

# Update and Recap on HKAS 39 and HKFRS 7 – Part 2

7 March 2009

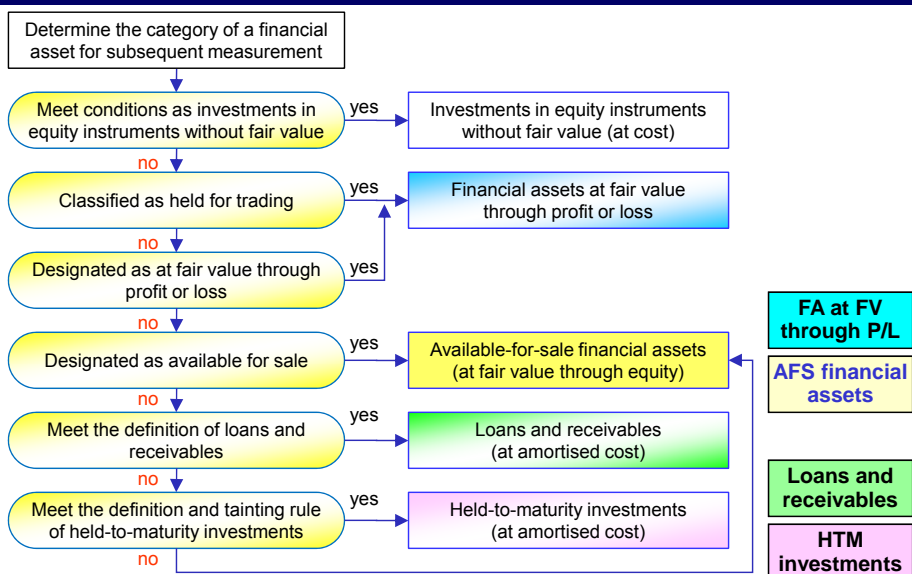


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## Financial Assets – Classification

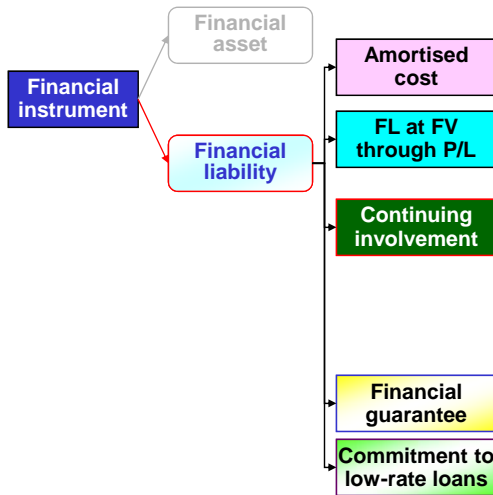


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# Financial Liabilities – Classification



After initial recognition, an entity shall measure all financial liabilities at **amortised cost** using the effective interest method, except for:

- a) financial liabilities at fair value through profit or loss
- b) financial liabilities that arise
  - when a transfer of a financial asset does not qualify for derecognition, or
  - when the continuing involvement approach applies.
- c) Financial guarantee contracts
- d) Commitments to provide a loan at a below-market interest rate.

# Today's Agenda



Derivative & Embedded Derivative

Financial Instruments: Disclosures (HKFRS 7)

1. Significance of Financial Instruments

2. Nature and Extent of Risks

# Today's Agenda

## Derivative & Embedded Derivative



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# Derivative & Embedded Derivative

## Derivative

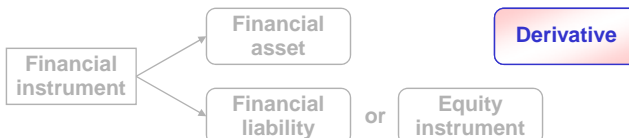
⇒ is a financial instrument or other contract within the scope of HKAS 39 with all 3 of the following characteristics:

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.



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# Derivative & Embedded Derivative

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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# Derivative & Embedded Derivative

## 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

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# Derivative & Embedded Derivative

## Case

Ping An Insurance (Group) Co. of China, Ltd.



### Accounting report 2006

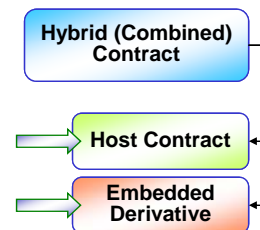
Derivative financial instruments

- Derivative financial instruments include
  - options embedded in convertible bonds purchased by the Group,
  - derivatives embedded in certain insurance contracts,
  - interest rate swaps and futures,
  - credit default swaps,
  - cross currency swaps,
  - forward currency contracts, and
  - options on interest rates, currencies and equities, etc.
- Derivative financial instruments are classified as held for trading
  - unless they are designated as effective hedging instruments.
- All derivatives are carried
  - as assets when the fair values are positive and
  - as liabilities when the fair values are negative.

Dr	Asset
Cr	Cash
Dr	Cash
Cr	Liabilities

# Derivative & Embedded Derivative

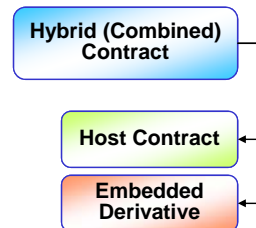
- A holder of a hybrid (combined) instrument is required to evaluate whether the embedded derivative should be separately accounted for in accordance with HKAS 39.
- A hybrid instrument includes
  - a non-derivative host contract and
  - an embedded derivative with the effect that some of the cash flows of the hybrid instrument vary in a way similar to a stand-alone derivative.
- However, a derivative that 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.



# Derivative & Embedded Derivative

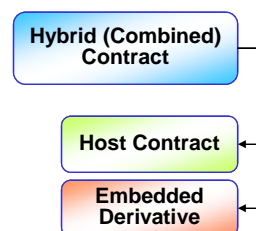
## Example

- Examples of contract with embedded derivative include:
  1. A call, put, or prepayment option embedded in a host debt contract.
  2. An option or automatic provision to extend the remaining term to maturity of a debt instrument.
  3. Equity-indexed interest or principal payments embedded in a host debt instrument.
  4. Commodity-indexed interest or principal payments embedded in a host debt instrument.
  5. An equity conversion feature embedded in a convertible debt instrument.

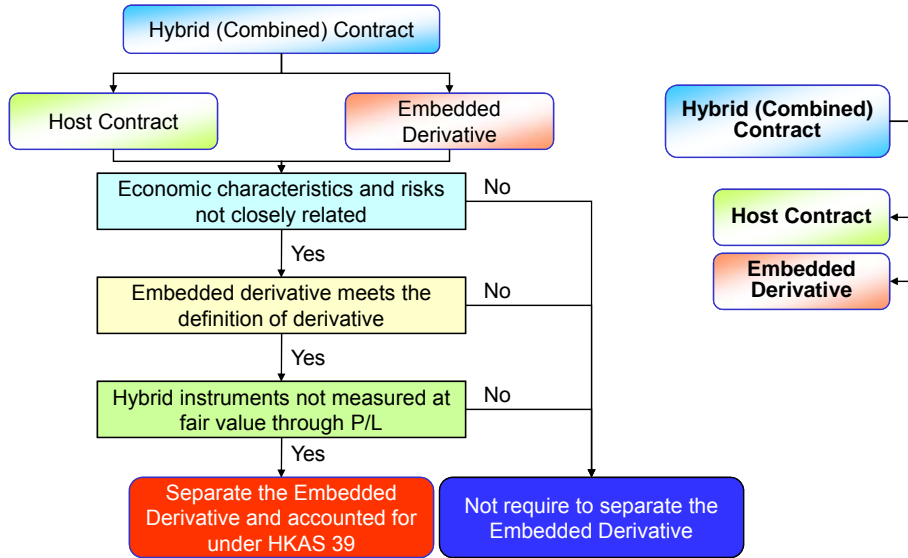


# Derivative & Embedded Derivative

- HKAS 39 requires an entity to separate an embedded derivative from the host contract and account for such embedded derivative as a derivative if, and only if:
  1. the economic characteristics and risks of the embedded derivative are not closely related to the economic characteristics and risks of the host contract;
  2. a separate instrument with the same terms as the embedded derivative would meet the definition of a derivative; and
  3. the hybrid instrument is not measured at fair value with changes in fair value recognised in profit or loss (i.e. a derivative that is embedded in a financial asset or financial liability at fair value through profit or loss is not separated).



# Derivative & Embedded Derivative



# Derivative & Embedded Derivative

- If an embedded derivative is separated, the host contract is accounted for
  - under HKAS 39 if it is a financial instrument, and
  - in accordance with other appropriate accounting standards if it is not a financial instrument.
- HKAS 39 does not address whether an embedded derivative is presented separately on the face of the financial statements.
- The separated embedded derivative is similar to a simple derivative to be accounted for in the same manner as other derivatives.



## Derivative & Embedded Derivative

- If a contract contains one or more embedded derivatives, an entity may designate the entire hybrid (combined) contract as a financial asset or financial liability at fair value through profit or loss unless:

1. the embedded derivative does not significantly modify the cash flows that otherwise would be required by the contract; or
2. it is clear with little or no analysis when a similar hybrid instrument is first considered that separation of the embedded derivative is prohibited, such as a prepayment option embedded in a loan that permits the holder to prepay the loan for approximately its amortised cost.

Hybrid (Combined)  
Contract

## Derivative & Embedded Derivative

- If an entity is required by HKAS 39 to separate an embedded derivative from its host contract, but is unable to measure the embedded derivative separately (either at acquisition or subsequently),
  - the entity is required to designate the entire hybrid contract as at fair value through profit or loss.

Hybrid (Combined)  
Contract

# Derivative & Embedded Derivative

## 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?

# Derivative & Embedded Derivative

## 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.

# Today's Agenda



## Financial Instruments: Disclosures (HKFRS 7)

### 1. Significance of Financial Instruments

### 2. Nature and Extent of Risks

# Introduction

- The objective of HKFRS 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
- 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, andhow the entity manages those risks.

### Significance

- Balance sheet
- Income statement
- Other disclosures

### Nature and Extent

- Qualitative disclosures
- Quantitative disclosures

## Introduction: Amended by HKFRS 7

- HKFRS 7 supersedes (from 1 Jan. 2007)
  - Full HKAS 30
  - Para. 51 to 95 of HKAS 32
- As compared with HKAS 30 and 32, HKFRS 7 has the following attributes:
  1. Apply to all entities while HKAS 30 applies to financial institution only
  2. Is more correlation with the categories of financial instruments as defined in HKAS 39
  3. Aim at simplifying the disclosure requirements of HKAS 32 on risks but introduced some new disclosures .....
  4. HKAS 32 has exemption for comparative on first year of adoption but HKFRS 7 only provides exemption on the nature and extent of risks.

Significance

Nature and Extent

## Introduction: Recap of HKAS 30

HKAS 30 *Disclosures in the Financial Statements of Banks and Similar Financial Institutions* set out some specific disclosure requirements on banks and similar entities, including:

- Accounting policies on specific items and transactions
- Specific items on income statement and balance sheet
- Fair values of each class of financial assets and liabilities
- Contingent liabilities and commitments (requiring specific items)
- Analysis of assets and liabilities into relevant maturity groupings
- Significant concentrations of its assets, liabilities and off balance sheet items (by geographical areas, customer, industry group or other groupings)
- Significant net foreign currency exposures
- Accounting policy, movements and amount on allowance for impairment loss
- Amounts set aside for general banking risks, including future losses and other unforeseeable risks or contingencies
- Liabilities secured and assets pledged as security

Not yet  
closely  
aligned with  
HKAS 39

## Introduction: Classes and Level

- When HKFRS 7 requires disclosures by class of financial instrument, an entity shall group financial instruments into classes
  - that are appropriate to the nature of the information disclosed and
  - that take into account the characteristics of those financial instruments.
- An entity shall provide sufficient information
  - to permit reconciliation to the line items presented in the balance sheet.

Significance

Nature and Extent

The classes described above are determined by the entity and are, thus, distinct from the categories of financial instruments specified in HKAS 39 (which determine how financial instruments are measured and where changes in fair value are recognised).

## Introduction: Classes and Level

- In determining classes of financial instrument, an entity shall, at a minimum:
  - a) distinguish instruments measured at amortised cost from those measured at fair value.
  - b) treat as a separate class or classes those financial instruments outside the scope of HKFRS 7.

Significance

Nature and Extent



## Introduction: Classes and Level

- An entity decides, in the light of its circumstances,
  - how much detail it provides to satisfy the requirements of HKFRS 7,
  - how much emphasis it places on different aspects of the requirements and
  - how it aggregates information to display the overall picture without combining information with different characteristics.
- It is necessary to strike a balance between
  - overburdening financial statements with excessive detail that may not assist users of financial statements and
  - obscuring important information as a result of too much aggregation.



Significance

Nature and Extent

## Today's Agenda



Financial Instruments: Disclosures  
(HKFRS 7)

1. Significance of Financial  
Instruments

# 1. Significance of Financial Instruments

- 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.

Significance

Balance Sheet

Income Statement and Equity

Other Disclosures



# 1. Significance of Financial Instruments

Balance Sheet

The carrying amounts of each of the following categories, as defined in HKAS 39, shall be disclosed either on the face of the balance sheet or in the notes:

- financial assets at fair value through P/L, showing separately
  - those designated as such upon initial recognition and
  - those classified as held for trading in accordance with HKAS 39;
- held-to-maturity investments;
- loans and receivables;
- available-for-sale financial assets;
- financial liabilities at fair value through P/L, showing separately
  - those designated as such upon initial recognition and
  - those classified as held for trading in accordance with HKAS 39; and
- financial liabilities measured at amortized cost.

New in  
HKFRS 7

New in  
HKFRS 7

HKAS 32 only  
requires such  
disclosures

# 1. Significance of Financial Instruments

## Activity

Entity A with HK\$ as its functional currency has the following financial instruments at y.e.

Investments in CD and bonds	
5% HK\$ Certificate of deposits	\$ 300,000
Equity-linked deposits in UK	520,000
LIBOR GBP bonds listed in UK	200,000
Investments in equity securities	
Strategic investments listed in HK	250,000
Trading securities listed in US	123,000
Unlisted in UK	25,000
Trade and other receivables	
Due from local customers in HK\$	2,564,560
Due from overseas customers in US\$	435,612
Due from overseas customers in Euro	784,231
Bank deposits	
Fixed deposits at UK banks	200,000
Fixed deposits at HK\$	1,240,500
Cash at bank	
Saving deposits in HK\$	231,230
Trade and other payables	(4,045,670)
Foreign forward contracts	(250,000)
Bank loans	(1,489,000)

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# 1. Significance of Financial Instruments

## Case

	Financial assets at fair value through profit or loss held for trading RMB'000	Loans and receivables RMB'000	Available-for-sale financial assets RMB'000	Total RMB'000
Financial assets included in other assets (note 18)	-	80,000	-	80,000
Interests in associates (notes 22)	-	10,000	-	10,000
Interests in jointly-controlled entities (note 23)	-	19,128	-	19,128
Available-for-sale investments	-	-	462,178	462,178
Financial assets included in prepayments, deposits and other receivables	-	321,664	-	321,664
Trade receivables	-	293,870	-	293,870
Bills receivables	-	52,346	-	52,346
Equity investments at fair value through profit or loss	102,439	-	-	102,439
Derivative financial instruments	4,440	-	-	4,440
Pledged deposits	-	52,088	-	52,088
Cash and cash equivalents	-	2,184,510	-	2,184,510
	106,879	3,013,606	462,178	3,582,663



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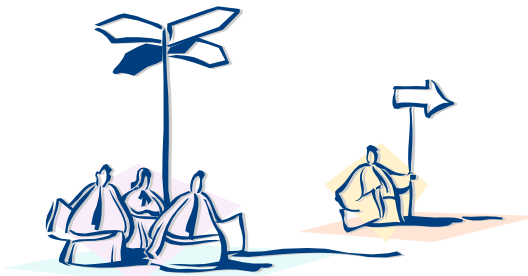
# 1. Significance of Financial Instruments

## Balance Sheet

Information is required to disclose on:

- Loan and receivable designated as at fair value through profit or loss (HKFRS 7.9)
- Financial liability designated as at fair value through profit and loss (HKFRS 7.10)

Designated as at Fair Value through profit or loss



# 1. Significance of Financial Instruments

## Balance Sheet

Information is required to disclose on:

- Loan and receivable designated as at fair value through profit or loss (HKFRS 7.9)

Designated as at Fair Value through profit or loss

If an entity has the above loan and receivable, it shall disclose certain information relating to credit risk, including:

- a. Maximum exposure to credit risk at the reporting date
- b. Amount by which any related credit derivative or similar instruments mitigate that maximum exposure to credit risk
- c. Amount of change (for the period and cumulative) in the fair value of the loan and receivable that is attributable to changes in credit risk of the item
- d. Amount of change in the fair value of any related credit derivative or similar instruments that has occurred (for the period and cumulative)

# 1. Significance of Financial Instruments

## Balance Sheet

Information is required to disclose on:

- Financial liability designated as at fair value through profit and loss (HKFRS 7.10)

Designated as at  
Fair Value through  
profit or loss

If an entity has the above financial liability, it shall disclose certain information relating to credit risk, including:

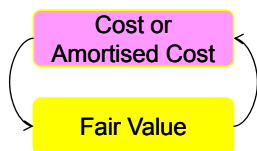
- a. Amount of change (for the period and cumulative) in the fair value of the financial liability that is attributable to changes in credit risk of the item
- b. the difference between
  - the financial liability's carrying amount and
  - the amount the entity would be contractually required to pay at maturity to the holder of the obligation

# 1. Significance of Financial Instruments

## Balance Sheet

### Reclassification

- If the entity has reclassified a financial asset as one measured:



- a) at cost or amortised cost, rather than at fair value; or
- b) at fair value, rather than at cost or amortised cost,

it shall disclose

- the amount reclassified into and out of each category and
- the reason for that reclassification (see HKAS 39.51–54).

# 1. Significance of Financial Instruments

## Balance Sheet

### **Reclassification (as amended in 2008)**

- If the entity has reclassified a financial asset out of the FV through P/L category or out of the AFS category, it shall disclose:
  - a. the amount reclassified into and out of each category;
  - b. for each reporting period until derecognition, the carrying amounts and fair values of all financial assets reclassified as such;
  - c. if a financial asset was reclassified, the rare situation, and the facts and circumstances indicating that the situation was rare;
  - d. for the reporting period when the asset was reclassified, the fair value gain or loss on the asset recognised in P/L or other comprehensive income;
  - e. for each reporting period until derecognition, the fair value gain or loss that would have been recognised in P/L or other comprehensive income if the asset had not been reclassified, and the gain, loss, income and expense recognised in P/L; and
  - f. the effective interest rate and estimated amounts of cash flows the entity expects to recover, as at the date of reclassification of the financial asset.

# 1. Significance of Financial Instruments

## Balance Sheet

### **Derecognition**

- An entity may have transferred financial assets in such a way that part or all of the financial assets do not qualify for derecognition (see HKAS 39.15–37 ).
  - The entity shall disclose for each class of such financial assets:
    - a) the nature of the assets;
    - b) the nature of the risks and rewards of ownership to which the entity remains exposed;
    - c) when the entity continues to recognise all of the assets, the carrying amounts of the assets and of the associated liabilities; and
    - d) when the entity continues to recognise the assets to the extent of its continuing involvement, the total carrying amount of the original assets, the amount of the assets that the entity continues to recognise, and the carrying amount of the associated liabilities.

# 1. Significance of Financial Instruments

## Balance Sheet



### Collateral

- An entity shall disclose:
  - a) the carrying amount of financial assets it has pledged as collateral for liabilities or contingent liabilities, including amounts that have been reclassified in accordance with HKAS 39.37(a); and
  - b) the terms and conditions relating to its pledge.
- When an entity holds collateral (of financial or non-financial assets) and is permitted to sell or repledge the collateral in the absence of default by the owner of the collateral, it shall disclose:
  - a) the fair value of the collateral held;
  - b) the fair value of any such collateral sold or repledged, and whether the entity has an obligation to return it; and
  - c) the terms and conditions associated with its use of the collateral.

# 1. Significance of Financial Instruments

## Balance Sheet

### Allowance account for credit losses (say impairment loss)

- When financial assets are impaired by credit losses and the entity records the impairment in a separate account (e.g. an allowance account used) rather than directly reducing the carrying amount of the asset,
  - it shall disclose a reconciliation of changes in that account during the period for each class of financial assets.

**No reconciliation required in HKAS 32.94(i) .....**



# 1. Significance of Financial Instruments

## Case

Early adopted HKFRS 7 in 2005 and its annual report 2006 states that (extract only):



- (a) The carrying amounts of accounts receivable and deposits approximated their fair values.
- (b) The movements in provision for impairment losses of trade receivables were as follows:

	Group	
	2006 \$'000	2005 \$'000
At 1 Jan	4,329	5,167
Provision for/(reversal of provision for) impairment losses of trade receivables (note 11)	350	(389)
Trade receivables written off during the year as uncollectible	-	(449)
At 31 Dec	<b>4,679</b>	<b>4,329</b>

# 1. Significance of Financial Instruments

## Balance Sheet

### Compound financial instruments with multiple embedded derivatives

- If an entity has issued an instrument that contains both a liability and an equity component (see HKAS 32.28) and the instrument has multiple embedded derivatives whose values are interdependent (such as a callable convertible debt instrument),
  - it shall disclose the existence of those features.

Similar requirement in HKAS 39.94(d)



# 1. Significance of Financial Instruments

## Balance Sheet

### Defaults and Breaches

- For loans payable recognised at the reporting date, an entity shall disclose:
  - a) details of any defaults during the period of principal, interest, sinking fund, or redemption terms of those loans payable;
  - b) the carrying amount of the loans payable in default at the reporting date; &
  - c) whether the default was remedied, or the terms of the loans payable were renegotiated, before the financial statements were authorised for issue.
- If, during the period, there were breaches of loan agreement terms other than those described above, an entity shall disclose
  - the same information as required by above if those breaches permitted the lender to demand accelerated repayment (unless the breaches were remedied, or the terms of the loan were renegotiated, on or before the reporting date).

# 1. Significance of Financial Instruments

## Income Statement and Equity

An entity shall disclose the following items either on the face of the financial statements or in the notes:

- a) net gains or net losses on:
  - i) financial assets or financial liabilities at fair value through P/L, showing separately
    - those on financial assets or financial liabilities designated as such upon initial recognition, and
    - those on financial assets or financial liabilities that are classified as held for trading in accordance with HKAS 39;
  - ii) available-for-sale financial assets, showing separately the amount of gain or loss recognised directly in equity during the period and the amount removed from equity and recognised in profit or loss for the period;
  - iii) held-to-maturity investments;
  - iv) loans and receivables; and
  - v) financial liabilities measured at amortized cost

New in  
HKFRS 7

HKAS 32  
requires  
this only

New in  
HKFRS 7

# 1. Significance of Financial Instruments

## Income Statement and Equity

An entity shall disclose the following items either on the face of the financial statements or in the notes:

- b) total interest income and total interest expense for financial assets or financial liabilities that are not at fair value through P/L;
- c) fee income and expense (other than amounts included in determining the effective interest rate) arising from:
  - i) financial assets or financial liabilities that are not at fair value through profit or loss; and
  - ii) trust and other fiduciary activities that result in the holding or investing of assets on behalf of individuals, trusts, retirement benefit plans, and other institutions;
- d) interest income on impaired financial assets accrued in accordance with HKAS 39.AG93, and
- e) the amount of any impairment loss for each class of financial asset.



New in  
HKFRS 7

# 1. Significance of Financial Instruments

## Other Disclosures

- Disclosure requirements on accounting policies, hedge accounting and fair value are similar to HKAS 32.
- HKFRS 7 additionally requires:
  - a) in fair value hedges, gains or losses:
    - i) on the hedging instrument; and
    - ii) on the hedged item attributable to the hedged risk.
  - b) the ineffectiveness recognised in profit or loss that arises from cash flow hedges; and
  - c) the ineffectiveness recognised in profit or loss that arises from hedges of net investments in foreign operations.

New in  
HKFRS 7



# Today's Agenda



Financial Instruments: Disclosures  
(HKFRS 7)

1. Significance of Financial  
Instruments

2. Nature and Extent of Risks

## 2. Nature and Extent of Risks

Nature and Extent

## 2. Nature and Extent of Risks

- 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.



Significance

Nature and Extent

Qualitative Disclosures

Quantitative Disclosures

## 2. Nature and Extent of Risks

In HKFRS 7

In HKAS 32

Market Risk

Market Risk

Interest Rate Risk

FV Interest Rate Risk

Currency Risk

Currency Risk

Other Price Risk

Price Risk

Credit Risk

Credit Risk

Liquidity Risk

Liquidity Risk

Cash Flow Interest Rate Risk

Nature and Extent

Qualitative Disclosures

Quantitative Disclosures

## 2. Nature and Extent of Risks

- 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.
- It implies that the disclosures requirements are required
  - not only on credit risk, liquidity risk and market risk
  - but also on other risks that may be identified by the entity for its financial instruments.

Qualitative Disclosures

Quantitative Disclosures

## 2. Nature and Extent of Risks

- The disclosures in respect of the nature and extent of risks arising from financial instruments can be either
  1. given in the financial statements or
  2. incorporated by cross-reference from the financial statements to some other statement, that is available to users of the financial statements
    - on the same terms as the financial statements and
    - at the same time.

e.g. risk report, or management commentary

Without the information incorporated by cross-reference, the financial statements are incomplete.  
(HKFRS 7.BC46)

Qualitative Disclosures

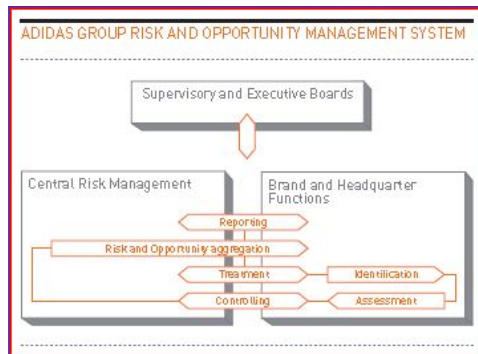
Quantitative Disclosures

## 2. Nature and Extent of Risks

### Example

- Adidas's 13-page
  - “Risk and Opportunity Report”
- HSBC's 97-page
  - “The Management of Risk” incorporated in the Report of Directors

e.g. risk report, or management commentary



Qualitative Disclosures

Quantitative Disclosures

## 2. Nature and Extent of Risks

### 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

### Example

- The type of qualitative information an entity might disclose includes, but is not limited to, a narrative description of:
  1. The entity's exposures to risk and how they arose.

Information about risk exposures might describe exposures both gross and net of risk transfer and other risk-mitigating transactions.
  2. The entity's policies and processes for accepting, measuring, monitoring and controlling risk, which might include:
    - i. The structure and organisation of the entity's risk management functions, including a discussion of independence and accountability;
    - ii. The scope and nature of the entity's risk reporting or measurement systems;
    - iii. The entity's policies for hedging or mitigating risk, including its policies and procedures for taking collateral; and
    - iv. The entity's processes for monitoring the continuing effectiveness of such hedges or mitigating devices.
  3. The entity's policies and procedures for avoiding excessive concentrations of risk.

## 2. Nature and Extent of Risks

### Example

- Entities are also required to disclose any change in the qualitative information from the previous period and explain the reasons for the change. Such changes may result from:
  1. changes in exposure to risk or
  2. changes in the way those exposures are managed.

## 2. Nature and Extent of Risks

### Case



Jardine Matheson Limited (2007):

- The Group's credit risk is primarily attributable to deposits with banks, credit exposures to customers and derivative financial instruments with a positive fair value. The Group has credit policies in place and the exposures to these credit risks are monitored on an ongoing basis.
- The Group manages its deposits with banks and financial institutions and transactions involving derivative financial instruments by monitoring credit ratings and limiting the aggregate risk to any individual counterparty. The utilization of credit limits is regularly monitored .....

Exposures to credit risk

How to manage credit risk

## 2. Nature and Extent of Risks

### Quantitative Disclosures

- For each type of risk arising from financial instruments, an entity shall disclose:
  - a. Summary quantitative data about its exposure to that risk at the 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 HKAS 24 *Related Party Disclosures*), for example the entity's board of directors or chief executive officer.
  - b. the disclosures required in quantitative disclosures, to the extent not provided in (a), unless the risk is not material (see HKAS 1.29-31).
  - c. concentrations of risk if not apparent from (a) and (b)



## 2. Nature and Extent of Risks

### Quantitative Disclosures

- When an entity (or its key management personnel) uses several methods to manage a risk exposure,
  - the entity is required to disclose information using the method or methods that provide the most relevant and reliable information. (Refers to HKAS 8 for relevant and reliable information)



## 2. Nature and Extent of Risks

### Case

Jardine Matheson Limited (2007):

- The Group is exposed to equity securities price risk because of listed and unlisted equity investments which are available for sale and held by the Group at fair value.
- Gains and losses arising from changes in the fair value of available-for-sale investments are dealt with in reserves.
- The performance of the Group's listed and unlisted available-for-sale investments are monitored regularly, together with an assessment of their relevance to the Group's long term strategic plans.
- Details of the Group's available-for-sale investments are contained in note 16.



Exposures to price risk

How to manage price risk

Summary quantitative data

## 2. Nature and Extent of Risks

### Quantitative Disclosures

- **Concentrations of risk** arise from financial instruments that have similar characteristics and are affected similarly by changes in economic or other conditions.
- The identification of concentrations of risk requires judgement taking into account the circumstances of the entity.
- Disclosure of concentrations of risk shall include:
  - a) a description of how management determines concentrations;
  - b) a description of the shared characteristic that identifies each concentration (eg counterparty, geographical area, currency or market); and
  - c) the amount of the risk exposure associated with all financial instruments sharing that characteristic.



## 2. Nature and Extent of Risks

### Activity

#### Activity R1 – Concentration of risk

1. Are the following cases representing concentration of risk?
  - a) Industry sectors: if an entity's counterparties are in one or more industry sectors (such as retail or wholesale).
  - b) Credit rating or other measure of credit quality – If an entity's counterparties are in one or more credit qualities (such as secured loans or unsecured loans) or in one or more credit ratings (such as investment grade or speculative grade)
  - c) Geographical distribution – If an entity's counterparties are in one or more geographical markets (such as Asia or Europe)
  - d) A limited number of individual counterparties or groups of closely related counterparties.
2. Are the disclosures of concentration of risk applied to other risks, for example liquidity risk?  
(Hints: in HKAS 32, the disclosure focus on concentration of credit risk)

## 2. Nature and Extent of Risks

### Example

1. Yes, all cases represent concentration of credit risks.
2. Yes, similar principles apply to identifying concentrations of other risks, including liquidity risk and market risk. For example:
  - Concentrations of liquidity risk may arise from the repayment terms of financial liabilities, sources of borrowing facilities or reliance on a particular market in which to realise liquid assets.
  - Concentrations of foreign exchange risk may arise if an entity has a significant net open position in a single foreign currency, or aggregate net open positions in several currencies that tend to move together.

## 2. Nature and Extent of Risks

### Quantitative Disclosures

- 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.



## 2. Nature and Extent of Risks

### Example

- Can an entity avoid disclosure of nature and extent of risk by
  - Unwinding a position of large exposure in a particular currency, or
  - Disposal of its large portfolio in equity instruments ?
- If the quantitative data disclosed as at the reporting date are unrepresentative of an entity's exposure to risk during the period, an entity is still required to provide further information that is representative.
- When an entity typically has a large exposure to a particular currency or an equity investments, but at year-end unwinds the position,
  - the entity might disclose a graph that shows the exposure at various times during the period, or disclose the highest, lowest and average exposures during the period. (HKFRS 7.IG20)

## 2. Nature and Extent – Credit Risk

### Quantitative Disclosures

#### Credit risk

- An entity shall disclose by class of financial instrument:
  - a) the amount that best represents its maximum exposure to credit risk at the reporting date without taking account of any collateral held or other credit enhancements (e.g. netting agreements that do not qualify for offset in accordance with HKAS 32);
  - b) in respect of the amount disclosed in (a), a description of collateral held as security and other credit enhancements;
  - c) information about the credit quality of financial assets that are neither past due nor impaired; and
  - d) the carrying amount of financial assets that would otherwise be past due or impaired whose terms have been renegotiated.



## 2. Nature and Extent – Credit Risk

### Activity

#### Activity R2 – Concentration of risk

- The following cases give rise to credit risk:
  - a. Granting loans and receivables to customers and placing deposits with other entities
  - b. Entering into derivative contracts, e.g. foreign exchange contracts, interest rate swaps and credit derivatives
  - c. Granting financial guarantees
  - d. Making a loan commitment that is irrevocable over the life of the facility or is revocable only in response to a material adverse change
- Assess the maximum exposure to credit risk.

## 2. Nature and Extent – Credit Risk

### Example

- Activities that give rise to credit risk and the associated maximum exposure to credit risk include, but are not limited to:
  - a) granting loans and receivables to customers and placing deposits with other entities.  
(the maximum exposure to credit risk is the carrying amount of the related financial assets)
  - b) entering into derivative contracts, e.g. foreign exchange contracts, interest rate swaps and credit derivatives.  
(the maximum exposure to credit risk at the reporting date will equal the carrying amount)
  - c) granting financial guarantees.  
(the maximum exposure to credit risk is the maximum amount the entity could have to pay if the guarantee is called on)
  - d) making a loan commitment that is irrevocable over the life of the facility or is revocable only in response to a material adverse change.  
(the maximum credit exposure is the full amount of the commitment)

## 2. Nature and Extent – Credit Risk

### Case

Early adopted HKFRS 7 in 2005 and its annual report 2006 states that (extract only):



- Exposure to credit risk - as at 31 Dec., the financial assets and financial liabilities of the Group and HKEx that were exposed to credit risk and their maximum exposure were as follows:

	Group		Group	
	2006	2006	2005 (As restated)	2005 (As restated)
	Carrying amount in balance sheet	Maximum exposure to credit risk	Carrying amount in balance sheet	Maximum exposure to credit risk
	\$'000	\$'000	\$'000	\$'000
Financial assets				
Clearing House Funds:				
Available-for-sale financial assets	317,212	317,212	224,137	224,137
Time deposits with original maturities over three months	-	-	30,290	30,290
Cash and cash equivalents	1,957,229	1,957,229	1,091,233	1,091,233
Compensation Fund Reserve Account:				
Available-for-sale financial assets	42,990	42,990	18,488	18,488
Cash and cash equivalents	8,653	8,653	30,240	30,240
Time deposit with maturity over one year	38,886	38,886	38,768	38,768
Other financial assets	18,583	18,583	17,162	17,162

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## 2. Nature and Extent – Credit Risk

### Example

- In disclosing information about the credit quality of financial assets with credit risk that are neither past due nor impaired, an entity might disclose the following information:
  1. an analysis of credit exposures using an external or internal credit grading system;
  2. the nature of the counterparty;
  3. historical information about counterparty default rates; and
  4. any other information used to assess credit quality.

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## 2. Nature and Extent – Past Due

### Quantitative Disclosures

#### Financial assets that are either past due or impaired

- An entity shall disclose by class of financial asset:
  - a) an analysis of the age of financial assets that are past due as at the reporting date but not impaired;
  - b) an analysis of financial assets that are individually determined to be impaired as at the reporting date, including the factors the entity considered in determining that they are impaired; and
  - c) for the amounts disclosed in (a) and (b), a description of collateral held by the entity as security and other credit enhancements and, unless impracticable, an estimate of their fair value.



## 2. Nature and Extent – Past Due

### Example

- Based on HKFRS 7, an entity uses its judgement to determine the number of time bands, for example:
  1. not more than three months;
  2. more than three month and not more than six months;
  3. more than six months and not more than one year; and
  4. more than one year.

## 2. Nature and Extent – Past Due

### Case

Early adopted HKFRS 7 in 2005 and its annual report 2006 states that (extract only):



(iv) Financial assets that were past due but not impaired

As at 31 December, the age analysis of the trade receivables of the Group that were past due but not determined to be impaired according to the period past due was as follows:

	Group	
	2006 \$'000	2005 \$'000
Up to 6 months	186,359	141,277
Over 6 months to 1 year	–	–
Over 1 year to 3 years *	–	8,521
Over 3 years *	8,651	142
<b>Total</b>	<b>195,010</b>	<b>149,940</b>

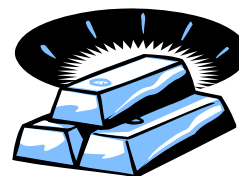
\* No provision for impairment losses has been made against trade receivables amounting to \$8,510,000 (2005: \$8,521,000) as the balances can be recovered from the Clearing House Funds.

## 2. Nature and Extent – Collateral

### Quantitative Disclosures

#### Collateral and other credit enhancements obtained

- When an entity obtains financial or non-financial assets during the period by taking possession of collateral it holds as security or calling on other credit enhancements (eg guarantees), and such assets meet the recognition criteria in other Standards, an entity shall disclose:
  - the nature and carrying amount of the assets obtained; and
  - when the assets are not readily convertible into cash, its policies for disposing of such assets or for using them in its operations.



## 2. Nature and Extent – Liquidity Risk

### Quantitative Disclosures

#### Liquidity risk

- Before HKFRS 7, contractual maturity analysis together with effective interest rate analysis was required by HKAS 32 for interest rate risk disclosure.
- HKFRS 7 now requires, for liquidity risk disclosure, an entity to disclose:
  - a) a maturity analysis for financial liabilities that shows the remaining contractual maturities; and
  - b) a description of how it manages the liquidity risk inherent in (a).



## 2. Nature and Extent – Liquidity Risk

### Example

#### Contractual Maturity Analysis

- In preparing the contractual maturity analysis for financial liabilities required by HKFRS 7.39(a), an entity uses its judgement to determine an appropriate number of time bands.
- For example, an entity might determine that the following time bands are appropriate:
  - a) not later than one month;
  - b) later than one month and not later than three months;
  - c) later than three months and not later than one year; and
  - d) later than one year and not later than five years.

## 2. Nature and Extent – Liquidity Risk

### Example

#### Contractual Maturity Analysis

- When a counterparty has a choice of when an amount is paid,
  - the liability is included on the basis of the earliest date on which the entity can be required to pay.
    - For example, financial liabilities that an entity can be required to repay on demand (e.g. demand deposits) are included in the earliest time band.
- When an entity is committed to make amounts available in instalments,
  - each instalment is allocated to the earliest period in which the entity can be required to pay.
    - For example, an undrawn loan commitment is included in the time band containing the earliest date it can be drawn down.

## 2. Nature and Extent – Liquidity Risk

### Case

Early adopted HKFRS 7 in 2005 and its annual report 2006 states that (extract only):



- The financial liabilities of the Group and HKEx as at 31 Dec. 2006 are analysed into relevant maturity buckets based on their contractual maturity dates in the table below:

	Group					Total
	2006					
	Up to 1 month \$'000	>1 month to 3 months \$'000	>3 months to 1 year \$'000	>1 year to 5 years \$'000	Not determinable \$'000	
Current liabilities						
Margin deposits from Clearing Participants on derivatives contracts	21,666,474	-	-	-	-	21,666,474
Accounts payable, accruals and other liabilities	11,042,527	45,937	234	363	18,139	11,107,200
Participants' admission fees received	700	50	600	-	350	1,700
	32,709,701	45,987	834	363	18,489	32,775,374

## 2. Nature and Extent – Liquidity Risk



### Quantitative Disclosures

#### Liquidity risk

- The amounts disclosed in the maturity analysis are the contractual undiscounted cash flows.
- Such undiscounted cash flows differ from the amount included in the balance sheet
  - because the balance sheet amount is based on discounted cash flows.
- If appropriate, an entity is also required to disclose
  - the analysis of derivative financial instruments separately from
  - that of non-derivative financial instruments in the contractual maturity analysis for financial liabilities.

## 2. Nature and Extent – Liquidity Risk

### Example

- The contractual undiscounted cash flows disclosed in the maturity analysis include:
  1. Gross finance lease obligations (before deducting finance charges);
  2. Prices specified in forward agreements to purchase financial assets for cash;
  3. Net amounts for pay-floating/receive-fixed interest rate swaps for which net cash flows are exchanged;
  4. Contractual amounts to be exchanged in a derivative financial instrument (e.g. a currency swap) for which gross cash flows are exchanged; and
  5. Gross loan commitments.

## 2. Nature and Extent – Market Risk

### Activity

#### Activity R3 – Market Risk

- What are the problems you face in compliance of the disclosure requirements on market risk?



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## 2. Nature and Extent – Market Risk

### Example

No specific answers!

- The probable answers may include:
  1. what is a reasonably possible change in the relevant risk variable?
  2. what is the appropriate level of aggregation in the disclosures?
  3. what methodology should be used in preparing the sensitivity analysis?
- The IASB concluded that it would not be possible to provide comprehensive guidance on the methodology to be used in preparing the sensitivity analysis.

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## 2. Nature and Extent – Market Risk

### Quantitative Disclosures

#### Market risk

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



## 2. Nature and Extent – Market Risk

### Quantitative Disclosures

#### Market risk

- is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market prices
- comprises three types of risk:
  - currency risk,
  - interest rate risk and
  - other price risk.



## 2. Nature and Extent – Sensitivity

### Quantitative Disclosures

#### Market risk – Simple sensitivity analysis

- 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.

Assuming that a **reasonably possible change** in the relevant risk variable had occurred at the balance sheet date and had been applied to the risk exposures in existence at that date.



## 2. Nature and Extent – Sensitivity

In order to disclose the simple sensitivity analysis, an entity should:

1. Decide how much detail it provides, how much emphasis it places and how it aggregates information to display
2. Identify each type of market risk to which the entity is exposed and the relevant risk variable at the reporting date
3. Judge the reasonably possible changes in the relevant risk variables at the reporting date
4. Calculate and show how profit or loss and equity would be affected at the reporting date

## 2. Nature and Extent – Sensitivity

In order to disclose the simple sensitivity analysis, an entity should:

1. Decide how much detail it provides, how much emphasis it places and how it aggregates information to display

## 2. Nature and Extent – Sensitivity

### Quantitative Disclosures

#### Market risk – Simple sensitivity analysis

- For each type of market risk, an entity decides:
  - how it aggregates information to display the overall picture without combining information with different characteristics about exposures to risks from significantly different economic environments.
- For example, an entity that trades financial instruments might disclose
  - Sensitivity analysis for each type of market risk separately for
    - financial instruments held for trading and
    - those not held for trading.
- If an entity has exposure to only one type of market risk in only one economic environment,
  - it would not show disaggregated information.

## 2. Nature and Extent – Sensitivity

In order to disclose the simple sensitivity analysis, an entity should:

1. Decide how much detail it provides, how much emphasis it places and how it aggregates information to display



2. Identify each type of market risk to which the entity is exposed and the relevant risk variable at the reporting date

## 2. Nature and Extent – Sensitivity

Market Risk

Interest Rate Risk

• Interest rate risk arises

- on interest-bearing financial instruments recognised in the balance sheet (e.g. loans and receivables and debt instruments issued) and
- on some financial instruments not recognised in the balance sheet (e.g. some loan commitments).

## 2. Nature and Extent – Sensitivity

Market Risk

Currency Risk

- **Currency risk (or foreign exchange risk)** arises on financial instruments that are denominated in a foreign currency, i.e. in a currency other than the functional currency in which they are measured.
  - For the purpose of HKFRS 7, currency risk does not arise from financial instruments that are non-monetary items or from financial instruments denominated in the functional currency.
  - A sensitivity analysis is disclosed for each currency to which an entity has significant exposure.

## 2. Nature and Extent – Sensitivity

Market Risk

Other Price Risk

- **Other price risk** arises on financial instruments because of changes in, for example:
  - commodity prices or
  - equity prices.
- To comply with HKFRS 7, an entity might disclose the effect of a decrease in a specified variable, including:
  - stock market index,
  - commodity price, or
  - other risk variable.
- For example,
  - if an entity gives residual value guarantees that are financial instruments, the entity discloses an increase or decrease in the value of the assets to which the guarantee applies.

## 2. Nature and Extent – Sensitivity

### Example

Market Risk

Other Price Risk

- Examples of financial instruments that give rise to equity price risk are
  - a) a holding of equities in another entity and
  - b) an investment in a trust that in turn holds investments in equity instruments.
- Other examples include
  - forward contracts and options to buy or sell specified quantities of an equity instrument and swaps that are indexed to equity prices.
    - The fair values of such financial instruments are affected by changes in the market price of the underlying equity instruments.

## 2. Nature and Extent – Sensitivity

### Example

Market Risk

Interest Rate Risk

Currency Risk

Other Price Risk

Equity Price Risk

Commodity Price Risk

Prepayment Risk

Residual Value Risk

### Risk variables that are relevant to disclosing market risk

Yield curve of market interest rates

Foreign exchange rates

Prices of equity instruments

Market prices of commodities

## 2. Nature and Extent – Sensitivity

### Example

#### Example of financial assets and liabilities

- Investment in bonds, bank deposits, interest-bearing borrowings, bank loans
- Trade receivables and payables in foreign currency, foreign loans
- Investments in equity securities and equity funds, equity-linked investments
- Investments in commodity funds and commodity-linked investments

#### Risk variables that are relevant to disclosing market risk

Yield curve of market interest rates

Foreign exchange rates

Prices of equity instruments

Market prices of commodities

## 1. Significance of Financial Instruments

### Activity

Entity A with HK\$ as its functional currency has the following financial instruments at y.e.

Investments in CD and bonds	
5% HK\$ Certificate of deposits	\$ 300,000
Equity-linked deposits in UK	520,000
LIBOR GBP bonds listed in UK	200,000
Investments in equity securities	
Strategic investments listed in HK	250,000
Trading securities listed in US	123,000
Unlisted in UK	25,000
Trade and other receivables	
Due from local customers in HK\$	2,564,560
Due from overseas customers in US\$	435,612
Due from overseas customers in Euro	784,231
Bank deposits	
Fixed deposits at UK banks	200,000
Fixed deposits at HK\$	1,240,500
Cash at bank	
Saving deposits in HK\$	231,230
Trade and other payables	(4,045,670)
Foreign forward contracts	(250,000)
Bank loans	(1,489,000)

## 2. Nature and Extent – Sensitivity

In order to disclose the simple sensitivity analysis, an entity should:

1. Decide how much detail it provides, how much emphasis it places and how it aggregates information to display
2. Identify each type of market risk to which the entity is exposed and the relevant risk variable at the reporting date
3. Judge the reasonably possible changes in the relevant risk variables at the reporting date

## 2. Nature and Extent – Sensitivity

### Quantitative Disclosures

#### Market risk – Simple sensitivity analysis

- In determining what a reasonably possible change in the relevant risk variable is, an entity should consider:
  - a. the economic environments in which it operates.
  - b. the time frame over which it is making the assessment.
- A reasonably possible change should not include remote or “worst case” scenarios or “stress tests”.
- Moreover, if the rate of change in the underlying risk variable is stable, the entity need not alter the chosen reasonably possible change in the risk variable.
- The sensitivity analysis shall show the effects of changes that are considered to be reasonably possible over the period until the entity will next present these disclosures, which is usually its next annual reporting period.

## 2. Nature and Extent – Sensitivity

### Example

- Assume that interest rates are 5% and an entity determines that a fluctuation in interest rates of  $\pm 50$  basis points is reasonably possible.
  - It would disclose the effect on profit or loss and equity if interest rates were to change to 4.5% or 5.5%.
  
- In the next period, interest rates have increased to 5.5% and the entity continues to believe that interest rates may fluctuate by  $\pm 50$  basis points (ie that the rate of change in interest rates is stable).
  - The entity would disclose the effect on profit or loss and equity if interest rates were to change to 5% or 6%.
  - The entity would not be required to revise its assessment that interest rates might reasonably fluctuate by  $\pm 50$  basis points, unless there is evidence that interest rates have become significantly more volatile.

## 2. Nature and Extent – Sensitivity

### Case

How can it be reasonably possible change?

Observed assessments by certain companies:

<u>Entity name</u>	<u>Currency</u>	<u>Interest rate</u>	<u>Other price</u>
BASF	10% (drop only)	1%	10%
BP plc	VaR	VaR	10%
CLP Holdings Ltd.	1%	0.5%	15% (2006: 5%)
DBS Group	10%	0.25%	10%
Deutsche Telecom	10%	1%	N/M
France Telecom	10%	1%	N/M
Jardine Matheson Ltd.	10%	1%	25% (AFS)
Recruit	7 – 12%	N/M	N/M
Zijin Mining	10%	1%	N/M

## 2. Nature and Extent – Sensitivity

In order to disclose the simple sensitivity analysis, an entity should:

1. Decide how much detail it provides, how much emphasis it places and how it aggregates information to display
2. Identify each type of market risk to which the entity is exposed and the relevant risk variable at the reporting date
3. Judge the reasonably possible changes in the relevant risk variables at the reporting date
4. Calculate and show how profit or loss and equity would be affected at the reporting date

## 2. Nature and Extent – Sensitivity

- HKFRS 7 requires the sensitivity analysis to show the effect on profit or loss and equity of reasonably possible changes in the relevant risk variable. For this purpose:
  1. Entities are not required to determine what the profit or loss for the period would have been if relevant risk variables had been different.
    - Instead, entities disclose the effect on profit or loss and equity at the balance sheet date assuming that a reasonably possible change in the relevant risk variable had occurred at the balance sheet date and had been applied to the risk exposures in existence at that date.
  2. Entities are not required to disclose the effect on profit or loss and equity for each change within a range of reasonably possible changes of the relevant risk variable.
    - Disclosure of the effects of the changes at the limits (i.e. the upper and lower limits) of the reasonably possible range would be sufficient.

## 2. Nature and Extent – Sensitivity

### Example

#### Market Risk

- HKFRS 7 requires separate disclosure on
  - the sensitivity of profit or loss (that arises, for example, from instruments classified as at fair value through profit or loss and impairments of available-for-sale financial assets) is disclosed separately from
  - the sensitivity of equity (that arises, for example, from instruments classified as available for sale).
- Financial instruments that an entity classifies as equity instruments are not remeasured.
  - Neither profit or loss nor equity will be affected by the equity price risk of those instruments.
  - Accordingly, no sensitivity analysis is required.

## 2. Nature and Extent – Sensitivity

### Example

#### Example of financial assets and liabilities

#### Risk variables that are relevant to disclosing market risk

- Investment in bonds, bank deposits, interest-bearing borrowings, bank loans

Yield curve of market interest rates

- For interest rate risk, the sensitivity analysis might show separately the effect of a change in market interest rates on:
  - a) interest income and expense;
  - b) other line items of profit or loss (such as trading gains and losses); and
  - c) when applicable, equity.
- An entity might disclose a sensitivity analysis for interest rate risk for each currency in which the entity has material exposures to interest rate risk.

## 2. Nature and Extent – Sensitivity

### Example

#### Interest rate risk

- At 31 Dec. 20X2, if interest rates at that date had been 10 basis points lower with all other variables held constant,
  - post-tax profit for the year would have been \$1.7 million (20X1: \$2.4 million) higher, arising mainly as a result of lower interest expense on variable borrowings, and
  - other components of equity would have been \$2.8 million (20X1: \$3.2 million) higher, arising mainly as a result of an increase in the fair value of fixed rate financial assets classified as available for sale.
- If interest rates had been 10 basis points higher, with all other variables held constant,
  - post-tax profit would have been \$1.5 million (20X1: \$2.1 million) lower, arising mainly as a result of higher interest expense on variable borrowings, and
  - other components of equity would have been \$3.0 million (20X1: \$3.4 million) lower, arising mainly as a result of a decrease in the fair value of fixed rate financial assets classified as available for sale.

## 2. Nature and Extent – Sensitivity

### Example

#### Interest rate risk

- Profit is more sensitive to interest rate decreases than increases because of borrowings with capped interest rates.
- The sensitivity is lower in 20X2 than in 20X1 because of a reduction in outstanding borrowings that has occurred as the entity's debt has matured (see note X).



## 2. Nature and Extent – Sensitivity

### Case

#### KPMG HK: Illustrative Financial Statements under HKFRSs (2007.12)

##### Sensitivity Analysis

- At 31 December 2007, it is estimated that a general increase/decrease of [...] basis points in interest rates, with all other variables held constant, would decrease/increase the group's profit after tax and retained profits by approximately \$[...] (2006: \$[...]).
- Other components of consolidated equity would increase/decrease by approximately \$[...] (2006: \$[...]) in response to the general increase/decrease in interest rates.
- The sensitivity analysis above has been determined assuming that the change in interest rates had occurred at the balance sheet date and had been applied to the exposure to interest rate risk for both derivative and non-derivative financial instruments in existence at that date. The [...] basis point increase or decrease represents management's assessment of a reasonably possible change in interest rates over the period until the next annual balance sheet date.
- The analysis is performed on the same basis for 2006.

## 2. Nature and Extent – Sensitivity

### Activity

#### Activity R4 – Limitation of Simple Sensitivity Analysis

- What are limitations of simple sensitivity analysis?
- How does an entity resolve them?



## 2. Nature and Extent – Sensitivity

### Example

- The Information provided by a simple sensitivity analysis would not be comparable across entities. This is because the methodologies used to prepare the sensitivity analysis and the resulting disclosures would vary according to the nature of the entity and the complexity of its risk management systems. The IASB also acknowledged that a simple sensitivity analysis that shows a change in only one variable has limitations. For example, the analysis may not reveal:
  1. The effects of interdependencies between variables, or
  2. The non-linearities in sensitivities.
- To meet the first concern, a more complex sensitivity analysis that takes into account the interdependencies between risks can be required. Although more informative, such an analysis is also more complex and costly to prepare. Accordingly, IFRS 7 does not require such an analysis, but only permits its disclosure as an alternative to the minimum requirement when it is used by management to manage risk (for example, interdependency sensitivity analysis).
- To meet the second concern, IFRS 7 requires additional disclosure when the sensitivity analysis is unrepresentative of a risk inherent in a financial instrument.

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## 2. Nature and Extent – Sensitivity

### Quantitative Disclosures

#### Market risk – **Interdependency Sensitivity Analysis**

- An entity can alternatively prepare and disclose a sensitivity analysis, such as Value-at-Risk (VaR), that reflects interdependencies between risk variables (e.g. interest rates and exchange rates) so long as it uses such sensitivity analysis 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.

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## 2. Nature and Extent – Sensitivity

### Quantitative Disclosures

#### Market risk – Interdependency Sensitivity Analysis

- An entity might comply the VaR methodology by disclosing
  - the type of VaR model used (eg whether the model relies on Monte Carlo simulations),
  - an explanation about how the model works and
  - the main assumptions (eg the holding period and confidence level).
- Entities might also disclose
  - the historical observation period and weightings applied to observations within that period,
  - an explanation of how options are dealt with in the calculations, and
  - which volatilities and correlations (or, alternatively, Monte Carlo probability distribution simulations) are used.

## 2. Nature and Extent – Sensitivity

### Case

Early adopted HKFRS 7 in 2005 and its 2006 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 – Sensitivity

### Case

Early adopted HKFRS 7 in 2005 and its 2006 annual report states that (extract only):



- VaR is a statistical measure of risks and has limitations associated with the assumptions employed.
- Historical simulation assumes that actual observed historical changes in market indices, such as interest rates, foreign exchange rates and equity prices, reflect possible future changes.
- This implies that the approach is vulnerable to sudden changes in market behaviour.
- The use of a 10-day holding period assumes that the positions can be unwound in 10 trading days and the holding period may be insufficient at times of severe illiquidity.
- Also, VaR does not necessarily reflect all aspects of risks that affect the price of financial instruments and may underestimate real market risk exposure.
- In addition, VaR does not factor in the possibility of catastrophic risk but the use of stress testing for abnormal market conditions can mitigate this limitation.

## 2. Nature and Extent – Sensitivity

### Case

Early adopted HKFRS 7 in 2005 and its 2006 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					
	2006			2005		
	Average \$'000	Highest \$'000	Lowest \$'000	Average \$'000	Highest \$'000	Lowest \$'000
Foreign exchange risk	5,957	7,422	4,907	5,017	6,135	3,591
Equity price risk	11,207	13,032	8,991	8,495	11,209	6,567
Interest rate risk	11,884	13,862	9,040	20,515	24,043	14,367
Total VaR	18,751	21,005	15,939	23,451	26,869	20,383

	HKEx					
	2006			2005		
	Average \$'000	Highest \$'000	Lowest \$'000	Average \$'000	Highest \$'000	Lowest \$'000
Foreign exchange risk	794	1,245	273	222	709	-
Equity price risk	-	-	-	-	-	-
Interest rate risk	14	35	2	7	22	-
Total VaR	793	1,249	277	228	717	-

## 2. Nature and Extent – Sensitivity

### Case



#### Royal Dutch Shell plc for 2007

- Shell uses risk management systems for recording and valuing instruments.
- There is regular review of mandated trading limits by senior management, daily monitoring of market risk exposure using value-at-risk (VAR) techniques (see below), daily monitoring of trading positions against limits and marking-to-market of trading exposures with a department independent of traders reviewing the market values applied to trading exposures.
- Shell's exposure to substantial trading losses is therefore considered limited.
- Shell utilises VAR techniques based on variance/covariance or Monte Carlo simulation models and make a statistical assessment of the market risk arising from possible future changes in market values over a 24-hour period and within a 95% confidence level.
- The calculation of the range of potential changes in fair value takes into account positions, the history of price movements and the correlation of these price movements.
- Each of the models is regularly back tested against actual fair value movements to ensure model integrity is maintained.

## 2. Nature and Extent – Sensitivity

### Case



#### Royal Dutch Shell plc for 2007

VALUE-AT-RISK (pre-tax) \$ million	2007			2006			Year end	Year end
	High	Low	Average	High	Low	Average		
Oil Products and Chemicals	23	5	13	19	21	6	13	11
Gas & Power	20	6	11	7	16	4	9	9

## 2. Nature and Extent – Sensitivity

### Quantitative Disclosures

- Common approaches in estimating **Value at Risk (VaR)**
  - Variance-covariance approach
    - Same theoretical basis as portfolio theory and more straightforward
    - Weaknesses: not good at returns with non-linear or non-normal elements, say options
  - Historical simulation
    - Uses historical data to re-produce the distribution of return and no normality assumption
    - Weaknesses: depending on actual data observed
  - Monte Carlo simulation
    - Estimated from a simulated distribution, powerful and be able to handle any type of position
    - Weaknesses: difficult to implement and time-consuming



## 2. Nature and Extent – Sensitivity

### Case

Reference to the time horizon and confidence level of some entities used in VaR analysis for 2007.....

<u>Entity name</u>	<u>Time horizon</u>	<u>Confidence</u>	<u>Method</u>	<u>Coverage</u>
BASF	1 day	95%	VC	Commodity
BMW	3 months	99%	HS	Interest
BP plc	24 hours	95%	VC or HS	Market risk
CLP	4 weeks	95%	VC	Energy price
DBS Group	1 day	99%	HS	Trading market risk
HKEx	10 day	95%	HS	Market risk
HSBC	1 day	99%	HS	Market risk
Nokia	1 month	95%	VC or MC	Market risk
Shell	24 hours	95%	VC or MC	Price risk
Standard Chartered	1 day	97.5%	HS	Trading book

*Variance-Covariance (VS), Historical simulation (HS) and Monte Carlo simulation (MC)*

## 2. Nature and Extent – Sensitivity

### 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%



## 2. Nature and Extent – Sensitivity

### Example

#### Variance-Covariance Approach in VaR

- 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

## 2. Nature and Extent – Other

### Quantitative Disclosures

#### Other market risk disclosures

- When the sensitivity analyses disclosed (by the 2 approaches) are unrepresentative of a risk inherent in a financial instrument
  - the entity shall disclose
    - that fact and
    - the reason it believes the sensitivity analyses are unrepresentative.



## 2. Nature and Extent – Sensitivity

### Activity

#### Activity R5 – Other Market Risk Disclosures

- If sensitivity analysis disclosed is unrepresentative of a risk inherent in a financial instrument when:
  - a) a financial instrument contains terms and conditions whose effects are not apparent from the sensitivity analysis, e.g. options that remain out of (or in) the money for the chosen change in the risk variable;
  - b) financial assets are illiquid, e.g. when there is a low volume of transactions in similar assets and an entity finds it difficult to find a counterparty; or
  - c) an entity has a large holding of a financial asset that, if sold in its entirety, would be sold at a discount or premium to the quoted market price for a smaller holding.
- What kinds of disclosure should an entity with the above circumstances be disclosed?

## 2. Nature and Extent – Other

### Example

- Sensitivity analysis disclosed may be unrepresentative of a risk inherent in a financial instrument when:
  - a) a financial instrument contains terms and conditions whose effects are not apparent from the sensitivity analysis,
    - e.g. options that remain out of (or in) the money for the chosen change in the risk variable;
  - b) financial assets are illiquid,
    - e.g. when there is a low volume of transactions in similar assets and an entity finds it difficult to find a counterparty; or
  - c) an entity has a large holding of a financial asset that, if sold in its entirety, would be sold at a discount or premium to the quoted market price for a smaller holding.

## 2. Nature and Extent – Other

### Example

- If there is a financial instrument containing terms and conditions whose effects are not apparent from the sensitivity analysis, additional disclosure might include:
  - a) the terms and conditions of the financial instrument (eg the options);
  - b) the effect on profit or loss if the term or condition were met (ie if the options were exercised); and
  - c) a description of how the risk is hedged.

## 2. Nature and Extent – Other

### Example

- If there are illiquid financial assets, additional disclosure might include the reasons for the lack of liquidity and how the entity hedges the risk.
- If an entity has a large holding of a financial asset that, if sold in its entirety, would be sold at a discount or premium to the quoted market price for a smaller holding, additional disclosure might include:
  - a) the nature of the security (e.g. entity name);
  - b) the extent of holding (e.g. 15% of the issued shares);
  - c) the effect on profit or loss; and
  - d) how the entity hedges the risk.

## Update and Recap on HKAS 39 and HKFRS 7 – Part 2

7 March 2009



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# Update and Recap on HKAS 39 and HKFRS 7 – Part 2

7 March 2009



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