

# IAS 32 & 39 and IFRS 7 – Part Two

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## Today's Agenda

*Anyone who says they understand IAS 39  
has not read it .....*

Professor Sir David Tweedie  
Chairman of IASB

Derivatives

Derecognition

Hedging

FI: Presentation

FI: Disclosure

### Part Two

- Derivatives and Embedded Derivatives (IAS 39)
- Derecognition (IAS 39)
- Hedging (IAS 39)
- Financial Instruments: Presentation (IAS 32)
- Financial Instruments: Disclosure (IFRS 7)

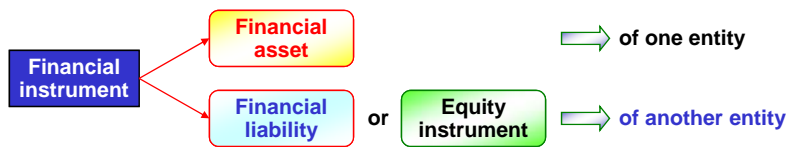
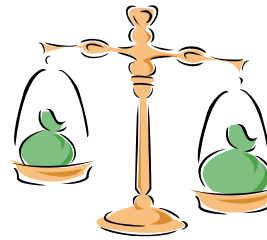
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# Today's Agenda

Derivatives

Part Two



# Derivatives

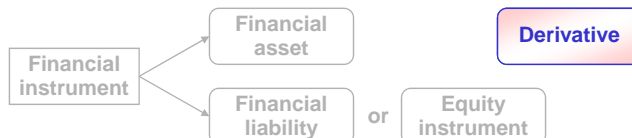
**Derivative** ⇒ is a financial instrument or other contract within the scope of IAS 39 with all 3 of the following characteristics:

Value change based on an underlying

Little or no initial net investment

Settled at a future date

- its value changes in response to the change in a specified interest rate, financial instrument price, commodity price, foreign exchange rate, index of prices or rates, credit rating or credit index, or other variable (sometimes called the 'underlying');
- it requires no initial net investment or an initial net investment that is smaller than would be required for other types of contracts that would be expected to have a similar response to changes in market factors; and
- it is settled at a future date.



# Derivatives

Example

## Derivative

Typical example:

- Future and forward
- Swap and options

Value change based on an underlying

Little or no initial net investment

Settled at a future date

Type of contract	Underlying variable
Interest Rate Swap	Interest rates
Currency Swap (Foreign Exchange Swap)	Currency rates
Commodity Swap	Commodity prices
Equity Swap	Equity prices (equity of another entity)
Credit Swap	Credit rating, credit index or credit price
Total Return Swap	Total fair value of the reference asset and interest rates
Purchased or Written Treasury Bond Option	Interest rates
Purchased or Written Currency Option	Currency rates
Currency Futures/Forward	Currency rates
Commodity Futures/Forward	Commodity prices
Equity Forward	Equity prices

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# Derivatives

Example

## 2 Non-Derivative Transactions

- Entity A makes a 5-year fixed rate loan to Entity B
- Entity B at the same time makes a 5-year variable rate loan for the same amount to Entity A.
- There are no transfers of principal at inception of the 2 loans, since A and B have a netting agreement
- Is this a derivative under IAS 39?

Value change based on an underlying ✓

Little or no initial net investment ✓

Settled at a future date ✓

Yes, it meets the definition of a derivative.

- The contractual effect of the loans is the equivalent of an interest rate swap arrangement with no initial net investment.

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# Derivatives

## Example

Value change based on an underlying

Little or no initial net investment

Settled at a future date

- Non-derivative transactions are aggregated and treated as a derivative when the transactions result, in substance, in a derivative.
- Indicators of this would include:
  - They are entered into at the same time and in contemplation of one another
  - They have the same counterparty
  - They relate to the same risk
  - There is no apparent economic need or substantive business purpose for structuring the transactions separately that could not also have been accomplished in a single transaction
- The same answer would apply if Entity A and Entity B did not have a netting agreement, because the definition of a derivative instrument in IAS 39 does not require net settlement

# Derivatives

## Example

Value change based on an underlying ✓

Little or no initial net investment ✗

Settled at a future date ✓

### Prepaid forward

- An entity enters into a forward contract to purchase shares of stock in 1 year at the forward price.
- It prepays at inception based on the current price of the shares.
- Is the forward contract a derivative?

No.

- The forward contract fails the “little or no initial net investment” test for a derivative.

# Derivatives

## Example

### Margin deposit (or account)

- Many derivative instruments, such as futures contracts and exchange traded written options, require margin accounts.
- Is the margin account part of the initial net investment?

Value change based on an underlying ✓

Little or no initial net investment ✓

Settled at a future date ✓

No!

- The margin account is not part of the initial net investment in a derivative instrument.
- Margin accounts are a form of collateral for the counterparty or clearing house and may take the form of cash, securities or other specified assets, typically liquid assets.
- Margin accounts are separate assets that are accounted for separately.

# Derivatives – Measurement

## Derivative

- What is the initial measurement and subsequent measurement on derivative?

### Initial measurement

- Similar to other financial assets and liabilities
  - Fair value plus transaction cost, except for those classified at fair value through profit or loss
- But, a derivative (except for a derivative that is a financial guarantee contract or a designated and effective hedging instrument) is classified as fair value through profit or loss
  - Implies fair value only

### Subsequent measurement

- As above, derivative, other than a financial guarantee contract or a designated and effective hedging instrument, is
  - classified and measured at fair value through profit or loss

# Derivatives – Measurement

## Case

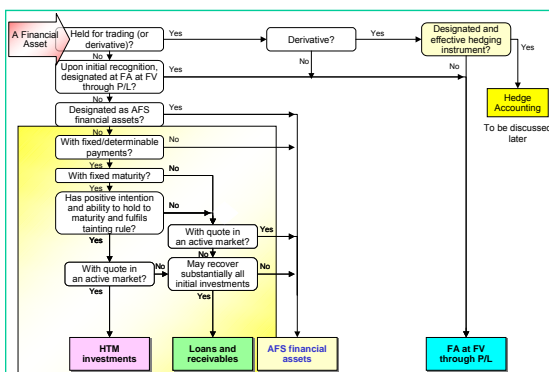


Derivative financial instruments (2006 Annual Report)

- Derivative financial instruments (“derivatives”) are initially recognised at fair value and carried
  - as assets when the fair value is positive and
  - as liabilities when the fair value is negative.
- In the normal course of business, the fair value of a derivative on initial recognition is considered to be the transaction price (i.e. the fair value of the consideration given or received).
- However, in certain circumstances the fair value of an instrument will be
  - evidenced by comparison with other observable current market transactions in the same instrument (i.e. without modification or repackaging) or
  - based on a valuation technique whose variables include only data from observable markets, including interest rate yield curves, option volatilities and currency rates.

Dr	Asset
Cr	Cash
Dr	Cash
Cr	Liabilities

# Embedded Derivatives

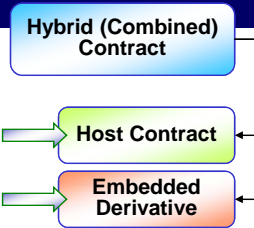


Will derivative elements in the financial assets affect the classification?

# Embedded Derivatives

IAS 39 introduce **Embedded Derivative**

- it is a component of a hybrid (combined) instrument that also include a non-derivative host contract
  - with the effect that some of the cash flows of the combined instrument vary in a way similar to a stand-alone derivative



- An **embedded derivative** causes some or all of the cash flows that otherwise would be required by the contract
  - to be modified according to a variable,
    - say specified interest rate, financial instrument price, commodity price, foreign exchange rate, index of prices or rates, credit rating or credit index, or other variable.

- A **derivative** that **Remember what derivative is?**
  - is attached to a financial instrument
  - but is contractually transferable independently of that instrument, or
  - has a different counterparty from that instrument
  - is NOT an embedded derivative, BUT a separate financial instrument.

# Embedded Derivatives

## Example

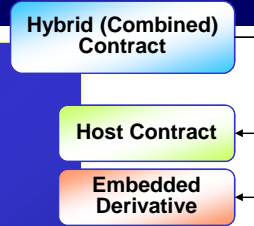
- Investments in convertible bonds (with equity conversion feature)
- Equity-indexed interest or principal payments embedded in a host debt instrument (equity-linked interest or principal payments)
- An option or automatic provision to extend the remaining term to maturity of a debt instrument
- A call, put, surrender or prepayment option embedded in a host debt instrument
- Equity kicker
- Equity-linked notes
- Equity call and put options
- Inflation-indexed lease payments
- Contingent rentals
- More ..... **but so?**



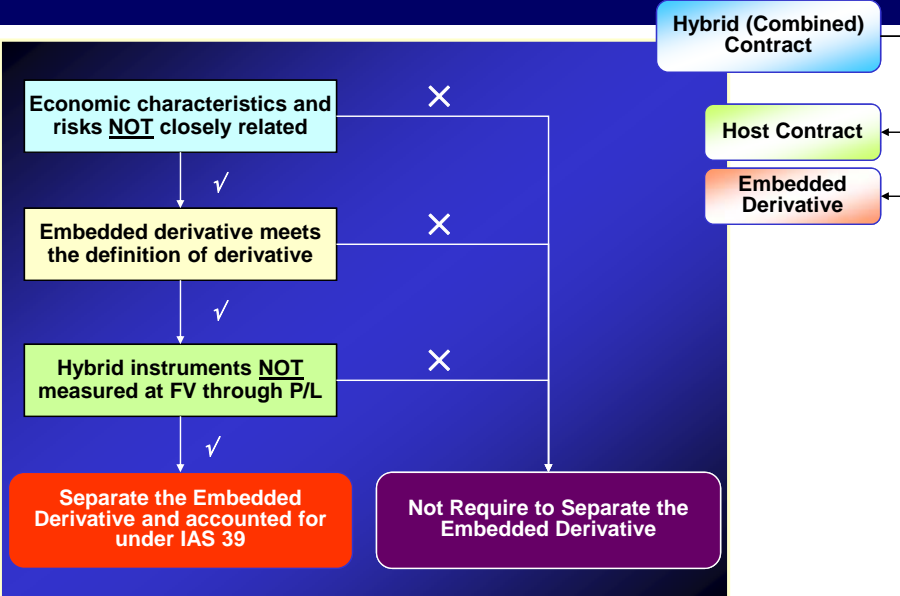
# Embedded Derivatives

IAS 39 requires an embedded derivative

- shall be separated from the host contract and
- accounted for as a derivative under IAS 39 if, and only if:
  - a. the economic characteristics and risks of the embedded derivative are not closely related to the economic characteristics and risks of the host contract
  - b. a separate instrument with the same terms as the embedded derivative would meet the definition of a derivative; and
  - c. the hybrid (combined) instrument is not measured at fair value with changes in fair value recognised in profit or loss



# Embedded Derivatives





# Embedded Derivatives

Economic characteristics and risks NOT closely related

• Guarantee Fund?  
• Alternatively, should we name it as ..... bond with index-linked interest?

## To assess economic characteristics and risks

- If a host contract
  - has no stated or predetermined maturity and
  - represents a residual interest in the net assets of an entity
    - then its economic characteristics and risks are those of an equity instrument, and
    - an embedded derivative would need to possess equity characteristics related to the same entity to be regarded as closely related.
- If the host contract
  - is not an equity instrument and
  - meets the definition of a financial instrument
    - then its economic characteristics and risks are those of a debt instrument.

# Embedded Derivatives

## If separation is required and can be measured

- ⇒ Host Contract shall be accounted for under applicable IFRS
- ⇒ Embedded Derivative shall be accounted under IAS 39 as a derivative

## If separation is required but cannot be measured

- ⇒ Entire Hybrid (Combined) Contract is classified as financial instrument that is held for trading

## If separation is not required

- ⇒ Hybrid (combined) contract shall be accounted for under applicable IFRS

Separate the Embedded Derivative and accounted for under IAS 39

Not Require to Separate the Embedded Derivative

# Embedded Derivatives

## Case



Embedded Derivatives (Annual Report 2006)

- An embedded derivative is
  - a component of a hybrid (combined) instrument that includes both the derivative and a host contract with the effect that some of the cash flows of the combined instrument vary in a way similar to a stand-alone derivative.
- The embedded derivatives are
  - separated from the host contract and
  - accounted for as a derivative when
    - a) the economic characteristics and risks of the embedded derivative are not closely related to the host contract; and
    - b) the hybrid (combined) instrument is not measured at fair value with changes in fair value recognised in the profit and loss account.

# Embedded Derivatives

## Example

### Index-linked Principal

- Entity A purchases a 5-year equity-index-linked note with an original issue price of \$10 at a market price of \$12 at the time of purchase.
- The note requires no interest payments before maturity.
- At maturity, the note requires
  - Payment of the original issue price of \$10
  - Plus a supplemental redemption amount that depends on whether
    - a specified share price index > a predetermined level at the maturity date.
  - If the share index < or = the predetermined level
    - the supplemental redemption amount is zero
  - If the share index > the predetermined level
    - the supplemental redemption amount equal a factor of level of the share index at maturity
- Entity A has the positive intention and ability to hold the note to maturity.
- Can Entity A classify the note as a held-to-maturity investment?

# Embedded Derivatives

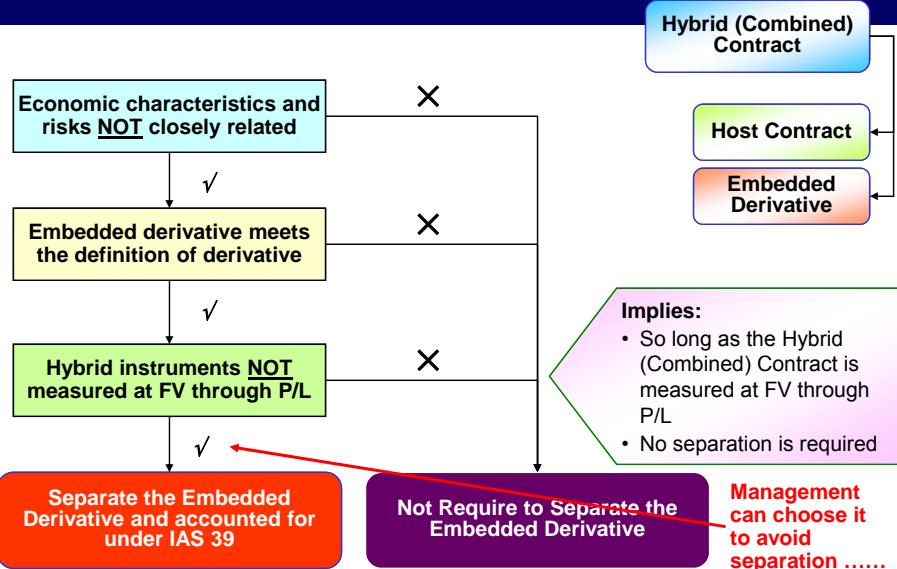
Example

## Index-linked Principal

Yes, subject to the separation of embedded derivative.

- The note can be classified as a HTM investment because
  - it has a fixed payment of \$10 and fixed maturity and
  - Entity A has the positive intention and ability to hold it to maturity.
- However, the equity index feature is a call option not closely related to the debt host, which must be separated as an embedded derivative.
- The purchase price of \$12 is allocated between
  - the host debt instrument and
  - the embedded derivative
- For example
  - if the fair value of the embedded option at acquisition is \$4
  - the host debt instrument is measured at \$8 on initial recognition
  - Then, the discount of \$2 that is implicit in the host bond (principal of \$10 minus the original carrying amount of \$8) is amortised to profit or loss over the term to maturity of the note using the effective interest method.

# Embedded Derivatives



# Embedded Derivatives



## Case

**HKEX** (Consolidated financial statements published on 28 Feb. 2005)

“From 1 January 2004, investments of the Group are classified under the following categories:

### Financial assets at fair value through profit or loss

This category comprises financial assets held for trading and those designated as fair value through profit or loss at inception .....

Debt securities and bank deposits with embedded derivatives for yield enhancement whose economic characteristics and risks are not closely related to the host securities and deposits are designated as financial assets at fair value through profit or loss.

### Available-for-sale financial assets

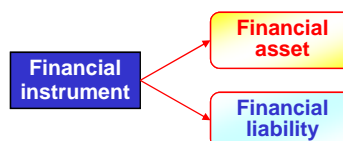
This category comprises financial assets which are non-derivatives and are designated as available-for-sale financial assets or not classified under other investment categories.

### Loans and receivables

Loans and receivables are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market, and with no intention of trading the receivables. Bank deposits are treated as loans and receivables and are disclosed as time deposits and cash equivalents.”

## Today's Agenda

Derecognition



# Derecognition of Financial Assets

An entity shall derecognise a **financial asset** when, and only when:

- a) the contractual rights to the cash flows from the financial asset expire; or
- b) it transfers the financial asset, and the transfer qualifies for derecognition



Direct derecognition

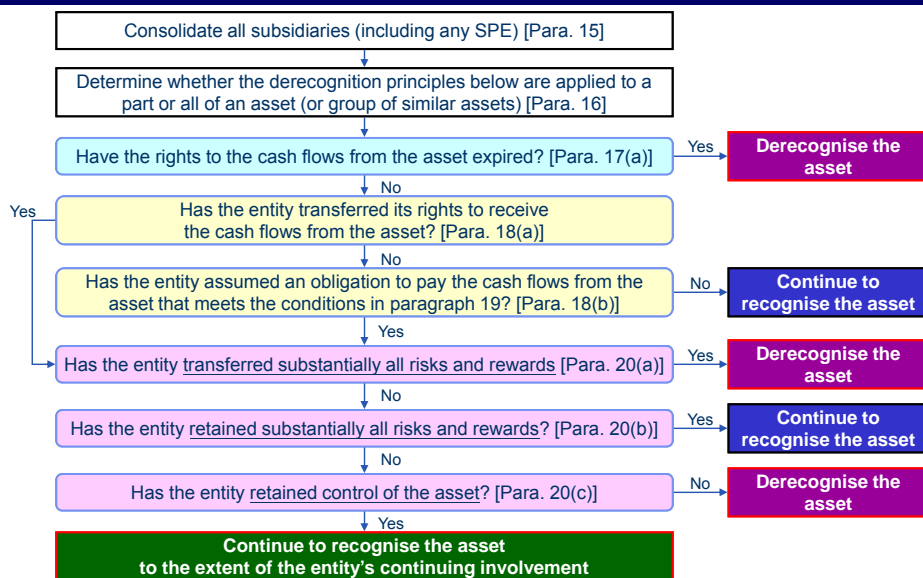
Further Test 1:  
Asset Transfer Test

Further Test 2:  
Risk and Reward Test

## General principles

- If passing both Further Tests ⇒ derecognise the asset
- If not passing Asset Transfer Test ⇒ not derecognise the asset
- If passing the Asset Transfer Test, but not passing Risk and Reward test ⇒ consider the entity's control over the asset, and extent of continuing involvement

# Derecognition of Financial Assets



# Derecognition of Financial Assets

## Example

- a) an unconditional sale of a financial asset;
- b) a sale of a financial asset together with an option to repurchase the financial asset at its fair value at the time of repurchase; and
- c) a sale of a financial asset together with a put or call option that is deeply out of the money (i.e. an option that is so far out of the money it is highly unlikely to go into the money before expiry).

- a) a sale & repurchase transaction where the repurchase price is a fixed price or a sale price plus a lender's return;
- b) a securities lending agreement
- c) a sale of a financial asset together with a total return swap that transfers the market risk exposure back to the entity
- d) a sale of a financial asset together with a deep in-the-money put/call option
- e) a sale of short-term receivables in which the entity guarantees to compensate the buyer for any credit losses

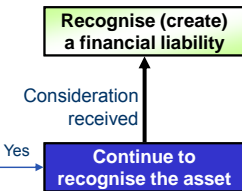
Has the entity transferred substantially all risks and rewards [Para. 20(a)]

Has the entity retained substantially all risks and rewards? [Para. 20(b)]

# Derecognition of Financial Assets

- If a transfer does not result in derecognition because the entity has retained substantially all the risks and rewards of ownership of the transferred asset, the entity shall
  - continue to recognise the transferred asset in its entirety
  - recognise a financial liability for the consideration received
  - in subsequent periods, recognise
    - any income on the transferred asset and
    - any expense incurred on the financial liability.

Has the entity retained substantially all risks and rewards? [Para. 20(b)]

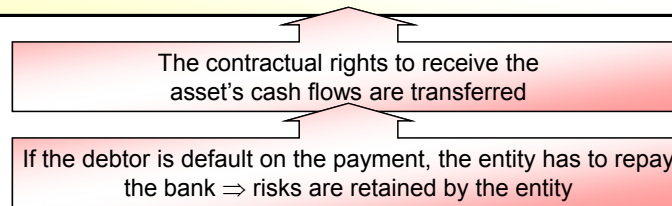


# Derecognition of Financial Assets

## Example

For SMEs/SMPs ⇒ say Discounted Bills, Factored Trade Receivables  
 For larger entities ⇒ say Strip and Total return swap

Let's analyse a bill discounted to bank  
 ⇒ At present, most entities derecognise bill receivable discounted to bank and disclose it as contingent liability  
 ⇒ Is it appropriate under new derecognition criteria?



Continue to recognise the bill receivables, and recognise a financial liability

# Derecognition of Financial Assets

## Case



- In its 2005 Interim Report, full set of HKFRS was adopted and the report set out that:
  - the Group's discounted bills with recourse,
    - which were previously treated as contingent liabilities,
    - have been accounted for as collateralized bank advances prospectively on or after 1 January 2005,
    - as the financial asset derecognition conditions as stipulated in HKAS 39 have not been fulfilled.

Total advances recognised:	HK\$ 822M
Current liabilities of that date:	7,578M
Net current assets of that date:	1,229M

# Derecognition of Financial Assets

## Case

2005/06 Annual Report:

- HKSA 39 provides more rigorous criteria for the derecognition of financial assets than the criteria applied in previous years.
- Under HKAS 39, a financial asset is derecognised, when and only when, either the contractual rights to the asset's cash flows expire, or the asset is transferred and the transfer qualifies for derecognition in accordance with HKAS 39. The decision as to whether a transfer qualifies for derecognition is made by applying a combination of risks and rewards and control tests .....
- The Company has applied the relevant transitional provision .....
- As a result, the Company's credit card receivables transferred to a special purpose entity under asset securitisation, which were derecognised prior to 20th February 2005, have not been restated.
- Any new transfer of credit card receivables to the SPE after 21st February 2005 has not been derecognised and remained as credit card receivables in the Company's financial statements.
  - This has resulted in a decrease in credit card securitisation income of HK\$23,700,000 in the current year.

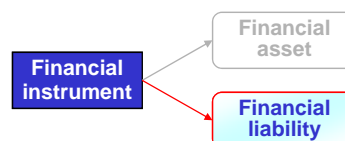


Credit card receivable  
↑ 106%

Turnover  
↑ 4%

# Derecognition of Financial Liability

- An entity shall derecognise a financial liability (or part of a financial liability) when, and only when, it is extinguished i.e. obligation discharged or cancelled or expires
- An exchange between an existing borrower and lender of debt instruments with substantially different terms shall be accounted for as
  - an extinguishment of the original financial liability and
  - the recognition of a NEW financial liability.
- Similar accounting treatment is adopted for a substantial modification of the terms of an existing financial liability or a part of it
- The difference between
  - the carrying amount of a financial liability extinguished or transferred to another party and
  - the consideration paid, including any non-cash assets transferred or liabilities assumed
 shall be recognised in profit or loss.





# Today's Agenda

Part Two

Hedging



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## Hedging – Introduction

A Hedge under IAS 39 involves 2 components

Hedging  
Instrument

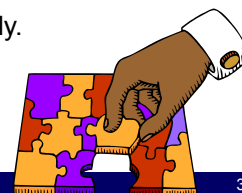
Hedged Item

- Strict conditions must be fulfilled before **Hedge Accounting** can be used.
- But even qualified, an entity can also choose not to use it, but .....

IAS 39 sets out **Hedge Accounting** which recognises the offsetting effects on profit or loss of changes in the fair values of these 2 components.

**Hedge Accounting** seeks to match the 2 sides of a **Hedging Relationship**, so as

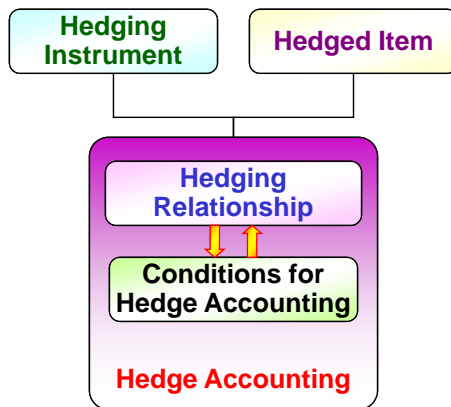
- to ensure both sides are offset and
- not to affect the income statements from one side only.



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# Hedging – Introduction

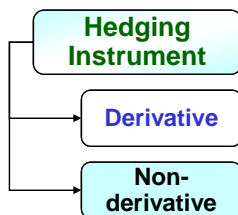


IAS 39

- defines and restricts the items qualified as
  - Hedging Instruments and
  - Hedged Items
- Sets out the types of Hedge Relationship
- Requires Conditions for Hedge Accounting must be fulfilled to qualify a hedge accounting
- Sets out the Hedge Accounting

If there is a designated Hedging Relationship, accounting for gain or loss on the Hedging Instruments and Hedged Item shall follow Hedge Accounting.

# Hedging – Hedging Instruments



Hedging Instrument is

- a designated derivative, or
- a designated non-derivative financial asset or non-derivative financial liability (for a hedge of the risk of changes in foreign currency exchange rates only)

whose fair value or cash flows are expected to offset changes in the fair value or cash flows of a designated hedged item

- A non-derivative financial asset or non-derivative financial liability may be designated as a hedging instrument only for a hedge of a foreign currency risk.
- No restriction on the circumstances in which a derivative may be designated as a hedging instrument provided the conditions for hedging accounting are met, except for Some Written Options.

# Hedging – Hedging Instruments

## Example

Entity A, whose functional currency is the Japanese yen

- has issued 5 million 5-year US\$ fixed rate debt.
  - owns a 5 million 5-year US\$ fixed rate bond which is classified as AFS.
1. Can Entity A designate its US\$ liability as a hedging instrument in a fair value hedge of the entire fair value exposure of its US\$ bond?
  2. Alternatively, can the US\$ liability be designated as a fair value hedge or cash flow hedge of the foreign currency component of the bond?

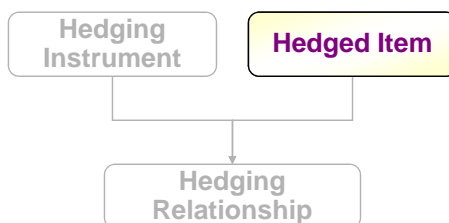
### 1. No.

- IAS 39 permits a non-derivative to be used as a hedging instrument only for a hedge of a foreign currency risk.
- Entity A's bond has a fair value exposure to:
  - foreign currency risk, interest rate changes and credit risk.

### 2. Yes

- However, hedge accounting is unnecessary because the amortised cost of the hedging instrument and the hedged item are both remeasured using closing rates.

# Hedging – Hedged Item



➤ Hedged item is

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

exposes the entity to risk of changes in fair value or future cash flows and is designated as being hedged.

- A hedged item is an exposure to risk to an entity that attempt to hedge.
- A hedged item can be a recognised asset or liability, an unrecognised firm commitment, a highly probable forecast transaction or a net investment in a foreign operation.

# Hedging – Hedged Item

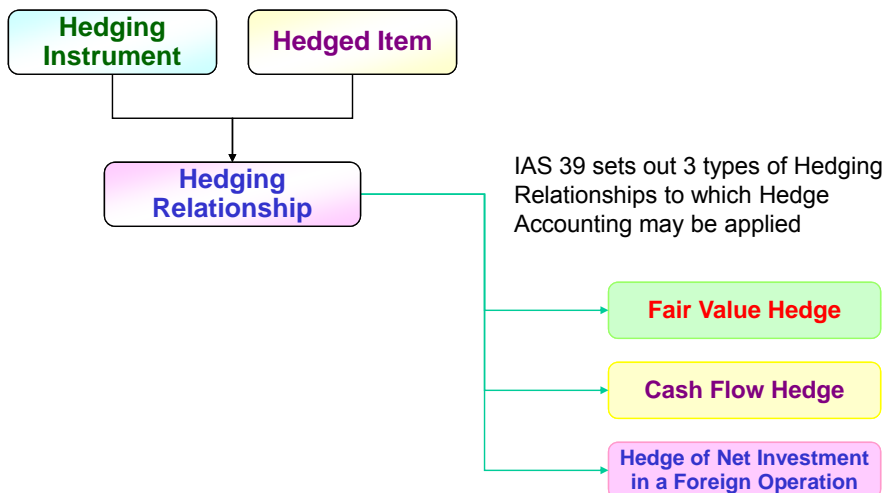
## Example

- Is hedge accounting permitted for a currency borrowing that hedges an expected but not contractual revenue stream in foreign currency?

Yes, if the revenues are highly probable.

- Under IAS 39, a hedge of an anticipated sale (highly probable forecast transaction) may qualify as a Cash Flow Hedge.
- For example:
  - An airline entity may use sophisticated models based on experience and economic data to project its revenues in various currencies.
  - If it can demonstrate that forecast revenues for a period of time into the future in a particular currency are “highly probable”, as required by IAS 39, it may designate a currency borrowing as a Cash Flow Hedge of the future revenue stream.
  - It is unlikely that it can reliably predict 100% revenues for a future year.
  - However, it is possible that a portion of predicted revenues, normally those expected in the short term, will meet the “highly probable” criterion.

# Hedging – Hedge Relationship



# Hedging – Hedge Relationship

## Fair Value Hedge

A hedge of the exposure to changes in fair value of

- a recognised asset or liability or an unrecognised firm commitment, or an identified portion of such items

that is attributable to a particular risk and could affect P/L

## Cash Flow Hedge

A hedge of the exposure to variability in cash flows that

- i) is attributable to a particular risk associated with a recognised asset or liability, or a highly probable forecast transaction and
- ii) could affect profit or loss

A hedge of the foreign currency risk of a firm commitment may be accounted for

- as a fair value hedge or as a cash flow hedge

## Hedge of Net Investment in a Foreign Operation

Hedge of a net investment in a foreign operation is as defined in IAS 21 *The Effects of Changes in Foreign Exchange Rates*

# Hedging – Hedge Relationship

## Example

## Fair Value Hedge

## Cash Flow Hedge

## Hedge of Net Investment in a Foreign Operation

Determine the classification for the following hedge:

- Entity A has a floating rate bond and enters into an interest rate swap by receiving fixed and paying float
- Entity B has a fixed rate bond and enters into an interest rate swap by receiving float and paying fixed
- Entity C issues a floating rate bond and enters into an interest rate swap by paying fixed and receiving float
- Entity D issues a floating rate bond and buys an interest rate cap

## Hedging – Hedge Relationship

### Case



### Esprit Holdings Limited

- Accounting policy on derivative financial instruments
  - The method of recognising the resulting gain or loss where the derivative is designated as a hedging instrument depends on the nature of the item being hedged.
  - The Group can designate certain derivatives as either:
    - i) hedges of the fair value of recognised assets or liabilities or a firm commitment (**Fair Value Hedges**); or
    - ii) hedges of highly probable forecast transactions (**Cash Flow Hedges**).

## Hedging – Hedge Relationship

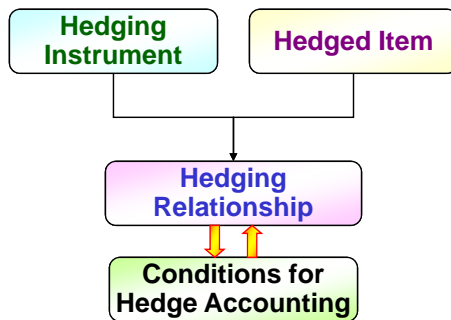
### Case



### Derivatives and Hedging (Annual Report 2006)

- When derivatives are designated as hedges, HSBC classifies them as either:
  - i) hedges of the change in fair value of recognised assets or liabilities or firm commitments ('fair value hedges');
  - ii) hedges of the variability in highly probable future cash flows attributable to a recognised asset or liability, or a forecast transaction ('cash flow hedges'); or
  - iii) hedges of net investments in a foreign operation ('net investment hedges').
- Hedge accounting is applied to derivatives designated as hedging instruments in a fair value, cash flow or net investment hedge provided certain criteria are met.

## Hedging – Hedge Accounting Conditions



A **Hedging Relationship** qualifies for **Hedge Accounting** if and only if all the **Conditions for Hedge Accounting** are met

## Hedging – Hedge Accounting Conditions

All 5 **Conditions for Hedge Accounting** must be met:

Formal documentation at inception

Highly effective and consistent with originally documented risk

Forecasted transaction to be highly probable (for cash flow hedge)

Hedge effectiveness can be reliably measured

Ongoing-assessed and actually highly effective

**Conditions for Hedge Accounting**

## Hedging – Hedge Accounting Conditions

Formal documentation  
at inception

- At the inception of the hedge, there is formal designation and documentation of:
  - the hedging relationship and
  - the entity's risk management objective and strategy for undertaking the hedge.
- That documentation shall include:
  - identification of the hedging instrument,
  - the hedged item or transaction,
  - the nature of the risk being hedged and
  - how the entity will assess
    - the hedging instrument's effectiveness in offsetting the exposure to changes in the hedged item's fair value or cash flows attributable to the hedged risk.

Hedge  
Effectiveness

## Hedging – Hedge Accounting Conditions

Forecasted transaction  
to be highly probable  
(for cash flow hedge)

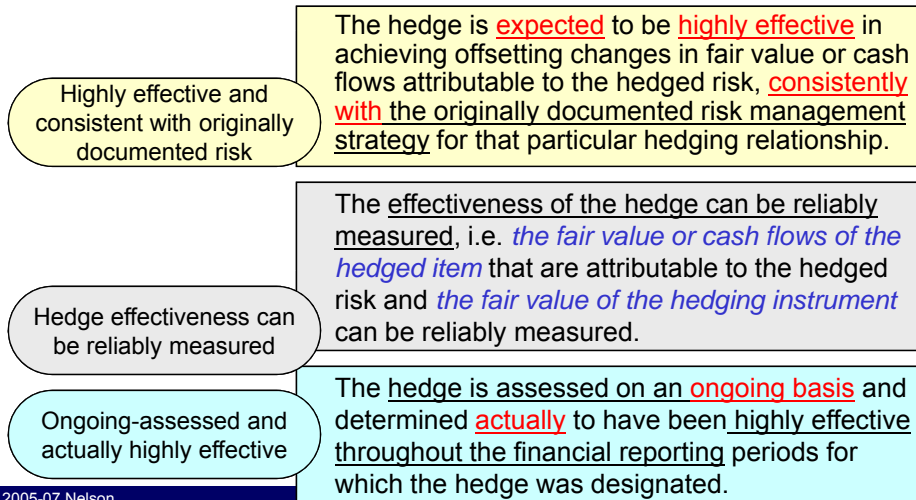
For Cash Flow Hedges,

- a forecast transaction that is the subject of the hedge
  - must be highly probable and
  - must present an exposure to variations in cash flows that could ultimately affect profit or loss.

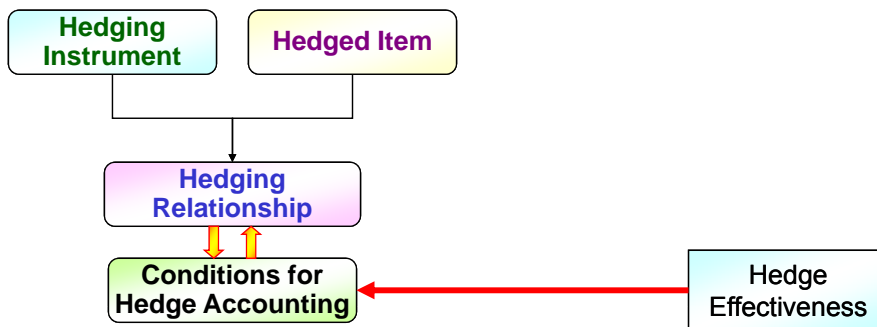


# Hedging – Hedge Accounting Conditions

Measurable and highly effective hedge from the beginning to the end .....



# Hedging – Assess Hedge Effectiveness



- **Hedge effectiveness** is the degree to which
  - *changes in the fair value or cash flows of the hedged item* that are *attributable to a hedged risk*
  - are offset by *changes in the fair value or cash flows of the hedging instrument*.

## Hedging – Assess Hedge Effectiveness

A hedge is regarded as **highly effective** only if both of the following conditions are met:

Inception and Ongoing

Prospective testing

- a) At the inception of the hedge and in subsequent periods
- the hedge is expected to be highly effective in achieving offsetting changes in fair value or cash flows attributable to the hedged risk during the period for which the hedge is designated.

Actual results

Retrospective testing

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

Effectiveness is assessed, at a minimum, at the time an entity prepares its

- annual financial statements or
- interim financial statements.

## Hedging – Assess Hedge Effectiveness

Inception and Ongoing

Prospective testing

In some cases, matching critical terms is also allowed

- Such expectation (at the inception and in subsequent periods) can be demonstrated in various ways, including:
  - a comparison of past changes in the fair value or cash flows of the hedged item that are attributable to the hedged risk with past changes in the fair value or cash flows of the hedging instrument (i.e. analysis of historical data), or
  - by demonstrating a high statistical correlation between the fair value or cash flows of the hedged item and those of the hedging instrument (i.e. using statistical model, say regression analysis).
- The entity may choose a hedge ratio of other than one to one in order to improve the effectiveness of the hedge (as described in IAS 39.AG100).

## Hedging – Assess Hedge Effectiveness

- The actual hedge effectiveness measurement may be based on either:
  - A period by period basis, or
  - A cumulative basis
- Such basis should be established in the hedge documentation and properly followed afterward.
- If a cumulative basis is used, hedge accounting will not be ceased even the hedge is not effective for a particular period.

Actual results

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

Retrospective testing

Hedging Instrument

→ Gain is \$125

Hedged Item

→ Loss is \$100

- The degree of offset can be measured by either

- $\$125 \div \$100$ , which is 125%, or
- $\$100 \div \$125$ , which is 80%

within 80% to 125% range

## Hedging – Assess Hedge Effectiveness

Case

HSBC 

Hedge Accounting (Annual Report 2006)

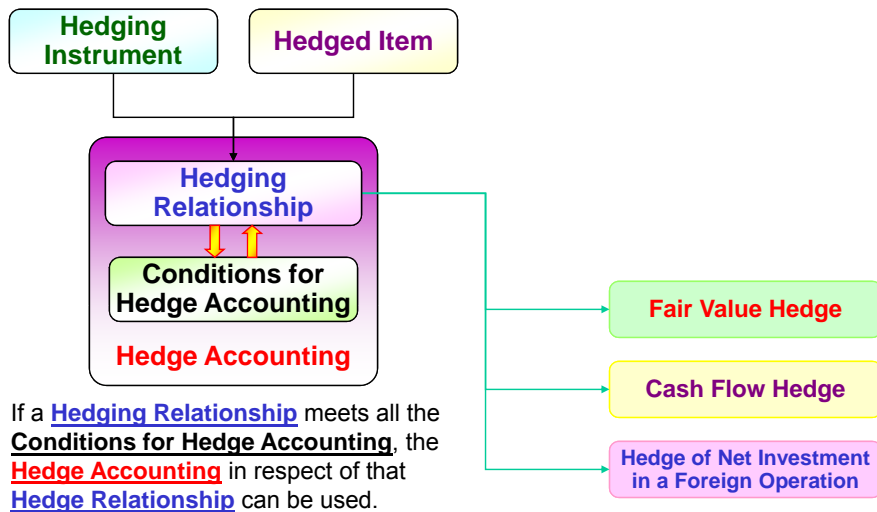
- At the inception of a hedging relationship, HSBC documents
  - the relationship between the hedging instruments and the hedged items,
  - its risk management objective and
  - its strategy for undertaking the hedge.

- HSBC also requires a documented assessment, both
  - at hedge inception and
  - on an ongoing basis,

of whether or not the hedging instruments, primarily derivatives, that are used in hedging transactions are highly effective in offsetting the changes attributable to the hedged risks in the fair values or cash flows of the hedged items.

- Interest on designated qualifying hedges is included in 'Net interest income'.

# Hedging – Hedge Accounting



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# Hedging – Hedge Accounting

## Fair Value Hedge

⇒ Meets the **Condition for Hedging Accounting**, then:

### Hedging Instrument

### Hedged Item

- a) the gain or loss from re-measuring the **Hedging Instrument** at fair value (for a derivative hedging instrument) or the foreign currency component of its carrying amount measured in accordance with IAS 21 (for a non-derivative hedging instrument)
  - shall be recognised in profit or loss
- b) the gain or loss on the **Hedged Item** attributable to the hedged risk
  - shall adjust the carrying amount of the **Hedged Item** and be recognised in profit or loss.

This applies if the hedged item is otherwise measured at cost.

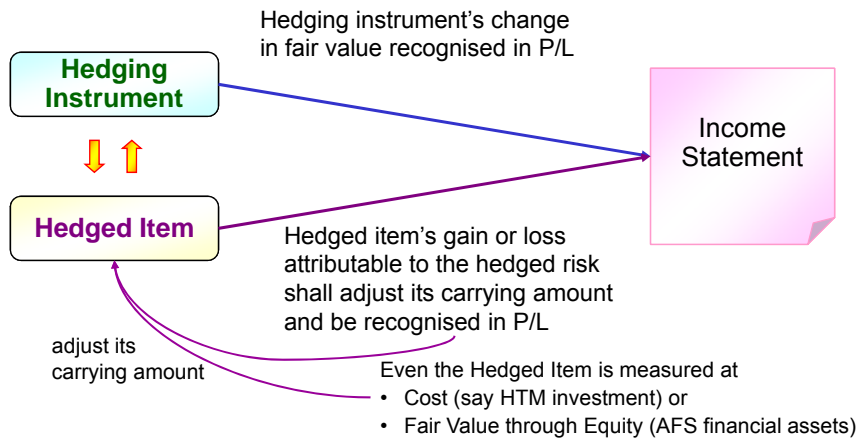
Recognition of the gain or loss attributable to the hedged risk in P/L applies if the hedged item is an available-for-sale financial asset.

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# Hedging – Hedge Accounting

## Fair Value Hedge



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# Hedging – Hedge Accounting

## Example

### Hedge of Inventory

- Can Entity A designate its inventories, say copper, as the hedged item in a Fair Value Hedge of the exposure to changes in the copper price?
  - However, inventories are measured at the lower of cost and net realisable value under HKAS 2 *Inventories*.

Yes.

- The inventories may be hedged for changes in fair value due to changes in the copper price.
- Because the change in fair value of inventories will affect profit or loss when the inventories are sold or their carrying amount is written down.
- The adjusted carrying amount becomes the cost basis for the purpose of applying the lower of cost and net realisable value test under HKAS 2.
- The Hedging Instrument used in a Fair Value Hedge of inventories may alternatively qualify as a Cash Flow Hedge of the future sale of the inventory.

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## Hedging – Hedge Accounting

### Example

#### Interest Rate Swap on A Fixed Rate Financial Asset

- Company A purchases a bond that
  - has a principal amount of \$1 million at a fixed interest rate of 6% per year.
  - is classified as an available-for-sale financial asset.
  - has a fair value of \$1 million.
- The company enters into an interest rate swap.
  - It exchanges the fixed interest rate payments it receives on the bond for floating interest rate payments, in order to offset the risk of a decline in fair value.
  - It designates and documents the swap as a hedging instrument.
  - The swap has a fair value of zero at the inception of hedge.
- Assuming
  - The market interest rates have increased to 7% and the fair value of the bond will have decreased to \$960,000.
  - The fair value of the swap has increased by \$40,000.

## Hedging – Hedge Accounting

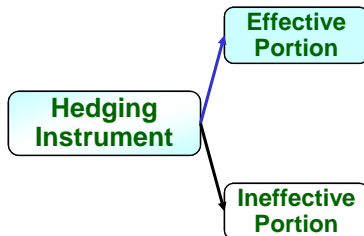
### Example

- The instrument is classified as available-for-sale, therefore the decrease in fair value would normally be recorded directly in reserves.
- However, since the instrument is a Hedged Item in a Fair Value Hedge, this change in fair value of the instrument is recognised in profit or loss, as follows:
  - Dr Income statement                      \$40,000
  - Cr Available-for-sale financial asset    \$40,000
- While the swap is a derivative, it is measured at fair value with changes in fair value recognised in profit or loss.
  - Dr Swap receivables                      \$40,000
  - Cr Income statement                      \$40,000
- The changes in fair value of the Hedged Item and the Hedging Instrument exactly offset each other:
  - the hedge is 100% effective and the net effect on profit or loss is zero.

# Hedging – Hedge Accounting

## Cash Flow Hedge

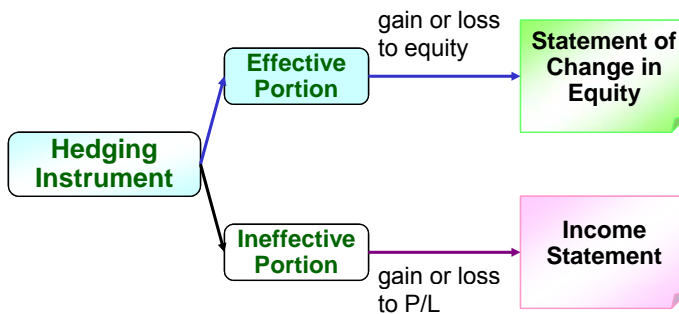
⇒ Meets the **Condition for Hedging Accounting**, then:



- a) the portion of the gain or loss on the **Hedging Instrument** that is determined to be an **effective hedge** shall be **recognised directly in equity** through the statement of changes in equity; and
- b) the **ineffective portion** of the gain or loss on the **Hedging Instrument** shall be **recognised in profit or loss**.

# Hedging – Hedge Accounting

## Cash Flow Hedge



How's the treatment, if it is .....

Hedge of a forecast transaction resulting in recognition of **Financial Asset or Financial Liability**

Hedge of forecast transaction resulting in recognition of **Non-Financial Asset or Non-Financial Liability**

# Hedging – Hedge Accounting

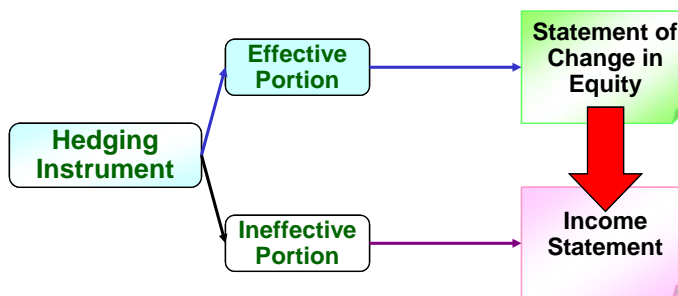
## Cash Flow Hedge

- If a **Hedge of a Forecast Transaction** subsequently results in the recognition of **a financial asset or a financial liability**
  - the associated gains or losses that were recognised directly in equity shall be reclassified into profit or loss in the same period(s) during which the asset acquired or liability assumed affects profit or loss (such as in the periods that interest income or interest expense is recognised)
- If any loss recognised directly in equity is expected not to be recovered in one or more future periods
  - it shall reclassify such loss into profit or loss.

Hedge of a forecast transaction resulting in recognition of **Financial Asset or Financial Liability**

# Hedging – Hedge Accounting

## Cash Flow Hedge



Hedge of a forecast transaction resulting in recognition of **Financial Asset or Financial Liability**

- Reclassified associated gain or loss recognised in equity to P/L in case of
- Final recognition of financial assets or financial liabilities, or
  - Loss recognised directly in equity is expected not to be recovered



# Hedging – Hedge Accounting

## Cash Flow Hedge

- If a **Hedge of a Forecast Transaction** subsequently results in
  - the recognition of a non-financial asset or a non-financial liability, or
  - a forecast transaction for such non-financial item becomes a firm commitment for which fair value hedge accounting is applied
- Then an entity shall adopt (a) or (b) below:

a) Reclassifies the associated gains and losses recognised in equity into P/L in the same period(s) during which the asset acquired or liability assumed affects P/L (such as in the periods that depreciation expense or cost of sales is recognised).  
If any loss recognised directly in equity is expected not to be recovered in one or more future periods, it shall reclassify into P/L such loss.

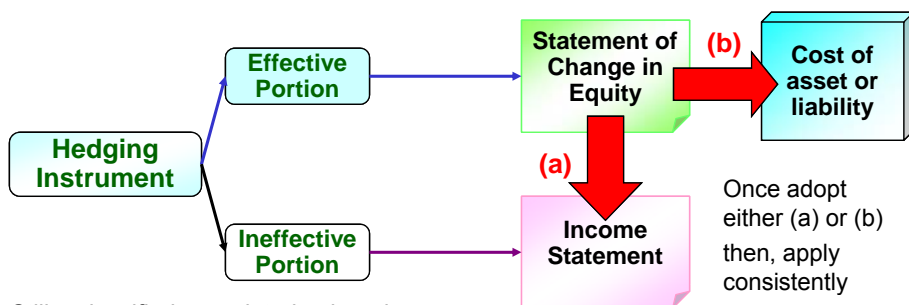
b) Removes the associated gains and losses recognised directly in equity, and includes them in the initial cost or other carrying amount of the asset or liability.

Once adopt either (a) or (b), apply consistently

Hedge of forecast transaction resulting in recognition of **Non-Financial Asset or Non-Financial Liability**

# Hedging – Hedge Accounting

## Cash Flow Hedge



Still reclassified associated gain or loss recognised in equity to P/L when

- Loss recognised directly in equity is expected not to be recovered

Associated gain or loss will also be either

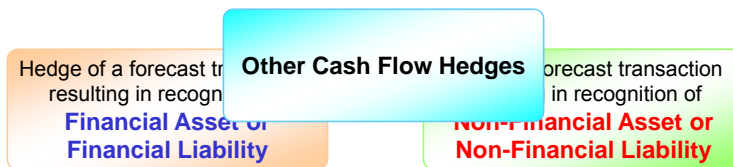
**a) reclassified to P/L, or**  
**b) included in cost of assets or liabilities**

Hedge of forecast transaction resulting in recognition of **Non-Financial Asset or Non-Financial Liability**

# Hedging – Hedge Accounting

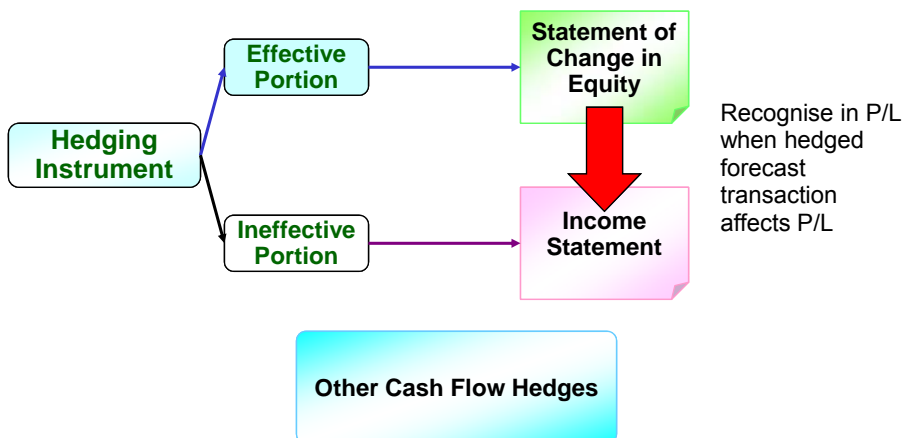
## Cash Flow Hedge

- For cash flow hedges other than those discussed
  - amounts that had been recognised directly in equity shall be recognised in profit or loss in the same period(s) during which the hedged forecast transaction affects P/L (for example, when a forecast sale occurs).



# Hedging – Hedge Accounting

## Cash Flow Hedge



# Hedging – Hedge Accounting

Example

## Hedge of Forecast Transaction

- Entity A trades in UK mainly in UK Sterling.
  - It expects to purchase a machine for 1 million Euros in one year from 1 May 2006.
  - In order to offset the risk of increases in the Euro rate, Entity A enters into a forward contract to purchase 1 million Euros in 1 year for a fixed amount (£650,000).
  - The forward contract is designated as a Cash Flow Hedge.
  - At inception, the forward contract has a fair value of zero.
- At the year-end of 31 October 2006
  - the Euro has appreciated and the value of 1 million Euros is £660,000.
  - The fair value of the forward contract rises to £10,000.
  - The machine will still cost 1 million Euros so the company concludes that the hedge is 100% effective.

# Hedging – Hedge Accounting

Example

- The entire change in the fair value of the hedging instrument is recognised directly in reserves.
 

Dr Forward contract	£10,000	
Cr Reserves		£10,000

← How to treat this amount finally?
- The forward contract is settled with no further change in the exchange rate:
 

Dr Cash	£10,000
Cr Forward contract	£10,000
- The company purchases the machine for 1 million euros and makes the following journal entry:
 

Dr Machine	£660,000
Cr Accounts Payable	£660,000
- The gain of £10,000 recognised in reserve (equity) should either
  - be reclassified from equity into P/L, or
  - be reclassified from equity and included in the initial carrying amount of the machine (for non-financial assets or liabilities only)
  - once this policy is chosen, it must be used consistently

# Hedging – Hedge Accounting

## Case

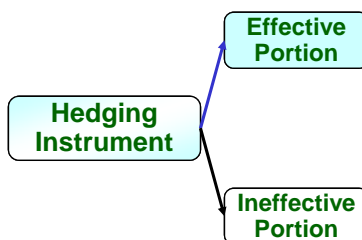


### Cash Flow Hedges (2006 Annual Report)

- The effective portion of changes in the fair value of derivatives that are designated and qualified as cash flow hedges are recognised in equity.
- Any gain or loss relating to an ineffective portion is recognised immediately in the income statement within “Trading income”.
- For cash flow hedges of a recognised asset or liability, the associated cumulative gain or loss is recycled from equity and recognised in the income statement in the same periods during which the hedged cash flow affect profit and loss.
- When a hedging instrument expires or is sold, or when a hedge no longer meets the criteria for hedge accounting, any cumulative gain or loss existing in equity at that time remains in equity until the forecast transaction is ultimately recognised in the income statement.
- When a forecast transaction is no longer expected to occur, the cumulative gain or loss that was reported in equity is immediately transferred to the income statement.

# Hedging – Hedge Accounting

## Hedge of Net Investment in a Foreign Operation



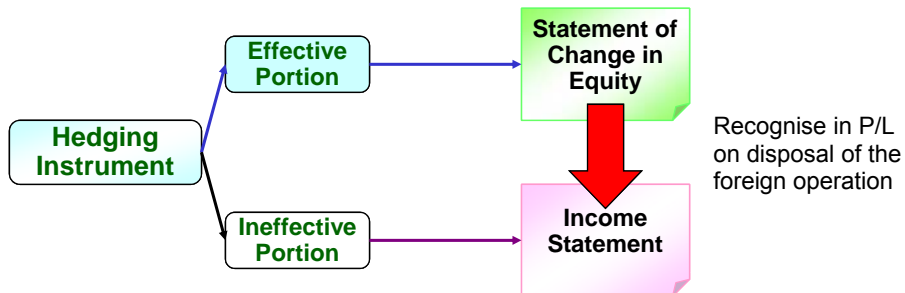
Including a hedge of a monetary item that is accounted for as part of the net investment, shall be accounted for similarly to **Cash Flow Hedges**:

- a) the portion of the gain or loss on the **Hedging Instrument** that is determined to be an **effective hedge** shall be **recognised directly in equity** through the statement of changes in equity; and
- b) the **ineffective portion** shall be **recognised in profit or loss**.

The gain or loss on the hedging instrument relating to the effective portion of the hedge that has been recognised directly in equity shall be recognised in profit or loss on disposal of the foreign operation.

## Hedging – Hedge Accounting

Hedge of Net Investment  
in a Foreign Operation



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## Hedge – Cease Hedge Accounting

An entity shall discontinue prospectively the **Hedge Accounting** if:

- the hedging instrument expires or is sold, terminated or exercised;
- the hedge no longer meets the **Conditions for Hedge Accounting**;
- the entity revokes the designation; or
- in case of a **Cash Flow Hedge**, the forecast transaction that is hedged is no longer expected to occur.

When the **Hedge Accounting** is discontinued (for **Cash Flow Hedge**), the cumulative gain or loss on the **Hedging Instrument** that remains recognised directly in equity shall:

- remain separately recognised in equity until the forecast transaction occurs; or
- be recognised in profit or loss if the forecast transaction is no longer expected to occur.

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# Today's Agenda

## Part Two

## FI: Presentation



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# Presentation and Disclosure

## IAS 32 *Financial Instruments: Disclosure and Presentation*

- Aims at enhancing financial statement users' understanding of
  - the significance of financial instruments to an entity's financial position, performance and cash flows.
- Contains requirements for the presentation of financial instruments and identifies the information that should be disclosed about them.

From  
1.1.2007

## IAS 32 *Financial Instruments: Presentation*

- Aims at establishing principles
  - for presenting financial instruments as liabilities or equity and for offsetting financial assets and financial liabilities.

## IFRS 7 *Financial Instruments: Disclosures*

- Aims at providing disclosures to evaluate the significance of financial instruments and the nature and extent of risks arising from financial instruments

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# IAS 32 – Presentation

Presentation from the perspective of the issuer on

Liability and equity

Compound financial instruments

Treasury shares

Interests, dividends, losses and gains

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

# IAS 32 – Presentation

Case



Annual report of 2005 sets out that it has probably had the following shares:

- Preference shares carry a mandatory coupon
- Preference shares are redeemable on a specific date or at the option of the shareholder
- Preference shares are redeemable at the option of the shareholder

How do you classify and present the above items?

# IAS 32 – Presentation

## Presentation from the perspective of the issuer on

### Liability and equity

Contractual obligation, including one arising from a derivative, that will or may result in the future receipt or delivery of the issuer's own equity instruments, but does not meet conditions (a) and (b) above, is not an equity instrument.

- An instrument can be an equity instrument if, and only if, both conditions (a) and (b) below are met.
  - a) The instrument includes no contractual obligation:
    - i) to deliver cash or another financial asset; or
    - ii) to exchange financial instrument under conditions that are potentially unfavourable to the issuer.
  - b) If the instrument will or may be settled in the issuer's own equity instruments, it is:
    - i) a non-derivative that includes no contractual obligation to deliver a variable no. of its own equity instruments; or
    - ii) a derivative that will be settled only by the issuer exchanging a fixed amount of cash or another financial asset for a fixed number of its own equity instruments.

# IAS 32 – Presentation

## Example

## Presentation from the perspective of the issuer on

### Liability and equity

- Are the following financial liabilities or equity instruments?

- A contract to deliver as many of the entity's own equity instruments as are equal in value to \$10,000. ➤ **Financial liability**
- A contract to deliver as many of the entity's own equity instruments as are equal in value to the value of 100 ounces of gold. ➤ **Financial liability**

- Such a contract is a financial liability of the entity even though the entity must or can settle it by delivering its own equity instruments.
- It is not an equity instrument because the entity uses a variable number of its own equity instruments as a means to settle the contract.



# IAS 32 – Presentation

Presentation from the perspective of the issuer on

Liability and equity

Compound financial instruments

**Compound financial instrument** is an instrument containing both a liability and an equity component

- IAS 32
  - applies only to issuers of non-derivative compound financial instruments and
  - does not deal with compound financial instruments from the perspective of holders.
- IAS 39
  - deals with the separation of embedded derivatives from the perspective of holders of compound financial instruments that contain debt and equity features.

# IAS 32 – Presentation

Presentation from the perspective of the issuer on

Liability and equity

Compound financial instruments

## Evaluation and Initial Classification

- The issuer of a non-derivative financial instrument shall evaluate the terms of the financial instruments
  - to determine whether it contains both a liability and an equity component.
- Such components shall be classified separately as financial liabilities, financial assets or equity instrument in accordance with
  - the substance of the contractual arrangement and
  - the definitions of a financial liability, financial asset and an equity instrument.
- An entity recognises separately the components of a financial instrument that
  - a) creates a financial liability of the entity, and
  - b) grants an option to the holder of the instrument to convert it into an equity instrument of the entity.



# IAS 32 – Presentation

## Example

### Presentation from the perspective of the issuer on

Liability and equity

Compound financial instruments



- For example, a convertible bond allows the bondholder to convert it into a fixed no. of ordinary shares of the entity
  - is a compound financial instrument.
- From the perspective of the entity, such an instrument comprises two components:
  - 1) a financial liability – a contractual arrangement to deliver cash or another financial asset), and
  - 2) an equity instrument – a call option granting the holder the right, for a specified period of time, to convert it into a fixed no. of ordinary shares of the entity.
- The economic effect of issuing such an instrument is substantially the same as issuing a debt instrument with detachable share purchase warrants.
- In all cases, the entity presents the liability and equity components separately on its balance sheet.

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# IAS 32 – Presentation

### Presentation from the perspective of the issuer on

Liability and equity

Compound financial instruments



#### Separating Initial Carrying Amount of Each Component

- The equity component is assigned the residual amount, after deducting from the fair value of the instrument as a whole the amount separately determined for the liability component.
- The value of any derivative features (such as a early redemption option) embedded in the compound financial instrument other than the equity component
  - is included in the liability component.
- The sum of the carrying amounts assigned to the liability and equity components on initial recognition is always equal to the fair value that would be ascribed to the instrument as a whole.
- No gain or loss arises from initially recognising the components of the instrument separately.

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# IAS 32 – Presentation

Presentation from the perspective of the issuer on

Liability and equity

Compound financial instruments



## Separating Initial Carrying Amount of Each Component

The issuer of a bond convertible into ordinary shares

- Firstly determines the carrying amount of the liability component
  - by measuring the fair value of a similar liability (including any embedded non-equity derivative features) that does not have an associated equity component.
- Then determine the carrying amount of the equity instrument represented by the option to convert the instrument into ordinary shares
  - by deducting the fair value of the financial liability
  - from the fair value of the compound financial instrument as a whole.

# IAS 32 – Presentation

Example

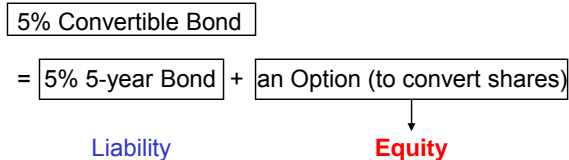
Presentation from the perspective of the issuer on

Liability and equity

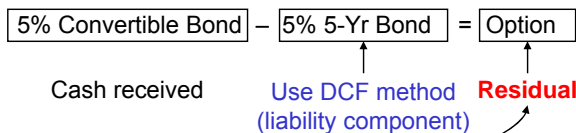
Compound financial instruments

For example, an entity issues a 5% 5-year convertible bond

- It can be analysed as



- To find out the equity component:



- **To classify as Equity**

# IAS 32 – Presentation

## Example

### Presentation from the perspective of the issuer on

Liability and equity

Compound financial instruments

- An entity issues 2,000 convertible bonds at the start of year 1.
- The bonds have a 3-year term, and are issued at par with a face value of \$1,000 per bond, giving total proceeds of \$2,000,000.
- Interest is payable annually in arrears at a nominal annual interest rate of 6%.
- Each bond is convertible at any time up to maturity into 250 ordinary shares.
- When the bonds are issued, the prevailing market interest rate for similar debt without conversion options is 9%.
- Discuss and calculate in accordance with IAS 32.

# IAS 32 – Presentation

## Example

### Presentation from the perspective of the issuer on

Liability and equity

Compound financial instruments

- The liability component is measured first, and the difference between the proceeds of the bond issue and the fair value of the liability is assigned to the equity component.
- The present value of the liability component is calculated using a discount rate of 9%, the market interest rate for similar bonds having no conversion rights.

Present value of the principal	
\$2,000,000 payable at the end of three years	\$ 1,544,367
Present value of the interest	
\$120,000 payable annually in arrears for three years	<u>303,755</u>
Total liability component	\$ 1,848,122
Equity component (by deduction)	<u>151,878</u>
Proceeds of the bond issue	\$ 2,000,000

# IAS 32 – Presentation

## Example

### Presentation from the perspective of the issuer on

Liability and equity

Compound financial instruments

How does an issuer recognise a callable convertible bond?

- Assume that the proceeds received on the issue of a callable convertible bond are \$60.
- The value of a similar bond without a call or equity conversion option is \$57.
- Based on an option pricing model, it is determined that the value to the entity of the embedded call feature in a similar bond without an equity conversion option is \$2.

- In this case, the value allocated to the liability component is \$55 (\$57 – \$2).
- Then, the value allocated to the equity component is \$5 (\$60 – \$55).
- The journal entry is as follows:

Dr	Cash	60	
Cr	Liabilities		55
	Equity		5

2 components:

- Liability component, plus
- Derivative feature embedded other than the equity component (i.e. the call feature)

# IAS 32 – Presentation

### Presentation from the perspective of the issuer on

Liability and equity

Compound financial instruments

Treasury shares

- Treasury shares (an entity's own equity instruments reacquired by itself or its subsidiaries)
  - Those instruments shall be deducted from equity
  - Cannot be classified as an asset
  - No gain or loss shall be recognised in profit or loss on the purchase, sale, issue or cancellation of an entity's own equity instruments.
  - Such treasury shares may be acquired and held by the entity or by other members of the consolidated group.
  - Consideration paid or received shall be recognised directly in equity.
- The amount of treasury shares held is disclosed separately either on the face of the balance sheet or in the notes.

## IAS 32 – Presentation

Presentation from the perspective of the issuer on

Liability and equity

Compound financial instruments

Treasury shares

Interests, dividends, losses and gains

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

## IAS 32 – Presentation

Case



Annual report of 2005 sets out that:

- Preference shares, which
  - carry a mandatory coupon,
  - or are redeemable on a specific date
  - or at the option of the shareholder,are classified as financial liabilities and are presented in other borrowed funds.
- The dividends on these preference shares
  - are recognised in the income statement as interest expense on an amortised cost basis using the effective interest method.

# IAS 32 – Presentation

Presentation from the perspective of the issuer on

Liability and equity

Compound financial instruments

Treasury shares

Interests, dividends, losses and gains

## Offsetting

Financial assets and financial liabilities are offset when and only when

- 1) there is a legally enforceable right to set off, and
- 2) the entity intends to settle on a net basis

# Today's Agenda

Part Two



FI: Disclosure

## Disclosure Amended by IFRS 7

- The objective of IFRS 7 is to require entities to provide disclosures in their financial statements that enable users to evaluate:

1) the significance of financial instruments for the entity's

- financial position and
- financial performance; and

### Significance

- Balance sheet
- Income statement
- Other disclosures

2) the nature and extent of risks arising from financial instruments to which the entity is exposed

- during the period and
- at the reporting date, and

how the entity manages those risks.

### Nature and Extent

- Qualitative disclosures
- Quantitative disclosures

## Disclosure Amended by IFRS 7

- IFRS 7 supersedes (from 1 Jan. 2007)
  - Full IAS 30
  - Para. 51 to 95 of IAS 32
- As compared with IAS 30 and 32, IFRS 7 has the following attributes:

1. Apply to all entities while IAS 30 applies to financial institution only
2. Is more correlation with the categories of financial instruments as defined in IAS 39
3. Aim at simplifying the disclosure requirements of IAS 32 on risks but introduced some new disclosures .....
4. IAS 32 has exemption for comparative on first year of adoption but IFRS 7 only provides exemption on the nature and extent of risks.

### Significance

### Nature and Extent



# 1. Significance of Financial Instruments

## Significance

- An entity shall disclose information that enables users of its financial statements to evaluate
  - the significance of financial instruments for its financial position and performance.

Balance Sheet

Income Statement

Other Disclosures



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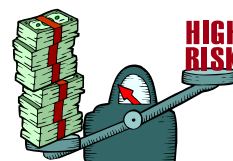
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# 2. Nature and Extent of Risks

## Nature and Extent

- An entity shall disclose information that enables users of its financial statements to evaluate
  - the nature and extent of risks arising from financial instruments to which the entity is exposed at the reporting date.
- The disclosures required focus on the risks that arise from financial instruments and how they have been managed.
- These risks typically include, but are not limited to
  - credit risk,
  - liquidity risk and
  - market risk.

Currency risk, interest rate risk and other price risk



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## 2. Nature and Extent of Risks

### Nature and Extent

#### In IAS 32

Market Risk

Currency Risk

FV Interest  
Rate Risk

Price Risk

Credit Risk

Liquidity Risk

Cash Flow Interest  
Rate Risk

#### In IFRS 7

Market Risk

Currency Risk

Interest  
Rate Risk

Other Price Risk

Credit Risk

Liquidity Risk

## 2. Nature and Extent of Risks

### Nature and Extent

### Qualitative Disclosures

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



## 2. Nature and Extent of Risks

Nature and Extent

Quantitative Disclosures



- For each type of risk arising from financial instruments, an entity shall disclose:
  - Summary quantitative data about its exposure to that risk at the reporting date.
- The level of detail of such disclosure is based on:
  - The information provided internally to key management personnel of the entity (as defined in IAS 24 *Related Party Disclosures*), for example the entity's board of directors or chief executive officer.
- If the quantitative data disclosed as at the reporting date are unrepresentative of an entity's exposure to risk during the period, an entity shall provide further information that is representative.

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## 2. Nature and Extent of Risks

Nature and Extent

Quantitative Disclosures

### Market risk

- IFRS 7 requires the disclosures of sensitivity analysis.
- The disclosures of sensitivity analysis can be achieved by 2 approaches:
  1. Sensitivity analysis for each type of market risk
  2. Sensitivity analysis that reflects interdependencies between risks variables



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## 2. Nature and Extent of Risks

Nature and Extent

Quantitative Disclosures

**Market risk** – Sensitivity Analysis for Each Type of Market Risk

- An entity shall disclose:
  - a) a sensitivity analysis for each type of market risk to which the entity is exposed at the reporting date, showing:
    - how profit or loss and equity would have been affected by changes in the relevant risk variable that were reasonably possible at that date;
  - b) the methods and assumptions used in preparing the sensitivity analysis; and
  - c) changes from the previous period in the methods and assumptions used, and the reasons for such changes.

Currency risk,  
interest rate risk and  
other price risk



## 2. Nature and Extent of Risks

Nature and Extent

Quantitative Disclosures

**Market risk** – Sensitivity analysis that reflects interdependencies between risks variables

- Alternatively, an entity prepares and discloses a sensitivity analysis, such as value-at-risk, that reflects interdependencies between risk variables (e.g. interest rates and exchange rates) and uses it to manage financial risks.
- The entity shall also disclose:
  - a) an explanation of the method used in preparing such a sensitivity analysis, and of the main parameters and assumptions underlying the data provided; and
  - b) an explanation of the objective of the method used and of limitations that may result in the information not fully reflecting the fair value of the assets and liabilities involved.

## 2. Nature and Extent of Risks

### Case

- Early adopted HKFRS 7 in 2005 and its annual report states that (extract only):
  - Risk management techniques, such as Value-at-Risk (“VaR”) based on historical simulation and portfolio stress testing, are used to identify, measure and control foreign exchange risk, equity price risk and interest rate risks of the Group’s investments.
  - VaR measures the expected maximum loss over a given time interval (a holding period of 10 trading days is used by the Group) at a given confidence level (95 per cent confidence interval is adopted by the Group) based on historical data (one year is used by the Group).
  - The Board sets a limit on total VaR of the Group and VaR is monitored on a weekly basis .....



*How would you determine them?*

## 2. Nature and Extent of Risks

### Case

- Early adopted HKFRS 7 in 2005 and its annual report states that (extract only):
  - The VaR for each risk factor and the total VaR of the investments of the Group and HKEx during the year were as follows:



	Group			HKEx		
	Average	Highest	Lowest	Average	Highest	Lowest
	\$million	\$million	\$million	\$million	\$million	\$million
Foreign exchange risk	5	6.1	3.6	0.2	0.7	-
Equity price risk	8.5	11.2	6.6	-	-	-
Interest rate risk	20.5	24	14.4	-	-	-
Total VaR	23.5	26.9	20.4	0.2	0.7	-

## How Do You Determine Them .....

### Case

Reference to the time horizon and confidence level of some entities used in VaR analysis .....

Entity name	Time horizon	Confidence level
• HSBC	• 1 day	• 99%
• BoC-HK	• 1 day	• 99%
• Standard Chartered	• 1 day	• 97.5%
• HKMA	• 1 month	• 95%
• HKEx	• 10 days	• 95%



## A Simple Quantitative Example

### Example

Assume you have a financial asset with the following details:

- \$ 10 million in HSBC shares
- Volatility is 2% per day and 32% per year

Find 10-day VaR at 99% confidence level

- The standard deviation of daily changes in the value of the asset is:  
2% of \$ 10 million = \$ 200,000
- Assuming the changes on successive days are independent, the standard deviation over 10-day period to be  
 $\$ 200,000 \times \sqrt{10} = \$ 632,456$
- 99% confidence level implies  $N(-2.33) = 0.01$
- Thus, 10-day 99% VaR for that \$10 million portfolio is:  
 $\$632,456 \times 2.33 = \$ 1,473,621$

Modified from *Options, Futures, & Other Derivatives*,  
by John C. Hull, 4th Edition, Prentice Hall, 2000

# IAS 32 & 39 and IFRS 7 – Part Two

10 September 2007

Full set of slides in PDF may be found in  
[www.NelsonCPA.com.hk](http://www.NelsonCPA.com.hk)



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