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TRANSFORMATION OF BANKING SERVICES IN THE CONTEXT OF DIGITALIZATION

The development of the modern world as a whole is no longer imaginable without the use of digital technologies. Digitalization has affected almost all spheres of activity and this is the reality of the modern era. The banking sector is no exception. Despite the significant scientific contribution to the above-mentioned issues, a certain list of issues requires additional coverage. In particular, in our opinion, insufficient attention has been focused on the advantages of the transformation of banking services in the context of digitalization for banks and their clients. The focus of this scientific study is to identify and highlight the main advantages, directions and effects of the transformation of banking services from the introduction of digital technologies.

The article is devoted to the study of the processes of digitalization of the banking sector of Ukraine at the present stage. The article highlights the main prerequisites for the active digitalization of the domestic banking system. Attention is paid and characterized to the main digital technologies that are reforming the global banking space, namely artificial intelligence, machine learning, blockchain technologies, and the Internet of Things. The advantages and challenges of the transition of traditional banking institutions to the digital sphere for both the banks themselves and their clients are summarized. The number of bank branches in Ukraine during 2019–2025 is studied and the main patterns in their dynamics are identified. The article also focuses on the business models of banks in the context of the digitalization of banking operations. The final point of the article is to outline future potential and already existing, but not yet very active trends and tendencies in the process of further digitalization of the banking sector of Ukraine.

Keywords: *banking sector, digitalization, financial performance indicators, cashless transactions, bank management, strategy.*

Fig. 1. Lit. 8.

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ТРАНСФОРМАЦІЯ БАНКІВСЬКИХ ПОСЛУГ В УМОВАХ ЦИФРОВІЗАЦІЇ

Розвиток сучасного світу в цілому вже не уявляється без використання цифрових технологій. Цифровізація торкнулася майже всіх сфер діяльності і це є реальність сучасного сьогодення. Не виключенням є і банківська сфера. Незважаючи за значний науковий внесок у зазначену проблематику, певний перелік питань потребує додаткового висвітлення. Зокрема, на наш погляд, недостатньо зосереджено увагу на перевагах трансформації банківських послуг в умовах цифровізації для банків та їх клієнтів. У центрі даного наукового дослідження є визначення та висвітлення основних переваг, напрямів та ефектів трансформації банківських послуг від впровадження цифрових технологій.

Стаття присвячена дослідженню процесів цифровізації банківського сектору України на сучасному етапі. В статті виділено основні передумови активної діджиталізації вітчизняної банківської системи. Звернена увага та надана характеристика основним цифровим технологіям, що реформують світовий банківський простір, а саме штучному інтелекту, машинному навчанню, блокчейн технологіям, інтернету речей. Узагальнено переваги та виклики переходу традиційних банківських

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установ в цифрову сферу як для самих банків, так і для їх клієнтів. Досліджено кількість банківських відділень в Україні впродовж 2019—2025 рр. та виявлено основні закономірності у їхній динаміці. Також увага в статті присвячена бізнес-моделям банків в умовах цифровізації банківських операцій. Кінцевим пунктом статті є окреслення майбутніх потенційних та уже наявних, але ще не надто активних трендів та тенденцій у процесі подальшої цифровізації банківського сектору України.

Ключові слова: *банківський сектор, цифровізація, показники фінансових результатів, безготівкові операції, банківський менеджмент, стратегія.*

Statement of the problem. The new world of financial services aims to solve both simple and non-standard tasks in the process of organizing the effective functioning of the banking sector, using financial technologies, financial engineering tools and innovative financial services in the digital economy [1-5].

Digitalization is one of the most popular trends of 2020-2025. Businesses from completely different industries are going digital. The consequences of the financial crisis only accelerate this transition and increase the intensity of digital initiatives. According to Gartner, 91% of companies worldwide are involved in some form of digital processes, and 87% of CEOs consider digital transformation a priority task [6].

The rapid development and implementation of digital technologies accelerate the transformation of banking services and channels for their provision. Digitalization brings significant challenges and significant changes, which are most dynamically manifested in the financial sector, especially in banking. Customer-centricity, personalization of the offer, and mobility of service provision are key components of the concept of modern banking, which will be even more significant when transferring traditional banking business to a digital format. The recession led to the need to review costs and optimize operations, and the speed of response to changes has become perhaps the most important factor in business survival. Even those companies that were previously skeptical of everything related to digitalization have changed their minds. And businesses that have chosen the systematic path of digitalization receive many dividends. Starting from the «elimination» of labor-intensive manual processes and minimizing costs, ending with improving the quality of customer service, which in turn increases their loyalty. The «strategic» consequence of a company going «digital» is increased flexibility, scalability, and, most importantly, business efficiency [6].

The speed of transition to the digital economy is significantly high. In particular, banking institutions are integrating into a new digital ecosystem of interconnected digital services, which, in turn, are based on various applications (including mobile), the rapid development of financial technologies, application programming interfaces (API), artificial intelligence, etc. Digital finance and alternative sources of financing for projects, both in the public space and in the business sector based on crowd technologies, are increasingly developing.

Digitalization is a fundamental process that permeates various aspects of modern life and business. It is the integration of digital technologies, such as artificial intelligence, data analytics, the Internet of Things and blockchain, into traditional processes and structures of organizations and enterprises. Digitalization of the banking sector is not only the implementation of modern technologies, but also a rethinking of the ways in which banks provide services and interact with customers. This process includes the creation of digital channels for customer service, the automation of banking processes, as well as the analysis and use of huge amounts of data for more accurate forecasting and decision-making.

In a basic sense, digital transformation is the transition from paper to digital media, and in a broader sense, digital transformation refers to a wide range of areas related to process automation and improving the customer experience [6].

Digitalization of banking activities due to the development of technologies and the increase in client needs requires banks to expand the list of services, including financial and non-financial services. Therefore, banks today face a serious task of transforming the model of organization and provision of banking services, which will allow improving client services, diversifying product offerings and diversifying income. A strategically important task for the accelerated development of domestic digital banking is the development of a competitive comprehensive banking product offering, while maintaining popular traditional products and services, simplifying the tools for their implementation based on the use of advanced information and communication technologies. Thus, the relevance of this study is determined by the need to find algorithms for high-quality and personalized promotion of banking products and services based on the use of digital technologies and tools.

Analysis of recent research and publications. A sufficient number of works by modern domestic scientists and specialists have been devoted to the digitalization of the banking sector in recent years. Let us pay attention to the issues in this area that are widely covered in the literature. Scientists O. Kopylova, Yu. Pichuhina, K. Honchar [1] conducted a study of the main factors of digitalization of the banking sector of Ukraine, presented the cycle of introducing digital technologies into the activities of the bank, the components of which are trigger, development, analysis of technologies, adaptation, implementation, improvement [1], identified the consequences of digitalization of the banking sector of Ukraine, the most significant risks of its implementation and prospects for further development. L. Bondarenko and A. Podaryn [2] track the features of digital transformation in the banking sector of Ukraine, emphasizing that Ukraine is actively adopting digital tools in banking according to global rankings, in particular in terms of the level of digital competitiveness and the level of contactless payments, with a constant improvement in Ukraine's positions over the past five years [2]. O. Stashchuk and R. Martyniuk stated that the specifics of the formation of a new banking service system associated with the use of the latest technologies allows banks to significantly save on the maintenance of individual branches and reduce the number of personnel [3]. With a significant number of publications on the study of the digitalization of the banking sector of Ukraine, the topic does not lose its relevance, especially in the perspective of studying the current state of bank digitalization and the prospects for its development. The fundamental aspects of the formation and development of the banking services market, credit institutions and their infrastructure have been widely studied in the works of domestic and foreign scientists such as: O. Dziubliuk [1], O. Martseniuk-Rozaronova, V. Shmihelska [2], O. Pokataieva, N. Davydkova [3], F. Kotler [4], S. Tidke [5].

Objectives of the article. The purpose of the article is to assess the impact of digitalization on the banking sector of Ukraine, the benefits and risks it carries, as well as to determine the ways of further development of bank digitalization. The main directions and effects of the transformation of banking services in the context of digitalization have been identified and studied. The article, based on the consideration of the advantages of technology that allows banks to analyze a large amount of data (Big Date), shows that its use contributes to the correct construction of a bank's business model, which involves the development and implementation of personalized offers for customers, based on their preferences. The features of the application of digital technologies by banks in operational processes are highlighted, in particular, the possibility of servicing customers using remote online services and providing cashback services when purchasing banking products. It has been established that the types of banking risks are also changing, cyber risk is added to the main risks of the bank. As a result, the main effects that banks and their customers receive in the process of transforming banking services in the context of digitalization have been identified.

The main material of the research. First of all, let's define the essence of the concept of «bank digitalization». According to L.H. Kloby, digitalization in banking is a complex of modern economic, organizational, managerial, and institutional innovations in any area of bank functioning [4]. Therefore, digitalization of the banking sector is a transformation that occurs under the influence of modern information and communication technologies that change the methods and approaches to providing financial services [4, 7].

Digitalization significantly changes the business models of banks, technologies, transforms the content of banking products, allows for a fundamentally new level of communication with customers. Therefore, the priorities of the banking sector are natural and justified. Digital transformation provides unlimited opportunities and allows, first of all, to optimize working time and conduct more effective and in-depth data analysis. «Moreover, this is an opportunity to start working with open data, automate, robotize processes and strengthen their security, and, of course, improve the customer experience, including expanding self-service, providing customers with 24-hour remote access» explains Andrii Kashperuk, deputy chairman of the board, chief operating officer of UKRSIBBANK BNP Paribas Group, noting that recently, digital transformation has been one of the main strategic directions [6].

Therefore, to improve the customer experience, new products and solutions are constantly needed, which use digital technologies to create them. In practice, the results of a digital strategy are primarily [6]:

- refusal of paper document management or reduction of its volume;
- reduction of customer service time and transaction and settlement processing time;
- expanding the possibilities of remote access of clients to their funds and independent conduct of operations at any convenient time and from anywhere in the world without visiting the bank;
- reduction of operating costs;
- reducing risks from core activities.

At the same time, «digital» expands the possibilities of data exchange between customers, parties to the agreement and government agencies. That is why digital transformation is not only about technologies, but also how and by whom they are used. While developing and improving the «external» customer experience, we must not forget about «internal customers» – developing a culture of innovation, training and empowering employees should be at the top of the digital agenda. In the context of the above, it should be noted that only the presence of a clear algorithm will allow us to change the analog paradigm of business to a digital one. First of all, because transformation is a business model that requires constant improvement of technologies and the introduction of new developments. A successful strategy will be when technologies «work» to improve products and attract customers, empower employees and optimize operations. Penetrating all internal and external levels and areas of a company's activity, technologies shape its digital future [3-7].

Many companies usually start their digital transformation with automation. Because it lays the foundation for further evolution. This is the automation of sales, production, financial flows, document management, etc. For this, various solutions can be used - from cloud technologies to specialized software designed to manage the activities of the enterprise (ERP). Enterprise resource planning (ERP) systems used in modern banking are on-premises or cloud-based integrated platforms for managing all aspects of a manufacturing or distribution business. In addition, ERP systems support all aspects of financial, personnel, supply chain and production management together, as well as a key function - accounting. ERP systems will also provide transparency to the entire banking business process, they can track all aspects of production, logistics and finance. These integrated systems act as a central business hub for all workflow and data and provide access to them to various departments. In addition, modern banking institutions are simultaneously implementing technologies and solutions to create new business models. These can be the Internet of Things (IoT), blockchain in accounting, various digital tools, robotics, etc.

According to the results of the identification, 4 business models of Ukrainian banks were identified: retail, universal, corporate, corporate with retail financing. The increasingly widespread implementation of modern business models is explained by the constant increase in competitiveness. The business model is a set of components of its potential that affect, taking into account the actions of exogenous factors and strategic goals, the structure of assets, liabilities and income of the bank. Thus, the business model of the bank affects its competitive position in the market, as well as the level of risks and profitability (fig. 1) [1-8].

The classification of bank business models is based on the following criteria [1-8]:

1) by scope: local and comprehensive;
2) by type: universal, retail, corporate, corporate with retail financing, limited credit intermediation;
3) by degree of quality (viable and non-viable);
4) by the method of providing banking products to customers: neobanking or technological, traditional and mixed.

The Ukrainian banking sector not only keeps up with advanced foreign experience, but is also one of the leaders in digitalization on a global scale.

Digitalization improves customer satisfaction and provides banks with a wider audience reach. Digitalization allows you to automate many banking processes, which helps increase efficiency and reduce operating costs. Some examples of increasing the productivity of banking processes using digitalization:

– automation of credit scoring processes and loan granting decisions, which reduces application review time and reduces risks;

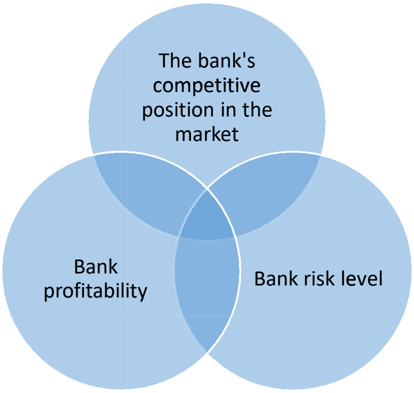

Fig. 1. **The impact of a bank's business model on its competitive position in the market, as well as on the level of risks and profitability,** *compiled by the author based on [1-8]*

– using robotic process automation (RPA) to perform routine tasks such as document processing and accounting operations;

– transition to digital documents and electronic signatures, which reduces paper costs and increases operational speed.

Productivity improvements allow banks to reduce the cost of providing services and increase their competitiveness.

Thus, the main advantages shaping the digital transformation of banking business include the following [7]:

1. Possibility of optimizing banking processes.
2. Creating a personalized and attractive service infrastructure.
3. The ability to find new sources of income.

Conclusions. With the development of digital technologies, banks are transforming their services and gaining a real tool to provide customers with the maximum level of service, increasing their loyalty. Thus, banks are consolidating and expanding their customer bases.

Digital transformation as the highest level of use of digital technologies generates the following effects in the banking sector: a high degree of standardization, since the integration of financial functions with technological systems is based on standardized processes and data; a high level of automation, since new technological tools provide automation of most services and processes; increased productivity by reducing the time spent on performing actions and operations; a change in financial models towards concentrating resources on understanding market needs, rather than on transactions; improved interaction with customers and employees due to increased availability of information; improved quality of customer service due to better structuring of the service provision process. Thus, the digital transformation of the banking sector makes it possible to improve banking activities, increase its efficiency and profitability, and reduce costs.

The transformation of banking services in the context of digitalization provides the following benefits to customers:

– availability in time (24/7) and place (from anywhere);
– saving time accessing the service;
– high speed of interaction, which depends on the speed of the banking specialist's work (no queueing problems);
– high speed of interaction, which depends on the speed of the banking specialist's work (no queueing problems).

Ultimately, the introduction of digital technologies leads to the creation of new business models and the development of open ecosystems, in which all markets and consumers will be involved. It is important to emphasize that digital transformation is not a technological strategy, but a business strategy that allows businesses to quickly respond to market needs.

Based on the analysis, it can be concluded that the banking sector of Ukraine, despite the challenges associated with economic instability, demonstrates high resilience and adaptability. The main goals of banking management remain to ensure profitability and reliability of banking operations. This is achieved through effective risk management and maintaining stable profitability.

In recent years, the number of banks has decreased only slightly, which indicates the absence of a critical impact on the structure of the banking sector. Positive trends are also observed in key financial indicators: net assets of solvent banks are increasing, the volume of non-cash transactions is growing, and a high level of profitability of assets and capital is maintained.

Key factors of stability were the prompt anti-crisis measures taken by the National Bank of Ukraine. This includes both supporting banks' liquidity through refinancing and strict control over capital flows during the most stressful periods. Digital transformation, in particular the development of contactless payments and the use of NFC technologies, also significantly contributed to supporting the banking system during this difficult period.

Thus, the coordinated actions of bank management and the state regulator ensured the stable operation of the banking sector, which allows not only to support the country's economic activity, but also creates prospects for the further restoration and development of the financial system of Ukraine.

The need to continue strategic reforms, in particular towards integration with European standards, as well as maintaining macroeconomic stability are key tasks to ensure the long-term sustainability of the sector.

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