

International Congress on Economics, Management and Business Studies
Hosted Online from New York, USA
Date: 23rd November, 2026
Website: https://econferencia.com

THE UZ-F-SCORE SCORING ANALYSIS METHOD FOR EXPRESS ASSESSMENT OF THE FINANCIAL CONDITION OF ISSUERS

M. D. Irmukhamedova
Independent Researcher
muslima.irmukhamedova@gmail.com
ORCID: 0009-0009-8883-7422

Abstract

The paper presents a modified nine-factor scoring model, UZ-F-Score, developed on the basis of the Piotroski F-Score model and adapted to the specific characteristics of financial reporting of issuers in силу of the Republic of Uzbekistan. The method is based on a binary evaluation of liquidity, profitability, and financial stability ratios. Testing of the model on a sample of 200 companies confirmed its high convergence with the market capitalization dynamics of local issuers.

Keywords: Stock market, scoring, issuers, financial stability, liquidity, express assessment.

Introduction

The current stage of development of the financial system of the Republic of Uzbekistan is characterized by the systemic modernization of the capital market, initiated by the Presidential Decree No. UP-6207 "On measures for the further development of the capital market", as well as Resolutions No. PP-291 and No. PP-303 "On the formation of the National Investment Fund of the Republic of Uzbekistan". These regulatory legal acts are aimed at the fundamental transformation of market infrastructure, institutionalization of the investor pool,

increasing the transparency of exchange operations, and optimizing transaction costs through the digitalization and automation of clearing settlements.

At the same time, the national stock market retains a number of specific features inherent in emerging financial systems. The key destructive factors hindering the inflow of investment remain low asset liquidity, information asymmetry of corporate reporting, fragmentation of historical time series, and high sensitivity to macroeconomic uncertainty. In these institutional conditions, the direct projection of classical foreign investment strategies and analytical models, in particular based on the Piotroski F-score, leads to a significant bias in statistical estimates of the financial and economic activities of local issuers and, consequently, a distorted assessment of the profitability of their shares. This is due not only to differences in capital structure but also to the specifics of National Accounting Standards (NAS).

The implementation of large-scale privatization programs within the framework of the "Uzbekistan – 2030" Strategy highlights the need to develop, verify, and implement unified domestic analytical tools. The formation of an adaptive methodology for scoring express analysis, capable of functioning effectively within the existing information contour, is a critical condition for conducting mass screening of issuers, reducing investment risks, and increasing the overall maturity of the national capital market.

Purpose and Objectives of the Study

The purpose of this study is the development, theoretical substantiation, and empirical verification of a unified nine-factor scoring methodology adapted to the institutional features of the Uzbek stock market and the specifics of NAS reporting, to ensure mass and high-precision express assessment of the financial

stability and investment attractiveness of issuer enterprises. To achieve this goal, the following tasks were formulated and solved:

- Systematization and selection of the most informative and non-collinear financial ratios based on official accounting reports of issuers (Form No. 1 and Form No. 2 of NAS), comprehensively reflecting liquidity, solvency, financial leverage, and operational efficiency;
- Formation of a system of rigid threshold criteria for each of the nine selected factors, taking into account market-average profitability indicators and capital structure in the corporate sector of the republic;
- Development of an algorithm for integrated binary evaluation of issuers and a scale of quantile distribution of companies by financial risk levels ("stable", "satisfactory", "unstable", "problematic");
- Empirical approbation of the developed scoring method on a continuous sample of 200 largest Uzbek issuers in the real sector to verify the predictive power of the model and assess its convergence with the actual dynamics of market capitalization.

Methodology

To solve the problem of mass screening of issuers, the author has developed methods based on the creation of a specialized scoring index, UZ-F-Score (a modified model of the quality of financial condition by Piotroski).

The essence of the proposal lies in adapting classical Western models to the structure and specifics of national accounting standards (NAS) and financial reporting of the Republic of Uzbekistan (Balance Sheet — Form No. 1, Income Statement — Form No. 2). The methodology can also be adapted to the requirements of National Financial Reporting Standards (NFRS), the phased implementation of which is expected starting in 2027.

Specification and calculation method of the UZ-F-Score index. The UZ-F-Score index is an aggregated indicator evaluating the dynamics of the quality of an enterprise's financial condition on a scale from 0 to 9 points based on nine binary variables grouped into three key areas: profitability, capital structure (liquidity), and operational efficiency.

Each variable takes a value of 1 (if the dynamics are positive / criterion is met) or 0 (if the dynamics are negative / criterion is not met):

$$\text{UZ_F_Score} = \sum_{i=1}^{9} F_i$$

The values of the indicators F_i are presented in Table 1.

Indicator No.	Group	Group and Parameter Name	Calculation formula based on NAS reporting	Condition for awarding 1 point	Direction of financial analysis
F1	Profitability	Net Profit	Line 270 (Form No. 2)	> 0	General profitability of current activities
F2	Profitability	Return on Assets (ROA)	Line 270 (Form No. 2) / Avg. value of line 400 (Form No. 1)	> 0	Efficiency of asset utilization
F3	Profitability	Operating Cash Flow	Net cash inflow from operating activities (Form No. 4)	> 0	Presence of real cash inflow
F4	Profitability	Quality of Net Profit	Comparison of growth rates of Net Profit and Accounts Receivable	Growth rate of Net Profit > Growth rate of AR	Exclusion of paper profit without cash
F5	Financial Stability	Long-term Debt Load	Line 490 (Form No. 1) / Line 400 (Form No. 1)	Current ratio < Previous year's ratio	Reduction of dependence on long-term loans

F6	Financial Stability	Current Liquidity Ratio	Current assets (line 390) / Current liabilities (line 600)	Current CR > Previous year's CR	Growth of ability to pay short-term debts
F7	Financial Stability	Capital Structure Stability	Line 410 (Form No. 1)	Did not grow without justified revenue growth	Control over the absence of hidden dilution of shares
F8	Efficiency	Gross Margin Ratio	Gross profit (line 030 of Form No. 2) / Net revenue (line 010 of Form No. 2)	Current margin > Previous year's margin	Increasing price efficiency and cost control
F9	Efficiency	Asset Turnover (AT)	Line 010 of Form No. 2 / Avg. value of line 400 (Form No. 1)	Current AT > Previous year's AT	Intensification of resource utilization

Interpretation of results by UZ-F-Score

Table 1. Indicators for calculation and evaluation criteria according to the UZ-F-Score scoring model

Total Score	Assessment Level
8–9	High potential
6–7	Medium-high potential
4–5	Moderate investment interest
0–3	Low attractiveness or increased risk

Results of the Study

Testing of the developed UZ-F-Score scoring model was carried out on a continuous sample of 200 largest issuers of the real sector of the economy of the Republic of Uzbekistan (excluding the financial and insurance segments) based on financial and economic activities.

The obtained quantile distribution revealed that only 12% of the analyzed enterprises of the real sector entered the investment benchmark group with a high quality of current status (UZ-F-Score index at the level of 7–9 points). These companies are characterized by a balanced capital structure, a decrease in debt load, and stable generation of net cash flow from core activities. The main part of the sample (about 54%) demonstrated unstable indicators (4–5 points). This is due to the immobilization of working capital into accounts receivable and a decrease in the gross margin ratio due to rising operating costs.

Testing the model on historical 10-year time series of one of the leading exchange issuers, JSC "UzRCE", showed a high convergence of scoring results with the dynamics of stock prices and dividend payment volumes (correlation coefficient $r = 0.84$), which confirms the high predictive and diagnostic power of the developed tool.

Conclusion

The developed UZ-F-Score scoring analysis method is an effective tool for mass express assessment, allowing for the ranking of large arrays of financial data in a short time without involving expensive external consulting. The implementation of the UZ-F-Score index makes it possible to automate the processes of primary screening of equity issuers presented on the stock market and optimize the algorithms for forming long-term investment portfolios.

References

1. Decree of the President of the Republic of Uzbekistan dated April 13, 2021, No. UP-6207 "On measures for the further development of the capital market".
2. Resolution of the President of the Republic of Uzbekistan dated September 2, 2023, No. PP-291 "On additional measures for the development of the capital market".

3. Resolution of the President of the Republic of Uzbekistan dated August 27, 2024, No. PP-303 "On the formation of the National Investment Fund of the Republic of Uzbekistan".
4. Piotroski, J. D. “Value Investing: The Use of Historical Financial Statement Information to Separate Winners from Losers.” Journal of Accounting Research, Vol. 38, Supplement – 2000, Studies on Accounting Information and the Economics of the Firm, pp. 1–41. DOI: 10.2307/2672906
5. Irmukhamedova M. D. Automation of analytical processes in corporate. - "Economy and Society" No. 9 (124) 2024.
6. Irmukhamedova M. D. Development of a system of analytical indicators for assessing the profitability of shares of Uzbek issuers. - International and local scientific and popular journal. 2026, March-April. No. 4. pp. 235-240. www.info@mpkuz.uz ISSN: 3060-4699
https://mpkjournal.com/index.php/MPK