



IMPACT OF COVID-19 PANDEMIC ON ACCELERATING THE DIGITIZATION AND TRANSFORMATION OF BANKS

Mamadiyarov Zokir Toshtemirovich

TSUE, e-mail:
z.mamadiyarov@tsue.uz

Askarov Sarvar Anvar ugli

TSUE, e-mail:
sarvar.askarov@inbox.ru

Sulaymanov Samandarboy Adhambek ugli

TSUE, e-mail:
samandar_8008@list.ru

Uktamova Durdona Bakhtiyor kizi

TSUE, e-mail:
uktamova_durdona@mail.ru

ABSTRACT

The coronavirus crisis has highlighted the need to accelerate the introduction of innovative technologies in the banking and financial system, expand sources of non-bank financing, increase financial literacy among the population, as well as develop more transparent mechanisms of social support for those in need. The article presents the importance of the transformation of banking services in Uzbekistan in the context of the COVID-19 pandemic, the issues of expanding the scope of remote banking services, the views and opinions of economists on them, the state of remote banking services in the world during the COVID-19 pandemic, existing problems and methods their solutions, approaches and suggestions.

CCS CONCEPTS

• **information technology**; • **digital banking**; • **banking services**; • **Automated Teller Machine (ATM)**; • **FinTechs**; • **transformation**; • **financial services**; • **COVID-19**;

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1 INTRODUCTION

Today, many banks are working to transform their products and services to change their development strategy. It is important to understand that without these changes, it will not be possible to compete in the financial and banking system tomorrow. Transformation is a necessity of the time. An organization that wants to maintain its position in the future must start making changes today. Banks are exploring and implementing various solutions and

opportunities, including ways to establish cooperation with groups of major international financial institutions.

Digital transformation is an inevitable process as world business begins to adapt to the new conditions and preferences of the digital economy society, which is a tool to improve people's living standards, create convenience and improve the quality of life in society through the introduction of digital technology.

The banking sector is now one of the most developed areas in terms of technological innovation, and it is the country's principal locomotive for economic progress. The base for the development of a country's economy is determined by the effective operation of its banking system and its rapid response to changes related with the development of the global banking system. Technological advancements have resulted in significant changes in the banking sector, as well as in other domains. The global banking system is currently transitioning from a traditional to a digital banking system. Consumers may now offer a wide range of services thanks to the introduction of digital financial services as a target system.

Developed countries, according to banking practice, as a result of the development of today's market relations, require the study of foreign experience in providing banking services to customers.

During the years of independence, Uzbek banks have also been able to adequately develop their services. However, competition between banks is pushing them to take a new approach to attract more customers and expand the range and quality of services provided.

To effectively organize the work in this area, the Address of the President to the Oliy Majlis emphasizes the need for radical reform of the banking system, transformation of banks, introduction of modern banking practices, management, and new services. In particular, with the support of the Government and the Central Bank, and international financial institutions, we need to develop a long-term strategy for the development of the banking and financial system, ie the national concept of the digital economy. On this basis, as noted in the "Digital Uzbekistan-2030" program, the need to develop strategies was considered as a key task [1].

Also, the President of the Republic of Uzbekistan's Decree PF-5992 "On the strategy of reforming the banking system of the Republic of Uzbekistan for 2020-2025" [2], the President of the Republic of Uzbekistan's Decree PF-5614 "On additional measures to further develop the economy and increase the effectiveness of economic policy" [3], the President of the Republic of Uzbekistan's Decree PF-5614 "Resolutions of the President of the Republic of Uzbekistan, No. PP-4400, dated July 23, 2019, "On measures to increase the popularity of microfinance services" and improve their

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quality, in particular, the introduction of new bank business models, including those based on "digital banking" principles. [4].

One of the main expected outcomes of commercial bank transformations with international financial institutions is the reduction of the state's share of several commercial banks by attracting strategic investors with sufficient banking experience, knowledge, and reputation to bring international experience. Furthermore, the establishment of the necessary conditions for the gradual elimination of administrative burdens, the widespread adoption of modern information and communication technologies, the automation of commercial bank business processes, and the expansion of remote banking services by relieving credit institutions of non-specific functions, as well as overloading, are expected.

The remainder of the paper is arranged accordingly: In Section 2, we discuss the background study. In Section 3 the influence of the COVID-19 pandemic on bank's profit is analyzed and the results of this analysis are discussed. In Section 4 conclusions and suggestions are given.

2 RELATED RESEARCH

Although remote banking services have numerous advantages, they also pose significant hazards in terms of private information, consumer personal information, and transactions [5]. As a result, electronic payment systems require a high level of security and risk awareness [6]. The success of such technologies, as well as the need to keep an eye on security when implementing new payment system platforms, must be kept in mind [7].

In the context of the COVID-19 pandemic, priorities for bank customers will also change. That is, the health of his family and himself and the food security of his family are important. Banks can play an important role in overcoming these challenges. In the U.S., under COVID-19, nearly half of bank customers lost their jobs or became concerned about it [8].

Many bank customers who did not save financially before the pandemic had job-related problems. For example, in 2018, 39 percent of U.S. residents said they would not be able to afford the \$ 400 additional cost in addition to the planned initial costs (Report, 2019). A 2016 study in the U.S. found that small businesses had enough to cover an average of 27 days of operations [9]. The current financial vulnerabilities and stresses in COVID-19 make it difficult for bank customers to manage complexity wisely and make decisions. Studies also show that financial deprivation leads to serious psychological difficulties and leads to more myopic decisions [10].

Before buying goods or using services, people inquire and gather information from others to reduce risk [11]. When it comes to high-risk behaviors and unproven new technology, customers are more likely to turn to and trust oral speech [12]. Through personal action, verbal communication delivers information directly and dependably. In this regard, it has been recognised in the literature that the word is extraordinarily potent in influencing customer behavior, even more powerful than consumer advertising.

To suspend lending to bank customers with reduced solvency, to reconsider the terms of existing loans, to obtain resources from funds to ensure short-term liquidity, to minimize costs, to reconsider the role of staff in the organization of work, to support small businesses government programs should be used.

Leading banks in Singapore and China are offering online short-term corporate loans to small and medium-sized enterprises based on a 6-month principal debt delay, a simple application, and primary documents to their customers.

3 ANALYSIS AND RESULTS

The involvement of banks was considered as a big part of the problem in the last global financial crisis, which occurred in 2008. Banks can play a crucial role in addressing these concerns in the context of the COVID-19 epidemic. To slow the spread of COVID-19, banks can assist their customers in making more efficient use of digital and remote control channels. As a result, banks can assist their customers in mitigating the effects of the looming crisis by managing their funds, issuing payments, and coordinating ongoing activities with other government agencies.

The 2020 pandemic will take all areas of human activity to a new level. Financial institutions have been forced to take steps to protect their employees, change business processes, and serve customers in new, improved ways.

As a result, banks need to transform their activities by the requirements of customers, that is, to create new banking services using modern information and communication technologies.

Today, bank transformation necessitates, first, the creation of digital banks, and, second, the modification of existing banking departments' activities and the lowering of banking costs. Banking services will be totally automated in digital banks, and bank users will have access to self-management tools. Today's demands, in particular, necessitate that banks serve a bigger number of consumers as a result of the digital economy's development, rather than increasing the number of branches, by creating remote banking services.

During the pandemic, the software revolution – which has already shut down many industries and made some industries obsolete, is still rapidly changing the financial services industry.

Digital transformation has become an important goal of banking strategy. This period is very impressive for the future of digital banking and will completely change the image of traditional banking, as well as require more services to customers.

As the coronavirus continues to spread around the world, the financial goals of more and more organizations are also not as expected due to strategic and operational changes and declining customer demand. It is not clear how long COVID-19 will last, nor is it clear that it is a short-term event. This means that banks also need to prepare long-term plans.

However, the process in this area is very slow. There are several technologies available today that can help in the process of digital transformation of the banking sector. This digital transformation should include technologies that are effective for both the bank and its customers.

The coexistence of Uzbek commercial banks with international financial institutions provides the way for greater integration and globalization. On one side, the development of integration processes needed the use of modern ICT, but it also resulted in a business change. The study of these processes from an economic and political perspective, as well as the development of scientific findings, is a current demand. Corruption and the "dark economy"

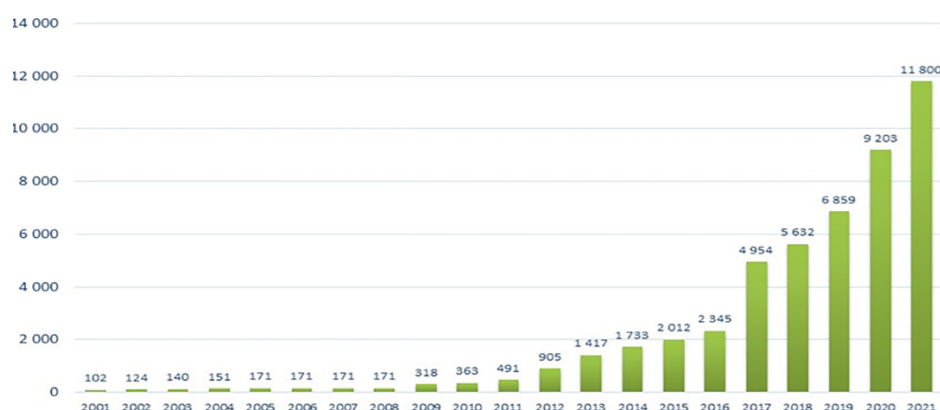


Figure 1: Number of ATMs and kiosks installed (as of January 1) (The Central Bank of the Republic of Uzbekistan www.cbu.uz)

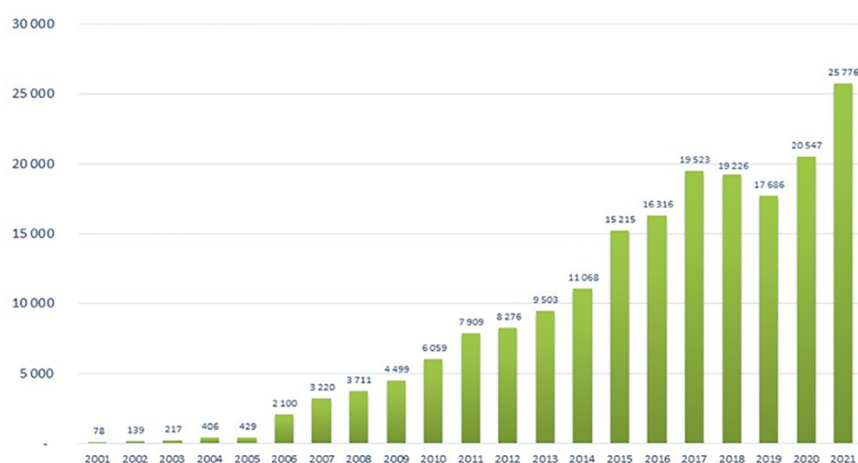


Figure 2: Number of bank cards in circulation (thousand sum, as of January 1). (The Central Bank of the Republic of Uzbekistan www.cbu.uz)

have a powerful ally in the digital economy. Because the numbers encrypt everything, they can be stored in an electronic archive and used to provide information rapidly. In such circumstances, it is impossible to keep any information hidden, to conduct secret transactions, or to provide complete information about any activity; the computer will reveal everything. Because it is impossible to deceive the system, the data structure prohibits lies and deception. As a result, laundering "dirty money," stealing funds, spending them inefficiently and mindlessly, exaggerating or hiding is impossible.

As can be seen from the picture above, as of January 1, 2012, the number of ATMs and kiosks was 905, while in the same period of 2021, the number of ATMs and kiosks was 11,800. During this period, the number of ATMs and kiosks increased by 10,895, is ATMs and kiosks increased by 1,303%.

The number of bank cards in circulation as of January 1, 2021, amounted to 25.7 million. compared to the same period last year. per unit, an increase of 25.4 percent. Although the number of plastic cards has increased sharply, the provision of mobile banking

services through them is not fully covered. That is, as of January 1, 2020, the total number of mobile banking users exceeded 17 million.

However, there are practical and theoretical problems that need to be addressed in the further development of remote banking services:

- First, at present, the expansion of remote banking services and the lack of innovations in existing ones, that is, through remote banking services, bank customers are still unable to perform all banking services without a full visit to the bank. Only as of January 1, 2021, the number of mobile subscribers in the Republic of Uzbekistan exceeded 27 million, of which the number of mobile Internet users exceeded 20 million, while the number of mobile banking users during this period exceeded 17 million. This means that the number of remote banking users in Uzbekistan is growing.
- Second, the rapid expansion of remote banking services raises the potential of economic concerns. That is, the integrity of client services, the extent to which they legitimate /, and so on.

Table 1: Rating of clients using remote services (individuals)

No	Bank	01.10.2021		01.01.2021		The change		
		size (in million sums)	Share (%)	size (in million sums)	Share (%)	change(%) (+/-)	Share(+/-)	position(+/-)
1.	JSCB "Agrobank"	2 875 970	16,2%	2 355 155	17,1%	22,1%	-1,0%	→ 0
2.	JSC People's Bank of the Republic of Uzbekistan	2 765 251	15,6%	2 148 750	15,6%	28,7%	-0,1%	→ 0
3.	JSCB "Uzpromstroybank"	2 305 903	13,0%	1 667 420	12,1%	38,3%	0,8%	→ 0
4.	JSC Mortgage Bank "Ipoteka Bank"	1 687 232	9,5%	1 300 787	9,5%	29,7%	0,0%	→ 0
5.	National Bank for Foreign Economic Activity of the Republic of Uzbekistan	1 301 073	7,3%	1 191 694	8,7%	9,2%	-1,3%	→ 0
6.	JSCB with foreign capital "HAMKORBANK"	1 149 571	6,5%	918 703	6,7%	25,1%	-0,2%	→ 0
7.	JSICB "Ipak Yuli"	903 630	5,1%	570 568	4,2%	58,4%	0,9%	↑ 2
8.	JSC "Asakabank"	893 670	5,0%	739 200	5,4%	20,9%	-0,3%	↓ -1
9.	JSC Microcreditbank	747 736	4,2%	682 778	5,0%	9,5%	-0,8%	↓ -1
10.	JSC "Aloqabank"	520 835	2,9%	375 174	2,7%	38,8%	0,2%	→ 0
11.	JSCB "Invest Finance Bank"	343 850	1,9%	285 243	2,1%	20,5%	-0,1%	→ 0
12.	JSCB "Qishloq Qurilish Bank"	339 431	1,9%	283 360	2,1%	19,8%	-0,2%	→ 0
13.	PCJSCB "Orient Finans"	328 873	1,8%	230 577	1,7%	42,6%	0,2%	→ 0
14.	JSCB "Kapitalbank"	263 332	1,5%	200 404	1,5%	31,4%	0,0%	→ 0
15.	JSCB "Asia Alliance Bank"	233 635	1,3%	174 339	1,3%	34,0%	0,0%	↑ 1
16.	JSC Turon Bank	226 966	1,3%	194 298	1,4%	16,8%	-0,1%	↓ -1
17.	JSCB "TBC Bank"	176 459	1,0%	3 159	0,0%	5485,9%	1,0%	↑ 10
18.	PJSB "Trustbank"	155 442	0,9%	115 976	0,8%	34,0%	0,0%	↓ -1
19.	JSC "ANOR BANK"	146 929	0,8%	0	0,0%	0,0%	0,8%	—
20.	PJSCB "Universal Bank"	92 339	0,5%	73 303	0,5%	26,0%	0,0%	↓ -2
21.	PJSCB "Davir Bank"	84 536	0,5%	60 492	0,4%	39,7%	0,0%	↓ -1
22.	JSCB with foreign capital "Savdogar"	76 521	0,4%	67 635	0,5%	13,1%	-0,1%	↓ -3
23.	JSC "Ravnaq-bank"	43 635	0,2%	21 923	0,2%	99,0%	0,1%	↓ -1
24.	JSC "KDB Bank Uzbekistan"	33 821	0,2%	28 724	0,2%	17,7%	0,0%	↓ -3
25.	JSC "ZIRAAT BANK UZBEKISTAN"	28 762	0,2%	17 594	0,1%	63,5%	0,0%	↓ -1
26.	PCJSCB "HI-TECH BANK"	22 019	0,1%	21 012	0,2%	4,8%	0,0%	↓ -3
27.	PCJSCB Turkistan	14 367	0,1%	10 047	0,1%	43,0%	0,0%	↓ -2
28.	JSCB "Tenge Bank"	5 365	0,0%	1 830	0,0%	193,2%	0,0%	↑ 1
29.	JSC "Poytaxt bank"	4 572	0,0%	3 736	0,0%	22,4%	0,0%	↓ -3
30.	JSCB "Madad Invest Bank"	2 464	0,0%	2 209	0,0%	11,5%	0,0%	↓ -2
31.	Bank Saderat Tashkent	1 568	0,0%	1 261	0,0%	24,3%	0,0%	↓ -1
32.	PJSCB "Universal Bank"	1 255	0,0%	1 225	0,0%	2,4%	0,0%	↓ -1
Bank total:		17 775 757	100,0%	13 747 351	100,0%	29,3%		

- Third, banks' limited access to new information technology and the general public's lack of financial awareness provide challenges to the growth of remote banking services.
- Fourth, the development of an automated cashless payment system necessitates the search for new modern forms and means that simplify and expedite the cash circulation system.

- Fifth, one of the most significant obstacles to the growth of remote banking services in Uzbekistan is public trust in the financial system [13].

While there are many benefits to remote banking services, this poses some risks associated with confidential information, customer personal information, and transactions in new technology services.

Further development of remote banking services provided by the banking system of Uzbekistan, identification of the population's

demand for such products and services through marketing services, and, consequently, changes in the banking strategy will ensure the bank's stability and competitiveness in this market segment.

Development strategy of Ipoteka Bank for 2020-2021. Tashkent-2021.

As of 01.10.2021, the level of use of remote banking services by individuals in the banking sector is 12085000 users of JSCB "Agrobank", JSC People's Bank, JSC "Industrial Construction Bank", JSC "Ipoteka-Bank", TIF National Bank, and JSCB with foreign capital "HAMKORBANK" 68.0% of the total number of users, which is characterized by a large number of bank branches of these banks in the country.

As of October 1, 2021, the banks with the highest growth compared to the beginning of the year were JSCB "TBC Bank" - 5485.9%, JSCB "Tenge Bank" - 193.2%, and JSC "Ravnaq-Bank" - 99.0%. JSCB "Madad Invest Bank", Bank Saderat Tashkent, and PJSCB "Universal Bank" can be characterized by a small number of users of remote banking services, the number of their branches, and the number of customers.

Finally, the increase of remote banking service systems' functional capabilities will enable users to perform a wide range of procedures via remote identification systems. Remote identification needs security measures in banking operations control, hence simplifying banking services. Clients must be able to execute financial services without the use of paper documents, be customers of one bank branch, and be able to use other branches and banking services in the future.

As a result of lowering the cost of services through the provision of remote banking services, commercial banks provide clients with the possibility to attract new customers and develop financial market expertise. As a result, the bank's income will increase as a result of this activity.

The development of new financial products and services based on modern information technology allows the banking services market in Uzbekistan to grow. Commercial banks will expand their services as the market economy in Uzbekistan grows by expanding the range of remote banking services available to customers.

Terminals, ATMs, and kiosks are all necessary components of remote banking services. These simple-to-use devices are now used as a form of mini-bank, eliminating the typical customer-cashier interaction. It is now feasible to use these external means to not only withdraw cash, but also to create different payments for goods and services. Customers are recommended to use any bank terminal, ATM, or kiosk 7/24, i.e. 24 hours a day, 7 days a week, in the event of a COVID-19 pandemic, in compliance with hygiene norms.

The concept of the Republic of Uzbekistan's Development Strategy until 2035 divides the development of the payment system in Uzbekistan into two periods, the first of which covers the period up to 2020 and includes the creation of banking applications, connecting customers to a single payment platform, organizing customer support, the introduction of card rider and mobile POS terminals into the payment system, the maintenance of R2R settlements, and the second of which covers the period up to 2035 and includes the introduction of card rider. The second period runs from 2025 to 2025, and includes a portal for accounting and sales of goods, a transaction management system, mobile banking cryptographic identifiers, integration of various services into digital platforms of

banks, B2B and B2C express transfers, open programming interface, banking business enabling the provision of banking products and services based on remote identification, artificial intelligence, and automated machine learning. [14].

Today, traditional banking services are being replaced by digital banking services. Because if banks do not improve the range of services, they may lose the opportunity to dramatically increase revenue and the number of customers. In order to increase the diversification of assets and liabilities of banks, it is necessary to plan to further increase its position in the retail customer segment, and in this regard should identify the following as a strategic plan:

- introduce new types of financial services on a regular basis through a proactive study of customer requirements. In addition, the establishment of asset management and financial advisory services close to banking activities;
- It is necessary to introduce express lending to small businesses, introduce a scoring system, launch innovative online lending services;
- development of a wide range of financial services, such as information channels, Internet banking, mobile banking, SMS banking, banking client programs, and self-service centers that are open 24 hours a day, seven days a week;
- increase the efficiency of cross-selling operations and the introduction of specialized sales models in the same field;
- widespread use of plastic cards in the provision of banking services, the issuance of various cards, the introduction of time deposits on plastic cards, further expansion of the network of ATMs, giving priority to areas visited by tourists and places with high demand for banking services [15];
- further strengthening the results achieved in the collection of utility bills from the population, improving the established relations with public utilities for the direct exchange of electronic information, the establishment of these channels in the online system;
- improving the mobile application of the bank. Launch of microcredit and overdraft loans to customers through the mobile application, introduction of international money transfers;
- organization of electronic applications for opening a card for customers through the website;
- opening an account for customers through the bank's website, arranging the repayment of loans through the personal account of individuals;
- improving the skills of bank employees in the provision of retail banking services, communication with customers, and the formation of the corporate culture.

Although remote banking services are emerging in Uzbekistan, commercial banks encountered several difficulties in remotely coordinating banking services for the public during the COVID-19 pandemic and were unable to provide all services to their customers remotely. It is clear that remote banking services in Uzbekistan are still in their infancy.

The non-disclosure of all facts and the fact that some statistics are banking secrets have hampered the analysis process in Uzbekistan's development of remote banking services. If the share of remote banking services in the payment system, the number of bank

expenditures for the development of remote banking services, and a variety of other statistics [15] are available, it will be feasible to conduct more interesting study in the future.

4 CONCLUSION

It is not possible to precisely predict how terrible or long-lasting the issue will be as the pandemic worsens. COVID-19 will undoubtedly have a negative impact on economic performance in 2020. It is also vital to analyze the potential for enhancing the payment ecosystem due to the economic slowdown. These are not just components of the financial industry that need to be modified, but also preventing the spread of viruses, tasks that must be completed in order for our economy to recover efficiently and quickly. In the next section, we provide a number of recommendations for things that should be altered about banks in the framework of COVID-19.

- Managing cash carefully. In the context of COVID-19, the usage of cash as a physical payment can be an active tool in viral transmission. Banks close their branches or work with a small number of workers for security reasons. In this environment, banks must make better use of online banking, as well as develop and expand digital initiatives. In retail payments, there has been a strong incentive to use contactless payments, cards, and e-wallet-based payment methods.
- Make sure the platforms are simple to use and available to everyone. Not all bank customers have equal access to new technology under COVID-19. This is especially detrimental to those who rely solely on cash. As a result, the development of an automated cashless payment system necessitates the search for new modern forms and means that simplify and accelerate the cash circulation system. The rise in online sales will have a significant influence on the sales of merchants that do not employ digital technologies. As a result, all legal businesses and individuals who are bank customers must be prepared to adopt digital banking technologies [16].
- To facilitate multi-sectoral trade, it is required to build a multi-sectoral payment system. Capabilities of multi-channel that integrate physical and digital payments in any location can help expand the geographic reach of users who can make all types of payments. Remote banking, in particular, can broaden the range of services available in a number of ways. Mobile banking, online services, digital assistants, social media, FinTechs and applications, ATMs, and contact centers will be the most essential communication channels for the deployment of banking services by 2022, according to the Efma-Infosys Finacle Digital Banking Report Survey 2018. Mobile banking is the most common of them, with 6.56 billion users predicted by 2022. There are 5.95 billion people who use online services. The number of people who use digital assistants, such as bots, voice devices, and other similar gadgets, is 4.93 billion. They were the primary trio, comprising the body. Despite this, 3.84 billion people used financial services through bank branches during this time period. The formation of the organization reflects the growing importance of innovative payment systems and technology [17].

- Promoting a new era of cooperative competition. The general decline of our society is beginning a new crisis, a question of cooperative thinking that is not typical of past crises. The liquidity and profitability crisis caused by the crisis will lead to drastic changes in the FinTechs industry and eliminate initiatives that are clearly not in line with long-term economic goals. We are confident that this development will lead to a new FinTechs landscape, creating more opportunities for the development of partnerships and achievements in the field.
- Changing the operating model of payments in banks. Payment processes are more complex and less operational today. It is a huge cost burden, especially for banks. Banks need to think about changing and improving the payment system in the wake of economic inactivity in a pandemic. Probably managing businesses that make some payments in a completely different way. For example, outsourcing for the sale or redistribution of products, cloud-based infrastructure, automation, and the use of onshoring in decision-making based on analysis can be considered structural changes.

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