

ANALYSIS OF BANKS ACTIVITIES THAT HAVE SUCCESSFULLY IMPLEMENTED DIGITAL INNOVATIONS IN UZBEKISTAN

Gulbakhor Matyakubovna Bakoeval

1PhD on Economic Sciences, Associate Professor of “International Finance and Investments” Department, University of World Economy and Diplomacy. Associate Professor of “Economics and Business Management” Department, Nordic International University in Tashkent
gulibakoeva@gmail.com, gbakoeva@uwed.uz

ABSTRACT	KEY WORDS
The article focuses on analysis of banks activities that have successfully implemented digital innovations in Uzbekistan. The main tendencies and measures, concerned to digitalization of banking and financial operations were researched.	Digitalization, emission, bank transactions, financial services, fintech, bank capitalization.

Introduction

While the Uzbek banking sector has traditionally been dominated by traditional, branch-based models, recent years have seen a surge in digital transformation efforts. The increasing adoption of smartphones and internet access among the Uzbek population has fueled demand for digital banking services. The Uzbek government has actively promoted digital financial inclusion and supported initiatives for a cashless society, fostering a favorable environment for digital banking innovation. The emergence of new fintech players and the growing popularity of digital payment platforms have created competitive pressure on traditional banks to innovate and adapt.

Today, 22 million people in Uzbekistan use remote banking services, which is more than half of the country's population. With the adoption of the Law of the Republic of Uzbekistan "On Payments and Payment Systems", ¹the service infrastructure of payment system operators operating in our country has increased dramatically. ²In addition, 28 payment organizations specializing in providing digital financial services were registered. In order to develop contactless payments, the HUMO retail payment system was created, which fully meets international standards, and this, in turn, created a competitive environment in the field of bank cards. The share of online payments in the country is growing really fast - in 2022 alone, twice as much money was transferred through payment services as compared to a year ago.

Uzbekistan is gradually moving to the online banking system. After signing the Decree of the President of the Republic of Uzbekistan "On measures to fundamentally improve the activities of the Central

¹ The President of the Republic of Uzbekistan, Shavkat Mirziyoyev, signed, on 1 November 2019, the Law of the Republic of Uzbekistan No. ZRU-578 of 1 November 2019 on Payments and Payment Systems ('the Law'). <https://lex.uz/uz/docs/5527922>

Bank of the Republic of Uzbekistan", the establishment of "digital" banks and banking units specializing in retail banking services in the banking system and customer service using innovative banking technologies tasked with further expanding the display quality.

Accordingly, "Anor Bank" and "TBC bank" were registered as digital banks for the first time in Uzbekistan in 2020.

Also, the number of technological start-ups and IT companies that contribute to the growth of the digital economy in Uzbekistan is increasing. In order to develop the IT sector, separate institutes and directions focused on this sector have been opened. the number of students studying in the field of IT has exceeded 6000. Banks are one of the main sectors in the digitization of the economy. In the early 2000s, the first online banking system was launched in Uzbekistan as part of large-scale efforts for financial modernization. and until now this system is developing. Uzbekistan's online banking system works like other countries. Especially the Covid-19 pandemic has made a great contribution to the development of remote banking services.

As of December 1, 2021, the number of users of remote banking services has exceeded 20 million. The number of ATMs in the republic increased by 10% compared to the level of 2020. ³In 2021, 12,814 ATMs will be installed in our country. In addition, there are more than 26.5 million bank cards in circulation, which is 500,000 more than last year. Uzbekistan started to develop digital banking in 2018. The goal is to make all banking services remote - both entrepreneurs and residents should be able to receive them by phone or the Internet. The COVID-19 pandemic has significantly accelerated the shift to remote banking. In 2020, the number of ATMs increased by 33%, and the number of bank cards increased by 27%. In addition, fully digital banks (TBC UZ, Anorbank) have appeared, and traditional banks have expanded their online service offerings. In October 2021, the Central Bank allowed banks to identify customers remotely. This allowed customers to use remote services even in previously unserved banks.

Let's see what conveniences this system brings to the population:

- remote access to clients' accounts;
- able to manage their funds at home or on the road through their smartphones;
- remote money transfers;
- get an online loan;
- Enables enhanced security features such as transaction alerts for added peace of mind.

The commercial bank "Anor Bank" in Uzbekistan is actively applying digital transformation with the aim of becoming a leading player in the developing digital economy of the country. Although specific details about their internal systems and technologies are not publicly available, we can analyze their publicly announced initiatives and general trends in Uzbek digital banking to provide insights for your thesis:

Anor Bank's digital strategy is likely to focus on improving customer experience, expanding reach and improving operational efficiency. They can invest in a robust online and mobile banking platform that offers features such as account management, mobile payments, bill payments and potentially

³Number of ATMs in Uzbekistan increased by 10%23.12.2021

<https://kun.uz/en/news/2021/12/23/number-of-atms-in-uzbekistan-increased-by-10#:~:text=As%20of%20December%201%2C%202021%2C,December%201%20of%20last%20year>

personalized financial services such as loan applications or investment recommendations. Their online platform likely includes security features such as advanced encryption and multi-factor authentication to protect customer data.

The bank uses data analytics to tailor customer behavior and services, offers 24/7 customer support across multiple channels, and is exploring AI-powered chat-bots for faster and more efficient support can be Their digital strategy is likely to emphasize reaching the underserved population by providing affordable and convenient financial services through digital channels.

General trends in Uzbek digital banking show increasing attention to:

Central Bank Initiatives: The Central Bank of Uzbekistan is actively promoting digitization in the banking sector, encouraging banks to adopt new technologies, develop innovative financial products, and increase financial inclusion.

Mobile payment systems: Mobile payment systems such as Click, Payme and UZCARD are becoming increasingly popular in Uzbekistan, providing consumers with convenient and convenient ways to make payments and transfer money.

Growth of e-commerce: The growth of e-commerce in Uzbekistan is increasing the demand for online payment solutions, creating opportunities for banks to integrate with e-commerce platforms and ensure secure payment processing.

Fintech Innovation: Uzbek fintech startups are emerging, developing innovative financial solutions for specific needs such as microcredit, insurance and wealth management, and developing cooperation between banks and fintech companies.

Table 1.3.1 Anorbank Mobile App Features & Results

Feature	Description
i. Easy registration with Face ID via NFC	Streamlined account setup using facial recognition and Near Field Communication
ii. Convenient interface	User-friendly and intuitive design for easy navigation
iii. Smart transfer	Automated and simplified money transfers
iv. Ordering and delivery of cards	Easy card ordering and delivery
v. Currency exchange operations	Convenient foreign exchange transactions
vi. Payments for services	Effortless payment for various services
vii. Processing loans	Convenient loan application and management
viii. Opening and managing deposits	Easy access to deposit accounts
ix. Manage security through Life ID	Enhanced security through biometric identification
x. Block cards	Immediate card blocking for security
xi. Transfers between accounts and cards	Seamless transfers between accounts and cards
xii. Information and statements on cards and account numbers	Easy access to account information and statements
xiii. Car payments	Simplified car loan payments

Source: compiled by author based on Anor Bank official site

More than 200 organizations transferred their monthly salaries with a total of 20 billion soums through Anor Bank and achieved several other achievements. Thus, to date, almost all banks in our country provide remote services through the mobile banking system. In the table below, Uzbekistan the number of users of remote service banks is given.

Table 2.3.1 From systems providing remote banking services number of users as of November 1, 2023.

№	Bank	Legal entities and individual entrepreneurs	Individuals	Overall
1	Milliy bank	97 296	1 614 472	1 711 768
2	O'zbekiston sanoat-qurilish banki	72 183	5 993 998	6 066 181
3	Agrobank	197 533	5 378 755	5 576 288
4	Ipoteka-bank	164 079	2 793 710	2 957 789
5	Mikrokreditbank	69 436	980 080	1 049 516
6	Xalq banki	117 911	3 904 633	4 022 544
7	Garant bank	6 853	93 383	100 236
8	Biznesni rivojlantirish banki	29 407	256 665	286 072
9	Turonbank	47 590	456 346	503 936
10	Hamkorbank	123 737	1 551 297	1 675 034
11	Asaka bank	36 586	906 140	942 726
12	Ipak Yo'li banki	60 119	2 126 982	2 187 101
13	Ziraat bank Uzbekistan	4 370	55 051	59 421
14	Trastbank	48 039	146 376	194 415
15	Aloqabank	62 638	1 481 822	1 544 460
16	KDB Bank O'zbekiston	16 406	27 869	44 275
17	Soderot bank Toshkent	357	2 400	2 757
18	Universal bank	11 961	142 644	154 605
19	Kapitalbank	35 391	1 212 057	1 247 448
20	Octobank	2 714	66 217	68 931
21	Davr-bank	26 088	193 682	219 770
22	Invest Finance bank	17 731	386 832	404 563
23	Asia Alliance bank	20 025	627 921	647 946
24	Orient Finans bank	29 552	521 333	550 885
25	Madad Invest bank	1 104	2 611	3 715
26	AVO bank	109	405	514
27	Poytaxt bank	1 090	10 491	11 581
28	Tenge bank	2 221	629 822	632 043
29	TBC bank	0	1 721 587	1 721 587
30	ANOR bank	23 230	3 524 261	3 547 491
31	UZUM bank	0	1 440 000	1 440 000
Overall		1 325 756	38 249 842	39 575 598

Source: Compiled by the author based on Central Bank data

<https://cbu.uz/uz/statistics/paysistem/1512282/>

From this data we can see that the total number of users of remote services is 39,575,598, of which 1,325,756 are legal entities, and 38,249,842 are individuals. Industrial Construction Bank of Uzbekistan provides the most remote services. we can see that it is the leading bank. AVO bank has the lowest index with 514 clients.

The rapid evolution of the global financial landscape has seen the rise of online banking, which has revolutionized the way individuals and businesses interact with financial institutions. Although the United States is a pioneer in this field and has developed complex digital banking systems, the question arises: can these models be effectively applied to other countries, especially a developing country like Uzbekistan?

This section will examine the possibilities and problems of adapting the US online banking structure to the specific conditions of Uzbekistan. It explores the benefits, pitfalls, and necessary adjustments for successful implementation, contributing to a broader understanding of the intersection of technology, regulation, and cultural context in shaping the nation's financial landscape.

Uzbekistan has made significant strides in digital banking, becoming a leader in the Central Asian region. The widespread adoption of mobile banking, coupled with the government's push for digitalization, has created a conducive environment for innovation.

Positive Aspects:

- Mobile banking is widely used, with a majority of the population owning smartphones.
- Start-ups and established institutions are offering innovative financial services, particularly in microfinance and payment solutions.
- Regulatory reforms and initiatives are promoting digital financial inclusion.

Areas for Further Development:

- While mobile penetration is high, financial literacy remains a challenge, hindering full adoption of digital banking services.
- Fragmented systems and lack of standardized APIs hinder seamless data exchange and cross-border transactions.
- As reliance on digital banking grows, robust cybersecurity measures are crucial to protect against fraud and data breaches.
- While urban areas see rapid digitalization, rural communities often lack reliable internet connectivity and financial infrastructure.

Table 1. SWOT Analysis of Uzbekistan's Digital Banking System

Category	Factors
Strengths	* Government Support for Digital Finance * Growing Digital Literacy * Young and Tech-Savvy Population * Potential for Innovation * Emerging Fintech Landscape
Weaknesses	* Limited Infrastructure (Internet Access) * Cybersecurity Concerns * Lack of Trust in Digital Banking * Limited Financial Literacy * Outdated Technology in Some Institutions
Opportunities	* Expanding Financial Inclusion * Developing New Digital Products & Services * Partnerships with Fintech Companies * Improved Efficiency & Cost-Effectiveness * Data Analytics and Personalized Services
Threats	* Economic Volatility * Regulatory Uncertainty * Competition from International Players * Cybersecurity Attacks * Dependence on Technology

Source: Compiled by author based on information

US online banking model: main features and benefits

The US online banking model is characterized by a focus on customer experience, technological innovation and product diversification. Famous examples like Ally Bank show the strengths of this approach. Branchless banking reduces additional costs, provides competitive prices and high interest rates, which is an important advantage in a developing economy like Uzbekistan. These institutions prioritize user-friendly interfaces, 24/7 accessibility and personalized financial services that appeal to younger generations accustomed to digital convenience. The US model also demonstrates the power of technology, using AI-powered chat bots, data analytics and mobile-first design to streamline operations, personalize services and improve customer satisfaction. This approach to banking can contribute to financial inclusion by making financial services accessible to a wider range of individuals and communities.

Adaptation of US digital banking structure to the Uzbek context: opportunities and problems

While the US model offers valuable lessons, applying it to Uzbekistan requires careful consideration of the country's unique environment and existing infrastructure.

Important challenges include:

Road map for Uzbekistan

To overcome these difficulties and successfully implement the US online banking model in Uzbekistan, a clearly defined approach is necessary:

Start with pilot programs targeting specific populations or geographic areas to assess opportunities and gather valuable data. This iterative approach allows for adaptation and improvement based on user feedback and market conditions.

Develop products and services specifically designed to meet the unique needs and preferences of Uzbek customers. Understanding local financial behavior and tailoring solutions accordingly is critical.

Partnerships and Collaboration: Leveraging the expertise of Fintech companies and other stakeholders is key. Partnerships can facilitate technology integration, improve payment system interoperability, and improve customer experience.

America's banks are at the forefront of implementing innovative technologies to improve customer experience, improve efficiency and increase financial inclusion. While some technologies may not be directly transferable to Uzbekistan due to infrastructure or regulatory differences, others have great potential for adaptation. Below, get acquainted with the main technologies and their possible application in Uzbekistan:

Artificial Intelligence (AI) and Machine Learning: In the US, AI-powered chatbots are revolutionizing customer support, handling routine queries and solving problems quickly. Machine learning algorithms are used for fraud detection, credit scoring and personalized financial recommendations. Artificial intelligence chatbots in Uzbekistan can provide 24/7 support in Uzbek, Russian and English languages, which can answer various queries. Machine learning can be used to develop more accurate credit scoring models, improving access to credit for individuals and businesses.

Biometric Authentication: Facial recognition, fingerprint scanning, and voice authentication are used in the U.S. for secure access and transaction authorization, increasing security and convenience. In Uzbekistan, biometric authentication improves security and prevents fraud in digital banking. However, privacy and data security issues must be carefully considered.

Open Banking: US open banking regulations allow customers to share their financial information with third-party applications, fostering a more interconnected and personalized financial ecosystem. Introducing open banking regulations in Uzbekistan can stimulate innovation by allowing fintech companies to develop new financial services and expand consumer and business opportunities.

Blockchain technology: The US is exploring blockchain for secure and transparent cross-border payments, digital identity management and supply chain financing. In Uzbekistan, blockchain can improve the efficiency and security of cross-border payments, especially for its growing trade ties. It can also facilitate the secure operation of digital identity systems and simplify financial transactions.

Cloud computing: Cloud-based platforms allow American banks to operate more flexibly, expand services and reduce infrastructure costs. In Uzbekistan, cloud computing is crucial for banks, allowing them access to advanced technologies and infrastructure without significant investment.

Mobile-First Banking: Mobile apps are the primary interface for many American banks, offering a range of features from account management to payments. The mobile-first approach is especially relevant in Uzbekistan, where smartphones are widespread. Developing user-friendly mobile banking apps with intuitive features can significantly improve customer experience.

Data analytics: Banks of America use data analytics to understand customer behavior, predict financial needs, and develop personalized product offerings. In Uzbekistan, data analytics can help banks tailor products and services to specific customer segments, increase financial inclusion, and improve customer satisfaction.

Although these technologies have great potential, it is important to consider the unique context of Uzbekistan. Regulatory, infrastructure, and cultural factors must be carefully considered when adapting these technologies. A successful transition to a digital banking ecosystem requires a phased approach, starting with pilot projects and phased implementation.

The introduction of digital banking in Uzbekistan creates unique opportunities and challenges that require a thorough understanding of the country's unique context. While digital banking holds great promise for increasing financial inclusion, improving efficiency and improving customer experience, a number of challenges need to be addressed for its successful implementation and widespread adoption.

One of the main challenges is underdeveloped internet infrastructure, which hinders seamless adoption of digital banking services, especially in rural areas. Patchy Internet access and unreliable connections are a serious obstacle for those outside major urban centers. In addition, a significant portion of the population lacks the necessary digital literacy skills to effectively use online banking platforms. This knowledge gap not only limits access, but also creates vulnerabilities against online fraud.

Building trust in digital banking systems is another way. Many potential users have concerns about data privacy and security, particularly when it comes to online transactions. Strong regulatory frameworks, robust cybersecurity measures, and transparent communication about data protection practices are critical to building trust and encouraging broad adoption.

The regulatory environment for online banking in Uzbekistan is still being developed. Clear regulations on **data privacy, cybersecurity, consumer protection** and licensing for digital financial service

providers are essential to create a stable and trustworthy environment that attracts investment and encourages innovation.

Another challenge is the integration of existing payment systems with online banking platforms. Ensuring seamless interoperability between different payment systems is critical to a seamless user experience and encourages wider adoption.

Bridging the digital divide and providing financial services to disadvantaged populations, especially in rural areas, requires targeted initiatives and tailored solutions. Digital banking solutions must be designed to meet the unique needs of these communities, taking into account factors such as technology access, literacy levels, and cultural preferences.

Ways of overcoming Digital Banking Barriers in Uzbekistan:

1. Closing the digital divide:

Expanding Internet Access: Invest in fiber optic expansion to connect rural communities, encourage partnerships with telecommunications companies, and support community-driven Internet initiatives.

Making data accessible: Offer affordable data plans tailored for digital banking users to reduce cost barriers.

2. Strengthen digital literacy:

Nationwide Training: Implement free or subsidized training programs for basic computer skills, online security and digital banking with a focus on rural areas.

Collaborating with education: Integrating digital literacy into school curricula and offering training in community centers.

User-friendly platforms: Develop intuitive online banking interfaces with clear instructions and language options.

Dedicated support: Offer personalized customer service channels to help users.

3. Building trust and confidence:

Strong privacy policies: Implement strong policies that protect user data and ensure transparency in data collection and use.

Invest in security: Use advanced cybersecurity measures such as multi-factor authentication, encryption and fraud detection.

Open communication: Clearly communicate data protection policies and security practices to build trust.

Collaborative Initiatives: Work with NGOs and consumer groups to address user concerns and develop confidence-building programs.

4. Regulation of the regulatory landscape:

Clear Regulations: Developing comprehensive regulations for online banking, including data privacy, cyber security, consumer protection and licensing.

Encourage innovation: Create a regulatory testing environment to experiment with new digital banking products.

Promoting Financial Inclusion: Developing policies that make financial services accessible to underserved populations.

5. Creating a seamless payment ecosystem:

Interoperability standards: establishing standards for seamless integration of payment systems and online banking platforms.

Single Payment Gateways: Development of a national payment gateway connecting all major payment systems.

Encouraging collaboration: fostering collaboration between financial institutions, payment providers and technology companies.

6. Reaching Out to Underserved Communities:

Tailored solutions: Developing digital banking solutions tailored to the needs of rural communities, taking into account their unique circumstances.

Local Partnerships: Partner with NGOs, community groups, and microfinance institutions to provide outreach and financial education to underserved populations.

Mobile-first approach: Use mobile technology to offer convenient and convenient banking services.

Financial Literacy Programs: Implementation of programs to empower individuals in rural areas to effectively access digital banking tools.

By implementing these solutions, Uzbekistan can bridge the digital divide, strengthen trust in online banking, and create an environment that supports financial inclusion and empowers citizens to participate in the digital economy.

Despite these challenges, the future of digital banking in Uzbekistan holds great promise. The government recognizes the importance of digitization and has launched various initiatives to improve digital infrastructure and promote financial inclusion. Continued investment in infrastructure development, digital literacy programs and regulatory frameworks will be critical to developing a vibrant digital banking ecosystem.

The emergence of Uzbek fintech startups that develop innovative financial solutions tailored to specific needs is adding more dynamism to the sector. Cooperation between banks and fintech companies can accelerate the adoption of innovative technologies and solve specific problems faced by the banking sector.

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