



## THE ROLE AND FEATURES OF THE DIGITAL TRANSFORMATION OF BANKS IN THE DEVELOPMENT OF THE INNOVATIVE ECONOMY

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## РОЛЬ И ОСОБЕННОСТИ ЦИФРОВОЙ ТРАНСФОРМАЦИИ БАНКОВ В РАЗВИТИИ ИННОВАЦИОННОЙ ЭКОНОМИКИ

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### **JEL Classification: J3, J39**

**Abstract.** The article analyzes the features and modern trends of the transformation of commercial banks, the main challenges and also provides a comparative assessment of the transformation of domestic banks with the banks of developed countries in the period of economic instability, examines standards for reforming the banking sector, as well as international experience in digital transformation of the sector. As a result of the analysis, it was revealed that the transformation of the banking sector is strongly influenced by governmental regulators, the level of digitalization of the economy, corporate culture in banks and the presence of a clear strategy for the gradual development of banking activities.

**Аннотация.** В статье анализируются особенности и современные тенденции трансформации коммерческих банков, а также даётся сравнительная оценка трансформации отечественных банков с банками развитых стран в условиях экономической неустойчивости, рассматриваются нормативы по реформированию банковского сектора, а также международный опыт по цифровой трансформации банковской деятельности. В результате анализа было выявлено, что на трансформацию банковского сектора оказывают сильное влияние государственные регуляторы, уровень цифровизации экономики,

корпоративная культура в банках и наличие чёткой стратегии для поэтапного развития банковской деятельности.

**Keywords:** commercial banks, state-owned banks, digitalization, transformation of banks, innovation, the risks for banks, mobile and online applications, ecosystem, IT, compliance, HRM/CRM

**Ключевые слова:** коммерческий банк, цифровизация, трансформация банков, инновации, банковские риски, мобильные и онлайн-приложения, экосистема, IT-инфраструктура

**Introduction.** Digital transformation is a complex process, but necessary for effective development and sustainable growth. There are many challenges on the way to digitalization: from the right choice of software and investment in computing power to the need to optimize processes and train personnel, includes a large package of initiatives and is designed to increase the efficiency of banks by optimizing and automating processes, improving IT architecture, developing new systems and the introduction of modern approaches to integration. The implementation of these digital transformation initiatives is expected to bring benefits to the bank in the tens of

millions of dollars. The current trend in the development of the economy leads to the fact that the digitalization of all processes is a fundamental factor in the functioning of subjects of economic relations. The banking sector, as one of the main segments of the economy, operates under the influence of changes in the financial markets. Therefore, the current trajectory of the development of commercial banks is determined by a combination of factors, including financial instability, stiff

competition between domestic banks and increased risks. Especially, the transition to a new technological order, strict control regulations and increased competition challenge all financial and credit organizations. Therefore, banks are faced with the task of making the transition to a new format of their activities, introducing innovative technologies and management approaches in order to ensure survival in the market in the long term.



**Figure 1. The main criteria for the digital transformation of banks**

In 2018, a research and consulting company named Gartner which specializes in information technology markets made a bold prediction, saying that by 2030, 80 percent of traditional financial companies will cease functioning. Gartner linked these anticipated projections to digitalization, showing that companies that fail to embrace digital transformation could lose market share to “global digital platforms, fintechs and other non-traditional players.” Since then, the COVID-19 pandemic has accelerated these predictions, fuelling the era of online banking and digital payments.

This article discusses the main directions of the transformation of banking, as well as the role of digitalization in

increasing the profitability of the banking sector and the economy as a whole.

**Material and methods.** The transformation of banks is a rather complicated process, therefore the development of theoretical foundations in this area is one of the important priorities for the practical construction of an effective approach to reform banks.

In the modern world, the role of the bank has begun to gradually transform: its functions have become less exclusive. For example, Vasilyeva T.A. proves in her researches that banks are no longer the sole owners of unique information, and due to the development of financial engineering and financial instruments, transactions are concluded without banking intervention, an



example of which can be "full contracts" offered by non-bank financial intermediaries.

The theory of disintermediation, which arose at the beginning of the 21st century, also speaks about the transformation of banking functions. Kozlova S.Yu. shows in her article that disintermediation in the banking sector is expressed through the loss and decrease in the effectiveness of banking functions as financial intermediaries.

Over the past decades, there has been a scientific discussion about the complete cessation of the existence of banks, and the phrase said by Bill Gates back in 1994 that

the world needs banking services, but not the banks themselves, has become widely known. However, the role of banks in the modern world is not so lost, and thanks to digital evolution, banks, as subjects of economic relations and financial intermediaries, are still functioning, expanding the range of their services, and we are of the opinion that at the present stage, banks will be able to maintain their role. The conceptual approaches of the main characteristics of the activity of modern banks are considered below.

**Table 1**

**Characteristics of activities by types of banks [12,13]**

Bank	Characteristics of activities		
	King B.	Isayev R.A.	Vasilyeva T.A.
Bank 1.0	<ul style="list-style-type: none"> <li>- traditional organizational structure;</li> <li>- Internet, ATMs and call centers - "alternative channels" that are not strategic functional units</li> </ul>	<ul style="list-style-type: none"> <li>- traditional or conservative approach;</li> <li>- does not practice the application of modern technologies and standards;</li> <li>- inefficient methods of risk management;</li> <li>- lack of motivation system</li> </ul>	<ul style="list-style-type: none"> <li>- a classic business model aimed at close relationships with the client and supporting their service in the branches;</li> <li>- provision of standard services.</li> </ul>
Bank 2.0	<ul style="list-style-type: none"> <li>- the main priority for the bank is to study the consumer behaviour of customers;</li> <li>- the use of innovative technologies providing for maximum satisfaction of customer needs.</li> </ul>	<ul style="list-style-type: none"> <li>- a system that has purposeful, justified business processes;</li> <li>- technologies are used on the basis of financial market trends;</li> <li>- employee motivation system;</li> </ul>	<ul style="list-style-type: none"> <li>- provision of virtual services using the online environment;</li> </ul>
Bank 3.0	<ul style="list-style-type: none"> <li>- use of mobile technologies, social media and behavioural gaming models</li> </ul>	<ul style="list-style-type: none"> <li>- innovative approach to serve their customers;</li> <li>- systematization of business processes;</li> <li>- use of the KPI system;</li> <li>- Encouraging the initiative of employees.</li> </ul>	<ul style="list-style-type: none"> <li>- in the process of digital transformation, including process automation and switching from front-end activity to digital channels.</li> </ul>



In addition, the scientific works of economists such as Adzer I., Mamontov A., Berger K., Millar V. and others were devoted to the study of the methodological foundations of the transformation of the organizational structure of the bank, and Isaev R.A., Kaltrel S., Korolev V. .YU. Sinky J.Jr. revealed in their works the methodology of strategic management of the bank and the mechanism of business modeling. However, they made omissions, such as the fact that most of them considered the activities of the bank in the framework of the traditional approach, and also left open certain aspects of the transformation of the banking business into an electronic form.

During the research, we studied the development trends of digital banks, international experience in the digitalization of the banking sector and the main aspects of the transformation of banks in Uzbekistan.

When analyzing the data obtained during the study of the process of digital transformation of banks, methods such as comparison, tabular and graphic, methods of abstract thinking and a systematic approach were widely used.

**Results.** Nowadays, most of the banks around the world are at the process of digital transformation, so both commercial and traditional banks have to use new technologies and digitalization opportunities in order to remain competitive in the financial market because of the advance of fintech companies and become more dynamic, responsive and efficient in satisfying banking consumers.

At the heart of digital transformation is customer focus, that is, banks must learn to determine the needs and desires of the client in time. At the same time, the more modern the client, the more difficult it is to meet his/her digital expectations. Therefore, many

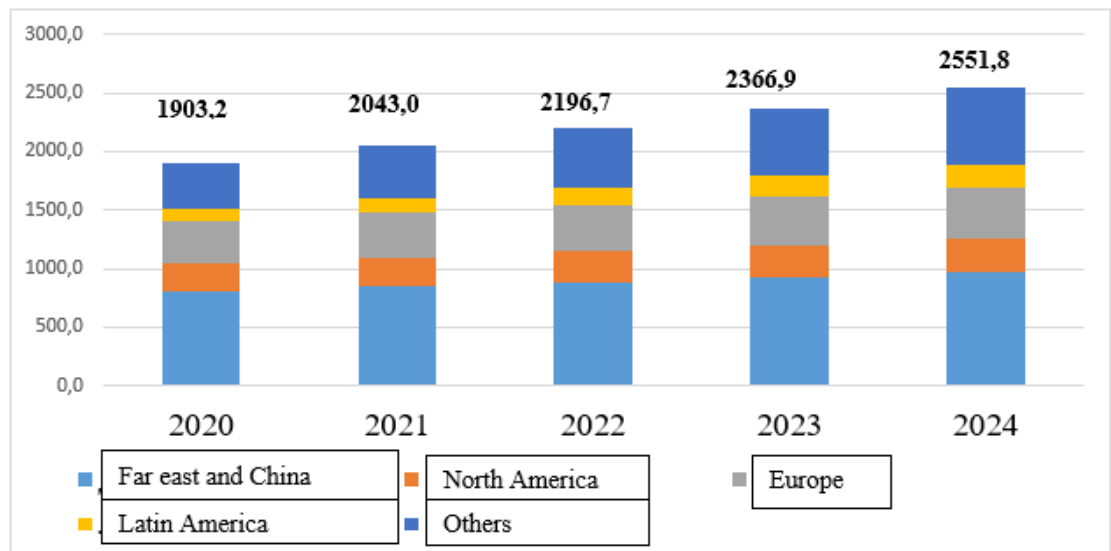
research institutions study and track changes in customer needs, which in turn makes it possible to segment customers based on their age, preferences and gender.

According to the statistical research, in January 2023, there were 5.44 billion unique mobile users worldwide, that triggered the usage of mobile banking as well. It is also predicted that the global mobile banking market will grow from \$692.5 million in 2021 to \$1.3 billion by 2028. [14] Among the active users of online banking services are millennials and Gen Z.

The international organization PWC, which segmented banking sector customers by their financial capabilities and digital technology needs, divides consumers into 5 segment groups and shows the percentage of consumers by preference for mobile or online banking services. Particular attention is paid to the generation Y and Z, as this is a segment that is just reaching the peak age of financial consumption and is considered as a potential client for banks in the near future. Thus, 2/3 of generations Y and Z customers prefer the Internet and mobile devices, and when choosing a bank by this group of people, the digital set of functions that the bank offers plays a much more important role than its location and brand.

According to Blake Morgan, author of *The Customer of the Future*, the process of segmenting customers and learning about their needs affects many important aspects of a business, including customer service, organizational structure, data integration, privacy, logistics, and sales.

In addition, in 2020 reports, Deloitte showed a survey of more than 17,000 banking consumers, and the survey found that 22% of consumers use online and mobile application channels more than 10 times a month to meet their banking needs.



**Figure 2. Number of active users of online banking in 2020 with forecasts up to 2024 (in millions) [15]**

According to the international market and consumer business platform Statista, the use of online banking and mobile banking will grow steadily between 2020 and 2024, with the Asian market being the largest. As you can see from the graph, in 2020, the Far East and China already accounted for more than 800 million active online banking users. This figure is expected to reach nearly one billion by 2024. As of 2020, about 1.9 billion people worldwide were actively using online banking services, and this number is projected to reach 2.5 billion by 2024.

All of the above factors have contributed to the development of new innovative service channels, such as ecosystems. An ecosystem is a whole network/group of collaborating and competing companies offering their own related products and services.

For the above mentioned analyses, it can be concluded that the main triggers to the transformation of banks are:

1. The Pandemic has changed the way how customers perceived digital banking, as more and more people started

using mobile apps for their needs in banking products.

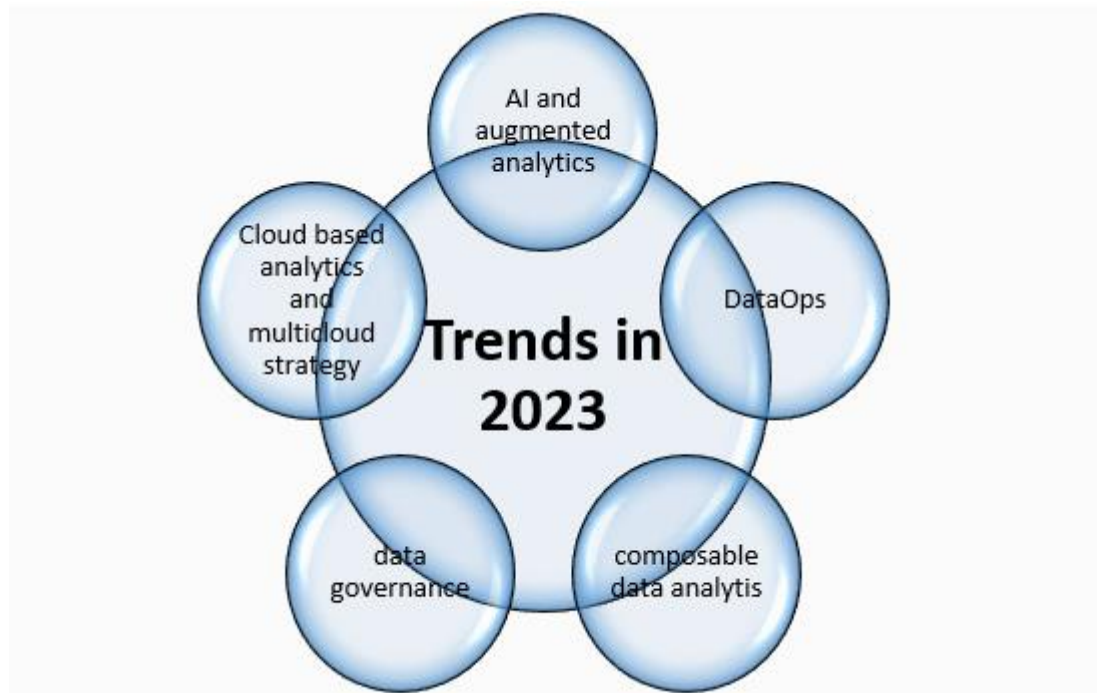
2. Banks are no longer just banks, but they are becoming more multi-service platforms, which include ecosystems.

3. As the people started to use mobile apps, banks have developed financial management support for their clients, which offer advisory services such as investment options, risk management, portfolio management and so on.

4. Developing e-banking services has made banks pay more attention to the compliance system in order to adhere to both internal policies and procedures, along with governmental laws. Implementation of compliance procedures can help banks protect their reputational risks and prevent violations of rules.

Along with the customer segmentation and compliance system, in 2023 McKinsey has added the development of the data analyses as transformation tools for the banking sector. Allied Market Research Data Analytics in Banking Market report estimates that the global data analytics in the banking market will increase from \$4.93 billion in 2021 to \$28.11 billion by 2031.





**Figure 3. The top five Analytics Trends of 2023 in Banking [23]**

According to the international experience, the components of digital transformation can be divided into 3 categories:

**1. Customer relationship.** Improved customer experience is the most visible result of the transformation. With the introduction of digital technologies, not only external communications are simplified, but also analytics, marketing and sales are reaching a new level.

**2. Processes within the organization.** Changes in the infrastructure of the company often lead to the emergence of new processes. For example, the implementation of an EDI system for digital information exchange, which leads to faster interaction with partners, increased productivity and eliminated paperwork. And this is due to a change in the data exchange model, that is, the digitalization of the workflow.

**3. Political strength of leadership.** StudyBCG shows that digital transformation fails 70% of the time. One of the main

reasons for failure is the management's fear of change.

The effect of innovation depends on the willingness of management to rethink the style and processes of business management, and, in particular, the quality of customer service. By being self-aware, the team will be able to chart a clear path to digital transformation and are more likely to work towards its success.

As in other countries, Uzbekistan is also undergoing a process of transformation of the banking sector, especially in state-owned banks. President of the Republic of Uzbekistan Mirziyoyev Sh.Sh. in 2020, adopted the Decree "On the Strategy for Reforming the Banking System of the Republic of Uzbekistan", which specifically indicated the target indicators for the implementation of the strategy. For this, within the framework of the law, a "road map" was developed, according to which four priority areas for the development of the banking and financial system were identified:

1. Improving the efficiency of the banking system: attracting strategic investors, reducing soft loans, and others.
2. Increasing financial stability: improving corporate governance in banks, developing banking supervision and risk management systems;
3. Expansion of the availability of banking services: development of an ecosystem of financial intermediation, development and implementation of the National Strategy for Increasing Financial Inclusion in cooperation with the World Bank;
4. Reducing the state share in the banking system.

These initiatives are primarily aimed at improving innovative technologies in banks, developing new digital channels for access by all segments of the population and developing banks as universal financial institutions. As a result of **reforms, the strategy is expected to achieve** the following results by the end of 2025: increasing the share of bank assets without a state share in total assets from the current 16 percent to 60 percent, increasing the share of banks' liabilities to the private sector in total liabilities from the current 28 percent to 70 percent, increasing the ratio of deposits and liabilities of banks from the current 41 percent to 50 percent.

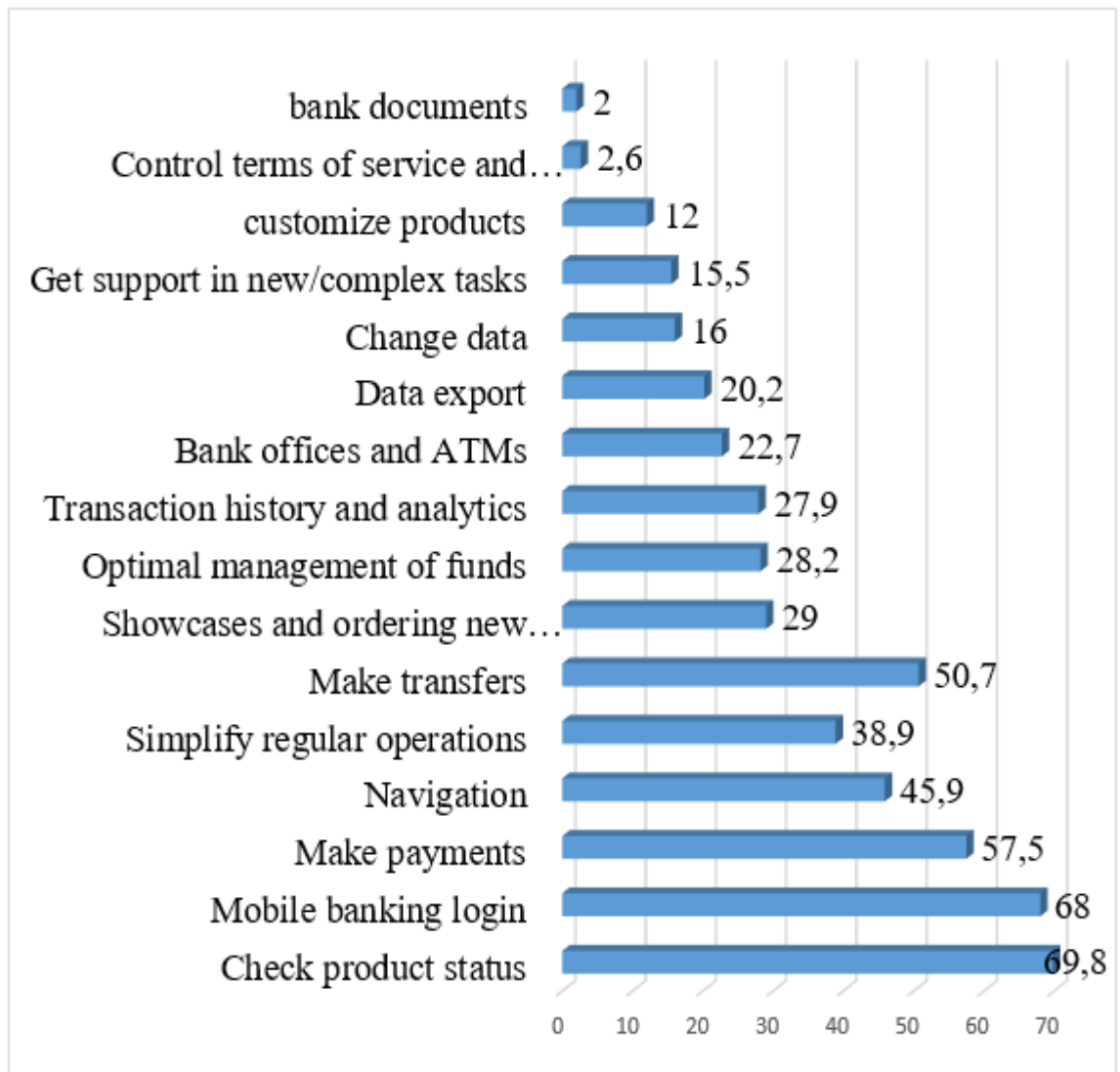


Figure 4. Assessment of banks in 2022 [23]



Mobile Banking Rank Uzbekistan 2022 is a study of user experience, which consists of the completeness and convenience of tasks solved in mobile banks for individuals. The focus of the study is the management of debit cards. Credit products are considered only in the part of the showcase of secondary sales.

The results of the study will allow us to evaluate the vector of development, key features and trends of mobile banking in Uzbekistan, to see practices and solutions for qualitatively improving customer experience and creating a competitive advantage.

The level of digitalization of all user tasks in mobile banks in Uzbekistan does not exceed 50%. Some of the processes still take place offline: obtaining certificates and documents, managing data, uploading information on accounts. These tasks are included in the category of digital office and can be solved through the application.

A strong quality of mobile banks in Uzbekistan is the digitalization of payments. This group of tasks has a higher average score. The bar for the quality of payments in the market is set by foreign banks and payment systems, such as Click. As a result, the entire market tries to keep up with their level.

It is important to note that not a single domestic bank entered the top 3 in terms of the quality of customer experience, and the foreign digital bank and payment systems became the leaders. They stand out in the market due to their broader coverage of user scenarios related to payments and set a high bar for the quality of transfers in the market. This motivates traditional banks to actively develop payments.

**Conclusions.** Based on the results of the analysis of the topic under study, the following conclusions can be drawn:

Banks, as financial institutions, play a crucial role in the efficient distribution of

savings and investments in a market economy and are important for the stability of the entire financial structure. Therefore, they must be simultaneously reformed along with the economy and have flexible tools. The introduction of digitalization in banks is an opportunity to effectively build a new model for the functioning of banks, it is also a tool that requires the application of the basics of behavioral economics in banking.

Theoretical and practical results of the analysis and evaluation of the digital transformation of banks served to form the following proposals:

1. Each bank, based on its interests and areas of operation, should develop a clear roadmap for digital transformation for the phased introduction of new innovative services, which in turn can lead to optimization of operating costs and increased profits;

2. Develop an action plan to ensure operational efficiency and financial sustainability. It is necessary to create new digital products corresponding to regional and marketing strategies for further development in market conditions;

3. It is important to strengthen corporate governance and strengthen corporate culture with an emphasis on open communication and the promotion of ambitious goals;

4. Customer focus. Implementation of those digital products and services that meet the needs of customers and satisfy the bank's requirements for profitability at the same time.

Despite the fact that at the current stage of economic development, banks are faced with the need to transform all their business processes, digitalize services and change the approach to functioning, it should be noted that this is what led to a new era of digital banks, which have more flexible approaches to unstable economic conditions. change and a wider range of products and services than traditional banks.



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