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## DIGITALIZATION OF THE FINANCIAL SYSTEM OF UKRAINE

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### ДІДЖИТАЛІЗАЦІЯ ФІНАНСОВОЇ СИСТЕМИ УКРАЇНИ

*The article is devoted to the theoretical foundations of the development of digital technologies in the financial system of the state, the peculiarities of the influence of the digitalization process on the development of the financial market are considered and highlighted. The current legal acts contributing to the implementation and development of the digital transformation of the country's financial system have been analyzed. In Ukraine, the starting point for the development of the implementation of digital technologies on the financial market is the large-scale step-by-step plan developed by the National Bank of Ukraine (NBU) — the Strategy for the Development of Fintech in Ukraine until 2025, which is the first high-level document that describes the principles and elements of a stable fintech ecosystem, details the most important directions and delves into ecosystem development indicators in detail. The document is based on four basic building blocks of the modern Fintech ecosystem: regulatory policy, capital, demand and opportunities. The main advantages and risks of the development of digital technologies in the financial sphere are considered. It is well-founded that the financial system cannot function effectively if the population does not use financial services in the sphere of lending, investment, savings, etc. Users of financial services must be financially literate, because only in this case will the financial system function stably. That is why, it has been emphasized that in the conditions of widespread use of digital technologies, the sphere of financial services should be oriented to the population as much as possible. However, it should be noted that accelerating the digital literacy of the population and the introduction of modern information systems and digital technologies requires significant investments in modern technologies, which in the conditions of a full-scale war is a problematic issue for Ukraine.*

Статтю присвячено вивченню теоретичних засад розвитку цифрових технологій у фінансовій системі держави, розглянуто та висвітлено особливості впливу процесу цифровізації на розвиток фінансового сектору. Визначено, що впровадження процесу цифровізації на вітчизняному фінансовому ринку потребує відповідного нормативного забезпечення розвитку цифрових технологій у фінансовій системі держави та імплементації чинного законодавства до законодавства країни ЄС. Проаналізовано чинні нормативно-правові акти, які сприяли розвитку цифрової трансформації фінансової системи країни. Обґрунтовано, що до основних факторів, які сприяли стрімкому розвитку цифрових технологій у світі, належать такі: всесвітнє зростання процесів діджиталізації, які охопили практично всі сфери життя людини, включно з фінансовим сектором; підвищення задоволеності споживачів фінансових послуг; розширення можливостей управління капіталом суб'єктів господарювання; зниження витрат усіх учасників фінансового ринку; прискорення фінансових операцій; збільшення територіального охоплення фінансовими послугами; підвищення прозорості відносин на фінансовому ринку. Розглянуто основні переваги та ризики розвитку цифрових технологій у фінансовій сфері. Зазначено, що в умовах широкого використання цифрових технологій сфера фінансових послуг має бути максимально орієнтована на потреби та запити населення. Широкий спектр цифрових фінансових технологій зумовлює необхідність побудови ефективної фінансової системи, а це, у свою чергу, потребує дотримання грамотного та системного підходу з боку держави щодо правового регулювання сфери фінансових технологій; приве-

**дення нормативно-правової бази України до норм європейського законодавства; впровадження IT-технологій, що забезпечують сучасне впровадження цифрових інструментів; підвищення рівня фінансової грамотності населення, заснованого на простоті та доступності подання інформації; формування компетентного кадрового потенціалу у сфері цифровізації; фінансування новітніх наукових розробок.**

*Key words: digitalization, finance, financial system, financial technologies, digital transformation, digital technologies.*

*Ключові слова: діджиталізація, фінанси, фінансова система, фінансові технології, цифрова трансформація, цифрові технології.*

## SETTING THE TASK

The rapid development of digital technologies in the world is increasing its pace, which is manifested in the spread of digitalization processes in many spheres of society. In the financial market, operations are carried out using various mechanisms of financial technologies, a special place among which is given to cryptocurrency and blockchain, which by their nature replace funds and bank accounts, respectively, and thereby virtualize the process of managing financial flows.

Today, there are many discussions about financial technologies and economic substantiation of the value of digital assets, the possibility of their integration into the global financial system. In these discussions, both supporters and opponents of modern financial technologies present many convincing arguments, but it is unlikely to reach a unified opinion. Financial technologies are the future, but there is still no unified concept of the digital currency regulatory system in the world; therefore, the approach to understanding and relating to modern fintech systems and other digital technologies of the financial market is ambiguous and requires appropriate solutions, since several countries around the world have banned the use of cryptocurrencies.

## ANALYSIS OF RECENT RESEARCH AND PUBLICATIONS

The study of problematic issues related to digitalization in the financial market and ways to solve them are considered in the scientific works of O. Baranovskyi, O. Vovchak, S. Volosovych, V. Kovalenko, V. Korneeva, K. Kraus, A. Mazaraki, S. Naumenkova, S. Onyshko, L. Pavlenko, S. Tsyrylyk, I. Chugunov and others. However, despite the significant achievements of these scientists, it is worth noting that as a result of the rapid introduction of innovative financial technologies, the theoretical justification of digitalization of the financial market needs additional attention.

## HIGHLIGHTING PREVIOUSLY UNRESOLVED PARTS OF THE OVERALL PROBLEM

The proper functioning and dynamic development of the financial market of Ukraine serves as a prerequisite for ensuring the steady rise of the country's economy. The implementation of digitalization processes in the financial market of Ukraine should ensure the effectiveness of the functioning of the country's financial system and increase

the quality of life in society. At the same time, the issue of formulating the main directions of further development of digital financial technologies on the financial market in conditions of uncertainty and risk remains relevant.

## FORMULATION OF THE GOALS OF THE ARTICLE

The goal of the article is to research the ways of digitalization of the financial market, to determine the main advantages and threats, to formulate the main directions of further theoretical and practical provision of the effectiveness of the use of financial technologies.

## PRESENTATION OF THE MAIN RESEARCH MATERIAL

Digitalization of the economy has led to the need for digitalization of management processes and the introduction of modern software products. The issue of the implementation of digital technologies is important for scientific circles not only in Ukraine, but also abroad. The process of digitalization is insufficiently studied because of the rapid development of innovative technologies both in Ukraine and throughout the world. Modern scientists study the issue of introducing innovations in various fields, conduct scientific research in the financial sector. Ukrainian scientists, in particular V. Onyshchenko and A. Chervyak, believe that digitalization was first introduced precisely in the financial market [1, p. 10], and Y. Klapkiv, O. Hrybinenko, V. Zakolodyazhnyi, D. Tretyak, Litoshenko, B. Nicoletti, M. Eling and others study the essence of the new terms "digitalization", "digitization", "digital technologies", "virtualization" and methods of influence of these processes on the development of the financial market [3].

A significant feature of the modern development of the financial market is the widespread introduction of financial technologies, which contributed to the development of the appropriate category apparatus, where one of the most popular is the term "FinTech", which is considered among scientists in various aspects: FinTech innovations, FinTech services, FinTech business model, FinTech industry and FinTech technology. This multifaceted concept of "FinTech" has led to significant differences in the definition of this category in the scientific literature. But one of the most common approaches is FinTech as innovation, which is the closest to the concept of "financial innovation". FinTech innovations are always technological innovations, while unlike them, financial innovations are not always related to

the adaptation of certain information technologies to the financial market. The technological innovations that ensured the development of FinTech are: distributed access technologies (blockchain), artificial intelligence, big data analytics (Big Data), application programming interfaces, cloud technologies, biometrics, and others [2].

The reality of rapid transformation in the economy has recognized digitalization as a business need, because it provides an opportunity to work with the help of cloud services [1; p. 34]. Providers of innovations offer to satisfy the need for speed of change of services at the expense of cloud platforms, which will help to speed up the development of necessary programs, input of data, and will help to increase the possibilities of analytics. They create reliable applications, as well as facilitate the processes of managing features that are important to the user without problems from the main structure and safety. Fast installation without loss of time and accessibility for the consumer is important in the implementation of the digitalization process.

The benefits of digitalization are the rapid growth (exponential, not linear) of innovation, which helps to improve efficiency, increase productivity and reduce costs; rapid (unparalleled) growth of information volumes and the possibility of using them for new technologies; artificial intelligence which is the reality of our time — Chat GPT and others.

Along with the above mentioned advantages, the digitalization of the financial market has a number of disadvantages, in particular: the insufficient level of legal regulation due to the use of FinTech by companies with business models different from traditional institutions; spontaneity of decision-making by consumers of online services; limited access due to a certain level of skills and the availability of gadgets among users for online operations [5, p. 207]; Internet addiction.

In Ukraine, the starting point for the development of the implementation of digital technologies on the financial market is the large-scale step-by-step plan developed by the National Bank of Ukraine (NBU) — the Strategy for the Development of Fintech in Ukraine until 2025, which is the first high-level document that describes the principles and elements of a stable fintech ecosystem, details the most important directions and delves into ecosystem development indicators in detail. An important strategic direction of the Strategy is the development of the financial technology market and digitalization of the economy [6]. The strategy is based on a comprehensive study of the experience of more than 30 advanced and most developed Fintech ecosystems in the world and modern approaches to the effective management of the financial innovation market by global regulators. The document is based on four basic building blocks of the modern Fintech ecosystem: regulatory policy, capital, demand and opportunities.

The development of digital technologies contributes to the emergence of certain potential risks that affect the efficiency of the functioning of the financial market. These risks include: market risk, which implies negative consequences from a significant change in the market situation; cyber risk arising from the specifics of the financial technology environment; technological risk, which implies a violation of the uninterrupted provision of services due to failures or errors in the operation of the

service; legal risks related to insufficient protection of consumer rights [4, p. 64].

For Ukraine today, an important task is to ensure the effective functioning of modern digital technologies in the financial market, as objectively the most important part of the competitiveness of the financial system of Ukraine. To implement this task, it is advisable to implement coordinated measures, in particular:

1. Adherence to a balanced approach in the field of state regulation of the financial technology market. On the one hand, the task of the state is to create a favorable environment for the development of innovations, on the other — to control and minimize the risks associated with the functioning of the fintech market.

2. Introduction of open banking through the approval of the standards of the European directive PSD2 in Ukraine. Open banking involves "uniting" different banks and platforms into a single system and providing access to user data from different "points". The National Bank of Ukraine has already developed the concept and initiated the implementation of the standard at the legislative level. The main advantage of this initiative is that open banking is an incentive for competition [7].

3. Facilitating the process of cooperation between banks and fintech companies based on the involvement of fintech companies in outsourcing. They will help implement projects that require speed and flexibility. This trend also stimulates investments in startups by banks.

4. Increasing the level of financial literacy of the population, which is based on the simplicity and accessibility of information presentation, ergonomic and design solutions, the implementation of artificial intelligence elements, the development of robotic consulting and machine learning in the financial sphere.

5. Formation of personnel potential, which involves ensuring in the future access to specialists who possess key competencies for the fintech industry, creation of an attractive education system, as well as the implementation of a favorable immigration policy.

An important point in the development of financial technologies is the active participation of the National Bank of Ukraine, which not only fulfills the role of a mega-regulator, but also acts as an initiator and platform for the development of fintech projects.

Therefore, digitalization of the financial market opens up many opportunities for the effective functioning and development of the country's financial system: it contributes to the minimization of shadow flows of capital outside the budget, which increases trust in Ukraine on the part of financial partners; increasing the transparency and accountability of the use of funds; limiting corruption, tax evasion and facilitating the interaction of citizens with local and state authorities. In general, digitalization of the financial system is expected to bring improvements to the provision of services in the field of health care and education, promoting social integration and communication, ensuring satisfaction of the needs and interests of citizens.

## CONCLUSIONS FROM THE CONDUCTED RESEARCH

The study and scientific analysis of the theoretical foundations of the digital transformation of the financial

system makes it possible to conclude that the main theoretical prerequisites for the active implementation of digital technologies in the financial system have been created in Ukraine. However, the war formed new paradigms of development, now the processes of digital transformation are intensifying in Ukraine, which leads to the search for non-traditional forms of innovative development and the need to introduce modern information systems and digital technologies. An important task is the development of appropriate tools, as well as complex and coordinated approaches to the implementation of digital technologies.

A wide range of digital financial technologies makes it necessary to build an effective financial system, and this, in turn, requires compliance with a competent and systematic approach on the part of the state regarding the legal regulation of the field of financial technologies; implementation of the normative and legal framework of Ukraine to the norms of European legislation; the introduction of information technologies that ensure the modern implementation of digital tools; increasing the level of financial literacy of the population, based on the simplicity and accessibility of information submission; formation of competent personnel potential in the field of digitalization; financing of the latest scientific developments.

In today's realities, the implementation of the above-mentioned measures will contribute to the promising development of digital financial technologies in the main spheres of society. However, it should be noted that accelerating the digital literacy of the population and the introduction of modern information systems and digital technologies requires significant investments in modern technologies, which in the conditions of a full-scale war is a problematic issue for Ukraine.

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