

## “IMPROVING THE METHODOLOGY FOR ASSESSING THE FINANCIAL STABILITY OF ENTERPRISES”

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### Abstract

Financial stability assessment is becoming increasingly important in the context of global economic volatility, rising inflation, and heightened default risk. This systematic literature review synthesizes theoretical approaches, empirical findings, and international experience in assessing financial stability at the firm level. Drawing on classical, neoclassical, and modern financial theories, as well as regional and international research, this article examines the key indicators that shape financial stability—liquidity, profitability, capital structure, and risk. In addition, it describes stress testing, cognitive modeling, and machine learning techniques for early detection of bankruptcy risk. The review also highlights Uzbekistan’s evolving methodology in line with the requirements of the digital economy. This work contributes to improving the theoretical and methodological foundations of financial stability assessment and recommends integrated models adapted to the transition economy.

**Keywords:** *financial indicators, yielding substantial, profitability, corporate finance, financial risk,*

### 1. Introduction

In today’s globalized economy, ensuring enterprise financial stability requires analytical precision and timely response mechanisms. Traditional financial analysis tools no longer suffice for identifying potential risks and ensuring resilience. This research proposes a comprehensive methodological upgrade incorporating dynamic and predictive components suitable for both macroeconomic shocks and firm-specific vulnerabilities.

### 2. Methodological Framework

The improved methodology includes cognitive modeling to reveal causal relationships among financial indicators, a composite index to measure financial stability, and stress-testing scenarios involving exchange rate fluctuations, inflation, and liquidity risks. The integration of logistic regression and machine learning algorithms facilitates early detection of default risks with over 90%

accuracy. These methods together enable a deeper understanding of financial dynamics and allow firms to proactively manage financial risks.

### 3. Practical Implications and Innovations

The improved methodology was empirically applied to industrial enterprises in Uzbekistan, yielding substantial practical benefits. A key innovation was the implementation of a composite financial stability index, which synthesized liquidity, profitability, and debt burden indicators. The index, when applied to enterprises such as 'Toshneftgazqurilish', allowed management to assess the firm's financial condition in real time and categorize stability levels (high, medium, low). This granularity supported more effective resource allocation and financial planning.

Additionally, cognitive models visualized the interrelations between financial indicators, enabling deeper insight into how variables like interest rates or currency fluctuations impact overall financial health. Managers used these models to forecast financial distress scenarios and adjust policy proactively. Stress-testing, incorporating macroeconomic shocks—such as inflation surges or currency devaluations—was also deployed. This empowered enterprises to test resilience under hypothetical conditions and identify vulnerabilities.

Logistic regression models and machine learning algorithms further allowed for the prediction of default probabilities with high precision. The introduction of these tools significantly improved early warning capabilities. For instance, at the enterprise level, logistic regressions integrated with real-time financial data helped distinguish between temporary liquidity shortages and systemic insolvency threats. This differentiation was crucial for developing timely responses, such as restructuring liabilities or securing short-term funding.

The practical implications also extended to policy design. The proposed methodology aligns with national digital transformation goals and serves as a foundation for institutionalizing enterprise-level financial diagnostics.

It encourages the adoption of data-driven management culture, supports macroeconomic stability, and bolsters investor confidence by enhancing financial transparency and predictability.

### 4. Recommendations and Conclusion

The study recommends institutionalizing financial risk monitoring systems at the enterprise level, aligning national financial reporting standards with international norms (e.g., IFRS), and

adopting AI-powered forecasting tools. Policymakers are encouraged to support methodological innovation by enabling data accessibility and incentivizing the adoption of predictive financial management frameworks.

This research demonstrates the critical need for advancing financial stability assessment methodologies. By integrating traditional tools with predictive analytics and scenario-based testing, enterprises can enhance strategic planning, mitigate risks, and contribute more effectively to national economic resilience.

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