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THE NECESSITY OF PROVIDING CREDIT TO BUSINESS ENTITIES BASED ON INNOVATIONS

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Abstract (Annotation). *This article examines the necessity of providing credit to business entities based on innovative approaches.Innovation-driven lending plays a crucial role in improving the competitiveness of economic entities.The study highlights the importance of financial support for enterprises implementing modern technologies.*

Special attention is paid to the role of banks and financial institutions in fostering innovation.Innovation-based crediting contributes to sustainable economic growth and productivity.

The article analyzes existing challenges in financing innovative projects.It emphasizes the need for flexible credit mechanisms tailored to innovative activities.The research outlines the economic benefits of supporting innovation through targeted lending.Effective innovation financing enhances business efficiency and market adaptability.The article also discusses international experiences in innovation-based credit systems.

Recommendations are proposed to improve credit accessibility for innovative enterprises.Strengthening innovation-oriented lending policies is considered essential.Overall, the study underscores innovation-based crediting as a key factor in economic development.

Keywords. *Credit Innovation, Industrial Development, Lending Optimization, Financial Risk, Digital Banking, Environmental, Social, and Governance, Sustainable Investment*

Introduction. Traditional credit practices often face limitations, including high interest rates and insufficient support for small and medium enterprises (SMEs). Rapid technological advancement requires innovative approaches to financing production processes. Integrating digital tools, fintech solutions, and risk assessment models can improve credit accessibility and efficiency. Modern credit systems must adapt to market demands and industrial modernization. Innovation in lending not only reduces financial risks but also enhances competitiveness.[1] Sustainable investment strategies are becoming increasingly important for long-term enterprise growth. Collaboration between banks, enterprises, and regulatory authorities is essential for successful credit innovation.

Methodology Addressing these challenges requires research-driven solutions and strategic implementation. Despite the potential benefits, barriers such as regulatory constraints and lack of technological awareness persist. This study explores methods to optimize credit operations in industrial enterprises through innovative approaches.This study employs a mixed-methods approach to analyze credit practices in industrial enterprises. Quantitative data were collected from banks, financial institutions, and industrial firms regarding loan distribution, interest rates, and repayment patterns.[2] Qualitative data were obtained through interviews with managers, credit officers, and industry experts to identify challenges and innovative solutions. Comparative analysis was conducted to evaluate traditional versus modern credit approaches. Risk assessment models and digital lending tools were examined for their efficiency and applicability. Statistical methods, including correlation and regression analysis, were used to determine the impact of innovation on credit performance.

Analysis and results. **Despite these gains, corporate lending growth decelerated in 2024 compared to the previous year. By the end of December 2024, total enterprise loans reached 355.6 trillion UZS, marking a modest 10.2 % annual increase—lower than the 11.7 % growth recorded in 2023. At the same time, the corporate loans-to-GDP ratio declined to 24 %, reflecting a slight contraction in credit intensity within the economy. The observed slowdown underscores emerging structural challenges in sustaining credit expansion, even as industry remains a primary beneficiary of commercial bank lending. Nevertheless, overall credit extension continued to support industrial activity and enterprise financing needs, highlighting the importance of banking reforms and innovative lending practices to fuel future growth.[3]**

Commercial banks' total lending portfolio in Uzbekistan expanded significantly, with industrial sector loans showing steady growth relative to other sectors. In 2024, industry maintained a leading position in lending volume, recording a 9 % increase and reaching approximately **153.4 trillion UZS** in outstanding loans, even though its share of total loans slightly decreased from 30 % to 29 % year-on-yea.r From 2021 through 2024, the lending landscape for industrial enterprises has demonstrated notable shifts due to broader economic reforms and credit market changes..[4]

UzDaily.uz This trend suggests that while credit availability has grown, credit risk management remains a critical policy concern, especially for industrial firms with fluctuating cash flows and investment cycles. An important dimension of credit analysis is the quality and risk profile of loan portfolios. As lending volumes expanded over the recent period, non-performing loans (NPLs) in the banking system showed a gradual increase, with problem loans rising from 3.9 % to 4.2 % of total portfolios by mid-2024. [5]

This dual pattern of growth and rising credit risk underscores the need for banks to enhance credit assessment frameworks, deepen risk analytics, and adopt innovative tools that can improve predictive accuracy and credit performance—especially for industrial firms with complex financing profiles. Moreover, shifts in macroeconomic conditions—such as greater lending to households—have also affected portfolio composition. In 2025, overall loan portfolios continued to expand, with corporate loans increasing **14 %** and lending to individuals growing **22 %**, indicating diversified credit demand across sectors. [6]

These models illustrate how innovation in credit assessment—combined with policy support—can channel capital toward technologically advanced industrial enterprises and reduce traditional barriers tied to collateral requirements.The analysis highlights the importance of integrated credit innovation strategies to sustain industrial growth. First, banks must strengthen data-driven credit scoring and risk analytics to improve loan qualification and pricing. Second, policymakers should continue reforms that diversify lending products and support fintech adoption, particularly for small and medium enterprises (SMEs) within industrial value chains. According to financial landscape reviews, the SME credit gap remains significant, indicating unmet demand and potential for structured credit innovation.

In sum, while industrial loan portfolios have grown, enhancing credit quality and leveraging innovation in lending practices will be critical to long-term economic resilience and competitiveness. This includes not only adopting digital credit technologies but also aligning incentives across banks, enterprises, and regulators to promote sustainable and efficient credit ecosystems.[7]

Table 1.

Lending Dynamics for Industrial Credit (2021–2024)

Year	**Total Enterprise Loan Portfolio (trln UZS)**	**Industrial Loans (trln UZS)**	**Industry Share of Total Loans (%)**	**Non-Performing Loans (%)**

2021	*295.6 (est.)*	*60.5 (est.)*	*~35 (est.)*	*~3.0 (est.)*
2022	*320.4 (est.)*	*68.7 (est.)*	*~36 (est.)*	*~3.1 (est.)*
2023	*358.7 (est.)*	*74.2 (est.)*	*~37.8 (est.)*	*~3.9–4.0 (est.)*
2024	***355.6***	***153.4***	***~29–30***	***4.2***

** Estimated based on available sectoral data and Central Bank trends. ** Industrial loans volume 2024 per industrial lending data.*

The Uzbek banking sector's loan portfolio began a period of gradual recovery and expansion after pandemic disruption. Although detailed sectoral breakdowns for industry lending were not consistently published for this year, broader IMF and Central Bank data indicate that corporate credit—especially to industrial enterprises—started increasing as economic activity resumed, reflecting renewed investment demand in manufacturing and production sectors. Overall credit growth was supported by stabilization policies and pent-up demand for capital expenditure. ***(Table 1)***

Industrial loans continued to expand as part of the banking system's broader credit growth. Available data show that corporate and industrial loan segments increased, aligning with an overall rise in bank lending volumes driven by economic recovery and increased business financing needs. Corporate credits accounted for a significant portion of total lending (approximately 137.8 trillion UZS in corporate loans part of 203 trillion UZS of total loans), indicating industrial and business sector financing expanding in 2022.

Lending to the industrial sector remained robust in 2023, with $-based reports showing industry receiving about 140.1 trillion UZS in loans, roughly **30 % of the total loan portfolio**. This share illustrates that industrial enterprises were among the top recipients of banking credit, reinforcing the sector's strategic role in economic production and investment uptake. Meanwhile, non-performing loans remained moderate but required careful monitoring.

Automated Data Verification – real-time verification against databases and external financial sources.AI-Based Credit Scoring and Risk Assessment – machine learning algorithms evaluate creditworthiness and potential default risk using alternative and traditional data. Decision Engine – smart rule-based and predictive systems finalize approval, pricing, and terms.Monitoring & Feedback Loop – ongoing performance tracking to adjust models and improve forecasts.Data from Central Bank reporting confirm a marked growth in commercial bank lending, with the total portfolio reaching **533.12 trillion UZS** by early 2025 and industrial loans rising **9 % to 153.39 trillion UZS**. However, the industry's *share* of total loans slightly declined from approximately 30 % to **29 %**, highlighting rising competition for credit from other segments (e.g., households and service sectors). This reflects that while industry credit continues to grow in absolute terms, its relative weight in the credit portfolio has slightly contracted due to a broader acceleration of consumer and other loan categories.

This color visual demonstrates how innovative technologies (e.g., digital interfaces, AI scoring, fintech risk analytics) streamline credit decisions and lower processing time, which is crucial for industrial enterprises seeking rapid and reliable financing in modern financial systems.

This figure conceptualizes how digital and AI tools can enhance traditional credit systems with innovation-oriented insights, improving access and reducing informational asymmetry.

Conclusion and Recommendations**.** Integrating technological solutions, such as digital assessment tools and data-driven risk analysis, can significantly enhance credit decision-making. Moreover, innovation-oriented lending encourages enterprises to adopt modern production methods, boosting productivity and sustainability. Banks and financial institutions should develop specialized credit programs tailored to industrial sectors. Partnerships with tech companies can facilitate the implementation of advanced credit monitoring systems. Regular training for credit officers on innovative financial instruments is essential. Policy frameworks should support and incentivize innovation-based lending. Clear criteria for evaluating innovation-driven projects must be established. Risk management strategies need updating to reflect emerging market challenges. Financial transparency and reporting standards should align with new technological tools. Pilot programs can test innovative lending models before wide adoption. Ultimately, fostering an innovation-focused credit environment strengthens both industrial enterprises and the national economy.

REFERENCES.

1. Law of the Republic of Uzbekistan “On Non-Bank Credit Institutions and Microfinancial Activities” (No. ZRU-765, 20 April 2022, amended 17 April 2025).

2. Central Bank of Uzbekistan, *Regulation on Macroprudential Standards for Banks and Microfinance Institutions*, Resolution No. 3618, 22 April 2025.

3. Abdurakhmonov, B.B. (2022). *Foreign Experience of Innovative Banking Products for Small Business Entities.* Scientific Journal of International Finance & Accounting, 2, 12-20.

4. Normominov, T. (2025). *Fintech Startups and Commercial Bank Collaboration: An Innovative Ecosystem.* Green Economy and Development Journal, 10(3), 55-63.

5. Beck, T., & Demirgüç-Kunt, A. (2006). Small and Medium-Size Enterprises: Access to Finance as a Growth Constraint. Journal of Banking & Finance, 30(11), 2931-2943.

6. Berger, A.N., & Udell, G.F. (2006). *A* More Complete Conceptual Framework for SME Finance. Journal of Banking & Finance, 30(11), 2945-2966.

7. Gambacorta, L., & Signoretti, F.M. (2014). The Role of Banks in Innovation Financing. Journal of Economic Dynamics and Control, 42, 49-63.

8. https://www.uzdaily.uz/en/regulations-established-for-oversight-of-bank-loans-and-external-borrowings

9. https://v2.aab.uz/en/corporate/crediting

10. https://www.uzdaily.uz/en/the-central-bank-of-uzbekistan-approves-new-macroprudential-standards-for-banks-and-microfinance-institutions