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A Digital Learning Platform for Generation Z:  
Passport to IFRS®

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# IFRS® Standard 13 Fair Value Measurement



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## IFRS® Standard 13 Fair Value Measurement

### Scope and Key Definitions

Entities may use different methods of accounting for their assets or liabilities, some based on cost, and others on the actual value. In assessing the interests of investors, the actual value is significant, because it reflects the value of an entity's assets or liabilities close to the market. Thus, determination of fair value in an entity may be required by accounting regulations or in the interests of investors. IFRS® Standard 13 Fair Value Measurement defines what fair value is, what fair value measurement system applies, and what information about fair value measurement should be disclosed.

It should be noted that fair value is not the self-assessment of an entity, but the market value. For different assets and liabilities, different market transactions or other market information may be monitored. For example, various countries have databases of certain market prices, statistical reports, commodity exchange data, etc. However, depending on the assets or liabilities, other observable data may not be available in other cases. Nevertheless, regardless of the nature of the asset or liability, the objective remains to estimate the price between market participants in an orderly transaction for the sale of the asset or transfer of the liability at the measurement date.

In some cases, when prices for identical assets or liabilities are not available, an entity can determine fair value using different valuation methods. Taking into account that fair value is based on the market, an entity should measure it using the assumptions that market participants would use to determine the price of an asset or liability, including risk assumptions. The concept of fair value focuses on assets and liabilities, as these elements are subject to accounting valuation.

IFRS 13 applies when other IFRS Standards require or permit the disclosure of assets and liabilities at fair value. However, share-based payments, leasing transactions, impairment of assets due to net realizable value are not subjected to the IFRS 13 requirements. The fair value measurement procedures described in IFRS 13 apply to both initial and subsequent measurement if fair values are required.

#### Key definitions (IFRS 13. Appendix A):

**Fair value** – refers to the estimated price that would be received to sell an asset or incurred to settle a liability in an orderly transaction between market participants at the measurement date.

**Active market** – refers to a market, in which transactions with sufficient frequency and volume to provide regular information about the prices of assets and liabilities.

**Most advantageous market** – is a market that maximizes the proceeds from the sale of an asset or the one that minimizes the amount of the liability transferred, taking into account transaction and transportation costs.

**Principal market** – refers to a market, in which the maximum volume and level of activity of an asset or liability exists.

**Cost approach** – refers to one of the fair value measurement methods which shows the cost to replace the service capacity of an asset (known as the current replacement cost).

Income approach – refers to one of the methods of measuring fair value by converting future amounts into a single present (discounted) amount. Fair value is determined based on the present value of current market expectations about those future amounts.

Market approach – refers to one of the fair value measurement methods that uses prices and other relevant information obtained from market transactions involving identical or comparable (similar) assets or liabilities.

### Fundamental Issues: Recognition

In some cases, in accordance with the provisions of other IFRS Standards, fair value may be applied at the initial recognition. For example, when an asset is acquired or a liability is incurred in exchange, the transaction price is the price that would be payable for an asset or a receivable on the acceptance of the liability.

In some cases, entities do not sell assets at the price paid to purchase them. Similarly, entities do not necessarily transfer liabilities at the prices obtained by incurring liabilities. For example, when an asset is sold at the auction, its price may differ from the market price under normal conditions.

If other IFRS Standards require for a permit from an entity to measure an asset or liability initially at fair value and the transaction price differs from fair value, the entity shall recognize the resulting gain or loss in profit (loss), unless IFRS Standards specify otherwise. Examples are presented in Figure 1.

Situation	Record
<p>Broker-trader entity X purchase goods in order to buy them quickly and earn from price fluctuations, so such an entity values the goods at fair value. Entity X purchased an automobile for CU10,000 from an insolvent entity in March. The automobile will be resale in future. Under the normal business conditions, a similar automobile costs CU12,000 in the market. Entity X will recognize the inventories at fair value for CU12,000.</p>	<p>Dr. Inventories CU12,000            Cr. Cash CU10,000            Cr. Revenue CU2,000</p>

Figure 1. Example of recognition on fair value

### Fundamental Issues: Measurement

When determining the fair value of a particular asset or liability, it is necessary to consider the characteristics of such an asset or liability, provided that market participants also consider the characteristics of an asset or liability (see Fig. 2).

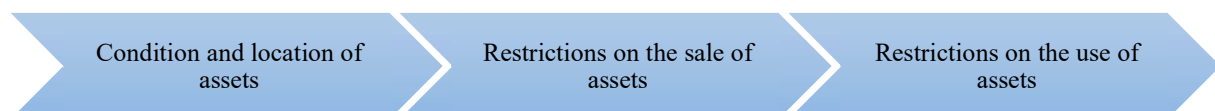
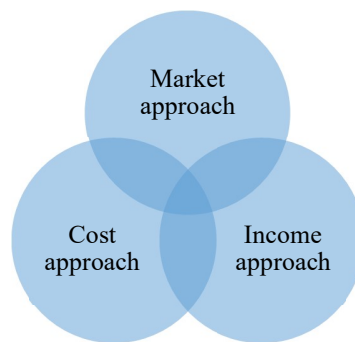


Figure 2. Examples of assets characteristics consideration

The need to measure fair value of assets or liabilities shall take into account the characteristics of the asset or liability if market participants take this characteristic into account pricing the asset or liability at the measurement date. Assets or liabilities can be measured at fair value individually or in groups of assets or liabilities. When determining whether assets and liabilities are measured individually or in groups, it depends on their unit of account.

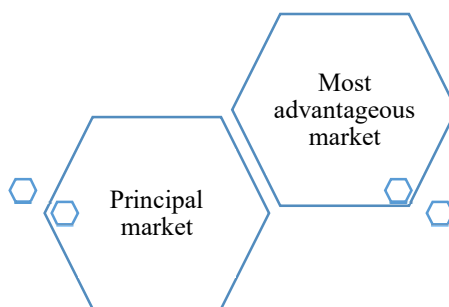
An entity shall use appropriate valuation techniques that, in appropriate circumstances, are sufficient to determine fair value. There are three most widely used valuation techniques which are presented in Figure 3.



**Figure 3. Fair value valuation techniques**

Entities themselves shall select the fair value valuation techniques to be used. In some cases, several techniques may be used. When an entity chooses fair value valuation techniques, it shall apply them consistently. However, fair value valuation techniques may change as new markets develop, new information becomes available, previously used information no longer exists, valuation techniques improve, or market conditions change.

**Market approach.** The determination of fair value is based on the assumption that an asset or liability is exchanged between market participants for the purpose of selling an asset or transferring the liability in accordance with the market conditions prevailing at the measurement date. Here, assets and liabilities are valued by market type (see Fig. 4).



**Figure 4. Examples of market types**

Fair value should be determined based on the principal market and, when a principal market is absent, in the most advantageous market. An entity is not required to conduct a thorough search of potential markets to identify the primary market or, in its absence, the most profitable market. However, an entity must take into account all reasonable and available information. In the absence of evidence to the

contrary, the market in which an entity would normally enter into a transaction to sell goods or transfer an obligation is considered to be the principal market, when it is not the most advantageous market. Fair value is measured at the price of the asset or liability in the principal market, regardless of whether the price is published or determined using another valuation technique at the measurement date, even if the price in another market is more favorable.

An entity must have access to the principal market (or the most advantageous market) on the valuation date of the assets and liabilities. Entities may have access to different markets even for the same assets or liabilities, because different entities have different activities. Therefore, the principal market is viewed from the perspective of an individual entity, considering the possibility in which it may sell specific assets or transfer specific liabilities.

When assessing the fair value of assets and liabilities, an entity relies on assumptions similar to those made by market participants to determine the cost of the assets or liabilities with the best economic interests at stake. This requires consideration of whether these are inherent in the assets or liabilities, whether inherent in the principal market (or the most advantageous market) or inherent in the market participants that would enter into the transaction into the market.

When setting the price as fair value in the principal market (or the most advantageous market), the value of the assets or liabilities would not be adjusted for the transaction costs. Transaction costs are not an indication of an asset or a liability, as these costs may vary for a specific of transaction. As per IFRS 13 paragraph 25, transaction costs are never deducted from the asset's price to determine its fair value. Yet, they are deducted from price to determine the most advantageous market where there is no principal market. After determining the most advantageous market, the fair of the asset is still determined by only deducting transport costs from its price (not the transaction costs). Transaction costs do not include the transportation costs. It should be noted that if a location is one of the characteristics of an asset, then the price in the principal market (or the most advantageous market) must be adjusted for the transportation costs that would be incurred to transport an asset from its current location to the intended market. Examples are given in Table 1.

**Table 1. Setting the fair value**

In the principal market			In the most advantageous market		
<i>The following information about asset markets A and B is known. Market A is considered the principal market.</i>			<i>The following information about asset markets A and B is known. There is no principal market.</i>		
Market	A	B	Market	A	B
Price, CU	12,000	15,000	Price, CU	12,000	15,000
Transport costs, CU	2,000	3,000	Transport costs, CU	2,000	3,000
Transaction costs, CU	1,000	1,200	Transaction costs, CU	1,000	1,200
<i>The fair value of assets is CU12,000 – CU2,000 = CU10,000</i>			<p><i>Net amount obtained on market A is CU12,000 – CU2,000 - CU1,000 = CU9,000</i></p> <p><i>Net amount obtained in market B is CU15,000 – CU3,000 - CU1,200 = CU10,800</i></p> <p><i>Therefore, the most advantageous market is market B.</i></p>		

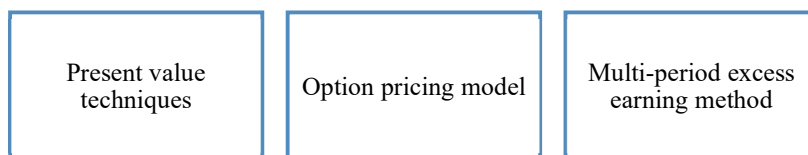
*The fair value of assets is CU12,000 (not taking into account transport costs CU15,000 - CU3,000), as obtained in the most advantageous market (B).*

**Cost approach.** The cost approach reflects the replacement cost of an asset. From the market participant’s point of view, the price that may be obtained in connection with the acquisition of a replacement asset of similar utility, is adjusted for obsolescence. A market participant would not pay more than it would require changing a service or an asset. Depreciation is a physical, functional (technological) and economic (external) depreciation that goes beyond the financial reporting purposes. In most cases, the current replacement cost method is used to measure the fair value of an item of tangible assets that is used in conjunction with another asset or with other assets and liabilities. An example of applying the cost approach is given in Table 2.

**Table 2. Fair value setting by cost approach**

<b>Situation</b>	<b>Entity X had purchased specific production equipment for CU50,000 two years ago. Today, the entity has a need to determine the fair value of the production equipment. The entity considers it appropriate to apply the cost approach as there is no analogue or similar product on the market and, therefore, the market approach cannot be applied.</b>
<b>Fair value measurement</b>	Upon request, Entity Z provided an estimate of how much it would cost to produce a similar equipment. The cost of producing such equipment would be CU60,000. However, this value cannot be considered as fair value as the value needs to be adjusted for obsolescence. Experts at Entity X have determined that the equipment must be valued at 65% of the new equivalent. Therefore, the fair value is CU39,000 (CU60,000 x 65%).

**Income approach.** The income approach is based on the conversion of the future amount into the present value. Therefore, the fair value determined using the income approach reflects the current market expectations about future amounts. The techniques used the most frequently are given in Figure 5.



**Figure 5. Techniques for the income approach for fair value**

The present value technique is used to relate the future amounts to the present amount using a discount rate. Determining the fair value of an asset or liability using the present value technique involves estimating the future cash flows, expectations about the amount and timing of cash flows that reflect the uncertainties inherent in the cash flows, the cost of recovering the uncertainties inherent in the cash flows and various other factors. The present value technique for determining fair value follows the following principles:

- Cash flows and discount rates should reflect the market assumptions used by market participants;

- Cash flow and discount rates should only take into account factors in the assets and liabilities being measured;
- Discount rates should reflect assumptions that are specific to cash flows in order to avoid double counting or underestimation of risk factors;
- Assumptions about cash flows and discount rates should be internal and consistent;
- Discount rates should be in line with key economic factors in the currency.

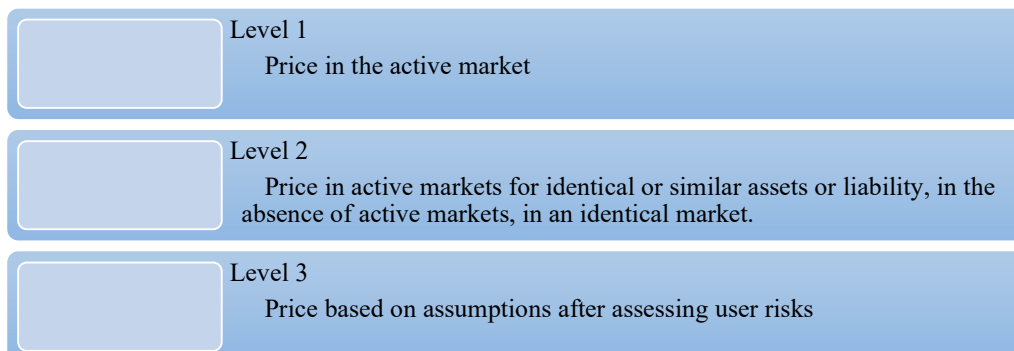
Often, the amount and timing of cash flows are uncertain, and market participants generally seek compensation for the uncertainty inherent in an asset or liability. Therefore, risk compensation must be included in the determination of fair value. Other techniques would exclude risk compensation from the fair value without reflecting an accurate measurement of an asset or liability. Different present value methods are then used, such as the discount rate adjustment method or another expected present value method. An example of applying the income approach is given in Table 3.

**Table 3. Fair value setting by income approach**

<b>Situation</b>	<b>Entity X purchased production equipment for CU50,000 in installments over 2 years. Payments are made once a year at CU25,000, including interest. Annual interest rate 3%.</b>
<b>Fair value of assets</b>	$NPV = \frac{25,000}{(1 + 0.03)^1} + \frac{25,000}{(1 + 0.03)^2} = CU47,836.74$
<b>Fair value of the current part of non-current liabilities</b>	$NPV = \frac{25,000}{(1 + 0.03)^1} = CU24,271.84$
<b>Entries in the general journal at the time of acquisition</b>	<b>Record</b> Dr. Tangible assets (equipment) CU47,836.74 Cr. Long-term liabilities CU23,564.90 Cr. Short-term liabilities CU24,271.84

### Fundamental Issues: Procedures

In order to maintain consistency and comparability when determining fair value and related information, the fair value hierarchy is divided into three levels (see Fig. 6).



**Figure 6. Fair value hierarchy**

Under this fair value hierarchy, an entity first evaluates the active market and the price of an identical product. In the absence of an identical product, a similar product is sought in the active market in the second level, in the absence of this information in the third level, assumptions are used (see Table 4).

**Table 4. Fair value hierarchy**

Level	Explanation
Level 1	On this level, the focus is on the identification: <ul style="list-style-type: none"> <li>the principal market for the asset or liability, if there is no principal market, the most advantageous market;</li> <li>whether an entity can enter into a transaction for an asset or liability at a price in that market at the measurement date.</li> </ul>
Level 2	When assets or liabilities have a specified (contractual) maturity at this level, the observation period and level 2 include: <ul style="list-style-type: none"> <li>quoted prices in the active markets for similar assets or liabilities;</li> <li>quoted prices in identical markets for identical or similar assets or liabilities;</li> <li>data other than the prices quoted that are observable for the asset or liability.</li> </ul>
Level 3	Unobservable inputs on this level shall be used to estimate fair value to the extent that no relevant observable inputs are available. This applies if, on the measuring date, the market for an asset or liability is low (or non-existent). The unobservable inputs must then reflect the assumptions that market participants would use in setting the price of the asset or liability, including risk assumptions. Risk assumptions include the risks inherent to the particular valuation technique used to determine fair value (for example, the pricing model) and the risks inherent in the valuation method inputs.

### Disclosures

When disclosing information to a user of financial statements, an entity should present information related to two aspects. First, an entity shall disclose information for assets and liabilities that are measured at fair value on a recurring or non-recurring basis after initial recognition, the valuation techniques and inputs used to develop those measurements. Second, an entity shall disclose information for the recurring fair value measurements of assets and liabilities, significant unobservable inputs (Level 3) were used to determine the effect of the measurements on profit or loss or other comprehensive income for the period.

The level of details of the information must also be taken into account in order to meet all the disclosure requirements, to assess how much attention needs to be paid to each of the various requirements, which information needs to be summarized and what has been deducted and whether additional quantitative information is needed.

When disclosing information, an entity should properly identify the classes of assets and liabilities according to their nature, characteristics, risks and the level of the fair value hierarchy.



## Examples

### Example No. 1

An entity seeks to determine the fair value of goods A and B using the market approach. How will the value of the goods differ, if:

- Market Y is the principal market for goods A and B.
- If there are no principal markets (X, Y, Z) for goods A and B.

The data known from the markets is presented in the table below.

Market	X		Y		Z	
Goods	A	B	A	B	A	B
Price, CU	18,000	27,000	22,000	23,000	21,000	28,000
Transport cost, CU	4,000	3,000	1,000	1,000	3,000	5,000

The estimated value of the goods using the market approach is given in the table below.

Market	X		Y		Z	
Goods	A	B	A	B	A	B
Calculation of Value, CU	18,000 – 4,000 = 14,000	27,000 - 3,000 = 24,000	22,000 – 1,000 = 21,000	23,000 – 1,000 = 22,000	21,000 - 3,000 = 18,000	28,000 – 5,000 = 23,000

If market Y is the principal market for goods A and B, then fair value for good A is CU21,000 and for good B is CU22,000.

If there are no principal markets, then the most advantageous market for good A is market Y and fair value of good A is CU21,000. The most advantageous market for goods B is market X and the fair value of good B is CU24,000.

### Example No. 2

An entity was purchasing the printing equipment needed for their printing activities. The equipment was practically not used, so their managers had a dilemma which methodology to use for the valuation of fair value: the market approach or the cost approach. The principal market does not exist. However, similar equipment was found to be available in markets A, B, C and D. The following market data has been collected.

Market	A	B	C	D
Price, CU	100,000	110,000	90,000	98,000
Transaction cost, CU	12,000	12,000	11,500	11,000
Transport cost, CU	3,000	2,000	4,500	5,000

The entity asked equipment suppliers Z and X to provide an estimate of how much it would cost to produce similar equipment. The following information was received.

Cost structure	Raw materials, CU	Labour, CU	Testing, CU	Total, CU
Supplier Z	60,000	15,000	12,000	87,000
Supplier X	70,000	20,000	8,000	98,000

Because the location of the equipment is important (location is one of the characteristics of an asset), transaction and transportation costs are deducted when measuring the fair value, to determine the most advantageous market. The estimated value of the equipment using the market approach is given in the table below.

Market	A	B	C	D
Calculation of the net amount received for the equipment, CU	100,000 - 12,000 - 3,000 = <b>85,000</b>	110,000 - 12,000 - 2,000 = <b>96,000</b>	90,000 - 11,500 - 4,500 = <b>74,000</b>	98,000 - 11,000 - 5,000 = <b>82,000</b>

Hence, the most advantageous market for the equipment is market B (the net amount that would be received for the asset is CU96,000). On this market, the fair value of the equipment is CU108,000 (CU112,000 - CU2,000), not accounting for the transaction costs.

As it can be seen, the market value of the equipment ranges from CU74,000 to CU108,000. The most advantageous market in this case is market B and the fair value under the market approach is CU108,000.

Depending on the cost approach, the value of the equipment is found to range from CU87,000 to CU98,000. Knowing that the equipment has been practically unused, obsolescence is not assessed.

Entity managers estimate the reasons for determining the fair value. Data obtained using the market approach is less subjective than the one obtained using the cost approach.

Therefore, the managers considered that the market approach used reflected the fair value in the best way possible, and in this case, fair value of the equipment was determined to be CU108,000.

### Example No. 3

An entity purchased a building for CU1,000,000. It will pay for the building within a two-year period in equal installments every six months (4 times in total). The annual interest rate is set at 5%. This entity measures assets at fair value applying the income approach.

The entity has calculated the present value of the assets.

$$NPV = \frac{250,000}{(1+0.05/2)^1} + \frac{250,000}{(1+0.05/2)^2} + \frac{250,000}{(1+0.05/2)^3} + \frac{250,000}{(1+0.05/2)^4} = CU940,493.60$$

The entity has calculated the portion of the current year payable at fair value.

$$NPV = \frac{250,000}{(1 + 0.05/2)^1} + \frac{250,000}{(1 + 0.05/2)^2} = CU481,856.00$$

This purchase was recorded in the general journal.

<b>Dr. Tangible assets (equipment) CU940,493.60</b>
<b>Cr. Long-term liabilities CU458,637.60</b>
<b>Cr. Short-term liabilities CU481,856.00</b>