

Chapter 25

Fair Value Measurement

IFRS 13 / PSAK 68



Edited by Taufik Hidayat

Agenda

1. Applicable Standard and Scope
2. Definition of Fair Value
3. Fair Value Measurement
4. Application to Specific Situations
5. Fair Value at Initial Recognition
6. Valuation Techniques
7. Fair Value Hierarchy
8. When Volume/Level of Activity Significantly Decreased
9. Disclosure



Introduction – Fair Value Debate

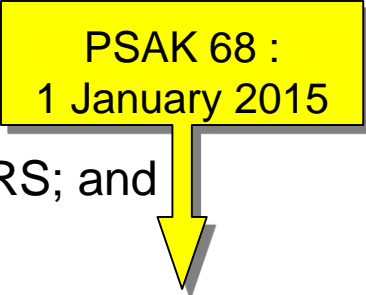
- In the global financial crisis, accountants and their accounting standards had been pleaded as guilty to create the financial tsunami.
- To be accountable for the global financial stability, the IASB and FASB were forced to take measures to address the issues and to amend their respective accounting standards.
- IFRS 13 *Fair Value Measurement* is one of the consequences to provide converged guidance on fair value measurement.



1. Applicable Standard and Scope

- IFRS 13 is a single IFRS to address the measurement fair value used in many other IFRSs. It aims at:
 1. Defining fair value;
 2. Setting out a framework for measuring fair value in a single IFRS; and
 3. Setting out the disclosures about fair value measurement.
- With effective from annual periods beginning on or after 1 January 2013, except in specified circumstances as set out below, an entity is required to apply IFRS 13, when another IFRS requires or permits
 1. Fair value measurements, or disclosures about fair value measurements; &
 2. Measurements, such as fair value less costs to sell, based on fair value, or disclosure about those measurements.
- As a result of using a single IFRS to cover the fair value measurement, the IFRS practices in fair value measurement and disclosure become **not only clearer, unified and consistent across different IFRSs**, but also **converged with the US practices**.

PSAK 68 :
1 January 2015



1. Applicable Standard and Scope

- The measurement and disclosure requirements of IFRS 13 do not apply to:
 1. Share-based payment transactions within the scope of IFRS 2 *Share-based Payment*;
 2. Leasing transactions within the scope of IAS 17 *Leases* (PSAK 30); and
 3. Measurements that have some similarities to fair value but are not fair value, such as **net realisable value** in IAS 2 *Inventories* (PSAK 14) or **value in use** in IAS 36 *Impairment of Assets* (PSAK 48).
- The disclosures required by IFRS 13 are not required for:
 1. Plan assets measured at fair value in accordance with IAS 19 *Employee Benefits* (PSAK 24);
 2. Retirement benefit plan investments measured at fair value in accordance with IAS 26 *Accounting and Reporting by Retirement Benefit Plans* (PSAK 18); and
 3. Assets for which recoverable amount is fair value less costs of disposal in accordance with IAS 36 (PSAK 48).

2. Definition of Fair Value

- In many IFRSs and many chapters of this book, fair value shares a similar definition.
 - For example, in Chapter 15, fair value of financial instruments is defined as “the amount for which an asset could be exchanged, or a liability settled, between knowledgeable, willing parties in an arm’s length transaction”.
- In IFRS 13, a new definition is adopted:
 - Fair value is defined as the price that would be **received** to sell an asset or **paid** to transfer a liability in an orderly transaction between market participants at the measurement date.

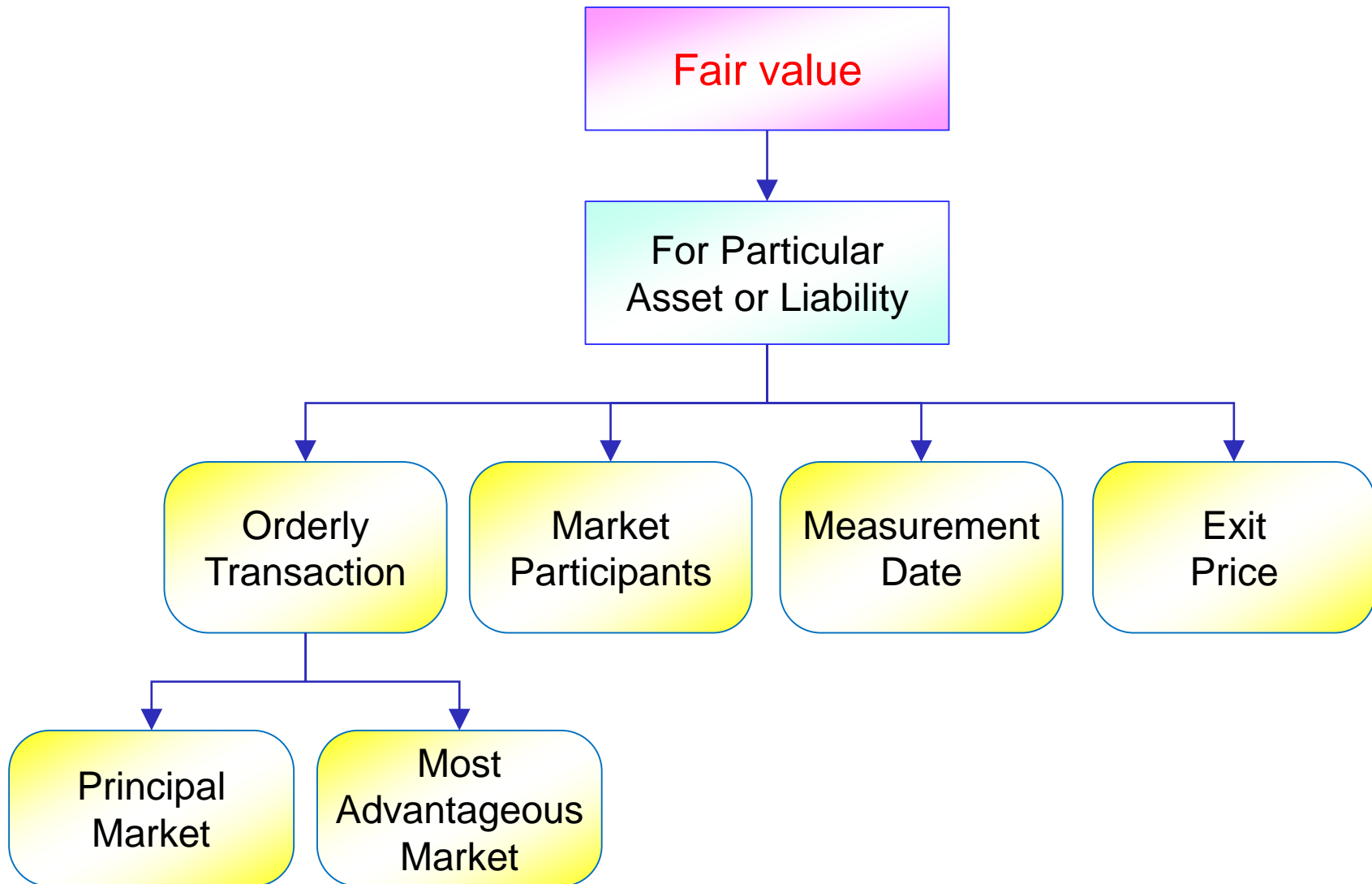


2. Definition of Fair Value

- New definition addresses several drawbacks of the original definition:
 1. The original definition did **not specify** whether an entity is buying or selling the asset;
 2. It was **unclear** about what is meant by settling a liability because it did not refer to the creditor, but to knowledgeable, willing parties; and
 3. It did **not state explicitly** whether the exchange or settlement takes place at the measurement date or at some other date (IFRS 13.BC30).



3. Fair Value Measurement



3. Fair Value Measurement

Fair value

- The objective of a fair value measurement is thus to estimate the fair value, i.e. the **exit price** in an orderly transaction between market participants at the measurement date.
- In IFRS 13, a fair value measurement also sets out the “fair value measurement approach” and requires an entity to determine all the following issues:
 1. The particular asset or liability that is the subject of the measurement, consistently with its unit of account.
 2. For a non-financial asset, the valuation premise that is appropriate for the measurement (consistently with its highest and best use).
 3. The principal market or most advantageous market for the asset or liability.
 4. The valuation technique(s) appropriate for the measurement.

3. Fair Value Measurement

For Particular
Asset or Liability

- IFRS 13 requires an entity, when measuring fair value, is required to take into account
 - the **characteristics** of the asset or liability if market participants would take those characteristics into account when pricing the asset or liability at the measurement date.
 - i.e. condition and location of asset; restriction on sale or use of asset.

3. Fair Value Measurement

- IFRS 13 also assume that the orderly transaction to sell the asset or transfer the liability can take place in either:
 1. The **principal market** for the asset or liability; or
 2. The **most advantageous market** for the asset or liability, if there is no principal market



- Principal market is defined as
 - the market with the **greatest** volume and level of activity for the asset or liability.
- Most advantageous market is defined as
 - the market that **maximises** the amount that would be received to sell the asset or **minimises** the amount that would be paid to transfer the liability, after taking into account transaction costs and transport costs.

3. Fair Value Measurement

- An entity is required to measure the fair value of an asset or a liability using the assumptions that **market participants would use** when pricing the asset or liability, assuming that market participants act in their economic best interest.
- Exit price is defined as the price that would be received to **sell** an asset or **paid** to transfer a liability.
 - Does **not** include **transaction costs**, but the transaction costs do **not** include **transport costs**.



3. Fair Value Measurement

Example

The Equipment is sold in 2 different markets at different prices. PT Fairness enters into transaction in both market as follows:

- Market A, with price is \$26, transaction cost is \$3, and transportation cost is \$2. Net amount to be received is \$21.
- Market B, with price is \$25, transaction cost is \$1, and transportation cost is \$2. Net amount to be received is \$22.

Determine the fair value of the equipment!

- If market A is the principle market for the asset, fair value is \$24. But fair value in the market B would be \$23. Because in market B PT Fairness could maximize the net amount received (\$22 instead of \$21), the fair value of the asset is \$23.

4. Application to Specific Situations

- In applying the fair value measurement, IFRS 3 introduces the concepts of **highest** and **best use** and **valuation premise** for non-financial assets, but it also explains that they would not apply to financial assets or to liabilities.
- Together with the application to non-financial assets, IFRS 3 addresses application to at least three groups of items:
 1. Application to **non-financial assets**;
 2. Application to **liabilities** and an **entity's own equity instruments**; and
 3. Application to financial instruments within a **portfolio**, i.e. the financial assets and financial liabilities with offsetting positions in market risks or counterparty credit risk.

4. Application to Specific Situations

Application to Non-financial Assets

- In a fair value measurement of a non-financial asset, IFRS 13 requires an entity to take into account a market participant's **ability to generate economic benefits** by using the asset, or selling it to another market participant that would use it, in **its highest and best use** (IFRS 13.27).
- Highest and best use is defined as
 - the use of a non-financial asset by market participants that would **maximise the value** of the asset or the group of assets and liabilities (e.g. a business) within which the asset would be used.



4. Application to Specific Situations

Application to Non-financial Assets

- The highest and best use of a non-financial asset must be physically possible, legally permissible and financially feasible:
 1. **Physically possible** – physical characteristics of the asset that market participants would consider, for example the location or size of a property.
 2. **Legally permissible** – legal restrictions on the use of the asset that market participants would consider, for example, the zoning regulations applicable to a property.
 3. **Financially feasible** – adequate income or cash flows to produce an investment return that market participants would require from an investment in that asset put to that use.

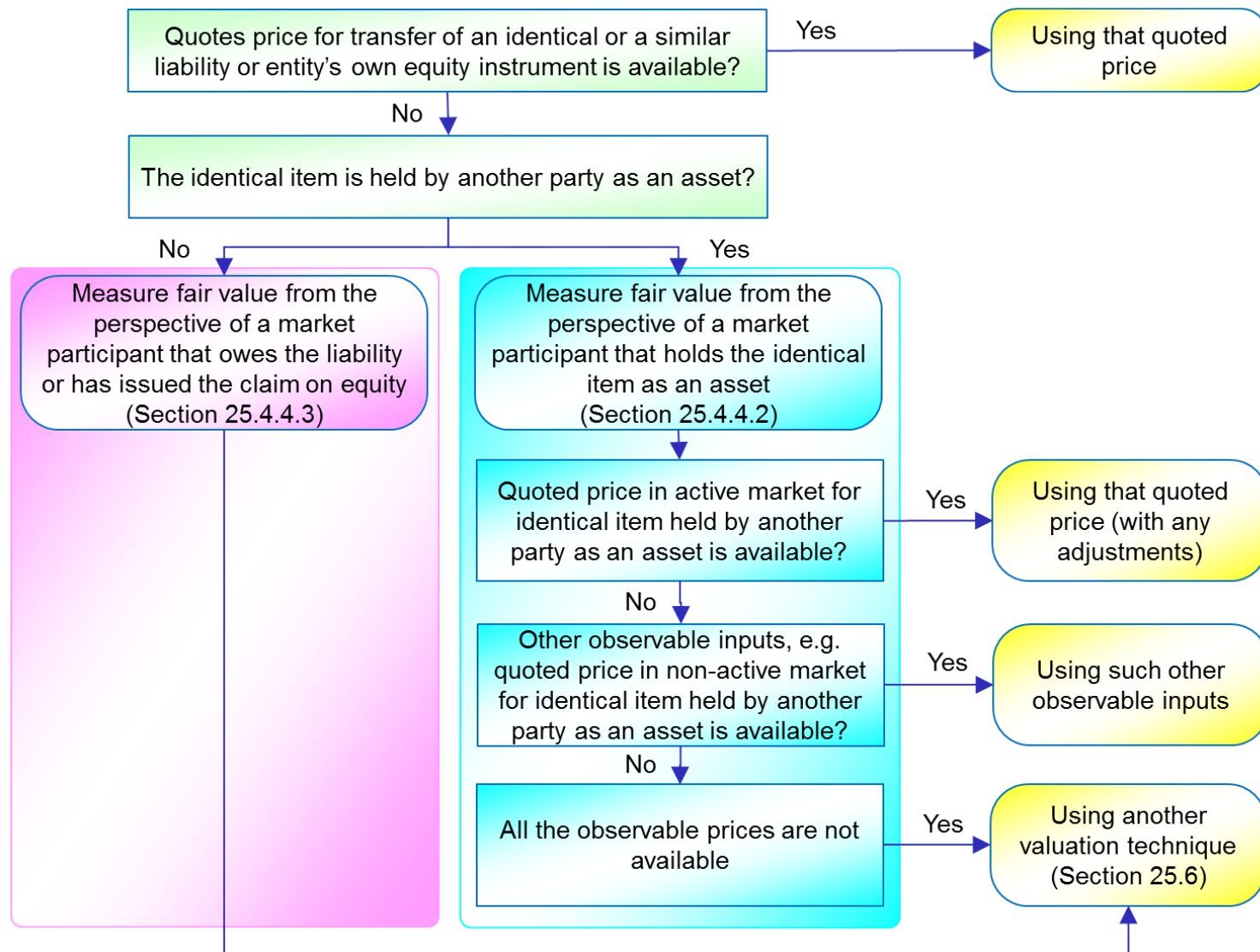


4. Application to Specific Situations

Application to Liabilities and Entity's Own Equity Instruments

- A fair value measurement in IFRS 13 assumes that a liability or an entity's own equity instrument is **transferred** to a market participant at the measurement date and the transfer of a liability or an entity's own equity instrument assumes the following:
 1. A liability would
 - **remain outstanding** and the market participant transferee would be required to fulfil the obligation
 - not be settled with the counterparty or otherwise extinguished on the measurement date.
 2. An entity's own equity instrument would
 - remain outstanding and the market participant transferee would take on the rights and responsibilities associated with the instrument
 - not be cancelled or otherwise extinguished on the measurement date (IFRS 13.34).

4. Application to Specific Situations



4. Application to Specific Situations

Application to Financial Instruments within a Portfolio

- IFRS 13 introduces a portfolio exception,
 - i.e. an exception to its fair value measurement for financial instruments held within a portfolio,
 - specifically for a group of financial assets and financial liabilities with offsetting positions in
 - market risks or
 - counterparty credit risk.
- When an entity manages a portfolio on the basis of its net exposure to either market risks or credit risk,
 - it is permitted to measure the fair value of the portfolio on a net position, instead of on an instrument-by-instrument basis.



5. Fair Value at Initial Recognition

- IFRS 13 specifies the consideration when fair value is required or permitted to use in **initial recognition** of an asset or a liability.
 - IFRS 13 has not specified whether fair value should be used for initial recognition of an asset or a liability.
 - An asset or a liability is initially recognised at a basis in accordance with the corresponding IFRS.
- Historically, IFRS commonly addresses that the fair value on initial recognition is normally the transaction price.
- However, IFRS 13 uses the phrase “in many cases” to substitute the word “normally” in describing the relationship between the fair value and transaction price.
 - The change represents that a fair value is defined as a current exit price in IFRS 13 but a transaction price is considered as an entry price.

6. Valuation Techniques

- In selecting and using valuation techniques in fair value measurement, an entity is required to use
 - Valuation techniques that are appropriate in the **circumstances** and for which **sufficient data** are available to measure fair value.
 - The techniques **maximising** the use of relevant observable inputs and **minimising** the use of unobservable inputs (IFRS 13.61).
- IFRS 13
 - sets out three valuation approaches to guide the selection and use of valuation techniques;
 - imposes requirements on the inputs to be used in each technique and then it in turn also affects the selection and use of valuation techniques.



6. Valuation Techniques



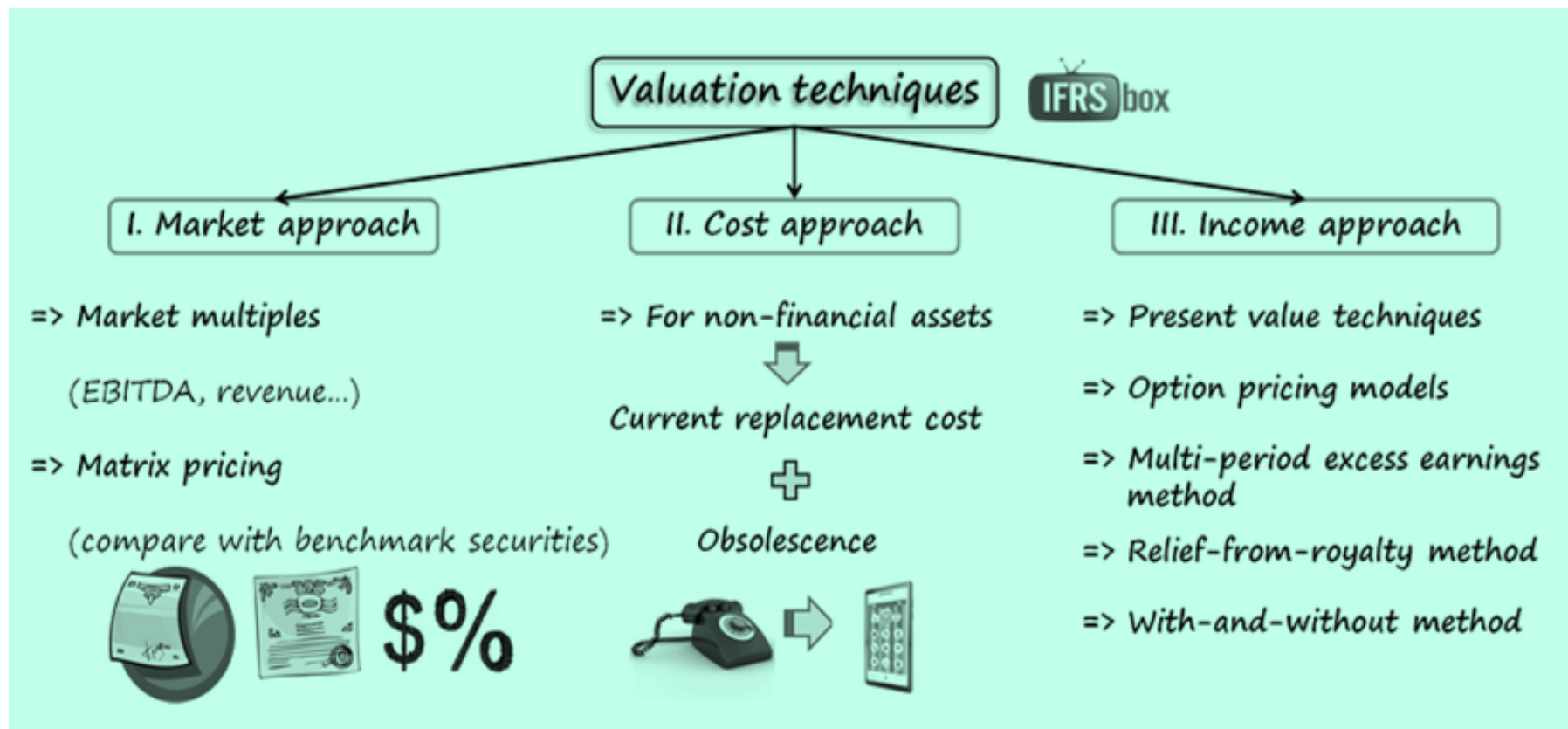
- IFRS 13 sets out the following three valuation approaches to guide the selection and usage of valuation techniques
 1. Market approach,
 2. Cost Approach, and
 3. Income Approach.
- An entity is required to use valuation techniques consistent with one or more of the valuation approaches to measure fair value.

6. Valuation Techniques



- Market approach is defined as a valuation technique
 - that uses prices and other relevant information generated by market transactions involving identical or comparable (i.e. similar) assets, liabilities or a group of assets and liabilities, such as a business.
- Cost approach is defined as a valuation technique
 - that reflects the amount that would be required currently to replace the service capacity of an asset (often referred to as current replacement cost).
- Income approach is defined as valuation techniques
 - that convert future amounts (e.g. cash flows or income and expenses) to a single current (i.e. discounted) amount.
 - The fair value measurement is determined on the basis of the value indicated by current market expectations about those future amounts.

6. Valuation Techniques



6. Valuation Techniques

Example

PT Dunia Maya develop software internally for licencing to customers. PT Dunia Maya consider 2 approaches to calculate fair value:

- The income approach using present value technique. The cash flow used reflected the expected cash flow from licencing to customers. The fair value indicated by this approach is \$15 million.
- The cost approach using estimated current cost to be required to construct the substitute software. The fair value indicated by this approach is \$10 million.

PT Dunia Maya determines that no one can construct a substitute software because of unique characteristic.

Determine the appropriate approach to calculate fair value!

Income Approach, because no one can construct a substitute software, so cost approach is irrelevant.

6. Valuation Techniques

- Present value techniques are the valuation techniques consistent with **income approach** to measure fair value and are specified in the application guidance of IFRS 13.
- The application guidance of IFRS 13 sets out
 - the general principles in using present value techniques and
 - the consideration of risk and uncertainty.
- IFRS 13 also specifies the following two present value techniques:
 1. Discount rate adjustment technique; and
 2. Expected present value technique.



6. Valuation Techniques

Summary of Discount Rate Adjustment Technique and Expected Present Value Technique

	Cash flows	Discount rate
1. Discount rate adjustment technique	<ul style="list-style-type: none"> Contractual, promised or most likely cash flows. 	<ul style="list-style-type: none"> Discount rate derived from observed rates of return for comparable items traded in the market
2. Expected present value technique – risk-adjusted expected cash flow method	<ul style="list-style-type: none"> Expected cash flows that are risk-adjusted 	<ul style="list-style-type: none"> Risk-free rate
3. Expected present value technique – expected rate of return method	<ul style="list-style-type: none"> Expected cash flows that are not risk-adjusted 	<ul style="list-style-type: none"> Discount rate adjusted to include the risk premium that market participants require

6. Valuation Techniques

Example

PT Expectra has an asset with expected cash flow of \$780 in 1 year based on probability as follows:

<u>Possible Cash Flow (\$)</u>	<u>Probability (%)</u>	<u>Probability Weighted Cash Flow (\$)</u>
500	15	75
800	60	480
900	25	<u>225</u>
Expected cash flow		780

Risk free rate for 1 year is 5% and systematic risk premium of asset is 3%. **Determine fair value using risk-adjusted expected cash flow method.**

$$\text{Risk adjustment} = \$780 - \left(\$780 \times \frac{1+5\%}{1+8\%} \right) = \$22$$

$$\text{Fair value} = \frac{\$758}{1 + 5\%} = \$722$$


6. Valuation Techniques

Example

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500	15	75
800	60	480
900	25	<u>225</u>
Expected cash flow		780

Risk free rate for 1 year is 5% and systematic risk premium of asset is 3%. **Determine fair value using expected rate of return method.**

$$\text{Fair value} = \frac{\$780}{1 + 8\%} = \$722$$


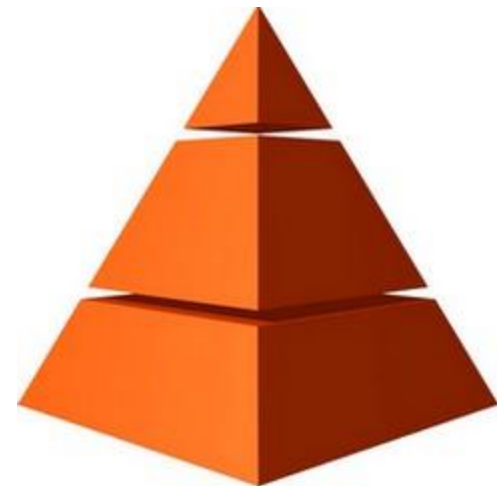
7. Fair Value Hierarchy

- To increase consistency and comparability in fair value measurements and related disclosures, IFRS 13 establishes a fair value hierarchy that categorises the inputs to valuation techniques used to measure fair value into the following three levels:
 - Level 1 inputs
 - Level 2 inputs
 - Level 3 inputs



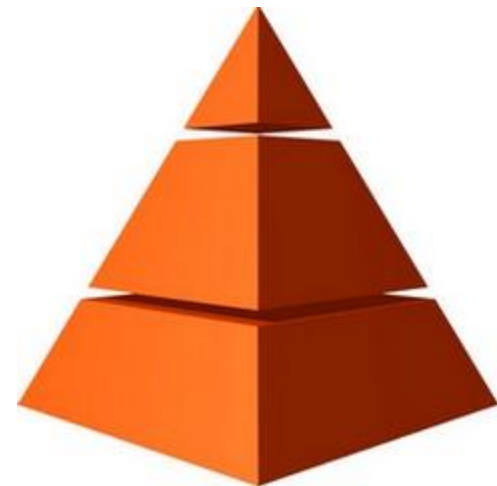
7. Fair Value Hierarchy

- Level 1 inputs
 - Quoted prices (unadjusted) in **active** markets for identical assets or liabilities that the entity can access at the measurement date.
- Level 2 inputs
 - Inputs other than quoted prices included within Level 1 that are **observable** for the asset or liability, either directly or indirectly.
- Level 3 inputs
 - **Unobservable** inputs for the asset or liability.

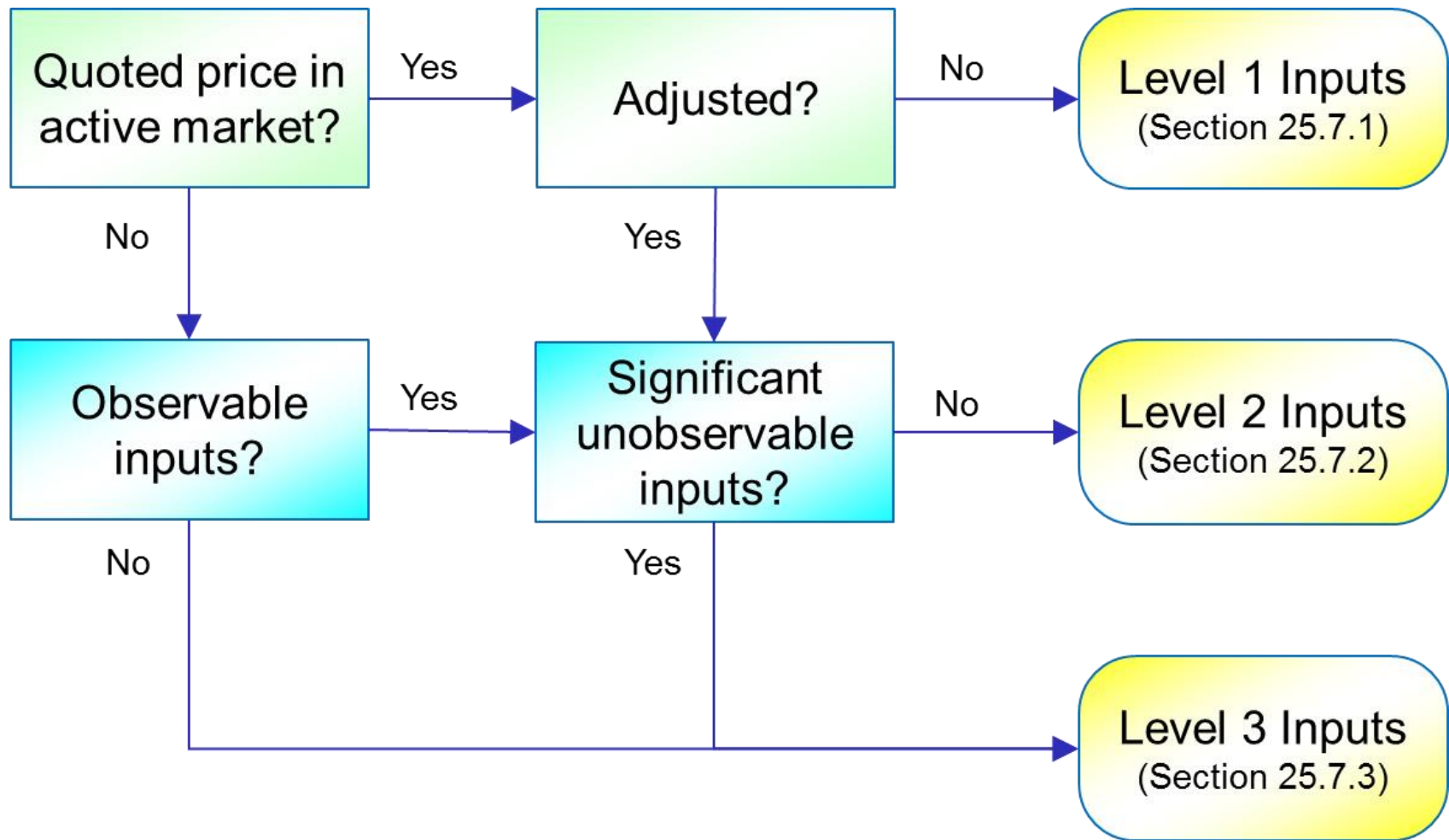


7. Fair Value Hierarchy

- Level 2 inputs include the following:
 - Quoted prices for **similar** assets or liabilities in **active market**.
 - Quoted prices of **identical** assets or liabilities in **not active market**.
 - **Input** other than quoted prices that are **observable**: i.e. interest rates, implied volatilities, credit spreads.
- Level 2 example:
 - Interest rate swap using LIBOR.
 - Inventory at retail outlet.
 - Building with per square metre based on observable and comparable market data.



7. Fair Value Hierarchy

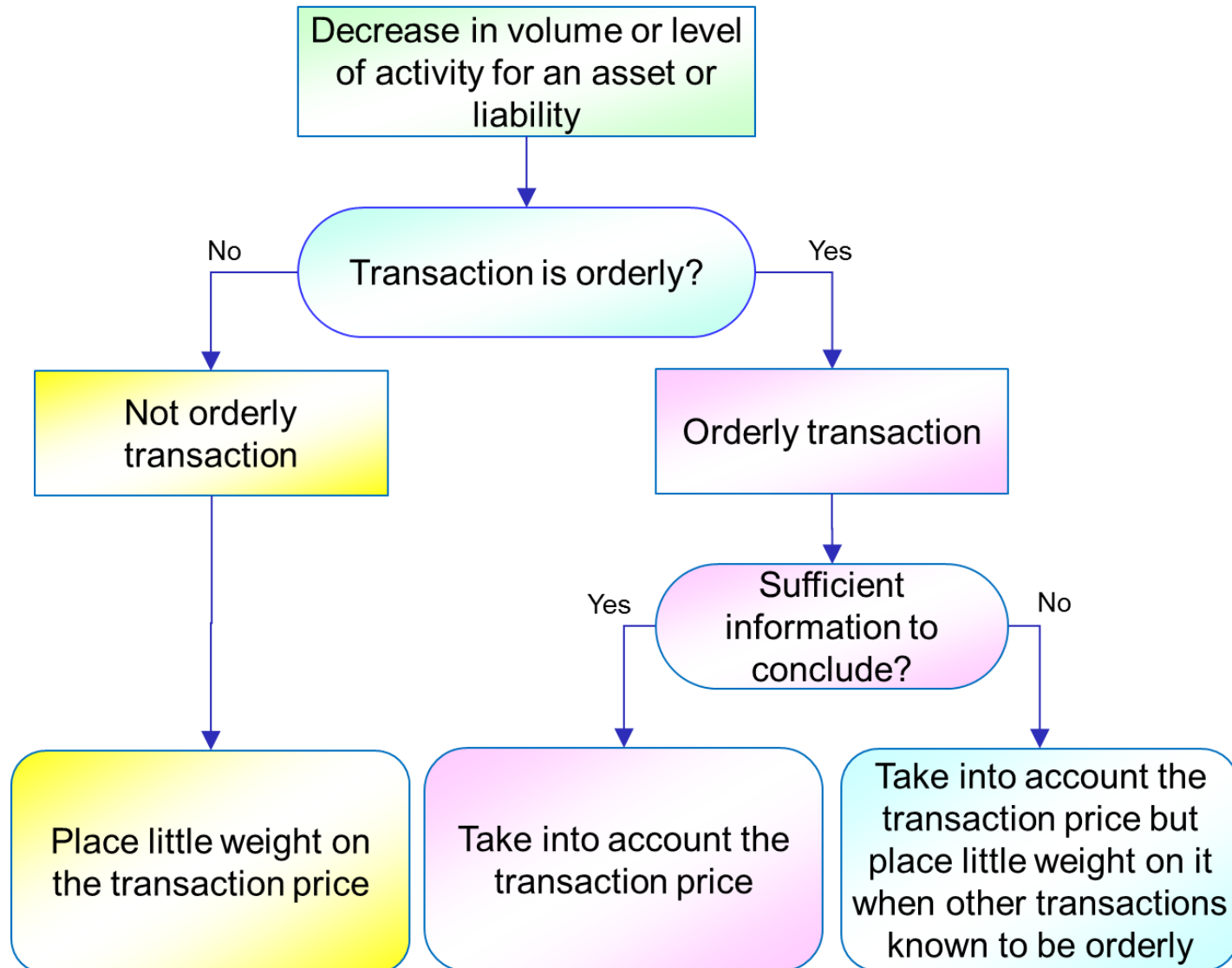


8. When Volume/Level of Activity Significantly Decreased



- When there has been a **significant decrease** in the volume or level of activity when compared with normal market activity for the asset or liability, or similar assets or liabilities,
 - **further analysis** of the transactions or quoted prices is needed.
- A decrease in the volume or level of activity on its own may not indicate that a transaction price or quoted price does **not represent** fair value or that a transaction in that market is **not orderly**.

8. When Volume/Level of Activity Significantly Decreased



9. Disclosure

- The disclosures about fair value measurements in IFRSs vary even many IFRSs at least require information about **the methods** and **significant assumptions** used in the measurement, and whether fair value was measured using **observable** prices from recent market transactions.
 - In consequence, in addition to establish a framework for measuring fair value in IFRS 13, the IASB also enhanced and harmonised the disclosures about fair value measurements in IFRS 13.



9. Disclosure

Objectives and General Principles for Disclosure

- An entity is required to disclose information that helps users of its financial statements assess both of the following:
 1. For assets and liabilities that are measured at fair value on a recurring or non-recurring basis in the statement of financial position after initial recognition,
 - a. The valuation techniques, and
 - b. Inputs used to develop those measurements.
 2. For recurring fair value measurements using significant unobservable inputs (Level 3), the effect of the measurements on profit or loss or other comprehensive income for the period (IFRS 13.91).



9. Disclosure

Objectives and General Principles for Disclosure

- To meet the above objectives, an entity is required to consider all the following:
 1. The level of detail necessary to satisfy the disclosure requirements;
 2. How much emphasis to place on each of the various requirements;
 3. How much aggregation or disaggregation to undertake; and
 4. Whether users of financial statements need additional information to evaluate the quantitative information disclosed.
- If the disclosures provided in accordance with IFRS 13 and other IFRSs are insufficient to meet the above objectives,
 - an entity is required to disclose additional information necessary to meet those objectives (IFRS 13.92).



Chapter 25

Fair Value Measurement

Thank You

