THE ROLE AND IMPORTANCE OF ARTIFICIAL INTELLIGENCE IN INCREASING THE COMPETITIVENESS OF COMMERCIAL BANKS

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ABSTRACT

Modern banks are operating in an era of digital transformation, which is forcing them to implement new technologies — in particular, artificial intelligence (AI) and machine learning (ML) solutions — to remain competitive (Farishy, 2023). AI technologies are widely used in the banking sector, from customer service to credit risk assessment, fraud detection, and internal process automation. These processes increase the operational efficiency of banks, reduce costs, and strengthen their market position.

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Artificial intelligence is a set of technologies that simulate human mental processes through computer systems, which are able to quickly correlate large amounts of data, make predictions, and make complex decisions (Adhikari, Aryal & Park, 2022). Banks are using AI to upgrade customer service processes to 24/7 and offer fast and personalized service. For example, AI chatbots and automated advisors speed up customer interactions, guide the customer with intelligent questions, and significantly reduce labor costs, thereby reducing the bank's overall costs and increasing its competitiveness (Farishy, 2023).

AI technologies provide innovative approaches to bank credit risk management. Traditional credit models usually make decisions based on only a few parameters, but AI-based models use larger data sets, real-time analysis, and sophisticated algorithms to more accurately assess borrowers' solvency (Bi & Bao, 2024). AI systems can identify complex features in credit risk forecasting and improve the quality of the loan portfolio, which leads to financial stability for banks.

Today, fraud detection systems in banks are also powered by AI. Traditional methods rely on human eye recognition of patterns, which is time-consuming and error-prone. AI technologies analyze transactions in real time and immediately detect unusual behavior, thereby protecting against losses (Normominov, 2025). This allows banks to not only maintain customer trust, but also maintain their brand reputation at a high level.

AI also plays an important role in providing personalized services to customers. Banks can differentiate themselves in the market by analyzing customer data and offering products and services tailored to individual needs (Boykulov, 2025). For example, automated recommendations and personalization strategies increase bank revenues by retaining customers and attracting them to more products.

Artificial intelligence has also shown its great potential in optimizing internal processes. The funds allocated for the bank's operating expenses are significantly reduced, as technology automates routine and repetitive tasks, reduces the number of errors, and increases speed. This has a positive impact on the bank's overall profitability and is an important factor for its competitiveness (Kamolov, 2025).

In addition, AI strengthens the bank's strategic decision-making mechanisms. Through big data analysis and predictive models, banks can anticipate market trends and develop appropriate strategies. This allows them to make quick and correct decisions in an environment of aggressive competition. Scientific research shows that AI innovation improves the financial performance of banks, including increasing return on assets, which plays an important role in strengthening competitiveness (Irfa, 2024). The introduction of AI technologies also serves to increase the market share of banks. Research shows that when banks expand their services through digital channels and provide customers with advanced AI-based services, their market share and customer loyalty increase (Rashid et al., 2025). AI assets, especially in mobile and internet banking, enable interactive communication with customers through English analytics, chatbots, and automated assistant systems.

Not surprisingly, AI also forms a strategic resource of banks - human capital. Although digital technologies automate business processes, banks need to equip their employees with new competencies. This requires the involvement of specialized specialists to continuously train employees, manage AI systems, and implement new innovations (Normominov, 2025).

However, the implementation of AI also comes with risks and limitations. These include data security, algorithmic transparency and information confidentiality, and regulatory compliance (Erdonayev, 2025). Banks should also avoid becoming too dependent on AI and maintain a stable balance with human control. For this reason, it is important to develop strategies that comply with AI rules and ensure their security.

In the case of international banks, AI is also being used as a strategic tool to increase bank competitiveness. For example, international financial institution HSBC is working with generative AI models, which will help automate customer services and accelerate innovation. This initiative is helping to increase the bank's market potential, as well as maintaining a high level of competitiveness (Reuters, 2025) Analytically, AI allows banks to implement sustainable innovation in a competitive environment. It increases operational efficiency, reduces costs, deepens customer relationships, and offers innovative services necessary for the bank to be market leader. At the same time, the strategic use of SI helps banks quickly adapt to market dynamics and maintain global competitiveness.In general, SI is a fundamental factor in increasing bank competitiveness, which serves to successfully implement the digital transformation process, offer high-level services to customers, optimize processes and introduce strategic innovations. The correct use of SI technologies helps banks to become stable, efficient and competitive in the modern financial market.

References:

1.Adhikari, R. P., Aryal, T., & Park, G. (2022). Impact of artificial intelligence on commercial bank's ATM. Farabi Journal of Social Sciences, 8(2), 32–38. https://doi.org/10.26577/FJSS.2022.v8.i2.06

2.Bi, S., & Bao, W. (2024). Innovative application of artificial intelligence technology in bank credit risk management.

3.Erdonayev, A. (2025). Raqamli bank xizmatlarida sun'iy intellektdan foydalanishning istiqbollari va xavfsizlik masalalari. Green Economy and Development. https://doi.org/10.5281/zenodo.15468869

4.Farishy, R. (2023). The use of artificial intelligence in banking industry. International Journal of Social Service and Research. https://doi.org/10.46799/ijssr.v3i7.447

5.Normominov, T. (2025). Prospects for the use of artificial intelligence technologies in banking services: risks and opportunities. Economic Development and Analysis. https://doi.org/10.60078/2992-877X-2025-vol3-iss11-pp163-169

6.Rashid, S., Hameed, A., Shaikh, T. A., Warsi, A. Z., & Hameed, A. (2025). Impact of innovative financial services on banks' market share: The role of artificial intelligence. Center for Management Science Research.

7.Reuters. (2025, December). HSBC taps French start-up Mistral to supercharge generative-AI rollout. Reuter