

Improving Remote Banking Services in the Process of Digital Transformation

Zokir Mamadiyarov

DSc, Professor, International School of Finance and Technology Institute, Uzbekistan

Abstract: This article sheds light on analyzes the problems of improving the remote provision of banking services in the process of digital transformation of banks, the problematic cases of remote provision of banking services during and after the COVID-19 pandemic. The results of this study will be important in studying the factors influencing the development of remote banking systems and overcoming problematic situations.

Key words: Remote banking services, risk, digital assistants, digital banking, biometric technologies, mobile applications, blockchain technology, artificial intelligence, neobank.

INTRODUCTION

According to the practice of developed countries, commercial banks are developing convenient financial solutions for problematic situations in the banking system by providing remote banking services and digitizing banking services. In particular, the global banking system is also developing with digital assistants, digital banks, biometric technologies, mobile applications, blockchain technology, artificial intelligence and other modern financial technologies. As a result, with their help, the bank and its customers without physical contact, the ability to manage funds without going to the bank building, to provide services to a large number of customers without queues, and to save time and costs has increased. The increase in remote banking channels and the rapid development of the system as a result, the importance of digital banks operating without opening branches and branches increases, the development of biometric technologies with increased security, the popularization of blockchain technology with strong transparency, mobile applications with convenient navigation becoming the choice of users, automatic analysis of data with the help of artificial intelligence, and cost and time savings in service. This requires banks to carry out complex scientific and practical research on innovative and technological development of remote banking services.

Literature review.

Associate Professor Cohen Lewis of Cardiff University studied the effect of risk on willingness to use remote banking services and found that there is a positive relationship between willingness and risk [1]. It is important for people to consider risk when adopting new technology [2]. The risk factor in remote banking services is considered very important because remote banking services have more risk compared to other services due to the remote connection to bank accounts. L.Vessels and J.Drennan studied the factors affecting the use of remote banking services and concluded that risk had a negative effect on the use of these services. That is, the higher the risk in the use of new technologies, the more negative the impact on users [3].

In order to remain competitive in a changing banking environment, banks need to continuously innovate and improve. In addition, they are required to provide user-friendly platforms, increase the offer of digital products, provide transparent and fast service [4].

In our opinion, the wide introduction of modern information and communication technologies in the relationship between the bank and the client, including the introduction of financial services

based on electronic and digital technologies with relatively low costs, turning many bank branches into banking service centers throughout the country, and gradually removing information kiosks that operate with low profitability saving costs by issuing, increasing smart offices in 24/7 mode, offering convenient services for bank customers and residents of our country is considered an urgent issue of today.

Research methodology

In the process of digital transformation of banks, it is necessary to study the factors affecting the improvement of remote banking services and the problems related to them, as well as conducting analytical analyses. In the process of preparing a scientific article, the methods of data comparison based on tables, data grouping, statistical grouping, and expert evaluation were used effectively.

Analysis and results

Digital banking has many advantages, two of which are speed and convenience. People using digital banking services can access their accounts, view their statements, make transactions, make payments and many other activities from the comfort of their homes or on the go. However, there are also clear problems faced in the development of this field.

Studying the problems is also very important for remote and digital banking services in banks and for efficient organization and quick and convenient customer service. Banks should develop ways to effectively solve these problems. Let's look at some of the problems:

1. Changing the traditions of banks. Remote and digital banking practices have increased during the pandemic. For example, since March 2020, the number of registrations for the internet banking service has increased by 130 percent. Up to 80 percent of people now prefer remote and digital banking to visiting a bank, and all banks around the world have started closing their physical branches.

In the context of social distancing practices with digital services in banks, contactless solutions have increased. MasterCard 2020 global contactless transactions increase by 40%. In addition, experts predict that the market value of wearable payment technology will grow at a CAGR of 29.8% between 2021 and 2028.

2. Security system. Security is one of the most important challenges for banks in providing remote and digital banking services. Although security is well established in the banking system, cyber-attacks and fraudulent activities still occur.

Mobile apps and browsers account for 71 percent of banking fraud. Fraudsters take advantage of the user's indiscretions and social media habits in their personal lives. Issues such as weak passwords and logins, use of unsecured networks, identity theft and phishing make banks vulnerable to attacks that allow fraudsters to carry out bank transactions.

Current practices in banks such as using multi-factor authentication and passwords are a good starting point.

3. Technical issues. We always experience interruptions in technology and service when using the Internet. If system stability and performance, internet speed deteriorates or fails completely, there may be problems accessing accounts. In addition, no matter how sophisticated the technologies are, we still face problems with bank servers, such as intentional or accidental downtime.

A system failure not only prevents users from making payments and transactions, but also raises concerns about the security of information and funds.

4. Lack of personal relationships. While 73% of people around the world use digital banking at least once a month, meeting the more complex needs of customers through digital banking alone is a complex process. The benefits of having a personal relationship with a customer's bank are often overlooked, as difficult banking processes can be made easier by bringing in experienced banking professionals. Having a personal banking relationship helps customers compare their options and

find solutions tailored to their needs, which is not easily achieved through self-service.

An effective solution helps customers find the right solutions for their overall banking needs. A mix of digital banking and traditional banking services should also be used for day-to-day transaction needs and personal relationships with bank employees. Banks should improve the financial literacy of their customers and also ensure that digital banking services are simplified and understandable. Banks require marketing services to make customers as aware as possible of digital and traditional banking services .

5. The changing banking landscape. The changing banking landscape is driven by digital-only banks and an increasing number of financial technologies offering simplified banking solutions. As of June 2021, the neobank of the Brazilian state " Nubank " ¹ had 25 million customers. In the UK, too, neobanks are emerging as major competitors to traditional banks . UK neo-bank Chime has added 8 million customers in 2021 and its total customer base has reached 12 million. Few of the UK's other banks (or neobanks) have seen rapid growth in customer numbers. " Revolut " neobank has 15 million personal users, " Monzo " neobank has more than 5.6 million personal users, " Starling Bank " neobank has more than 2 million customers.

Neobanks are faster and more transparent than traditional banks. Neobanks take full advantage of digital power to offer a seamless banking experience with little or no fees. This creates serious competition for traditional banks, because having traditional banking components is no longer enough. Traditional banks need to continue their digital transformation and adapt their services to be easy, efficient and online. Banks should strive to provide a personalized banking experience, call center strategies to meet the complex needs of customers, and attract experienced experts to digitize banks, including digitalization and automation of processes.

Even though the systems of providing remote banking services in the commercial banks of the Republic of Uzbekistan are developing year by year, there are no problems in the further development of these systems of providing remote banking services. It is possible to achieve an increase in the number of customers as a result of the elimination of problems in the remote provision of banking services and the creation of convenience through the digitization of banking services.

Despite this, a number of regulatory and legal documents have been developed in the banking system of Uzbekistan on the development of remote banking services, and intensive work is being done on the transformation of banks. Today, banks are trying to increase their income as a result of increasing the number of customers, attracting more customers and improving the quality of services provided to them.

Providing remote banking services to bank clients is one of the most promising areas of development of the modern banking system, and a number of factors influence its development. It is necessary to take into account the factors affecting the development of remote banking services. These influencing factors can be divided into two, i.e. internal and external factors.

Table 1 Internal and external factors affecting remote banking systems

No	Internal factors	External factors
1.	Organizational status of banking services: - technological equipment of the bank; - ease of use of remote banking services systems; security of personal data in remote banking services systems .	Risks: - operational risk; - financial risk; - other risks.

¹ Neobank is a new FinTech trend in the world, the popularity of which has increased dramatically due to the COVID-19 pandemic. To ensure their safety, people are looking for ways to buy things and pay for services remotely . This has led to the growing popularity of neobanks - financial institutions that provide online services only. Digital banks do not use branches and branches to serve customers, they provide their services only through gadgets (mobile phones, computers) .

2.	Bank's marketing policy: - if he sees banking services from a distance - advertising of dental systems; - providing information on remote banking services systems on bank sites and among the population.	Social (social status of citizens): - people's awareness of remote banking systems; - people's confidence in remote banking systems; - users recommend remote banking systems to their relatives.
3.	Remote banking services systems and their cost.	Importance of remote banking systems for users in saving time and costs
4.	Bank management (bank employees and their qualifications) and level of financial literacy	Financial literacy, technological skills and demographic characteristics of users
5.	Improving the current legislation on remote banking services based on the experience of developed countries.	Political factors: - the policy of the state in relation to banks; - internet speed.

Source : Compiled by the author

As can be seen in Table 1 above, the factors affecting remote banking systems are divided into external and internal factors. Studying the influence of existing factors on the remote provision of banking services is one of the main aspects of the research work.

First, we can take factors related to the organization of remote banking services to internal factors. That is, in the organization of remote provision of each banking service, it is implemented by introducing the capabilities of any new technologies into the banking system. Therefore, in the first place, banks should be fully equipped with banking technologies to establish an electronic payment system and automate banking activities. Then, the system implemented with these technologies should be created in such a way that it is simple for users, that is, people who do not have a high financial culture and have less technological knowledge can use it. In addition, the security of their personal data must be fully ensured by the system creators in order for users to trust this system.

Secondly, the marketing policy of the bank is required to popularize remote banking services . According to him, it is important to create a positive impression on the users of these services by conducting seminar trainings to convey the types of remote banking services and their possibilities to the bank customers and the population. Advertising these services by placing video clips on the convenience and possibilities of remote banking services in crowded places, on websites, social networks, on television and in the bank's front office and halls working with customers will also have a great effect.

remote banking systems and improve the quality of service in order to retain customers of commercial banks and attract new customers . A lot of work is being done in this regard, the prices for using ATMs are getting cheaper, many services are not charged when making payments at infokiosks, the fee for transfers in mobile applications is getting cheaper, transfers in some mobile applications are absolutely free, and in some, they are free in the section of a bank.

Fourthly, in order to ensure effective use of modern banking technologies and systems of remote banking services based on them, it is necessary to improve bank employees and their skills. For this, it is necessary to organize regular educational and practical seminars by special experts in the training center of the bank.

of the President of the Republic of Uzbekistan dated March 23, 2018 " On additional measures to increase the popularity of banking services " No. PQ-3620 provides for the protection of the rights and legal interests of consumers of banking services, financial openness, and increasing the level of financial literacy of the population and business entities Central Republic of Uzbekistan it was mentioned that it is one of the important tasks of the bank.

Fifthly, the establishment of remote banking services and the legal aspects of the Central Bank's instructions and internal regulations and procedures of commercial banks, which reflect the legal aspects of all cases, that is, the creation of a regulatory and legal basis, will increase the confidence of users in this system. In addition, effective use of ICT infrastructure in financial services and non-cash payments and improvement of existing legislation based on the experience of developed countries is required.

Remote provision of banking services external factors affecting the development of systems :

Firstly, the occurrence of operational risk as a result of negative situations related to the operating system and the wrong operation of the user in the implementation of financial transactions in remote banking services, financial losses in problematic situations in remote banking services systems, as a result of careless mistakes made by users and financial losses in other cases. the emergence of risk has a negative impact on the use of remote banking services . In addition, it is not a secret that the security risk of financial information transmitted through electronic communication channels is not enough for citizens to trust banks, that is, the majority of citizens still keep their savings not in banks, but in the form of real estate or currency " under the pillow".

Second, people's awareness of remote banking systems means they become aware of remote banking systems from advertisements, bank websites, by hearing from relatives or by word of mouth. In particular, word of mouth about telebanking systems in free communication in a virtual environment or by relatives has been recognized to be more influential than the effect of advertising on consumers. For example, according to a 2004 study by J.E. Hogan, K.N. Lemon and B. Libailar, the effectiveness of word of mouth was found to be three times higher than the effectiveness of advertising. The result of this study is that word-of-mouth communication about remote banking services has a positive effect on the popularity of these services and the increase of trust among users [5].

Thirdly, one of the obstacles to the introduction of new technologies into the banking system is its purchase, and the second is the cost of using them. In their use, the price and the importance of saving time for users are considered important aspects. On the other hand, low prices and saving time of customers encourage remote banking systems . In general, customers understand the many benefits of remote banking services provided by banks and have a positive attitude towards the adoption and use of new technologies. Thus, it can be recognized that remote banking systems are used as an impressive benefit construct in the banking industry.

Fourthly, in order to develop a strategy for increasing the level of financial literacy of the population and entrepreneurs and to implement the tasks defined within it, to prepare modern educational materials on financial literacy for different age groups and audiences, to develop an information and educational resource on financial literacy, and to increase the financial literacy of the population in various ways As a result of regular organization of events, the level of financial literacy of the population and entrepreneurs will not fail to show its influence.

Demographic characteristics of users, ie, age and gender, are of great importance in the use of remote banking services systems . User gender is one of the most studied consumer demographics in e-services. Anxiety in computer use is more typical of women, and it has been observed that men are more likely to use new technologies in banking practices than women. Women are also more risk averse than men when it comes to online shopping. Young people are more flexible in applying and adopting new technologies because they perceive low risk in services based on new technologies [6]. Older consumers, on the other hand, are more aware of the risks involved in new technologies and are more cautious about using them.

Fifth, in the last few years, the opportunity to use the Internet as a channel in the financial market , selling and serving customers has appeared in Uzbekistan . Currently, commercial banks are creating convenience for customers' transactions through various transaction models and new banking services . time is saved, costs are reduced, and the speed, transparency, and mobility of banking services are increasingly improved. The government's attention to such banking services at the level of state policy will certainly give its positive result in the future.

the decree of the President of the Republic of Uzbekistan No. PF-60 dated January 28, 2022 " On the new development strategy of Uzbekistan for 2022-2026 " by developing the cyber security strategy of the Republic of Uzbekistan for 2023-2026, the cyber security of the internet space of the "UZ" domain zone comprehensive tasks for protection of the main areas of provision and electronic government, energy, digital economy systems and other areas related to important information infrastructure were defined [7].

As of April 2024, the Internet speed in Uzbekistan has increased by 5 percent compared to the previous month. That is, in April 2024, it took 88th place among 144 countries in terms of mobile internet speed (119th place in December 2021), that is, the data download speed was 29.93 Mbit/s. It should be noted that this is lower than the average mobile Internet speed worldwide (download speed 52.87 Mbit/s) [8].

As of April 2024, fiber optic internet speed in Uzbekistan has increased by 1 percent compared to the previous month. That is, in April 2024, it took 89th place among 181 countries in terms of optical fiber Internet speed (82nd place in December 2021), that is, the data download speed was 64.5 Mbit/s. It should be noted that this is slightly lower than the world average fiber optic data download speed (download speed 93.65 Mbit/s) [8].

As of January 2024, Singapore, Hong Kong (SAR) and Chile were the top three countries in terms of fiber internet speed (data download) with speeds of 284.05 Mbps, 271.29 Mbps and 270.19 Mbps respectively. /sec.

At the same time, the fact that there is a high population density compared to other countries and the fact that the country has a level of access to the Internet by about 90% of the population, the state supports the introduction of large-scale and broadband technologies.

One of the factors driving the development of remote banking services is the growth of the Internet and the number of its users. According to the International Telecommunication Society, as of January 1, 2023, 67.9% of the world's population is using the Internet, and we can see that their number currently exceeds 5.3 billion (Table 2).

Estimates show that the number of Internet users was 393,710.2 million in 2000, and reached 5,385,798.4 million in 2023 . That is, it can be seen that in 2023 it increased more than 13.9 times compared to 2000 . If we pay attention to the distribution of the number of Internet users by region, 54.2% of Internet users are in Asia, 13.9% are in Europe, 11.2% are in Africa, 9.9% are in Latin America, 6.5% are in North America, We can see that 3.8 percent is in the Middle East and 0.6 percent is in Australia and Oceania.

Table 2 The number of Internet users worldwide (as of January 1, 2023)

World regions	Population (thousand)	Population (in %)	Number of Internet users (thousand)	Internet usage - people (in %)	Growth 2000-2023 (fold)	Share of the number of Internet users by region (in %)
Asia	4350826.9	54.8%	2916890,2	67.0 %	24 ,5	5 4,2 %
Middle East	268302.8	3.4%	206760,7	77.1 %	61,9	3.8 %
Africa	1394588.5	17.6%	601940,8	43.2 %	132,3	11.2 %
Okeania / Australia	43603.0	0.5%	30549.2	70,1%	3.0	0.6%
East Europe	841319.7	10.6%	747214,7	89.2 %	6.1	13.9 %
Latin America / Caribbean	663520.3	8.4%	534526,1	80.5 %	28, 6	9.9 %
North America	372555.6	4.7%	347916,7	93.4 %	2.2	6.5 %
Worldwide total	7934716.8	100.0%	5385798,4	67.9 %	13, 9	100.0%

Source: Compiled by the author based on Internet World Stats.

If we look at the region of the world, the region with the highest percentage of Internet users is North America, 93.4 percent of the population actively use the Internet, 89.2 percent of the population in Europe and 67.0 percent of the population in Asian countries. uses the internet. The least popular region of the Internet is African countries, where only 43.2 percent of the total population uses this service. Internet saturation coefficient is not high in African countries, so the fastest growth in 2023 compared to 2000, i.e. 132.3 times growth, was recorded in this region.

Nevertheless, as of January 1, 2022, 120.7% of the population of the United Arab Emirates, 119.7 % of the population of the country of Burinei, 108,1 % of the population of Cyprus, 107,9 % of the population of Malta, 107.3 % of the population of Qatar, 100.0 % of the population of Bahrain and Liechtenstein 100,0 %i 7.9% of the population of South Sudan, 6.8% of the population of Eritrea, and 4.6% of the population of the Western Sahara state, although the Internet is widely used, indicates that the level of Internet use in these countries is still very low. North Korea until 2019, the Internet was not even used in the country, but as of July 31, 2022, 0.1% of the country's population, that is, about 20,000 people, are using the Internet.

In addition, the number of smartphone users worldwide reached 4.3 billion as of January 1, 2017, 5.1 billion in 2018, 5.6 billion in 2019, and more than 6.6 billion in 2022. In 2022, more than 83.8% of the total world population is using smartphones [9].

As of January 1, 2013, the total number of Internet users in Uzbekistan is approximately 6.1 million made up 1 4.9 as of January 1, 2017 million per hectare, as of January 1, 2020, 22.5 million. ta ha and by the same period of 2022 27.2 mln. It should be noted that it has reached [10]. It means that as of January 1, 2022, 78.6 percent of the population of the Republic of Uzbekistan is using the Internet. Taking into account the presence of minors in the population, it can be estimated that the adult population uses the Internet almost completely.

the same time, one of the new user- friendly technologies is the use of the Internet system through a mobile phone. In particular, the number of mobile subscribers in the Republic of Uzbekistan reached 32.0 million by January 1, 2023 (see Figure 1), and the number of mobile Internet users is more than 2.7 million, which in turn increases the number of mobile phones to the Internet. indicating greater use in output. The level of providing the population with mobile communication was 75 units per 100 people.

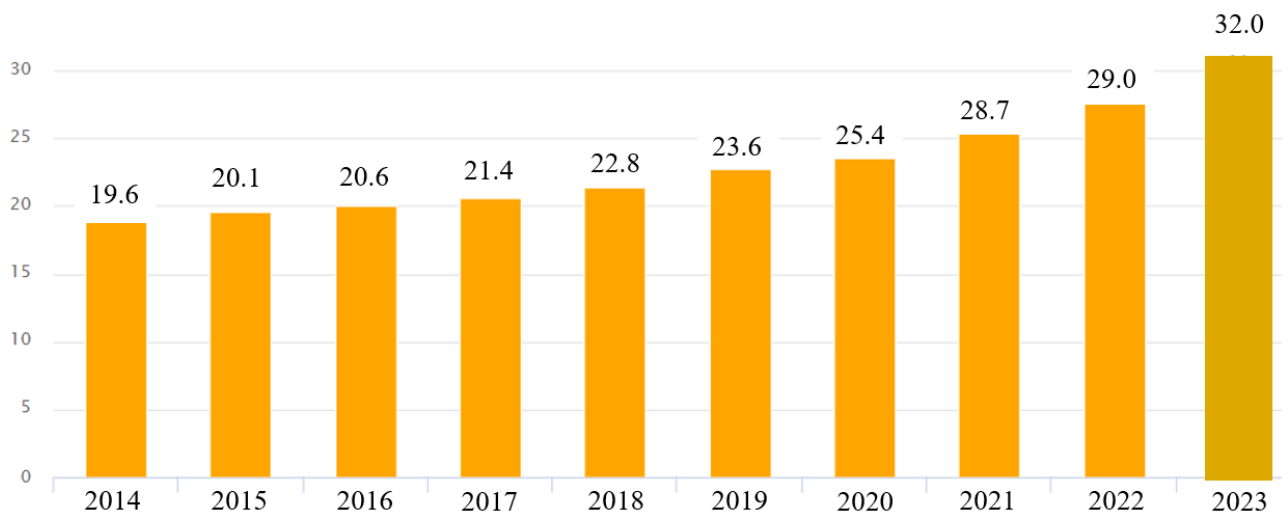


Figure 1. Dynamics of the number of mobile subscribers in Uzbekistan (in millions) [10]

All users of the Internet and mobile communication are prospective customers for banks, and it depends only on the behavior of this bank to attract these prospective customers to the bank by demonstrating the advantages of remote banking services systems. Because an individual who keeps his funds in the bank can not only get information about his account number, but also make payments for using many services through remote banking services systems.

Conclusions and suggestions

During the digital transformation of banks, as a result of the elimination of problems related to the remote provision of banking services, it is possible to digitize banking services and minimize the risks that may arise in them.

above factors affecting the development of remote banking services systems, it is necessary to eliminate several other problematic situations:

First, local residents prefer direct communication with bank employees when they make their transactions in banks and are used to receiving confirmation documents for each transaction. In this case, in order to change the mentality of the population, it is necessary to educate the population about the possibilities and security of remote banking services.

Second, many people's new remote banking systems due to the lack of understanding about the new modern technology and system, they are afraid to use it for the first time, because every new software technology causes some difficulties in the first use. Also, banks are constantly improving the types of services in their software systems. In the process of improvement, banks should also try to make the programs a little simpler for users, otherwise it will be difficult for the part of customers who lack technological skills. That's why every bank's IT specialists create easy-to-use and multi-functional systems that provide their customers with effective services in a competitive environment.

Thirdly, there are frequent power outages in remote areas of our Republic, and as a result, customers cannot be provided with communication services and other financial services on time. Especially in these places, the internet speed is very low, which causes all kinds of misunderstandings when using remote banking services. As a result, bank customers in these areas still do their banking entirely at the bank. Therefore, banks should pay attention to the introduction of remote banking services in these regions as well.

Fourthly, for the purchase and installation of modern technologies and software for commercial banks, the introduction of their own special programs based on smartphones and computers allows banks to create new opportunities and save costs in remote banking services. This puts a lot of responsibility on the banks' IT specialists and programmers, or requires the support of other local experts.

Fifth, in order to increase the share of remote banking services systems, to ensure the widespread use of information technologies in the operational activities of banks, to ensure that business entities and individuals can use payment services around the clock, to connect all commercial banks to the 24/7 interbank instant payments system, remote banking services, including the expansion of the number and coverage of contactless payments is one of the important aspects of today. Automatic payment transactions based on remote banking services even during non-operational days is one of the important tasks that require implementation, especially at a time when the economy is becoming digitized, the payment system is accelerating year by year, and the number of bank customers is increasing [11].

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