SUPPLEMENT

to the publication

**Accounting for Financial Instruments -
Standards, Interpretations, and
Implementation Guidance**

originally issued in July 2001

**This document includes the final versions of the
proposed questions and answers on pages 477-541
of the above publication that were approved in final form by the
IAS 39 Implementation Guidance Committee in September 2001**

**International
Accounting Standards
Board**

IAS 39 Implementation Guidance: Questions and Answers

Introduction

Background

IAS 39, Financial Instruments: Recognition and Measurement, establishes principles for recognising, measuring, and disclosing information about financial assets and financial liabilities. When the IASC Board voted to approve IAS 39 in December 1998, it noted that, at about the same time, the United States had adopted new standards on derecognition, derivatives, and hedging, and that other countries did not have comprehensive standards on accounting for financial instruments. Consequently, the IASC Board recognised that there was little experience in applying principles similar to those in IAS 39 in most countries.

The IASC Board instructed its staff to monitor implementation issues and to consider how to best respond to such issues and thereby help financial statement preparers, auditors, financial analysts, and others understand IAS 39 and particularly those preparing to apply it for the first time.

At its meeting in March 2000, the IASC Board approved an approach to publish implementation guidance on IAS 39 in the form of Questions and Answers (Q&A). At that meeting, it appointed an IAS 39 Implementation Guidance Committee (IGC) to review and approve the draft Q&A and to seek public comment before approval of the final Q&A. In April 2001, the IASB agreed to continue that approach. At 1 October 2001, the IGC was comprised of ten members from eight different countries (all experts in financial instruments with backgrounds as accounting standard-setters, auditors, bankers, and preparers) and three observers (who represented the Basel Committee, IOSCO, and the European Commission).

Due process

The Q&A were drafted by the IASB Staff. The questions are based largely on inquiries submitted by financial statement preparers, auditors, regulators, and other interested parties. The draft Q&A were discussed and revised by the IGC, and were approved to be posted on the IASB website for public comment by consensus of the IGC. The IGC reviewed the comments received

from the public, agreed to necessary revisions to the Q&A, and approved the Q&A for publication in final form.

This document includes the final versions of the draft Q&A issued for public comment in June 2001. The final versions of the draft Q&A issued for public comment in May 2000, June 2000, July 2000, September 2000, and December 2000 are included in the publication Accounting for Financial Instruments - Standards, Interpretations, and Implementation Guidance issued in July 2001.

Status of the implementation guidance

The implementation guidance represents the consensus view of the IGC on the appropriate interpretation and practical application of IAS 39 in a range of circumstances and takes into account comments received during the comment period. The guidance is issued to help financial statement preparers, auditors, financial analysts, and others understand IAS 39, and help ensure consistent application of the Standard.

IAS 1, Presentation of Financial Statements, requires compliance "with all the requirements of each applicable Standard and each applicable Interpretation of the Standing Interpretations Committee" if financial statements are to be described as complying with IAS. The implementation guidance issued by the IGC does not have the status of such a Standard or Interpretation. It has not been formally considered by the Board and does not necessarily represent the views of the Board, although the Board has been able to provide comments on the draft Q&A.

Since the implementation guidance has been developed to be consistent with the requirements and guidance provided in IAS 39, other Standards, Interpretations of the Standing Interpretations Committee, and the IASB Framework, enterprises should consider the guidance as they select and apply accounting policies in accordance with IAS 1.20-22.

Paragraph 10
Question 10-20
Loans and receivables originated by the enterprise: sovereign debt

An enterprise acquires a debt security issued by a government at original issuance by transferring the funds directly to the government. Is the government a debtor for purposes of determining whether the debt instrument qualifies as a loan originated by the enterprise under IAS 39.10 and Question 10-11-a?

Yes. The debt security qualifies as a loan originated by the enterprise if (1) it establishes a contractual right to receive repayment of the debt from the government and (2) the enterprise does not have an intent to sell the asset immediately or in the short term. The definition of originated loans and receivables in IAS 39.10 does not distinguish between loans that take the form of securities and those that do not. See Question 10-11-a.

Discussed by IAS 39 IGC: 24-25 April 2001
Published for Public Comment: 22 June 2001
Discussed by IAS 39 IGC: 25-26 September 2001
Final Action: Approved

Paragraph 10
Question 10-21
Definition of held for trading: portfolio with a recent actual pattern of short-term profit taking

The definition of a financial asset held for trading states that "a financial asset should be classified as held for trading if, regardless of why it was acquired, it is part of a portfolio for which there is evidence of a recent actual pattern of short-term profit taking". What is a "portfolio" for purposes of applying this definition?

Although the term ''portfolio'' is not explicitly defined in IAS 39, the context in which it is used suggests that a portfolio is a group of identified financial assets that are managed together as part of a group (IAS 39.10, IAS 39.21, and IAS 39.107). If there is evidence of a recent actual pattern of short-term profit taking on financial instruments included in such a portfolio, those financial instruments qualify as held for trading even though an individual financial instrument in the portfolio may in fact be held for a longer period of time. Also, if an enterprise has classified certain financial instruments in a category other than held for trading, but then manages those financial instruments as part of a portfolio for which there is evidence of a recent actual pattern of trading, for instance, a portfolio managed by a trading desk, the financial instruments in that portfolio are reclassified into the trading category (IAS 39.107).

> **Discussed by IAS 39 IGC: 24-25 April 2001**
> **Published for Public Comment: 22 June 2001**
> **Discussed by IAS 39 IGC: 25-26 September 2001**
> **Final Action: Approved**

Paragraph 22
Question 22-2
Embedded derivatives: separation of embedded option

Question 22-1 states that the terms of an embedded non-option derivative should be determined so as to result in the embedded derivative having a fair value of zero at the initial recognition of the hybrid instrument. In separating an embedded option-based derivative, must the terms of the embedded option be determined so as to result in the embedded derivative having either a fair value of zero or an intrinsic value of zero (that is, be at the money) at the inception of the hybrid instrument?

No. The economic behaviour of a hybrid instrument with an option-based embedded derivative depends critically on the strike price (or strike rate) specified for the option feature in the hybrid instrument, as discussed below. Therefore, the separation of an option-based embedded derivative (including any embedded put, call, cap, floor, caption, floortion, or swaption feature in a hybrid instrument) should be based on the stated terms of the option feature documented in the hybrid instrument. As a result, the embedded derivative would not necessarily have a fair value or intrinsic value equal to zero at the initial recognition of the hybrid instrument.

If an enterprise were required to identify the terms of an embedded option-based derivative so as to achieve a fair value of the embedded derivative of zero, the strike price (or strike rate) generally would have to be determined so as to result in the option being infinitely out of the money. This would imply a zero probability of the option feature being exercised. However, since the probability of the option feature in a hybrid instrument being exercised generally is not zero, it would be inconsistent with the likely economic behaviour of the hybrid instrument to assume an initial fair value of zero. Similarly, if an enterprise were required to identify the terms of an embedded option-based derivative so as to achieve an intrinsic value of zero for the embedded derivative, the strike price (or strike rate) would have to be assumed to equal the price (or rate) of the underlying variable at the initial recognition of the hybrid instrument. In this case, the fair value of the option would consist of only time value. However, such an assumption would not be consistent with the likely economic behaviour of the hybrid instrument, including the probability of the option feature being exercised, unless the agreed strike price was indeed equal to the price (or rate) of the underlying variable at the initial recognition of the hybrid instrument.

The economic nature of an option-based embedded derivative is fundamentally different from a forward-based embedded derivative (including forwards and swaps), because the terms of a forward are such that a payment based on the difference between the price of the underlying and the forward price will occur at a specified date, while the terms of an option are such that a payment based on the difference between the price of the underlying and the strike price of the option may or may not occur depending on the relation between the agreed strike price and the price of the underlying at a specified date or dates in the future. Adjusting the strike price of an option-based embedded derivative, therefore, alters the nature of the hybrid instrument. On the other hand, if the terms of a non-option embedded derivative in a host debt instrument were determined so as to result in a fair value of any amount other than zero at the inception of the hybrid instrument, that amount would essentially represent a borrowing or lending. Accordingly, as discussed in Question 22-1, it is not appropriate to separate a non-option embedded derivative in a host debt instrument on terms that result in a fair value other than zero at the initial recognition of the hybrid instrument.

Discussed by IAS 39 IGC: 24-25 April 2001
Published for Public Comment: 22 June 2001
Discussed by IAS 39 IGC: 25-26 September 2001
Final Action: Approved

Paragraph 23
Question 23-9
Embedded derivatives: equity kicker

In some instances, venture capital companies providing subordinated loans agree that if and when the borrower lists its shares on a stock exchange, the venture capital company is entitled to receive shares of the borrowing enterprise for free or at a very low price (an equity kicker) in addition to interest and repayment of principal. As a result of the equity kicker feature, the interest on the subordinated loan is lower than it would otherwise be. Assuming that the subordinated loan is not measured at fair value with changes in fair value reported in net profit or loss (IAS 39.23(c)), does the equity kicker feature meet the definition of an embedded derivative even though it is contingent upon the future listing of the borrower?

Yes. The economic characteristics and risks of an equity return are not closely related to the economic characteristics and risks of a host debt instrument (IAS 39.23(a)). The equity kicker meets the definition of a derivative because it has a value that changes in response to the change in the price of the shares of the borrower, it requires no or little initial net investment, and it is settled at a future date (IAS 39.23(b) and IAS 39.10). The equity kicker feature meets the definition of a derivative even though the right to receive shares is contingent upon the future listing of the borrower. IAS 39.13 states that a derivative could require a fixed payment as a result of some future event that is unrelated to a notional amount. An equity kicker feature is similar to such a derivative except that it does not give a right to a fixed payment, but an option right, if the future event occurs.

Discussed by IAS 39 IGC: 24-25 April 2001
Published for Public Comment: 22 June 2001
Discussed by IAS 39 IGC: 25-26 September 2001
Final Action: Approved

Paragraph 23
Question 23-10
Embedded derivatives: no reliable measurement

If an enterprise is unable to directly determine the fair value of an embedded derivative, for instance, because the embedded derivative is based on an unquoted equity instrument whose fair value cannot be reliably determined, may the enterprise determine fair value by reference to the fair value of the hybrid instrument and deducting the fair value of the host contract?

Yes. If an enterprise is required to separate an embedded derivative and is able to reliably measure the fair value of the entire instrument and of the host contract, the difference between the two values provides reliable evidence of the fair value of the embedded derivative. This answer does not affect the identification of the terms of an embedded derivative on initial recognition. An enterprise applies Questions 22-1 and 22-2 to identify the terms of an embedded derivative. Thus, an embedded non-option component is separated so as to have a fair value of zero on initial recognition. See also Questions 23-3 and 70-3.

Discussed by IAS 39 IGC: 24-25 April 2001 **Published for Public Comment: 22 June 2001** **Discussed by IAS 39 IGC: 25-26 September 2001** **Final Action: Approved**

Paragraph 23
Question 23-11
Embedded derivatives: issued puttable convertible debt

Enterprise A issues puttable convertible bonds at their total par value of 2,000,000. Each bond pays fixed interest and is convertible at any time up to maturity into common shares of Enterprise A. Each bond also contains an embedded put option that gives the investor in the bond the right to put the convertible bond back to Enterprise A. Allocating the total proceeds of the convertible bond issue to its component parts gives an initial carrying amount of the equity component of 200,000 and an initial carrying amount of the liability component of 1,800,000. Should Enterprise A, in addition to the separation of the liability and equity elements of each convertible bond, also separate a written put option as an embedded derivative liability under IAS 39?

No. Since the debt was not issued at a significant premium or discount before separating out the embedded equity conversion option, the put is considered to be closely related to the host debt instrument (IAS 39.24(g)).

The issuer separates the equity and liability elements of the compound instrument in accordance with IAS 32. The equity conversion option is an equity instrument of the issuer and, therefore, outside the scope of IAS 39 (IAS 39.1(e)).

The issuer applies the requirements regarding the separation of embedded derivatives under IAS 39 and the guidance in Question 23-8 to determine whether there is an embedded derivative in addition to the equity conversion option that should be separated under IAS 39. Under IAS 39, the assessment of whether the put option is closely related to the host instrument is made before separating the embedded equity conversion option.

Discussed by IAS 39 IGC: 24-25 April 2001 **Published for Public Comment: 22 June 2001** **Discussed by IAS 39 IGC: 25-26 September 2001** **Final Action: Approved**

Paragraph 23
Question 23-12
Embedded derivatives: debt or equity host contract

Enterprise A purchases a five-year "debt" instrument issued by Enterprise B with a principal amount of 1,000,000 that is indexed to the share price of Enterprise C. At maturity, Enterprise A will receive from Enterprise B the principal amount plus or minus the change in the fair value of 10,000 shares of Enterprise C. The current share price is 110. No separate interest payments are made by Enterprise B. The purchase price is 1,000,000. Enterprise A classifies the debt instrument as available for sale. It has a policy of reporting gains and losses on available-for-sale financial assets in equity. Enterprise A concludes that the instrument is a hybrid instrument with an embedded derivative because of the equity-indexed principal. For purposes of separating an embedded derivative, is the host contract an equity instrument or a debt instrument?

The host contract is a debt instrument because the hybrid instrument has a stated maturity, that is, it does not meet the definition of an equity instrument (IAS 39.8). It is accounted for as a zero coupon debt instrument. Thus, in accounting for the host instrument, Enterprise A imputes interest on 1,000,000 over five years using the applicable market interest rate at initial recognition. The embedded non-option derivative is separated so as to have an initial fair value of zero (see Question 22-1).

> **Discussed by IAS 39 IGC: 24-25 April 2001**
> **Published for Public Comment: 22 June 2001**
> **Discussed by IAS 39 IGC: 25-26 September 2001**
> **Final Action: Approved**

Paragraph 25
Question 25-9
Embedded derivatives: hard currency supply contracts

In countries that are subject to significant inflation, it is common for purchase and sale contracts to be denominated in a hard currency such as the US dollar (USD). In these circumstances, assuming the USD is not the measurement currency of any substantial party to the transaction, must an USD / local currency embedded derivative be separated from the host supply contract?

Yes, unless the USD is the currency (a) of the primary economic environment in which any substantial party to the contract operates or (b) in which the price of the related good or service is routinely denominated in international commerce (IAS 39.25(d)). Question 25-6 explains that the currency of the primary economic environment refers to the measurement currencies and the currencies of the countries of domicile of any substantial party to the contract. SIC-19, Reporting Currency – Measurement and Presentation of Financial Statements under IAS 21 and IAS 29, discusses how an enterprise determines a currency for measuring items in its financial statements.

> **Discussed by IAS 39 IGC: 24-25 April 2001**
> **Published for Public Comment: 22 June 2001**
> **Discussed by IAS 39 IGC: 25-26 September 2001**
> **Final Action: Approved**

Paragraph 83
Question 83-8
Held-to-maturity investments: internal downgrade

Would a sale of a held-to-maturity investment following a downgrade of the internal rating of the issuer raise a question about the enterprise's intent to hold other investments to maturity?

It depends. As discussed in Question 83-7, a sale following a downgrade in a credit rating by an external rating agency would not necessarily raise a question about the enterprise's intent to hold other investments to maturity if the downgrade provides evidence of a significant deterioration in the issuer's creditworthiness and it is an isolated event that is beyond the enterprise's control and that is non-recurring and could not have been reasonably anticipated by the enterprise. Similarly, if an enterprise uses internal ratings for assessing exposures, changes in those internal ratings may help identify issuers for which there has been a significant deterioration in creditworthiness. However, a downgrade in an internal rating does not in itself provide evidence of a significant deterioration in the creditworthiness of an issuer unless the enterprise can demonstrate that its approach to assigning internal ratings and changes in those ratings provide a consistent, reliable, and objective measure of the credit quality of issuers and that the deterioration is significant. See also Question 83-7.

Discussed by IAS 39 IGC: 24-25 April 2001
Published for Public Comment: 22 June 2001
Discussed by IAS 39 IGC: 25-26 September 2001
Final Action: Approved

Paragraph 115
Question 115-1
Impairment: assets carried at cost because fair value cannot be reliably measured

Enterprise A has an investment in an unquoted equity instrument whose fair value cannot be reliably measured. In 20x1, Enterprise A determines that there is an indication of impairment under IAS 39.115 based on an analysis of expected net cash inflows. Accordingly, it reports an impairment loss equal to the difference between the investment's carrying amount and recoverable amount in net profit or loss for the period. In a subsequent period, Enterprise A determines that the amount of impairment has decreased based on objective evidence related to an event occurring after the write-down. Should it reverse the impairment loss?

Yes. In this situation, the enterprise applies the guidance in IAS 39.114 and IAS 39.119 to reverse the impairment loss. If a reliable measure of fair value can be made, IAS 39.91 applies, and the instrument is subsequently measured at fair value after the impairment loss has been reversed.

Discussed by IAS 39 IGC: 24-25 April 2001
Published for Public Comment: 22 June 2001
Discussed by IAS 39 IGC: 25-26 September 2001
Final Action: Approved

Paragraph 117
Question 117-3
Impairment: whether the available-for-sale reserve in equity can be negative

A company has chosen to report gains and losses arising from changes in fair value on available-for-sale financial assets directly in equity as its accounting policy under IAS 39.103(b)(ii). If the aggregate fair value of such assets is less than their carrying amount, should the aggregate net loss that has been recognised directly in equity be removed from equity and reported in net profit or loss?

Not necessarily. The relevant criterion is not whether the aggregate fair value is less than the carrying amount, but whether there is objective evidence that a financial asset or group of assets is impaired. An enterprise assesses at each balance sheet date whether there is any objective evidence that a financial asset or group of assets may be impaired based on IAS 39.109 and IAS 39.110. Question 117-1 explains that a decline in the market value of an equity security below its cost is not necessarily evidence of impairment. Similarly, a decline in the fair value of a debt security below its amortised cost is not necessarily evidence of impairment, for instance, a decline that results from an increase in the basic, risk-free interest rate.

> **Discussed by IAS 39 IGC: 24-25 April 2001**
> **Published for Public Comment: 22 June 2001**
> **Discussed by IAS 39 IGC: 25-26 September 2001**
> **Final Action: Approved**

Paragraph 144
Question 144-3
Hedging instrument: out-of-the money put option

Company A has an investment in one share of Company B, which it has classified as available for sale. Company A has a policy of reporting gains and losses on available-for-sale financial assets in equity under IAS 39.103(b)(ii). To partially protect itself against decreases in the share price of Company B, Company A acquires a put option on one share of Company B and designates the change in the intrinsic value of the put as a hedging instrument in a fair value hedge of changes in the fair value of its share in Company B. The put gives Company A the right to sell one share of Company B at a strike price of 90. At the inception of the hedging relationship, the share has a quoted price of 100. Since the put option gives Company A the right to dispose of the share at a price of 90, the put should normally be fully effective in offsetting price declines below 90 on an intrinsic value basis. Price changes above 90 are not hedged. In this case, are changes in the fair value of the share of Company B for prices above 90 regarded as hedge ineffectiveness under IAS 39.142 and reported in net profit or loss under IAS 39.153?

No. IAS 39.144 permits Company A to designate changes in the intrinsic value of the option as the hedging instrument. The changes in the intrinsic value of the option provide protection against the risk of variability in the fair value of one share of Company B 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 one share of Company B for prices above 90 are not attributable to the hedged risk for purposes of assessing hedge effectiveness and reporting gains and losses on the hedged item.

Therefore, Company A reports changes in the fair value of the share in equity if it is associated with variation in its price above 90 (IAS 39.155 and IAS 39.103(b)(ii)). Changes in the fair value of the share associated with price declines below 90 form part of the designated fair value hedge and are reported in net profit or loss under IAS 39.153(b). Assuming the hedge is effective, those changes are offset by changes in the intrinsic value of the put, which are also reported in net profit or loss (IAS 39.153(a)). Changes in the time value of the put are excluded from the designated hedging relationship and recognised in net profit or loss under IAS 39.103(a).

Paragraph 145
Question 145-1
Hedging instrument: proportion of the cash flows of a cash instrument

In the case of foreign exchange risk, a non-derivative financial asset or financial liability can potentially qualify as a hedging instrument. Can an enterprise treat the cash flows for specified periods during which a financial asset or financial liability that is designated as a hedging instrument remains outstanding as a proportion of the hedging instrument under IAS 39.145, and exclude the other cash flows from the designated hedging relationship?

No. IAS 39.145 indicates that a hedging relationship may not be designated for only a portion of the time period in which the hedging instrument is outstanding. For example, the cash flows during the first three years of a ten-year borrowing denominated in a foreign currency cannot qualify as a hedging instrument in a cash flow hedge of the first three years of revenue in the same foreign currency. On the other hand, a non-derivative financial asset or financial liability denominated in a foreign currency may potentially qualify as a hedging instrument in a hedge of the foreign currency risk associated with a hedged item that has a remaining time period until maturity that is equal to or longer than the remaining maturity of the hedging instrument (see Question 128-2).

Paragraph 158
Question 158-3
Cash flow hedges: forecasted transaction occurs prior to the specified period

An enterprise designates a derivative as a hedging instrument in a cash flow hedge of a forecasted transaction, such as a forecasted sale of a commodity. The hedging relationship meets all the hedge accounting conditions, including the requirement to identify and document the period in which the transaction is expected to occur within a reasonably specific and generally narrow range of time (see Question 142-8). If, in a subsequent period, the forecasted transaction is expected to occur in an earlier period than originally anticipated, can the enterprise conclude that this transaction is the same as the one that was designated as being hedged?

Yes. The change in timing of the forecasted transaction does not affect the validity of the designation. However, it may affect the assessment of the effectiveness of the hedging relationship. Also, the hedging instrument would need to be designated as a hedging instrument for the whole remaining period of its existence in order for it to continue to qualify as a hedging instrument (see IAS 39.145 and Question 128-2).

```
Discussed by IAS 39 IGC: 24-25 April 2001
Published for Public Comment: 22 June 2001
Discussed by IAS 39 IGC: 25-26 September 2001
Final Action: Approved
```

Paragraph 158
Question 158-4
Cash flow hedges: measuring effectiveness for a hedge of a forecasted transaction in a debt instrument

A forecasted investment in an interest-earning asset or forecasted issuance 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 forecasted 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 occurrence of the forecasted transaction. During the period of the hedge, it is not possible to determine what the market interest rate for the forecasted transaction will be at the time the hedge is terminated or when the forecasted transaction occurs. In this case, how is the effectiveness of the hedge assessed and measured?

During this period, effectiveness can be measured based on the changes in interest rates that have occurred 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 forecasted 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.

It generally will not be sufficient to simply 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 enterprise's expectations as to whether the cash flows will offset in subsequent periods and whether there will be any resulting ineffectiveness.

The discussion that follows illustrates the mechanics of establishing a cash flow hedge and measuring its effectiveness. For purposes of the illustrations, assume that an enterprise expects to issue a 100,000 one-year debt instrument in three months. The instrument will pay interest quarterly with principal due at maturity. The enterprise 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 forecasted debt issuance. The enterprise will pay a fixed rate and receive a variable rate, and the enterprise designates the risk being hedged as the LIBOR-based interest component in the forecasted issuance 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 variable and estimated future cash flows. The relationship between spot rates and one-period forward rates is shown by the following formula:

Spot – forward relationship

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

where, F = forward rate (%)
SR = spot rate (%)
t = period in time (e.g., 1, 2, 3, 4, 5)

Also, for purposes of this illustration, assume 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)

Forward periods	1	2	3	4	5
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 based on the spot rates for the applicable maturities. For example, the current forward rate for Period 2 calculated using the formula above is equal to $[1.0450^2/1.0375] - 1 = 5.25\%$. 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, the enterprise expects to issue a 100,000 one-year debt instrument in three months with quarterly interest payments. The enterprise is exposed to interest rate increases and would like to eliminate the effect on cash flows of interest rate changes that may occur before the forecasted transaction occurs. If that risk is eliminated, the enterprise would obtain an interest rate on its debt issuance 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 forecasted debt instrument. It results in the fair value of the debt being equal to par at its issuance.

At the inception of the hedging relationship, the expected cash flows of the debt instrument can be calculated based on 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:

Issuance of fixed rate debt
Beginning of period 2 - No rate changes (Spot based on forward rates)

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

(*) $100,000/(1+[0.0688/4])^4$

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 forecasted transaction. The fair value amounts are computed based on 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 forecasted transaction. They reflect the effect of discounting those cash flows based on 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 forecasted transaction occurs.

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 actually have not 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 forecasted 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

	Total					
Original forward periods		1	2	3	4	5
Remaining periods			1	2	3	4
Cash flows:						
Fixed interest @ 6.86%			1,716	1,716	1,716	1,716
Forecasted variable interest			1,313	1,877	1,876	1,813
Forecasted based on forward rate			*5.25%*	*7.51%*	*7.50%*	*7.25%*
Net interest			-403	161	160	97
Fair value:						
Discount rate (spot)			*5.25%*	*6.38%*	*6.75%*	*6.88%*
Fixed interest	6,592		1,694	1,663	1,632	1,603
Forecasted variable interest	6,592		1,296	1,819	1,784	1,693
Fair value of interest rate swap	0		-398	156	152	90

At inception of the hedge, the fixed rate on the forward swap is equal to the fixed rate the enterprise 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 a number of ways.

Assume that interest rates change as follows immediately prior to the issuance of the debt at the beginning of Period 2:

Yield curve - Rates increase 200 basis points

Forward periods	1	2	3	4	5
Remaining periods		1	2	3	4
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 which was designated as the hedging instrument would be as follows:

Fair value of interest rate swap

	Total	1	2	3	4	5
Original forward periods		1	2	3	4	5
Remaining periods			1	2	3	4
Cash flows:						
Fixed interest @ 6.86%			1,716	1,716	1,716	1,716
Forecasted variable interest			1,438	1,813	2,377	2,376
Forecasetd based on new forward rate			5.75%	7.25%	9.51%	9.50%
Net interest			-279	97	661	660
Fair value:						
New discount rate (spot)			5.75%	6.50%	7.50%	8.00%
Fixed interest	6,562		1,692	1,662	1,623	1,585
Forecasted variable interest	7,615		1,417	1,755	2,248	2,195
Fair value of net interest	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 forecasted transaction. There are at least two methods of accomplishing this measurement.

Method A – Compute change in fair value of debt

	Total	1	2	3	4	5
Original forward periods		1	2	3	4	5
Remaining periods			1	2	3	4
Cash flows:						
Fixed interest @ 6.86%			1,716	1,716	1,716	1,716
Principal						100,000
Fair value:						
New discount rate (spot)			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	98,947
Fair value at inception	100,000
Fair value difference	-1,053

$$(*) = 100,000/(1+[0.08/4])^4$$

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 based on 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 exactly offset in this example, since the terms of the swap and the forecasted transaction match each other.

Method B - Compute change in fair value of cash flows

	Total					
Original forward periods		*1*	*2*	*3*	*4*	*5*
Remaining periods			*1*	*2*	*3*	*4*
Market rate at inception			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 x rate)			279	-97	-661	-660
Discount rate (spot)			*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 based on 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 had the debt 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 based on 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, since the terms match.

Other considerations

There is an additional computation that should be performed to compute ineffectiveness prior to the expected date of the forecasted transaction that has not been considered for purposes of this illustration. The fair value difference has been determined in each of the illustrations as of the expected date of the forecasted transaction immediately prior to the forecasted transaction, that is, at the beginning of Period 2. If the assessment of hedge effectiveness is done before the forecasted 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 forecasted transaction is now expected to occur in two months, the amount would have to be discounted for the remaining two months before the forecasted 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 based on 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 had the debt 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 forecasted 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:

	Total		1	2	3	4	5
Original forward periods			1	2	3	4	5
Remaining periods				1	2	3	4
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 x rate)				-125	64	-501	-563
Discount rate (spot)				5.75%	6.50%	7.50%	8.00%
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 occurrence of the forecasted 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 purposes of assessing effectiveness in this situation (IAS 39.144). 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.

Paragraph 158
Question 158-5
Cash flow hedges: firm commitment to purchase inventory in a foreign currency

Enterprise A has the Reporting Currency (RC) as its measurement currency. On 30 June 2001, it enters into a forward exchange contract to receive Foreign Currency (FC) 100,000 and deliver RC 109,600 on 30 June 2002 at an initial cost and fair value of zero. 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 on 31 March 2002 and the resulting payable of FC 100,000, which is to be paid on 30 June 2002. All hedge accounting conditions in IAS 39 are met.

As indicated in the table below, on 30 June 2001, the spot exchange rate is RC 1.072 to 1 FC, while the twelve-month forward exchange rate is 1.096. On 31 December 2001, the spot exchange rate is 1.080, while the six-month forward exchange rate is 1.092. On 31 March 2002, the spot exchange rate is 1.074, while the three-month forward rate is 1.076. On 30 June 2002, the spot exchange rate is 1.072. The applicable yield curve in the reporting currency is flat at 6 per cent per annum throughout the period. The fair value of the forward exchange contract is negative 388 on 31 December 2001 $\{([1.092 \times 100,000] - 109,600) / 1.06^{(6/12)}\}$, negative 1,971 on 31 March 2002 $\{([1.076 \times 100,000] - 109,600) / 1.06^{(3/12)}\}$, and negative 2,400 on 31 June 2002 $\{1.072 \times 100,000 - 109,600\}$.

Date	Spot rate	Forward rate to 30 June 2002	Fair value of forward contract
30 June 2001	1.072	1.096	0
31 December 2001	1.080	1.092	(388)
31 March 2002	1.074	1.076	(1,971)
30 June 2002	1.072	-	(2,400)

What is the accounting for these transactions if the hedging relationship is designated as being for changes in the fair value of the forward exchange contract?

The accounting entries are as follows.

30 June 2001

Dr   Forward   0
        Cr   Cash   0

To record the forward exchange contract at its initial amount of zero (IAS 39.66). The hedge is expected to be fully effective because the critical terms of the forward exchange contract and the purchase contract and the assessment of hedge effectiveness are based on the forward price (IAS 39.151).

31 December 2001

Dr   Equity   388
        Cr   Forward liability   388

To record the change in the fair value of the forward exchange contract between 30 June 2001 and 31 December 2001, that is, 388 – 0 = 388, directly in equity (IAS 39.158). The hedge is fully effective because the loss on the forward exchange contract (388) exactly offsets the change in cash flows associated with the purchase contract based on the forward price (-388 = $\{([1.092 \times 100,000] - 109,600)/1.06^{(6/12)}\} - \{([1.096 \times 100,000] - 109,600)/1.06\}$).

31 March 2002

Dr   Equity   1,583
        Cr   Forward liability   1,583

To record the change in the fair value of the forward exchange contract between 1 January 2002 and 31 March 2002 (that is, 1,971 – 388 = 1,583), directly in equity (IAS 39.158). The hedge is fully effective because the loss on the forward exchange contract (1,583) exactly offsets the change in cash flows associated with the purchase contract based on the forward price (-1,583 = $\{([1.076 \times 100,000] - 109,600)/1.06^{(3/12)}\} - \{([1.092 \times 100,000] - 109,600)/1.06^{(6/12)}\}$).

Dr	Paper (purchase price)		107,400	
Dr	Paper (hedging loss)		1,971	
	Cr	Equity		1,971
	Cr	Payable		107,400

To recognise the purchase of the paper at the spot rate (1.074 x 100,000) and remove the cumulative loss on the forward exchange contract that has been recognised directly in equity (1,971) and include it in the initial measurement of the purchased paper. Accordingly, the initial measurement of the purchased paper is 109,371 consisting of a purchase consideration of 107,400 and a hedging loss of 1,971.

30 June 2002

Dr	Payable		107,400	
	Cr	Cash		107,200
	Cr	Net profit or loss		200

To record the settlement of the payable at the spot rate (100,000 x 1.072 = 107,200) and the associated exchange gain of 200 (107,400-107,200).

Dr	Net profit or loss		429	
	Cr	Forward liability		429

To record the loss on the forward exchange contract between 1 April 2002 and 30 June 2002 (that is, 2,400 – 1,971 = 429) in net profit or loss. The hedge is considered to be fully effective because the loss on the forward exchange contract (429) exactly offsets the change in the fair value of the payable based on the forward price $(429 = ([1.072 \times 100,000] - 109,600 - \{([1.076 \times 100,000] - 109,600)/1.06^{(3/12)}\})$.

Dr	Forward liability		2,400	
	Cr	Cash		2,400

To record the net settlement of the forward exchange contract.

What is the accounting for these transactions if the hedging relationship instead is designated as being for changes in the spot element of the forward exchange contract and the interest element is excluded from the designated hedging relationship (IAS 39.144)?

The accounting entries are as follows.

30 June 2001

Dr	Forward		0	
	Cr	Cash		0

To record the forward exchange contract at its initial amount of zero (IAS 39.66). 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 (IAS 39.151).

31 December 2001

Dr	Net profit or loss (interest element)		1,165	
	Cr	Equity (spot element)		777
	Cr	Forward liability		388

To record the change in the fair value of the forward exchange contract between 30 June 2001 and 31 December 2001, that is, 388 – 0 =388. The change in the present value of spot settlement of the forward exchange contract is a gain of 777 $(\{([1.080 \times 100,000] - 107,200)/1.06^{(6/12)}\} - \{([1.072 \times 100,000] - 107,200)/1.06\})$, which is recognised directly in equity (IAS 39.158). The change in the interest element of the forward exchange contract (the residual change in fair value) is a loss of 1,165 (388 + 777), which is recognised in net profit or loss (IAS 39.144 and IAS 39.103(a)). The hedge is fully effective because the gain in the spot element of the forward contract (777) exactly offsets the change in the purchase price at spot rates $(777 = \{([1.080 \times 100,000] - 107,200)/1.06^{(6/12)}\} - \{([1.072 \times 100,000] - 107,200)/1.06\})$.

31 March 2002

Dr	Equity (spot element)		580	
Dr	Net profit or loss (interest element)		1,003	
	Cr	Forward liability		1,583

To record the change in the fair value of the forward exchange contract between 1 January 2002 and 31 March 2002, that is, 1,971 – 388 = 1,583. The change in the present value of the spot settlement of the forward exchange contract is a loss of 580 ($\{([1.074 \times 100{,}000] - 107{,}200)/1.06^{(3/12)}\} - \{([1.080 \times 100{,}000] - 107{,}200)/1.06^{(6/12)}\}$), which is recognised directly in equity (IAS 39.158). The change in the interest element of the forward exchange contract (the residual change in fair value) is a loss of 1,003 (1,583 – 580), which is recognised in net profit or loss (IAS 39.144 and IAS 39.103(a)). The hedge is fully effective because the loss in the spot element of the forward contract (580) exactly offsets the change in the purchase price at spot rates ($-580 = \{([1.074 \times 100{,}000] - 107{,}200)/1.06^{(3/12)}\} - \{([1.080 \times 100{,}000] - 107{,}200)/1.06^{(6/12)}\}$).

Dr	Paper (purchase price)	107,400	
Dr	Equity	197	
	Cr Paper (hedging gain)		197
	Cr Payable		107,400

To recognise the purchase of the paper at the spot rate (= 1.074 x 100,000) and remove the cumulative gain on the spot element of the forward exchange contract that has been recognised directly in equity (777-580 = 197) and include it in the initial measurement of the purchased paper. Accordingly, the initial measurement of the purchased paper is 107,203 consisting of a purchase consideration of 107,400 and a hedging gain of 197.

30 June 2002

Dr	Payable	107,400	
	Cr Cash	107,200	
	Cr Net profit or loss		200

To record the settlement of the payable at the spot rate (100,000 x 1.072 = 107,200) and the associated exchange gain of 200 (– [1.072 – 1.074] x 100,000).

Dr	Net profit or loss (spot element)	197	
Dr	Net profit or loss (interest element)	232	
	Cr Forward liability		429

To record the change in the fair value of the forward exchange contract between 1 April 2002 and 30 June 2002 (that is, 2,400 – 1,971 = 429). The change in the present value of the spot settlement of the forward exchange contract is a loss of 197 ($[1.072 \times 100{,}000] - 107{,}200 - \{([1.074 \times 100{,}000] - 107{,}200)/1.06^{(3/12)}\}$), which is recognised in net profit or loss. The change in the interest element of the forward exchange contract (the residual change in fair value) is a loss of 232 (429 – 197), which is recognised in net profit or loss. The hedge is fully effective because the loss in the spot element of the forward contract (197) exactly offsets the change in the present value of the spot settlement of the payable ($-197 = \{[1.072 \times 100{,}000] - 107{,}200 - \{([1.074 \times 100{,}000] - 107{,}200)/1.06^{(3/12)}\}$).

Dr	Forward liability	2,400	
	Cr 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.

Period ending	Change in spot settlement	Fair value of change in spot settlement	Change in forward settlement	Fair value of change in forward settlement	Fair value of change in interest element
June 2001	-	-	-	-	-
December 2001	800	777	(400)	(388)	(1,165)
March 2002	(600)	(580)	(1,600)	(1,583)	(1,003)
June 2002	(200)	(197)	(400)	(429)	(232)
Total	0	0	(2,400)	(2,400)	(2,400)

Discussed by IAS 39 IGC: 24-25 April 2001
Published for Public Comment: 22 June 2001
Discussed by IAS 39 IGC: 25-26 September 2001
Final Action: Approved

Paragraph 172
Question 172-10
Transition: impairment

Prior to IAS 39, Enterprise A measured impairment of its financial assets carried at cost on an undiscounted basis. IAS 39 requires that impairment be measured on a discounted basis (IAS 39.111). Therefore, on transition to IAS 39, Enterprise A makes an adjustment to the carrying amount of those financial assets that are measured at amortised cost under IAS 39 to reflect the effect of discounting expected future cash flows. Should this adjustment be recognised as an adjustment to the opening balance of retained earnings in the financial year in which IAS 39 is initially applied under IAS 39.172(d)?

Yes. IAS 39.172(d) states that "at the beginning of the financial year in which [IAS 39] is initially applied, an enterprise should … identify those financial assets that should be measured at fair value and those that should be measured at amortised cost, and it should remeasure those assets as appropriate. Any adjustment of the previous carrying amount should be recognised as an adjustment to the [opening] balance of retained earnings". While IAS 39.172(d) does not refer explicitly to the recognition and measurement of impairment, the treatment specified there is applicable because a change from an undiscounted to a discounted measure of impairment results in a remeasurement of assets carried at amortised cost on transition to IAS 39. The definition of 'amortised cost' in IAS 39 includes an adjustment for impairment (IAS 39.10).

At the beginning of the financial year in which IAS 39 is initially applied, Enterprise A also revises its assessment of the amount of impairment inherent in its financial assets carried at amortised cost based on a reassessment of their expected cash flows or other relevant estimates, such as the fair value of supporting collateral. To reflect the results of this, it makes an adjustment to the carrying amount of financial assets carried at amortised cost. Should this adjustment be recognised as an adjustment to the opening balance of retained earnings in the financial year in which IAS 39 is initially applied under IAS 39.172(d)?

No. An adjustment to the carrying amount of financial assets is treated as a transition adjustment under IAS 39.172(d) only to the extent that it results from adopting IAS 39. IAS 8 provides guidance on accounting for changes in

estimates. If an enterprise is unable to determine if a certain portion of the adjustment is a transition adjustment or a change in estimate, that portion is treated as a change in accounting estimate under IAS 8, with appropriate disclosures (IAS 8.25).

Discussed by IAS 39 IGC: 24-25 April 2001
Published for Public Comment: 22 June 2001
Discussed by IAS 39 IGC: 25-26 September 2001
Final Action: Approved

**Appendices to the
IAS 39 Implementation Guidance**

Appendix to the IAS 39 Implementation Guidance
Illustrative example of applying the approach in Question 121-2

The purpose of this example is to illustrate the process of establishing, monitoring, and adjusting hedge positions and of qualifying for cash flow hedge accounting in applying the approach to hedge accounting described in Question 121-2 when a financial institution manages its interest rate risk on an enterprise-wide basis. To this end, this example identifies a methodology that allows for the use of hedge accounting and takes advantage of existing risk management systems so as to avoid unnecessary changes to it and to avoid unnecessary bookkeeping and tracking.

The approach being illustrated herein reflects only one of a number of risk management processes that could be employed and could qualify for hedge accounting. Its use is not intended to suggest that other alternatives could not or should not be used. The approach being illustrated also could be applied in other circumstances (such as for cash flow hedges of commercial companies), for example, hedging the rollover of commercial paper financing.

Identifying, assessing and reducing cash flow exposures

The discussion and illustrations that follow focus on the risk management activities of a financial institution that manages its interest rate risk by analysing expected cash flows in a particular currency on an enterprise-wide basis. The cash flow analysis forms the basis for identifying the interest rate risk of the enterprise, entering into hedging transactions to manage the risk, assessing the effectiveness of risk management activities, and qualifying for and applying cash flow hedge accounting.

The illustrations that follow assume that an enterprise, a financial institution, had the following expected future net cash flows and hedging positions outstanding in a specific currency, consisting of interest rate swaps, at the beginning of Period X0. The cash flows shown are expected to occur at the end of the period and, therefore, create a cash flow interest exposure in the following period as a result of the reinvestment or repricing of the cash inflows or the refinancing or repricing of the cash outflows.

The illustrations assume that the enterprise has an ongoing interest rate risk management program. Schedule I shows the expected cash flows and hedging

positions that existed at the beginning of Period X0. It is included herein to provide a starting point in the analysis. It provides a basis for considering existing hedges in connection with the evaluation that occurs at the beginning of Period X1.

Schedule I – End of period – Expected cash flows and hedging positions

Quarterly period	X0	X1	X2	X3	X4	X5	...n
Expected net cash flows		1100	1500	1200	1400	1500	x,xxx
Outstanding interest rate swaps:							
Receive-fixed, pay-variable (notional amounts)	2000	2000	2000	1200	1200	1200	x,xxx
Pay-fixed, receive-variable (notional amounts)	-1000	-1000	-1000	-500	-500	-500	x,xxx
Net exposure after outstanding swaps		100	500	500	700	800	x,xxx

The schedule depicts five quarterly periods. The actual analysis would extend over a period of many years, represented by the notation, "…n". A financial institution that manages its interest rate risk on an enterprise-wide basis re-evaluates it cash flow exposures periodically. The frequency of the evaluation depends on the enterprise's risk management policy.

For purposes of this illustration, the enterprise is re-evaluating its cash flow exposures at the end of Period X0. The first step in the process is the generation of forecasted net cash flow exposures from existing interest-earning assets and interest-bearing liabilities, including the rollover of short-term assets and short-term liabilities. Schedule II below illustrates the forecast of net cash flow exposures. A common technique for assessing exposure to interest rates for risk management purposes is an interest rate sensitivity gap analysis showing the gap between interest rate-sensitive assets and interest rate-sensitive liabilities over different time intervals. Such an analysis could be used as a starting point for identifying cash flow exposures to interest rate risk for hedge accounting purposes (see Question 121-2-a).

Schedule II – Forecasted net cash flow and repricing exposures

Quarterly period	Notes	X1	X2	X3	X4	X5	...n
CASH INFLOW AND REPRICING EXPOSURES - from assets							
Principal and interest payments:							
Long-term fixed rate	(1)	2400	3000	3000	1000	1200	x,xxx
Short-term (roll over)	(1)(2)	1575	1579	1582	1586	1591	x,xxx
Variable rate - principal payments	(1)	2000	1000	0	500	500	x,xxx
Variable rate - estimated interest	(2)	125	110	105	114	118	x,xxx
Total expected cash inflows		*6100*	*5689*	*4687*	*3200*	*3409*	*x,xxx*
Variable rate asset balances	(3)	8000	7000	7000	6500	6000	x,xxx
Cash inflows and repricings	***(4)***	***14100***	***12689***	***11687***	***9700***	***9409***	***x,xxx***
CASH OUTFLOW AND REPRICING EXPOSURES - from liabilities							
Principal and interest payments:							
Long-term fixed rate	(1)	2100	400	500	500	301	x,xxx
Short-term (roll over)	(1)(2)	735	737	738	740	742	x,xxx
Variable rate - principal payments	(1)	0	0	2000	0	1000	x,xxx
Variable rate - estimated interest	(2)	100	110	120	98	109	x,xxx
Total expected cash outflows		*2935*	*1247*	*3358*	*1338*	*2152*	*x,xxx*
Variable rate liability balances	(3)	8000	8000	6000	6000	5000	x,xxx
Cash outflows and repricings	***(4)***	***10935***	***9247***	***9358***	***7338***	***7152***	***x,xxx***
NET EXPOSURES	(5)	3165	3442	2329	2362	2257	x,xxx

(1)   The cash flows are estimated using contractual terms and assumptions based on management intent and market factors. It is assumed that short-term assets and liabilities will continue to be rolled over in succeeding periods. Assumptions about prepayments and defaults and the withdrawal of deposits are based on market and historical data. It is assumed that principal and interest inflows and outflows will be reinvested and refinanced, respectively, at the end of each period at the then current market interest rates and share the benchmark interest rate risk to which they are exposed.

(2)   Forward interest rates obtained from Schedule VI are used to forecast interest payments on variable-rate financial instruments and expected rollovers of short-term assets and liabilities. All forecasted cash flows are associated with the specific time periods (3 months, 6 months, 9 months, and 12 months) in which they are expected to occur. For completeness, the interest cash flows resulting from reinvestments, refinancings, and repricings are included in the schedule and shown gross even though only the net margin may actually be reinvested. Some entities may choose to disregard the forecasted interest cash flows for risk management purposes because they may be used to absorb operating costs and any remaining amounts would not be significant enough to affect risk management decisions.

(3)   The cash flow forecast is adjusted to include the variable-rate asset and liability balances in each period in which such variable-rate asset and liability balances reprice. The principal amounts of these assets and liabilities are not actually being paid and, therefore, do not generate a cash flow. However, since interest is computed on the principal amounts each period based on the then current market interest rate, such principal amounts expose the entity to the same interest rate risk as if they were cash flows being reinvested or refinanced.

(4)   The forecasted cash flow and repricing exposures that are identified in each period represent the principal amounts of cash inflows that will be reinvested or repriced and cash outflows that will be refinanced or repriced at the market interest rates that are in effect when those forecasted transactions occur.

(5)   The net cash flow and repricing exposure is the difference between the cash inflow and repricing exposures from assets and the cash outflow and repricing exposures from liabilities. In the illustration, the enterprise is exposed to interest rate declines because the exposure from assets exceeds the exposure from liabilities and the excess (that is, the net amount) will be reinvested or repriced at the current market rate and there is no offsetting refinancing or repricing of outflows.

Note that some banks consider some portion of their non-interest bearing demand deposits to be economically equivalent to long-term debt. However, these deposits do not create a cash flow exposure to interest rates and, therefore, would be excluded from this analysis for accounting purposes.

Schedule II, Forecasted Net Cash Flow and Repricing Exposures, only provides a starting point for assessing cash flow exposure to interest rates and for adjusting hedging positions. The complete analysis includes outstanding hedging positions and is shown in Schedule III, Analysis of Expected Net Exposures and Hedging Positions. It compares the forecasted net cash flow exposures for each period (developed in Schedule II) with existing hedging positions (obtained from Schedule I), and provides a basis for considering whether adjustment of the hedging relationship should be made.

Schedule III – Analysis of expected net exposures and hedging activities

Quarterly period	X1	X2	X3	X4	X5	...n
Net cash flow and repricing exposures (Schedule II)	3165	3442	2329	2362	2257	x,xxx
Pre-existing swaps outstanding:						
Receive-fixed, pay-variable (notional amounts)	2000	2000	1200	1200	1200	x,xxx
Pay-fixed, receive-variable (notional amounts)	-1000	-1000	-500	-500	-500	x,xxx
Net exposure after pre-existing swaps	*2165*	*2442*	*1629*	*1662*	*1557*	*x,xxx*
Transactions to adjust outstanding hedging positions						
Receive-fixed, pay variable swap 1 (notional amount, 10-years)	2000	2000	2000	2000	2000	x,xxx
Pay-fixed, receive-variable swap 2 (notional amount, 3-years)			-1000	-1000	-1000	x,xxx
Swaps ...X						x,xxx
Unhedged cash flow and repricing exposure	*165*	*442*	*629*	*662*	*557*	*x,xxx*

The notional amounts of the interest rate swaps that are outstanding at the analysis date are included in each of the periods in which the interest rate swaps are outstanding to illustrate the impact of the outstanding interest rate swaps on the identified cash flow exposures. The notional amounts of the outstanding interest rate swaps are included in each period because interest is computed on the notional amounts each period, and the variable rate components of the outstanding swaps are repriced to the current market rate quarterly. The notional amounts create an exposure to interest rates that in part is similar to the principal balances of variable-rate assets and variable-rate liabilities.

The exposure that remains after considering the existing positions is then evaluated to determine the extent to which adjustments of existing hedging positions are necessary. The bottom portion of Schedule III shows the beginning of Period X1 using interest rate swap transactions to further reduce the net exposures to within the tolerance levels established under the enterprise's risk management policy.

Note that in the illustration, the entire cash flow exposure is not eliminated. Many financial institutions do not fully eliminate risk but rather reduce it to within some tolerable limit.

Various types of derivative instruments could be used to manage the cash flow exposure to interest rate risk identified in the schedule of forecasted net cash flows (Schedule II). However, for purposes of the illustration, it is assumed that interest rate swaps are used for all hedging activities. It is also assumed that in periods in which interest rate swaps should be reduced, rather than terminating some of the outstanding interest rate swap positions, a new swap with the opposite return characteristics is added to the portfolio.

In the illustration in Schedule III above, swap 1, a receive-fixed, pay-variable swap, is used to reduce the net exposure in Periods X1 and X2. Since it is a 10-year swap, it also reduces exposures identified in other future periods not shown. However, it has the effect of creating an over-hedged position in Periods X3 to X5. Swap 2, a forward starting pay-fixed, receive-variable interest rate swap, is used to reduce the notional amount of the outstanding receive-fixed, pay-variable interest rate swaps in Periods X3 to X5 and thereby reduce the over-hedged positions.

It also is noted that in many situations, no adjustment or only a single adjustment of the outstanding hedging position is necessary to bring the exposure to within an acceptable limit. However, in situations in which there is a very low tolerance for risk specified in the risk management policy of the enterprise, a greater number of adjustments to the hedging positions over the forecast period would be needed to further reduce any remaining risk.

To the extent that some of the interest rate swaps fully offset other interest rate swaps that have been entered into for hedging purposes, it is not necessary that they be included in a designated hedging relationship for hedge accounting purposes. These offsetting positions can be combined, de-

designated as hedging instruments, if necessary, and reclassified for accounting purposes from the hedging portfolio to the trading portfolio. This procedure limits the extent to which the gross swaps must continue to be designated and tracked in a hedging relationship for accounting purposes. If an offsetting swap only partially offsets another interest rate swap that is designated as a hedge, the net position does not qualify as a hedging instrument because that would result in a portion of the hedging instrument being designated as a hedge, which is not permitted for accounting purposes. To the extent that both swaps are designated as hedging instruments and they do not fully offset each other, the effect of hedge accounting would be to take out of equity any excess gain or loss recognised in equity over the remaining contractual life of the interest rate swap to correspond with the timing of the designated hedged forecasted transactions. For purposes of this illustration it is assumed that 500 of the pay-fixed, receive-variable interest rate swaps fully offset 500 of the receive-fixed, pay-variable interest rate swaps at the beginning of period X1 and for periods X1 through X5, and are de-designated as hedging instruments and reclassified to the trading account.

After reflecting these offsetting positions, the remaining gross interest rate swap positions from Schedule III are shown in Schedule IV as follows:

Schedule IV – Interest rate swaps designated as hedges

Quarterly period	X1	X2	X3	X4	X5	…n
Receive-fixed, pay-variable (notional amounts)	3500	3500	2700	2700	2700	x,xxx
Pay-fixed, receive-variable (notional amounts)	-500	-500	-1000	-1000	-1000	x,xxx
Net outstanding swaps positions	3000	3000	1700	1700	1700	x,xxx

For purposes of the illustrations, it is assumed that Swap 2, entered into at the beginning of Period X1, only partially offsets another swap being accounted for as a hedge and, therefore, continues to be designated as a hedging instrument.

Hedge accounting considerations

Illustrating the designation of the hedging relationship

The discussion and illustrations thus far have focused primarily on economic and risk management considerations relating to the identification of risk in future periods and the adjustment of that risk using interest rate swaps. These activities form the basis for designating a hedging relationship for accounting purposes.

The examples in IAS 39 focus primarily on hedging relationships involving a single hedged item and a single hedging instrument, but there is little discussion and guidance on portfolio hedging relationships for cash flow hedges when risk is being managed on a centralised basis. In this illustration, the general principles are applied to hedging relationships involving a component of risk in a portfolio having multiple risks from multiple transactions or positions.

While designation is necessary to achieve hedge accounting, the way in which the designation is described also affects the extent to which the hedging relationship is considered to be effective for accounting purposes and the extent to which the enterprise's existing system for managing risk will be required to be modified to track hedging activities for accounting purposes. Accordingly, an enterprise may wish to designate the hedging relationship in a manner that avoids unnecessary systems changes by taking advantage of the information already generated by the risk management system and avoids unnecessary bookkeeping and tracking. In designating hedging relationships, the enterprise may also consider the extent to which ineffectiveness is expected to be recognised for accounting purposes under alternative designations.

There are a number of things that should be specified in the designation of the hedging relationship. These are illustrated and discussed here from the perspective of the hedge of the interest rate risk associated with the cash inflows, but the guidance also can be applied to the hedge of the risk associated with the cash outflows. It is fairly obvious that only a portion of the gross exposures relating to the cash inflows are being hedged by the interest rate swaps. Schedule V, The General Hedging Relationship, illustrates the designation of the portion of the gross reinvestment risk exposures identified in Schedule II being hedged by the interest rate swaps.

Schedule V – The general hedging relationship

Quarterly period	X1	X2	X3	X4	X5	...n
Cash inflow repricing exposure (Schedule II)	14100	12689	11687	9700	9409	x,xxx
Receive-fixed, pay-variable swaps (Schedule IV)	3500	3500	2700	2700	2700	x,xxx
Hedged exposure percentage	24.8%	27.6%	23.1%	27.8%	28.7%	xx.x%

The hedged exposure percentage is computed as the ratio of the notional amount of the receive-fixed, pay-variable swaps that are outstanding divided by the gross exposure. Note that in Schedule V there are sufficient levels of forecasted reinvestments in each period to more than offset the notional amount of the receive-fixed, pay-variable swaps and satisfy the accounting requirement that the forecasted transaction is probable of occurring.

It is not as obvious, however, how the interest rate swaps are specifically related to the cash flow interest risks designated as being hedged and how the interest rate swaps are effective in reducing that risk. The more specific designation is illustrated in Schedule VI, The Specific Hedging Relationship, shown below. It provides a meaningful way of depicting the more complicated narrative designation of the hedge by focusing on the hedging objective to eliminate the cash flow variability associated with future changes in interest rates and to obtain an interest rate equal to the fixed rate inherent in the term structure of interest rates that exists at the commencement of the hedge.

The expected interest from the reinvestment of the cash inflows and repricings of the assets is computed by multiplying the gross amounts exposed by the forward rate for the period. For example, the gross exposure for Period 2 of 14100 is multiplied by the forward rate for Periods 2 to 5 of 5.50%, 6.00%, 6.50%, and 7.25%, respectively, to compute the expected interest for those quarterly periods based on the current term structure of interest rates. The hedged expected interest is computed by multiplying the expected interest for the applicable three-month period by the hedged exposure percentage.

Schedule VI – The specific hedging relationship

			Term structure of interest rates					
Quarterly period			X1	X2	X3	X4	X5	...n
Spot rates			5.00%	5.25%	5.50%	5.75%	6.05%	x.xx%
Forward rates *			5.00%	5.50%	6.00%	6.50%	7.25%	x.xx%
Cash flow exposures and expected interest amounts								
Repricing period	Time to forecasted transaction	Gross amounts exposed		Expected interest				
2	3 months	14100	→	194	212	229	256	
3	6 months	12689			190	206	230	xxx
4	9 months	11687				190	212	xxx
5	12 months	9700					176	xxx
6	15 months	9409						xxx
Hedged percentage (Schedule V) in the previous period				24.8%	27.6%	23.1%	27.8%	xx.x%
Hedged expected interest				48	52	44	49	xx

*The forward interest rates are computed from the spot interest rates and rounded for purposes of the presentation. Computations that are based on the forward interest rates are made based on the actual computed forward rate and then rounded for purposes of the presentation.

It does not matter whether the gross amount exposed is reinvested in long-term fixed-rate debt or variable-rate debt, or in short-term debt that is rolled over in each subsequent period. The exposure to changes in the forward interest rate is the same. For example, if the 14100 is reinvested at a fixed rate at the beginning of Period 2 for six months, it will be reinvested at 5.75%. The expected interest is based on the forward interest rates for Period 2 of 5.50% and for Period 3 of 6.00% which is equal to a blended rate of 5.75% $(1.055 \times 1.060)^{0.5}$, which is the Period 2 spot rate for the next six months.

However, only the expected interest from the reinvestment of the cash inflows or repricing of the gross amount for the first three-month period after the forecasted transaction occurs is designated as being hedged. The expected interest being hedged is represented by the shaded cells. The exposure for the subsequent periods is not hedged. In the example, the portion of the interest

rate exposure being hedged is the forward rate of 5.50% for Period X2. In order to assess hedge effectiveness and compute actual hedge ineffectiveness on an ongoing basis, the enterprise may use the information on hedged interest cash inflows in Schedule VI and compare it with updated estimates of expected interest cash inflows (for instance, in a table that looks like Schedule II). As long as expected interest cash inflows exceed hedged interest cash inflows, the enterprise may compare the cumulative change in the fair value of the hedged cash inflows with the cumulative change in the fair value of the hedging instrument to compute actual hedge effectiveness. If there are insufficient expected interest cash inflows, there will be ineffectiveness. It is measured by comparing the cumulative change in the fair value of the expected interest cash flows to the extent they are less than the hedged cash flows with the cumulative change in the fair value of the hedging instrument.

Describing the designation of the hedging relationship

As mentioned previously, there are a number of matters that should be specified in the designation of the hedging relationship that complicate the description of the designation but are necessary to limit ineffectiveness to be recognised for accounting purposes and to avoid unnecessary systems changes and bookkeeping. The example that follows describes the designation more fully and identifies additional aspects of the designation not apparent from the previous illustrations.

Example designation

Hedging objective

The hedging objective is to eliminate the risk of interest rate fluctuations over the hedging period, which is the life of the interest rate swap, and effectively obtain a fixed interest rate during this period that is equal to the fixed interest rate on the interest rate swap.

Type of hedge

Cash flow hedge

Hedging instrument

The receive-fixed, pay-variable swaps are designated as the hedging instrument. They hedge the cash flow exposure to interest rate risk.

Each repricing of the swap hedges a 3-month portion of the interest cash inflows that results from

- *the forecasted reinvestment or repricing of the principal amounts shown in Schedule V.*
- *unrelated investments or repricings that occur after the repricing dates on the swap over its life and involve different borrowers or lenders.*

The hedged item - General

The hedged item is a portion of the gross interest cash inflows that will result from the reinvestment or repricing of the cash flows identified in Schedule V and expected to occur within the periods shown on such schedule. The portion of the interest cash inflow that is being hedged has three components: 1) the principal component giving rise to the interest cash inflow and the period in which it occurs, 2) the interest rate component, and 3) the time component or period covered by the hedge.

The hedged item – The principal component

The portion of the interest cash inflows being hedged is the amount that results from the first portion of the principal amounts being invested or repriced in each period:

- *that is equal to the sum of the notional amounts of the received-fixed, pay-variable interest rate swaps that are designated as hedging instruments and outstanding in the period of the reinvestment or repricing, and*
- *that corresponds to the first principal amounts of cash flow exposures that are invested or repriced at or after the repricing dates of the interest rate swaps.*

The hedged item – The interest rate component

The portion of the interest rate change that is being hedged is the change in the:

- *credit component of the interest rate being paid on the principal amount that is invested or repriced that is equal to the credit risk inherent in the interest rate swap. It is that portion of the interest rate on the investment that is equal to the interest index of the interest rate swap, such as LIBOR, and*
- *the yield curve component of the interest rate that is equal to the repricing period on the interest rate swap designated as the hedging instrument.*

The hedged item – The hedged period

The period of the exposure to interest rate changes on the portion of the cash flow exposures being hedged is:

- *the period from the designation date to the repricing date of the interest rate swap that occurs within the quarterly period in which, but not before, the forecasted transactions occur, and*
- *its effects for the period after the forecasted transactions occur equal to the repricing interval of the interest rate swap.*

It is important to recognise that the swaps are not hedging the cash flow risk for a single investment over its entire life. The swaps are designated as hedging the cash flow risk from different principal investments and repricings that occur in each repricing period of the swaps over their entire term. The swaps hedge only the interest accruals that occur in the first period following the reinvestment. They are hedging the cash flow impact resulting from a change in interest rates that occurs up to the repricing of the swap. The exposure to changes in rates for the period from the repricing of the swap to the date of the hedged reinvestment of cash inflows or repricing of variable-rate assets is not hedged. When the swap reprices, the interest rate on the swap is fixed until the next repricing date and the accrual of the net swap settlements is determined. Any changes in interest rates after that date that affect the amount of the interest cash inflow is no longer hedged for accounting purposes.

Designation objectives

Systems considerations

A considerable amount of the tracking and bookkeeping requirements is eliminated by designating each repricing of an interest rate swap as hedging the cash flow risk from forecasted reinvestments of cash inflows and repricings of variable rate assets for only a portion of the lives of the related assets. A considerable amount of tracking and bookkeeping would be necessary if the swaps were instead designated as hedging the cash flow risk from forecasted principal investments and repricings of variable rate assets over the entire lives of these assets.

This type of designation avoids basis adjustment upon the occurrence of the forecasted transactions (IAS 39.160) because the portion of the cash flow risk being hedged is that portion that will be recognised in earnings in the period immediately following the forecasted transactions that corresponds with the periodic net cash settlements on the swap. If the hedge were to cover the entire life of the assets being acquired, it would be necessary to associate a specific interest rate swap with the asset being acquired. If a forecasted transaction is the acquisition of a fixed-rate instrument, the fair value of the swap that hedged that transaction would be reclassified out of equity to adjust the basis of the asset acquired. The swap would then have to be terminated or redesignated in another hedging relationship. If a forecasted transaction is the acquisition of a variable-rate asset, the swap would continue in the hedging relationship but it would have to be tracked back to the asset acquired so that any fair value amounts on the swap recognised in equity could be recognised in earnings upon the subsequent sale of the asset.

It also avoids the necessity of associating any portion of the fair value of the swaps that is recognised in equity with variable-rate assets. Accordingly, there is no portion of the fair value of the swap that is recorded in equity that should be reclassified out of equity upon the occurrence of a forecasted transaction or upon the sale of a variable-rate asset.

This type of designation also permits considerable flexibility in deciding how to reinvest cash flows when they occur. Since the hedged risk relates only to a single period that corresponds with the repricing period of the interest rate swap designated as the hedging instrument, it is not necessary to determine at the designation date whether the cash flows will be reinvested in fixed-rate or

variable-rate assets or to specify at the date of designation the life of the asset to be acquired.

Effectiveness considerations

Ineffectiveness is reduced considerably by designating a specific portion of the cash flow exposure as being hedged.

- Ineffectiveness due to credit differences between the interest rate swap and hedged forecasted cash flow is eliminated by designating the cash flow risk being hedged as the risk attributable to changes in the interest rates that correspond with the rates inherent in the swap, such as the AA rate curve. This type of designation prevents changes resulting from changes in credit spreads from being considered as ineffectiveness.

- Ineffectiveness due to duration differences between the interest rate swap and hedged forecasted cash flow is eliminated by designating the interest rate risk being hedged as the risk relating to changes in the portion of the yield curve that corresponds with the period in which the variable-rate leg of the interest rate swap is repriced.

- Ineffectiveness due to interest rate changes that occur between the repricing date of the interest rate swap and the date of the forecasted transactions is eliminated by simply not hedging that period of time. The period from the repricing of the swap and the occurrence of the forecasted transactions in the period immediately following the repricing of the swap is simply unhedged. Therefore, the difference in dates does not result in ineffectiveness.

Accounting considerations

The ability to qualify for hedge accounting using the methodology described herein is founded on a number of provisions in IAS 39 and on interpretations of its requirements. Some of the key provisions and interpretations that provide the foundation for hedge accounting are described in the answer to Question 121-2, Hedge accounting considerations when interest rate risk is managed on a net basis. Some additional and supporting provisions and interpretations are identified below.

Hedging a portion of the risk exposure

The ability to identify and hedge only a portion of the cash flow risk exposure resulting from the reinvestment of cash flows or repricing of variable-rate instruments is founded in IAS 39.128 as interpreted in the answers to Questions 121-2-k, 128-2, Partial term hedging, and 128-3, Hedge accounting: risk components.

Hedging multiple risks with a single instrument

The ability to designate a single interest rate swap as a hedge of the cash flow exposure to interest rates resulting from various reinvestments of cash inflows or repricings of variable-rate assets that occur over the life of the swap is founded in IAS 39.131 as interpreted in the answer to Question 131-1, Hedges of more than one type of risk.

Hedging similar risks in a portfolio

The ability to specify the forecasted transaction being hedged as a portion of the cash flow exposure to interest rates for a portion of the duration of the investment that gives rise to the interest payment without specifying at the designation date the expected life of the instrument and whether it pays a fixed or variable rate is founded in the answer to Question 121-2-1 which specifies that the items in the portfolio do not necessarily have to have the same overall exposure to risk, providing they share the same risk for which they are designated as being hedged.

Hedge terminations

The ability to de-designate the forecasted transaction (the cash flow exposure on an investment or repricing that will occur after the repricing date of the swap) as being hedged is provided for in IAS 39.163 dealing with hedge terminations. While a portion of the forecasted transaction is no longer being hedged, the interest rate swap is not de-designated, and it continues to be a hedging instrument for the remaining transactions in the series that have not occurred. For example, assume that an interest rate swap having a remaining life of one year has been designated as hedging a series of three quarterly reinvestments of cash flows. The next forecasted cash flow reinvestment occurs in three months. When the interest rate swap reprices in three months at the then current variable rate, the fixed rate and the variable rate on the

interest rate swap become known and no longer provide hedge protection for the next three months. If the next forecasted transaction does not occur until three months and ten days, the ten-day period that remains after the repricing of the interest rate swap is not hedged.

Appendix to the IAS 39 Implementation Guidance
Internal derivatives: examples of applying Question 134-1-b

The following examples illustrate the application of Question 134-1-b. In each case, FC = foreign currency, RC = reporting currency, and TC = treasury centre.

Case 1: Offset of fair value hedges

Subsidiary A has trade receivables of FC 100, due in 60 days, which it hedges using a forward contract with TC. Subsidiary B has payables of FC 50, also due in 60 days, which it hedges using a forward contact with TC.

TC nets the two internal derivatives and enters into a net external forward contract to pay FC 50 and receive RC in 60 days.

At the end of month 1, FC weakens against RC. A incurs a foreign exchange loss of RC 10 on its receivables, offset by a gain of RC 10 on its forward contract with TC. B makes a foreign exchange gain of RC 5 on its payables offset by a loss of 5 on its forward contract with TC. TC makes a loss of RC 10 on its internal forward contract with A, a gain of RC 5 on its internal forward contract with B, and a gain of RC 5 on its external forward contract.

A's entries

Dr	Foreign exchange loss	10	
	Cr Receivables		10

Dr	Internal contract TC	10	
	Cr Internal gain TC		10

B's entries

Dr	Payables	5	
	Cr Foreign exchange gain		5

Dr	Internal loss TC	5	
	Cr Internal contract TC		5

TC's entries

Dr	Internal loss A	10	
	Cr Internal contract A		10

Dr	Internal contract B	5	
	Cr Internal gain B		5

Dr	External forward contract	5	
	Cr Foreign exchange gain		5

Both A and B could apply hedge accounting in their separate IAS financial statements provided all conditions in IAS 39 are met. However, in this case, no hedge accounting is required because gains and losses on the internal derivatives and the offsetting losses and gains the hedged receivables and payables are recognised immediately in the income statement without hedge accounting.

At the group level, the internal derivative transactions are eliminated. In economic terms, the payable in B hedges FC 50 of the receivables in A. The external forward contract in TC hedges the remaining FC 50 of the receivable in A.

After these adjustments, the net balances are as follows:

Receivables   Cr 10
Payables   Dr 5
External forward contract Dr 5
Gains and losses   0
Internal contracts   0

Case 2: Offset of cash flow hedges

To extend the example, A also has highly probable future revenues of FC 200 on which it expects to receive cash in 90 days. B has a contract to purchase advertising space for FC 500, also to be paid for in 90 days. Both A and B enter into separate forward contracts with TC to hedge these exposures and TC enters into an external forward contract to receive FC 300 in 90 days.

As before, FC weakens at the end of month 1. A incurs a "loss" of RC 20 on its anticipated revenues because the RC value of these revenues decreases. This is offset by a gain of RC 20 on its forward contract with TC.

B incurs a "gain" of RC 50 on its anticipated advertising cost because the RP value of the expense decreases. This is offset by a loss of RC 50 on its transaction with TC.

TC incurs a gain of RC 50 on its internal transaction with B, a loss of RC 20 on its internal transaction with A, and a loss of RC 30 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 stand-alone IAS financial statements. A defers the gain of RC 20 on its internal derivative transaction in a hedging reserve in equity and B defers the loss of RC 50 in its hedging reserve in equity. TC does not claim hedge accounting, but measures both its internal and external derivative positions at fair value, which net to zero.

A's entries

Dr	Internal contract TC	20	
	Cr Equity		20

B's entries

Dr	Equity	50	
	Cr Internal contract TC		50

TC's entries

Dr	Internal loss A	20	
	Cr Internal contract A		20

Dr	Internal contract B	50	
	Cr Internal gain B		50

Dr	Foreign exchange loss	30	
	Cr External forward contract		30

At the group level, there is no need to make consolidation adjustments because the impact is the same - a net RC 30 is deferred in equity.

The net balances are as follows:

External forward contract	Cr 30
Equity	Dr 30
Gains and losses	0
Internal contracts	0

Case 3: Offset of fair value and cash flow hedges

Assume that the exposures and the internal derivative transactions are the same as in cases 1 and 2. However, instead of entering into two external derivatives to separately hedge the fair value and cash flow exposures, TC enters into a single net external derivative to receive FC 250 in exchange for RC in 90 days.

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 RC is minimal, and therefore the ineffectiveness resulting from the mismatch in maturities is expected to have a minimal effect on net 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 defers a gain of RC 20 on its internal derivative transaction in equity and B defers a loss of RC 50 on its internal derivative transaction in equity.

A's entries

Dr	Foreign exchange loss	10	
	Cr Receivables		10
Dr	Internal contract TC	10	
	Cr Internal gain TC		10
Dr	Internal contract TC	20	
	Cr Equity		20

B's entries

Dr	Payables	5	
	Cr Foreign exchange gain		5
Dr	Internal loss TC	5	
	Cr Internal contract TC		5
Dr	Equity	50	
	Cr Internal contract TC		50

TC's entries

Dr	Internal loss A	10	
	Cr Internal contract A		10
Dr	Internal loss A	20	
	Cr Internal contract A		20
Dr	Internal contract B	5	
	Cr Internal gain B		5
Dr	Internal contract B	50	
	Cr Internal gain B		50
Dr	Foreign exchange loss	25	
	Cr External forward contract		25

TOTAL	A	B	Total
Income (fair value hedges)	10	(5)	5
Equity (cash flow hedges)	20	(50)	(30)
Total	30	(55)	(25)

In consolidation, the external forward contract for FC 250, which has a loss of 25, can be used to offset the net of the internal derivatives of 5 and (30) even though one is a hedging instrument in a cash flow hedge and the other in a fair value hedge. This is permitted because the hedging instruments in the fair value hedges in A and B are foreign currency receivables and payables, which

qualify as hedging instruments for foreign currency risk under IAS 39, and they can first be applied against the cash flow exposures of each other. Thus, the loss on A's receivables of 10 offsets the "gain" on B's anticipated transaction of 50 leaving a remaining cash flow exposure (gain) of 40 in B. The gain on B's payables of 5 offsets the "loss" on A's forecasted transaction of 20 leaving a remaining cash flow exposure (loss) of 15 in A. Then, the two cash flow exposures of 40 and 15 are netted, which results in a net exposure of 25 at the consolidated level, which equals the net exposure of 25 that is hedged by the external derivative. Therefore, there is no need to unwind the hedging relationships in A and B for group reporting purposes.

The total net balances are as follows:

Receivables	Cr 10	
Payables	Dr 5	
Forward contract	Cr 25	
Equity	Dr 30	
Gains and losses	0	
Internal contracts	0	

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

Assume similar transactions as in Case 3, except that the anticipated cash outflow of FC 500 in B relates to the purchase of inventory that is delivered after 60 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 RC 50 on B's internal derivative, deferred in equity in month 1, is adjusted against the carrying amount of inventory in B. The gain of RC 20 on A's internal derivative is deferred in equity as before.

At the group level, there is now a mismatch compared to the result that would have been achieved by unwinding and redesignating the hedges. The external derivative (FC 250) and a proportion of the receivable (FC 50) offset FC 300 of the anticipated inventory purchase. There is a natural hedge between the remaining FC 200 of anticipated cash outflow in B and the anticipated cash inflow of FC 200 in A. This relationship does not qualify for hedge accounting under IAS 39 and this time there is only a partial offset between gains and losses on the internal derivatives that hedge these amounts.

A's entries

Dr	Foreign exchange loss	10	
	Cr Receivables		10
Dr	Internal contract TC	10	
	Cr Internal gain TC		10
Dr	Internal contract TC	20	
	Cr Equity		20

B's entries

Dr	Payables	5	
	Cr Foreign exchange gain		5
Dr	Internal loss TC	5	
	Cr Internal contract TC		5
Dr	Equity	50	
	Cr Internal contract TC		50
Dr	Inventory	50	
	Cr Equity		50

TC's entries

Dr	Internal loss A	10	
	Cr Internal contract A		10
Dr	Internal loss A	20	
	Cr Internal contract A		20
Dr	Internal contract B	5	
	Cr Internal gain B		5
Dr	Internal contract B	50	
	Cr Internal gain B		50

Dr   Foreign exchange loss   25
         Cr   Forward   25

TOTAL	A	B	Total
Income (fair value hedges)	10	(5)	5
Equity (cash flow hedges)	20		20
Basis adjustment (inventory)		(50)	(50)
Total	30	(55)	(25)

Again, the fair value hedges for A and B are foreign currency receivables and payables and they can first be applied against the cash flow exposures of each other. The loss on A's receivables of 10 offsets the "gain" on B's purchase of inventory of 50 leaving a remaining cash flow exposure (gain) of 40 in B. The gain on B's payables of 5 offsets the "loss" on A's forecasted transaction of 20 leaving a remaining cash flow exposure (loss) of 15 in A. The loss on the external derivative of 25 offsets the cash flow exposure in B of 40 leaving 15 for which there is no external offset. At the group level, therefore, RC 15 of the loss on B's internal derivative that is deferred in inventory should be reclassified to equity to offset the corresponding gain from the hedge of anticipated revenues in A.

Dr   Equity   15
         Cr   Inventory   15

The total net balances are as follows:

Receivables   Cr 10
Payables   Dr 5
Forward contract   Cr 25
Equity   Cr 5
Basis adjustment (inventory)   Dr 35
Gains and losses   0
Internal contracts   0