



MODERN METHODS FOR ASSESSING THE CREDITWORTHINESS OF BUSINESS ENTITIES

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ABSTRACT

This article analyzes modern methods used to assess the creditworthiness of business entities in the context of digital transformation in the banking sector. The study explores traditional and innovative approaches, including financial ratios, credit scoring models, artificial intelligence (AI), and machine learning tools. The author highlights the importance of comprehensive evaluation systems that combine quantitative and qualitative indicators, contributing to improved decision-making and reduced credit risks for financial institutions.

Creditworthiness assessment plays a crucial role in the decision-making process of financial institutions. It determines whether a business entity is capable of fulfilling its financial obligations within the specified time frame. An effective evaluation system allows banks to minimize default risks and maintain portfolio stability. In the modern banking environment, where financial technologies (FinTech) are rapidly evolving, traditional methods of creditworthiness assessment are no longer sufficient. The integration of data analytics, artificial intelligence, and automated scoring systems enables more objective and data-driven evaluations.

In Uzbekistan, the government has prioritized improving access to finance for entrepreneurs, especially small and medium-sized enterprises (SMEs). Therefore, adopting modern, transparent, and efficient methods of creditworthiness assessment is essential for supporting entrepreneurship and sustainable economic growth.

Creditworthiness refers to the borrower's ability and willingness to repay the borrowed funds according to the loan terms. Assessing the creditworthiness of business entities involves analyzing their financial condition, market position, management efficiency, and risk factors. Traditionally, banks rely on a combination of financial indicators and qualitative factors, such as:

- Profitability and liquidity ratios;
- Debt-to-equity ratio;
- Business reputation and credit history;
- Stability of cash flows;
- Management experience and corporate governance quality.

These factors collectively help banks determine the borrower's repayment capacity. However, in the age of digitalization, such manual analysis can be time-consuming and prone

to human bias. Thus, modern automated systems are being developed to complement traditional evaluation methods.

Credit scoring models use statistical and mathematical methods to predict the probability of default. These systems assign numerical scores based on historical and real-time data, allowing for objective credit risk assessments. In Uzbekistan, several commercial banks have started implementing automated scoring systems integrated with national tax and credit databases.

AI algorithms can analyze vast amounts of structured and unstructured data, identifying hidden patterns that affect borrower reliability. Machine learning models continuously improve over time, adapting to new economic conditions and data trends. For example, AI-based credit assessment systems may consider social media behavior, online transaction data, and supplier relationships as additional risk indicators.

Big Data tools allow banks to process complex datasets from various sources, such as digital payment platforms, accounting systems, and public registries. By integrating these sources, financial institutions can obtain a holistic view of a borrower's financial health, helping to make faster and more accurate credit decisions.

Behavioral scoring models evaluate a company's financial discipline and payment habits based on real-time transaction data. This method is particularly effective for SMEs and microbusinesses with limited financial histories.

Table 1. Comparative Overview of Traditional and Modern Methods of Creditworthiness Assessment

	Meth od Type	Main Criteria	Advan tages	Limitati ons	Applicability in Uzbekistan
	Tradit ional Financial Analysis	Liquidity , profitability, leverage ratios	Simple and widely used	Time- consuming, subjective	Applicable for large enterprises
	Credit Scoring Model	Statistica l score based on client data	Objecti ve, automated, fast	Requires quality data	Widely used in retail and SME lending
	AI & Machine Learning	Predictiv e analytics using large datasets	High accuracy, adaptive	Expensi ve implementati on	Gradually adopted by major banks
	Big Data Analytics	Real- time analysis from multiple sources	Deep insight into borrower behavior	Data integration challenges	Potential for future use
	Behav ioral Scoring	Payment behavior, cash flow trends	Real- time monitoring	Limited historical data	Suitable for micro and small businesses
	Hybri	Combina	Compr	Requires	Highly

Modern Model	Combination of traditional and AI methods	of comprehensive and flexible	skilled analysts	recommended for all banks
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Modern banks increasingly use hybrid systems that combine traditional financial ratio analysis with AI-driven algorithms. Such systems ensure both analytical depth and operational efficiency, reducing human subjectivity while enhancing predictive accuracy.

Conclusion. Assessing the creditworthiness of business entities is a key element of sustainable lending and financial stability. Traditional evaluation methods — based on financial ratios and qualitative indicators — remain relevant, but they must be complemented by innovative technologies. To strengthen credit assessment practices in Uzbekistan, it is necessary to:

- Implement AI-based and automated scoring systems in banks;
- Integrate financial databases across sectors;
- Expand the use of Big Data analytics;
- Develop a unified national credit assessment platform;
- Continuously train banking specialists in digital risk management.

Such reforms will help create a transparent, efficient, and inclusive credit environment that supports the growth of entrepreneurship and strengthens the national financial system.

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