significantly greater than the potential gain in value of a related hedged item. Therefore, a written option is prohibited from qualifying as a hedging instrument unless it is designated as an offset to a purchased option, including one that is embedded in another financial instrument. An example of this might be a written call option that is used to hedge a callable liability. In contrast, a purchased option has potential gains equal to or greater than losses and therefore has the potential to reduce profit or loss exposure from changes in fair values or cash flows. Accordingly, a purchased option can qualify as a hedging instrument. [IAS 39.AG94].

It follows that a derivative such as an interest rate collar that includes a written option cannot be designated as a hedging instrument if it is a net written option. [IAS 39.77]. However, a derivative instrument that includes a written option may be designated as a hedging instrument if it is a net purchased option or zero cost collar. [IAS 39.F.1.3(a)].

The following factors, taken together, indicate that an instrument is not a net written option:

- no net premium is received, either at inception or over the life of the instrument – the distinguishing feature of a written option is the receipt of a premium to compensate for the risk incurred;
- except for the strike prices, the critical terms and conditions of the written and purchased option components are the same, including underlying variable(s), currency denomination and maturity date; and
- the notional amount of the written option component is not greater than that of the purchased option component. [IAS 39.F.1.3(b)].

The application of these requirements is illustrated in the following two examples.

*Example 52.2: Foreign currency collar (or 'cylinder option')*

Company E, which has sterling as its functional currency, has forecast that it is highly probable it will receive €1,000 in six months' time in respect of an expected sale to a customer in France.

E is concerned that sterling might have appreciated by the time the payment is received and wishes to protect the profit margin on the sale without paying the premium that would be required with an ordinary currency option. E also wishes to benefit from some of the upside in the event that sterling depreciates, so would prefer not to use a forward contract.

Accordingly, E enters into an instrument under which it effectively:

- purchases an option that allows it to buy sterling for €1,000 from the counterparty at €1.53:£1.00; and
- sells an option that allows the counterparty to sell sterling to E for €1,000 at €1.47:£1.00.

In the foreign currency markets, such an instrument is often called a 'cylinder option' rather than a 'collar' and it operates as follows. If, in six months' time, the spot exchange rate exceeds €1.53:£1.00, E will exercise its option to sell €1,000 at €1.53:£1.00, effectively fixing its minimum proceeds on the sale (in sterling terms) at £654. Similarly, if the rate is below €1.47:£1.00, the counterparty will exercise its option to buy €1,000 at €1.47:£1.00, effectively capping E's maximum proceeds on the sale at £680. If the rate is between €1.47:£1.00 and €1.53:£1.00, both options will lapse unexercised and E will be able to sell its €1,000 for sterling at the spot rate, generating between £654 and £680.

The premium that E would pay to acquire the purchased option equals the premium it would receive to sell the written option and therefore no premium is paid or received on inception. The critical terms and conditions, including the notional amounts, of the written and purchased option components are the same except for the strike price. Therefore, E concludes that the instrument is not a net written option and, consequently, it may be used as the hedging instrument in a hedge of the foreign currency risk associated with the future sale.

It is possible that the counterparty might, instead, have offered E a variation on the instrument described above. If the notional amount on E's purchased option component had been reduced, say to €500, the counterparty could have offered a better rate on that component, say €1.51. However, in this case, the notional amount on the written option component is twice that of the purchased option component and the instrument would be seen as a net written option. Accordingly, even if E had very good business reasons for using such an instrument to manage its foreign exchange risk, it could not qualify as a hedging instrument under IAS 39. Therefore, hedge accounting would be precluded.

*Example 52.3: 'Knock-out' swap*

Company Y has a significant amount of long-dated floating rate borrowings. In order to hedge the cash flow interest rate risk arising from these borrowings, Y has entered into a number of matching pay-fixed, receive-floating interest rate swaps that effectively convert the interest rates on the borrowings to fixed-rate.

Under the terms of one of these swaps, on each fifth anniversary of its inception until maturity the swap counterparty may choose to simply terminate the swap at no cost. This is often referred to as a knock-out feature. In return for agreeing to this, Y benefits by paying a lower interest rate on the fixed leg of the swap than it would on a conventional swap. In other words, Y receives a premium for taking on the risk of the counterparty cancelling the swap.

This instrument contains a net written option, i.e. the knock-out feature, and therefore cannot be used as a hedging instrument unless it is used in a hedge of an equivalent purchased option. (In practice, it is unlikely that the hedged borrowings will contain such an option feature.)

*2.1.1.B Credit break clauses*

It is not uncommon for certain derivatives (e.g. long-term interest rate swaps) to contain terms that allow the counterparties to settle the instrument at a so-called 'fair value' in certain circumstances. The 'fair value' is usually not a true fair value as it excludes changes in credit risk. Such terms, often called 'credit break clauses', enable the counterparties to manage their credit risk in markets where collateral or margin



accounts and master netting agreements are not used. They are particularly common where a long-duration derivative is transacted between a financial and non-financial institution. For example, the terms of a twenty-year interest rate swap may allow either party to settle the instrument at fair value on the fifth, tenth and fifteenth anniversary of its inception.

These terms can be seen as options on counterparty credit risk. However, provided the two parties have equivalent rights to settle the instrument at 'fair value', the credit break clause will generally not prevent the derivative from qualifying as a hedging instrument. Particularly, in assessing whether a premium is received for agreeing to the incorporation of such terms into an instrument, care needs to be exercised. For example, marginally better underlying terms offered by one potential counterparty (as a result of market imperfections) should not be mistaken for a very small option premium.

### 2.1.2 Cash instruments

In contrast to the position for derivatives, there are significant restrictions over the use as hedging instruments of non-derivative financial assets and liabilities, or 'cash instruments' as the IASB sometimes refer to them. [IAS 39.BC144]. Essentially, a cash instrument may be designated as a hedging instrument only for a hedge of foreign currency risk. [IAS 39.72].

This would allow, say, a held-to-maturity investment carried at amortised cost to be designated as a hedging instrument in a hedge of foreign currency risk, [IAS 39.AG95], as well as other instruments such as loans and receivables, available for sale debt instruments and borrowings. However, an investment in an unquoted equity instrument that is not carried at fair value because its fair value cannot be reliably measured (see Chapter 49 at 2.6), cannot be designated as a hedging instrument. [IAS 39.AG96].

The following two examples illustrate the types of permitted hedge relationships where the hedging instrument is a non-derivative.

#### Example 52.4: Hedging with a non-derivative liability

In Example 52.1 above, Company J had issued a fixed rate debt instrument with principal due at maturity in two years of US\$5 million. J had also entered into a fixed price sales commitment, accounted for as an executory contract, for US\$5 million that matured in two years as well.

J could not designate the debt instrument as a hedge of the exposure to *all* fair value changes of the fixed price sales commitment because the hedging instrument is a non-derivative (and it would not be a good economic hedge anyway). However, J could designate the fixed rate debt instrument as a hedge of the foreign currency exposure associated with the future receipt of US dollars on the fixed price sales commitment. [IAS 39.F.1.2].

#### Example 52.5: Hedge of foreign currency bond

Company J has also issued US\$5 million five year fixed rate debt and owns a US\$5 million five year fixed rate bond, which is classified as available for sale.

J's bond has exposure to changes in both foreign currency and interest rates, as does the liability. However, the liability can only be designated as a hedge of the bond's foreign currency, not interest rate, risk because it is a non-derivative instrument.

In Example 52.5 above, hedge accounting is unnecessary because the amortised cost of the hedging instrument and the hedged item are both remeasured using closing rates

with differences recognised in profit or loss as required by IAS 21 – *The Effects of Changes in Foreign Exchange Rates*. [IAS 39.F.1.1].

In principle, there is no reason why a non-derivative financial instrument cannot be a hedging instrument in one hedge (of foreign currency risk) and a hedged item in another hedge (for example in a hedge of interest rate risk).

In developing the hedge accounting requirements for inclusion in IFRS 9 the IASB has decided that a non-derivative financial asset or financial liability measured at fair value through profit or loss may qualify as a hedging instrument, including for risks other than foreign currency risk, provided it is not a financial liability designated as at fair value through profit or loss with changes in its credit risk recognised in other comprehensive income (see Chapter 53 at 4.2). [IFRS 9.6.2.2, BC6.140-141].

### 2.1.3 *Combinations of instruments*

Two or more derivatives, or proportions of them (see 2.1.4 below) may be viewed in combination and jointly designated as a hedging instrument. This is the case even when the risk(s) arising from some derivatives offset(s) those arising from others. However, two or more instruments (or proportions of them) may be designated as a hedging instrument only if none of them is a written option or a net written option. [IAS 39.77]. Although this restriction on individual net written options does not appear in IFRS 9 (see Chapter 53 at 4.1), there is still a requirement that any combination can only be designated as a hedged item if the combination is not a net written option.

In practice, many zero cost collars are transacted as legally separate written and purchased options. On the face of it, therefore, such transactions cannot be treated as a combined hedging instrument, even if the combination is not a net written option. However, we are not at all convinced the IASB intended such a prohibition to take effect in practice. This is especially the case if the reason the collar takes the legal form of two options is for the seller's administrative ease, which would in many cases be irrelevant to the entity purchasing the collar. In fact, if it can be demonstrated that the only substantive business purpose for entering into such an arrangement is to purchase a zero cost collar to hedge an underlying exposure, the logic in some of the implementation guidance would require these contracts to be treated as a single instrument for this purpose (see 2.3.3 below and Chapter 44 at 3.2). We therefore believe that a combination of two or more derivatives, having the same critical terms, but including a derivative that on its own is a written (or net written) option, can be designated as a hedging instrument if they meet the following criteria:

- for accounting purposes, those options are parts of a single financial instrument and not different financial instruments (see below); and
- the combined instrument does not meet the definition of a net written option (see 2.1.1.A above).

Whether a combination of options constitutes a single financial instrument or separate financial instruments for accounting purposes is a matter of judgement that depends on the circumstances of the transactions from which they arise. Indicators that in

substance there is only a single financial instrument that is treated as such for accounting purposes include: [IAS 39.B.6]

- the options are entered into at the same time and in contemplation of one another;
- the options have the same counterparty;
- the options relate to the same risk;
- there is no apparent economic need or substantive business purpose for structuring the transactions separately that could not also have been accomplished in a single transaction.

When documenting the hedging relationship it is important that the formal designation reflects the consideration that the hedging instrument is a single financial instrument.

In the case of a hedge of foreign currency risk, the standard also allows two or more non-derivatives, or proportions of them, to be viewed in combination and designated as a hedging instrument. Further, a combination of derivatives and non-derivatives, or proportions of them, may be similarly combined. [IAS 39.77].

Unlike for combinations of derivatives, the standard does not clarify whether it is acceptable for these combinations to contain offsetting terms although in the absence of an indication to the contrary we believe it is.

For example, an entity with the euro as its functional currency may have issued a yen denominated floating rate borrowing and entered into a matching receive-yen floating (plus principal at maturity), pay-US dollar floating (plus principal at maturity) cross-currency interest rate swap. These instruments, which effectively synthesise a US dollar floating rate borrowing, contain offsetting terms, i.e. the whole of the borrowing and the yen leg of the swap. The entity could designate the combination of these two instruments in a hedge of the entity's foreign currency risk arising from, say, an asset with an identifiable exposure to US dollar exchange rates.

#### 2.1.4 Portions and proportions of hedging instruments

In contrast to the position for hedged financial items (see 2.2.1 below), there are significant restrictions on what components of an individual financial instrument can be carved out and designated as a hedging instrument. It is explained that there is normally a single fair value measure for a hedging instrument in its entirety and the factors that cause changes in its fair value are co-dependent. Normally, therefore, a financial instrument (or proportion thereof – see 2.1.4.C below) can only be designated as a hedging instrument in its entirety. [IAS 39.74].

##### *Example 52.6: Combination of written and purchased options*

Company Y transacts a combination of a written option and purchased option (such as an interest rate collar) as a single instrument with one counterparty. Y cannot split the derivative instrument into its written and purchased option components and designate just the purchased option component as a hedging instrument. [IAS 39.F.1.8].

Similarly, the 'knock-out swap' in Example 52.3 above could not be split into a conventional interest rate swap, to be used as a hedging instrument, and the knock-out feature (a written swaption, i.e. an option for the counterparty to enter into an offsetting interest rate swap with the same terms as the conventional swap).

However, there are a number of exceptions to this general rule:

- the time value of options may be separated (see 2.1.4.A below);
- interest elements of forwards may be separated (see 2.1.4.B below);
- a proportion only of a hedging instrument may be designated in a hedging relationship (see 2.1.4.C below);
- the spot rate retranslation risk of a foreign currency cash instrument may be separated (see 2.1.4.D below); and
- a derivative may be separated into notional component parts when each part is designated as a hedge and qualifies for hedge accounting (see 2.1.4.E below).

IFRS 9 retains most of those exceptions. Further, IFRS 9 introduces the concept of costs of hedging to account for the time value of options and the interest element of forward contracts, should an entity choose to separate those elements from the hedged designation. Applying costs of hedging can further reduce volatility in profit or loss (see Chapter 53 at 4.5 and 7).

#### *2.1.4.A Time value of options*

IAS 39 permits an entity to separate the intrinsic value and time value of an option contract and designate as the hedging instrument only the change in intrinsic value of the option and exclude changes in its time value. This is permitted because, as the standard explains, the intrinsic value of the option can generally be measured separately. [IAS 39.74]. However, this explanation is slightly hollow as the same would apply to the type of instrument discussed in Example 52.6 above.

An entity may choose to designate the variability of future cash flow outcomes resulting from a price increase (but not a decrease) of a forecast commodity purchase. In such a situation, only cash flow losses that result from an increase in the price above the specified level are designated. However, only the intrinsic value of a purchased option, not its time value, reflects this one-sided risk in the hedged item (assuming that it has the same principal terms as the designated risk). The hedged risk of, say, a forecast transaction does not have features similar to the time value of a purchased option because that is not a component of the forecast transaction that affects profit or loss (see 5.3.10 below). [IAS 39.AG99BA].

Excluding the time value may make it administratively easier to process the hedges and it can certainly improve a hedge's effectiveness from an accounting perspective. However, even though separated from the hedging relationship, the changes in the fair value of time value over the term of the hedge still affect profit or loss.

The use of this exception is not mandatory. For example, a dynamic hedging strategy that assesses both the intrinsic value and time value of an option contract can qualify for hedge accounting (see 5.1.2 below), [IAS 39.74], although the time value is likely to result in some ineffectiveness.

In some cases, an entity may use an option to hedge an exposure that itself contains optionality. See 5.3.11 below for the challenges that arise with such a designation.

#### 2.1.4.B Interest elements of forwards

IAS 39 also permits (but does not require) an entity to separate the interest element and spot price of a forward contract because the premium on the forward can generally (like the time value of an option) be measured separately. [IAS 39.74].

Excluding this portion may be consistent with the entity's overall hedging strategy, such as where the interest element of forward contracts are managed with the rest of the entity's interest rate exposures rather than in conjunction with the associated spot rate exposures. Similar to the treatment of the time value of an option, if the interest element of a forward contract is excluded from the hedge relationship, changes in the fair value of that element will continue to impact profit or loss (see 5.3.3 below).

#### 2.1.4.C Proportions of instruments

In addition to the above exceptions, a proportion of the entire hedging instrument, such as 50% of the notional amount, may also be designated in a hedging relationship. However, a hedging relationship may not be designated for only a portion of the time period in which the hedging instrument is outstanding. [IAS 39.75].

A literal reading of the second sentence in paragraph 75 might suggest that a hedge relationship may not be designated for a shorter period of time than the period for which the hedging instrument can remain outstanding. For example, if an interest rate swap has a remaining maturity of five years, then it might be concluded this could not be a hedging instrument in a hedge relationship that would only last four years. However, we do not believe that this is the intended meaning of the guidance. We believe that there is no restriction on the period of the hedge relationship itself, but only a restriction on what can be used as the hedging instrument. For example, in the case of the interest rate swap above, the payments and receipts over the next four years (i.e. ignoring those in year five) could not be designated as the hedging instrument. Instead, the whole derivative (i.e. including payments and receipts in year five) must be designated as the hedging instrument, although the hedging relationship may itself last for only four years. However, hedge accounting can only be applied if the hedge is determined to be effective (see 5.3 below), which may be difficult where there are significant mismatches in maturity between the hedged item and the hedging instrument.

#### 2.1.4.D Cash instruments

There is one further situation where a portion of an instrument may be designated as a hedging instrument (in fact, is required to be). In the case of a cash instrument used as a hedge of foreign currency risk, it is essentially only the spot rate retranslation risk of, say, a borrowing that is used as the hedging instrument and not the other components, such as its changes in fair value arising from interest rate risk. [IAS 39.89(a), IAS 39.F.1.1].

*2.1.4.E Notional decomposition*

We also believe it is acceptable in certain circumstances to split a derivative (or allowable portion thereof – see 2.1.4.A to 2.1.4.C above) into component parts provided all of those components are designated and qualify for hedge accounting. For example a ‘functional currency leg’ could be introduced into a derivative that is denominated in two currencies (such as a forward contract or cross-currency interest rate swap) and the components designated separately in more than one hedging relationship. In fact, the implementation guidance effectively contains examples of just such an approach (see Examples 52.7 and 52.8 and 2.1.6 below for further details) and the IFRS Interpretations Committee has confirmed that it considers such an approach to be acceptable.<sup>2</sup>

*2.1.4.F Restructuring of derivatives*

An entity may exchange a derivative that does not qualify as a hedging instrument (say, the knock-out swap in Example 52.3 above) for two separate derivatives that, together, have the same fair value as the original instrument (say, a conventional interest rate swap and a written swaption). Such an exchange is likely to be motivated by a desire to obtain hedge accounting for one of these new instruments.

In order to determine whether the new arrangement can be treated as two separate derivatives, rather than a continuation of the original derivative, we believe it is necessary to determine whether the exchange transaction has any substance, which is clearly a matter of judgement. If the exchange has no substance then hedge accounting would still be precluded as the two ‘separate’ derivatives would in substance be a continuation of the original derivative (see 2.3.3 below and Chapter 44 at 3.2).

In the case of the knock-out swap, if the two new contracts had the same counterparty and, in aggregate, the same terms as the original contract this would not necessarily lead to the conclusion that the exchange lacked substance. However if, in addition, the swaption would be settled by delivery of the conventional interest rate swap in the event that it was exercised, this is a strong indicator that the exchange does lack substance.

*2.1.5 Reduction of risk*

The implementation guidance explains that risk exposures should be assessed on a transaction basis and, therefore, a hedging instrument need not reduce risk at an entity-wide level. For example, if an entity has a fixed rate asset and a fixed rate liability, each with the same principal terms, it may enter into a pay-fixed, receive-variable interest rate swap to hedge the fair value of the asset even though the effect of the swap is to create an interest rate exposure for the entity that previously did not exist. [IAS 39.F.2.6]. However, such a hedge designation would of course only make sense when the hedge is offsetting an economic risk. For example, in the situation described above, the hedge designation might only be a proxy for a hedge of a cash flow risk that does not qualify for hedge accounting.

The IASB discussed the concept of proxy hedging as part of the deliberations on the IFRS 9 hedge accounting guidance and decided that proxy hedging is permitted, provided the designation is directionally consistent with the actual risk management activities (see Chapter 53 at 5.5).

A derivative which does not reduce risk at the transaction level cannot be a hedging instrument. Consider a ‘basis swap’ that effectively converts one variable interest rate



index (say a central bank base rate) on a liability to another (say LIBOR). A relationship of this nature would not normally qualify for hedge accounting because the hedging instrument does not reduce or eliminate risk in any meaningful way – it simply converts one risk to another similar risk. For this reason, such an economic strategy would not qualify as either a fair value or cash flow hedge relationship (see 3.1 and 3.2 below).

A basis swap or similar instrument may qualify as a hedging instrument when considered in combination with another instrument (see 2.1.3 above). For example, the basis swap described above and a pay-fixed, receive-LIBOR interest rate swap may qualify as a hedging instrument in a cash flow hedge of a borrowing that pays interest based on a central bank rate. It may also be used on its own in a hedge of offsetting asset and liability positions (see 2.1.6 below).

### 2.1.6 Hedging different risks with one instrument

A single hedging instrument may be designated as a hedge of more than one type of risk, provided that:

- the risks hedged can be identified clearly;
- the effectiveness of the hedge can be demonstrated ; and
- it is possible to ensure that there is specific designation of the hedging instrument and different risk positions. [IAS 39.76].

The implementation guidance provides the following example to illustrate this point.

#### *Example 52.7: Foreign currency forward hedging positions in two foreign currencies*

Company J, which has Japanese yen as its functional currency, issues five year floating rate US dollar debt and acquires a ten year fixed rate sterling bond. The principal amounts of the asset and liability, when converted into Japanese yen, are the same. J enters into a single foreign currency forward contract to hedge its foreign currency exposure on both instruments under which it receives US dollars and pays sterling at the end of five years.

Designating a single hedging instrument as a hedge of multiple types of risk is permitted if three conditions are met:

- the hedged risks can be clearly identified.  
In this case the risks are exposures to changes in the US dollar/yen and yen/sterling exchange rates respectively;
- the effectiveness of the hedge can be demonstrated.  
For the sterling bond, effectiveness can be measured as the degree of offset between the fair value of the principal repayment in sterling and the fair value of the sterling payment on the forward exchange contract.  
For the US dollar liability, effectiveness can be measured as the degree of offset between the fair value of the principal repayment in US dollars and the US dollar receipt on the forward exchange contract.  
Even though the bond has a ten year life and the forward only protects it for the first five years, hedge accounting is permitted for only a portion of the exposure (see 2.2.1.B below); and
- it is possible to ensure that there is a specific designation of the hedging instrument and the different risk positions.  
The hedged exposures are identified as the principal amounts of the liability and the bond in their respective currency of denomination.

The hedging instrument satisfies all of these conditions and J can designate the forward as a hedging instrument in a cash flow hedge against the foreign currency exposure on the principal repayments of both instruments and qualify for hedge accounting. [IAS 39.F.1.13].

In this example, the hedging instrument is effectively decomposed and viewed as two forward contracts, each with an offsetting position in yen, i.e. J's functional currency. Each of the decomposed forward contracts is then designated in an eligible hedge accounting relationship.

The implementation guidance also explains that a single hedging instrument may be designated in both a cash flow hedge and a fair value hedge, provided the above conditions are met (see 3 below). For example, entities may use a cross currency interest rate swap to convert a variable rate position in a foreign currency to a fixed rate position in the functional currency. Such a swap could be designated separately as a fair value hedge of the currency risk and a cash flow hedge of the interest rate risk. [IAS 39.F.1.12]. However it could also be designated as a single cash flow hedge of foreign exchange and interest rate risk with the interest rate and currency swap in combination as the hedging instrument.

The IASB's implementation guidance takes the concept of hedging different risks a little further, as set out in the following example.

*Example 52.8: Cross-currency interest rate swap hedging two foreign currency exchange rate exposures and fair value interest rate exposure*

Company J whose functional currency is Japanese yen issues five-year floating rate US dollar debt and acquires a ten-year fixed rate sterling bond and wishes to hedge the foreign currency exposure on both the bond and the debt as well as the fair value interest rate exposure on the bond. To do this it enters into a matching cross-currency interest rate swap to receive floating rate US dollars, pay fixed rate sterling and exchange the US dollars for sterling at the end of five years.

Hedge accounting is permitted for components of risk, provided effectiveness can be measured. A single hedging instrument may be designated as a hedge of more than one type of risk if the risks can be identified clearly, effectiveness can be demonstrated, and specific designation of the hedging instrument and the risk positions can be ensured.

Therefore, the swap may be designated as a hedging instrument in a fair value hedge of the sterling bond against exposure to changes in its fair value associated with the interest rate payments on the bond until year five and the change in value of the principal payment due at maturity to the extent affected by changes in the yield curve relating to the five years of the swap (see Example 52.11 at 2.2.1.B below) as well as the exchange rate between sterling and US dollars.

In summary, the swap would be measured at fair value with changes in fair value recognised in profit or loss. The carrying amount of the receivable would be adjusted for changes in its fair value caused by changes in UK interest rates for the first five-year portion of the yield curve. Both the receivable and payable are remeasured using spot exchange rates under IAS 21 and the changes to their carrying amounts recognised in profit or loss. [IAS 39.F.2.18].

Taken literally, the designation set out above takes no account of the existence of the US dollar liability and thereby suggests that the exchange rate between sterling and US dollars (the hedged risk) is seen as a component of the risk associated with the sterling bond (the hedged item). Mathematically this is clearly true from the point of view of a yen functional entity – together, the sterling/US dollar rate and the US dollar/yen rate give the sterling/yen exchange rate, i.e. the true foreign currency risk arising on the sterling bond. However, without considering the US dollar liability (which does not appear to be part of the designated hedge relationship) the hedge provides no real offset against the currency risk of the sterling liability. Instead it simply converts one foreign currency risk (exposure to sterling) to another (exposure to US dollars) and this would not normally be considered an acceptable hedging relationship. The IASB obviously

sees the existence of the US dollar liability as important (otherwise it would not have been introduced into the example) but the point it is trying to articulate is not perfectly clear. In all likelihood, their failure to refer to the US dollar liability in the description of the hedge designation was simply an oversight. We believe that a hedge relationship to reflect the hedge of the foreign exchange risk on the US dollar liability would also need to be designated.

By analogy with Examples 52.7 and 52.8 above, we believe it would be acceptable to use a basis swap as a hedge of relevant asset and liability positions. For example, an entity may have made a \$1m loan that earns LIBOR based interest and incurred a \$1m liability that pays interest based on the central bank rate. In this case it may use as a hedging instrument an interest rate swap under which it pays LIBOR based interest and receives interest based on the central bank rate on a notional amount of \$1m. In this case, the basis swap could be decomposed into two interest rate swaps, both with an offsetting \$1m fixed rate leg, to facilitate hedge designations for each of the LIBOR loan and central bank deposit within separate cash flow hedges.

Decomposition of a derivative hedging instrument by imputing a notional leg is an acceptable means of splitting the fair value of a derivative hedging instrument into multiple components in order to achieve hedge accounting, as long as the split does not result in the recognition of cash flows that do not exist in the contractual terms of the derivative instrument.

The guidance above discussed combinations of (a) different cash flow hedges, (b) different fair value hedges and (c) a cash flow hedge and a fair value hedge. However, there appears to be no reason why a single instrument could not, in theory, be designated in other combinations of hedges, for example a cash flow hedge and a hedge of a net investment.

When a single hedging instrument is designated as a hedge of more than one type of risk, the Interpretations Committee has confirmed that the method of effectiveness testing is not prescribed. The method of assessing effectiveness should be captured in the hedge documentation on designation. Accordingly, the effectiveness assessment may be carried out for the total hedged position, i.e. incorporating all risks identified if these risks are inextricably linked, or for the decomposed parts separately, i.e. individually each for hedge relationship that includes a decomposed part of the derivative.<sup>3</sup> However, if the assessment is undertaken separately we believe that the assessment needs to be passed for each hedge relationship that includes a decomposed part, otherwise the assessment fails overall. This restriction is necessary as a financial instrument can only be designated as a hedging instrument in its entirety (see 2.1.4 above). [IAS 39.74].

### 2.1.7 *Own equity instruments*

An entity's own equity instruments are not financial assets or liabilities of the entity and, therefore, cannot be hedging instruments. [IAS 39.AG97]. This prohibition would also apply to instruments that give rise to non-controlling interests in consolidated financial statements – under IFRS it is clear that non-controlling interests are part of a reporting entity's equity.

## 2.2 Hedged items

The basic requirement for a hedged item is for it to be one of the following:

- a recognised asset or liability;
- an unrecognised firm commitment;
- a highly probable forecast transaction; or
- a net investment in a foreign operation,

and it should expose the entity to the risk of changes in fair value or future cash flows. *[IAS 39.78]*.

Recognised assets and liabilities can include financial items and non-financial items such as inventory. They can also include firm commitments that are not routinely recognised as assets or liabilities absent the effects of hedge accounting for such items. Most internally-generated intangibles (e.g. for a bank, a core deposit intangible – see 2.2.10 below) are not recognised assets and therefore cannot be hedged items. *[IAS 39.F.2.3]*.

In general, for hedge accounting purposes, only exposures that involve a party external to the entity can be designated as hedged items. However, there are some exceptions which are covered at 2.3.4 below. *[IAS 39.80]*.

Financial assets and liabilities need not be within the scope of IAS 39 to qualify as hedged items. For example, although rights and obligations under lease agreements are for most purposes scoped out of IAS 39, finance lease payables or receivables still meet the definition of a financial instrument and could therefore be hedged items in a hedge of interest rate or foreign currency risk.

In the case of a financial asset or liability containing an embedded derivative (see Chapter 44 at 4), if the embedded derivative is accounted for separately from the host instrument, the hedged item would be the host instrument or cash flows from the host (or portion thereof – see 2.2.1 below); otherwise it would be based on the hybrid instrument (i.e. the instrument including the embedded derivative) or cash flows from the hybrid which is not permitted.

As well as designating all changes in the cash flows or fair value of a hedged item in a hedging relationship, an entity can also designate only changes in the cash flows or fair value of a hedged item above or below a specified price or other variable (a one-sided risk – see 5.3.10 below). For example, an entity can designate the variability of future cash flow outcomes resulting from a price increase of a forecast commodity purchase, without including the risk of a price decrease within the hedge relationship. Such a situation may arise if the entity wanted to retain the opportunity to benefit from lower commodities prices, but protect itself against an increase. In such a situation, only cash flow losses that result from an increase in the price above the specified level are designated. *[IAS 39.AG99BA]*.

### 2.2.1 *Financial items: portions and proportions*

If the hedged item is a financial asset or liability, the standard contains a general principle that it may be a hedged item with respect to the risks associated with only a portion of its cash flows or fair value, such as one or more selected contractual cash flows or portions of them or a percentage of the fair value (i.e. a proportion of the asset or liability) provided that effectiveness can be measured. *[IAS 39.81]*. The ability to

designate a proportion or a percentage of an exposure as a hedged item is similar to the guidance for hedging instruments. However the ability to identify a portion of an exposure as the hedged item is very different to the restrictions imposed on hedging instruments discussed in 2.1.4 above. For example:

- (a) all of the cash flows of a financial instrument may be designated for cash flow or fair value changes attributable to some (but not all) risks; or
- (b) some (but not all) of the cash flows of a financial instrument may be designated for cash flow or fair value changes attributable to all or only some risks (i.e. a 'portion' of the cash flows of the financial instrument may be designated for changes attributable to all or only some risks). [IAS 39.AG99E].

Only the portion of cash flows or fair value of a financial instrument that are designated as the hedged item are subject to the hedge accounting requirements. The accounting for other portions that are not designated as the hedged item remains unchanged.

The guidance also adds that to be eligible for hedge accounting, the designated risks and portions must be separately identifiable components of the financial instrument, and changes in the cash flows or fair value of the entire financial instrument arising from the designated risks and portions must be reliably measurable. [IAS 39.AG99F]. This is considered further below.

#### 2.2.1.A Benchmark portions of interest rate risk

As an example of the general principle above, an identifiable and separately measurable portion of the interest rate exposure of an interest-bearing asset or liability may be designated as the hedged risk. Such a portion might be a risk-free interest rate or other benchmark interest rate component of the total interest rate exposure of a hedged financial instrument. This is always subject to the proviso that effectiveness can be measured (see 5.3 below). [IAS 39.81].

For a fixed-rate financial instrument hedged for changes in fair value attributable to changes in a risk-free or other benchmark interest rate, the implementation guidance explains that the risk-free or other benchmark rate is normally regarded as both a separately identifiable component of the financial instrument and reliably measurable. [IAS 39.AG99F(a)].

For example, consider an entity that issues five year debt with a fixed coupon of 5%, for which the pricing was based on a prevailing benchmark curve of 2% for five years, plus 3% credit risk spread. The entity then transacts an interest rate swap at the prevailing five year benchmark rate (i.e. pay benchmark, receive 2%). It would be possible for the entity to designate the portion of the debt's cash flow represented by the debt principal and a 2% benchmark component of the coupon as the hedged item. However, in general, if a portion of the cash flows of a financial asset or liability is designated as the hedged item, that designated portion must be less than its total cash flows. For example, in the case of a liability whose effective interest rate is below LIBOR, designating the following components is not permitted:

- a portion of the liability equal to the principal amount plus interest at LIBOR; and
- a negative residual portion.

This restriction gives rise to what is often referred to as the 'sub-LIBOR issue'. In these cases, all of the cash flows of the entire financial asset or liability may be designated as

the hedged item in a hedge of only one particular risk (e.g. only for changes that are attributable to changes in LIBOR). Consider a financial liability whose effective interest rate is 100 basis points (1%) below LIBOR (i.e. the cash flows represent repayment of the principal plus interest at LIBOR minus 100 basis points). It is not possible to designate cash flows representing a LIBOR component of that liability, but the entire liability can be designated as the hedged item in a hedge of changes in the fair value or cash flows attributable to changes in LIBOR. This means that the full cash flows from the liability are designated within the hedge relationship, but for changes in LIBOR.

For example, in the case of a financial liability whose effective interest rate is 100 basis points below LIBOR, an entity can designate as the hedged item the entire liability (i.e. principal plus interest at LIBOR minus 100 basis points) and hedge the change in the fair value or cash flows of that entire liability that is attributable to changes in LIBOR. *[IAS 39.AG99C]*.

This is likely to be an effective hedge as changes in the credit risk of the borrower are excluded from the hedge relationship. However such a hedge will not be perfectly effective. Although the variability of cash flows in the hedged item and hedging instrument may be the same, the absolute cash flows are not, due to the inclusion of the negative spread in the hedged item. Accordingly, the discounted cash flows will not offset. The discount curve used to discount the hedged cash flows needs to reflect LIBOR (as the hedged risk). However, there is a choice between discounting the hedged cash flows at LIBOR or at LIBOR minus the negative credit spread (100 basis points in the example above) as the guidance is not prescriptive. The negative credit spread would not need to be updated for changes in the borrower's credit risk as that risk is excluded from the hedge relationship. This is consistent with the general hedge accounting approach of calculating a change in the present value of the hedged item with respect to the hedged risk and not a full fair value. The second option for discounting may improve effectiveness but some ongoing ineffectiveness is likely to remain.

In the example above, even if the hedged item included an embedded floor at zero, the hedge might still be effective, for instance if LIBOR is above 100 basis points and is not expected to go below it. This is because the hedged item will have the same cash flow variability as a liability without a floor as long as LIBOR remains above 100 basis points. However, when considering changes in value of the hedged item due to the hedged risk, the change in value of the embedded floor should also be considered (see 5.3.11 below). This will be an additional source of ineffectiveness, as there is likely to be time value attributable to the embedded floor, even if the floor is not expected to become active. If the floor is expected to become active, there are a number of other issues to be considered, such as the disappearance of variability in the cash flows stemming from the hedged item.

The standard explains that, in order to improve the effectiveness of the hedge, a hedge ratio of other than one-to-one may be chosen. *[IAS 39.AG99C]*. This is relevant for hedged items in both cash flow hedges (e.g. a floating rate debt security which re-fixes to 3 month LIBOR less a 0.5% spread every 3 months) and fair value hedges (e.g. a fixed rate loan with an effective interest rate which is 1% less than the prevailing benchmark rate for that term). See Chapter 53 at 3.4.5 for further information on this topic.

The guidance goes on to explain that if a fixed rate financial instrument is hedged sometime after its origination, and interest rates have changed in the meantime, a portion equal to a benchmark rate that is actually higher than the contractual rate paid



on the item can be designated as the hedged item in some circumstances. This is provided that the benchmark rate is less than the effective interest rate calculated as if the instrument had been purchased on the day it was first designated as the hedged item. [IAS 39.AG99D]. In other words, the effective interest rate for the hedged item is notionally recalculated as if the hedged item had been originated at the inception of the intended hedge, this is purely in order to justify the hedge relationship. This is illustrated below.

*Example 52.9: Hedge of a portion of an existing fixed rate financial asset following a rise in interest rates*

Company B originates a fixed rate financial asset of €100 that has an effective interest rate of 6% at a time when LIBOR is 4%. B begins to hedge that asset some time later when LIBOR has increased to 8% and the fair value of the asset has decreased to €90.

B calculates that if it had purchased the asset on the date it first designated it as the hedged item for its then fair value of €90, the effective yield would have been 9.5%. Because LIBOR is less than this recalculated notional effective yield, the entity can designate a LIBOR portion of 8% that consists partly of the contractual interest cash flows and partly of the difference between the current fair value (€90) and the amount repayable on maturity (€100). [IAS 39.AG99D].

The guidance illustrated in Example 52.9 above will assist entities in designating hedges in a way that significantly reduces ineffectiveness. In fact, as noted at 5.3.8 below, the ability to designate a portion of a financial instrument as the hedged item can enable many hedges to be designated in a way that minimises or even eliminates ineffectiveness in some cases.

The negative interest rate environment in some countries, mainly Switzerland and certain countries in the Eurozone, has further implications on the designation of risk components in connection with the sub-LIBOR issue. The following example illustrates this.

*Example 52.10: Negative interest rates and fair value hedges*

Assume the following scenarios

- Bank A enters into a €1 million loan to a corporate at a fixed coupon of 3.5%. The coupon has been determined considering the negative EONIA rate (the benchmark) of -0.15% plus a credit spread of 3.65%.
- Bank B acquires a government debt security in the secondary market with the same terms as the loan in scenario a). In this fact pattern the debt was issued some years ago when benchmark interest rates were much higher. The purchase price of the debt was €1.185 million which resulted in an effective interest rate of -0.18%, consisting of the negative EONIA rate (the benchmark) when the debt was acquired of -0.15% and a credit spread of -0.03%.

Both, Bank A and Bank B want to hedge the fixed rate benchmark component and enter into an interest rate swap paying fixed -0.15% and receiving EONIA. The banks wish to designate the benchmark component in a fair value hedge for changes in EONIA.

In scenario a) it seems acceptable for the bank to designate the benchmark risk component because:

- it is included in the pricing of the hedged item and therefore separately identifiable and reliably measureable;
- the benchmark can be positive or negative, therefore the cash flows representing that benchmark rate can also be positive or negative, even if they are part of overall positive cash flows (which is similar to a benchmark component of 4% hedging the benchmark risk in a coupon of 5%, except that the benchmark is negative in this case); and
- the benchmark cash flows are less than the cash flows in the hedged items (i.e. minus 0.15% which is less than 3.5%).

We would find it difficult to reach the same conclusion for scenario b) as the benchmark rate is higher than the effective interest rate (i.e. minus 0.15% which is greater than minus 0.18%). [IAS 39.AG99D]. This is

consistent with the fact that if a debt instrument were to be issued at par bearing a coupon of  $-0.18\%$ , which included credit spread of  $-0.03\%$ , when the benchmark rate was  $-0.15\%$  it would not be possible to identify a benchmark component for hedge accounting purposes. [IAS 39.AG99C].

In both scenarios, the banks would not be permitted to designate a payment of  $0.15\%$  of the principal as an eligible component of a receipt of a  $3.5\%$  coupon, as it is difficult to argue that a payment of  $0.15\%$  of the principal is a portion of a receipt of  $3.5\%$  of that principal. However, this is not that relevant in scenario a) as it would be possible to designate a separately identifiable benchmark component in the total cash flows, as noted above. [IAS 39.AG99E(b)].

Notwithstanding the above, in both cases, the banks can designate all the cash flows in the financial asset for changes in the benchmark rate, although this is likely to result in some ineffectiveness. [IAS 39.AG99E(a)].

### 2.2.1.B Partial term hedging

The example below illustrates a different portion of interest rate risk that is eligible for designation. It is the ability to designate a hedged item for the portion of risk that represents only part of the term that a hedged item remains outstanding.

#### Example 52.11: Partial term hedging

Company A acquires a  $10\%$  fixed-rate government bond with a remaining term to maturity of ten years and classifies it as available-for-sale. To hedge against the fair value exposure on the bond associated with the first five years' interest payments, it acquires a five year pay-fixed receive-floating swap.

The swap may be designated as hedging the fair value exposure of the interest rate payments on the government bond until year five and the change in value of the principal payment due at maturity to the extent affected by changes in the yield curve relating to the five years of the swap. [IAS 39.F.2.17].

### 2.2.1.C Foreign currency risk associated with publicly quoted shares

The implementation guidance explains that the foreign currency risk associated with a holding of publicly traded shares may be hedged if they give rise to a clear and identifiable exposure to changes in foreign exchange rates. It is asserted that this will be the case if:

- the shares are not traded on an exchange, or other established market, in which trades are denominated in the same currency as the functional currency of the holder; and
- dividends on the shares are not denominated in the functional currency of the holder.

Consequently, if the share trades in multiple currencies, one of which is the holder's functional currency, hedge accounting would not be permitted. [IAS 39.F.2.19]. However, this restriction does not stand up to close scrutiny, as illustrated in the following example.

#### Example 52.12: Foreign currency risk associated with equity shareholding

ABC plc, a UK company whose functional currency is sterling, acquires a small shareholding in IJK Limited. IJK is a South African company whose operations are based solely in that country and whose income, expenditure and dividends are all denominated in South African rand. IJK's shares are listed on the Johannesburg Stock Exchange where trades are denominated in rand.

The implementation guidance suggests that, potentially, ABC could hedge the foreign currency risk arising from the sterling/rand exchange rate on its IJK holding, which appears quite sensible. If, on day 1, the shares trade at R50 and the exchange rate is R10 to £1, the shares would have a sterling value of £5.00 ( $= R50 \div 10$ ). If, on day 2, the exchange rate moves to R8 to £1, all other things being equal, the rand value of IJK should not change, but its sterling value would be £6.25 ( $= R50 \div 8$ ), exactly mirroring the exchange rate movement.

If IJK subsequently obtained a secondary listing on the London Stock Exchange where trades were denominated in sterling, but its business fundamentals were unchanged, in the scenario outlined above ABC's foreign exchange exposure would be exactly the same. In fact, the operation of the markets should ensure that the share price in London on the equivalent of days 1 and 2 is £5.00 and £6.25 respectively. However, the guidance suggests that because of the secondary listing, ABC no longer has a clear and identifiable exposure to changes in foreign exchange rates on the IJK shares and therefore hedge accounting would not be permitted.

#### 2.2.1.D Inflation risk

Although there has been significant debate by many interested parties over the years, the implementation guidance in IAS 39 states that inflation is not separately identifiable and reliably measurable and cannot be designated as a risk portion of a financial instrument. There is one exception: the contractually specified inflation portion of the cash flows of a recognised inflation-linked bond (assuming there is no requirement to account for an embedded derivative separately) is considered to be separately identifiable and reliably measurable as long as other cash flows of the instrument are not affected by the inflation portion. Therefore inflation risk would not be eligible as a designated risk or portion of a fixed interest rate borrowing that does not also reference inflation. [IAS 39.AG99F(b)-(c), BC11D, BC172C].

However, this approach will be softened on application of IFRS 9 which introduces a rebuttable presumption (rather than prohibition) that, unless contractually specified, inflation is not separately identifiable and reliably measurable (see Chapter 53 at 3.4.4).

#### 2.2.1.E Other portions

While IAS 39 permits hedging of some portions of risk for financial assets or liabilities, there are intended to be some restrictions, i.e. a portion cannot be simply anything. It also noted that IAS 39 requires a hedged portion to have an effect on the price of the hedged item or transaction that is separately measurable from the hedged item or transaction itself. Consequently, a portion cannot be a residual; i.e. an entity is not permitted to designate as a portion the residual fair value or cash flows of a hedged item or transaction if that residual does not have a separately measurable effect on the hedged item or transaction. It is for this reason that it is not considered possible to determine that credit risk is an eligible risk component of a debt instrument.

This position was reaffirmed by the IASB in IFRS 9. [IFRS 9.BC6.470]. However, IFRS 9 does introduce an alternative accounting solution for entities undertaking economic credit risk hedging activity (see Chapter 53 at 10.1).

#### 2.2.2 Non-financial items: portions

It is explained that changes in the price of an ingredient or component of a non-financial asset or liability generally do not have a predictable, separately measurable effect on the price of the item that is comparable to the effect of, say, a change in market interest rates on the price of a bond. Therefore, because of the difficulty of isolating and measuring the appropriate portion of cash flows or fair value changes attributable to specific risks (other than foreign currency risks) a non-financial asset or liability can be designated as a hedged item only:

- in its entirety for all risks; or
- for foreign exchange risks. [IAS 39.82, AG100].

A number of commentators disagree with this assertion, at least in certain situations, and some urged the IASB in revising IAS 39 to reconsider this restriction. For example, Swiss International Air Lines, in responding to the June 2002 exposure draft, wrote the following:

‘Like any airline SWISS is short of jet fuel. The Company is exposed to the daily price fluctuations of crude oil and the prices of inter product spreads (cracks, differentials) that convert crude oil into gas oil and finally into jet fuel.

There is more liquidity in crude oil for positions beyond two years. Therefore, it is part of SWISS’ fuel risk management strategy to do long-term hedges with crude oil. These positions are then rolled into gas oil and jet fuel as they move closer to the settlement dates.

Paragraphs 129-130 [of the Exposure Draft] state that non-financial assets and liabilities can only be hedged in their entirety or separately with respect to foreign exchange risk.

Crude oil hedges therefore must be designated as hedging the risk of price movements of jet fuel in its entirety. The critical terms of the hedging instrument and the hedged item therefore do not perfectly match – frequently a certain ineffectiveness will result. Even if the hedge can be expected to be highly effective due to a high historical correlation of the price movements of crude and jet fuel, actual effectiveness might fall outside the 80-125% range in some periods and the hedge will have to be dedesignated.

We believe that due to the special properties of jet fuel prices, it should be allowed to designate the price changes of a jet fuel component such as crude oil as the hedged risk.

The reason given in paragraphs 129 and 130 is that risk components of non-financial instruments generally do not have a predictable, separately measurable effect on the price of the entire item. This is a generalization that does not account for the special properties of jet fuel pricing.

Jet fuel is a derivative of crude oil. Crude oil is then converted into gas oil. The difference of the crude and the gas oil price is called gas oil crack. Gas oil is finally converted into jet fuel, the price difference being called jet differential.

It is not difficult to isolate and measure the portion of the changes of jet fuel prices attributable to the price risk of these components. Crude, gas oil crack, and jet differential are separately traded and market prices are available through market information systems such as Platt’s as for jet fuel itself. The price of jet fuel actually is calculated from the prices of its components.

Changes in the price of the components of jet fuel do have a predictable, separately measurable effect on the price of jet fuel. This effect can be compared to the effect of a change in the market interest rates on the price of a bond.<sup>4</sup>

However, in spite of protestations such as this, the IASB noted that, in many cases, changes in the cash flows or fair value of a portion of a non-financial hedged item are difficult to isolate and measure and therefore the restriction was retained largely unchanged. [IAS 39.BC137, BC138]. This was much to the disappointment of various airlines and entities with similar fuel requirements who would have preferred the standard to adopt a different approach, e.g. to establish a ‘rebuttable presumption’ that components

could not be identified and separately hedged. In fact, it appears that this message had not been fully appreciated because it was again put to the Interpretations Committee and discussed in October 2004, where it was again reiterated that it was not possible to designate a risk component of a non-financial item other than foreign exchange risk.<sup>5</sup>

Interestingly, with the aim of bringing hedge accounting closer to risk management practices, the IASB has revisited risk components of non-financial items when developing the revised hedge accounting requirements for inclusion in IFRS 9. The hedge accounting requirements of IFRS 9 pick up the above jet fuel hedging example and permit risk components of non-financial items to be eligible hedged items, provided the risk component is separately identifiable and reliably measurable (see Chapter 53 at 3.4.3).

However, it is possible for an amount of highly probable forecast non-financial hedged items to be designated in a hedge relationship that is less than the full amount expected to occur. Such a designation is only possible if the forecast transaction can be identified and documented with sufficient specificity so that when the transaction occurs, it is clear whether the transaction is or is not the hedged transaction (see 5.2 below).

Furthermore, the guidance in IAS 39 does not prevent an entity hedging a specified range of absolute values of a non-financial item, i.e. a one sided risk (see 2.2 above). For example, an entity may hedge the risk that its gold inventory will fall in value by purchasing a cash-settled at-the-money put option that allows (but does not require) the entity to sell a fixed amount of gold for a price that is fixed at its market value at inception of the contract – in this case the hedged risk is the risk that the value of the gold inventory will fall below a specified price.

The IASB also considered whether the interest rate risk portion of loan servicing rights could be designated as the hedged item on the grounds that this portion can be separately identified and measured, and that changes in market interest rates have a predictable and separately measurable effect on the value of such rights. In fact the possibility of treating loan servicing rights as financial assets rather than non-financial assets, perhaps on an elective basis, was also considered. However, it was concluded that no exceptions should be permitted for this matter either. [IAS 39.BC140-BC143].

It seems reasonably clear from the logic of the above restriction that an entity may also hedge a non-financial exposure for all risks *except* foreign currency risk (even if it is not clear from the standard itself), as illustrated in the following example.

*Example 52.13: Hedge of foreign currency denominated commodity risk*

Company P has the FC as its functional currency. It has forecast, with a high probability, the need to purchase a fixed quantity of crude oil for US Dollars in twelve months' time. To hedge part of its exposure to the price risk inherent in this purchase P enters into an exchange traded twelve-month cash-settled crude oil forward contract. The strike price of the forward is denominated in US dollars (there is no active market in FC denominated crude oil futures) and P therefore fixes the US dollar price of the oil to be purchased. P chooses not to hedge the risk associated with FC to US dollar exchange rates. This might be because of illiquidity in the foreign currency markets for FCs or, perhaps, because P has forecast US dollar inflows that provide a natural hedge of the foreign exchange risk.

P may designate the forward contract as the hedging instrument in a hedge of the exposure to the US dollar denominated price risk associated with its forecast purchase of crude oil.

In many cases it will be difficult to identify a separately measurable effect on non-financial assets, even for foreign currency risk, as illustrated in the following example from the implementation guidance.

*Example 52.14: Foreign currency borrowings hedging fixed assets*

A Danish shipping company, D, has a US subsidiary that has the same functional currency as the parent, the Danish krone. Accordingly in D's consolidated financial statements, ships owned by the subsidiary, which are carried at depreciated historical cost, are reported in Danish krone using historical exchange rates. To hedge the potential currency risk on the disposal of the ships in US dollars, purchases of ships are normally financed with loans denominated in US dollars.

US dollar borrowings cannot be classified as fair value hedges of a ship because ships do not contain any separately measurable foreign currency risk even if their purchase was, and sale is likely to be, denominated in US dollars.

The proceeds from the anticipated sale of the ship may, however, be designated in a cash flow hedge, provided all the hedging criteria are met. Those conditions require that the sale is highly probable, which is only likely if the sale is expected to occur in the immediate future. [IAS 39.F.6.5].

Unfortunately, the statement that a ship does not contain any separately measurable foreign currency risk is not explained any further, which makes it difficult to apply this guidance in other situations. For example, it is hard to argue that a commodity such as crude oil, which is traded throughout the world in US dollars, does not contain a measurable exposure to US dollars. If another commodity is regularly traded and quoted both in US dollars and in euro (the implementation guidance suggests this might be the case for natural gas – see Chapter 44 at 5.2.1.B) it might seem sensible to treat that commodity as containing both US dollar and euro exposures. However, by analogy with the guidance on quoted shares (see 2.2.1.C above), [IAS 39 F.2.19], a commodity that is traded and quoted in more than one currency would probably be deemed to create no measurable currency exposure for an entity whose functional currency is one of those currencies.

Inevitably, for many hedges of non-financial items there will be a difference between the terms of the hedging instrument and the hedged item. As well as the restriction on hedging portions of the non-financial item, there may simply be no perfectly matching hedging instruments. For example, a forward contract to purchase Colombian coffee might be used as a hedge of the forecast purchase of Brazilian coffee on otherwise similar terms. Such a hedge may, nonetheless, qualify for hedge accounting, provided all the hedging criteria are met. [IAS 39.AG100].

To meet these criteria, it must be expected that the hedge will be highly effective. For this purpose, the amount of the hedging instrument may be greater or less than that of the hedged item if this improves the effectiveness of the hedging relationship (see 5.3 below for more on assessing the hedge effectiveness). For example, a regression analysis (see 5.3.6 below) could be performed to establish a statistical relationship between the hedged item (e.g. a transaction in Brazilian coffee) and the hedging instrument (e.g. a transaction in Columbian coffee). If there is a valid statistical relationship between the two variables (i.e. between the unit prices of Brazilian coffee and Columbian coffee), the slope of the regression line can be used to establish the designated hedge ratio that will maximise expected effectiveness. For example, if the slope of the regression line is 1.02, a hedge ratio based on 0.98



quantities of hedged items to 1.00 quantities of the hedging instrument maximises expected effectiveness. However, the hedging relationship may result in ineffectiveness that is recognised in profit or loss during the term of the hedging relationship. [IAS 39.AG100]. The continued existence of a valid statistical relationship is required to be proven as part of the ongoing hedge effectiveness assessment in order to continue with hedge accounting prospectively (see 5.3 below). This idea is a recurring theme in the standard and is referred to a number of times.

As discussed in Chapter 43 at 2.2.1, current tax receivable (payable) is a non-financial asset (liability) because it arises from statutory requirements imposed by governments rather than a contract. Therefore it is not possible to designate a portion of current tax as a hedged item except for foreign exchange risk. This is the case even where the portion arises indirectly from foreign exchange risk. For example, an entity may be taxed at, say, 30% on exchange gains or losses arising on a specified monetary item but the portion of its tax charge which is payable or receivable in respect of those foreign currency gains and losses may not be a hedged item. Consequently, gains and losses on the hedging instrument (which in some cases will offset the corresponding portion of the tax charge or credit in the right period without the need for hedge accounting) could not be offset against the tax charge in profit or loss (see Chapter 54 at 7.1.3).

### 2.2.3 *Groups of items as hedged items*

The standard explains that a hedged item can be a single item or a group of such items with similar risk characteristics. [IAS 39.78]. To aggregate and hedge similar assets or liabilities as a group, the individual items need to share the risk exposure for which they are hedged. Further, the standard requires that fair value changes attributable to the hedged risk for each individual item should be approximately proportional to the equivalent fair value change of the entire group. [IAS 39.83].

For example, a group of mortgage loans may be considered a hedged item with respect to interest rate risk as long as the changes in fair value attributable to changes in the hedged risk for each loan are expected to be approximately proportional to the overall change in fair value of the entire group of loans due to the hedged risk. Factors to consider might include the interest rate applied to the individual mortgage loans in the group (fixed or floating) the actual coupon rate for fixed rate mortgages, the denominated currency and the maturity of the loans. However, the risk characteristics of the individual shares in a portfolio designed to replicate a share index will be different from each other and from the portfolio as a whole. For example the fair value of an individual share may go up whereas the fair value of the portfolio as a whole goes down. Therefore, the portfolio could not be hedged with respect to movements in the index [IAS 39.F.2.20] even though, in economic terms, the portfolio of shares may well be perfectly (or near perfectly) hedged. In situations like this, an entity may be able to designate the assets within the portfolio at fair value through profit or loss so that gains and losses from the hedging instrument and hedged items should offset within profit or loss. However, designation could only take place on initial recognition and all fair value movements would be recognised, not just those with respect to the hedged risk – see Chapter 46 at 2.2.

The IFRS 9 guidance on hedge accounting for groups of items no longer requires that fair value changes attributable to the hedged risk for each individual item should be approximately proportional to the equivalent fair value change of the entire group (see Chapter 53 at 3.6.1).

IAS 39 states that, in general, hedge effectiveness is assessed by comparing the change in value or cash flow of hedging instruments and of hedged items. Therefore, an overall net position, e.g. the net of all fixed rate assets and fixed rate liabilities with similar maturities, cannot be a hedged item. [IAS 39.84]. Similarly, the net cash flows arising from a portfolio of floating rate assets and liabilities cannot be designated as the hedged item. [IAS 39.F.2.21]. Accordingly, many financial institutions apply the special portfolio hedge accounting solutions (see 6 below). The IFRS 9 guidance does permit designation of net position in some circumstances (see Chapter 53 at 3.6).

However, approximately the same effect on profit or loss can be achieved by designating a gross part of the underlying items as the hedged position. For example, a European company with firm commitments to make purchases and sales of US\$100 and US\$90 respectively could hedge the net exposure by acquiring a derivative and designating it as a hedging instrument associated with gross purchases of US\$10. Similarly, a bank with €100 of assets and €90 of liabilities with risks and terms of a similar nature could hedge the net exposure by designating €10 of those assets as the hedged item. [IAS 39.AG101].

#### *2.2.4 Hedges of general business risk*

To qualify for hedge accounting, the hedge must relate to a specific identified and designated risk, and not merely to the entity's general business risks; also, it must ultimately affect profit or loss (see the definitions of the types of hedging relationships in IAS 39 at 3 below). A hedge of the risk of obsolescence of a physical asset or the risk of expropriation of property by a government is not eligible for hedge accounting (effectiveness cannot be measured because those risks are not measurable reliably). [IAS 39.AG110]. Similarly, the risk that a transaction will not occur is an overall business risk that is not eligible as a hedged item. [IAS 39.F.2.8].

#### *2.2.5 Hedges of a firm commitment to acquire a business*

A firm commitment to acquire a business in a business combination cannot be a hedged item, except for foreign exchange risk (see further discussion at 4.4 below), because the other risks being hedged cannot be specifically identified and measured. These other risks are also said to be general business risks. [IAS 39.AG98]. However, transactions of the business to be acquired (for example floating rate interest payments on its borrowings) may potentially qualify as hedged items. For this to be the case, it would need to be demonstrated that, from the perspective of the acquirer, those hedged transactions are highly probable which may not be straightforward as this requirement applies to both the business combination and the hedged transactions themselves.

#### *2.2.6 Held-to-maturity investments*

Unlike loans and receivables, a held-to-maturity investment (whether it pays fixed or floating interest rates) cannot be a hedged item with respect to interest rate risk or prepayment risk. This is because designating an investment as held-to-maturity requires

an intention to hold the investment until maturity without regard to changes in the fair value or cash flows of such an instrument attributable to changes in interest rates (see Chapter 46 at 3). [IAS 39.79, F.2.9].

However, a held-to-maturity investment (or related cash flows) can be a hedged item in the following circumstances:

- the investment may be a hedged item with respect to risks from changes in foreign currency exchange rates and credit risk; [IAS 39.79]
- the forecast purchase of such an investment may be a hedged item, say to lock in current interest rates – this is because an investment is not given an IAS 39 classification until it is actually recognised; [IAS 39.F.2.10] and
- the forecast reinvestment of fixed or variable interest receipts can be hedged items with respect to the risk of interest rate changes, as these hedged interest flows relate to forecast debt instruments that have not yet been classified for accounting purposes. [IAS 39.F.2.11].

It should be noted that this hedge relationship is significantly different from a hedge of the interest rate risk on the held-to-maturity investment itself. The hedge of interest flows from forecast reinvestment is most commonly used as a building block in the cash flow macro-hedging model (see 6 below).

### 2.2.7 Derivatives and instruments measured at fair value through profit or loss

A derivative cannot be a hedged item. The implementation guidance explains that this is because such instruments are always deemed held for trading and measured at fair value with gains and losses recognised in profit or loss unless they are designated and effective hedging instruments. [IAS 39.F.2.1].

This has the effect that cash flows from a forecast derivative transaction also cannot be hedged items. For example, a company with the euro as its functional currency that expects to issue floating rate debt in three months' time may wish to enter into a forward starting euro denominated pay-fixed receive-floating interest rate swap to fix the cash flows on that debt before it is issued, and those cash flows could qualify as hedged items. However, that entity may expect to issue US dollar denominated debt and, immediately after issuance, swap it into floating rate euro debt by way of a cross currency interest rate swap. In this case, the forecast floating rate euro interest payments (i.e. the combination of the US dollar denominated debt in combination with the cross currency interest rate swap) are not valid hedged items as they partly arise from a forecast derivative contract.

Consider a further example where a commodity trading entity (which produces part of the commodities that it trades) accounts for all of its sales contracts at fair value through profit or loss (see Chapter 43 at 4). The costs of production are incurred in euros, which is also the entity's functional currency. Commodities are traded in US dollars and the entity has US dollar debt that was used to finance the production assets. In this example, the entity cannot hedge the foreign exchange risk arising from its expected gross sales in US dollars (i.e. the forecast transactions) with its US dollar debt as the expected gross sales arise from forecast derivatives.

Similarly, a 'synthetic hedged item' created by combining a derivative with a non-derivative financial instrument cannot be a hedged item. For example, if an entity issued foreign currency denominated fixed rate debt and converted it into functional currency floating rate debt using a cross-currency interest rate swap, it would not be possible to designate the synthetic functional currency floating rate debt as a hedged item, as it is made up of combination of debt and a derivative.<sup>6</sup>

In what is a significant change, the IASB decided to allow aggregated exposures (i.e. a combination of a derivative and a risk exposure) to qualify as a hedged item under the IFRS 9 hedge accounting requirements. This allows hedge accounting to be applied to many common risk management strategies, such as where an entity initially only hedges the price risk of a highly probable forecast purchase of a raw material denominated in a foreign currency, then later hedges the foreign exchange risk too (see Chapter 53 at 3.3).

It does not immediately appear that it would be useful to designate a recognised hedged item that is measured at fair value through profit or loss in a hedge relationship. However, for certain variable rate instruments measured at fair value through profit or loss designation as the hedged item in a cash flow hedge relationship may be desirable. Although the variable hedged item would be measured at fair value through profit or loss, an entity may still seek to hedge variability of cash flows by entering into a hedging derivative. Because of the variable nature of the hedged item, such instruments may not be significantly exposed to changes in fair value caused by movements in the hedged risk whereas the hedging derivative will be. In this instance application of cash flow hedge accounting facilitates deferral of fair value changes in the hedging derivative to the cash flow reserve, which may better reflect the risk management strategy.

The implementation guidance of IAS 39 seems to be clear that financial instruments that are held for trading cannot be designated as a hedged item as stated above. However, the position is less clear for items held at fair value through profit or loss that are not held for trading such as those to which the fair value option has been applied (see Chapter 46 at 2.2). The guidance in IFRS 9 is more explicit, and provides the following example: an entity could use a swap to change floating rate debt to fixed-rate and apply cash flow hedge accounting, even if the debt is measured at fair value through profit or loss. This is because there is a systematic way in which the cash flow hedge reserve can be reclassified, i.e. in the same way interest payments on the instrument occur. *[IFRS 9.B6.5.2]*.

However, in other cases there might be no systematic way in which the cash flow hedge reserve can be reclassified. A forecast purchase of an equity instrument that, once acquired, will be accounted for at fair value through profit or loss, is mentioned as an example of an item that cannot be the hedged item in a cash flow hedge, because any gain or loss on the hedging instrument that would be deferred could not be appropriately reclassified to profit or loss during a period in which it would achieve offset. *[IFRS 9.B6.5.2]*. We believe that the principles set out by the examples above could also be applied to non-derivative instruments to which the fair value option has been applied, that are designated as hedged items in cash flow hedges under IAS 39 (see also Chapter 53 at 3.6.7).

### 2.2.8 Forecast acquisition or issuance of foreign currency monetary items

Changes in foreign exchange rates prior to acquisition or issuance of a monetary item denominated in a foreign currency do not impact profit or loss. Therefore an entity cannot hedge the foreign currency risk associated with the forecast acquisition or issuance of a monetary item denominated in a foreign currency, such as the expected issuance for cash of borrowings denominated in a currency other than the entity's functional currency. This is because there is a need for the hedged risk to have the potential to impact profit or loss in order to achieve hedge accounting. [IAS 39.86(b)].

### 2.2.9 Own equity instruments

Transactions in an entity's own equity instruments (including distributions to holders of such instruments) are generally recognised directly in equity by the issuer (see Chapter 45) and do not affect profit or loss. Therefore, such instruments cannot be designated as a hedged item. Similarly, a forecast transaction in an entity's own equity instruments (e.g. a forecast dividend payment) cannot qualify as a hedged item. However, a declared dividend that qualifies for recognition as a financial liability, e.g. because the entity has become legally obliged to make the payment, may qualify as a hedged item. For example, a recognised liability to pay a dividend in a foreign currency would give rise to foreign exchange risk. [IAS 39.F.2.7].

### 2.2.10 Core deposits

Financial institutions often receive a significant proportion of their funding from demand deposits, such as current account balances, savings accounts and other accounts that behave in a similar manner. Even though the total balance from all such customer deposits may vary, a financial institution typically determines a level of core deposits that it believes will be maintained for a particular time frame, and hence will behave for that time frame like a fixed interest rate exposure from an interest rate risk perspective.

These customer deposits or accounts usually pay a zero or low, stable interest rate which is generally insensitive to changes in market interest rates. Hence both existing and new deposits are generally considered fungible for interest rate risk management purposes, as new deposits will usually be on the same terms as any withdrawn deposits that they replace. Financial institutions cannot determine which individual customer deposits will make up the core deposits. While these deposits can be withdrawn at little or short notice, typically they are left as a deposit for a long and generally predictable time despite the low interest paid.

Risk management of the 'deemed' fixed rate interest rate risk exposure that financial institutions attribute to core deposits will often result in the need to transact interest rate derivatives, although achieving hedge accounting for these derivatives can be difficult.<sup>7</sup>

In order for items to be eligible hedged items in a fair value hedge, the fair value of the hedged items must vary with the hedged risk. However, IFRS 13 – *Fair Value Measurement* – states that the fair value of a financial liability with a demand feature (e.g. a demand deposit) is not less than the amount payable on demand, discounted from the first date that the amount could be required to be paid. [IFRS 13.47]. Therefore the fair value of demand deposits will not vary with the hedged risk, and fair value hedge accounting is precluded.

An alternative consideration is whether it is possible to designate a core deposit intangible (representing the value of this source of funding to the financial institution) as an eligible hedged item. The term 'core deposit intangible' could be used to represent the difference between:

- (a) the fair value of a portfolio of core deposits; and
- (b) the aggregate of the individual fair values of the liabilities within the portfolio, normally calculated in accordance with the requirements of IFRS 13.

Generally, an internally-generated core deposit intangible cannot be a hedged item because it is not a recognised asset. However, if a core deposit intangible is acquired together with a related portfolio of deposits, it is required to be recognised separately as an intangible asset (or as part of the related acquired portfolio of deposits) if it meets the recognition criteria in IAS 38 – *Intangible Assets* – [IAS 39.F.2.3] which it normally will (see Chapter 9 at 5.5.2).

Theoretically, therefore, a recognised purchased core deposit intangible asset could be designated as a hedged item. However this will only be the case if it meets the conditions for hedge accounting, including the requirement that the effectiveness of the hedge can be measured reliably. The implementation guidance explains that, because it is often difficult to measure reliably the fair value of a core deposit intangible asset other than on initial recognition, it is unlikely that this requirement will be met. [IAS 39.F.2.3]. In fact, this probably understates the difficulty.

For the reasons set out above, financial institutions are not able to designate core deposits with the associated hedging instruments in hedge accounting relationships, despite the economic validity of these risk management activities. Accordingly, many financial institutions apply the special portfolio or macro hedge accounting guidance (see 6 below).

#### *2.2.11 Pension scheme assets*

An entity may wish to enter into transactions to hedge the risk associated with assets held by a pension scheme or other long-term employee benefit fund. We consider that, for many reasons, plan assets are unlikely to qualify as hedged items under IAS 39. For example, a pension scheme is, in many respects, a non-financial asset or liability and, therefore, the portion of the risk associated with only the assets could not be a hedged item (see 2.2.2 above).

### **2.3 Internal hedges and other group accounting issues**

One of the most pervasive impacts that IAS 39 can have on groups, especially those operating centralised treasury functions, is the need to reassess hedging strategies that involve intra-group transactions. To a layman this might come as something of a surprise because the standard does little more than reinforce the general principle that transactions between different entities within a group should be eliminated in the consolidated financial statements of that group. Nevertheless, a significant amount of the standard and related implementation guidance is devoted to this subject.

### 2.3.1 Internal hedging instruments

The starting point for this guidance is the principle of preparing consolidated financial statements in IFRS 10 – *Consolidated Financial Statements* – that requires ‘intragroup assets and liabilities, equity, income, expenses and cash flows to be eliminated in full’.

[IFRS 10.B86, IAS 39.F.1.4].

Although individual entities within a consolidated group (or divisions within a single legal entity) may enter into hedging transactions with other entities within the group (or divisions within the entity), such as internal derivative contracts to transfer risk exposures between different companies (or divisions), any such intragroup (or intra-entity) transactions are eliminated on consolidation. Therefore, such hedging transactions do not qualify for hedge accounting in the consolidated financial statements of the group, [IAS 39.73, F.1.4], (or in the individual or separate financial statements of an entity for hedging transactions between divisions of the entity). Effectively, this is because they do not exist in an accounting sense.

As a consequence, IAS 39 makes it very clear that for hedge accounting purposes only instruments that involve a party external to the reporting entity (i.e. external to the group or individual entity that is being reported on) can be designated as hedging instruments. [IAS 39.73].

The implementation guidance explains that IAS 39 does not specify how an entity should manage its risk. Accordingly, where an internal contract is offset with an external party, the external contract may be regarded as the hedging instrument. In such cases, the hedging relationship (which is between the external transaction and the item that is the subject of the internal hedge) may qualify for hedge accounting. [IAS 39.F.1.4]. The following example illustrates this.

#### *Example 52.15: Internal derivatives*

The banking division of Bank A enters into an internal interest rate swap with A’s trading division. The purpose is to hedge the interest rate risk exposure of a loan (or group of similar loans) in the banking division’s loan portfolio. Under the swap, the banking division pays fixed interest payments to the trading division and receives variable interest rate payments in return.

Assuming a hedging instrument is not acquired from an external party, hedge accounting treatment for the hedging transaction undertaken by the banking and trading divisions is not allowed, because only derivatives that involve a party external to the entity can be designated as hedging instruments. Further, any gains or losses on intragroup or intra-entity transactions should be eliminated on consolidation. Therefore, transactions between different divisions within A cannot qualify for hedge accounting treatment in Bank A’s financial statements. Similarly, transactions between different entities within a group cannot qualify for hedge accounting treatment in A’s consolidated financial statements.

However, if, in addition to the internal swap in the above example, the trading division entered into an interest rate swap or other contract with an external party that offset the exposure hedged in the internal swap, hedge accounting would be permitted. For the purposes of IAS 39, the hedged item is the loan (or group of similar loans) in the banking division and the hedging instrument is the external interest rate swap or other contract.

The trading division may aggregate several internal swaps or portions of them that are not offsetting each other (see 2.3.2 below) and enter into a single third party derivative contract that offsets the aggregate exposure. Such external hedging transactions may qualify for hedge accounting treatment provided that the hedged items in the banking division are identified and the other conditions for hedge accounting are met. [IAS 39.F.1.4].

It follows that internal hedges may qualify for hedge accounting in the individual or separate financial statements of individual entities within the group, provided they are external to the individual entity that is being reported on. *[IAS 39.73]*.

The implementation guidance contains the following summary of the application of IAS 39 to internal hedging transactions:

- IAS 39 does not preclude an entity from using internal derivative contracts for risk management purposes and it does not preclude internal derivatives from being accumulated at the treasury level or some other central location so that risk can be managed on an entity-wide basis or at some higher level than the separate legal entity or division.
- Internal derivative contracts between two separate entities within a consolidated group can qualify for hedge accounting by those entities in their individual or separate financial statements, even though the internal contracts are not offset by derivative contracts with a party external to the consolidated group.
- Internal derivative contracts between two separate divisions within the same legal entity can qualify for hedge accounting in the individual or separate financial statements of that legal entity only if those contracts are offset by derivative contracts with a party external to the legal entity.
- Internal derivative contracts between separate divisions within the same legal entity and between separate entities within the consolidated group can qualify for hedge accounting in the consolidated financial statements only if the internal contracts are offset by derivative contracts with a party external to the consolidated group.
- If the internal derivative contracts are not offset by derivative contracts with external parties, the use of hedge accounting by group entities and divisions using internal contracts must be reversed on consolidation. *[IAS 39.F.1.4]*.

The premise on which the restriction on internal hedging instruments is based is not completely true. In fact, foreign currency intragroup balances may well give rise to gains and losses in profit or loss under IAS 21 that are not fully eliminated on consolidation. Such intra-group monetary items, as well as forecast intragroup transactions, may qualify as a hedged item in the consolidated financial statements if the other conditions for hedge accounting are met (see 2.3.4 below). However, this does not change the fact that internal transactions, even those that affect consolidated profit or loss, cannot be used as hedging instruments in consolidated financial statements. This is somewhat surprising as one might consider the same arguments that led to the exception permitting intragroup monetary items and forecast intragroup transactions to be hedged items to support allowing intragroup monetary items to be hedging instruments. However, during its deliberations of the hedge accounting model under IFRS 9 the IASB decided to retain this restriction. *[IFRS 9.BC6.142-147]*.

IFRS 8 – *Operating Segments* – requires disclosure of segment information that is reported to the chief operating decision maker even if this is on a non-GAAP basis (see Chapter 34 at 3.1). Consequently, for a hedge to qualify for hedge accounting in segment reporting, it is not always necessary for the hedging instrument to involve a party external to the segment.



### 2.3.2 Offsetting internal hedging instruments

As noted at 2.3.1 above, if an internal contract used in a hedging relationship is offset with an external party, the external contract may be regarded as a hedging instrument and the hedge may qualify for hedge accounting. [IAS 39.F.1.4]. The implementation guidance elaborates on this further in the context of both interest rate and foreign currency risk management, particularly in the situation where the exposure from internal derivatives are offset before being laid off with a third party.

#### 2.3.2.A Interest rate risk

Sometimes, central treasury functions enter into internal derivative contracts with subsidiaries and, perhaps, divisions within the consolidated group to manage interest rate risk on a centralised basis. If, before laying off the risk, the internal contracts are first netted against each other and only the net exposure is offset in the marketplace with external derivative contracts, the internal contracts cannot qualify for hedge accounting in the consolidated financial statements. [IAS 39.F.1.5].

An internal contract designated at the subsidiary level, or by a division, as a hedge results in the recognition of changes in the fair value of the item being hedged in profit or loss (for a fair value hedge – see 4.1.1 below) or in the recognition of the changes in the fair value of the internal derivative in other comprehensive income (for a cash flow hedge – see 4.2.1 below). On consolidation, there is no basis for changing the measurement attribute of the item being hedged in a fair value hedge unless the exposure is offset with an external derivative. Similarly, on consolidation, there is no basis for including the gain or loss on the internal derivative in other comprehensive income for one entity and recognising it in profit or loss by the other entity unless it is offset with an external derivative. [IAS 39.F.1.5].

Where two or more internal derivatives used to manage interest rate risk on assets or liabilities at the subsidiary or division level are offset at the treasury level, the effect of designating the internal derivatives as hedging instruments is that the hedged non-derivative exposures at the subsidiary or division levels would be used to offset each other on consolidation. Accordingly, since IAS 39 does not permit designating non-derivatives as hedging instruments (except for foreign currency exposures – see 2.1.2 above), the results of hedge accounting from the use of internal derivatives at the subsidiary or division level that are not laid off with external parties must be reversed on consolidation. [IAS 39.F.1.5].

It should be noted, however, that if the hedges were perfectly effective at the subsidiary level, there will be no effect on profit or loss and equity of reversing the effect of hedge accounting on consolidation for internal derivatives that offset each other at the consolidation level if they are used in the same type of hedging relationship at the subsidiary or division level and, in the case of cash flow hedges, where the hedged items affect profit or loss in the same period. Just as the internal derivatives offset at the treasury level, their use as fair value hedges by two separate entities or divisions within the consolidated group will also result in the offset of the fair value amounts recognised in profit or loss. Similarly, their use as cash flow hedges by two separate entities or divisions within the consolidated group will also result in the fair value amounts being offset against each other in other comprehensive income. [IAS 39.F.1.5].

However, there may be an effect on individual line items in both the consolidated income statement (or statement of comprehensive income) and the consolidated

statement of financial position. For example when internal derivatives that hedge assets (or liabilities) in a fair value hedge are offset by internal derivatives that are used as a fair value hedge of other assets (or liabilities) that are recognised in a different statement of financial position or income statement (or statement of comprehensive income) line item. In addition, to the extent that one of the internal contracts is used as a cash flow hedge and the other is used in a fair value hedge, the effect on profit or loss and equity would not offset since the gain (or loss) on the internal derivative used as a fair value hedge would be recognised in profit or loss and the corresponding loss (or gain) on the internal derivative used as a cash flow hedge would be recognised in other comprehensive income. [IAS 39.F.1.5]. However, the reversal of the fair value hedge adjustment would also be recognised in profit or loss when reversing hedge accounting on consolidation for internal derivatives.

Notwithstanding this, under the principles set out at 2.2.3 above, it may be possible to designate the external derivative as a hedge of *some* of the underlying exposures as illustrated in the following example.

*Example 52.16: Single external derivative offsets internal contracts on a net basis*

Company A uses what it describes as internal derivative contracts to document the transfer of responsibility for interest rate risk exposures from individual divisions to a central treasury function. The central treasury function aggregates the internal derivative contracts and enters into a single external derivative contract that offsets the internal derivative contracts on a net basis.

On one particular day the central treasury function enters into three internal receive-fixed, pay-variable interest rate swaps that lay off the exposure to variable interest cash flows on variable rate liabilities in other divisions and one internal receive-variable, pay-fixed interest rate swap that lays off the exposure to variable interest cash flows on variable rate assets in another division. It enters into an interest rate swap with an external counterparty that exactly offsets the four internal swaps.

A hedge of an overall net position does not qualify for hedge accounting. However, designating a part of the underlying items as the hedged position on a gross basis is permitted. [IAS 39.84, AG101]. Therefore, even though the purpose of entering into the external derivative was to offset internal derivative contracts on a net basis, hedge accounting is permitted if the hedging relationship is defined and documented as a hedge of a part of the underlying cash inflows or cash outflows on a gross basis and assuming that the hedge accounting criteria are met. [IAS 39.F.2.15].

*2.3.2.B Foreign exchange risk*

Although much of the discussion at 2.3.2.A above applies equally to hedges of foreign currency risk, there is one important distinction between the two situations. IAS 39 allows non-derivative financial instruments to be used as the hedging instrument in the hedge of foreign currency risk. Therefore, in this case, internal derivatives may be used as a basis for identifying non-derivative external transactions that could qualify as hedging instruments or hedged items, provided that the internal derivatives represent the transfer of foreign currency risk on underlying non-derivative financial assets or liabilities (see Case 3 in Example 52.17 below). However, for consolidated financial statements, it is necessary to designate the hedging relationship so that it involves only external transactions. [IAS 39.F.1.6].

Forecast transactions and unrecognised firm commitments cannot qualify as hedging instruments under IAS 39. Accordingly, to the extent that two or more offsetting internal derivatives represent the transfer of foreign currency risk on such items, hedge

accounting cannot be applied. As a result, if any cumulative net gain or loss on an internal derivative has been included in the initial carrying amount of an asset or liability (a 'basis adjustment') or recognised in other comprehensive income (see 4.2.1 and 4.2.2 below), it would have to be reversed on consolidation if it cannot be demonstrated that the offsetting internal derivative represented the transfer of a foreign currency risk on a financial asset or liability to an external hedging instrument. [IAS 39.F.1.6].

The following example illustrates this principle – it also illustrates the mechanics of accounting for fair value hedges and cash flow hedges, which are discussed in more detail at 4.1 and 4.2 below. [IAS 39.F.1.7].

*Example 52.17: Using internal derivatives to hedge foreign currency risk*

In each of the following cases, 'FC' represents a foreign currency, 'LC' represents the local currency (which is the entity's functional currency) and 'TC' the group's treasury centre.

**Case 1: Offset of fair value hedges**

Subsidiary A has trade receivables of FC100, due in 60 days, which it hedges using a forward contract with TC. Subsidiary B has payables of FC50, also due in 60 days, which it hedges using a forward contract with TC.

TC nets the two internal derivatives and enters into a net external forward contract to pay FC50 and receive LC in 60 days.

At the end of month 1, FC weakens against LC. A incurs a foreign exchange loss of LC10 on its receivables, offset by a gain of LC10 on its forward contract with TC. B makes a foreign exchange gain of LC5 on its payables, offset by a loss of LC5 on its forward contract with TC. TC makes a loss of LC10 on its internal forward contract with A, a gain of LC5 on its internal forward contract with B and a gain of LC5 on its external forward contract.

Accordingly, the following entries are made in the individual or separate financial statements of A, B and TC at the end of month 1 (assuming that forward foreign exchange and spot exchange rates are exactly the same, which is unlikely in reality). Entries reflecting intra-group transactions or events are shown in italics.

**A's entries**

	LC	LC
Foreign exchange loss	10	
Receivables		10
<i>Internal contract (TC)</i>	<i>10</i>	
<i>Internal gain (TC)</i>		<i>10</i>

**B's entries**

	LC	LC
Payables	5	
Foreign exchange gain		5
<i>Internal loss (TC)</i>	<i>5</i>	
<i>Internal contract (TC)</i>		<i>5</i>

**TC's entries**

	LC	LC
<i>Internal loss (A)</i>	<i>10</i>	
<i>Internal contract (A)</i>		<i>10</i>
<i>Internal contract (B)</i>	<i>5</i>	
<i>Internal gain (B)</i>		<i>5</i>
External forward contract	5	
Foreign exchange gain		5

Both A and B could apply hedge accounting in their individual financial statements provided all necessary conditions were met. However, because gains and losses on the internal derivatives and the offsetting losses and gains on the hedged receivables and payables are recognised immediately in profit or loss without hedge accounting, hedge accounting is unnecessary (see 3.3 below for further information on hedges of foreign currency denominated monetary items).

In the consolidated financial statements, the internal derivative transactions are eliminated. In economic terms, B's payable hedges FC50 of A's receivables. The external forward in TC hedges the remaining FC50 of A's receivable. In the consolidated financial statements, hedge accounting is again unnecessary because monetary items are measured at spot foreign exchange rates under IAS 21 irrespective of whether hedge accounting is applied.

The net balances, before and after elimination of the accounting entries relating to the internal derivatives, are the same, as set out below. Accordingly, there is no need to make any further accounting entries to meet the requirements of IAS 39.

	LC	LC
Receivables	–	10
Payables	5	–
External forward contract	5	–
Gains and losses	–	–
Internal contracts	–	–

### **Case 2: Offset of cash flow hedges**

To extend the example, A also has highly probable future revenues of FC200 on which it expects to receive cash in 90 days. B has highly probable future expenses of FC500 (advertising cost), also to be paid for in 90 days. A and B enter into separate forward contracts with TC to hedge these exposures and TC enters into an external forward contract to receive FC300 in 90 days.

As before, FC weakens at the end of month 1. A incurs a 'loss' of LC20 on its anticipated revenues because the LC value of these revenues decreases and this is offset by a gain of LC20 on its forward contract with TC. Similarly, B incurs a 'gain' of LC50 on its anticipated advertising cost because the LC value of the expense decreases and this is offset by a loss of LC50 on its transaction with TC.

TC incurs a gain of LC50 on its internal transaction with B, a loss of LC20 on its internal transaction with A and a loss of LC30 on its external forward contract.

Both A and B complete the necessary documentation, the hedges are effective and both A and B qualify for hedge accounting in their individual financial statements. A recognises the gain of LC20 on its internal derivative transaction in other comprehensive income and B does the same with its loss of LC50. TC does not claim hedge accounting, but measures both its internal and external derivative positions at fair value, which net to zero.

Accordingly, the following entries are made in the individual or separate financial statements of A, B and TC at the end of month 1. Entries reflecting intra-group transactions or events are shown in italics.

#### **A's entries**

	LC	LC
<i>Internal contract (TC)</i>	<i>20</i>	
<i>Other comprehensive income</i>		<i>20</i>

#### **B's entries**

	LC	LC
<i>Other comprehensive income</i>	<i>50</i>	
<i>Internal contract (TC)</i>		<i>50</i>

**TC's entries**

	LC	LC
<i>Internal loss (A)</i>	20	
<i>Internal contract (A)</i>		20
<i>Internal contract (B)</i>	50	
<i>Internal gain (B)</i>		50
Foreign exchange loss	30	
External forward contract		30

IAS 39 requires that, in the consolidated financial statements, the accounting effects of the internal derivative transactions must be eliminated.

If there were no hedge designation for the consolidated financial statements, the gains and losses recognised in other comprehensive income and profit or loss on the internal derivatives would be reversed. Consequently, a loss of LC30 would be recognised in profit or loss in respect of the external forward contract held by TC.

However, for the consolidated financial statements, TC's external forward contract on FC300 is designated, at the beginning of month 1, as a hedging instrument of the first FC300 of B's highly probable future expenses. Therefore, LC30 of the gain recognised in other comprehensive income by B may remain in other comprehensive income on consolidation, because it involves an external derivative. Accordingly, the net balances, before and after elimination of the accounting entries relating to the internal derivatives, are as set out below and there is no need to make any further accounting entries in order for the requirements of IAS 39 to be met.

	LC	LC
External forward contract	–	30
Other comprehensive income	30	–
Gains and losses	–	–
Internal contracts	–	–

**Case 3: Offset of fair value and cash flow hedges**

The example is extended further and it is assumed that the exposures and the internal derivative transactions are the same as in Cases 1 and 2. In other words, Subsidiary A has trade receivables of FC100, due in 60 days, and highly probable future revenues of FC200 on which it expects to receive cash in 90 days. Subsidiary B has payables of FC50, due in 60 days, and highly probable future expenses of FC500 to be paid for in 90 days. Each of these exposures is hedged using forward contracts with TC. However, in this case, instead of entering into two external derivatives to hedge separately the fair value and cash flow exposures, TC enters into a single net external derivative to receive FC250 in exchange for LC in 90 days.

Consequently, TC has four internal derivatives, two maturing in 60 days and two maturing in 90 days. These are offset by a net external derivative maturing in 90 days. The interest rate differential between FC and LC is minimal, and therefore the ineffectiveness resulting from the mismatch in maturities is expected to have a minimal effect on profit or loss in TC.

As in Cases 1 and 2, A and B apply hedge accounting for their cash flow hedges and TC measures its derivatives at fair value. A recognises a gain of LC20 on its internal derivative transaction in other comprehensive income and B does the same with its loss of LC50.

Accordingly, the following entries are made in the individual or separate financial statements of A, B and TC at the end of month 1. Entries reflecting intra-group transactions or events are shown in italics.

**A's entries**

	LC	LC
Foreign exchange loss	10	
Receivables		10
<i>Internal contract (TC)</i>	10	
<i>Internal gain (TC)</i>		10
<i>Internal contract (TC)</i>	20	
<i>Other comprehensive income</i>		20

<b>B's entries</b>		
	LC	LC
Payables	5	
Foreign exchange gain		5
<i>Internal loss (TC)</i>	5	
<i>Internal contract (TC)</i>		5
<i>Other comprehensive income</i>	50	
<i>Internal contract (TC)</i>		50
<b>TC's entries</b>		
	LC	LC
<i>Internal loss (A)</i>	10	
<i>Internal contract (A)</i>		10
<i>Internal loss (A)</i>	20	
<i>Internal contract (A)</i>		20
<i>Internal contract (B)</i>	5	
<i>Internal gain (B)</i>		5
<i>Internal contract (B)</i>	50	
<i>Internal gain (B)</i>		50
Foreign exchange loss	25	
External forward contract		25

The gains and losses recognised on the internal contracts in A and B can be summarised as follows:

	A	B	Total
	LC	LC	LC
Profit or loss (fair value hedges)	10	(5)	5
Other comprehensive income (cash flow hedges)	20	(50)	(30)
Total	<u>30</u>	<u>(55)</u>	<u>(25)</u>

In the consolidated financial statements, IAS 39 requires the accounting effects of the internal derivative transactions to be eliminated.

If there were no hedge designation for the consolidated financial statements, the gains and losses recognised in other comprehensive income and profit or loss on the internal derivatives would be reversed. Consequently, a loss of LC30 would be recognised in profit or loss in respect of the external receivable and payable held by A (loss LC10) and B (gain LC5) respectively and the external forward contract held by TC (loss LC25).

However, for the consolidated financial statements, the following designations are made at the beginning of month 1:

- the payable of FC50 in B is designated as a hedge of the first FC50 of the highly probable future revenues in A. Therefore, at the end of month 1, the following entries are made in the consolidated financial statements: Dr Payable LC5; Cr Other comprehensive income LC5;
- the receivable of FC100 in A is designated as a hedge of the first FC100 of the highly probable future expenses in B. Therefore, at the end of month 1, the following entries are made in the consolidated financial statements: Dr Other comprehensive income LC10, Cr Receivable LC10; and

- the external forward contract on FC250 in TC is designated as a hedge of the next FC250 of highly probable future expenses in B.

Therefore, at the end of month 1, the following entries are made in the consolidated financial statements:  
Dr Other comprehensive income LC25; Cr External forward contract LC25.

Combining these entries produces the total net balances as follows:

	LC	LC
Receivables	–	10
Payables	5	–
External forward contract	–	25
Other comprehensive income	30	–
Gains and losses	–	–
Internal contracts	–	–

**Case 4: Offset of fair value and cash flow hedges with adjustment to carrying amount of inventory**

Similar transactions to those in Case 3 are assumed except that the anticipated cash outflow of FC500 in B relates to the purchase of inventory that is delivered after 60 days. It is also assumed that the entity has a policy of basis-adjusting hedged forecast non-financial items (see 4.2.2 below).

To recap, Subsidiary A has trade receivables of FC100, due in 60 days, and highly probable future revenues of FC200 on which it expects to receive cash in 90 days. Subsidiary B has payables of FC50, due in 60 days, and a highly probable future purchase of inventory for FC500, to be delivered in 60 days and paid for in 90 days. Each of these exposures is hedged using forward contracts with TC, and TC enters into a single net external derivative to receive FC250 in exchange for LC in 90 days.

At the end of month 2, there are no further changes in exchange rates or fair values. At that date, the inventory is delivered and the loss of LC50 on B’s internal derivative, recognised in other comprehensive income in month 1, is removed from equity and adjusts the carrying amount of inventory in B. The gain of LC20 on A’s internal derivative is recognised in other comprehensive income as before.

In the consolidated financial statements, there is now a mismatch compared with the result that would have been achieved by unwinding and redesignating the hedges. The external derivative (FC250) and the proportion of receivable (FC50) in A offset FC300 of the anticipated inventory purchase in B. Offset will occur between the FC50 payable in B and a FC50 proportion of the receivable in A. There is a natural hedge between the remaining FC200 of anticipated cash outflow in B (inventory) and the anticipated cash inflow of FC200 in A (revenue). This last relationship does not qualify for hedge accounting under IAS 39 as no valid hedging instrument exists, hence this time there is only a partial offset between gains and losses on the internal derivatives that hedge these amounts.

Accordingly, the following entries are made in the individual or separate financial statements of A, B and TC at the end of month 1. Entries reflecting intra-group transactions or events are shown in italics.

**A’s entries (all at the end of month 1)**

	LC	LC
Foreign exchange loss	10	
Receivables		10
<i>Internal contract (TC)</i>	<i>10</i>	
<i>Internal gain (TC)</i>		<i>10</i>
<i>Internal contract (TC)</i>	<i>20</i>	
<i>Other comprehensive income</i>		<i>20</i>

<b>B's entries (at the end of month 1)</b>		
	LC	LC
Payables	5	
Foreign exchange gain		5
<i>Internal loss (TC)</i>	<i>5</i>	
<i>Internal contract (TC)</i>		<i>5</i>
<i>Other comprehensive income</i>	<i>50</i>	
<i>Internal contract (TC)</i>		<i>50</i>
<b>B's entries (at the end of month 2)</b>		
	LC	LC
Inventory	50	
Other comprehensive income		50
<b>TC's entries (all at the end of month 1)</b>		
	LC	LC
<i>Internal loss (A)</i>	<i>10</i>	
<i>Internal contract (A)</i>		<i>10</i>
<i>Internal loss (A)</i>	<i>20</i>	
<i>Internal contract (A)</i>		<i>20</i>
<i>Internal contract (B)</i>	<i>5</i>	
<i>Internal gain (B)</i>		<i>5</i>
<i>Internal contract (B)</i>	<i>50</i>	
<i>Internal gain (B)</i>		<i>50</i>
Foreign exchange loss	25	
External forward contract		25

The gains and losses recognised on the internal contracts in A and B can be summarised as follows:

	A	B	Total
	LC	LC	LC
Profit or loss (fair value hedges)	10	(5)	5
Other comprehensive income (cash flow hedges)	20	–	20
Basis adjustment (inventory)	–	(50)	(50)
Total	<u>30</u>	<u>(55)</u>	<u>(25)</u>

Combining these amounts with the external transactions (i.e. those not marked in italics above) produces the total net balances before elimination of the internal derivatives as follows:

	LC	LC
Receivables	–	10
Payables	5	–
External forward contract	–	25
Other comprehensive income	–	20
Basis adjustment (inventory)	50	–
Gains and losses	–	–
Internal contracts	–	–



For the consolidated financial statements, the following designations are made at the beginning of month 1:

- The payable of FC50 in B is designated as a hedge of the first FC50 of the highly probable future revenues in A.

Therefore, at the end of month 1, the following entry is made in the consolidated financial statements:  
Dr Payables LC5; Cr Other comprehensive income LC5.

- The receivable of FC100 in A is designated as a hedge of the first FC100 of the highly probable future inventory purchase in B.

Therefore, at the end of month 1, the following entries are made in the consolidated financial statements:  
Dr Other comprehensive income LC10; Cr Receivable LC10; and at the end of month 2, Dr Inventory LC10; Cr Other comprehensive income LC10.

- The external forward contract on FC250 in TC is designated as a hedge of the next FC250 of highly probable future inventory purchase in B.

Therefore, at the end of month 1, the following entry is made in the consolidated financial statements:  
Dr Other comprehensive income LC25; Cr External forward contract LC25; and at the end of month 2,  
Dr Inventory LC25; Cr Other comprehensive income LC25.

This leaves FC150 of the future revenue in A and FC150 of future inventory purchase in B not designated in a hedge accounting relationship in the consolidated financial statements.

The total net balances after elimination of the accounting entries relating to the internal derivatives are as follows:

	LC	LC
Receivables	–	10
Payables	5	–
External forward contract	–	25
Other comprehensive income	–	5
Basis adjustment (inventory)	35	–
Gains and losses	–	–
Internal contracts	–	–

These total net balances are different from those that would be recognised if the internal derivatives were not eliminated, and it is these net balances that IAS 39 requires to be included in the consolidated financial statements. The accounting entries required to adjust the total net balances before elimination of the internal derivatives are as follows:

- to reclassify LC15 of the loss on B's internal derivative that is included in inventory to reflect that FC150 of the forecast purchase of inventory is not hedged by an external instrument (neither the external forward contract of FC250 in TC nor the external payable of FC100 in A); and
- to reclassify the gain of LC15 on A's internal derivative to reflect that the forecast revenues of FC150 to which it relates is not hedged by an external instrument.

The net effect of these two adjustments is as follows:

	LC	LC
Other comprehensive income	15	
Inventory		15

It is apparent that extending the principles set out in this relatively simple example to the more complex and higher volume situations that are likely to be encountered in practice is not going to be straightforward.

### 2.3.3 *Offsetting external hedging instruments*

The implementation guidance explains that where two offsetting derivatives are transacted at the same time, it is generally not permitted to designate one of them as a hedging instrument in a hedge when the derivatives are viewed as one unit. The two derivatives would not be accounted for as one unit if:

- the second derivative was not entered into in contemplation of the first; or
- there is a 'substantive business purpose' for structuring the transactions separately; or
- the derivatives are with different counterparties.

This issue is also discussed in Chapter 44 at 8. It is emphasised that judgement should be applied in determining what a substantive business purpose is. For example, a centralised treasury entity may enter into third party derivative contracts on behalf of other subsidiaries to hedge their interest rate exposures and, to track those exposures within the group, enter into internal derivative transactions with those subsidiaries. It may also enter into a derivative contract with the same counterparty during the same business day with substantially the same terms as a contract entered into as a hedging instrument on behalf of another subsidiary as part of its trading operations, or because it wishes to rebalance its overall portfolio risk. In this case, there is a valid business purpose for entering into each contract. However, a desire to achieve fair value accounting for the hedged item is deemed not to be a substantive business purpose. *[IAS 39.F.1.14]*.

The following example, based on the implementation guidance, explores this issue a little further.

#### *Example 52.18: External derivative contracts settled net*

A company uses internal derivative contracts to transfer interest rate risk exposures from individual divisions to a central treasury function. For each internal derivative contract, the central treasury function enters into a derivative contract with a single external counterparty that offsets the internal derivative contract. For example, if the central treasury function has entered into a receive-5% fixed, pay-LIBOR interest rate swap with another division that has entered into the internal contract with central treasury to hedge the exposure to variability in interest cash flows on a pay-LIBOR borrowing, central treasury would enter into a pay-5% fixed, receive-LIBOR interest rate swap on the same principal terms with the external counterparty.

Although each external derivative contract is formally documented as a separate contract, only the net of the payments on all of the external derivative contracts is settled since there is a netting agreement with the external counterparty.

Even though the external derivatives are settled on a net basis, the individual external derivative contracts, such as the pay-5% fixed, receive-LIBOR interest rate swap above, can generally be designated as hedging instruments of underlying gross exposures, such as the exposure to changes in variable interest payments on the pay-LIBOR borrowing above, assuming that all the other hedge accounting criteria are met.

External derivative contracts that are legally separate contracts and serve a valid business purpose, such as laying off risk exposures on a gross basis, qualify as hedging instruments even if those external contracts are settled on a net basis with the same external counterparty, provided the hedge accounting criteria in IAS 39 are met. *[IAS 39.F.2.16]*.

In the context of interest rate instruments, the facts in this example appear a little unlikely. This is because most master netting agreements have a practical effect only in the event of default by, or insolvency of, one of the counterparties – otherwise payments tend to be made gross. However, the above situation has become more relevant as many jurisdictions recently introduced (or plan to introduce) requirements to settle over-the-counter derivatives through a central clearing house (discussed at 4.2.3.A below).

For foreign currency instruments, a number of financial institutions provide services that are broadly analogous to the one described in Example 52.18 above. Under these arrangements a treasury function will transact, say, legally separate forward exchange contracts with the financial institution to offset each internal derivative it has entered into with a subsidiary or division. These contracts will be administered under a centralised facility with settlements being made on a net basis. Further, the financial institution will often price these contracts to reflect the reduced credit risk and administrative burden associated with the arrangements so that the cost of transacting individual contracts is significantly reduced.

Some may express surprise that the guidance explains that arrangements such as those illustrated in Example 52.18 above may qualify for hedge accounting. In substance, they are little different from the entity offsetting its internal contracts before entering into an offsetting external transaction, which as explained at 2.3.2 above, would not permit hedge accounting to be applied for each item hedged using an internal contract. However, this is nothing compared to what follows. The implementation guidance considers an extension to the arrangement set out above:

‘Treasury observes that by entering into the external offsetting contracts and including them in the centralised portfolio, it is no longer able to evaluate the exposures on a net basis. Treasury wishes to manage the portfolio of offsetting external derivatives separately from other exposures of the entity. Therefore, it enters into an additional, single derivative to offset the risk of the portfolio.’ [IAS 39.F.2.16].

The guidance explains that the purpose of structuring the external derivatives like this is consistent with the entity’s risk management policies and strategies and, generally, hedge accounting may still be used. Even if this final external derivative is effected with the same counterparty under the same netting arrangement, and notwithstanding the fact that all exposures with that counterparty will, as a result, net to zero, it is implied that this constitutes a substantive business purpose as described at the start of this subsection. [IAS 39.F.2.16].

In essence, the guidance appears to suggest that the use of internal derivatives for hedge accounting is allowed, provided that an agreement is reached with a third party to give the appearance of laying off the exposure even though the risk is immediately taken back again. This seems a long way from what the standard requires and, in fact, begs the question of why an entity should even go to the trouble of creating such an artificial external agreement that appears to lack any commercial substance. We have serious reservations over this part of the guidance, particularly we question whether it really would be possible to demonstrate the existence of a valid business purpose for such an arrangement.

#### 2.3.4 *Internal hedged items*

Only assets, liabilities, firm commitments or highly probable forecast transactions that involve a party external to the entity can be designated as hedged items. It follows that hedge accounting can be applied to transactions between entities in the same group only in the individual or separate financial statements of those entities and not in the consolidated financial statements of the group. However, there are two exceptions – intragroup monetary items and forecast intragroup transactions, discussed at 2.3.4.A and 2.3.4.B below. [IAS 39.80].

### 2.3.4.A *Intragroup monetary items*

IAS 39 allows the foreign currency risk of an intra-group monetary item (e.g. a payable or receivable between two subsidiaries) to qualify as a hedged item in the consolidated financial statements if it results in an exposure to foreign exchange rate gains or losses under IAS 21 that are not fully eliminated on consolidation. Foreign exchange gains and losses on such items are not fully eliminated on consolidation when they are transacted between two group entities that have different functional currencies (see Chapter 15 at 6.3), [IAS 39.80], as illustrated in the following example.

#### *Example 52.19: Intragroup monetary items that will affect consolidated profit or loss*

Company A has two subsidiaries, Company B and Company C. A and B have the euro as their functional currencies, while C has the US dollar as its functional currency. On 31 March, C purchases goods from B for US\$110, payable on 30 June.

In this case, the intragroup monetary item of US\$110 may be designated as a hedged item in a hedge of foreign currency risk both by B in its separate financial statements and by A in its consolidated financial statements.

While B's foreign currency receivable is eliminated against C's foreign currency payable on consolidation, the exchange differences that arise for B cannot be eliminated since C has no corresponding exchange differences.

Thus, the intragroup monetary item results in an exposure to variability in the foreign currency amount of the intra-group monetary item that will affect profit or loss in the consolidated financial statements. Therefore, the intragroup monetary item may be designated as a hedged item in a foreign currency hedge.<sup>8</sup>

### 2.3.4.B *Forecast intragroup transactions*

IAS 39 also contains a second exception allowing the foreign currency risk of a highly probable forecast intragroup transaction to qualify as a hedged item in a cash flow hedge in consolidated financial statements in certain circumstances. The transaction must be denominated in a currency other than the functional currency of the entity entering into that transaction (e.g. parent, subsidiary, associate, joint venture or branch) and the foreign currency risk must affect consolidated profit or loss (otherwise it cannot qualify as a hedged item). [IAS 39.80, AG99A].

Normally, royalty payments, interest payments and management charges between members of the same group will not affect consolidated profit or loss unless there is a related external transaction. However, by way of example, a forecast sale or purchase of inventory between members of the same group will affect profit or loss if there is an onward sale of the inventory to a party external to the group. Similarly, a forecast intragroup sale of plant and equipment from the group entity that manufactured it to a group entity that will use it in its operations may affect consolidated profit or loss. This could occur, for example, because the plant and equipment will be depreciated by the purchasing entity and the amount initially recognised for the plant and equipment may change if the forecast intragroup transaction is denominated in a currency other than the functional currency of the purchasing entity. [IAS 39.AG99A].

Although the standard refers exclusively to forecast intragroup transactions, we believe there is no reason why these provisions should not also apply to intragroup firm commitments.

### 2.3.5 *Hedged item and hedging instrument held by different group entities*

The implementation guidance explains that, in a group, it is not necessary for the hedging instrument to be held by the same entity as the one that has the exposure being hedged in

order to qualify for hedge accounting in the consolidated financial statements. [IAS 39.F.2.14]. This is illustrated in the following example.

*Example 52.20: Subsidiary's foreign exchange exposure hedged by parent*

Company S is based in Switzerland and prepares consolidated financial statements in Swiss francs. It has an Australian subsidiary, Company A, whose functional currency is the Australian dollar and is included in the consolidated financial statements of S. A has forecast purchases in Japanese yen that are highly probable and S enters into a forward contract to hedge the change in yen relative to the Australian dollar.

Because A did not hedge the foreign currency exchange risk associated with the forecast purchases in yen, the effects of exchange rate changes between the Australian dollar and the yen will affect A's profit or loss and, therefore, would also affect consolidated profit or loss. Therefore that hedge may qualify for hedge accounting in S's consolidated financial statements provided the other hedge accounting criteria in IAS 39 are met. [IAS 39.F.2.14].

### 3 TYPES OF HEDGING RELATIONSHIPS

There are three types of hedging relationship defined in IAS 39: [IAS 39.86]

- *fair value hedge*: a hedge of the exposure to changes in the 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;
- *cash flow hedge*: 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; and
- *hedge of a net investment in a foreign operation*: as defined in IAS 21 (see Chapter 15 at 2.3).

These definitions are considered further in the remainder of this section.

#### 3.1 Fair value hedges

An example of a fair value hedge is a hedge of the exposure to changes in the fair value of a fixed rate debt instrument (not measured at fair value through profit or loss) as a result of changes in interest rates – if interest rates increase, the fair value of the debt decreases and *vice versa*. Such a hedge could be entered into either by the issuer or by the holder, [IAS 39.AG102], (provided, in the case of the holder, it was not classified as held-to-maturity – see 2.2.6 above).

On the face of it, if a fixed rate loan that is classified within loans and receivables is held until it matures (as is the case for many such loans), changes in the fair value of the loan would not affect profit or loss. However, the implementation guidance explains that such assets may be hedged items in a fair value hedge because the loan could be sold, in which case fair value changes would affect profit or loss. [IAS 39.F.2.13]. The same would be true of a fixed rate borrowing for which settlement before maturity is very unlikely.

A variable rate debt may be the hedged item in a fair value hedge in certain circumstances. For example, the fair value of such an instrument will change if the

issuer's credit risk changes. Accordingly variable rate debt could be designated in a hedge of all changes in its fair value. There may also be changes in its fair value relating to movements in the market rate in the periods between which the variable rate is reset. For example, if a debt instrument provides for annual interest payments reset to the market rate each year, a portion of the debt instrument has an exposure to changes in fair value during the year. *[IAS 39.F.3.5].*

The exposure to changes in the price of inventories that are carried at the lower of cost and net realisable value may also be the subject of a fair value hedge because their fair value will affect profit or loss when they are sold or written down. For example, a copper forward may be used as the hedging instrument in a hedge of the copper price associated with copper inventory. *[IAS 39.F.3.6].*

An equity method investment cannot be a hedged item in a fair value hedge because the equity method recognises in profit or loss the investor's share of the associate's profit or loss, rather than changes in the investment's fair value. For a similar reason, an investment in a consolidated subsidiary cannot be a hedged item in a fair value hedge in the consolidated financial statements of a parent because consolidation recognises in profit or loss the subsidiary's profit or loss, rather than changes in the investment's fair value. *[IAS 39.AG99].* However, it would in our view be possible to hedge the foreign exchange risk in the carrying value of a foreign currency denominated investment in the parent entity's separate financial statements. Further, we believe it would be possible to hedge the change in the entire fair value of the investment even if the fair value is not reflected in the financial statements. This hedge relationship would most likely be treated as a fair value hedge and would require an adjustment to be made to the carrying value of the investment.

The ongoing accounting for fair value hedges is described at 4.1 below.

### *3.1.1 Hedges of firm commitments*

A hedge of a firm commitment (e.g. a hedge of the change in fuel price relating to an unrecognised contractual commitment by an electricity utility to purchase fuel at a fixed price) is considered a hedge of an exposure to a change in fair value. Accordingly, such a hedge is a fair value hedge. However, a hedge of the foreign currency risk of a firm commitment may be accounted for as a fair value hedge or a cash flow hedge (this is discussed further at 3.2.2 below). *[IAS 39.87, AG104].*

### *3.1.2 Hedges of foreign currency monetary items*

A foreign currency monetary asset or liability that is hedged using a forward exchange contract may be treated as a fair value hedge because its fair value will change as foreign exchange rates change. Alternatively, it may be treated as a cash flow hedge because changes in exchange rates will affect the amount of cash required to settle the item (as measured by reference to the entity's functional currency) (see 4.2.2 below). *[IAS 39.F.3.3-F.3.4].*

## **3.2 Cash flow hedges**

An example of a cash flow hedge is the use of an interest rate 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. *[IAS 39.AG103].*

As noted at 3.1 above, a hedge of the exposure to changes in the fair value of a fixed rate debt instrument as a result of changes in interest rates could be treated as a fair value hedge. This could not be a cash flow hedge because changes in interest rates will not affect the cash flows on the hedged item, only its fair value. [IAS 39.F.3.1].

It was also noted at 3.1 above that a copper forward, say, may be used in a fair value hedge of copper inventory. Alternatively, the same hedging instrument may qualify as a cash flow hedge of the future sale of the inventory. [IAS 39.F.3.6].

The following example from the implementation guidance explains how a company might lock in current interest rates by way of a cash flow hedge of the anticipated issuance of fixed rate debt.

*Example 52.21: Hedge of anticipated issuance of fixed rate debt*

Company R periodically issues new bonds to refinance maturing bonds, provide working capital, and for various other purposes. When R decides it will be issuing bonds, it sometimes hedges the risk of changes in long-term interest rates to the date the bonds are issued. If long-term interest rates go up (down), the bond will be issued either at a higher (lower) rate, with a higher (smaller) discount or with a smaller (higher) premium than was originally expected. The higher (lower) rate being paid or decrease (increase) in proceeds is normally offset by the gain (loss) on the hedge.

In August 2018 R decides it will issue £2m seven-year bonds in January 2019. Historical correlation studies suggest that a seven-year treasury bond adequately correlates to the bonds R expects to issue, assuming a hedge ratio of 0.93 future contracts to one debt unit. Therefore, it hedges the anticipated issuance of the bonds by selling ('shorting') £1.86m worth of futures on seven-year treasury bonds.

From August 2018 to January 2019 interest rates increase and the short futures positions are closed on the date the bonds are issued. This results in a £120,000 gain, which offsets the increased interest payments on the bonds and, therefore, will affect profit or loss over the life of the bonds. The hedge may qualify as a cash flow hedge of the interest rate risk on the forecast debt issuance (assuming all other conditions for hedge accounting are met). [IAS 39.F.2.2].

Similarly, the forecast reinvestment of interest cash flows from a fixed rate asset can be the subject of a cash flow hedge using, say, a forward rate agreement to lock in the interest rate that will be received on that reinvestment. [IAS 39.F.3.2].

The ongoing accounting for cash flow hedges is described at 4.2 below.

*3.2.1 All-in-one hedges*

There are situations where an instrument that is accounted for as a derivative under IAS 39 is expected to be settled gross by delivery of the underlying asset in exchange for the payment of a fixed price. The implementation guidance states that such an instrument can be designated as the hedging instrument in a cash flow hedge of the variability of the consideration to be paid or received in the future transaction that will occur on gross settlement of the derivative contract itself. It is explained that this is acceptable because there would be an exposure to variability in the purchase or sale price without the derivative. It is important to note that, in order to qualify for a hedge of a highly probable forecast transaction, the hedging entity must have the intention (and the ability) to gross settle the derivative. For example, consider an entity that enters into a fixed price contract to sell a commodity and that contract is accounted for as a derivative under IAS 39 (see Chapter 43 at 4). This might be because the entity has a practice of settling such contracts net in cash or of taking delivery of the underlying and selling it within a short period after delivery for the purpose of generating a profit from

short-term fluctuations in price or dealer's margin. In this case, the fixed price contract may be designated as a cash flow hedge of the variability of the consideration to be received on the sale of the asset (a future transaction) even though the fixed price contract is the contract under which the asset will be sold. *[IAS 39.F.2.5]*.

Similarly, an entity may enter into a forward contract to purchase a debt instrument (which will not be classified at fair value through profit or loss) that will be settled by delivery, but the forward contract is a derivative. This will be the case if its term exceeds the regular way delivery period in the marketplace (see Chapter 48 at 2.2). In this case the forward may be designated as a cash flow hedge of the variability of the consideration to be paid to acquire the debt instrument (a future transaction), even though the derivative is the contract under which the debt instrument will be acquired. *[IAS 39.F.2.5]*. If the debt instrument was to be classified at fair value through profit or loss, the all-in-one hedge strategy could not be applied (see 2.2.7 above).

It might come as a surprise to many entities that such contracts are, in fact, derivatives as defined. *[IAS 39.9]*. Therefore, the use of an 'all-in-one hedge' strategy for such instruments could prove useful in keeping fair value gains and losses, on what might be considered little more than purchase or sale orders, from being recognised immediately in profit or loss.

However, it seems best to accept the all-in-one hedge for what it is, i.e. a pragmatic concession, rather than trying to determine how it is derived from the principles of the standard. For example, the hedged item in each of the above two paragraphs, i.e. the spot price payment on the future purchase or sale of the asset, appears to be a cash flow that will never happen because the asset will be purchased or sold for the fixed price specified in the contract. Further, the hedged item (i.e. the contracted sale or purchase) also appears to be accounted for as a derivative, which is generally prohibited (see 2.2.7 above).

### *3.2.2 Hedges of firm commitments*

A hedge of the foreign currency risk of a firm commitment may be accounted for as a cash flow hedge or a fair value hedge (see 3.1.1 above). *[IAS 39.87, AG104]*. This is because foreign currency risk affects both the cash flows and the fair value of the hedged item. Accordingly, a foreign currency cash flow hedge of a forecast transaction need not be redesignated as a fair value hedge when the forecast transaction becomes a firm commitment. *[IAS 39.BC154]*.

### *3.2.3 Hedges of foreign currency monetary items*

A foreign currency monetary asset or liability that is hedged using a forward exchange contract may be treated as a fair value hedge because its fair value will change as foreign exchange rates change. Alternatively, it may be treated as a cash flow hedge because changes in exchange rates will affect the amount of cash required to settle the item (as measured by reference to the entity's functional currency) (see 4.2.2 below). *[IAS 39.F.3.3-F.3.4]*.

## **3.3 Hedges of net investments in foreign operations**

Many reporting entities have investments in foreign operations which may be subsidiaries, associates, joint ventures or branches. As set out in Chapter 15 at 4, IAS 21 requires an entity to determine the functional currency of each of its foreign operations



as the currency of the primary economic environment of that operation. When translating the results and financial position of its foreign operation into a presentation currency, it should recognise foreign exchange differences in other comprehensive income until disposal of the foreign operation. [IFRIC 16.1].

From the perspective of an investor (e.g. a parent) it is clear that an investment in a foreign operation is likely to give rise to a degree of foreign currency exchange rate risk and an entity with many foreign operations may be exposed to a number of foreign currency risks. [IFRIC 16.4]. Whilst equity method investments and investments in consolidated subsidiaries cannot be hedged items in a fair value hedge because changes in the investments' fair value are not recognised in profit or loss, they may be designated in a net investment hedge relationship. A hedge of a net investment in a foreign operation is said to be different because it is a hedge of the foreign currency exposure, not a fair value hedge of the change in the value of the investment. [IAS 39.AG99].

Conceptually, net investment hedging is somewhat unsatisfactory, as it mixes foreign currency translation risk (largely an accounting exposure) with transactional risk (much more an economic exposure). IFRIC 16 – *Hedges of a Net Investment in a Foreign Operation* – addresses the question of what does and does not constitute a valid hedging relationship, a topic on which IAS 39 provided very little guidance.

IFRIC 16 applies to any entity that hedges the foreign currency risk arising from its net investments in foreign operations and wishes to qualify for hedge accounting in accordance with IAS 39. [IFRIC 16.7]. It only applies to those hedges and should not be applied by analogy to other types of hedge accounting. [IFRIC 16.8]. For the avoidance of doubt, IFRIC 16 explains that such a hedge can be applied only when the net assets of that foreign operation are included in the financial statements. This will be the case for consolidated financial statements, financial statements in which investments such as associates or joint ventures are accounted for using the equity method or those that include a branch or a joint operation (as defined in IFRS 11 – *Joint Arrangements*). [IFRIC 16.2]. For convenience, IFRIC 16 refers to such an entity as a parent entity and to the financial statements in which the net assets of foreign operations are included as consolidated financial statements and this section follows this convention.

Investments in foreign operations may be held directly by a parent entity or indirectly by its subsidiary or subsidiaries.

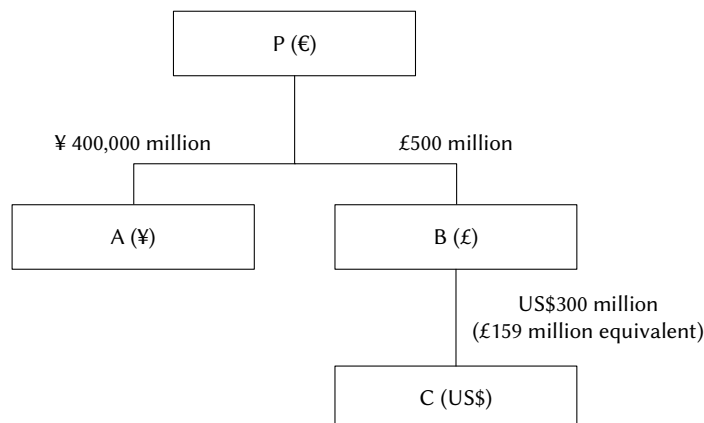
The requirements of IFRIC 16 are discussed in more detail at 3.3.1 to 3.3.4 below and, in the case of assessing and measuring the effectiveness of such a hedge, at 5.3.13 below.

### 3.3.1 Nature of the hedged risk

Perhaps the most important decision made by the Interpretations Committee was that hedge accounting may be applied only to the foreign exchange differences arising between the functional currency of the foreign operation and the parent entity's functional currency. [IFRIC 16.10]. Furthermore, the hedged risk may be designated as the foreign currency exposure arising between the functional currency of the foreign operation and the functional currency of any parent entity (the immediate, intermediate or ultimate parent entity) of that foreign operation. The fact that the net investment may be held through an intermediate parent does not affect the nature of the economic risk arising from the foreign currency exposure to the ultimate parent entity. [IFRIC 16.12]. This principle is illustrated in the following example.

*Example 52.22: Nature of the hedged risk in a net investment hedge*

Company P is the ultimate parent entity of a group and presents its consolidated financial statements in its functional currency of euro. It has two direct wholly owned subsidiaries, Company A whose functional currency is Japanese yen and Company B whose functional currency is sterling. B has a wholly owned subsidiary, Company C, whose functional currency is US dollars. P's net investment in A is ¥400,000 million which includes A's external borrowings of US\$300 million. P's net investment in B is £500 million including the equivalent of £159 million representing B's net investment in C of US\$300 million. This corporate structure is illustrated as follows:



P, in its consolidated financial statements, could hedge its net investment in each of A, B and C for the foreign exchange risk between their functional currencies (Japanese yen, sterling and US dollars respectively) and euro. P could also hedge the foreign exchange risk between the functional currencies of B (sterling) and C (US dollars).

In its consolidated financial statements, B could hedge its net investment in C for the foreign exchange risk between C's functional currency (US dollars) and its own (pounds sterling). [IFRIC 16.AG1-AG3].

Where a non-derivative instrument is used as the hedging instrument, the designated risk should be the spot foreign exchange risk; if the hedging instruments were forward contracts, the forward or the spot foreign exchange risk could be designated as the hedged risk (see 5.3.13 below). [IFRIC 16.AG2].

### 3.3.2 Amount of the hedged item for which a hedging relationship may be designated

The hedged item can be an amount of net assets equal to or less than the carrying amount of the net assets of the foreign operation in the consolidated financial statements of the parent entity. [IFRIC 16.11].

*Example 52.23: Amount of hedged item in a net investment hedge*

The facts are as in Example 52.22 above. If P wished to hedge the foreign exchange risk from its net investment in C, the hedged item could be an amount of net assets equal to or less than the US\$300 million carrying amount of C in P's consolidated financial statements. [IFRIC 16.AG4].

The carrying amount of the net investment takes account of monetary items receivable from or payable to a foreign operation for which settlement is neither planned nor likely to occur in the future. Under IAS 21 these balances are considered to be, in substance, part of the reporting entity's net investment in the foreign operation. In the case of a loan made to the foreign operation this will increase the amount that can be hedged; if a loan is made by the foreign operation, the amount that can be hedged will be reduced. [IFRIC 16.AG14].

In many cases the full economic value of a net investment will not be recognised in the financial statements. The most common reason will be the existence of, say, goodwill or intangible assets that are either not recognised or measured at an amount below their current value. In these situations, if an investor hedges the entire economic value of its net investment it will not be able to obtain hedge accounting for the proportion of the hedging instrument that exceeds the recognised net assets.

A single hedging instrument can hedge the same designated risk only once. Consequently, in Examples 52.22 and 52.23 above, P could not in its consolidated financial statements designate A's external borrowing in a hedge of both the €/US\$ spot foreign exchange risk and the £/US\$ spot foreign exchange risk in respect of its net investment in C. [IFRIC 16.AG6].

The carrying amount of the net assets of a foreign operation that may be designated as the hedged item in the consolidated financial statements of a parent depends on whether any lower level parent of the foreign operation has applied hedge accounting for all or part of the net assets of that foreign operation and whether that accounting has been maintained in the parent's consolidated financial statements. [IFRIC 16.11]. An exposure to foreign currency risk arising from a net investment in a foreign operation may qualify for hedge accounting only once in the consolidated financial statements. Therefore, if the same net assets of a foreign operation are hedged by more than one parent entity within the group (for example, both a direct and an indirect parent entity) for the same risk, only one hedging relationship will qualify for hedge accounting in the consolidated financial statements of the ultimate parent. [IFRIC 16.13]. This is illustrated in the following example.

*Example 52.24: Amount of hedged item in a net investment hedge (different hedged risks)*

The facts are the same as in Examples 52.22 and 52.23 above except that P's net assets include £500 million and US\$300 million of external borrowings. If P wished to hedge the foreign exchange risk in relation to its net investments in B and C, the designations it could make in its consolidated financial statements include the following: [IFRIC 16.AG10]

- US\$300 million of the US dollar borrowings designated as a hedge of the net investment in C with the risk being the spot foreign exchange exposure (€/US\$) between P and C and up to £341 million of the sterling borrowings designated as a hedge of the net investment in B with the risk being the spot foreign exchange exposure (€/£) between P and B; or
- US\$300 million of the US dollar borrowings as a hedge of the net investment in C with the risk being the spot foreign exchange exposure (£/US\$) between B and C and up to £500 million of the sterling borrowings designated as a hedge of the net investment in B with the risk being the spot foreign exchange exposure (£/£) between P and B.

The €/US\$ risk from P's net investment in C is a different risk from the €/£ risk from P's net investment in B. However, in the first case described above, P would have already fully hedged the €/US\$ risk from its net investment in C and if P also designated its £500 million of borrowings as a hedge of its net investment in B, £159 million of that net investment, representing the sterling equivalent of its US dollar net investment in C, would be hedged twice for £/€ risk in P's consolidated financial statements. [IFRIC 16.AG11]. In the second case described above, because the designation of the US\$/£ risk between B and C does not include the £/€ risk, P is also able to designate up to £500 million of its net investment in B with the risk being the spot foreign exchange exposure (£/€) between P and B. [IFRIC 16.AG12].

A hedging relationship designated by one parent entity in its consolidated financial statements need not be maintained by another higher level parent entity. However, if it

is not maintained by the higher level parent entity, the hedge accounting applied by the lower level parent must be reversed before the higher level parent's hedge accounting is recognised. [IFRIC 16.13]. This is illustrated in the following example.

*Example 52.25: Hedge accounting applied by intermediate parent*

The facts are the same as in Examples 52.22 and 52.23 above, except that P's net assets include £500 million of external borrowings and B's net assets of £341 million include US\$300 million of external borrowings which it designates as a hedge of the £/US\$ risk of its net investment in C in its own consolidated financial statements.

P could maintain B's designation of that hedging instrument as a hedge of its net investment in C for the £/US\$ risk and P could designate its £500 million external borrowings as a hedge of its entire net investment in B. The first hedge, designated by B, would be assessed by reference to B's functional currency (sterling) and the second hedge, designated by P, would be assessed by reference to P's functional currency (euro). In this case, only the £/US\$ risk from P's net investment in C has been hedged in its consolidated financial statements by B's US dollar borrowings, not the entire €/\$ risk. Therefore, the entire €/£ risk from P's net investment in B may be hedged in P's consolidated financial statements. [IFRIC 16.AG13].

Alternatively, P could reverse the hedging relationship designated by B. In this case, it could designate B's US\$300 million external borrowing as a hedge of its net investment in C for the €/US\$ risk and designate £341 million of its borrowings as a hedge of part of the net investment in B. In this case the effectiveness of both hedges would be computed by reference to P's functional currency (euro). Consequently, both the US\$/£ and £/€ changes in value of B's US\$300 million borrowing would be included in P's foreign currency translation reserve. Because P has already fully hedged the €/US\$ risk from its net investment in C, it could hedge only up to £341 million for the €/GBP risk of its net investment in B. [IFRIC 16.AG15].

### 3.3.3 Where the hedging instrument can be held

The hedging instrument(s) may be held by any entity or entities within the group, including the foreign operation being hedged, provided the designation, documentation and effectiveness requirements of IAS 39 are satisfied. The hedging strategy of the group should be clearly documented because of the possibility of different designations at different levels of the group (see 3.3.2 above). [IFRIC 16.14, BC24A, BC24B].

Where the entity holding the hedging instrument has a functional currency that is not the same as the parent by which the hedged risk is defined, this could result in the recognition of ineffectiveness in profit or loss – this is discussed further at 5.3.12 below.

Clearly the reporting entity (which, in the case of consolidated financial statements, includes any subsidiary consolidated by the parent) must be a party to the hedging instrument. In Examples 52.22 and 52.23 above, therefore, B could not apply hedge accounting in its consolidated financial statements in respect of a hedge involving the US\$300 million borrowing issued by A because the hedging instrument is held outside of the group headed by B. [IFRIC 16.AG6].

### 3.3.4 Disposal of a hedged foreign operation

When a foreign operation that was hedged is disposed of, the amount reclassified from the foreign currency translation reserve to profit or loss in respect of the hedging instrument is the amount that IAS 39 requires to be identified, being the cumulative gain or loss on the hedging instrument that was determined to be an effective hedge (see 5.3.12 below). [IFRIC 16.16]. If the step-by-step method of consolidation is used, this amount could be different to the equivalent amount of gains or losses accumulated within equity arising on the retranslation of that entity (see Chapter 15 at 6.1.5 and at 6.6). [IFRIC 16.17].

*Example 52.26: Disposal of foreign operation*

Based on the same facts as in Examples 52.22 and 52.23 above, the group has designated US\$300 million of the US dollar borrowings of A as a hedge of the net investment in C with the risk being the spot foreign exchange exposure (€/US\$) between P and C. If C were disposed of, the amounts reclassified to profit or loss in P's consolidated financial statements from its foreign currency translation reserve would be: [IFRIC 16.17, AG8]

- in respect of A's borrowing, the amount that IAS 39 requires to be identified, i.e. the total change in value in respect of foreign exchange risk that was recognised in other comprehensive income as the effective portion of the hedge; and
- in respect of the net investment in C, the amount determined by the entity's consolidation method. If P uses the direct method, its foreign currency translation reserve ('FCTR') in respect of C will be determined directly by the EUR/USD foreign exchange rate. If P uses the step-by-step method, its FCTR in respect of C will be determined by the FCTR recognised by B reflecting the GBP/USD foreign exchange rate, translated to P's functional currency using the EUR/GBP foreign exchange rate. P's use of the step-by-step method for consolidation in prior periods does not require it to or preclude it from determining the amount of FCTR to be reclassified when it disposes of C to be the amount that it would have recognised if it had always used the direct method, however, it is an accounting policy choice which should be followed consistently for all net investments.

## 4 ACCOUNTING FOR EFFECTIVE HEDGES

If there is a designated hedging relationship between a hedging instrument and a hedged item as described at 3 above and it meets the conditions set out at 5 below, the accounting for the gain or loss on the hedging instrument and the hedged item will be as set out in the remainder of this section. [IAS 39.71]. This is referred to as 'hedge accounting' and is said to recognise the offsetting effects on profit or loss of changes in the fair values of the hedging instrument and the hedged item. [IAS 39.85].

### 4.1 Fair value hedges

#### 4.1.1 Ongoing fair value hedge accounting

If a fair value hedge (see 3.1 above) meets the qualifying conditions set out at 5 below during the period, it should be accounted for as follows:

- 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) is recognised in profit or loss; and
- the carrying amount of the hedged item is adjusted for the change in its value attributable to the hedged risk and the gain or loss is recognised in profit or loss. This applies if the hedged item is an available-for-sale financial asset (and that gain or loss would otherwise be recognised in other comprehensive income) or if it is otherwise measured at cost. [IAS 39.89].

It will be rare for the change in fair value of the hedging instrument (or, for non-derivative hedging instruments, foreign exchange gains or losses) to be exactly the same as the change in fair value of the hedged item attributable to the hedged risk, even for highly effective hedges. To the extent these amounts differ, a net amount will be recognised in profit or loss. The recognition of this difference is commonly

referred to as the measurement of hedge ineffectiveness. Although not clearly evident from the standard, we believe the gain or loss from remeasuring the hedging instrument and the gain or loss from adjusting the hedged item should be recognised in the same line item in profit or loss to reflect the offsetting effect of hedge accounting (see Chapter 54 at 7.1.3).

The following simple example illustrates how the treatment above might apply to a hedge of fair value interest rate risk on an investment in fixed rate debt.

*Example 52.27: Fair value hedge*

At the beginning of Year 1 an investor purchases a fixed rate debt security for £100 and classifies it as available-for-sale. At the end of Year 1, the fair value of the asset is £110. To protect this value, the investor enters into a hedge by acquiring a derivative with a nil fair value. By the end of Year 2, the derivative has a fair value of £5 and the debt security has a corresponding decline in fair value (its fair value does not change as a result of any factors other than interest rates).

The investor would record the following accounting entries:

**Year 1**

Beginning of year	£	£
Debt security	100	
Cash		100

To reflect the acquisition of the security.

End of year	£	£
Debt security	10	
Other comprehensive income		10

To record the increase in the security's fair value in other comprehensive income.

**Year 2**

Beginning of year	£	£
Derivative	–	
Cash		–

To record the acquisition of the derivative at its fair value of nil.

End of year	£	£
Derivative	5	
Profit or loss		5

To recognise the increase in the derivative's fair value in profit or loss.

	£	£
Profit or loss	5	
Debt security		5

To recognise the decrease in the security's fair value in profit or loss.

The example is taken from the original version of the standard and was not carried forward into the December 2003 version of the standard, although it is not entirely clear why not. Even if it was considered too simplistic to be a useful practical example (it does not deal, for example, with net cash settlements on the derivative, coupon payments on the debt or the subsequent impact on the recognition of

interest under the effective interest method), it does illustrate the basic mechanics of fair value hedge accounting quite well.

The standard explains that if only particular risks attributable to a hedged financial instrument are hedged, the recognised changes in the fair value of the hedged item that are unrelated to the hedged risk should be recognised as set out in Chapter 49 at 2. [IAS 39.90]. Therefore, for instruments measured at amortised cost, these other gains and losses would generally not be recognised; for available-for-sale assets those gains and losses would generally be recognised in other comprehensive income. Exceptions to this would include foreign currency retranslation gains or losses on monetary items and impairment losses, which would be recognised in profit or loss in any event. The following example illustrates this.

*Example 52.28: Hedging foreign currency risk of publicly traded shares*

Company C, whose functional currency is sterling, acquires 100,000 shares in a listed US corporation for US\$1m, which it classifies as available-for-sale. It is assumed the shares gives rise to a clear and identifiable exposure to changes in the US dollar/sterling exchange rate and to protect itself from changes in this exchange rate, C enters into a forward contract to sell US\$0.75m which it intends to roll over for as long as the shares are held.

A portion of an exposure may be designated as a hedged item, and so the forward contract may be designated as a hedge of part of the shareholding. It could be a fair value hedge of the foreign exchange exposure of US\$0.75m associated with the shares (alternatively it could be a cash flow hedge of a forecast sale of the shares but only if the timing of the sale is identified with sufficient certainty). Any variability in the fair value of the shares in US dollars would not affect the assessment of hedge effectiveness unless their fair value fell below US\$0.75m. [IAS 39.F.2.19].

Gains and losses on the forward contract would be recognised in profit or loss. Gains and losses arising from remeasuring the dollar value of the hedged portion of the shares to sterling would also be recognised in profit or loss and the remainder would be recognised in other comprehensive income (as would all of the foreign currency amount were it not for the hedge relationship).

The basic hedge accounting treatment above applies equally to fair value hedges of unrecognised firm commitments. Therefore, where an unrecognised firm commitment is designated as a hedged item in a fair value hedge, the subsequent cumulative change in its fair value attributable to the hedged risk should be recognised as an asset or liability with a corresponding gain or loss recognised in profit or loss. Thereafter, the firm commitment would be a recognised asset or liability (albeit that its carrying amount will not represent either its cost or, necessarily, its fair value). The changes in the fair value of the hedging instrument would also be recognised in profit or loss. [IAS 39.93].

It can be seen that applying fair value hedge accounting adjustments does not change the accounting for the hedging instrument. This is true whether the hedging instrument is a derivative or non-derivative instrument (in a hedge of foreign currency risk). For example, if a foreign currency cash instrument was designated as the hedging instrument in a fair value hedge (see 2.1.2 above), the foreign currency component of its carrying amount would continue to be measured in accordance with IAS 21. [IAS 39.89(a)].

### 4.1.2 Dealing with adjustments to the hedged item

In general, adjustments to the hedged asset or liability arising from the application of hedge accounting as described at 4.1.1 above are dealt with in accordance with the normal accounting treatment for that item. For example, copper inventory might be the hedged item in a fair value hedge of the exposure to changes in the copper price. In this case, the adjusted carrying amount of the copper inventory becomes the cost basis for the purpose of applying the lower of cost and net realisable value test under IAS 2 – *Inventories* (see Chapter 22 at 3). [IAS 39.F.3.6].

Where the hedged item is a financial instrument for which the effective interest method of accounting is used, the adjustment should be amortised to profit or loss. Amortisation may begin as soon as the adjustment exists and should begin no later than when the hedged item ceases to be adjusted for changes in its fair value attributable to the hedged risk. The adjustment should be based on a recalculated effective interest rate at the date amortisation begins and should be fully amortised by maturity. [IAS 39.92]. See Chapter 50 at 5.6.5 for details on how the recalculated effective interest rate interacts with the IFRS 9 expected credit loss calculation.

When an entity enters into a firm commitment to acquire an asset or assume a liability that is a hedged item in a fair value hedge, the initial carrying amount of the asset or liability that results from the entity meeting the firm commitment is adjusted to include the cumulative change in the fair value of the firm commitment attributable to the hedged risk that was recognised in the statement of financial position. [IAS 39.94].

#### *Example 52.29: Hedge of a firm commitment to acquire equipment*

Company X has the euro as its functional currency. It has chosen to treat all hedges of foreign currency risk associated with firm commitments as fair value hedges. In January 2018 it contracts with a US supplier (with the US dollar as its functional currency) to purchase an item of machinery it intends to use in its business. The machine will be delivered at the start of July 2018 and the contracted price, payable on delivery, is US\$1,000.

X has no appetite to take on foreign currency exchange risk in relation to euro/US dollar exchange rates and so contracts with a bank to purchase US\$1,000 at the start of July in exchange for €900 (six month forward exchange rate is US\$1:€0.90). In other words, X has effectively fixed the price it will pay for the machine (in euro terms) at €900.

If the fair value of the forward contract at the end of March 2018 (X's year end) is €30 positive to X, on delivery is €50 positive to X (spot exchange rate is US\$1:€0.95) and assuming the hedge is perfectly effective (this might be the case if the hedged risk is identified as the forward exchange rate rather than the spot rate – see 5.3.3 below) and meets all the requirements for hedge accounting, the journal entries to record this hedging relationship would be as follows:

#### **January 2018**

No entries are required as the firm commitment is unrecognised, the forward contract is recognised but has a zero fair value and no cash is paid or received.

#### **March 2018**

	€	€
Forward contract	30	
Profit or loss		30



To recognise the change in fair value of the forward contract in profit or loss.

	€	€
Profit or loss	30	
Firm commitment		30

To recognise the change in fair value of the (previously) unrecognised firm commitment in respect of changes in forward exchange rates in profit or loss.

**July 2018**

	€	€
Forward contract	20	
Profit or loss		20

To recognise the change in fair value of the forward contract in profit or loss.

	€	€
Profit or loss	20	
Firm commitment		20

To recognise the change in fair value of the (now recognised) firm commitment in respect of changes in forward exchange rates in profit or loss.

	€	€
Cash	50	
Forward contract		50

To record the settlement of the forward contract at its fair value.

	€	€
Machine	950	
Cash		950

To record the settlement of the firm commitment at the contracted price of US\$1,000 at the spot rate of US\$1:€0.95.

	€	€
Firm commitment	50	
Machine		50

To remove the carrying amount of the firm commitment from the statement of financial position and adjust the initial carrying amount of the machine that results from the firm commitment.

In summary, the result of these accounting entries is as follows:

	€	€
Machine	900	
Cash		900

which is somewhat reassuring given the starting presumption, i.e. that X had effectively fixed the purchase price of its machine at €900.

### 4.1.3 Discontinuing fair value hedge accounting

The ongoing fair value hedge accounting set out at 4.1.1 above should be discontinued prospectively if any one of the following occurs:

- the hedging instrument expires or is sold, terminated, or exercised.  
For this purpose, the replacement or a rollover of a hedging instrument into another is not an expiration or termination if that is part of the documented hedging strategy. Further, an expiration or termination of the hedging instrument is not considered to have occurred for this purpose if:
  - as a consequence of laws or regulations or the introduction of laws or regulations, the parties to the hedging instrument agree that one or more clearing counterparties replace their original counterparty to become the new counterparty to each of the parties. For this purpose, a clearing counterparty is a central counterparty (sometimes called a 'clearing organisation' or 'clearing agency') or an entity or entities, for example, a clearing member of a clearing organisation or a client of a clearing member of a clearing organisation, that are acting as counterparty in order to effect clearing by a central counterparty. However, when the parties to the hedging instrument replace their original counterparties with different counterparties this paragraph shall apply only if each of those parties effects clearing with the same central counterparty; and
  - other changes, if any, to the hedging instrument are limited to those that are necessary to effect such a replacement of the counterparty. Such changes are limited to those that are consistent with the terms that would be expected if the hedging instrument were originally cleared with the clearing counterparty. These changes include changes in the collateral requirements, rights to offset receivables and payables balances, and charges levied;
- the hedge no longer meets the hedge effectiveness criteria for hedge accounting; or
- the designation is revoked. [IAS 39.91].

If the reason the hedge no longer meets the criteria for qualification for hedge accounting is that it does not meet the hedge effectiveness criteria, hedge accounting should be discontinued from the last date on which compliance with hedge effectiveness was demonstrated. However, if the event or change in circumstances that caused the hedging relationship to fail the effectiveness criteria can be identified, and it can be demonstrated that the hedge was effective before the event or change in circumstances occurred, the hedge accounting should be discontinued from the date of the event or change in circumstances. [IAS 39.AG113].

*Example 52.30: Hedge of foreign exchange risk from currency pegged to the US dollar*

Company Z has the euro as its functional currency and prepares annual financial statements for the year ended 31 December. It also prepares interim financial statements for the six months ended 30 June and, in general, assesses the effectiveness of hedges at these dates.

In January 2018, Z acquires an equity instrument issued by a company whose functional currency is the FC. It is assumed the investment has a clear and identifiable exposure to changes in the FC/euro exchange rate and is classified as available-for-sale. For many years the value of the FC has been pegged to the US dollar and historical studies show that during this time the FC/US dollar exchange rate has never moved outside of

a corridor representing 2.5% of the mean rate. Furthermore, there is no evidence to suggest that the peg will not continue for the foreseeable future.

Accordingly, in January 2018, Z is able to designate a US dollar denominated borrowing as a highly effective hedge of the foreign currency risk associated with part of the equity instrument.

At the end of June 2018, Z performs an effectiveness assessment and determines that the hedge has been highly effective and, therefore, changes in the value of the equity instrument attributable to changes in the FC/euro exchange rate are recognised in profit or loss rather than other comprehensive income, together with the exchange differences on the US dollar borrowing.

At the beginning of October 2018, there is an unexpected financial crisis, the peg ceases and the FC is devalued by 25% relative to the US dollar.

When Z assesses the effectiveness of the hedge in December 2018 it concludes that, because of the cessation of the peg and consequent devaluation, the hedge can no longer be regarded as highly effective and that hedge accounting should cease.

However, Z is able to determine that the failure of the hedge arose because of the cessation of the FC/US dollar peg and subsequent devaluation at the beginning of October 2018. Therefore, it is able to apply hedge accounting for the first three months of its second interim period. Thus, changes in the value of the equity instrument attributable to changes in the FC/euro exchange rate for that period will be recognised in profit or loss, but thereafter will be recognised in other comprehensive income when accounting for the available-for-sale asset at fair value.

In other cases, hedge accounting should be discontinued from the date the hedging instrument expires or is sold, terminated or exercised, or the hedge designation is revoked. For example, if the forward contract in Example 52.29 above were settled (or the hedge designation was revoked) at the end of March 2018, no further adjustments to the carrying value of the firm commitment (€30) would be made after that date.

## 4.2 Cash flow hedges

### 4.2.1 Ongoing cash flow hedge accounting

If a cash flow hedge (see 3.2 above) meets the qualifying conditions set out in 5 below, it should be accounted for as follows:

- the portion of the gain or loss on the hedging instrument that is determined to be an effective hedge should be recognised in other comprehensive income; and
- the ineffective portion should be recognised immediately in profit or loss. [IAS 39.95, F.4.5].

More specifically, the accounting should be as follows:

- the separate component of equity associated with the hedged item is adjusted to the lesser of the following (in absolute amounts):
  - (i) the cumulative gain or loss on the hedging instrument from inception of the hedge; and
  - (ii) the cumulative change in fair value (present value) of the expected future cash flows on the hedged item from inception of the hedge;
- any remaining gain or loss on the hedging instrument or designated component of it (that is not an effective hedge) is recognised in profit or loss; and
- if the documented risk management strategy for a particular hedging relationship excludes from the assessment of hedge effectiveness a specific component of the gain or loss or related cash flows on the hedging instrument, that excluded

component of gain or loss is recognised as set out in Chapter 49 at 2 (effectively in profit or loss for a derivative hedging instrument).

Those excluded components can include the time value of an option, the interest element of a forward contract or a proportion of an instrument (see 2.1.4 above). [IAS 39.96].

The requirements set out in the first two bullets are often referred to as the 'lower of requirements'. This accounting treatment is illustrated in the following examples.

*Example 52.31: Cash flow hedge of anticipated commodity sale*

On 30 September 2018, Company A hedges the anticipated sale of 24 tonnes of pulp on 1 March 2019 by entering into a short forward contract. The contract requires net settlement in cash, determined as the difference between the future spot price of 24 tonnes of pulp on a specified commodity exchange and £1m. A expects to sell the pulp in a different, local market.

A determines that the forward contract is an effective hedge of the anticipated sale and that the other conditions for hedge accounting are met. It assesses hedge effectiveness by comparing the entire change in the fair value of the forward contract with the change in the fair value of the expected cash inflows. On 31 December 2018, the spot price of pulp has increased both in the local market and on the exchange, although the increase in the local market exceeds the increase on the exchange. As a result, the present value of the expected cash inflow from the sale on the local market is £1.1m and the fair value of the forward is £85,000 negative. The hedge is determined to be still highly effective.

The cumulative change in the fair value of the forward contract is £85,000, while the fair value of the cumulative change in expected future cash flows on the hedged item is £100,000. Ineffectiveness is not recognised in the financial statements because the cumulative change in the fair value of the hedged cash flows exceeds the cumulative change in the value of the hedging instrument. The whole of the fair value change in the forward contract would be recognised in other comprehensive income.

**December 2018**

	£'000	£'000
Other comprehensive income	85	
Forward contract		85

However, if A concluded that the hedge was no longer highly effective, it would discontinue hedge accounting prospectively as from the date the hedge ceased to be highly effective (see 4.2.3 below). [IAS 39.F.5.3].

*Example 52.32: Cash flow hedge of a floating rate liability*

Company A has a floating rate liability of £1m with five years remaining to maturity. It enters into a five year pay-fixed, receive-floating interest rate swap with the same principal terms to hedge the exposure to variable cash flow payments on the floating rate liability attributable to interest rate risk.

At inception, the swap's fair value is £nil. Subsequently, there is an increase of £49,000 which consists of a change of £50,000 resulting from an increase in market interest rates and a change of minus £1,000 resulting from an increase in the credit risk of the swap counterparty. There is no change in the fair value of the floating rate liability, but the fair value (present value) of the future cash flows needed to offset the exposure to variable interest cash flows on the liability increases by £50,000.

Even if A determines that the hedge of interest rate risk is 'highly effective' (simplistically, the offset ratio is  $49,000 \div 50,000$  or 98%, so this is quite likely), it is not fully effective if part of the change in the fair value of the derivative is due to the counterparty's credit risk (see 5.3.4 below). However, because the hedge relationship is still 'highly effective', A credits the effective portion of the swap's fair value change, £49,000, to other comprehensive income. There is no debit to profit or loss for the change in fair value of the swap attributable to the deterioration in the credit quality of the swap counterparty because the cumulative change in the present value of the future cash flows needed to

offset the exposure to variable interest cash flows on the hedged item, £50,000, exceeds the cumulative change in value of the hedging instrument, £49,000. If A concluded that the hedge was no longer highly effective, it would discontinue hedge accounting prospectively as from the date the hedge ceased to be highly effective (see 4.2.3 below).

Alternatively, if the fair value of the swap increased to £51,000 of which £50,000 results from the increase in market interest rates and £1,000 from a decrease in the swap counterparty's credit risk, there would be a credit to profit or loss of £1,000 for the change in the swap's fair value attributable to the improvement in the counterparty's credit quality. This is because the cumulative change in the value of the hedging instrument, £51,000, exceeds the cumulative change in the present value of the future cash flows needed to offset the exposure to variable interest cash flows on the hedged item, £50,000. The difference of £1,000 represents the excess ineffectiveness attributable to the swap, and is recognised in profit or loss. [IAS 39.F.5.2].

It can be seen that the measurement of hedge ineffectiveness differs for a cash flow hedge when compared to a fair value hedge. In a cash flow hedge, if the fair value of the derivative increases by €10 and the present value of the hedged expected cash flows change by only €8, the €2 difference is recognised in profit or loss (as would be the case for a fair value hedge). However, if the present value of the hedged expected cash flows changes by €10, but the fair value of the derivative changes by only €8, this €2 of hedge ineffectiveness is not recognised in profit or loss (which would not be the case for a fair value hedge).

Because of this, an entity might consider deliberately under-hedging an exposure in a cash flow hedge. It might do this by targeting an offset of, say, 85% to 90%, which would keep it within the prescribed 80% to 125% range (see 5.3.1 below) but avoid the need to recognise ineffectiveness in profit or loss. However, such an approach is not permitted by IAS 39. [IAS 39.AG107A, BC136A].

#### 4.2.2 *Reclassification of gains and losses recognised in other comprehensive income from equity to profit or loss*

If a hedged forecast transaction subsequently results in the recognition of a *financial* asset or liability, the associated gains or losses that were recognised in other comprehensive income should be reclassified from equity to profit or loss in the same period(s) during which the hedged forecast cash flows (or asset acquired or liability assumed) affect profit or loss, e.g. in the periods that interest income or interest expense is recognised. This reclassification is often referred to as 'recycling'. However, if it is expected that all or a portion of a loss recognised in other comprehensive income will not be recovered in one or more future periods, the amount that is not expected to be recovered should be reclassified from equity to profit or loss immediately. [IAS 39.97].

If a hedged forecast transaction subsequently results in the recognition of a non-financial asset or liability (or a forecast transaction for a non-financial asset or liability becomes a firm commitment for which fair value hedge accounting is applied) then a choice of accounting policies is available. In these circumstances, an entity should either:

- reclassify the associated gains and losses that were recognised in other comprehensive income from equity to profit or loss in the same period(s) during which the asset acquired or liability assumed affects profit or loss, e.g. in the periods that depreciation expense or cost of sales is recognised. However, if it is

expected that all or a portion of a loss recognised in other comprehensive income will not be recovered in one or more future periods, the amount that is not expected to be recovered should be reclassified from equity to profit or loss. Essentially this is the same treatment as for hedges of financial items; or

- remove the associated gains and losses that were recognised in other comprehensive income and include them in the initial cost or other carrying amount of the asset or liability, [IAS 39.98], as a 'basis adjustment'.

An entity should adopt one of these as its accounting policy and apply it consistently to all relevant hedges. [IAS 39.99]. These treatments are illustrated in the following example.

*Example 52.33: Hedge of a firm commitment to acquire equipment*

Consider a variation of the situation in Example 52.29 at 4.1.2 above whereby Company X has chosen to treat all hedges of foreign currency risk associated with firm commitments as cash flow hedges, rather than as fair value hedges, as permitted by the standard (see 3.2.2 above). In the first case, X's accounting policy is to apply a basis adjustment to cash flow hedges that result in the recognition of non-financial assets or liabilities; in the second case it does not. Otherwise, the underlying facts and assumptions are the same. The accounting entries made at the end of March 2018 have not been shown separately (as they were in Example 52.29) because they are not relevant to the issue being illustrated.

**Case 1: Basis adjustment**

The journal entries to record this hedging relationship would be as follows:

**January 2018**

No entries are required as the firm commitment is unrecognised, the forward contract is recognised but has a zero fair value and no cash is paid or received.

**July 2018**

	€	€
Forward contract	50	
Other comprehensive income		50

To recognise the change in fair value of the forward contract and, because no ineffectiveness arises, the whole of this change is recognised in other comprehensive income.

	€	€
Cash	50	
Forward contract		50

To record the settlement of the forward contract at its fair value.

	€	€
Machine	950	
Cash		950

To record the settlement of the firm commitment at the contracted price of US\$1,000 at the spot rate of US\$1:€0.95.

	€	€
Other comprehensive income	50	
Machine		50

To remove the gain recognised in other comprehensive income and adjust the carrying amount of the machine that results from the hedged transaction by this amount.

In summary, the result of these accounting entries is as follows:

	€	€
Machine	900	
Cash		900

which again reflects the starting presumption, i.e. that X had effectively fixed the purchase price of its machine at €900.

**Case 2: No basis adjustment**

The journal entries to record this hedging relationship would be as follows:

**January 2018**

No entries are required as the firm commitment is unrecognised, the forward contract is recognised but has a zero fair value and no cash is paid or received.

**July 2018**

	€	€
Forward contract	50	
Other comprehensive income		50

To recognise the change in fair value of the forward contract and, because no ineffectiveness arises, the whole of this change is recognised in other comprehensive income.

	€	€
Cash	50	
Forward contract		50

To record the settlement of the forward contract at its fair value.

	€	€
Machine	950	
Cash		950

To record the settlement of the firm commitment at the contracted price of US\$1,000 at the spot rate of US\$1:€0.95.

In summary, the result of these accounting entries is as follows:

	€	€
Machine	950	
Cash		900
Other comprehensive income		50

The gain recognised in other comprehensive income would be reclassified from equity to profit or loss as the machine affects profit or loss, e.g. as it is depreciated, impaired or derecognised. If the machine has a very long useful economic life, this might involve tracking this adjustment for many years. The result might be considered less intuitive than the outcome on case 1.

The hedge accounting requirements of IFRS 9 eliminate the accounting policy choice and require a basis adjustment (see Chapter 53 at 8.1).

For all other cash flow hedges (i.e. those that do not result in the recognition of an asset or a liability), amounts that had been recognised in other comprehensive income should be reclassified from equity to profit or loss in the same period or periods during which the hedged forecast cash flows (or transaction) affects profit or loss, e.g. when a forecast sale occurs, [IAS 39.100], or when variable rate interest income or expense is recognised.

Although not clearly evident from the standard, we believe the reclassification from accumulated other comprehensive income to profit or loss should be recognised in the same line item in profit or loss as the hedged transaction to reflect the offsetting effect of hedge accounting (see Chapter 54 at 7.1.3).

When instruments such as conventional interest rate swaps are used as a hedging instrument in a cash flow hedge, it is common for entities to recognise net interest income or expense on the hedging instrument directly in profit or loss on an accruals basis. Other changes in fair value of the hedging instrument (i.e. the 'clean value' – excluding accrued interest) are recognised in other comprehensive income, subject to the 'lower of requirements' (see 4.2.1 above). Such an approach avoids the need to reclassify from equity to profit or loss the net interest as the hedged item impacts profit or loss. However, care must be taken to ensure the portion of the gain or loss on the hedging instrument that is recognised in other comprehensive income appropriately excludes ineffectiveness, which should be recognised in profit or loss. The hedging derivative would still be recognised in the statement of financial position at the full fair value.

If a hedge of a foreign currency forecast intragroup transaction qualifies for hedge accounting (see 2.3.4.B above), any gain or loss that is recognised in other comprehensive income should be reclassified from equity to profit or loss in the same period(s) during which the foreign currency risk of the hedged transaction affects consolidated profit or loss. *[IAS 39.AG99B]*.

It was stated at 3.2.3 above that using a forward exchange contract to hedge a foreign currency payable or receivable could be treated either as a fair value hedge, or a cash flow hedge, under IAS 39. In a fair value hedge, the gain or loss on remeasurement of the forward contract and the hedged item are recognised immediately in profit or loss. However, in a cash flow hedge, the gain or loss on remeasuring the forward contract is recognised in other comprehensive income and reclassified from equity to profit or loss when the payable or receivable affects profit or loss. Because the payable or receivable is remeasured continuously in respect of changes in foreign exchange rates, the gain or loss on the forward contract will be reclassified from equity to profit or loss as the payable or receivable is remeasured, not when the payment occurs. *[IAS 39.F.3.3-F.3.4]*. Where cash flow hedge accounting is applied, the effective portion of the gain or loss on the forward contract should be recognised in other comprehensive income and then reclassified from equity to profit or loss in the same period or periods during which the hedged item(s) impact profit or loss.

The interest element of the fair value of a forward may be excluded from the designated hedge relationship (designation of the spot exchange risk only – see 2.1.4.B above) although in this case changes in the fair value of the interest element would be recognised immediately in profit or loss, outside the hedge accounting. *[IAS 39.F.6.4]*. Designating the forward exchange rate or the spot exchange rate as the hedged risk could result in different results as illustrated in Example 52.37 at 5.3.3 below.

#### *4.2.3 Discontinuing cash flow hedge accounting*

Cash flow hedge accounting should be discontinued prospectively in any of the following circumstances:



- (a) the hedging instrument expires or is sold, terminated, or exercised.

In this case the cumulative gain or loss that has been recognised in other comprehensive income in the period when the hedge was effective should remain in equity until the forecast transaction occurs. That is, the cumulative gain or loss on the hedging instrument that has been recognised in other comprehensive income should be reclassified from equity to profit or loss in the same period(s) during which the hedged forecast cash flows (or asset acquired or liability assumed) affect profit or loss. The standard does not entertain the possibility that, subsequently, the hedged forecast transaction might not occur. However, it would only make sense to deal with this situation in the same way as for hedges where the hedged instrument has not been terminated, i.e. as in (c) below;

The replacement or rollover of a hedging instrument into another hedging instrument is not an expiration or termination if such replacement or rollover is part of the entity's documented hedging strategy.

As a result of amendments made to IAS 39 in July 2013, for this purpose an expiration or termination of the hedging instrument is not considered to have occurred if:

- as a consequence of laws or regulations or the introduction of laws or regulations, the parties to the hedging instrument agree that one or more clearing counterparties replace their original counterparty to become the new counterparty to each of the parties. For this purpose, a clearing counterparty is a central counterparty (sometimes called a 'clearing organisation' or 'clearing agency') or an entity or entities, for example, a clearing member of a clearing organisation or a client of a clearing member of a clearing organisation, that are acting as counterparty in order to effect clearing by a central counterparty. However, when the parties to the hedging instrument replace their original counterparties with different counterparties this paragraph shall apply only if each of those parties effects clearing with the same central counterparty;
- other changes, if any, to the hedging instrument are limited to those that are necessary to effect such a replacement of the counterparty. Such changes are limited to those that are consistent with the terms that would be expected if the hedging instrument were originally cleared with the clearing counterparty. These changes include changes in the collateral requirements, rights to offset receivables and payables balances, and charges levied.

- (b) the hedge no longer meets the criteria for hedge accounting.

In this case, the cumulative gain or loss that has been recognised in other comprehensive income is dealt with in same way as in (a) above;

- (c) the forecast transaction is no longer expected to occur.

In this case, the cumulative gain or loss on the hedging instrument that has been recognised in other comprehensive income should be reclassified from equity to profit or loss. However, a forecast transaction that is no longer highly probable

(and therefore the hedge no longer meets the criteria for hedge accounting) may still be expected to occur, in which case (b) above will apply, not (c);

(d) the designation as a hedge is revoked.

In this case, the cumulative gain or loss that has been recognised in other comprehensive income is dealt with in same way as in (a) above. However, if the transaction is no longer expected to occur, (c) applies. [IAS 39.101].

As for fair value hedges, if the reason the hedge no longer meets the criteria for qualification for hedge accounting is that it does not meet the hedge effectiveness criteria, hedge accounting should normally be discontinued from the last date on which compliance with hedge effectiveness was demonstrated. However, if the event or change in circumstances that caused the hedging relationship to fail the effectiveness criteria can be identified, and it can be demonstrated that the hedge was effective before the event or change in circumstances occurred, the hedge accounting should be discontinued from the date of the event or change in circumstances. [IAS 39.AG113].

#### 4.2.3.A Impact of central clearing regulations on cash flow hedges

The collapse of some financial institutions during the financial crisis highlighted the potential impact of credit risk on the global derivatives markets. In response to this, several jurisdictions have introduced, or are in the process of introducing, legal or regulatory requirements that require over-the-counter (OTC) derivatives to be novated to a central clearing party (CCP) or incentivise financial institutions to do so. The CCP would usually require the derivatives to be collateralised, thereby reducing (potentially significantly) the counterparty credit risk. Examples of such legislation include the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act) in the United States and the European Market Infrastructure Regulation (EMIR) in the European Union.

Following an urgent request, the IFRS Interpretation Committee concluded in January 2013 that an entity is required to discontinue hedge accounting where an OTC derivative that is designated as hedging instrument in a hedging relationship is novated to a CCP (unless, very unusually, the novation represented a replacement or rollover of the hedging instrument as part of a documented hedging strategy). This is because the novated derivative is derecognised and the new derivative contract, with the CCP as a counterparty, is recognised at the time of the novation. However, if the new derivative was designated in a cash flow hedge relationship accounting ineffectiveness would likely arise if the derivative had a fair value other than zero (see 5.3.5 below). Consequently, the Interpretations Committee decided to recommend that the IASB make a narrow-scope amendment to IAS 39 to permit continuation of hedge accounting in such narrow circumstances.<sup>9</sup> In July 2013 the IASB amended IAS 39 after the publication of an exposure draft in February 2013.

The exception applies to some, but not all, voluntary novations to a CCP. In order for hedge accounting to continue, a voluntary novation should at least be associated with laws or regulations that are relevant to central clearing of derivatives. For example, a voluntary novation could be in anticipation of regulatory changes. However, the mere possibility of laws or regulations being introduced is not, in the view of the IASB, a sufficient basis for continuation of hedge accounting. [IAS 39.BC220O-BC220Q].

Further, the exception applies to so-called ‘indirect clearing’ arrangements where a clearing member of a CCP provides an indirect clearing service to its client or where a group entity is clearing on behalf of another entity within the same group since they are consistent with the objective of the amendments. [IAS 39.BC220R, BC220S].

For this purpose, a clearing counterparty is a central counterparty (sometimes called a ‘clearing organisation’ or ‘clearing agency’) or an entity or entities, for example, a clearing member of a clearing organisation or a client of a clearing member of a clearing organisation, that are acting as counterparty in order to effect clearing by a central counterparty. However, when the parties to the hedging instrument replace their original counterparties with different counterparties this paragraph shall apply only if each of those parties effects clearing with the same central counterparty. [IAS 39.101(a)(i)].

Finally, in order to qualify for the exception, any changes (if any) to the hedging instrument, as a result of a novation, should be limited to those that are necessary to effect the novation. Such changes are limited to those that are consistent with the terms that would be expected if the hedging instrument were originally cleared with the clearing counterparty. These changes include changes in the collateral requirements, rights to offset receivables and payables balances, and charges levied. [IAS 39.101(a)(ii)].

The other criteria for achieving hedge accounting will still need to be met in order to continue hedge accounting, including the effectiveness assessment (see at 5.3 below).

In December 2015, the London Clearing House (LCH) changed its rule book to introduce a new type of settled-to-market (STM) interest rate swap that becomes available in addition to the previously existing collateralized-to-market (CTM) swaps.

In the existing CTM model, transactions cleared through LCH are subject to daily cash variation margining. This means that the replacement value of the trade is in effect paid or received as cash each day and there is no ability to recover any of the variation margin unless the fair value of the interest rate swap changes. In addition, the variation margin is also used to settle the periodic swaps payments, and, in case of early settlement, the variation margin is used to settle the outstanding derivative position. Interest is paid on the variation margin based on a risk free overnight rate.

In the new STM model, transactions have the same economic exposure and overall cash flows as in the CTM model, except that the previous daily variation margin is now treated as a settlement of the interest rate swap’s outstanding fair value. While the swap is gradually settled, it remains the same swap with the same original terms (e.g. the fixed rate, the maturity date etc.). In order to maintain the same economics, a new feature of the STM swap pricing is the Price Alignment Interest (PAI) that essentially replicates what would have been the interest on the collateral for a CTM swap into the STM swap pricing.

The introduction of the new STM swaps was primarily driven by the potentially different regulatory treatment they attract and at first sight it may appear that the accounting impact is limited since the existing CTM swap replacement values and related cash collateral are already normally offset in the statement of financial position. There are however some important accounting considerations if swaps designated in on-going hedging relationships are migrated from the CTM model to the STM model. The first question that arises is whether the change results in the de-designation of the

existing hedge relationship and hence the need to re-designate a new hedging relationship with a derivative that is now likely to have a non-zero fair value (and so give rise to ineffectiveness if designated in a cash flow hedge). We consider that the amendment of each swap from being CTM to STM is not a substantial modification and so does not result in derecognition of one swap and the recognition of another. Accordingly, we believe that there is no requirement to de-designate the existing hedging relationship. The second question that arises is how the PAI should be considered in the hedge effectiveness testing and measurement and whether any hypothetical derivative can be assumed to reflect these new terms (see 5.3.2 below). To date, few LCH clearing members have moved to the STM model for portfolios of hedging derivatives, and no consistent interpretation of the accounting requirements has yet emerged.

#### *4.2.4 Acquisitions and disposals*

Where a reporting entity acquires a subsidiary that is applying cash flow hedge accounting, additional considerations arise. In applying the purchase method of accounting in its consolidated financial statements, the reporting entity does not inherit the subsidiary's existing cash flow hedge reserve, since this clearly represents cumulative pre-acquisition gains and losses.<sup>10</sup> This has implications for the assessment of hedge effectiveness and the measurement of ineffectiveness because, so far as the group is concerned, it has effectively started a new hedge relationship with a hedging instrument that is likely to have a non-zero fair value (see 5.1.1 and 5.3.5 below).

The standard does not address the situation when the hedge relationship ceases because there is a change in the relationship between the reporting entity and the entity that is holding the hedging instrument and/or is exposed to the hedged transaction, for example when a subsidiary is disposed of. In November 2016, the Interpretations Committee discussed the issue of whether a group should discontinue hedge accounting in the consolidated financial statements where the group applies cash flow hedge accounting to forecast transactions that are anticipated in a subsidiary after the expected date of disposal of that subsidiary. Although the discussion was held in the context of IFRS 9, the discussion is equally relevant for IAS 39. The Interpretations Committee were of the tentative view that the assessment of a qualifying hedging relationship should be performed from the group's perspective based on whether the transaction is highly probable and could affect the group's profit or loss. Given that the forecast transactions are expected to occur only after the expected date of disposal of the subsidiary, these transactions are no longer expected to occur from the group's perspective as soon as the subsidiary is classified as held for sale. According to the Interpretation Committee's tentative view the forecast transactions would no longer be eligible hedged items and the group would discontinue hedge accounting from the date the subsidiary is classified as held for sale.<sup>11</sup> The Interpretations Committee suggested that outreach would be helpful to understand if diverse accounting is currently applied in practice under IAS 39. If the Interpretation Committee's view is confirmed, existing accounting policies may need to be changed retrospectively.

### 4.3 Accounting for hedges of a net investment in a foreign operation

Hedges of a net investment in a foreign operation (see 3.3 above), including a hedge of a monetary item that is accounted for as part of the net investment (see Chapter 15 at 6.3.1), should be accounted for in a similar way to cash flow hedges: [IAS 39.102]

- the portion of the gain or loss on the hedging instrument that is determined to be an effective hedge should be recognised in other comprehensive income and (as clarified by IFRIC 16) included with the foreign exchange differences arising on translation of the results and financial position of the foreign operation; [IFRIC 16.3] and
- the ineffective portion should be recognised in profit or loss.

The gain or loss on the hedging instrument relating to the effective portion of the hedge that has been recognised in other comprehensive income should be reclassified from equity to profit or loss on disposal or, in certain circumstances, partial disposal of the foreign operation in accordance with IAS 21 (see Chapter 15 at 6.6). [IAS 39.102].

The meaning of 'in a similar way to cash flow hedges' is not immediately clear. It is readily understood that the portion of the gain or loss on the hedging derivative that is determined to be an effective hedge should be recognised in other comprehensive income (as it would for a cash flow hedge). However, the wording in the standard also seems to indicate that ineffectiveness should be measured in the same way as for cash flow hedges, i.e. no ineffectiveness is recognised in profit or loss if the gain or loss on the hedging instrument is less, in absolute terms, than the gain or loss on the hedged item (see 4.2.1 above). This is despite the fact that there appears to be no good reason why ineffectiveness should not also be recognised in profit or loss if the gain or loss on the hedging instrument is less, in absolute terms, than the gain or loss on the hedged item. This is different to the accounting for net investment hedges under US GAAP,<sup>12</sup> for which it is clear that ineffectiveness should be recognised in profit or loss for under-hedges as well as over-hedges.

In its March 2016 meeting, the Interpretations Committee discussed this issue with respect to IFRS 9. The Interpretations Committee concluded that the guidance in IFRS 9 is sufficiently clear and would require an entity to apply the lower of test for net investment hedges. One of the arguments put forward was that the application of the lower of test in determining the effective portion of the gains or losses arising from the hedging instrument when accounting for net investment hedges, avoids the recycling of exchange differences arising from the hedged item that have been recognised in other comprehensive income before the disposal of the foreign operation. Such an outcome would be consistent with the requirements of IAS 21.<sup>13</sup>

IFRS 9 uses almost the same wording as IAS 39 when stating that net investment hedges should be accounted for 'in a similar way to cash flow hedges'. [IAS 39.102, IFRS 9.6.5.13]. However, the guidance in IFRS 9 specifically refers to paragraph 6.5.11 of IFRS 9, which deals with the accounting for cash flow hedges, whereas the equivalent guidance in IAS 39 makes reference to the qualifying criteria of a hedge relationship. Therefore, some might argue that the requirement to apply the 'lower of' test is clearer in IFRS 9 and an entity should be allowed not to apply the 'lower of test' for net investment hedges under IAS 39. However, the argument stated above arguably also applies for net investment hedges under IAS 39. Furthermore, the

Interpretations Committee noted that it did not receive evidence of significant diversity among entities applying IAS 39 in determining the effective portion of the gains or losses arising from the hedging instrument by applying the 'lower of' test when accounting for net investment hedges.

Given that hedges of a net investment in a foreign operation are accounted for similar to cash flow hedges, we expect the accounting for the discontinuation of such hedges also to be similar to what is described at 4.2.3 above.

#### **4.4 Hedges of a firm commitment to acquire a business**

A firm commitment to acquire a business in a business combination cannot be a hedged item, except for foreign exchange risk (see 2.2.5 above).

Consider the situation where an entity with euro as its functional currency enters into a binding agreement to purchase a subsidiary in six months. The subsidiary's functional currency is the US dollar. The consideration is denominated in US dollars and is payable in cash. The entity decides to enter into a forward contract to buy US dollars for euros to hedge its foreign currency risk on the firm commitment. The following options exist and the entity may choose the most appropriate accounting treatment:

- Because the hedge is a purchase of US dollars, it is, arguably, not a fair value hedge of the acquisition, since the acquisition is itself naturally hedged for changes in the fair value in the US dollar – that is, the entity is committed to buy a group of US dollar denominated assets and liabilities for a price denominated in US dollars. Nevertheless, the entity may still designate the transaction as the hedged item in a fair value hedge relationship, [IAS 39.87], although this may not make intuitive sense.
- The entity could instead designate the forward contract as a hedge of the cash flows associated with the committed purchase, which is a cash flow hedge. [IAS 39.87].
- If the anticipated business combination in this example is only a highly probable forecast transaction and not a firm commitment, then the entity can only apply cash flow hedging.

If the transaction is a fair value hedge, then the carrying amount of the hedged item is adjusted for the gain or loss attributable to the hedged risk. Since separately identifiable assets acquired and liabilities assumed must be recognised on initial consolidation at fair value in the consolidated financial statements of the acquirer, it follows that the gain or loss attributable to the hedged risk must be included in the consideration paid. In other words, the impact of the hedge affects the calculation of goodwill, that is otherwise determined by the application of IFRS 3 – *Business Combinations* – see Chapter 9 at 6.<sup>14</sup>

During the hedging period, the effective portion of the gain or loss on a hedging instrument in a cash flow hedge is recognised in other comprehensive income. Upon initial recognition of the acquisition, gains or losses recognised in other comprehensive income may be:

- deferred in other comprehensive income until the goodwill acquired affects profit or loss; or
- included in the consideration paid for the business combination that is designated as the hedged item. [IAS 39.98].

The adjusted carrying amount of goodwill, including the gain or loss from hedge accounting, will then be subject to the normal requirements to test for annual impairment (see Chapter 20 at 8).

Once the purchase price is paid and the transaction is completed, the entity is 'long' US dollars as a result of recognising the US dollar net assets of the acquired entity. Those net assets would then be eligible for net investment hedging which would require selling US dollars to create an eligible hedging instrument, for example by entering into a foreign currency forward (see 3.3 and 4.3 above).

#### 4.5 Hedge accounting for a documented rollover hedging strategy

As mentioned above (see 4.1.3 and 4.2.3), the standard is clear that the replacement or rollover of a hedging instrument into another hedging instrument is not an expiration or termination of a hedge relationship if such replacement or rollover is part of the entity's documented hedging strategy. [IAS 39.91(a), 101(a)]. However, there is minimal additional specific guidance provided on what is meant by, or the accounting for, a documented rollover hedging strategy. We believe that a rollover hedging strategy refers to a strategy whereby the maturity of the hedging instrument is intentionally shorter than the maturity of the hedged item, and there is an expectation that on expiry of the original hedging instrument it will be replaced by a new hedging instrument. The replacement hedging instrument is likely to have similar characteristics to the instrument being replaced. The rollover strategy must have been documented as such at inception of the initial hedge and the usual qualifying conditions for hedge accounting should be met (see 5 below).

The standard is clear that hedge effectiveness may be assessed on a cumulative basis (see 5.3.1 below) and that accounting for the effective portion of cash flow hedges should be performed on a cumulative basis (see 4.2.1 below). [IAS 39.95, F.4.2]. Cumulative is generally understood to mean over the life of the hedge relationship. Therefore the identification and documentation of a rollover hedging strategy within a hedge relationship has the effect that cumulative hedge effectiveness assessment (if this is selected as the means of assessment) and measurement of the effective portion of a cash flow hedge, is performed over the life of the hedge relationship. This will include subsequent periods in which hedging instruments are rolled over, for as long as the hedge continues to remain live. The cumulative period is not reset just because a new rollover hedging instrument is transacted, if it is part of a documented rollover strategy. Furthermore, amortisation of any fair value adjustment made to the hedged item under a fair value hedge need not commence until the rollover hedge strategy is discontinued.

##### *Example 52.34: Hedge of a foreign exchange risk in rollover hedging strategy*

Company A has sterling as its functional currency. Company A expects highly probable foreign currency sales resulting in a forecast cash inflow of €2m in 9 months' time. Company A chooses to hedge the foreign currency risk and transacts an FX forward to sell €2m and receive GBP in 3 months' time. This is with an expectation that as the initial contract matures another 3 month contract will be transacted and then again a third contract on maturity of the second contract. As part of the usual hedge documentation Company A has identified this as being a rollover strategy for foreign currency risk.

The hedge relationship is not discontinued when the second and third FX contracts are transacted. Consistent with the usual IAS 39 hedge accounting requirement, effectiveness is assessed throughout the life of the hedge relationship by comparison of the change in fair value of the hedging instruments (the aggregate of the

changes in fair value of the 3 month FX contracts) and the change in value of the hedged item (the highly probable cash flow in 9 months' time) for changes in foreign currency risk. If effectiveness is assessed on a cumulative basis, the assessment would include fair value changes since designation of the hedge relationship, which would include the realised changes in fair value of the matured 3 month FX forwards.

If the hypothetical derivative method (see 5.3.2. below) is adopted to calculate the change in value of the hedged item, a single hypothetical derivative would be used based on the expected timing of the forecast transaction (i.e. a 9 month FX contract).

## 5 QUALIFYING CONDITIONS FOR HEDGE ACCOUNTING

A hedging relationship qualifies for hedge accounting as set out at 4 above if, and only if, all of the following conditions are met:

- at the inception of the hedge there is formal designation and documentation both of the hedging relationship and the entity's risk management objective and strategy for undertaking the hedge;
- the hedge is expected to be highly effective in achieving offsetting changes in fair value or cash flows attributable to the hedged risk, consistently with the originally documented risk management strategy for that particular hedging relationship;
- a forecast transaction that is the subject of a cash flow hedge must be highly probable and must present an exposure to variations in cash flows that could ultimately affect net profit or loss;
- the effectiveness of the hedge can be reliably measured, i.e. the fair value or cash flows of the hedged item that are attributable to the hedged risk and the fair value of the hedging instrument can be reliably measured (see Chapter 14 for guidance on determining fair value and Chapter 49 at 2.6 for a discussion of when fair values may not be reliably measurable); and
- the hedge is assessed on an ongoing basis and determined actually to have been highly effective throughout the financial reporting periods for which the hedge was designated. *[IAS 39.88].*

These conditions are considered in further detail in the remainder of this section.

### 5.1 Documentation and designation

The documentation supporting the hedge should include the identification of:

- the hedging instrument;
- the hedged item or transaction;
- the nature of the risk being hedged; and
- how the entity will assess the hedging instrument's effectiveness in offsetting the exposure to changes in the hedged item's fair value or cash flows attributable to the hedged risk. *[IAS 39.88(a)].*

Designation of a hedge relationship takes effect prospectively from the date all of the criteria at 5 above are met. In particular, hedge accounting can be applied only from the date all of the necessary documentation is completed. Therefore, hedge relationships cannot be designated retrospectively. *[IAS 39.F.3.8].*



Where an ongoing hedge relationship fails the retrospective effectiveness test (see 5.3.1 below), an entity is not precluded from redesignating the hedging instrument in a hedge of the same financial asset or liability. Therefore, hedge accounting may be obtained for a subsequent period in which the hedge is effective provided the hedge meets the requirements set out at 5 above.<sup>15</sup> This would require documentation as a new hedge relationship. Similarly, an instrument that has been dedesignated as a hedging instrument may be redesignated in a new hedge relationship for which the hedged item is the same or a different exposure provided all other conditions for hedge accounting are met.

Hedge designation need not take place at the time a hedging instrument is entered into. For example, a derivative contract may be designated and formally documented as a hedging instrument any time after entering into the derivative contract. Hedge accounting will apply prospectively from designation, provided all other conditions are met. [IAS 39.F.3.9]. However, there is often a hidden danger when designating a derivative as a hedging instrument subsequent to its inception. For non-option derivatives, such as forwards or interest rate swaps, any fair value is likely to create 'noise' in a hedge effectiveness assessment that may not be fully offset by changes in the hedged item, especially in the case of a cash flow hedge. Consequently, there is likely to be more ineffectiveness recognised and, in extremis, could cause the hedge not be regarded as highly effective (see 5.3.5 below). Only by coincidence will a derivative still have a fair value that is zero, or close to zero, which would minimise this problem.

#### 5.1.1 Business combinations

In a business combination accounted for using the purchase method of accounting where the acquiree has designated hedging relationships, the question arises of whether the acquirer should:

- be permitted to continue to apply the hedge accounting model to hedge relationships designated previously by the acquiree, assuming it is consistent with the acquirer's strategies and policies; or
- be required to re-designate hedge relationships at the acquisition date.<sup>16</sup>

IFRS 3 provides guidance that in order to obtain hedge accounting in their consolidated financial statements, acquirers are required to redesignate the acquiree's hedges. [IFRS 3.15, 16(b)]. Further, the acquirer should not recognise in its consolidated financial statements any amounts in equity in respect of any cash flow hedges of the acquiree relating to the period prior to acquisition. Redesignating the hedge relationships at the acquisition date means that if the hedging instrument has a fair value other than zero (see 5.3.5 below), it is likely that ineffectiveness will be introduced in a hedge that may have been nearly 100% effective prior to the acquisition. In fact, it is possible that a hedge relationship that would continue to be effective for the acquiree had the business combination not occurred will fail to qualify for hedge accounting in the acquirer's consolidated financial statements if the hedging instrument has a significant fair value at the acquisition date, particularly for cash flow hedges. To mitigate this, the acquirer may, subsequent to the combination, choose to settle the hedging instruments and replace them with more effective ones.

### 5.1.2 Dynamic hedging strategies

The standard explains that a dynamic hedging strategy that assesses both the intrinsic value and time value of an option contract can qualify for hedge accounting, for such a strategy it is helpful that there is no requirement to exclude the time value of hedging option contracts from the hedge relationship. [IAS 39.74]. The implementation guidance explains that this allows the use of a delta-neutral hedging strategy as well as other dynamic hedging strategies under which the quantity of the hedging instrument is constantly adjusted in order to maintain a desired hedge ratio (e.g. to achieve a delta-neutral position, insensitive to changes in the fair value of the hedged item), to qualify for hedge accounting. For example, a portfolio insurance strategy that seeks to ensure that the fair value of the hedged item does not drop below a certain level, while allowing the fair value to increase, may qualify for hedge accounting. [IAS 39.F.1.9].

For a dynamic hedging strategy to qualify for hedge accounting, the documentation must specify how the hedge will be monitored and updated and how effectiveness will be measured. In addition, the entity must be able to track properly all terminations and redesignations of the hedging instrument, in addition to demonstrating that all other criteria for hedge accounting are met. Also, the entity must demonstrate that the hedge is expected to be highly effective for a specified short period of time during which adjustment of the hedge is not expected. [IAS 39.F.1.9]. However, this does not mean that no ineffectiveness will arise.

This guidance is applicable when the quantity of the hedging instrument is constantly adjusted in order to maintain a desired hedge ratio for the existing hedged item(s), often referred to as a closed portfolio. Accounting for dynamic risk management of open portfolios, to which new exposures are frequently added, existing exposures mature, where frequent changes also occur to the hedged item(s), and the associated risk is managed directly was the subject of a Discussion Paper DP/2014/1 – *Accounting for Dynamic Risk management: A Portfolio Revaluation Approach to Macro Hedging* (see at 6 below).

## 5.2 Forecast transactions

In the case of a hedge of a forecast transaction, the documentation should identify the date on, or time period in which, the forecast transaction is expected to occur. This is because, in order to qualify for hedge accounting:

- the hedge must relate to a specific identified and designated risk;
- it must be possible to measure its effectiveness reliably; and
- the hedged forecast transaction must be highly probable.

To meet these criteria, entities are not required to predict and document the exact date a forecast transaction is expected to occur. However, the time period in which the forecast transaction is expected to occur should be identified and documented within a reasonably specific and generally narrow range of time from a most probable date, as a basis for assessing hedge effectiveness. To determine that the hedge will be highly effective, it is necessary to ensure that changes in the fair value of the expected cash flows are offset by changes in the fair value of the hedging instrument. The implementation guidance suggests in one example that this test may be met only if the

timing of the cash flows occur within close proximity to each other. [IAS 39.F.3.11]. However, the approach adopted elsewhere in the implementation guidance (see paragraph below) focuses more on the need to pass the effectiveness assessment, which would reflect differences in timing of the hedged and hedging cash flows.

If a forecast transaction such as a commodity sale is properly designated in a cash flow hedge relationship and, subsequently, its expected timing changes to an earlier (or later) period, this does not affect the validity of the original designation. If the entity can conclude that this transaction is the same as the one designated as being hedged, then hedge accounting may be able to continue. However, this is subject to passing the effectiveness assessment, which may well be affected by the change in timing, as the assessment would be based on the up to date expectation of the timing of the hedged forecast transaction. For example, if the forecast transaction was now expected earlier than originally thought, the hedging instrument will be designated for the remaining period of its existence, which will exceed the period to the forecast sale. [IAS 39.F.5.4].

Further, hedged forecast transactions must be identified and documented with sufficient specificity so that when the transaction occurs, it is clear whether the transaction is, or is not, the hedged transaction. Therefore, a forecast transaction may be identified as the sale of the first 15,000 units of a specific product during a specified three-month period, but it could not be identified as the last 15,000 units of that product sold because they cannot be identified when they occur. For the same reason, a forecast transaction cannot be specified solely as a percentage of sales or purchases during a period. [IAS 39.F.3.10].

Finally, the standard requires a forecast transaction that is the subject of a cash flow hedge to be 'highly probable'. The implementation guidance explains that this term indicates a *much* greater likelihood of happening than the term 'more likely than not' (a term used throughout the IASB's work to describe, or define, 'probable'). The guidance states that probability should be supported by observable facts and attendant circumstance and should not be based solely on management intent, because intentions are not verifiable. In making this assessment, consideration should be given to the following circumstances:

- the frequency of similar past transactions;
- the financial and operational ability to carry out the transaction;
- substantial commitments of resources to a particular activity, e.g. a manufacturing facility that can be used in the short run only to process a particular type of commodity;
- the extent of loss or disruption of operations that could result if the transaction does not occur;
- the likelihood that transactions with substantially different characteristics might be used to achieve the same business purpose, e.g. there are several ways of raising cash ranging from a short-term bank loan to a public share offering; and
- the entity's business plan.

The length of time until a forecast transaction is projected to occur is also a consideration in determining probability. Other factors being equal, the more distant a forecast transaction is, the less likely it is to be considered highly probable and the stronger the evidence that would be needed to support an assertion that it is highly probable. For example, a transaction forecast to occur in five years may be less likely to occur than a transaction forecast to occur in one year. However, forecast interest payments for the next 20 years on variable-rate debt would typically be highly probable if supported by an existing contractual obligation.

In addition, other factors being equal, the greater the physical quantity or future value of a forecast transaction in proportion to transactions of the same nature, the less likely it is that the transaction would be considered highly probable and the stronger the evidence that would be required to support such an assertion. For example, less evidence would generally be needed to support forecast sales of 100,000 units in the next month than 950,000 units when recent sales have averaged 950,000 units for each of the past three months. [IAS 39.F.3.7].

The implementation guidance uses the following example to elaborate on this:

*Example 52.35: Hedge of foreign currency revenues*

An airline operator uses sophisticated models based on past experience and economic data to project its revenues in various currencies. If it can demonstrate that forecast revenues for a period of time into the future in a particular currency are 'highly probable', it may designate the future revenue stream in a cash flow hedge.

However, it is unlikely that 100% of revenues for a future year could be reliably predicted. On the other hand, it is possible that a portion of predicted revenues, normally those expected in the short-term, will meet the 'highly probable' criterion. [IAS 39.F.2.4].

It is also explained that cash flows arising after the prepayment date on an instrument that is prepayable at the issuer's option may be highly probable for a group or pool of similar assets for which prepayments can be estimated with a high degree of accuracy, e.g. mortgage loans, or if the prepayment option is significantly out of the money. In addition, the cash flows after the prepayment date may be designated as the hedged item if a comparable option exists in the hedging instrument (see 5.3.11 below). [IAS 39.F.2.12].

The implementation guidance states that a history of having designated hedges of forecast transactions and then determining that the forecast transactions are no longer expected to occur, calls into question both the ability to accurately predict forecast transactions and the propriety of using hedge accounting in the future for similar forecast transactions. [IAS 39.F.3.7]. This is clearly common sense, however the standard contains no prescriptive 'tainting' provisions in this area akin to those applied to held-to-maturity investments (see Chapter 46 at 3.3). Therefore, entities are not automatically prohibited from using cash flow hedge accounting if a forecast transaction fails to occur. Instead, whenever such a situation arises the particular facts, circumstances and evidence should be assessed to determine whether doubt has, in fact, been cast on an entity's ongoing hedging strategies.

### 5.3 Assessing hedge effectiveness

One of the fundamental requirements of IAS 39 is that to use hedge accounting, the hedge must be an effective one. To this end, hedge effectiveness is defined as:

‘the degree to which changes in the fair value or cash flows of the hedged item that are attributable to a hedged risk are offset by changes in the fair value or cash flows of the hedging instrument’. [IAS 39.9].

There is little doubt that demonstrating the effectiveness of a hedge can be one of the most challenging aspects of IAS 39. The assessment of a hedge’s effectiveness has the potential to be an extremely difficult exercise, involving the use of complex statistical techniques and valuation models of which many accountants have, at best, only limited experience. All of this is not helped by the fact that the IASB has provided very limited practical guidance on how to go about testing effectiveness and the Interpretations Committee has shied away from developing application guidance in this area.<sup>17</sup>

#### 5.3.1 Basic requirements

Three of the qualifying conditions for hedge accounting involve hedge effectiveness as follows:

- the entity should expect the hedge to be highly effective in achieving offsetting changes in fair value or cash flows attributable to the hedged risk, consistently with the originally documented risk management strategy for that particular hedging relationship;
- the effectiveness of the hedge can be reliably measured, i.e. the fair value or cash flows of the hedged item that are attributable to the hedged risk and the fair value of the hedging instrument can be reliably measured; and
- the hedge should be assessed on an ongoing basis and determined actually to have been highly effective throughout the financial reporting periods for which the hedge was designated. [IAS 39.88].

Qualification for hedge accounting is based on an expectation of future (prospective) effectiveness, the objective of which is to ensure there is firm evidence to support an expectation of high effectiveness, and an evaluation of actual (retrospective) effectiveness. [IAS 39.BC136, BC136B]. The application guidance explains that a hedge is regarded as highly effective only if both of the following conditions are met:

- (a) At the inception of the hedge, and in subsequent periods, the hedge is expected to be highly effective in achieving offsetting changes in fair value or cash flows attributable to the hedged risk during the period for which the hedge is designated. Such an expectation can be demonstrated in various ways, including a comparison of past changes in the fair value or cash flows of the hedged item that are attributable to the hedged risk with past changes in the fair value or cash flows of the hedging instrument, or by demonstrating a high statistical correlation between the fair value or cash flows of the hedged item and those of the hedging instrument. A hedge ratio of other than one to one may be chosen in order to improve the effectiveness of the hedge (see 2.2.2 above); and

- (b) The actual results of the hedge are within a range of 80% to 125%.

For example, if actual results are such that the loss on the hedging instrument is €120 and the gain on the cash instrument is €100, offset can be measured by  $120 \div 100$ , which is 120%, or by  $100 \div 120$ , which is 83%. In this example, assuming the hedge meets the condition in (a), it would be concluded that the hedge has been highly effective. *[IAS 39.AG105(b)].*

Effectiveness should be assessed, at a minimum, at the time annual or interim financial reports are prepared. *[IAS 39.AG106].* However, there is nothing to prevent effectiveness assessments being performed more frequently. In fact this might be desirable if there is a risk of the hedge ceasing to be considered highly effective (although the prospective test should ensure such a risk is actually very low). The sooner an ineffective hedge is identified, the sooner the accounting volatility that results from a failure to obtain hedge accounting can be managed. For example, following a failure, it might be possible to redesignate the hedge (perhaps with some adjustment to the hedging instrument) but hedge accounting for that new hedge relationship will be available only prospectively.

No single method for assessing hedge effectiveness is specified by IAS 39 – the method used will depend on the entity's risk management strategy adopted. For example, if the risk management strategy is to adjust the amount of the hedging instrument periodically to reflect changes in the hedged position, it needs to be demonstrated that the hedge is expected to be highly effective only for the period until the amount of the hedging instrument is next adjusted. *[IAS 39.AG107].*

Hedge effectiveness may also be assessed on a pre-tax or after-tax basis. If effectiveness is to be assessed on an after-tax basis, this should be designated at inception as part of the formal documentation of the hedging strategy. *[IAS 39.F.4.1].*

In some cases, an entity will adopt different methods for different types of hedges. The documentation of its hedging strategy should include its procedures for assessing effectiveness and those procedures should state whether the assessment will include all of the gain or loss on a hedging instrument or for example whether the time value of the instrument is excluded (see 2.1.4 above). *[IAS 39.AG107].*

The appropriateness of a given method will depend on the nature of the risk being hedged and the type of hedging instrument used. The method must be reasonable and consistent with other similar hedges unless different methods are explicitly justified. An entity is required to document, at the inception of the hedge, how effectiveness will be assessed and then to apply that effectiveness test on a consistent basis for the duration of the hedge. Several mathematical techniques can be used including ratio analysis, i.e. a comparison of hedging gains and losses to the corresponding gains and losses on the hedged item at a point in time, and statistical measurement techniques such as regression analysis (see 5.3.6 below). If regression analysis is used, the entity's documented policies for assessing hedge effectiveness must specify how the results of the regression will be assessed. *[IAS 39.F.4.4].*

Expected hedge effectiveness may be assessed on a cumulative basis if that is how the hedge is designated and that condition is reflected in the hedging documentation. Therefore, even if a hedge is not expected to be highly effective in a particular period, hedge accounting is

not precluded if effectiveness is expected to remain sufficiently high over the life of the hedging relationship. [IAS 39.F.4.2]. Whether hedge effectiveness is to be assessed on a cumulative or period to period basis should form part of the hedge documentation.

*Example 52.36: Cumulative hedge effectiveness*

A company designates an interest rate swap linked to LIBOR as a hedge of a borrowing whose interest is a UK base rate plus a margin. The UK base rate changes, perhaps, once each quarter or less, in increments of 25 to 50 basis points, while LIBOR changes daily. Over a one to two year period, the hedge is expected to be highly effective. However, there will be quarters when the UK base rate does not change at all while LIBOR has changed significantly. This would not necessarily preclude hedge accounting. [IAS 39.F.4.2].

The time value of money will generally need to be considered in assessing the effectiveness of a hedge. The fair value of an interest rate swap derives from its net settlements and the fixed and variable rates on a swap can be changed without affecting the net settlement if both are changed by the same amount. In other words, a pay-7% fixed, receive-LIBOR swap should have the same fair value as a pay-6% fixed, receive-LIBOR minus 1% swap with otherwise identical terms. Consequently, the fixed rate on a hedged item need not exactly match the fixed rate on a swap designated as a fair value hedge. Nor does the variable rate on an interest-bearing asset or liability need to be the same as the variable rate on a swap designated as a cash flow hedge. [IAS 39.AG112].

In the case of interest rate risk, it is suggested that hedge effectiveness may be assessed by preparing a maturity schedule for financial assets and liabilities that shows the net interest rate exposure for each time period, provided that the net exposure is associated with a specific asset or liability (or a specific group of assets or liabilities or a specific portion of them) giving rise to the net exposure, and hedge effectiveness is assessed against that asset or liability. [IAS 39.AG111]. The macro-hedging models (see 6 below) have their origins in just such an approach.

An important point to note is that the method used in the assessment of hedge effectiveness need not be the same as that used in the measurement (i.e. recognition in profit or loss) of hedge ineffectiveness. Therefore, even if the calculations used to measure ineffectiveness would not support a retrospective hedge effectiveness test performed using the 'dollar-offset' method (see 5.3.2 below), hedge accounting would not necessarily be precluded, provided the hedge passed the originally documented retrospective hedge effectiveness test, for example regression analysis (see 5.3.6 below).<sup>18</sup>

### 5.3.2 The 'dollar-offset' method

One method that may be used to assess hedge effectiveness is a comparison of hedging gains and losses to the corresponding gains and losses on the hedged item at a point in time. [IAS 39.F.4.4].

This method essentially uses the mechanics of *measuring* hedge ineffectiveness set out at 4.1.1 and 4.2.1 above as a basis for *assessing* effectiveness. In other words, it compares the monetary amounts of the change in fair value of the hedging instrument with the monetary amount of the change in fair value or cash flows of the hedged item or transactions attributable to the hedged risk over the assessment period. To the extent that dividing these monetary amounts results in a fraction between 0.80 and 1.25, the hedge will be seen as highly effective on a retrospective basis. Largely because of the terminology used under US GAAP, this has become known as the 'dollar-offset' method.

The dollar-offset method is commonly used as a basis for assessing hedge effectiveness on an ongoing basis because it uses the calculations that have to be performed for determining the hedge accounting bookkeeping entries (i.e. measurement of hedge ineffectiveness), therefore it requires limited additional effort and is relatively easily understood.

Example 52.37 below contains a very comprehensive illustration of the dollar-offset method for a cash flow hedge that is based on the implementation guidance to IAS 39. Although it is somewhat esoteric, and many accountants will find the calculations difficult to follow, it is an important example. Particularly, it establishes two relatively practical methods of measuring ineffectiveness, and assessing effectiveness, for cash flow hedges. They are normally referred to as the 'hypothetical derivative method' and the 'change in fair value method' (which is what they are called under US GAAP).

As its name suggests, the hypothetical derivative method involves establishing a notional derivative that would be the ideal hedging instrument for the hedged exposure (normally an interest rate swap or forward contract with no unusual terms and a zero fair value at inception of the hedge relationship). The fair value of the hypothetical derivative is then used as a proxy for the net present value of the hedged future cash flows against which changes in value of the actual hedging instrument are compared to assess effectiveness and measure ineffectiveness.

*Example 52.37: Measuring effectiveness for a hedge of a forecast transaction in a debt instrument*

A forecast investment in an interest-earning asset or forecast issue of an interest-bearing liability creates a cash flow exposure to interest rate changes because the related interest payments will be based on the market rate that exists when the forecast transaction occurs. The objective of a cash flow hedge of the exposure to interest rate changes is to offset the effects of future changes in interest rates so as to obtain a single fixed rate, usually the rate that existed at the inception of the hedge that corresponds with the term and timing of the forecast transaction. However, during the period of the hedge, it is not possible to determine what the market interest rate for the forecast transaction will be at the time the hedge is terminated or when the forecast transaction occurs.

During this period, effectiveness can be measured on the basis of changes in interest rates between the designation date and the interim effectiveness measurement date. The interest rates used to make this measurement are the interest rates that correspond with the term and occurrence of the forecast transaction that existed at the inception of the hedge and that exist at the measurement date as evidenced by the term structure of interest rates.

Generally it will not be sufficient simply to compare cash flows of the hedged item with cash flows generated by the derivative hedging instrument as they are paid or received, since such an approach ignores the entity's expectations of whether the cash flows will offset in subsequent periods and whether there will be any resulting ineffectiveness.

It is assumed that Company X expects to issue a €100,000 one-year debt instrument in three months. The instrument will pay interest quarterly with principal due at maturity. X is exposed to interest rate increases and establishes a hedge of the interest cash flows of the debt by entering into a forward starting interest rate swap. The swap has a term of one year and will start in three months to correspond with the terms of the forecast debt issue. X will pay a fixed rate and receive a variable rate, and it designates the risk being hedged as the LIBOR-based interest component in the forecast issue of the debt.



**Yield curve**

The yield curve provides the foundation for computing future cash flows and the fair value of such cash flows both at the inception of, and during, the hedging relationship. It is based on current market yields on applicable reference bonds that are traded in the marketplace. Market yields are converted to spot interest rates ('spot rates' or 'zero coupon rates') by eliminating the effect of coupon payments on the market yield. Spot rates are used to discount future cash flows, such as principal and interest rate payments, to arrive at their fair value. Spot rates also are used to compute forward interest rates that are used to compute the estimated variable future cash flows. The relationship between spot rates and one-period forward rates is shown by the following formula:

*Spot-forward relationship*

$$F = \frac{(1 + SR_t)^t}{(1 + ST_{t-1})^{t-1}} - 1$$

where F = forward rate (%)

SR = spot rate (%)

t = period in time (e.g. 1, 2, 3, 4, 5)

It is assumed that the following quarterly-period term structure of interest rates using quarterly compounding exists at the inception of the hedge.

*Yield curve at inception (beginning of period 1)*

<i>Forward periods</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
Spot rates	3.75%	4.50%	5.50%	6.00%	6.25%
Forward rates	3.75%	5.25%	7.51%	7.50%	7.25%

The one-period forward rates are computed on the basis of spot rates for the applicable maturities. For example, the current forward rate for Period 2 calculated using the formula above is equal to  $[1.0450^2 \div 1.0375] - 1 = 5.25\%$ . The current one-period forward rate for Period 2 is different from the current spot rate for Period 2, since the spot rate is an interest rate from the beginning of Period 1 (spot) to the end of Period 2, while the forward rate is an interest rate from the beginning of Period 2 to the end of Period 2.

**Hedged item**

In this example, X expects to issue a €100,000 one-year debt instrument in three months with quarterly interest payments. X is exposed to interest rate increases and would like to eliminate the effect on cash flows of interest rate changes that may happen before the forecast transaction takes place. If that risk is eliminated, X would obtain an interest rate on its debt issue that is equal to the one-year forward coupon rate currently available in the marketplace in three months. That forward coupon rate, which is different from the forward (spot) rate, is 6.86%, computed from the term structure of interest rates shown above. It is the market rate of interest that exists at the inception of the hedge, given the terms of the forecast debt instrument. It results in the fair value of the debt being equal to par at its issue.

At the inception of the hedging relationship, the expected cash flows of the debt instrument can be calculated on the basis of the existing term structure of interest rates. For this purpose, it is assumed that interest rates do not change and that the debt would be issued at 6.86% at the beginning of Period 2. In this case, the cash flows and fair value of the debt instrument would be as follows at the beginning of Period 2.

*Issue of fixed rate debt (beginning of period 2) – no rate changes (spot based on forward rates)*

	<i>Total</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
<i>Original forward periods</i>			<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
<i>Remaining periods</i>				<i>1</i>	<i>2</i>	<i>3</i>
Spot rates			5.25%	6.38%	6.75%	6.88%
Forward rates			5.25%	7.51%	7.50%	7.25%
	€		€	€	€	€
<i>Cash flows:</i>						
Fixed interest at 6.86%			1,716	1,716	1,716	1,716
Principal						100,000
<i>Fair value:</i>						
Interest*	6,592		1,694	1,663	1,632	1,603
Principal*	93,408					93,408
	<u>100,000</u>					

\* cash flow discounted at the spot rate for the relevant period, e.g. fair value of principal is calculated as  $€100,000 \div (1 + [0.0688 \div 4])^4 = €93,408$

Since it is assumed that interest rates do not change, the fair value of the interest and principal amounts equals the par amount of the forecast transaction. The fair value amounts are computed on the basis of the spot rates that exist at the inception of the hedge for the applicable periods in which the cash flows would occur had the debt been issued at the date of the forecast transaction. They reflect the effect of discounting those cash flows on the basis of the periods that will remain after the debt instrument is issued. For example, the spot rate of 6.38% is used to discount the interest cash flow that is expected to be paid in Period 3, but it is discounted for only two periods because it will occur two periods after the forecast transaction.

The forward interest rates are the same as shown previously, since it is assumed that interest rates do not change. The spot rates are different but they have not actually changed. They represent the spot rates one period forward and are based on the applicable forward rates.

#### **Hedging instrument**

The objective of the hedge is to obtain an overall interest rate on the forecast transaction and the hedging instrument that is equal to 6.86%, which is the market rate at the inception of the hedge for the period from Period 2 to Period 5. This objective is accomplished by entering into a forward starting interest rate swap that has a fixed rate of 6.86%. Based on the term structure of interest rates that exist at the inception of the hedge, the interest rate swap will have such a rate. At the inception of the hedge, the fair value of the fixed rate payments on the interest rate swap will equal the fair value of the variable rate payments, resulting in the interest rate swap having a fair value of zero. The expected cash flows of the interest rate swap and the related fair value amounts are shown as follows:

#### *Interest rate swap*

	<i>Total</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
<i>Original forward periods</i>						
<i>Remaining periods</i>			<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
	€		€	€	€	€
<i>Cash flows:</i>						
Fixed interest at 6.86%			1,716	1,716	1,716	1,716
Forecast variable interest*			1,313	1,877	1,876	1,813
<i>Forecast based on forward rate</i>			5.25%	7.51%	7.50%	7.25%
Net interest			(403)	161	160	97

	<i>Total</i>				
<i>Original forward periods</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
<i>Remaining periods</i>		<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
	€	€	€	€	€
<i>Fair value</i>					
<i>Discount rate (spot)</i>		5.25%	6.38%	6.75%	6.88%
Fixed interest	6,592	1,694	1,663	1,632	1,603
Forecast variable interest	6,592	1,296	1,819	1,784	1,693
Fair value of interest rate swap	0	(398)	156	152	90

\* forecast variable rate cash flow based on forward rate, e.g. €1,313 = €100,000 × (0.0525 ÷ 4)

At the inception of the hedge, the fixed rate on the forward swap is equal to the fixed rate X would receive if it could issue the debt in three months under terms that exist today.

### Measuring hedge effectiveness

If interest rates change during the period the hedge is outstanding, the effectiveness of the hedge can be measured in various ways.

Assume that interest rates change as follows immediately before the debt is issued at the beginning of Period 2 (this effectively uses the yield curve existing at Period 1 with a 200 basis point (2%) shift).

#### *Yield curve assumption*

<i>Forward periods</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
<i>Remaining periods</i>		<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
Spot rates		5.75%	6.50%	7.50%	8.00%
Forward rates		5.75%	7.25%	9.51%	9.50%

Under the new interest rate environment, the fair value of the pay-fixed at 6.86%, receive-variable interest rate swap that was designated as the hedging instrument would be as follows.

#### *Fair value of interest rate swap*

	<i>Total</i>				
<i>Original forward periods</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
<i>Remaining periods</i>		<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
	€	€	€	€	€
<i>Cash flows:</i>					
Fixed interest at 6.86%		1,716	1,716	1,716	1,716
Forecast variable interest		1,438	1,813	2,377	2,376
<i>Forecast based on new forward rate</i>		<i>5.75%</i>	<i>7.25%</i>	<i>9.51%</i>	<i>9.50%</i>
Net interest		(279)	97	661	660
	<i>Total</i>				
<i>Original forward periods</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
<i>Remaining periods</i>		<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
	€	€	€	€	€
<i>Fair value</i>					
<i>New discount rate (spot)</i>		5.75%	6.50%	7.50%	8.00%
Fixed interest	6,562	1,692	1,662	1,623	1,585
Forecast variable interest	7,615	1,417	1,755	2,248	2,195
Fair value of interest rate swap	1,053	(275)	93	625	610

In order to compute the effectiveness of the hedge, it is necessary to measure the change in the present value of the cash flows or the value of the hedged forecast transaction. There are at least two methods of accomplishing this measurement.

*Method A – Compute change in fair value of debt*

	<i>Total</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
<i>Original forward periods</i>		<i>1</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
<i>Remaining periods</i>						
	€	€	€	€	€	€
<i>Cash flows:</i>						
Fixed interest at 6.86%		1,716	1,716	1,716	1,716	1,716
Principal						100,000
<i>Fair value:</i>						
<i>New discount rate (spot)</i>		5.75%	6.50%	7.50%	8.00%	
Interest	6,562	1,692	1,662	1,623	1,585	
Principal	92,385					*92,385
Total	<u>98,947</u>					
Fair value at inception	<u>100,000</u>					
Difference	(1,053)					

\* €100,000 ÷ (1 + [0.08 ÷ 4])<sup>4</sup>

Under Method A, a computation is made of the fair value in the new interest rate environment of debt that carries interest that is equal to the coupon interest rate that existed at the inception of the hedging relationship (6.86%). This fair value is compared with the expected fair value as of the beginning of Period 2 that was calculated on the basis of the term structure of interest rates that existed at the inception of the hedging relationship, as illustrated above, to determine the change in the fair value. Note that the difference between the change in the fair value of the swap and the change in the expected fair value of the debt (€1,053) exactly offset in this example, since the terms of the swap and the forecast transaction match each other.

*Method B – Compute change in fair value of cash flows*

	<i>Total</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
<i>Original forward periods</i>		<i>1</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
<i>Remaining periods</i>						
Market rate at inception		6.86%	6.86%	6.86%	6.86%	6.86%
Current forward rate		5.75%	7.25%	9.51%	9.50%	
Rate difference		1.11%	(0.39%)	(2.64%)	(2.64%)	
Cash flow difference (principal × rate)		€279	(€97)	(€661)	(€660)	
<i>Discount rate (spot)</i>		5.75%	6.50%	7.50%	8.00%	
Fair value of difference	(€1,053)	€275	(€93)	(€625)	(€610)	

Under Method B, the present value of the change in cash flows is computed on the basis of the difference between the forward interest rates for the applicable periods at the effectiveness measurement date and the interest rate that would have been obtained if the debt had been issued at the market rate that existed at the inception of the hedge. The market rate that existed at the inception of the hedge is the one-year forward coupon rate in three months. The present value of the change in cash flows is computed on the basis of the current spot rates that exist at the effectiveness measurement date for the applicable periods in which the cash flows are expected to occur. This method also could be referred to as the 'theoretical swap' method (or 'hypothetical derivative' method) because the comparison is between the hedged fixed rate on the debt and the current variable rate, which is the same as comparing cash flows on the fixed and variable rate legs of an interest rate swap.

As before, the difference between the change in the fair value of the swap and the change in the present value of the cash flows exactly offset in this example.

*Other considerations*

There is an additional computation that should be performed to compute ineffectiveness before the expected date of the forecast transaction that has not been considered for the purpose of this illustration. The fair value difference has been determined in each of the illustrations as of the expected date of the forecast transaction immediately before the forecast transaction, i.e. at the beginning of Period 2. If the assessment of hedge effectiveness is performed before the forecast transaction occurs, the difference should be discounted to the current date to arrive at the actual amount of ineffectiveness. For example, if the measurement date were one month after the hedging relationship was established and the forecast transaction is now expected to occur in two months, the amount would have to be discounted for the remaining two months before the forecast transaction is expected to occur to arrive at the actual fair value. This step would not be necessary in the examples provided above because there was no ineffectiveness. Therefore, additional discounting of the amounts, which net to zero, would not have changed the result.

Under Method B, ineffectiveness is computed on the basis of the difference between the forward coupon interest rates for the applicable periods at the effectiveness measurement date and the interest rate that would have been obtained if the debt had been issued at the market rate that existed at the inception of the hedge. Computing the change in cash flows based on the difference between the forward interest rates that existed at the inception of the hedge and the forward rates that exist at the effectiveness measurement date is inappropriate if the objective of the hedge is to establish a single fixed rate for a series of forecast interest payments. This objective is met by hedging the exposures with an interest rate swap as illustrated in the above example. The fixed interest rate on the swap is a blended interest rate composed of the forward rates over the life of the swap. Unless the yield curve is flat, the comparison between the forward interest rate exposures over the life of the swap and the fixed rate on the swap will produce different cash flows whose fair values are equal only at the inception of the hedging relationship. This difference is shown in the table below.

	<i>Total</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
<i>Original forward periods</i>						
<i>Remaining periods</i>			<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
Forward rate at inception		5.25%	7.51%	7.50%	7.25%	
Current forward rate		5.75%	7.25%	9.51%	9.50%	
Rate difference		(0.50%)	0.26%	(2.00%)	(2.25%)	
Cash flow difference (principal × rate)		(€125)	€64	(€501)	(€563)	
<i>Discount rate (spot)</i>		<i>5.75%</i>	<i>6.50%</i>	<i>7.50%</i>	<i>8.00%</i>	
Fair value of difference	€1,055	(€123)	€62	(€474)	(€520)	
Fair value of interest rate swap	€1,053					
Ineffectiveness	(€2)					

If the objective of the hedge is to obtain the forward rates that existed at the inception of the hedge, the interest rate swap is ineffective because the swap has a single blended fixed coupon rate that does not offset a series of different forward interest rates. However, if the objective of the hedge is to obtain the forward coupon rate that existed at the inception of the hedge, the swap is effective, and the comparison based on differences in forward interest rates suggests ineffectiveness when none may exist. Computing ineffectiveness based on the difference between the forward interest rates that existed at the inception of the hedge and the forward rates that exist at the effectiveness measurement date would be an appropriate measurement of ineffectiveness if the hedging objective is to lock in those forward interest rates. In that case, the appropriate hedging instrument would be a series of forward contracts each of which matures on a repricing date that corresponds with the date of the forecast transactions.

It also should be noted that it would be inappropriate to compare only the variable cash flows on the interest rate swap with the interest cash flows in the debt that would be generated by the forward interest rates. That methodology has the effect of measuring ineffectiveness only on a portion of the derivative, and IAS 39 does not permit the bifurcation of a derivative for the purposes of assessing effectiveness in this situation<sup>19</sup> – see 2.1.4 above. It is recognised, however, that if the fixed interest rate on the interest rate swap is equal to the fixed rate that would have been obtained on the debt at inception, there will be no ineffectiveness assuming that there are no differences in terms and no change in credit risk or it is not designated in the hedging relationship. [IAS 39.F.5.5].

Although the calculations are set out in longhand, the above example is still simplified. The ‘hypothetical derivative’ method should not be seen as a method in its own right that results in zero ineffectiveness for a hedge with matching terms. There are likely to be elements that are relevant for determining the fair value of the hedging instrument, such as credit risk, that are either not present in the hedged item or that differ between the hedged item and the hedging instrument (see also 5.3.4 below). When developing the revised hedge accounting requirements for inclusion in IFRS 9, the IASB discussed the role of hypothetical derivatives, see Chapter 53 at 5.3 and 6.4.2 for further details.

#### 5.3.2.A Law of small numbers

The dollar-offset method of assessing effectiveness is commonly used because it requires limited additional effort over and above that required to determine the amount of ineffectiveness to be recognised in profit or loss. However, there can be significant problems in achieving high correlation, particularly when the actual movements in fair value or cash flows of the hedging instrument and hedged item are both small.

Consider a fair value hedge of a fixed interest rate bond where interest rates barely change in the period. The change in fair value of the hedging instrument for the period might be €1,000 and the corresponding change in fair value of the hedged item €2,000, being an increase from €1,000,000 to €1,002,000. This would indicate that the hedging relationship was only 50% effective and would therefore not qualify for hedge accounting. However, the changes in fair value are very small in relation to the fair value of the contract being hedged. In fact, it might be possible to demonstrate that had interest rates moved by a more noticeable amount, the change in value of the hedged item and the hedging instrument would have been, say, €50,000 and €49,000 respectively, i.e. the strategy would actually have been highly effective. This scenario is often described as ‘the law of small numbers’ problem. Although well documented, the standard does not address this phenomenon and certainly offers no insight as to how an entity might deal with it.

A common approach, for the purposes of assessing hedge effectiveness, is simply to ignore changes in fair value that are below a given fixed limit (strictly, for the purpose of measuring ineffectiveness, these amounts should be recognised but they will not be material). This limit should be established at the inception of the hedge and should be included in the hedge documentation. Care should be taken in setting this limit – too high and the entity could be accused of not establishing an appropriate method of assessing effectiveness; too low and the risk of failing the assessment is increased.

#### 5.3.3 Dollar-offset: comparison of spot rate and forward rate methods

It was explained at 2.1.4.B above that the spot and interest elements of a forward contract could be treated separately for the purposes of hedge designation. The next

example, based on the implementation guidance, contrasts two variations of the dollar-offset method. Case 1 can be used when the whole of a forward contract is treated as the hedging instrument and the hedged risk is identified by reference to changes attributable to the forward rate (forward rate method). Case 2 can be used when the interest component is excluded and the hedged risk is identified by reference to changes attributable to the spot rate (spot rate method).

To demonstrate these methods, the implementation guidance uses a type of hedge that is very common in practice, the hedging of foreign currency risk associated with future purchases using a forward exchange contract. The example also illustrates the difference in the accounting for such hedges depending on whether the spot and interest elements of a forward contract are treated separately for the purposes of hedge designation.

*Example 52.38: Cash flow hedge of firm commitment to purchase inventory in a foreign currency*

Company A has the Local Currency (LC) as its functional and presentation currency. A's accounting policy is to apply basis adjustments to non-financial assets that result from hedged forecast transactions and it chooses to treat hedges of the foreign currency risk of a firm commitment as cash flow hedges.

On 30 June 2018, A enters into a forward exchange contract to receive Foreign Currency (FC) 100,000 and deliver LC109,600 on 30 June 2019 at an initial cost and fair value of zero. On inception, it designates the forward exchange contract as a hedging instrument in a cash flow hedge of a firm commitment to purchase a certain quantity of paper for FC100,000 on 31 March 2019 and, thereafter, as a fair value hedge of the resulting payable of FC100,000, which is to be paid on 30 June 2019. It is assumed that all hedge accounting conditions in IAS 39 are met.

The relevant foreign exchange rates and associated fair values for the forward exchange contract are provided in the following table:

Date	Spot rate	Forward rate to 30 June 2019	Fair value of forward contract
30 June 2018	1.072	1.096	–
31 December 2018	1.080	1.092	(388)
31 March 2019	1.074	1.076	(1,971)
30 June 2019	1.072	–	(2,400)

The applicable yield curve in the local currency is flat at 6% per annum throughout the period. The fair value of the forward exchange contract is negative LC388 on 31 December 2018 ( $\{[1.092 \times 100,000] - 109,600\} \div 1.06^{(6/12)}$ ), negative LC1,971 on 31 March 2019 ( $\{[1.076 \times 100,000] - 109,600\} \div 1.06^{(3/12)}$ ), and negative LC2,400 on 30 June 2019 ( $1.072 \times 100,000 - 109,600$ ).

**Case 1: Changes in the fair value of the forward contract are designated in the hedge**

Ignoring ineffectiveness that may arise from other elements that have an impact on the fair value of the hedging instrument, the hedge is expected to be fully effective because the critical terms of the forward exchange contract and the purchase contract are otherwise the same. The assessments of hedge effectiveness are based on the forward price.

The accounting entries are as follows.

*30 June 2018*

	LC	LC
Forward	–	
Cash		–

To record the forward exchange contract at its initial fair value, i.e. zero.

31 December 2018

	LC	LC
Other comprehensive income	388	
Forward – liability		388

To recognise the change in the fair value of the forward contract between 30 June 2018 and 31 December 2018, i.e.  $388 - 0 = \text{LC}388$ , in other comprehensive income. The hedge is fully effective because the loss on the forward exchange contract, LC388, exactly offsets the change in cash flows associated with the purchase contract based on the forward price  $\{([1.092 \times 100,000] - 109,600) \div 1.06^{(6/12)}\} - \{([1.096 \times 100,000] - 109,600) \div 1.06\} = -\text{LC}388$ . The negative figure denotes a reduction in the net present value of cash outflows and, therefore, effectively represents a 'gain' to offset the loss on the forward in other comprehensive income.

31 March 2019

	LC	LC
Other comprehensive income	1,583	
Forward – liability		1,583

To recognise the change in the fair value of the forward contract between 1 January 2019 and 31 March 2019, i.e.  $1,971 - 388 = \text{LC}1,583$ , in other comprehensive income. The hedge is fully effective because the loss on the forward exchange contract, LC1,583, exactly offsets the change in cash flows associated with the purchase contract based on the forward price  $\{([1.076 \times 100,000] - 109,600) \div 1.06^{(3/12)}\} - \{([1.092 \times 100,000] - 109,600) \div 1.06^{(6/12)}\} = -\text{LC}1,583$ . The negative figure denotes a reduction in the net present value of cash outflows and, therefore, effectively represents a 'gain' to offset the loss on the forward in other comprehensive income.

	LC	LC
Paper (purchase price)	107,400	
Paper (hedging loss)	1,971	
Other comprehensive income		1,971
Payable		107,400

To record the purchase of the paper at the spot rate ( $1.074 \times 100,000 = \text{LC} 107,400$ ) and remove the cumulative loss on the forward recognised in other comprehensive income from equity, LC1,971, and include it in the initial measurement of the purchased paper. Accordingly, the initial measurement of the purchased paper is LC 109,371 consisting of a purchase consideration of LC 107,400 and a hedging loss of LC 1,971. The payable is recorded as a foreign currency monetary item of FC100,000, equivalent to LC107,400 ( $100,000 \times 1.074$ ) on initial recognition.

30 June 2019

	LC	LC
Payable	107,400	
Cash		107,200
Profit or loss		200

To record the settlement of the payable at the spot rate ( $100,000 \times 1.072 = \text{LC}107,200$ ) and recognise the associated exchange gain of LC200 =  $107,400 - 107,200$  in profit or loss.

	LC	LC
Profit or loss	429	
Forward – liability		429

To recognise the loss on the forward exchange contract between 1 April 2019 and 30 June 2019, i.e.  $2,400 - 1,971 = \text{LC}429$  in profit or loss. The hedge is considered to be fully effective because the loss on the forward exchange contract, LC429, exactly offsets the change in the fair value of the payable



based on the forward price  $[1.072 \times 100,000] - 109,600 - \{([1.076 \times 100,000] - 109,600) \div 1.06^{(3/12)}\} = -LC429$ . The negative figure denotes a reduction in the net present value of the payable and, therefore represents a gain to offset the loss on the forward contract.

	LC	LC
Forward – liability	2,400	
Cash		2,400

To record the net settlement of the forward exchange contract.

Although this arrangement has been set up to be a ‘perfect hedge’, the loss on the forward in the last three months is significantly different from the exchange gain recognised on retranslating the hedged payable. The principal reason for this is that the change in the fair value of the forward contract includes changes in its interest element, as well as its currency element, whereas the payable is translated at the spot foreign exchange rate. [IAS 21.23(a)].

**Case 2: Changes in the spot element of the forward contract only are designated in the hedge**

Ignoring ineffectiveness that may arise from other elements that have an impact on the fair value of the hedging instrument, the hedge is expected to be fully effective because the critical terms of the forward exchange contract and the purchase contract are the same and the change in the premium or discount on the forward contract is excluded from the assessment of effectiveness.

30 June 2018

	LC	LC
Forward	–	
Cash		–

To record the forward exchange contract at its initial fair value, i.e. zero.

31 December 2018

	LC	LC
Profit or loss (interest element of forward)	1,165	
Other comprehensive income (spot element)		777
Forward – liability		388

To recognise the change in the fair value of the forward contract between 30 June 2018 and 31 December 2018, i.e.  $388 - 0 = LC388$ . The change in the present value of spot settlement of the forward exchange contract is a gain of  $LC777 = \{([1.080 \times 100,000] - 107,200) \div 1.06^{(6/12)}\} - \{([1.072 \times 100,000] - 107,200) \div 1.06\}$ , which is recognised in other comprehensive income. The change in the interest element of the forward exchange contract (the residual change in fair value) is a loss of  $LC1,165 = 388 + 777$ , which is recognised in profit or loss. The hedge is fully effective because the gain in the spot element of the forward contract,  $LC777$ , exactly offsets the change in the purchase price at spot rates  $\{([1.080 \times 100,000] - 107,200) \div 1.06^{(6/12)}\} - \{([1.072 \times 100,000] - 107,200) \div 1.06\} = LC777$ . The positive figure denotes an increase in the net present value of cash outflows and, therefore, effectively represents a ‘loss’ to offset the gain on the forward in other comprehensive income.

31 March 2019

	LC	LC
Other comprehensive income (spot element)	580	
Profit or loss (interest element)	1,003	
Forward – liability		1,583

To recognise the change in the fair value of the forward contract between 1 January 2019 and 31 March 2019, i.e.  $1,971 - 388 = LC1,583$ . The change in the present value of spot settlement of the forward exchange contract is a loss of  $LC580 = \{([1.074 \times 100,000] - 107,200) \div 1.06^{(3/12)}\} - \{([1.080 \times 100,000] - 107,200) \div 1.06^{(6/12)}\}$ , which

is recognised in other comprehensive income. The change in the interest element of the forward contract (the residual change in fair value) is a loss of LC1,003 = 1,583 – 580), which is recognised in profit or loss. The hedge is fully effective because the loss in the spot element of the forward contract, LC580, exactly offsets the change in the purchase price at spot rates  $\{([1.074 \times 100,000] - 107,200) \div 1.06^{(3/12)}\} - \{([1.080 \times 100,000] - 107,200) \div 1.06^{(6/12)}\} = -\text{LC}580$ . The negative figure denotes a reduction in the net present value of cash outflows and, therefore, effectively represents a 'gain' to offset the loss on the forward in other comprehensive income.

	LC	LC
Paper (purchase price)	107,400	
Other comprehensive income	197	
Paper (hedging gain)		197
Payable		107,400

To recognise the purchase of the paper at the spot rate ( $1.074 \times 100,000 = \text{LC } 107,400$ ) and remove the cumulative gain on the spot element of the forward contract that has been recognised in other comprehensive income ( $777 - 580 = \text{LC}197$ ) and include it in the initial measurement of the purchased paper. Accordingly, the initial measurement of the purchased paper is LC107,203 consisting of a purchase consideration of LC107,400 and a hedging gain of LC197.

30 June 2019

	LC	LC
Payable	107,400	
Cash		107,200
Profit or loss		200

To record the settlement of the payable at the spot rate ( $100,000 \times 1.072 = \text{LC}107,200$ ) and recognise the associated exchange gain of LC200 ( $= - [1.072 - 1.074] \times 100,000$ ) in profit or loss.

	LC	LC
Profit or loss (spot element)	197	
Profit or loss (interest element)	232	
Forward – liability		429

To recognise the change in the fair value of the forward between 1 April 2019 and 30 June 2019, i.e.  $2,400 - 1,971 = \text{LC}429$ ). The change in the present value of spot settlement of the forward exchange contract is a loss of LC197 =  $\{[1.072 \times 100,000] - 107,200 - \{([1.074 \times 100,000] - 107,200) \div 1.06^{(3/12)}\}\}$ , which is recognised in profit or loss. The change in the interest element of the forward contract (the residual change in fair value) is a loss of LC232 =  $429 - 197$ , which is recognised in profit or loss. The hedge is fully effective because the loss in the spot element of the forward contract, LC197, exactly offsets the gain on the payable reported using spot rates =  $\{[1.072 \times 100,000] - 107,200 - \{([1.074 \times 100,000] - 107,200) \div 1.06^{(3/12)}\}\} = -\text{LC}197$ . The negative figure denotes a reduction in the net present value of the payable and, therefore represents a gain to offset the loss on the forward contract.

	LC	LC
Forward – liability	2,400	
Cash		2,400

To record the net settlement of the forward exchange contract.

The following table provides an overview of the components of the change in fair value of the hedging instrument over the term of the hedging relationship. It illustrates that the way in which a hedging relationship is designated affects the subsequent accounting for that hedging relationship, including the assessment of hedge effectiveness and the recognition of gains and losses. [IAS 39.F.5.6].

Period ending	Change in spot settlement LC	Fair value of change in spot settlement LC	Change in forward settlement LC	Fair value of change in forward settlement LC	Fair value of change in interest element LC
30 June 2018	-	-	-	-	-
31 December 2018	800	777	(400)	(388)	(1,165)
31 March 2019	(600)	(580)	(1,600)	(1,583)	(1,003)
30 June 2019	(200)	(197)	(400)	(429)	(232)
Total	-	-	(2,400)	(2,400)	(2,400)

Ignoring ineffectiveness that may arise from elements that affect the fair value of the hedging instrument only or that may be different from the hedged item to the hedging instrument, both designations result in effective hedges as a result of the way effectiveness is measured. However, there is a significant difference in profit or loss. In part (a) all gains and losses on the forward are recognised in other comprehensive income when designated as a cash flow hedge whereas in part (b) changes in the fair value of the interest element of the forward are immediately recognised in profit or loss. The example also sets out how a single hedge can initially be a cash flow hedge of the future sale and then become a fair value hedge of the associated payable, provided it is documented as such.

The example also indicates that the time value of money is relevant for the assessment of effectiveness even when the spot element is designated in a hedge relationship. However, diversity in practice exists with respect to discounting of the spot element for hedge effectiveness purposes. This is perhaps because in many circumstances the effect of discounting the revaluation of the spot element may not be material. However, some might argue that by saying that 'in assessing the effectiveness of a hedge, an entity generally considers the time value of money' IAS 39 is not entirely clear on the issue of discounting the spot element. [IAS 39.AG112]. This guidance could be interpreted as meaning that there are cases where an entity would not be required to consider the time value of money. Furthermore, many entities consider that the spot element should not be discounted as by definition the 'interest or forward element is excluded'. Nevertheless, IFRS 9 is more explicit and states that 'when measuring hedge ineffectiveness, an entity shall consider the time value of money.' [IFRS 9.B6.5.4]. Therefore, we expect that this diversity in practice might disappear under IFRS 9. See Chapter 53 at 6.4.1.

#### 5.3.4 The impact of the hedging instrument's credit quality

The application guidance to IAS 39 states that a hedge of interest rate risk using a derivative would not be fully effective if part of the change in the fair value of the derivative is attributable to the counterparty's credit risk. [IAS 39.AG109]. The implementation guidance explains that when assessing effectiveness, both at inception and thereafter, the risk of counterparty default should be considered. For a fair value hedge, the implications of this guidance are clear. If there is a change in the derivative counterparty's creditworthiness, the hedging instrument's fair value will change but there is unlikely to be an offsetting change in fair value for

the hedged item. This will affect its effectiveness as measured and should also be taken into account in the assessment of whether it continues to qualify for hedge accounting. [IAS 39.F.4.3].

For a cash flow hedge, the implications of the guidance are slightly less clear. The application guidance noted above is included within a section of the standard titled 'Assessing hedge effectiveness'. This strongly suggests that it is applicable to the assessment of cash flow hedges as well as to their measurement (for which the credit risk of the counterparty is certainly something to be taken into account – see Example 52.32 above).

Some might argue that, to qualify for hedge accounting, the test is that the hedging instrument will be highly effective in achieving offsetting changes in fair value or cash flows attributable to the hedged risk. [IAS 39.88(b), 88(d), AG105(a)]. Further, in the context of a cash flow hedge, the implementation guidance explains that, if default becomes probable, the hedging relationship is unlikely to achieve offsetting cash flows and hedge accounting will be discontinued. [IAS 39.F.4.3]. Together, these might suggest that the assessment of a cash flow hedge's effectiveness should be affected only by significant changes in the counterparty's credit risk, i.e. where default became probable. This is the approach US GAAP adopts. Under US GAAP, if a hedged cash flow is probable of occurring, hedge accounting is permitted and changes in the risk of non-performance (e.g. credit spreads) within certain ranges, all of which still reflect the cash flow remaining probable of occurring, are not relevant to the measurement of hedge ineffectiveness because they will not change the amount of the ultimate cash flow or represent a source of variability. In other words, as long as the cash flows remain probable overall, changes in degrees of probability, as long as overall probability can still be asserted, are not measured under any of the three permitted methods for measuring ineffectiveness in cash flow hedges under US GAAP.<sup>20</sup> Each method contains accommodations for cash flow hedges that are intended to eliminate the generation of hedge ineffectiveness attributable to the use of different yield curves for measuring cash flows related to the hedged item and the derivative. These accommodations involve utilizing the same credit adjusted discount curve for both the derivative and the hedged item in all three methods. However, there is no equivalent guidance in IAS 39. Also, some would view ignoring changes in the credit risk component of a hedging instrument's fair value as inappropriately excluding a portion of the hedging instrument from the hedge relationship (see 2.1.4 above).

We note that the application guidance of IFRS 9 states in the context of the 'hypothetical derivative' method that one cannot include features in the value of the hedged item that only exist in the hedging instrument, but not in the hedged item. Arguably, both the hedged item and the hedging instrument include credit risk. However, the credit risk in the hedged item is likely to be different from the credit risk in the hedging instrument. This is true even when the specific credit risk that exists in the hedged item is not included in the hedge relationship as a benchmark interest rate has been designated as the hedged risk (see 2.2.1.A above). Consequently, at least when applying IFRS 9, credit risk also needs to be considered when assessing the

effectiveness of cash flow hedges (see Chapter 53 at 5.3), although some may argue that this approach should also be applied under IAS 39. [IFRS 9.B6.5.5].

In addition to changes in the counterparty's credit risk, changes in the reporting entity's own credit risk may also affect the fair value of the hedging instrument in ways that are not replicated in the hedged item (see Chapter 53 at 5.3 and Chapter 14 at 11.3). The impact will be more pronounced where the hedging derivative is longer term, has a significant negative fair value and there exist no other credit enhancements such as collateral agreements or credit break clauses. Consequently, changes in the hedging instrument's fair value arising from the reporting entity's own credit risk will need to be considered when measuring hedge effectiveness and assessing the effectiveness of fair value hedges. The extent to which they need to be considered when assessing the effectiveness of a cash flow hedge is subject to the same uncertainties as noted further above.

During the financial crisis the IASB's Expert Advisory Panel acknowledged that, in practice, this is an area that had received limited attention by many entities, possibly because such changes in value have been considered insignificant or immaterial. However the financial crisis, which started in the second half of 2007, brought the related issues into focus as the fair values of some instruments were impacted to a greater extent by credit risk than they had historically and IFRS 13 is clear that credit risk should be taken into account when measuring the fair value of derivatives (see Chapter 14 at 11.3).

Nowadays, most over-the-counter derivative contracts between financial institutions are cash collateralised. Furthermore, current initiatives in several jurisdictions, such as, the European Market Infrastructure Regulation (EMIR) in the European Union or the Dodd-Frank Act in the United States, will result in more derivative contracts being collateralised by cash. Cash collateralisation significantly reduces the credit risk for both parties involved. See 4.2.3.A above for a discussion of the STM model.

#### 5.3.4.A *Discount rates for calculating the fair value of derivatives*

Historically, the fair values of derivatives have been calculated using LIBOR-based swap curve as the discount factor, since it reflected the cost of funding for banks. However, the use of LIBOR as the standard discount rate ignores the fact that a number of derivative transactions are collateralised. For cash collateralised trades, a more relevant discount rate is an overnight rate rather than LIBOR.

While there has always been a difference between LIBOR and the overnight index swap (OIS) rates, the difference had historically been equal to a few basis points. However, the basis differential widened significantly during the 2008 financial crisis and is not expected to revert in the foreseeable future. Therefore, market participants generally consider an instrument's real cash flows including collateral, and OIS rate curves are generally being used to discount those derivatives that are fully cash collateralised. In other words, LIBOR (forward) rates are only used to project the future floating cash flows in collateralised derivatives but the cash flows are then discounted using OIS rates.

The use of two different yield curves (often referred to as the ‘multi curve issue’) has an effect on the fair value of the derivative and therefore also can have an effect on hedge accounting if the derivative is used in a hedge accounting relationship:

- For fair value hedges, it is likely that there will be ineffectiveness. This is because different curves are used for the calculation of future floating cash flows and discounting the cash flows from the derivative, while only one curve is used for discounting the hedged item’s fixed cash flows.
- In the case of cash flow hedges, the situation is less clear and comes back to the discussion about the use of the ‘hypothetical derivative’ method set out above at 5.3.4 above. However, the situation appears to be clearer on application of IFRS 9 given the guidance on hypothetical derivatives in paragraph B6.5.5 of IFRS 9 which precludes including features in the value of the hedged item that only exist in the hedging instrument, but not in the hedged item (see Chapter 53 at 6.4.2). Accordingly under IFRS 9 it is not permissible to assume a hypothetical derivative is subject to the credit risk inherent in an OIS rate just because the associated hedged item is hedged using a collateralised derivative. This will likely result in ineffectiveness under IFRS 9, although some may argue that this approach should be applied under IAS 39 (see Chapter 53 at 6.4.2 for more details).
- A derivative that is novated to a central clearing party may as a result become cash collateralised (see 4.2.3.A above). The application guidance clarifies that the change in the fair value of the hedging instrument that results from the changes to the contract in connection with the novation (e.g. a change in the collateral arrangements) must be included in measurement of hedge ineffectiveness. This would also affect the hedge effectiveness assessment. *[IAS 39.AG113A]*.

#### *5.3.4.B Foreign currency basis spreads*

Another phenomenon of the financial crisis is the increase in the currency basis spreads. The currency basis is the charge above the risk-free rate in a foreign country to compensate for country and liquidity risk. Consequently, currency basis is sensitive to changes in the relative sovereign ratings of the two currencies involved. Historically, basis spreads had been low, but increased significantly after the financial crisis and the following sovereign crisis. Volatility in currency basis can create hedge ineffectiveness when using a cross currency interest rate swap (CCIRS) to hedge the foreign exchange and interest rate risk of a debt instrument issued in a foreign currency.

When designating the CCIRS in a fair value hedge, the gain or loss on the hedged item attributable to changes in the hedged interest rate risk is determined based on the foreign currency interest rate curve, therefore excluding currency basis. IAS 21 then requires such a monetary item in a foreign currency to be translated to the functional currency using the spot exchange rate. *[IAS 21.23]*. Conversely, the fair value of the CCIRS incorporates the currency basis spread which results in ineffectiveness.

By contrast, IFRS 9 identifies cross currency basis spread as a ‘cost of hedging’ for which a new accounting approach was developed. Guidance in IFRS 9 permits an appropriate portion of the change in the fair value of cross currency basis spreads to be taken to OCI rather than immediately recognised in profit or loss, see Chapter 53 at 7.3.

### 5.3.5 Hedging using instruments with a non-zero fair value

The application guidance to IAS 39 states that a hedge of a highly probable forecast purchase of a commodity with a forward contract is likely to be highly effective if, among other things, the fair value of the forward contract at inception is zero (see 5.3.8 below). [IAS 39.AG108]. A non-optional derivative, such as a forward or swap contract, that has a non-zero fair value is unlikely to be a perfectly effective hedging instrument, especially in a cash flow hedge. This is because the derivative contains a 'financing' element (the initial fair value), gains and losses on which will not be replicated in the hedged item and therefore the hedge contains an inherent source of ineffectiveness. In extreme cases it may not be possible to determine that the hedge will be highly effective. This situation can arise when a derivative is designated or redesignated in a hedging relationship subsequent to its initial recognition or in a business combination (see 5.1.1 above).<sup>21</sup>

### 5.3.6 Regression analysis and other statistical methods

The use of regression analysis is referred to in the standard in the context of optimising the ratio of hedging instrument quantities to hedged item quantities in order to improve the effectiveness of a hedge. [IAS 39.AG100]. The implementation guidance also explains that statistical measurement techniques such as regression analysis may also be used for assessing hedge effectiveness. [IAS 39.F.4.4]. This section sets out the basic concepts underlying linear regression analysis, together with guidelines and considerations that we believe are appropriate when determining whether a hedge relationship can be considered highly effective when using this approach to test effectiveness.

#### 5.3.6.A Basic concepts of regression

Linear regression is a method of identifying and describing the relationship between variables, for example  $y$  and  $x$ ; linear refers to the assumption of a straight-line relationship between the variables. Regression analysis identifies a line of 'best fit' through a swarm of data using least squares analysis to minimise the total squared distances of the plotted points from the line. Some regression analyses will indicate a wider scatter of data points around the regression line than others; these wider scatters indicate a relationship between the variables that is less strong than a regression with a narrow scatter.

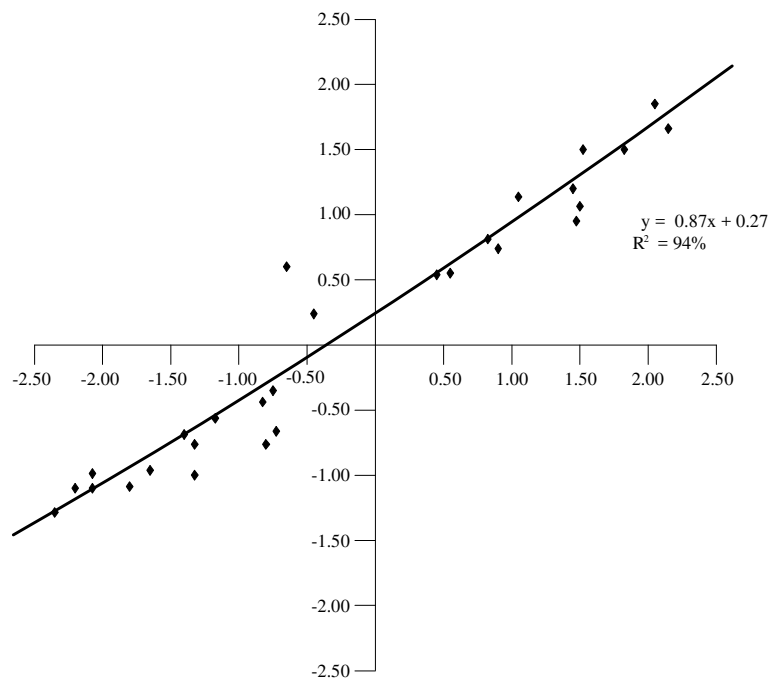
The regression is represented by the algebraic formula:

$$y = \alpha + \beta x + \epsilon$$

In this equation,  $y$  is the dependent variable,  $x$  is the independent variable,  $\alpha$  is the intercept,  $\beta$  is the slope of the regression line, and  $\epsilon$  is the residual, or error term. In the context of hedge effectiveness, it is convenient to define  $y$  as the change in the fair value of the hedged item, and  $x$  as the change in fair value of the hedging instrument.  $x$  and  $y$  are defined as changes rather than absolute amounts, because hedge accounting refers to offsetting changes in fair value (or cash flows) leading to effective hedges. If it is assumed hedging instruments have a starting value of zero, the implication is that  $x$  and  $y$  are defined as periodic changes and not as cumulative changes.

The following example of a regression describes the formula's terms in more detail:

*Figure 52.1: The line of best fit, drawn through a series of correlated observations of changes in the x and y variables (such a line is likely to incorporate a non-zero intercept, if only due to random error)*



The coefficient of determination,  $R^2$ , is the percentage of the variance in  $y$  that is 'explained' by  $x$ , and is a measure of the tightness of the distribution around the regression line. In the example above, an  $R^2$  value of 94% indicates that 94% of the variance in  $y$  can be explained by  $x$ . When assessing hedge effectiveness, the closer the line is to the actual results, the less ineffectiveness there will be. Higher  $R^2$  values indicate a stronger relationship. The square root of this value,  $R$ , is often referred to as the coefficient of correlation. We consider that the value of  $R^2$  should be at least 80% in order to indicate an effective hedge relationship.

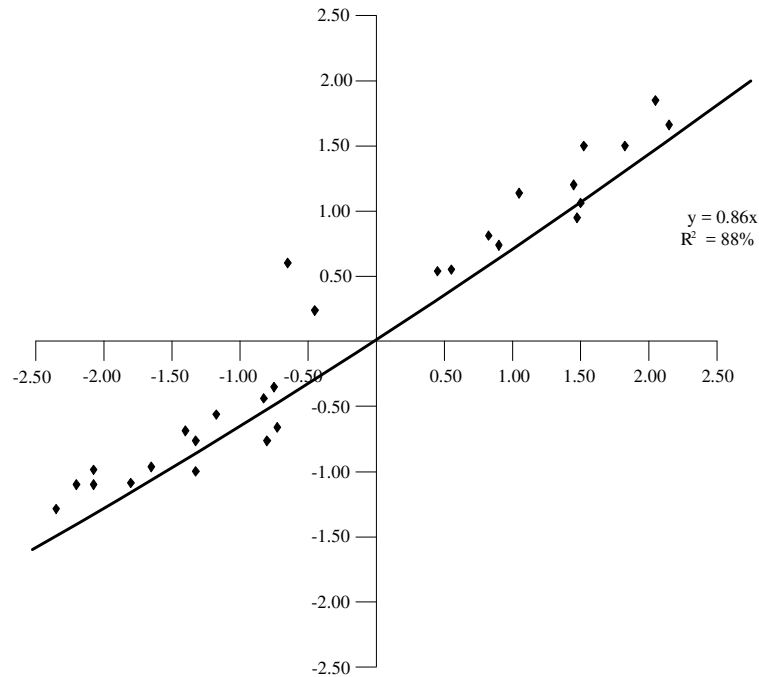
The slope of the regression line is known as  $\beta$  or beta. In Figure 52.1 above, the slope of 0.87 indicates that, given an increase in  $x$  of 1, we would expect an increase in  $y$  of 0.87.

As noted at 2.2.2 above, IAS 39 describes a situation in which expected hedge effectiveness is maximised if the ratio between the hedging instrument and the hedged item is set at a level other than 1.00. In such circumstances it may be easier to demonstrate hedge effectiveness by multiplying the  $y$  observations by the hedge ratio so as to bring the slope closer to 1.



The intercept is the point at which the regression line crosses the y-axis – the expected value of  $y$  when  $x$  is 0. In Figure 52.1 above, the intercept is 0.27. The presence of a non-zero intercept increases the likelihood of hedge ineffectiveness, as it implies that  $y$  will change even when there is no change in  $x$ . While a small  $y$  intercept will not necessarily invalidate a hedging relationship, it is easier to demonstrate that a hedge is effective by forcing the line of regression to have a  $y$  intercept of zero, although this will reduce the value of  $R^2$ , and may also alter the slope. The chart below illustrates the impact of forcing the regression line through the origin. The effect is a reduction of the  $R^2$  to 88% but (as described further below) an increase in the ‘confidence’ of the estimate.

Figure 52.2: *The line of best fit, drawn through a series of correlated  $x$  and  $y$  movements so that it passes through the origin*



When performing regression analysis, an important notion is the concept of the sample as opposed to the population. The sample represents actual observations, whereas the population is described by all possible observations, including the sample. It is assumed that the observations are drawn from an unknown, underlying distribution. Understanding this distribution enables an assessment of whether a hedging relationship is indeed effective, however, this underlying distribution is unknown. Therefore, conclusions are drawn from the observations and the results are ‘extrapolated’ to the underlying distribution. As such, estimates of the parameters of the population are based on the parameters of the sample. Statistical techniques can be used to express the confidence in the estimate.

For this reason, it is important to consider the statistical significance of the sample regression parameters: the degree to which the sample will provide an indication of the true (population) regression parameters (the underlying distribution). This will largely be driven by the number of data points sampled and the consistency between these points. Without some consideration of the confidence in the regression analysis, it is possible that a high  $R^2$  could be calculated and an appropriate slope based on the sample (implying that a hedge will be highly effective), even though the sample is not a fair reflection of the population as a whole. If this were the case, it would not be appropriate to conclude that the hedge relationship will be highly effective, and there is a higher possibility of the hedge relationship failing to satisfy a retrospective test of effectiveness in future periods. In practice, when an entity enters into a new hedge relationship, it may not have the number of data points necessary to generate a reasonable population for regression analysis. In such situations, entities often generate additional data points by looking to periods prior to the inception of the hedge relationship. Effectively, the historic data points are used to help simulate how the hedge relationship would have performed under historically observed conditions, but this only makes sense provided such data is representative of those subsequent to inception. This issue is particularly relevant for relationships that include hedged items with an embedded floor within economies presently experiencing a negative interest rate environment but for which historically it was more common for positive interest rates to be applied, for example in some European countries – see Chapter 53 at 5.2.

There are a number of methods that can be used to assess the significance of the regression, including the sample size, T tests, F tests and P statistics. While these tests, when performed appropriately, are largely consistent, we recommend incorporating all tests into a single methodology to ensure sufficient statistical significance e.g. a 95% confidence that the actual population slope (as compared to the sample slope) is within the 80% to 125% range. Using this single methodology incorporates the need to have a minimum number of data points. The statistical strength of the regression analysis increases with the number of data points and in our experience the use of 30 data points is generally helpful in achieving statistical significance.

The following graph illustrates this concept. Regression theory explains that the slope follows a t-distribution, where the shape is largely determined by the number of data points available. Using this distribution, the likelihood of the true slope being within the 80% to 125% range can be determined. For example, Figure 52.3 illustrates a sample in which there is a 96.4% probability that the slope is within the desired range.

Figure 52.3: The probability distribution of the true slope, for the given sample, follows a *t*-distribution, with a 96.4% probability that the slope is within the 80% to 125% range



The error term  $\varepsilon$  represents the unpredicted or unexplained variation in the hedged item. In a perfectly valid regression, the error terms should be normally distributed, with constant variance, and should be independent of each other (i.e. should have no 'autocorrelation')<sup>22</sup>. This is an impossible expectation for real market data as financial markets almost always incorporate autocorrelation of some sort. However the imperfections most likely to invalidate regression conclusions, such as significant trends, are less likely to occur in financial price data due to the existence of arbitrage activities that take advantage of such inefficiencies.

Finally, when considering whether to use regression analysis, we believe that there must be a logical, a priori, expectation of a relationship between the relevant variables (sometimes referred to as causality). It would be inappropriate to establish a hedge relationship based solely on statistics, as there is a greater possibility of the hedge relationship being coincidental or temporary, and so breaking down in the future if it has no ongoing economic or intuitive rationale. In fact, the hedge accounting requirements under IFRS 9 explicitly require an economic relationship between the hedged item and the hedging instrument to qualify for hedge accounting, which cannot be demonstrated using correlation as a single indicator (see Chapter 53 at 5.2).

### 5.3.6.B Summary

In order to assess a hedge relationship as highly effective (either on a prospective or retrospective basis) using regression analysis, we believe that all of the following criteria should normally be met:

- the line of best fit passes through the origin;
- the value of  $R^2$  is at least 80%;
- there is at least 95% confidence that the true population slope of the line is within the 80% to 125% range; and
- there is an intuitive economic rationale for the hedge relationship.

Whilst a regression analysis that does not comply with these guidelines is not necessarily invalid, in such circumstances, consideration should be given so that inappropriate reliance on the regression analysis is avoided.

Finally, the Interpretations Committee concluded that if regression analysis, as the originally documented method for assessing the hedge's retrospective hedge effectiveness, demonstrated that a hedge had been effective but a 'dollar-offset' test would have fallen outside of the 80-125% range, hedge accounting would not necessarily be precluded.<sup>23</sup> However, in such instances, care should be taken to ensure that the regression analysis remains valid, especially if the dollar-offset comparison regularly falls outside of the range.

### 5.3.7 'Short-cut method'

Under US GAAP, an entity is allowed to assume that there will be no ineffectiveness in a hedge of interest rate risk using an interest rate swap as the hedging instrument, provided specified criteria are met. This is known as the 'short-cut method' for assessing hedge effectiveness. [IAS 39.BC132]. The original version of IAS 39 precluded such an approach and during the improvements project many commentators urged the IASB to permit the use of the short-cut method under IAS 39. [IAS 39.BC133]. However, one of the general principles of IAS 39 is that ineffectiveness in a hedging relationship is measured and recognised in profit or loss and the IASB did not want to make an exception to this principle. Therefore, IAS 39 was not amended to permit the short-cut method. [IAS 39.BC134].

### 5.3.8 'Critical terms match' approach

The application guidance explains that if the principal terms of the hedging instrument and of the hedged asset, liability, firm commitment or highly probable forecast transaction are the same, the changes in fair value and cash flows attributable to the risk being hedged may be likely to offset each other fully, both when the hedge is entered into and afterwards. For example, a hedge of a highly probable forecast purchase of a commodity with a forward contract is likely to be highly effective if:

- the forward contract is for the purchase of the same quantity of the same commodity at the same time and location as the hedged forecast purchase;
- the fair value of the forward contract at inception is zero; and

- either the change in the discount or premium on the forward contract is excluded from the assessment of effectiveness and included directly in profit or loss or the change in expected cash flows on the forecast transaction is based on the forward price for the commodity (see 5.3.3 above). *[IAS 39.AG108].*

Similarly, an interest rate swap is likely to be an effective hedge if the notional and principal amounts, term, repricing dates, dates of interest and principal receipts and payments, and basis for measuring interest rates are the same for the hedging instrument and the hedged item. *[IAS 39.AG108].* However, an entity would of course have to consider other potential elements of ineffectiveness, such as the ones described at 5.3.4 above.

Sometimes the hedging instrument offsets only part of the hedged risk. For example, if the hedging instrument and hedged item are denominated in different currencies that do not move in tandem, the hedge would not be fully effective. *[IAS 39.AG109].*

In deciding not to permit the short-cut method, the IASB noted that IAS 39 permits the hedging of portions of financial assets and liabilities in cases where US GAAP does not. Therefore, an entity may hedge a portion of a financial instrument (e.g. interest rate risk – see 2.2.1 above) and if the critical terms of the hedging instrument and the hedged item are the same, the entity will in many cases be able to conclude that the hedge is perfectly effective based on a qualitative assessment. *[IAS 39.BC135].* The implementation guidance continues with this theme and explains that, to improve hedge effectiveness, an entity may designate only certain risks in an overall exposure as being hedged. For example, if an interest rate swap issued by a counterparty with a AA credit rating is used to hedge the fair value of a fixed interest rate debt instrument, designating only the exposure in the debt related to AA rated interest rate movements will reduce the impact on effectiveness of market changes in the debt counterparty credit spreads. *[IAS 39.F.4.7].*

Therefore it can be seen, at least for hedges of financial items, that the designation of the hedge can be tailored to reduce the ineffectiveness that can feasibly occur, sometimes significantly. However, because ineffectiveness may still arise as a result of other attributes (e.g. liquidity of the hedging instrument or its credit risk – see 5.3.4 above), hedge effectiveness cannot be assumed throughout the life of the hedge even if the principal terms of the hedging instrument and hedged item are the same. *[IAS 39.F.4.7].*

It is clear from the guidance discussed above that IAS 39 acknowledges a method of assessing prospective hedge effectiveness that involves comparing the critical terms of the hedging instrument and the hedged item, supplemented by a qualitative review of counterparty credit risk and other factors such as liquidity and credit risk of the hedging instrument (a ‘critical terms match’ approach). US GAAP also allows a ‘critical terms match’ approach to be used for retrospectively assessing the effectiveness of cash flow hedges,<sup>24</sup> but the lack of any equivalent guidance in IAS 39 has led some to say that a quantitative assessment is always necessary.

In fact, the extent of testing that is required to qualify for hedge accounting is not an accounting question, but more a regulatory issue. We have seen increasing evidence of financial reporting (and auditing) regulators setting their own benchmarks as to what

they consider to be appropriate methods to use in practice, with many being reluctant to accept retrospective assessments based on the matching of critical terms and other qualitative factors. Recent years have seen new challenges to the use of seemingly simple methods for assessing hedge effectiveness, including:

- the emergence of the multi-curve issue in determining the fair value of derivatives (see 5.3.4.A above);
- a widening of basis risk spreads within cross-currency interest rate swaps (see 5.3.4.B above) and the fact that the IASB highlighted currency basis spread as a source of hedge ineffectiveness in the hedge accounting requirements of IFRS 9 (see Chapter 53 at 7.3); and
- the increased impact of credit risk on the fair value of derivatives, including an explicit requirement in IFRS 13 to take account of credit risk, including the reporting entity's own credit risk, when estimating fair values (see Chapter 14 at 11.3).

These make it increasingly difficult to justify the use of such methods and whilst they have sometimes been accepted by regulators in the past, we would advise strong caution against their continued use. In general, a quantitative method will give rise to a much lower risk of challenge than a qualitative method although the effectiveness assessment under IFRS 9 may often be qualitative (see Chapter 53 at 5.1). The risk is heightened because, if it is determined that the selected method of assessing effectiveness is inappropriate, then hedge accounting should arguably never have been applied even if the hedge was demonstrably effective by other means such as a simple dollar-offset calculation (an approach the SEC appears to follow rigorously).<sup>25</sup>

### 5.3.9 Interest accruals and 'clean' versus 'dirty' values

Another problem that entities can face when assessing the effectiveness of hedging instruments such as interest rate swaps, is the fair value 'noise' that is generated between interest rate reset dates. The payments on an interest rate swap are typically established at the beginning of a reset period and paid at the end of that period. Between these two dates the swap is no longer a pure pay-fixed receive-variable (or *vice versa*) instrument because both the next payment and the next receipt are fixed. Accordingly, the corresponding changes in the fair value of the hedged item (e.g. fixed rate debt) will not strictly mirror that of the swap. This problem becomes more acute the less frequently variable interest rates are reset to market rates.

The IASB does not seem to see this as a potential source of ineffectiveness. For example, it is stated in IAS 39 that 'an interest rate swap is likely to be an effective hedge if the notional and principal amounts, term, repricing dates, dates of interest and principal receipts and payments, and basis for measuring interest rates are the same for the hedging instrument and the hedged item.' [IAS 39.AG108]. Further, given the IASB's statements (see 5.3.7 above) regarding the decision not to permit the short-cut method, which is only available for hedge relationships involving interest rate swaps, it seems safe to assume that they do not normally expect ineffectiveness from interest rate repricings to arise on such relationships where the hedge is 'perfect'. In fact, it is interesting to note that the one comprehensive example showing the measurement of effectiveness of an interest rate swap (see Example 52.37 at 5.3.2 above) completely avoids this issue.

Entities are therefore left with little practical guidance in dealing with the ineffectiveness that results from hedges that seem highly effective. In deliberating the accounting for macro hedging (see 6 below) the IASB staff concluded that ‘hedge ineffectiveness can arise from movements in the fair value of hedging instruments owing to changes in ... floating legs within hedging derivatives’.<sup>26</sup>

A common approach to avoid much of this noise is to use ‘clean’ fair values (which effectively ignore the effects of the next net settlement or interest payment) rather than ‘dirty’ fair values (which includes them) for assessment of effectiveness. The mathematics of an effectiveness assessment using this approach should mean there is a much lower likelihood of the hedge failing the test. This approach is likely to prove acceptable in many situations, especially where the interval between re-pricings is frequent enough, e.g. quarterly rather than yearly, so as to minimise the changes in fair value from the fixed net settlement or next interest payment.

However, ineffectiveness should always be measured and recognised in profit or loss. This ineffectiveness is likely to be more significant when interest rates are more volatile, as experienced by a number of entities during the ‘credit crunch’ starting in the second half of 2007.

### 5.3.10 Effectiveness of options

It was explained at 2.1.4.A above that the time value of an option may be excluded from the hedge relationship and, in many cases, this may make it easier to demonstrate the effectiveness of a hedge. In such cases, if the documented hedged risk is appropriately customised there will, in many cases, be no ineffectiveness to recognise, as set out in the following example.

#### *Example 52.39: Out of the money put option used to hedge an equity share*

Company A has an investment in one hundred shares of Company Z. The shares are classified as available-for-sale, therefore associated fair value gains and losses are recognised in other comprehensive income. The shares have a quoted price of £100 each and to partially protect itself against decreases in the share price, A acquires a put option, which gives it the right to sell one hundred shares in Z for £90 each.

A is permitted to designate changes in the option’s intrinsic value as the hedging instrument. The changes in the intrinsic value of the option provide protection against the risk of variability in Z’s share price below or equal to the strike price of the put of £90. For prices above £90, the option is out of the money and has no intrinsic value. Accordingly, gains and losses on the shares in Z for prices above £90 are not attributable to the hedged risk for the purposes of assessing hedge effectiveness and recognising gains and losses on the hedged item.

Therefore, changes in the fair value of the shares in Z are recognised in other comprehensive income if associated with variations in share price above £90. Changes in the fair value of the shares in Z associated with price declines below £90 form part of the designated fair value hedge and are recognised in profit or loss. Assuming the hedge is effective, those changes are offset by changes in the intrinsic value of the put, which are also recognised in profit or loss (see 4.1.1 above).

Changes in the time value of the put are excluded from the designated hedging relationship and recognised in profit or loss as they arise. [IAS 39.F.1.10].

Under US GAAP, implementation guidance sets out a method of assessing effectiveness and measuring ineffectiveness of an entire option (i.e. including its time value) in certain cash flow hedges, which normally resulted in the measurement of no ineffectiveness.<sup>27</sup> This allows entities to recognise all changes in the fair value of an option (including the time value) in other comprehensive income until the hedged transaction affects profit or loss.

This guidance appears to be an exception to, rather than an interpretation of, the general principles of hedge accounting under US GAAP. Consequently, the use of this method was seen by many as incompatible with IAS 39. The topic was brought to the attention of the Interpretations Committee and in September 2007 the committee decided not to take the issue onto its agenda as the IASB's project on 'portions' would make it clear that such an approach is not allowed by IAS 39.<sup>28</sup>

The IASB's project resulted in amendments to IAS 39 being issued in July 2008 which added implementation guidance to the standard. The guidance reiterates that if the principal terms of a forecast transaction and an option are the same, excluding the time value of the option from the hedging instrument may result in a hedging relationship that is perfectly effective in achieving offsetting changes in cash flows attributable to the hedged one-sided risk. [IAS 39.AG110A].

Conversely, if a purchased option is designated in its entirety as the hedging instrument of a one-sided risk arising from a forecast transaction, the hedging relationship will not be perfectly effective. This is because the premium paid for the option includes time value and, as discussed at 2.1.4.A above, a designated one-sided risk does not include the time value of an option. Therefore, in this situation, there will be no offset between the cash flows relating to the time value of the option premium paid and the designated hedged risk. [IAS 39.AG110B].

### 5.3.11 Hedged items with embedded optionality

As described at 2.1.4.A above, an entity can exclude the time value of the hedging instrument from the hedging relationship when hedging with options. Although the entity would need to recognise any changes in the fair value of the time value directly in profit or loss, it most likely would achieve a higher hedge effectiveness from an accounting perspective.

However, if the hedged item contains embedded optionality, which is matched by optionality within the hedging instrument, including the time value from both the hedged item and hedging instrument in the hedge relationship may result in a highly effective hedge. This is because there will be a level of offset from changes in time value of the hedging option and changes in the embedded time value in the hedged item. The following fact patterns provide examples of where there may be offsetting changes in time value:

- Entity A has purchased 10 year fixed rate debt. At the end of years five and seven, the issuer has the option to prepay the debt at par. Entity A may choose to eliminate variability in the fair value of the fixed rate debt by transacting a pay fixed receive floating interest rate swap, with matching prepayment options at five and seven years.
- Entity B has issued floating rate debt which includes an embedded floor (e.g. interest is floored at 0%). Entity B could choose to eliminate the variability in the cash flows above the floor (and lock in current low rates), by transacting a pay fixed swap with an embedded floor.

In the case of Entity A above, it is relatively easy to conclude that the change in value of the embedded prepayment option should form part of the effectiveness assessment



and measurement of ineffectiveness, as a fair value hedge. [IAS 39.F.6.2]. However, it is less clear in the case of Entity B since the arrangement would be a cash flow hedge.

IAS 39 provides guidance on hedge accounting for purchased options hedging a one-sided risk in a forecast transaction. The guidance explains that the hedged risk cannot include option time value because time value is not a component of the forecast transaction that affects profit or loss. Therefore, if an entity designates a purchased option in its entirety, as the hedging instrument of a one-sided risk arising from a forecast transaction, the hedging relationship will not be perfectly effective. In this situation, there will be no offset between the cash flows relating to the time value of the option premium paid and the designated hedged risk. [IAS 39.AG99BA, AG110B].

This might indicate that including the change in the time value of the embedded option in the hedged item as part of the change in value of the hedged item for effectiveness purposes is also not permitted by IAS 39. However, the above guidance was written specifically for forecast transactions that do not include time value, whereas hedged items with embedded optionality do include time value. Therefore, we believe that the guidance referred to above is not relevant for hedged items that do include optionality.

IAS 39 defines a cash flow hedge as a hedge of an exposure to variability in cash flows that could affect profit or loss. [IAS 39.86(b)]. Arguably, a change in the time value of an embedded option within the hedged item does not affect profit or loss nor does it result in cash flow variability. However, we believe that cash flow variability and the potential to affect profit or loss must be demonstrated for the designated hedged risk, which in this case is the underlying of the host hedged item and the embedded option. The measurement of ineffectiveness should incorporate cumulative change in fair value (present value) of the expected future cash flows on the entire hedged item, with respect to the designated hedged risk. [IAS 39.96(a)(i)]. The fair value of the hedged cash flows, which include the embedded optionality, includes the time value and not just the intrinsic value.

Furthermore, the standard requires that the hedge is expected to be highly effective in achieving offsetting changes in fair value or cash flows attributable to the hedged risk. [IAS 39.88(b)]. Ordinarily, in order to demonstrate compliance with this requirement, it is not acceptable only to compare cash flows, since it is also necessary to consider the time value of money by discounting the cash flows. The time value of money also does not affect profit or loss or cause variability in the cash flows in a cash flow hedge, but is considered a factor in the cumulative fair value (present value) of the future cash flows (consistent with IAS 39.96(a)(i)). This same approach should be applied to the time value of the embedded optionality within the hedged item with respect to the hedged risk, irrespective of whether the associated hedging instrument also has optionality.

### 5.3.12 *Net investment hedges: identifying the effective portion*

As set out at 3.3.1 above, IFRIC 16 explains that the hedged risk in a net investment hedge is defined by reference to the functional currency of a parent of the foreign operation that is the subject of the hedge. For the purpose of assessing effectiveness, the change in value of the hedging instrument in respect of foreign exchange risk should

be computed by reference to the functional currency of this parent entity. [IFRIC 16.15]. This change in value is also the amount that should be reclassified from equity to profit or loss if the hedged foreign operation is disposed of. [IFRIC 16.16].

Depending on where the hedging instrument is held, in the absence of hedge accounting the total change in its value might be recognised in profit or loss, in other comprehensive income, or both. [IFRIC 16.15]. For example, consider the situation outlined in Example 52.22 above (see 3.3.1 above). In the absence of hedge accounting, the total US\$/€ foreign exchange difference on A's US\$300 million external borrowing would be recognised in P's consolidated financial statements as follows: [IFRIC 16.AG5]

- US\$/¥ spot foreign exchange rate change, translated to euro, in profit or loss; and
- ¥/€ spot foreign exchange rate change in other comprehensive income.

The interpretation states that the assessment of effectiveness should not be affected by where the change in value of the hedging instrument would be recognised. In applying hedge accounting, the total effective portion of the change should be included in other comprehensive income. [IFRIC 16.15]. Nevertheless, the application guidance indicates that in certain situations there may be ineffectiveness recognised in profit or loss.

Consider the situation set out in Example 52.22 above. If A's borrowings were designated in a hedge of the €/US\$ spot risk associated with P's net investment in C, the application guidance states that all of the €/US\$ foreign exchange difference would, after the application of hedge accounting, be recognised in other comprehensive income and be included in the foreign currency translation reserve relating to C. The guidance says this is because the change in value of both the hedging instrument and the hedged item are computed by reference to the functional currency of P (euro) against the functional currency of C (US dollars). [IFRIC 16.AG4, AG7].

However, if the borrowing was designated as a hedge of the £/US\$ spot foreign exchange risk between C and B, the guidance states that the total US\$/€ foreign exchange difference on A's borrowing would instead be recognised in P's consolidated financial statements as follows: [IFRIC 16.AG5]

- the £/US\$ spot foreign exchange rate change (the effective portion of the hedging instrument) in the foreign currency translation reserve relating to C;
- £/¥ spot foreign exchange rate change, translated to euro, in profit or loss; and
- ¥/€ spot foreign exchange rate change in other comprehensive income.

Finally, it states that if P held the US\$ denominated borrowings and designated them in a hedge of the spot foreign exchange exposure (£/US\$) between B and C, only the £/US\$ part of the change in the value of the borrowings (the effective portion of the hedging instrument) would be included in P's foreign currency translation reserve relating to C. The remainder of the change (equivalent to the £/€ change on £159 million) would be included in P's consolidated profit or loss. [IFRIC 16.AG12].

The assessment of effectiveness is not affected by whether the hedging instrument is a derivative or a non-derivative instrument or by the method of consolidation. [IFRIC 16.15, AG7].

### 5.3.13 *Net investment hedges: other practical issues*

There can be a number of other issues surrounding what constitutes a valid net investment hedge and the remainder of this section deals with some of the other practical aspects of such hedges on the assumption that the hedge relationship is considered valid.

#### 5.3.13.A *Non-derivative liabilities used as the hedging instrument*

A foreign currency denominated non-derivative financial liability, such as a borrowing, can be used as the hedging instrument in a hedge of a net investment in a foreign operation. This can be seen as a pure 'accounting' hedge, i.e. the retranslation gain or loss on the borrowing (an accounting entry representing a part of its change in fair value that is accounted for on a continuous basis) can offset the retranslation gain or loss on the net investment (another accounting entry). In fact, if the liability is:

- denominated in the same currency as the functional currency of the hedged net investment;
- held by an entity with the same functional currency as the parent by which the hedged risk is defined;
- has an amortised cost that is lower than the net investment in the foreign operation; and
- is designated appropriately,

the hedge is likely to be perfectly effective in terms of the offsetting retranslation gains and losses on the liability and the hedged proportion of the net investment.

If a borrowing or similar liability is denominated in a different currency to the functional currency of the net investment, it may still be possible to designate it as the hedging instrument. However, it will need to be demonstrated that the two currencies are sufficiently correlated so that the hedging instrument is expected to result in offsetting gains and losses over the period that the hedge is designated. This might be the case if the two currencies are formally pegged or otherwise linked to one another or if the relevant exchange rates move in tandem because of, say, similarities in the underlying economies.

Even if such a hedge is highly effective, it is likely to result in some ineffectiveness. Under US GAAP it is suggested that the retranslation gains and losses on the actual instrument should be compared to those on a hypothetical non-derivative (e.g. a borrowing in the correct currency) with any difference recognised in profit or loss.<sup>29</sup> This approach should normally be acceptable under IAS 39, if applied in conjunction with the accounting requirements for net investment hedges (see 4.3 above).

#### 5.3.13.B *Derivatives used as the hedging instrument*

It is harder to determine what types of derivative may be used in a hedge of a net investment. The same definition of effectiveness applies to such hedges as to others, but what are the changes in the fair value or cash flows of the hedged item that are attributable to the hedged risk that are to be offset by changes in the fair value or cash flows of the hedging instrument? In many respects it is only an accounting entry that is being hedged but, unlike in 5.3.13.A above, the hedging instrument will be accounted for

at fair value. Even for the simplest derivative that fair value is likely to reflect factors other than changes in the spot exchange rate.

Under US GAAP a number of interpretations to ASC 815 have been issued setting out what types of derivative may be designated in a net investment hedge and how changes in the value of those derivatives should be accounted for. This guidance is summarised in the following table:<sup>30</sup>

Type of derivative	Method of assessing effectiveness under US GAAP*	
	Spot rate method	Forward rate method
Forward contract	Changes in value attributable to spot rate changes recognised in other comprehensive income Changes in value of interest element recognised in profit or loss	All changes in value (including interest element) recognised in other comprehensive income
Purchased option	Changes in intrinsic value recognised in other comprehensive income Changes in time value recognised in profit or loss	All changes in value (including time value) recognised in other comprehensive income
Cross-currency interest rate swap: both legs floating rate	Interest settlements accrued in profit or loss All other changes in value recognised in other comprehensive income	All changes in value (including interest settlements) recognised in other comprehensive income
Cross-currency interest rate swap: both legs fixed rate	Changes in value from retranslating notional at spot exchange rates recognised in other comprehensive income Interest settlements accrued in profit or loss Other changes in value (e.g. from changes in interest rates) recognised in profit or loss	All changes in value (including interest settlements) recognised in other comprehensive income
Cross-currency interest rate swap: one floating rate leg, one fixed	Hedge accounting not available	Hedge accounting not available

\* one method to be applied consistently for all derivatives designated as hedges of a net investment.

This table assumes the contracts are denominated in the same currency as the functional currency of the hedged net investment and that there are no other sources of ineffectiveness. The applicability of this guidance to IAS 39 is considered below.

#### 1 Forward currency contracts

It is very common for forward currency contracts to be used as the hedging instrument in a hedge of a net investment – in fact, this is the one example that is acknowledged in the implementation guidance. Therefore, applying the US GAAP guidance under IAS 39 seems relatively uncontroversial and has effectively been endorsed in IFRIC 16. [IFRIC 16.15, AG2]. However, implementation guidance in IAS 39 makes it clear that where the spot rate method is used (i.e. the interest element of the forward is excluded from the hedge relationship) the premium or discount cannot be amortised to profit or loss. [IAS 39.F.6.4].

Inevitably, therefore, some volatility will arise in profit or loss and the longer the term of the forward, the greater is the potential volatility.

Some may wonder why entities might choose the spot rate method over the forward rate method. Prior to the development of standards such as IAS 39, the interest element of a forward contract (and similar instruments) was commonly recognised as interest on an accruals basis. Depending on the relative interest rates of the two currencies in the forward, accounting for the interest element in this way could potentially result in a credit to profit or loss, which is clearly desirable from the perspective of preparers of the financial statements. Where an entity is prepared to accept the volatility associated with this method, a similar effect on profit or loss (over time) may be achieved by using the spot rate method.

If the forward contract is denominated in a different currency to the functional currency of the net investment it is likely that, at best, some ineffectiveness will arise (unless the link between the two currencies is perfect). Under US GAAP, a comparison of the forward contract with a hypothetical derivative (a forward contract in the right currency) would be made to measure the amount of ineffectiveness<sup>31</sup> and this approach would normally be acceptable under IAS 39.

#### *II Purchased options*

The spot rate method involves designating the intrinsic value of a purchased option as the hedging instrument (i.e. its time value is excluded from the hedge relationship). This is clearly acceptable under IAS 39 (see 2.1.4.A and 5.3.10 above), although this will cause some volatility in profit or loss, which over time will always result in an expense being recognised in profit or loss as the time value decays.

Under the forward rate method applied under US GAAP, the whole option would be designated as the hedging instrument. However, as discussed at 5.3.10 above, designating the entire purchased option as the hedging instrument under IAS 39 is likely to result in high levels of ineffectiveness which could result in hedge failure. This is because no offset will arise for changes in the time value of the purchased option, as the time value is not a component of the hedged net investment. [IAS 39.AG110B].

#### *III Cross-currency interest rate swaps*

Like forward contracts, these instruments are commonly used as hedging instruments in net investment hedges. At a conceptual level, it is easy to see that the changes in value of a cross-currency swap with two floating-rate legs are likely to offset the retranslation gains and losses of a net investment, provided the floating rate resets sufficiently frequently. It is also reasonably easy to see that a swap with one floating-rate leg and one fixed-rate leg is unlikely to provide the necessary offset because the fixed rate leg will give rise to changes in the swap's value that are unrelated to changes in exchange rates.

It is less easy to see that the change in value of a swap with two fixed-rate legs will provide a good hedge against the retranslation gains and losses (again the fixed-rate legs will give rise to changes in the swap's value that are unrelated to changes in exchange rates). However, such an instrument may be viewed as a combination of forward contracts, albeit ones that, individually, are likely to have non-zero fair values, which could be designated in a hedge of a net investment based on the forward rate method (see I above). Designating a fixed-for-fixed currency swap in a cash flow hedge based

on the forward rate implies that the amount of hedged item would be equal to the sum of the undiscounted foreign currency interest and principal payments which would be higher than the notional amount of the swap. However, since the conceptual basis of a net investment hedge is not that clear, we do not think such designation by analogy to a cash flow hedge would be required.

The 'spot rate' treatment under US GAAP which permits changes in value other than the retranslation of the notional at spot exchange rates to be included in other comprehensive income, however, is generally considered to have limited technical merit. We believe that application of the US GAAP spot rate method as described for forward contracts is more appropriate.

*5.3.13.C Combinations of derivative and non-derivative instruments used as the hedging instrument*

It is not uncommon for entities to hedge their net investments using synthetic foreign currency debt instruments. For example, consider a parent with the euro as its functional currency that has a net investment in a Japanese subsidiary with yen as its functional currency. The parent might borrow in US dollars and enter into a pay-Japanese yen, receive-US dollar cross-currency interest rate swap. In this way the two instruments might be considered a synthetic Japanese yen borrowing, although they are required to be accounted for separately (see Chapter 44 at 8).

As noted at 2.1.3 above, a combination of derivatives and non-derivatives may be viewed in combination and jointly designated as a hedging instrument under IAS 39. [IAS 39.77]. However, all the hedging instruments must be clearly identified in the hedge documentation. [IAS 39.88(a)].

The Japanese parent in the above fact pattern may wish to designate the spot rate only when hedging a net investment with a combination of derivatives and non-derivatives. Designation of the combination as hedging a forward rate is more problematic given the issues noted in 5.3.13.B III above and the fact that the hedging instrument includes a foreign currency monetary item for which the accounting for foreign exchange is at the spot rate. [IAS 21.23(a)].

Another alternative may be to notionally decompose the cross currency swap by introducing an interest bearing functional currency denominated leg and designating one part as a hedge of the borrowing and the other as a hedge of the net investment (see 2.1.4.E above).

*5.3.13.D Individual or separate financial statements*

It is common for an entity with an investment in a subsidiary, associate or joint venture to be party to a financial instrument (a borrowing, say) that in the entity's consolidated financial statements is designated as the hedging instrument in a hedge of its net investment in the subsidiary, associate or joint venture. However, in the entity's individual or separate financial statements, the investment will generally be accounted for as an asset measured at cost or as a financial asset in accordance with IAS 39. [IAS 27.10]. In other words, it will not be accounted for by way of consolidation or the equity method.

Accordingly, from the perspective of the individual or separate financial statements, the reporting entity will not have a net investment in a foreign operation. Therefore, the borrowing could not be designated as the hedging instrument in a net investment hedge for

the purposes of the separate financial statements. However, if hedge accounting is desirable, it may be possible to designate the borrowing as the hedging instrument in another type of hedge. Typically, this would be a fair value hedge of the foreign currency risk arising from the investment. This will be an independent hedge relationship, separate from the net investment hedge in the consolidated financial statements. Therefore, all of the other hedge accounting criteria (including the documentation requirements) will need to be met for this hedge too. Of course, the effects of this hedge accounting will need to be reversed when preparing the group's consolidated financial statements (otherwise those financial statements will reflect as an asset or liability certain changes in the fair value of a parent's investment in its subsidiary which would be contrary to the general principles of IFRS 10).

## 6 PORTFOLIO (OR MACRO) HEDGING

At a detailed level, the topic of portfolio (or macro) hedging for banks and similar financial institutions is beyond the scope of a general financial reporting publication such as this. However, no discussion of hedge accounting would be complete without an overview of the high level issues involved and an explanation of how the standard setters have tried to accommodate these entities.

The underlying philosophy of IAS 39's approach to hedge accounting is that individual hedging instruments are designated as hedging individual assets, liabilities or other risk exposures. However, banks and similar financial institutions typically manage their interest rate risk exposures dynamically on a portfolio (or macro) level. New exposures are frequently added to the portfolio and existing exposures mature. So as the net risk of the portfolio changes, risk managers will react accordingly to meet the risk management objective. Given that the focus is on the net risk position and natural offsets frequently arise as the exposures in the portfolio change, the distinction between hedged item and hedging instrument becomes less relevant. Accordingly, there is a fundamental difference between the risk management activities of the financial institution and the main hedge accounting requirements of the standard.

IAS 39 includes some specific guidance that was developed with a view to assist financial institutions in achieving hedge accounting for their portfolio interest rate risk management activities. This guidance is as follows:

- Fair value hedge of the interest rate exposure of a portfolio of financial assets or financial liabilities; [IAS 39.78, 81A, 89A, 92, AG114-AG132, BC173-220, IE1-IE31, DOI-DO2]
- Management of interest rate risk in financial institutions (colloquially known as the macro cash flow approach). [IAS 39.F.6.1-F.6.3].

Unfortunately, even with these two approaches, it is often difficult to accommodate the risk management activities of financial institutions within the IAS 39 hedge accounting requirements. In particular, there are significant restrictions on the way the fair value of financial liabilities with a demand feature are measured (see Chapter 14 at 11.5) and this effectively prevents banks from applying fair value hedge accounting to the majority of their current and deposit accounts (see 2.2.10 above). In fact, the EC endorsed version of IAS 39 has certain parts of the hedge accounting requirements carved out in a direct response to the cited difficulties of financial institutions achieving hedge accounting under IAS 39,<sup>32</sup> thereby allowing the use of hedge accounting in situations that the full version of IAS 39 would not.

In view of these factors, a project was set up by the IASB to develop a new accounting approach for dynamic risk management that would be based on an entity's risk management activities. This project was originally part of the IASB's project to replace IAS 39 with IFRS 9. However, the IASB realised that developing the new accounting model would take time and probably be a different concept from hedge accounting. In May 2012, the Board therefore decided to decouple the part of the project that related to accounting for dynamic risk management from IFRS 9, allowing more time to develop an accounting model without affecting the timeline for the completion of the other elements of IFRS 9.<sup>35</sup>

Although mainly focused on financial institutions, the accounting model for dynamic risk management might also be beneficial for some corporate entities applying macro-type hedging strategies.

In April 2014, the IASB issued the Discussion Paper – *Accounting for Dynamic Risk Management: a Portfolio Revaluation Approach to Macro Hedging*. The six-month comment period ended in October 2014. Most respondents supported the need for the project, but there was no consensus on a solution. Given the diversity in views, in July 2015 the IASB concluded that the insights that it had received from the comment letters and feedback so far did not enable it to develop proposals for an exposure draft. Accordingly, the IASB decided that the project should remain in the research programme, with the aim of publishing a second discussion paper. The next step for the project was to focus on identifying the information needed to provide more decision useful information on dynamic risk management. In May 2016, the IASB confirmed that the project should remain on the active research section of their work plan. At that meeting it was discussed that a focus on identifying information needs has proved to be challenging. Because of this, they returned the focus of their work to recognition and measurement for dynamic risk management. The IASB held three education sessions on dynamic risk management in each of March, May and June of 2017. During these sessions the IASB was not asked to make any decisions. The education sessions included information on the project background and history as well as additional explanation as to how and why dynamic risk management is typically undertaken by financial institutions.

The IASB plans to publish a second discussion paper in 2018.



## References

- 1 For example, see IAS 39 (2000), *Financial Instruments: Recognition and Measurement*, IASC, December 1998 to October 2000, para. 10.
- 2 *IFRIC Update*, July 2007.
- 3 *IFRIC Update*, July 2007.
- 4 *Comments of Swiss International Air Lines Ltd. on Paragraphs 129 and 130 of the 'Exposure Draft of Proposed Amendments to IAS 39 Financial Instruments: Recognition and Measurement'*, Swiss International Air Lines Ltd, October 2002.
- 5 *IFRIC Update*, October 2004.
- 6 *IFRIC Update*, July 2009.
- 7 DP/2014/1 1.14 -1.15 and 3.9.1-3.9.16.
- 8 IGC Q&A 137-13.
- 9 *IFRIC Update*, January 2013.
- 10 Information for Observers (February 2007 IASB meeting), *Business Combinations II: Reassessments (Agenda Paper 2B)*, IASB, February 2007, para. 28 and Information for Observers (April 2007 IASB meeting), *Classification and Designation of Assets, Liabilities and Equity Instruments Acquired or Assumed in a Business Combination (Agenda Paper 2B)*, IASB, April 2007, item #5, table following para. 14.
- 11 *IFRIC Update*, November 2016.
- 12 ASC 815-35-35-1 through 35-26 (formerly, Statement 133 Implementation Issue H8, *Foreign Currency Hedges: Measuring the Amount of Ineffectiveness in a Net Investment Hedge*).
- 13 *IFRIC Update*, March 2016.
- 14 *IFRIC Update*, January 2011.
- 15 *IFRIC Update*, June 2005.
- 16 Information for Observers (February 2007 IASB meeting), *Business Combinations II: Reassessments (Agenda Paper 2B)*, IASB, February 2007, para. 25.
- 17 *IFRIC Update*, September 2006.
- 18 *IFRIC Update*, November 2006.
- 19 *IFRIC Update*, March 2007.
- 20 ASC 815-30-35-10 through 35-32 (formerly, Statement 133 Implementation Issue G7, *Cash Flow Hedges: Measuring the Ineffectiveness of a Cash Flow Hedge under Paragraph 30(b) When the Shortcut Method is not Applied*) and ASC 815-20-35-14 through 35-18 (formerly, Statement 133 Implementation Issue G10, *Cash Flow Hedges: Need to Consider Possibility of Default by the Counterparty to the Hedging Derivative*).
- 21 IAS 39.AG108, *IFRIC Update*, March 2007, Information for Observers (January 2007 IFRIC meeting), *IAS 39 Financial Instruments: Recognition and Measurement – Assessing Hedge Effectiveness of an Interest Rate Swap in a Cash Flow Hedge (Agenda Paper 14(v))*, IASB, January 2007, Information for Observers (February 2007 IASB meeting), *Business Combinations II: Reassessments (Agenda Paper 2B)*, IASB, February 2007, para. 29 and Information for Observers (April 2007 IASB meeting), *Classification and Designation of Assets, Liabilities and Equity Instruments Acquired or Assumed in a Business Combination (Agenda Paper 2B)*, IASB, April 2007, item #5, table following para. 14.
- 22 Autocorrelation is the correlation of a variable with itself (i.e. the risk of repeating patterns in the error term).
- 23 *IFRIC Update*, November 2006.
- 24 ASC 815-20-25-84 (formerly, SFAS 133.65 ).
- 25 Speech by SEC Staff, *Remarks Before the 2006 AICPA National Conference on Current SEC and PCAOB Developments by Timothy S. Kviz*, U.S. Securities and Exchange Commission, December 2006.
- 26 Staff paper 4A, paragraph 14, October 2012 IASB Meeting.
- 27 ASC 815-20-25-126 to 25-129, 55-209 through 55-211, 815-30-35-33 to 35-37 and 55-127 (formerly, Statement 133 Implementation Issue G20, *Cash Flow Hedges: Assessing and Measuring the Effectiveness of a Purchased Option Used in a Cash Flow Hedge*).
- 28 *IFRIC Update*, September 2007.
- 29 ASC 815-35-35-1 to 35-26 (formerly, Statement 133 Implementation Issue H8, *Foreign Currency Hedges: Measuring the Amount of Ineffectiveness in a Net Investment Hedge*).
- 30 ASC 815-35-35-1 to 35-26 (formerly, Statement 133 Implementation Issue H8, Question 1) and ASC 815-20-25-67 to 25-68A; 25-71 (formerly, Statement 133 Implementation Issue H9, *Foreign Currency Hedges: Hedging a Net Investment with a Compound Derivative That Incorporates Exposure to Multiple Risks*).
- 31 ASC 815-35-35-1 to 35-26 (formerly, Statement 133 Implementation Issue H8, Question 2).
- 32 IAS 39, *Financial Instruments: Recognition and Measurement*, Regulation No. 2086/2004, European Commission, 19 November 2004, paras. 35, AG107A, AG124(a) and AG130 and parts of paras. 81A, AG31, AG99C, AG99D, AG114(c) and (g), AG118, AG119(d), (e) and (f), AG121, AG122, AG124(d), AG126, AG127 and AG129.
- 33 *IASB Update*, May 2012.

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