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KEY ASPECTS AND ADVANTAGES OF USING DIGITAL TECHNOLOGIES IN FINANCE AND BANKING

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Abstract: In an era when the digital economy covers every activity, digital technologies already occupy a broad place in services, production and many other fields thanks to their convenience. This article treats as key elements the main functions that digital technologies perform in finance and the economy, as well as the functions and levels of usefulness of the digital applications in use within the system. Rapidly developing economic trends, together with the introduction and creation of new technologies across sectors, are making many industries more efficient. Various mobile applications are raising citizens' financial literacy. Particular attention is paid to the broad use of modern technologies in financial transactions, to managing one's accounts in financial and banking relations, and to improving online payments. In addition, the article covers online lending and automated credit scoring in the banking sector, the wide-scale advancement of FinTech technologies, the networked use of modern Big Data, and the extensive use of modern artificial intelligence in credit and financial assessments. Improvements in cloud technologies reduce network loads, while modern solutions such as Blockchain data and ERP systems, which are aimed at improving enterprise operations, together with the digitalization of financial reporting, are considered important for achieving the intended efficiency through the convenience and time savings they provide. The article may be useful for scientific and practical guidance.

Keywords: Digital economy, digital technologies, digital payments, Internet and mobile banking, online lending, FinTech, artificial intelligence, Big Data, Blockchain, cloud technologies, ERP systems.

1. Introduction

In today's era of growing competitiveness, financial inclusion and the digital economy have become the foundation of global economic policy as key tools for reducing poverty and achieving sustainable growth. Between 2011 and 2021, the share of adults worldwide holding an account at a bank or mobile money provider rose from 51% to 76%, largely thanks to initiatives such as Universal Financial Access 2020 (World Bank, 2018; Demirgüç-Kunt et al., 2022). Despite this remarkable progress, the pace and depth of financial inclusion remain uneven across regions, which highlights persistent gaps in digital and financial access. Financial technologies, regarded as the main solution for

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closing these gaps, have been characterized by a growing share within the sector. Modern digitalization processes have not only demanded the wide use of digital payments but have also improved financial relations. Efficiency gains from the use of new mobile applications are increasing. It is envisaged that the digitalization of financial relations between enterprises and the population, as well as between the state and enterprises and between citizens and the state, will be further improved. Through the further improvement of digital technologies, mainly Internet and mobile banking applications, personal accounts can be managed quickly and conveniently, money transfers are improved, and payments can be made while saving time and funds.

2. Literature Review

The financial technology (FinTech) revolution is gaining momentum around the world. Although technology has been part of the financial services industry since the 1850s, only in the last two decades has "FinTech" become the general term for describing technological advances that transform the delivery of financial services, spur new business models, applications, processes and products, and increase consumer incomes. During this period the banking sector has undergone wide-ranging technological and regulatory changes, related, among others, to deregulation and liberalization, advances in information and communication technologies, new solutions for transactions and savings, and changes in cybersecurity and digitalization. From likes and tweets on a given topic on Facebook to consumer behavior and profile pictures, FinTech makes it possible to use any quantifiable information to make investment decisions or to assess the creditworthiness of an individual or firm. Potentially, this leads to better customization and pricing of services and products, as well as flexibility, screening and matching, but it also creates risks of discrimination, invasion of privacy, identity theft and fraud. New technologies also allow soft information to be partially hardened to some extent, for example by encoding text into numbers. Several papers address this possibility, including but not limited to those showing that banks have mainly collected soft, relationship-based information in order to make informed decisions about providing their services. This type of information constituted a competitive advantage because it is difficult to reproduce and transmit outside the bank concerned. Gradually, as hard information about customers became available, banks began to use it instead of, or alongside, soft information for certain functions, which moved outside the bank (Liberti & Petersen, 2019). Large banks are expected to rely more on hard information than on soft information (Berger, Miller, Petersen, Rajan, & Stein, 2005; Qian, Strahan, & Yang, 2015) because of their hierarchical structure and the possible separation between those who collect information and those who make the final decision on whether to provide a particular service or product (Stein, 2002; Da, Engelberg & Gao, 2011; Dougal, Engelberg, Garcia & Parsons, 2012; Huang, Zang & Zheng, 2014; and Gentzkow, Kelly & Taddy, 2019).

3. Research Methodology

Given the financial significance of each, it is essential to understand the risks and opportunities that FinTech creates for banks, as well as its impact on the core functions of financial intermediaries and on their role in the modern financial services ecosystem. Although the spread of FinTech is still at an early stage globally, there is potential competition with traditional financial institutions, which may lead to a relative decline in their market share and disrupt the classic textbook picture of financial intermediation, in which banks' core activity is lending on the basis of household deposits. In particular, it is unclear whether the FinTech revolution will completely destroy traditional banking or, on the contrary, strengthen the existing portfolio of banking products. To the best of our knowledge, the existing literature on this issue lacks a general overview; in this article we aim to provide exactly that.

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In this context, traditional financial institutions face competition in their core activities from non-bank financial institutions and shadow banks. Moreover, the emergence of FinTech has allowed startups, BigTech firms, neobanks and rival banks to enter the financial services sector as new competitors; in particular, FinTech startups are actively engaged in the main segments of financial services, such as payments and remittances, lending, corporate financial management, crowdfunding, enterprise technologies for financial institutions, trading and capital markets, insurance, personal financial management, wealth management and digital banking services.

The study is also based on the importance of the banking sector in the financial system and on the governance value that the digital transformation of banks can provide. On the one hand, the stable operation of banks is essential for the efficient allocation of resources and sustainable economic growth. Regulators and scholars place high value on the role of bank stability in ensuring capital market stability and sustainable economic growth. Various related studies show that the stable functioning of banks has been emphasized since the global financial crisis. Commercial banks generally hold an important position, especially in financial systems dominated by the banking system, because their stable operation is linked to preventing systemic financial risks.

On the other hand, scholars still need to focus on technological innovation within banks and its impact on the factors that affect bank stability. Commercial banks are increasingly adopting FinTech and undergoing internal digital transformation as part of the rising wave of the digital economy. As a result, FinTech has become a new mode of financial innovation. This brings about structural changes in the global financial system. However, how digital transformation affects bank stability, and through what potential mechanisms, are empirical questions that need to be examined. Therefore, understanding the impact of digital transformation on bank stability is an academically meaningful topic.

External FinTech serves as the main driving force of digital transformation in Chinese banks. In recent years, several Chinese online giants and non-bank technology companies have been using talent and technology to improve traditional financial services. As a result, the introduction of external FinTech inevitably reduces banks' franchise value and monopoly profits, and even appears as a potential substitute for traditional banks. Under market competition pressure, commercial banks are being forced to undergo digital transformation to improve their internal operational efficiency.

4. Findings and Discussion

In this study, we emphasize the integral value of digital transformation within banks, as it plays an important role in understanding the changing dynamics of commercial banks' behavior in the current financial competition environment. At the same time, we find that digital transformation can enhance bank stability by reducing risk-taking behavior on both the asset and liability sides and by making it easier for banks to diversify asset allocation and income.

However, there may be alternative explanations for our results, such as bank corporate governance and lending operations. Previous studies have shown that banks with diversified shareholdings and more independent directors are better at controlling risks and delivering share performance.

Liquidity creation through transformation belongs almost exclusively to banks, allowing them to lend to borrowers and provide liquidity services to their customers. In particular, Navaretti et al. (2018) emphasize that banks' provision of liquidity and management of risks are inextricably linked to their ability to provide payment services. For example, if customers can use their deposit accounts to make payments immediately without cash intermediation, the need for liquidity is better met. Checks, ATMs and POS payment services were the first "innovations" to facilitate transactions, with transactions taking

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place directly between banks. Liquidity provision is the function of banks that FinTech has disrupted the most and where banks face the most competition. On the one hand, strict banking regulations have encouraged the emergence of shadow banks, which are gradually increasing their market share in areas of financial services that do not require a banking license. On the other hand, in recent years technological change has enabled BigTech and FinTech firms to offer various credit and payment solutions. There are several reasons for this disruption. For example, in developing countries, the absence of traditional financial infrastructure, or scarcity owing to the geographical characteristics of certain regions, makes FinTech solutions the only possible way for people to access financial services. Another possible reason is the strict regulatory requirements for banks, versus the absence or leniency of such requirements for other players in certain financial areas. In some cases, this also creates regulatory arbitrage opportunities that many FinTech firms can successfully exploit. Unlike traditional financial institutions, NBFCs, BigTech and FinTech firms can benefit from proprietary technologies and economies of scale, and the resulting lower costs may be an additional explanation for the spread of FinTech in certain areas.

FinTech firms operating in banking services have led to the disintermediation of incumbent banks and have partly benefited from the currently lenient regulation. An important question here is whether banks should fight FinTech to defend their existing position and treat FinTech firms as competitors, or see them as an opportunity to expand their reach and improve overall liquidity provision. For example, in the area of lending, Tang (2019) argues that P2P platforms can generally be seen as a complement to banks, not as a substitute. In addition, Navaretti et al. (2018) (Dermine, 2017). Thakor (2020) analyzes in depth the differences between P2P lenders and banks and explains that whether P2P lenders will ultimately replace banks in lending depends on regulation and funding costs, banks' popularity among customers, safety and insurance coverage, and collateral requirements. However, he ultimately concludes that banks will develop their own platforms or partnerships with FinTech firms, and that FinTech lenders will replace banks. FinTech firms cannot replace banks; rather, they can coexist with them, cooperate with them, or potentially come to resemble banks. One reason is that the liquidity provided by FinTech lenders is limited, as they do not have access to central bank liquidity as banks do. Their inability to perform maturity transformation further limits the liquidity services they can offer.

5. Conclusion and Recommendations

Indeed, there are many cases in which online lending platforms have allowed maturity mismatches, where lenders may receive their money faster than borrowers repay their loans. At the same time, the use of digital technologies helps solve a number of problems in banking and also ensures quality. Finally, the use of hard information to automate processes is especially important in investment advice, where collecting and processing soft information can be costly. FinTech solutions such as robo-advisory process past investment choices, risk aversion and other relevant data, identify certain patterns in the data, and give investors relevant suggestions, which may be more efficient than the traditional service provided by banks.

References

1. Resolution of the President of the Republic of Uzbekistan No. PQ-3832 of July 3, 2018, "On Measures for the Development of the Digital Economy in the Republic of Uzbekistan."
2. Resolution of the President of the Republic of Uzbekistan of April 28, 2020, "On Measures for the Wide Introduction of the Digital Economy and E-Government."

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HOUGHTON STREET REVIEW JOURNAL
ISSN: 2058-5519|Impact factor-15.9
http://houghtonstreetreview.com/index.php/hsr

3. Address of the President of the Republic of Uzbekistan to the Oliy Majlis, December 2018, "The Most Important Priority Tasks for 2019."
4. Digital 2019: Global Digital Overview. Value Creation and Capture: Implications for Developing Countries. UNCTAD, 2020.
5. Kurpayanidi, K., Ilyosov, A. (2020). Problems of the Use of Digital Technologies in Industry in the Context of Increasing the Export Potential of the Country. Abdullayev, A. M., & Kurpayanidi, K. I. (2020). Analysis of Industrial Enterprise Management Systems: Essence, Methodology and Problems.
6. Balabanov, I. T. (2013). Financial Analysis and Planning of an Economic Entity. Moscow: Finansy i Statistika, 130 pp. (in Russian)
7. Savitskaya, G. V. (2021). Analysis of the Economic Activity of an Enterprise. Minsk: Novoye Znaniye. (in Russian)
8. Sheremet, A. D., & Saifulin, R. S. (2020). Financial Analysis. Moscow: Infra-M. (in Russian)
9. Stukov, S. A. (2022). Express Analysis of the Financial Condition of Enterprises. St. Petersburg: Piter. (in Russian)
10. Kovalev, V. V. (2021). Financial Analysis: Capital Management, Choice of Investments, Analysis of Reporting. Moscow: Prospekt. (in Russian)
11. Blank, I. A. (2020). Financial Management: Textbook. Kyiv: Nika-Center.
12. Helfert, E. A. (2016). Techniques of Financial Analysis: A Guide to Value Creation. McGraw-Hill Education.
13. Wild, J., & Subramanyam, K. R. (2018). Financial Statement Analysis. McGraw-Hill.
14. OECD (2023). SME and Entrepreneurship Outlook 2023. Paris: OECD Publishing. https://www.oecd.org
15. World Bank (2024). Global Economic Prospects, January 2024. Washington, D.C.: World Bank Group. https://www.worldbank.org