



USE OF DIGITAL TECHNOLOGIES IN IMPROVING THE FINANCIAL MARKET ACTIVITY

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Abstract

This article describes the ways of using digital technologies in the financial market and the effective organization of the stock exchange. As we know, the financial market in a broad sense includes the money market, capital market, investment market, stock market, foreign exchange market, insurance market, cryptocurrency market, etc. Artificial intelligence, machine learning, mobile applications, blockchain technology, cloud computing and big data analytics have led to the creation of new services and business models for existing financial institutions and new market participants. All these technologies can benefit both consumers and businesses by expanding access to financial services, offering more choice and making transactions more efficient, resulting in greater profits from crypto asset trading.

Keywords: Digital economy, crypto asset, crypto exchange, investments, trade.

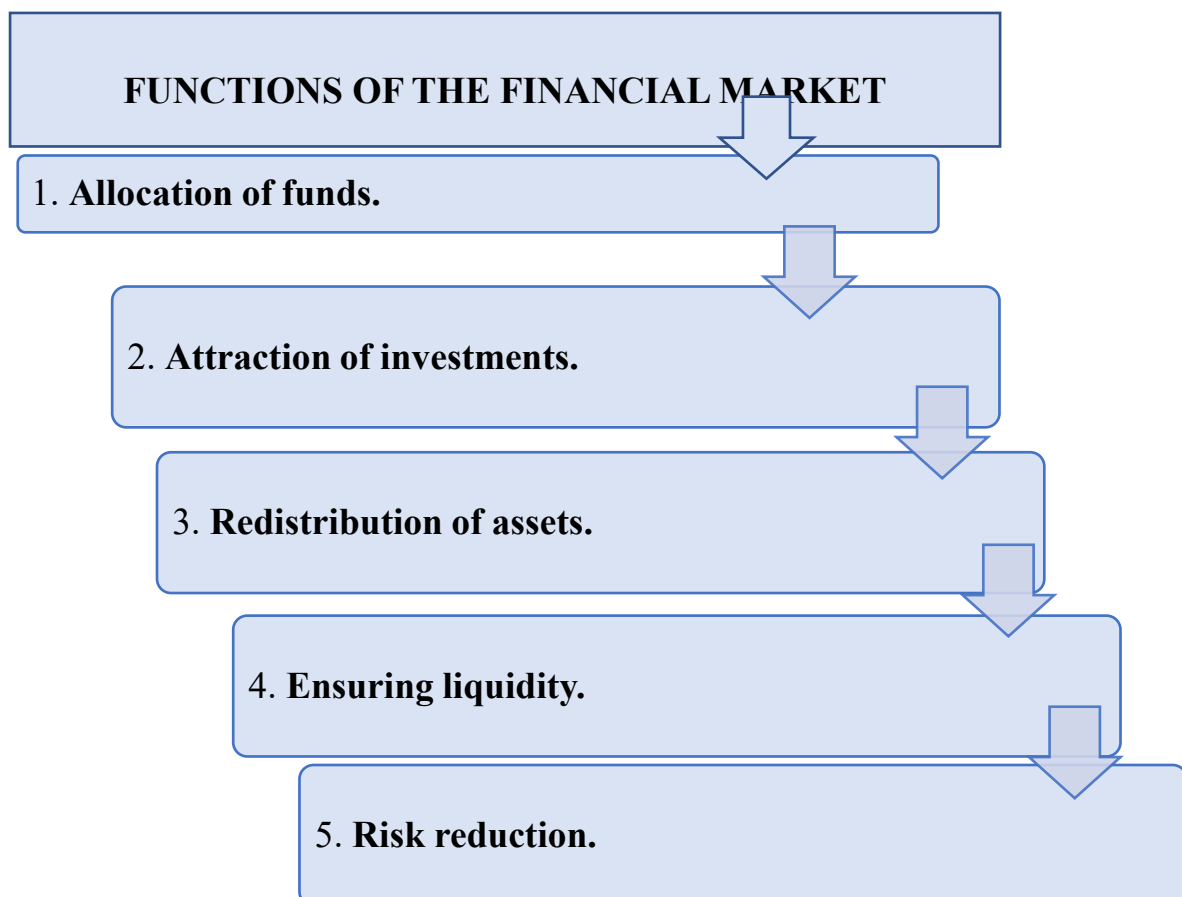
Introduction

Today, amid profound changes in global economic relations, comprehensive reforms are being implemented across all sectors of our country. These processes demand the development and implementation of measures aimed at rapid development of the country's economic sectors through innovative approaches and extensive use of digital technologies. Addressing a number of challenges, including digitalization and introduction of innovations, as well as applying new



forms and methods of attracting investments, requires cooperation between the government and businesses. As we all know, innovations and technologies are often introduced by the business sector.

The financial system is one of the main sectors in state development. Digitization of the financial system and the integration of digital technologies contribute to its further advancement. The financial market is an inseparable part of the financial system and represents the market of financial resources, namely money and money-equivalent assets. In this market, the free movement of funds is ensured according to demand and supply, meaning that assets are bought and sold. The financial market participants may include investors, enterprises, financial institutions, legal entities, banks, the government, and individual entrepreneurs. The financial market allows for the efficient allocation and increase of capital among all participants of the system. This ensures stability and economic growth.





The financial market broadly combines the money market, capital market, investment market, stock market, currency market, insurance market, crypto market, and others.

Although technological innovations in finance are not entirely new, investments in new technologies have significantly increased in recent years. Artificial intelligence, machine learning, mobile applications, blockchain technology, cloud computing, and big data analytics have brought about new services and business models for existing financial institutions and new market participants. All of these technologies can benefit both consumers and businesses by enabling wider use of financial services, offering more choices, and making transactions more efficient. They can also help reduce national barriers and promote competition in various sectors.

It is worth noting that in Uzbekistan, trading with crypto assets has been legalized, and the Uznex crypto exchange has begun its operations. This, in turn, impacts the financial services industry by encouraging broader use of financial services, offering more options, and increasing operational efficiency through innovative technologies, benefiting both consumers and enterprises.

Literature Review

Regarding the financial market, B.A. Raizberg stated in his article: "The financial market is the aggregate market for financial assets: foreign currency, securities, loans, deposits, and financial instruments issued by financial institutions"[1]. M.N. Mikhaylenko put forward the idea that "The financial market is a set of economic relations between participants (sellers, buyers, intermediaries) involved in transactions for buying and selling financial assets and financial services" [2]. Many sources emphasize the crucial role of the financial market in the development of the economy and the progress of the state. E.V. Shirshov and N.I. Petrik, in their educational manual, described the financial market as "an economic institution where demand and supply are formed during transactions involving various financial assets and instruments" [3].

Zhiyi Liu and Wenxuan Hou, in their article "Opportunities and Challenges of Digital Financial Development," analyze the historical process of digital



financial development, identifying stages such as automation, the Internet, mobile payments, and blockchain technologies. The authors discuss how the development of digital finance has impacted the advancement of financial technologies [4].

David Mhlana, in his article "Financial Technology (FinTech) an Introduction," introduces the concept of FinTech and highlights its role in digitizing traditional financial services as well as its connection to the technologies of the Fourth Industrial Revolution. The author debates FinTech's contribution to economic growth and development [5].

Rainer Alt, Gilbert Fridgen, and Younghoon Chang, in their article "The Future of Fintech — Towards Ubiquitous Financial Services," analyze the impact of FinTech on changes within the financial sector, discussing the future of digital financial services and their role in the economy. The authors review the development trends and prospects of FinTech [6].

Methodology

Within the scope of this research, the efficiency of using distributed ledger technologies is examined in the context of the financial industry and stock exchange activities. The research describes the methodological approaches themselves as well as the operational indicators, whose criteria or logical levels provided insight into the possibilities of effectively utilizing blockchain technology. During the study, theoretical methods such as synthesizing and analyzing existing information were applied.

Results

According to the Decree No. PQ-3832 of the President of the Republic of Uzbekistan dated July 3, 2018, titled "Measures to Develop the Digital Economy and the Circulation of Crypto-Assets in the Republic of Uzbekistan," the circulation of crypto-assets has been regulated by special normative-legal documents. It was established that operations involving crypto-assets carried out by legal entities and individuals, including non-residents, are not considered taxable objects, and income derived from these operations is excluded from the taxable base for taxes and other mandatory payments.



For carrying out activities in the field of crypto-asset circulation, licensed entities are authorized to perform crypto-asset related currency operations. It is stated that the norms of legislation regulating currency operations and currency control do not apply to these operations. A crypto-exchange is defined as an electronic platform that provides services for buying, selling, or exchanging crypto-assets. Licensing requirements and conditions for crypto-exchanges are set by the Presidential Decree No. PF-121 dated April 27, 2022.

Interest in investing in the crypto-asset market among Uzbekistani citizens and the business community has increased, leading to growth in the number of institutional participants in the crypto-asset market. Whereas at the beginning of 2023 there was only one crypto-exchange and four crypto-shops operating in the country, by the end of 2023, 14 licenses had been issued to providers operating in the crypto-asset circulation sector:

- Two licenses were issued for crypto-exchange companies (“Uznex” and “COINPAY”);
- Two licenses for crypto-depositories (“Lockton Solutions LLC-FZ” and “Paynet Crypto” LLC);
- Ten licenses for crypto-shops (“CRYPTO TRADE NET,” “CRYPTO MARKET,” “CRYPTO EXPRESS,” “COINPAY,” “C-BASE,” “PAYNET CRYPTO,” “CRYPTOCORP,” “C-CASH,” “T-FIRM,” and “T-REX”).

Thus, legal crypto-operations in Uzbekistan can be carried out through the “Uznex” exchange website or application, as well as offline through the above crypto-shops.

The “Uznex” exchange platform provides users with a high-quality security system and allows online registration to purchase crypto-assets equivalent to sums in Uzbek som via plastic cards. The exchange also offers a broker-free trading floor, providing convenient integration for users.

Statistical data for Uzbekistan indicates that during the period from March to August 2022, weekly crypto-assets worth between 23 to 180 million USD entered the country, while crypto-assets worth between 20 to 160 million USD left the country.

Providers offering services in the crypto-asset circulation sector paid state duties totaling 33.9 billion UZS and collected fees amounting to 2.3 billion UZS for



conducting activities. In 2022-2023, the total income from state duties and fees collected from providers amounted to 37.1 billion UZS (3.1 billion UZS in 2022 and 33.9 billion UZS in 2023) and 2.7 billion UZS (400 million UZS in 2022 and 2.3 billion UZS in 2023), respectively.

Analysis shows that providers in the crypto-asset circulation sector paid 3.1 billion UZS in state duties and fees during the past period. After the enactment of this law, it is expected that annual budget revenues from fees alone could increase by at least 1.5 billion UZS in the future.

The sector aims to achieve even higher results by attracting digital technologies. One unique feature of modern trading platforms is their ability to provide market information in real-time. Traders can access the latest data on securities prices, market trends, and relevant news. This rapid flow of information allows investors to make informed decisions and respond quickly to market changes.

Trading platforms are the foundation of modern exchange trading, simplifying the execution of purchase and sale orders on financial markets. These platforms have become indispensable tools for both individual investors and institutional traders, offering user-friendly interfaces, real-time market data, and advanced analytical tools. The emergence of these platforms has made exchange trading easier and accessible to a wider audience.

The integration of algorithmic trading and artificial intelligence (AI) has led to the automation of exchange trading and predictive analysis. Algorithmic trading uses pre-programmed algorithms to execute trades based on predetermined criteria. AI, on the other hand, employs machine learning algorithms to analyze large volumes of data and identify trading patterns [8].

Monitoring systems for financial operations using crypto-assets benefit from distributed ledger (blockchain) technology, which helps track and evaluate the status of crypto-asset transactions.

Conclusion and Recommendations

The importance of utilizing digital technologies in improving the financial market activities of Uzbekistan is steadily increasing. Using the example of the “Uznex” crypto exchange, it can be seen that modern digital technologies provide an opportunity to make the financial system more efficient, transparent,



and reliable. These technologies create conveniences for users, accelerate processes, and enhance the security of transactions. The development of digital platforms contributes to Uzbekistan's integration into global financial markets and strengthens international cooperation.

At the same time, it is crucial to develop legal and technical infrastructure, increase digital literacy, and implement reliable regulations during the implementation of this process. Analyses conducted through the "Uznex" crypto exchange indicate that the widespread application of digital technologies in the financial sector is a strategic opportunity to diversify the economy and improve the well-being of the population. Therefore, it is necessary to rapidly develop digital financial services and support innovative approaches through cooperation between the state and private sectors.

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