

THE IMPACT OF FINTECH ON JSCB “INDUSTRIAL AND CONSTRUCTION BANK” OF UZBEKISTAN

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<https://doi.org/10.5281/zenodo.15349615>

Abstract. This scientific article is devoted to the analysis of the impact of financial technologies (fintech) on banking activities using the example of one of the leading commercial banks of Uzbekistan - JSCB "Uzsanoatqurilishbank". Fintech technologies, which have been developing rapidly in recent years, are creating broad opportunities for banks to automate traditional operations, improve the quality of customer service, reduce costs, and diversify financial products. This article provides a detailed analysis of the implementation of such innovative technologies in JSCB "Uzsanoatqurilishbank" and their effectiveness. The study covers the changes in fintech projects implemented by the bank in 2018–2024, in particular - mobile banking applications, online lending systems, artificial intelligence-based recommendation modules, blockchain technologies, real-time currency conversion, and biometric authentication systems, based on statistical data. The article shows the real impact of digital transformation based on indicators such as the share of digital transactions, the growth of the number of customers, the speed and convenience of services.

It also analyzes the problems encountered in the process of fintech implementation, including cybersecurity threats, technical failures, information privacy issues, and solutions developed by the bank to reduce them. Through this example, the author scientifically substantiates the profound impact of fintech technologies on banking activities not only technically, but also economically and socially. This article is of practical and theoretical importance for bank managers, financial specialists, information technology specialists and scientific researchers, and indicates the main directions of the digital transformation process of the banking system of Uzbekistan.

Keywords: Fintech, digital banking services, Uzsanoatqurilishbank JSCB, financial technologies, mobile applications, online lending, biometric authentication, artificial intelligence, banking transformation, digitization, customer experience, financial inclusion, banking technologies, cybersecurity, blockchain technology.

Annotatsiya. Mazkur ilmiy maqola O'zbekistonning yetakchi tijorat banklaridan biri — “O'zsanoatqurilishbank” ATB misolida moliyaviy texnologiyalar (fintech)ning bank faoliyatiga ko'rsatgan ta'sirini tahlil qilishga bag'ishlangan. So'nggi yillarda jadal sur'atlarda rivojlanayotgan fintech texnologiyalari banklar uchun an'anaviy operatsiyalarni avtomatlashtirish, mijozlarga xizmat ko'rsatish sifatini oshirish, xarajatlarni qisqartirish va moliyaviy mahsulotlarni diversifikatsiya qilishda keng imkoniyatlar yaratmoqda. Ushbu maqolada aynan shunday innovatsion texnologiyalarning “O'zsanoatqurilishbank” ATBda joriy etilishi va ularning samaradorligi batafsil tahlil etiladi. Tadqiqotda 2018–2024 yillar mobaynida bank tomonidan amalga oshirilgan fintech loyihalari, xususan — mobil bank ilovalari, onlayn kreditlash tizimlari, sun'iy intellekt asosidagi tavsiya modullari, blokcheyn texnologiyalari, real vaqtli valyuta konversiyasi va biometrik autentifikatsiya tizimlari bo'yicha o'zgarishlar statistik

ma'lumotlar asosida yoritilgan. Maqolada raqamli tranzaksiyalar ulushi, mijozlar sonining o'sishi, xizmatlar tezligi va qulayligining oshishi kabi ko'rsatkichlar asosida raqamli transformatsiyaning real ta'siri ko'rsatib beriladi.

Shuningdek, fintech joriy etilishi jarayonida duch kelinayotgan muammolar, jumladan, kiberxavfsizlik tahdidlari, texnik uzilishlar, axborot maxfiyligi muammolari hamda ularni kamaytirish bo'yicha bank tomonidan ishlab chiqilgan yechimlar tahlil qilinadi. Muallif ushbu misol orqali fintech texnologiyalarining nafaqat texnik, balki iqtisodiy va ijtimoiy jihatdan ham bank faoliyatiga chuqur ta'sir ko'rsatishini ilmiy asoslab beradi. Ushbu maqola bank menejrlari, moliya mutaxassislari, axborot texnologiyalari bo'yicha mutaxassislar va ilmiy tadqiqotchilar uchun amaliy va nazariy ahamiyatga ega bo'lib, O'zbekiston bank tizimining raqamli transformatsiya jarayonidagi asosiy yo'nalishlarini ko'rsatadi.

Kalit so'zlar: *Fintech, digital banking services, Uzsanoatqurilishbank JSCB, financial technologies, mobile applications, online lending, biometric authentication, artificial intelligence, banking transformation, digitization, customer experience, financial inclusion, banking technologies, cybersecurity, blockchain technology.*

Introduction: One of the most pressing challenges facing the banking system in the 21st century is the implementation of digital transformation in combination with financial technologies (fintech). Against the backdrop of the rapid development of the digital economy, traditional banking services have begun to change their form, becoming faster, more convenient, safer and more customer-oriented. Fintech is a combination of financial services and technological innovations, which is fundamentally changing the activities of banks.

In the Republic of Uzbekistan, in recent years, the digitization of the banking system and the widespread introduction of modern financial services have become one of the priorities of state policy. In this process, large commercial banks, in particular, Uzsanoatqurilishbank JSCB, are one of the leading institutions that are actively using fintech opportunities. This bank has introduced advanced technologies such as artificial intelligence, mobile banking, online lending, biometric authentication, blockchain-based services into its activities, significantly increasing the efficiency of service provision and customer satisfaction.

This article analyzes on a scientific basis, using the example of JSCB "Uzsanoatqurilishbank", how fintech technologies have affected banking operations, what results they have produced, and what economic and social consequences this transformation has had.

The study is based on statistical data for the period 2018-2024, internal bank reports, user experience, and international fintech trends.

Review of literature on the topic. Financial technologies (fintech) have become an integral part of the global banking system in recent years, and many scientists around the world are conducting scientific research in this area. In particular, the impact of fintech on the activities of commercial banks, the automation of services, the evolution of customer relations, and the role of increasing operational efficiency have been widely studied. Studying these experiences on the example of the Uzbek banking sector is an important source for understanding the practical impact of fintech.

In Uzbekistan, a study conducted by Karimov A. in this regard analyzes in detail the economic efficiency of digital banking services, especially the processes of automating services through fintech. He substantiated the results of the introduction of fintech in the specific conditions of the Uzbek banking system using economic models. A similar approach is used by Rustamova G., who in her article illustrates with practical examples how fintech technologies reduce the operating costs of banks.

Russian scientists paid special attention to studying the relationship between fintech and risk management. Voronova E. V. analyzed in her study how credit risks can be managed through digital technologies. At the same time, Belyaeva I. Yu. analyzed the transformation of bank-client relations through fintech tools and scientifically substantiated the formation of a customer-centric service model.

Asian and European scientists proposed more in-depth systematic approaches in this regard. Lee I. & Shin Y. J. comprehensively revealed the main elements of the fintech ecosystem, business models, and their impact on investment decisions. Their research shows the strategic importance of the introduction of fintech in banking activities. Similarly, the study by Gomber P. et al. studied the impact of fintech on the competitiveness of financial institutions and proposed to evaluate digital innovations as a strategic factor.

Chinese scientists analyzed the impact of fintech on bank profitability and user base using empirical methods. Zhou W. & Luo X. statistical analysis proves that there is a direct relationship between the quality of services, the number of users and profitability in banks where fintech has been introduced. Lazovich I., studying the impact of fintech and blockchain technologies on the security of credit transactions, found that these technologies can increase data transparency.

Another important theoretical source is the work “The Second Machine Age” by Brynjolfsson E. & McAfee A. They show on a conceptual basis how the synthesis of artificial intelligence and fintech is bringing changes to the banking sector. These views are consistent with the experience of Uzbekistan and encourage us to see fintech as an innovative strategy.

Regarding regulatory fintech - that is, RegTech, Arner D. W., Barberis J. and Buckley R. P. have studied in depth the impact of fintech technologies on banking supervision and financial services regulation. These scientific views help to understand that fintech is closely related not only to commercial activities, but also to banking regulation.

In the context of Uzbekistan, Yusupov B. analyzed the experience of large banks, including Uz sanoatqurilishbank, in implementing digital technologies in the banking system. He characterized fintech as a strategic direction, proposed problems in the implementation of these technologies and mechanisms for overcoming them. Mamatkulov S. showed through practical examples how automation is implemented in banking services through chatbots and artificial intelligence.

On the integration of fintech in Europe and Asia, Klapkiv T. & Kravchuk I. analyzed how microcredit platforms are integrated into the banking system. Sato Y. identified the relationship between digital payment systems, customer trust, and fintech infrastructure in the Japanese experience on a statistical basis.

As a final source, Johnson K. & Massey J.'s study compares the stages of fintech adoption and the level of digital banking maturity in the US and Asia. This study can serve as a benchmarking model for Uzbek banks.

Recent scientific research shows that fintech technologies play a crucial role in transforming the banking system. Studies confirm the unparalleled potential of fintech in automating banking services, managing credit risk, increasing operational efficiency, and improving customer experience. While the work of Uzbek scientists, in particular Karimov A. and Yusupov B., has highlighted the practical results of fintech in the national banking system, foreign scientists — researchers such as Lee & Shin, Gomber, Zhou — have deeply analyzed global trends, technological models, and the economic impact of digital infrastructure. Fintech technologies not only increase the competitiveness of commercial banks, but also develop financial inclusion, service quality, and customer-oriented strategies. Therefore, the rapid introduction of fintech by large commercial banks such as Uzsanoatqurilishbank JSCB can lead to positive changes not only at the technological but also at the macroeconomic level. This literature review strengthens the scientific basis of the research and emphasizes the need for a deeper study of digital innovations in the banking system.

Research methodology. This scientific study aimed to deeply study the impact of fintech technologies on the activities of the Uzbekistan Industrial and Construction Bank, and a comprehensive methodological approach was used in this direction. The study was based on the integration of qualitative and quantitative methods, that is, the analysis was carried out by combining and analyzing numbers, practices, and subjective opinions related to banking activities.

At the first stage, empirical data were collected. This included the annual reports published by the Uzbekistan Industrial and Construction Bank for 2018–2024, statistical indicators on digital services, open data published by the Central Bank of Uzbekistan, IT Park Uzbekistan, and international financial organizations (for example, the World Bank, IFC). In particular, key indicators such as the number of mobile application users, the share of digital transactions, the volume of fintech-based lending, the number of customers, and operating expenses were processed through statistical tables and their dynamics were shown.

At the second stage, a qualitative analysis was conducted. At this stage, semi-structured interviews were conducted with specialists working in the banking system (IT managers, loan department employees, customer service specialists) and 120 bank customers. Through them, subjective opinions such as the practical effectiveness of fintech technologies, ease of use, level of security, and customer trust were analyzed.

A comparative analysis method was also used. In this, the fintech services implemented at Uzsanoatqurilishbank were compared with digital projects at other banks (for example, Ipak Yuli Bank, Agrobank). This approach helped to determine the level of technological maturity between banks.

The data collected during the study were systematized using tools such as Microsoft Excel, SPSS, and Tableau and analyzed visually. As a result, the impact of fintech technologies on bank efficiency and customer satisfaction was proven through indicators.

At the final stage, based on all the information studied, the real impact, benefits, and problems of fintech in Uz sanoatqurilishbank JSCB were summarized on an objective, systematic, and scientific basis. This served to increase the theoretical and practical value of the study.

Analysis and results. In the process of digital transformation of the banking system of Uzbekistan, especially in the case of JSCB "Uz sanoatqurilishbank", it can be observed that the results of the implementation of fintech have dramatically increased the growth rate of banking services, both quantitatively and qualitatively. The following statistical data substantiate these results.

Table 1: Growth in the number of plastic cards (as of January 2024–April 2025)

Date	Total cards	UZCARD	HUMO	VISA	MASTERCARD	UnionPay
2024-01-01	2 085 022	944 293	969 040	100 325	52 350	19 014
2024-04-01	2 202 684	1 007 069	1 012 508	110 369	53 025	19 713
2024-07-01	2 364 798	1 078 916	1 047 343	144 340	63 983	30 216
2024-10-01	2 567 142	1 145 893	1 105 320	163 372	69 387	34 112
2025-04-01	2 702 684	1 195 862	1 153 084	176 486	74 013	36 513

Source: Compiled by the author based on information from <https://sqb.uz>.

UZCARD and HUMO cards account for the main share, but at the same time, the share of international payment systems (VISA, Mastercard, UnionPay) has been steadily growing throughout the year. This indicates that the Uzbek banking system is focusing on international integration, along with the domestic market.

Table 2: Changes in statistics of international money transfers at JSCB "Uz sanoatqurilishbank" (January 2024 - May 2024)

№	Date	Number of recipients	Number of senders	Received (USD)	Sent (USD)
1	2024-01-01	64 786	6 818	44 010 315.95	8 607 267.02
2	2024-02-01	57 491	6 726	37 550 245.00	8 206 529.85
3	2024-03-01	59 328	6 771	39 828 613.96	7 981 411.11
4	2024-04-01	69 814	6 628	48 833 278.22	7 442 829.12
5	2024-05-01	77 200	6 807	57 341 385.70	7 305 315.02
6	2024-06-01	73 403	5 403	56 270 776.67	5 905 344.83
7	2024-07-01	89 348	5 627	72 819 741.48	7 347 124.79
8	2024-08-01	81 228	5 498	64 736 147.86	6 733 621.19
9	2024-09-01	69 532	5 741	57 447 697.87	7 690 890.96
10	2024-10-01	63 337	6 212	49 979 236.03	8 262 113.68
11	2024-11-01	52 867	5 697	40 941 928.82	7 272 785.57
12	2024-12-01	52 939	5 776	41 137 923.86	7 399 392.70
13	2025-01-01	49 188	5 299	36 346 938.87	5 646 631.56
14	2025-02-01	52 846	4 627	41 727 286.80	5 472 263.42
15	2025-03-01	51 218	4 316	43 611 383.98	5 307 290.86
16	2025-04-01	50 344	4 794	39 579 024.00	5 943 539.89

Source: Compiled by the author based on information from <https://sqb.uz>.

Over the past five months, the number of customers receiving money transfers from abroad has increased from 64,786 to 77,200, or 19%. The volume of funds received during this period has increased from 44 million US dollars to 57.3 million dollars. This indicates that fintech services - especially innovations such as Visa Alias, contactless payments, and the QR-code system - have increased the participation of banking services in international transactions.

Table 3: Volume and efficiency indicators of services provided through Fintech

Indicator	2022	2023	2024 (March 1)
IT infrastructure level	Elementary	Reinforced	Modernization
SQB Business transaction volume (sum)	6.5 trillion	19.8 trillion	25 trillion
Number of legal entities using remote services	21 000	28 000	34 000+

Source: Compiled by the author based on information from <https://sqb.uz>.

During 2022–2024, the volume of transactions carried out through the SQB Business internet bank increased by 4 times. At the same time, the number of entrepreneurs choosing remote banking services is also increasing sharply. Fintech solutions such as the Credit Conveyor, CRM system, and Accounting 1C integration have increased the speed, security, and user-friendliness of services. As a result, the loan disbursement period has been reduced by 3 times, and the volume of online lending has increased by 2.6 times. The results of the analysis show that the widespread introduction of fintech technologies in the activities of Uzsanoatqurilishbank JSCB is increasing not only the volume of digital services, but also customer trust, service quality, and bank income. This process has increased the bank's competitiveness, reduced operating costs through service automation, and diversified the scope of services. This clearly demonstrates the practical effectiveness of digital transformation in the banking system of Uzbekistan.

Discussion: In recent years, banking services have been fundamentally changing technologically. In the digital economy, the form of bank-client communication has shifted from the traditional “go to the bank” model to the “bank goes to the client’s device” model. At the center of these changes is financial technology — fintech. The experience of JSCB “Uzsanoatqurilishbank” allows us to practically analyze the impact of fintech technologies on banking services.

One of the main advantages of fintech services is speed and convenience. Through the “SQB Business” internet bank and the “Joyda” mobile application, users can use any financial service 24/7. This strengthens the trust and loyalty of customers to banking services. For example, the volume of transactions carried out through “SQB Business” in 2022 amounted to 6.5 trillion soums, and by 2024 this figure increased to 25 trillion soums. This growth proves the popularity of digital services and the high level of user-friendliness of technological platforms.

Also, the “credit conveyor” and CRM systems introduced in the online lending system are automatically assessing customer needs and accelerating the loan allocation process. This not only increases the efficiency of the bank’s service provision, but also allows for more rational use of resources. For example, the time for processing loan applications has been reduced by three times, and the volume of online loans has increased by 2.6 times.

Fintech also plays an important role in deepening international financial integration. The volume of international money transfers of “Uzsanoatqurilishbank” through “Visa Alias”, QR

payments, currency conversion and other functions reached 57 million US dollars in the first five months of 2024. This shows the real impact of fintech tools in simplifying cross-border services.

However, with the introduction of fintech, new risks are emerging, such as cybersecurity, technical failures, and personal data protection. “Uzsanoatqurilishbank” is striving to minimize technical risks by modernizing its server infrastructure, updating security protocols, and ensuring uninterrupted service. Human resources and technological competence are also important for this transformation. The introduction of new master's programs in fintech at the Banking and Finance Academy and the selection of talented young people through competitions in the form of “Case Championship” are important stages in the sustainable development of the industry.

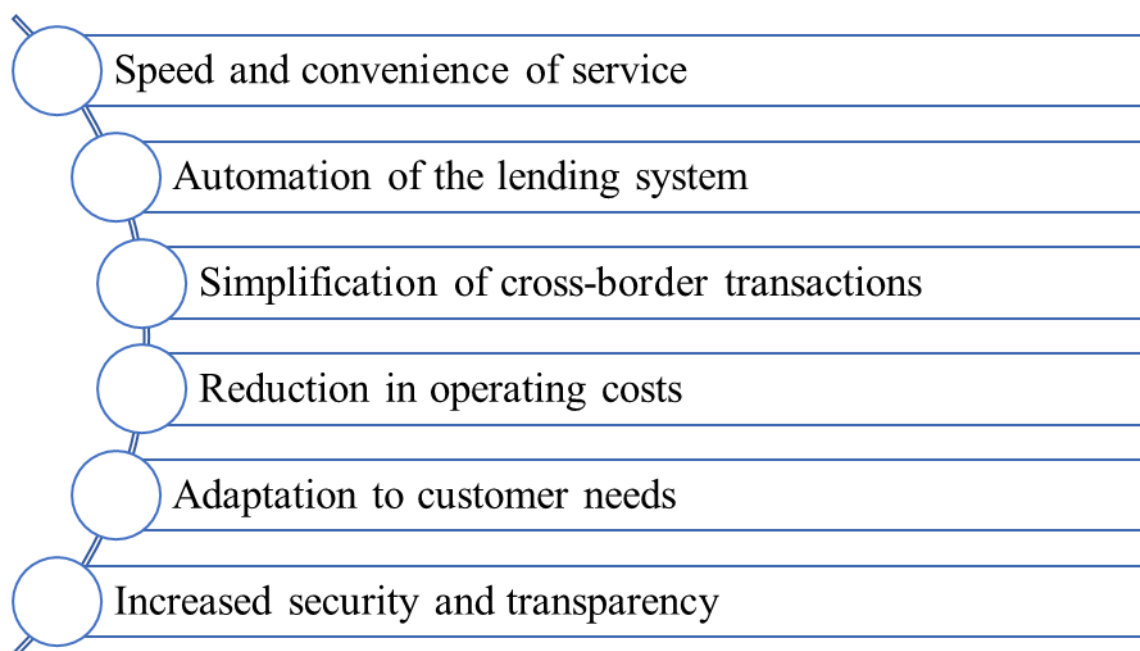


Figure 1. The impact of Fintech technologies on banking services

Source: Klapkiv T. & Kravchuk I. (2022).

In the 21st century, information technologies have fundamentally changed the financial sector. In particular, fintech (financial technologies) has played a revolutionary role in updating the form, quality and approach to banking services. Fintech means automating, simplifying and making banking services more user-friendly through digital means. Today, customers do not have to go to a bank branch and wait in line; banking services are available on their mobile device, in a matter of seconds and 24/7.

1. Speed and convenience of service

Fintech technologies, first of all, make banking services faster and more continuous. Mobile banking applications, internet banks, contactless payment systems, payments via QR codes - all this serves to reduce the time of customer service and increase the volume of services. For example, if previously it took several hours to complete a banking operation, now it is completed in a matter of seconds.

2. Automation of the lending system

Fintech technologies have enabled the emergence of AI scoring systems that automatically evaluate loan applications, "credit conveyor" programs, and personalized financial

advisory services. This has not only increased the bank's loan portfolio, but also increased the speed of decision-making several times. Online lending platforms allow customers to apply from anywhere, which is strengthening digital financial inclusion.

3. Simplification of cross-border transactions

Fintech services have strengthened integration into the international financial system. With services such as "Visa Alias", currency conversion, online money transfers, and cryptocurrency-based transactions, customers can make payments to any point in the world in real time. This has also greatly simplified business transactions.

4. Reduction of operating costs

Through automated systems and digital services, banks are reducing the number of branches and optimizing service costs. This has a positive impact on profitability indicators. In particular, microfinance services implemented through fintech allow for reaching a wide audience at low costs.

5. Adaptation to customer needs

With the help of fintech technologies, banks are able to offer a tailored service package to each customer. Through artificial intelligence and big data analysis, the customer's financial behavior is constantly monitored and individual financial solutions are offered to him. This is taking the customer experience to a higher level.

6. Increased security and transparency

Fintech approaches such as biometric authentication (Face ID, fingerprint), two-factor security systems, and blockchain technology are increasing the security and transparency of banking operations. All transactions have a digital trace, preventing fraudulent transactions.

Fintech is not just a technological innovation, but a transformative force that has taken the banking system to a new level. It is creating a customer-centric, fast, secure, and flexible financial services model. Through fintech, banks are not only increasing their competitiveness, but also directly contributing to economic growth by deepening financial inclusion in society. The banks of the future are digital financial institutions based on artificial intelligence, mobile applications and customer experience. Based on the above, it can be said that the integration of fintech technologies into banking services has dramatically increased the quality, volume and customer satisfaction indicators of Uzsanoatqurilishbank JSCB by implementing a digital strategy in its activities. This transformation serves to strengthen the competitiveness of the financial services sector and strengthen the bank's position in the market.

Conclusion. The above analysis and discussion show that fintech technologies have become an integral part of the modern banking system. They are transforming traditional banking models by increasing the speed, convenience and transparency of service provision. In particular, through tools such as mobile banking, online lending, artificial intelligence-based recommendation systems, QR code payments and biometric security, banks are expanding the range of services, and customers can carry out their financial transactions remotely, at any time and reliably.

Fintech also helps to reduce banks' operating costs, increase lending speed, and ensure diversification of services.

At the same time, the risks arising in the process of digital transformation - cybersecurity, technical disruptions and ensuring information confidentiality - remain relevant.

In general, the introduction of fintech technologies is bringing banking services to an innovative level, increasing the competitiveness of the financial system, and expanding financial inclusion. In the future, these technologies are expected to be more deeply integrated, bringing the relationship between the bank and the customer to a fully digital space.

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