

FAIR VALUE MEASUREMENT AND LIMITATIONS IN APPLYING IN
UZBEKISTAN

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Annotation: The article examines theoretical and practical aspects of fair value measurement in accounting. Particular attention is paid to the application of International Financial Reporting Standards 13 "Fair value measurement" in the context of the Republic of Uzbekistan. Key limitations and problems are identified: lack of active markets, limited number of specialists and shortcomings of the regulatory framework. Proposals are given for improving the methods of measurement and regulatory support.

Key words: fair value, IFRS 13, present value, Uzbekistan, asset valuation, market value, limitations.

Introduction. With the transition of the Republic of Uzbekistan to International Financial Reporting Standards (IFRS), the role of fair value measurement in the accounting system is increasing. However, the application of this measurement is accompanied by a number of limitations associated with the insufficient maturity of the national financial market, a shortage of qualified appraisers and gaps in legislations.

Fair value is recognized in international practice as a key element in the assessment of assets and liabilities, especially in relation to financial instruments. Fair value is a fundamental concept enshrined in IFRS 13 "Fair value measurement".

Fair value does not depend on the individual views of a particular company or accountant. It is formed on the basis of information available in active markets and should reflect what an independent market participant would pay for a given asset or liability under current conditions. The purpose of this article is to provide a brief description of the concept of fair value, describe the approaches used to measure it and identify the obstacles that exist in the Republic of Uzbekistan to its effective application in relation to financial investments.

Methods. The methodological basis of this study is based on the use of a set of analytical, comparative and applied methods aimed at identifying institutional, regulatory and practical factors that impede an objective and reliable assessment of the fair value of financial investments in the Republic of Uzbekistan.

The key theoretical reference is International Financial Reporting Standard (IFRS) 13 «Fair Value Measurement», which defines fair value 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.¹

According to this standard, three levels of input data hierarchy are considered within the study:

➤ Level 1 inputs are quoted prices (unadjusted) in active markets for assets or liabilities identical to those being measured. An active market is one in which transactions in identical assets or liabilities occur regularly between independent parties, and prices are publicly available and reflect current market values. Such markets are characterized by a sufficient number of buyers and sellers, which ensures liquidity and reliability of the prices obtained. In

¹ IFRS 13 "Fair Value Measurement"

the context of fair value assessment, an active market allows quoted prices to be used as an objective reference, without the need to resort to models or professional judgment.

➤ Level 2 inputs are inputs that are not quoted prices included in Level 1 and that are directly or indirectly observable for the asset or liability. These are likely to be prices quoted for similar assets or liabilities in active markets or supported by market data. For example, interest rates, credit spreads or yield curves. Adjustments may be necessary for Level 2 inputs and, if the adjustment is significant, the fair value may need to be categorised as Level 3.

➤ Level 3 inputs are unobservable inputs. These inputs should be used only when it is not possible to use Level 1 or 2 inputs. An entity should maximize the use of appropriate observable inputs and minimize the use of unobservable inputs.

In the context of Uzbekistan, the main emphasis is placed on Level 2 and especially Level 3, as the country's capital market does not provide sufficient liquidity and transparency for widespread use of Level 1 assessments.

To determine the deviations between international practice and the national situation, a comparative analysis method was used, which allowed:

- Compare the requirements of IFRS and National Accounting Standards (NAS) in terms of fair value assessment;
- To assess the compliance of the legislative and institutional framework of Uzbekistan with international standards;
- To identify practical differences in the use of valuation methods in companies with different levels of access to the capital market.

The secondary data analysis is based on the study of the following sources:

- Reports of the Agency for the Development of the Stock Market of the Republic of Uzbekistan;
- Annual reports of companies that have switched to IFRS;
- Publications of scientific journals and dissertations;
- Materials of audit and appraisal companies;
- Data from the Unified Portal of Corporate Reporting.

In addition, publications from leading international organizations (IFRS Foundation, World Bank, OECD) were used, which made it possible to give an objective assessment of the state of national practice in a global context.

To enhance the applied aspect, the study includes a hypothetical case study on assessing the fair value of a private company using a discounted cash flow (DCF) model based on Level 3 input data. This allows to demonstrate the real difficulties in collecting data and selecting model parameters, analyze the sensitivity of the result to changes in assumptions, show the dependence of the quality of the assessment on the transparency and availability of information.

To interpret the obtained data, methods of logical analysis and expert synthesis were used, including identification of key barriers (infrastructure, personnel, regulatory); establishing cause-and-effect relationships between the level of development of the stock market and the applicability of assessment methods; formulating proposals to eliminate the identified limitations.

Thus, the research methodology combines the theoretical foundations of international standards, a systemic analysis of the regulatory environment of Uzbekistan and practical assessment methods, which provides a comprehensive approach to the issues under study.

Results. The conducted analysis showed that the application of the fair value measurement in the conditions of Uzbekistan faces a number of significant limitations caused by both institutional and methodological reasons.

One of the main factors limiting the possibility of fair value measurement is the weak development of the stock market. According to the Agency for the Development of the Stock Market of the Republic of Uzbekistan, only 0.2% of Gross Domestic Product (GDP) is accounted for by stock market capitalization (as of the end of 2023), which is several times lower compared to countries with developed market economies.

Country	Market Capitalization (% of GDP)
USA	165%
Kazakhstan	25%
Uzbekistan	0.2%

Table 1. Comparison of stock market capitalization level (% of GDP)²

The lack of an active market makes it impossible to use stock and bond prices as a fair value (IFRS 13 Level 1). This forces companies to resort to more complex models that require increased expertise and access to alternative data.

The correct application of level 2 and 3 assessment models requires the participation of professional appraisers, financiers, and analysts who are proficient in modern approaches: DCF models, multipliers, realistic calibration of parameters (WACC, growth rate, risk level). However, there is an acute shortage of such personnel in Uzbekistan.

According to the Association of Professional Accountants of Uzbekistan, at the beginning of 2024, the share of specialists who had passed international certification (for example, ACCA, CFA) was less than 1% of the total number of economists in the country.

Fair value requires transparent and reliable data on financial position, market activity, expected income. However, corporate reporting of most companies in Uzbekistan still does not meet the requirements of either IFRS or XBRL standards.

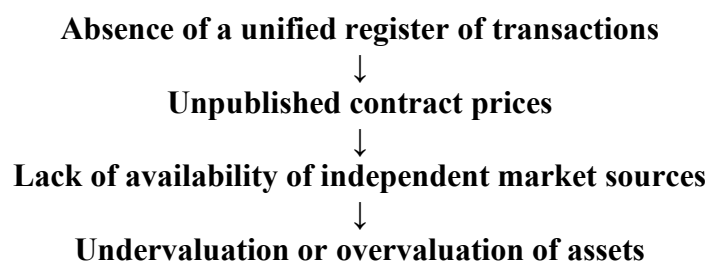


Diagram 1. Factors of insufficient transparency of information³

Thus, a weak information infrastructure reduces the reliability of input data, which is especially critical for building level 2 and 3 models in fair value measurement.

² Prepared by author based on data of World Bank, 2023; Stock Market Development Agency of the Republic of Uzbekistan, 2023

³ Prepared by author

The current legislation of the Republic of Uzbekistan does not have a clearly established methodology for measuring the fair value of assets, nor are there any mechanisms for mandatory verification of the correctness of its application. For example, the Law on Valuation Activities of the Republic of Uzbekistan (2021 edition) does not contain direct references to the requirements of IFRS 13; National Accounting Standards (NAS) do not cover all aspects and levels of fair value assessment; the participation of certified appraisers in the mandatory procedure for calculating fair value for major transactions or when consolidating financial statements is not provided.⁴

This creates legal uncertainty and leaves organizations with too much scope for subjective interpretation, which reduces the comparability and reliability of financial information.

According to IFRS 13 “Fair Value Measurement” when assets do not have an active market, companies are forced to use valuation models such as:

- Discounted Cash Flow (DCF)
- Multiplier Method (EV/EBITDA, P/E)
- Options and Stochastic Models Method

However, these models require reliable revenue and profit forecasts, accurate calculation of the discount rate, understanding of industry risks. In an unstable economic environment, high inflation and lack of market benchmarks, it becomes extremely difficult to achieve a realistic model. As an example, the following section presents a DCF calculation for a private company not represented on the market.

In order to demonstrate the applicability of fair value assessment in practice in the Uzbek market, this section provides a hypothetical example of valuation of a private manufacturing company that is not listed on the stock exchange.

Case Study: Fair Value Measurement Based on DCF Model. In order to demonstrate the applicability of fair value assessment in practice in the Uzbek market, the article provides a hypothetical example of valuation of a private manufacturing company that is not listed on the stock exchange. Due to the absence of quoted market prices (Level 1) and limited comparable information (Level 2), the valuation is performed using a DCF model, which is a Level 3 input under IFRS 13.

For the purposes of the measuring, the following conditions are accepted:

Indicator		Note
Revenue (Current Year)	12 000 mln sum	Average level for small businesses
Revenue growth (average annual)	8%	Moderate realistic growth
Operating Margin (EBIT)	18%	Typical for light industry
Income tax rate	15%	According to the Tax Code of the Republic of Uzbekistan
Investments in non-current assets	500 million sum per year	Continuous investment in equipment upgrades
Changes in working capital	2% of revenue	Growth of current assets

⁴ Ministry of Finance of the Republic of Uzbekistan. *Concept for the Development of the Accounting and Reporting System for 2020–2030*. – Tashkent, 2020.

Discount rate (WACC)	22%	Taking into account premium for country and industry risk
Forecasting horizon	5 year	Typical evaluation period in the absence of long-term contracts
Growth rate in the post-forecast period (g)	3%	Corresponds to the rate of inflation

FCFF (Free Cash Flow to Firm) is the free cash flow for the entire company, that is, the cash flow that remains with the enterprise after covering all operating expenses, taxes and necessary investments (capital investments and changes in working capital), but before taking into account the payment of interest and dividends.

This indicator reflects the real ability of the company to generate cash available to all investors - both debt holders (banks, bondholders) and shareholders.

FCFF calculation formula:

$$\text{FCFF} = \text{EBIT} \times (1 - \text{Tax rate}) + \text{Depreciation} - \text{CAPEX} - \Delta \text{Working Capital}$$

Where:

- **EBIT** — Earnings Before Interest and Taxes;
- **Tax rate** — income tax rate (e.g. 15%);
- **Depreciation** — depreciation;
- **CAPEX** — capital expenditures;
- **Δ Working Capital** — change in working capital (Working Capital = Current Assets – Current Liabilities, minus short-term debt).

FCFF is used in the discounted cash flow (DCF) model - to calculate the fair value of an enterprise (the entire business); to assess the value of a company regardless of its capital structure (without reference to debt or shareholder interest); in investment analysis, it allows you to understand how much a company can invest or distribute among all its financing parties.

Below is a table of projected free cash flows for our example:⁵

Year	Revenue	EBIT (18%)	Income tax	FCFF
1	12 960	2 333	350	1 350
2	13 997	2 519	378	1 471
3	15 116	2 720	408	1 613
4	16 335	2 940	441	1 774
5	17 662	3 179	477	1 955

Note: FCFF is calculated in a simplified manner, without taking into account depreciation, to simplify the example.

Calculation of the Net Present Value of FCFF (in million sum):⁶

Year	FCFF	Discount factor (1/(1+WACC)^t)	Net Present Value
1	1 350	(1/(1+22%)^1)	1 106

⁵ Calculations made by author

⁶ Calculations made by author

2	1 471	$(1/(1+22\%)^2)$	988
3	1 613	$(1/(1+22\%)^3)$	884
4	1 774	$(1/(1+22\%)^4)$	791
5	1 955	$(1/(1+22\%)^5)$	709
	Total		4 478

Terminal Value (TV) is an estimate of the value of a business (or investment project) at the end of the forecast period, i.e. the period for which detailed monetary forecasts are made. It is a key element in calculating the present value (DCF), since the majority of the project's value may be accounted for by the residual value.⁷

Infinite Growth Model (Gordon Growth Model, GGM)

Free cash flow is assumed to grow forever at a constant rate g .

Formula:

$$TV = \frac{FCFF_5 \times (1 + g)}{WACC - g}$$

Where:

- g – the rate of constant growth of cash flows (Growth rate in the post-forecast period).

Calculation of Terminal Value (in million sum):

$$TV = \frac{FCFF_5 \times (1 + g)}{WACC - g} = \frac{1955 \times 1,03}{0,22 - 0,03} \approx \frac{2014}{0,19} \approx 10600$$

Present Value of Termination Value (in million sum):

$$\frac{10600}{(1,22)^5} = 10600/2,69 \approx 3941$$

Total fair value of the business:

$$Business Value = NPV_{5 years} + PV_{Terminal Value}$$

So,

$$Business Value = 4 478 + 3 941 = 8 419 \text{ mln sum.}$$

The given practical example of calculating the fair value of an enterprise based on the discounted cash flow (DCF) model demonstrates the versatility and analytical power of this approach. Using the projected cash flow over a 5-year horizon and calculating the residual value allowed us to obtain a reasonable fair value of the company in the amount of 8.42 billion sum. The example clearly shows how key parameters such as operating margin, tax rate, investment expenses, changes in working capital and discount rate critically influence the final valuation. In addition, the example emphasizes the importance of transparent financial information and a professional approach when applying the DCF model, especially in emerging markets such as Uzbekistan.

⁷ Ermakov, S.A. Features of Using the DCF Model in Developing Countries // Accounting. – 2020. – No. 5.

Discussion. The results of the conducted analysis and practical assessment based on the DCF model allow us to make a number of general conclusions about the applicability of the fair value concept in the conditions of Uzbekistan.

Fair value, as an economic category, implies market objectivity, i.e. the presence of reliable benchmarks for determining the value of an asset or liability. However, in the real conditions of Uzbekistan, such benchmarks are often absent, especially with respect to unquoted financial instruments and investments in private enterprises.

The practical example demonstrated that the application of the discounted cash flow model is also possible in domestic conditions, but requires the appraiser to have high professional competence, access to market information and the ability to adapt international approaches to the specifics of the national economy.

The fair value calculated in Case study (8,419 million sums) is based on a number of internal assumptions as:

- the revenue forecast is built without taking into account seasonality and external shocks;
- the discount rate includes a conditional premium for country risk, which may change;
- the growth rate in the post-forecast period is based on average macroeconomic indicators.

This makes the final assessment sensitive to the slightest deviations in the input parameters. The analysis carried out confirms the vulnerability of Level 3 input data models (IFRS 13), especially in countries with insufficient information infrastructure.

Systematization of the identified obstacles allows us to structure the key risks that enterprises and auditors face in Uzbekistan:

Problem	Consequences in assessment practice
Stock Market Weakness	No market prices → impossible Level 1
Shortage of specialists	Increased risk of errors in the DCF model
Limitations of financial reporting	Difficulty of validating assumptions
Regulatory gaps	Discrepancies in the interpretation of concepts and methods
Lack of benchmarks	Difficulties in calibrating multipliers

The DCF model, despite its universality, requires a number of conditions that are not always met in Uzbekistan:

- stability of the operating environment;
- availability of long-term forecasts;
- transparency of reporting;
- reliable industry multipliers.

There is also a risk of manipulation of assumptions (for example, overstating the growth rate or understating the WACC) in order to distort value, which could influence the decisions of investors and regulators.

Taking into account the identified barriers and assumptions, the following areas are possible for increasing the objectivity of fair value assessment in the Republic of Uzbekistan:

- Development of the stock market — creation of platforms with public reporting and active trading.
- Strengthening professional training — implementation of international programs (ACCA, CFA) at the university level.
- Legislative adaptation of IFRS 13 — inclusion of requirements for valuation levels in NAS.

- Creation of a database of transactions and multiples — a national repository of comparable valuations.
- Institutional independent verification of models — participation of certified appraisers in mandatory examinations.

Thus, the successful implementation of fair value measurement of financial investments in the Republic of Uzbekistan is possible only with the simultaneous solution of a set of institutional, legal and methodological problems.

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