THE EFFECT OF TECHNOLOGICAL ADVANCEMENTS ON THE GLOBAL FINANCIAL MARKET'S GROWTH

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Abstract *International financial markets now present a range of uncertain opportunities and challenges in addition to acting as a stimulus for global economic growth. Technological revolutions have always shaped the financial sector's evolution, affecting its capacity to adapt to shifting circumstances. These days, technological advancement plays a key role in revolutionary shifts in global financial markets, opening the door to creative and efficient solutions. In light of the growth of the global financial market, the study aims to pinpoint the theoretical, conceptual, and practical underpinnings of how technological advancements affect the global financial system. To accomplish this, the study systematizes the primary categories of contemporary technological advances and establishes the fundamental concepts of "technological innovations" and "international financial market." The report identifies contemporary technical advancements in the global financial sector, such as blockchain technology, artificial intelligence in fintech platforms, digital currencies and electronic money, crowdfunding, and public relations initiatives. In addition to providing an evaluation of the evolution of contemporary technological innovations in the financial market, including future projections, the study presents the authors' personal viewpoint on the phases of development and formation of technical innovations in the global financial market.*

Keywords: *blockchain, fintech platforms, crowdfunding, artificial intelligence, banking, financial markets, world economy, development, innovation.*

Introduction

The world is changing quickly these days due to technological advancements. One of the most crucial infrastructure elements in an economy heavily impacted by innovation is the financial system. Economic societies' interactions with money, investments, and financial management are altered by technological advancements, which open up new possibilities

The current global financial market is changing rapidly due to technological advances, making the research question pertinent. Traditional approaches to asset management, trading, and financial transactions are being transformed by technological advancements such as blockchain, artificial intelligence, and fintech solutions.

As a result, how these technological advancements are incorporated and used will significantly impact the future of the financial market. They can boost access to financial services for a large segment of the population, offer greater efficiency and reliability in financial transactions, and open new doors for businesses and investors. But these technological advancements also bring new risks and concerns, such as cybersecurity

and data privacy, as well as the need to regulate the global financial industry to keep pace with these changes.

According to the literature analysis, some questions concerning the future of the global financial market remain unanswered. Predicting and identifying the technical advancements that will be utilized in the financial industry in the future is one of the primary unresolved concerns. A comprehensive examination and systematization of diverse innovation trends and their possible effects on the financial system and international financial relations are necessary to address this issue.

The study aims to determine and evaluate the opportunities arising from the application of cutting-edge technologies in the financial sector, including the role of blockchain in enhancing transaction security and transparency, and the influence and advancement of artificial intelligence in investment decision-making.

Establishing the theoretical, conceptual, and practical underpinnings of technological advances' operation in the global financial market and assessing their influence on the global financial system are the study's goals.

During the training procedure, the following tasks were completed in order to accomplish this goal:

1. The key categories of contemporary technological advances are categorized, and the fundamental ideas of "technological innovations" and "international financial market" are taken into consideration.
2. The development of technological advancements during the international financial market's establishment process is taken into account.
3. Future projections and assessments are made regarding the advancement of technology developments in the financial market.
4. The key patterns that point to its continued growth are noted.

Literature review

The theoretical and practical facets of technological advances' activity in the global financial market have been extensively researched by writers and academics. Thus, O. Al-Kasasbeh et al. (2023) examine and evaluate how new financial innovations and technologies impact the global financial landscape, the operation of financial markets, and the interactions of financial institutions. The authors outline the primary facets and directions of fintech's influence on the global financial system, including digital payments, cryptocurrency markets, crowdsourcing, financial technology infrastructure, and other areas. They also discuss development patterns in this area and evaluate the potential advantages and risks of implementing fintech innovations in the banking industry.

A study by S. M. Alavi et al. (2022) examines the effects of financial innovation and institutional quality on financial development in emerging nations. According to the authors, the degree of financial development in

these areas can be positively impacted by the existence and effective application of financial innovation. This includes the creation of new financial products, technological advancements, and methods for providing financial services, all of which promote economic and financial expansion.

The author Ebrahimi, M. (2023) examines the success factors of business models in the fintech sector, including innovation, production efficiency, consumer demand, competitive advantage, and other crucial elements. Additionally, he offers suggestions for developing business plans that could be successful in the global financial market.

In his analysis of the role of information in financial markets, Goldstein (2023) emphasizes the importance of information in allocating resources and the effects of contemporary developments, such as the fintech revolution, on its transmission and processing. The study looks at potential shifts in the nature of information communication in the future.

Gudlur's (2023) research focuses on cybersecurity in the context of financial technology (fintech). The author examines several data and transaction security issues in the fintech industry and proposes a plan to prevent them and ensure future financial transaction security. This paper examines the significant problems arising from the advancement of financial technology and how it has affected the contemporary financial environment. Savona, P. and Kregel, J. A. (2020) concentrate on how technological advancements affect the contemporary institutional framework of money and financial markets.

The authors address the challenges of reestablishing the link between finance and the real economy, as well as the potential for imposing a government monopoly over cryptocurrency issuance and its effects on financial stability. The degree of information and communication technology (ICT) penetration in the stock markets of ten European nations and the advancement of financial innovations are evaluated by Marszk, A., & Lechman, E. (2021). The study's key findings are that technological advancements in financial markets are being aggressively implemented in numerous nations and are laying the groundwork for the creation of cutting-edge financial products.

Taherdoost, H. (2023) objectively explains the key elements of fintech and its effects on the financial market. The researcher also examines the challenges of using fintech and predicts how it will develop in the global financial industry. The study by Zheng, M. et al. (2023) examines empirical findings that demonstrate a strong correlation between technical innovation and financial globalization. The study concludes that technical innovation benefits greatly from financial globalization, and that this effect will be particularly noticeable in future financial markets.

Even with a wealth of studies on the topic, it remains unclear how technological progress may affect the global financial system; further investigation and analysis are needed. Today's world is experiencing rapid technological innovation, changing many facets of the financial industry. For financial institutions, regulators, and scholars studying international

financial markets, comprehending this influence may prove a significant obstacle in the future.

Methodology

The study aims to identify the theoretical, conceptual, and practical underpinnings of technological innovation in the global financial market and assess its effects on the global financial system. Given the rapid pace of technological development, it is necessary to fully understand and examine how advances affect the financial industry. In addition to aiding in predicting future market trends, understanding these shifts will help regulators and financial institutions formulate plans to maximize the stability and effectiveness of the financial system amid rapid technological advancement.

A thorough analysis of academic journals and current studies on technological innovation in global financial markets served as the foundation for this investigation. Moreover, it is predicated on a quantitative data analysis intended to evaluate how these advances affect the dynamics of financial operations inside the global financial system.

Numerous techniques spanning a range of topics were employed in researching technical advancements in the global financial sector.

This study forecasted and analyzed the dynamics of key indicators of technological advancement using statistical and economic methods. This approach enabled forecasting global spending on blockchain solutions in billions of US dollars for 2024, as well as estimating spending for 2017–2021, accounting for the sector's growth. The size of the finance industry's artificial intelligence (AI) market in 2021 and 2032 was also projected using this methodology. Additionally, the utilization of fintech technology was evaluated and analyzed using statistical and economic methodologies on a global scale.

You can visualize intricate processes, patterns, and phenomena under study by using graphs and diagrams. Diagrams are useful for identifying the dynamics of technical advances such as blockchain, fintech, and artificial intelligence when researching them in the context of the global financial market.

Methods for comparison, synthesis, and analysis. While the method of comparison and synthesis enables you to formulate the key stages and characteristics of the development of technological innovations in the global financial market, the method of analysis enables you to thoroughly consider and arrange the primary types of technological innovations in the global financial market.

A critical analysis of the received data, using inductive and deductive reasoning, identified the primary trends for the future of the global financial market.

Results

Innovations in technology are revolutionizing every facet of existence in a world that is changing quickly. The banking system is among the sectors most impacted by these advances (Al Kasasbeh, 2023). The global financial system is changing and reforming due to technological advancements, including decentralized financial instruments, artificial intelligence, and fintech platforms. These developments are presenting the economic community with new opportunities and new obstacles. By eliminating middlemen and addressing security and privacy concerns in electronic transactions, contemporary technologies such as blockchain enable payments to be conducted directly between users (Chong, 2019). Simultaneously, the advancement of artificial intelligence makes financial analysis more precise and forecasts. Traditional financial institutions are being forced by fintech businesses to find new methods to compete and offer services.

According to Ebrahimi M., technical innovation is the process of developing, implementing, and disseminating novel concepts, products, services, or procedures based on cutting-edge technologies, intended to enhance or modify current practices across a range of industries. New technical solutions, new production methods, data analysis, and the development of new goods or services that satisfy the demands of contemporary customers are a few examples of such innovations. In many areas of the economy and society at large, technological advancements are frequently intended to increase productivity, enhance quality, and lower costs (Ebrahimi, 2023).

The total of all financial products, services, and exchanges between nations and financial institutions is known as the global financial market. It has a big influence on the worldwide economy and is an essential component of the global financial system. Technological advances have a significant impact on how financial transactions, risk management, and financial services are delivered in the global financial market (Feyen, 2021).

The types of technical innovations in the global financial market are categorized as follows:

Innovative technologies in the financial market:

1. Blockchain technologies
- ☐ Cryptocurrencies
- ☐ Smart platforms
- ☐ Asset tokenization
- ☐ Stablecoins

2. AI
- ☐ AI for data analysis and forecasting
- ☐ AI for robotic decision-making
- ☐ Virtual assistants and chatbots
- ☐ Credit rating and credit assessment

- ☐ Trading algorithms

3. Fintech Platforms

- ☐ Payment platforms
- ☐ Fintech for lending
- ☐ Accounting systems for business

4. Electronic money and digital currencies
5. Crowdfunding and PR project
6. Digital banks
7. Insurance technologies

As a result, technical advancements affect global trade and the economy, as well as cross-border financial transactions and the effectiveness and security of international financial transactions.

As technical progress has advanced significantly, the authors present their perspective on the cyclical nature of technological progress in the global financial sector.

Phases and distinctive characteristics of foreign exchange development in the global financial market

1. Period: The first phase, which lasted until the middle of the 20th century, was the rise of technological advancements.

Developmental features: At this point, the primary financial instruments were money and securities; financial transactions were conducted almost exclusively in person, and innovation was limited.

Examples: Gold, silver, bonds, notes, and paper money

2. Period: Stage of electronic processing (mid-1900s to early-2100s)

Developmental features: The introduction of electronic trading platforms, electronic payment systems, and financial transaction automation has all been made possible by the development of electronic computing systems and data processing technology.

Examples: Innovations such as global banking and card payment systems emerged during this phase.

3. Period: From the early 21st century to the present, the internet and fintech technologies

Developmental features: Fintech companies and other innovations in the financial industry have been enabled by the growth of the Internet and digital technologies.

Examples: Advanced data analytics, blockchain technology, digital currencies, AI, and machine learning

4. Period: Future tense

Developmental features: The development of digital currencies, the expansion of global fintech ecosystems, the growing impact of artificial intelligence, and the ongoing digital revolution will all shape the future of technical innovation in the global financial sector.

Examples: Enhanced and expanded digital currencies, blockchain technology, artificial intelligence, and more.

Thus, the major shifts in the financial industry during the past few centuries are reflected in the frequency of technological advancements in the global financial market. Beginning with conventional financial transactions conducted primarily in person, technological advancements have revolutionized the contemporary financial sector. The development of computer systems, electronic payment systems, and fintech solutions has enabled greater effectiveness and convenience in financial services. It is anticipated that the influence of digital technologies such as blockchain, artificial intelligence, and digital currencies on the global financial market will continue to grow. This will transform the financial services paradigm, increase access to financial services, and speed up and simplify financial transactions. All facets of the global financial sector will be affected by technological advancements that continue to reshape the financial landscape (Taherdoost, 2023).

Cross-border financial transactions are being significantly impacted by technological advancements like blockchain. They help make these transactions more secure and efficient, which has a significant impact on trade and the global economy. At the same time, data analysis indicates that the development of these technologies is active and necessary, as illustrated in Figure 1, which shows international spending on blockchain solutions from 2017 to 2021 with a forecast of billions of US dollars for 2024. Additionally, it can reach 19 billion US dollars in 2024. (Global Blockchain Spending, 2022).

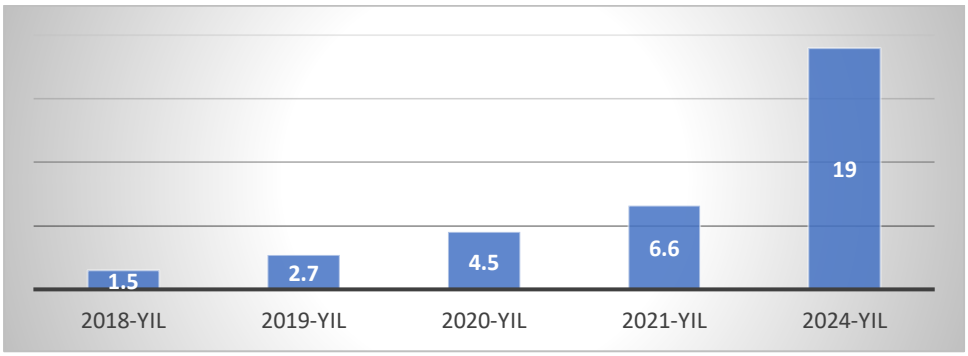

Figure 1. Global spending on blockchain solutions from 2017 to 2021, with projections for 2024. ($ billions)

Since these technologies work together to solve complex problems, AI applications in the financial sector are becoming increasingly significant. When combined with blockchain technology, they create a powerful environment that enhances the efficiency of global financial services and operations and drives innovation.

In 2022, the global market for generative AI in the financial services industry was valued at $924.12 million (Figure 2). This sum is expected to increase by 28.36% between 2023 and 2032, reaching $11,220.84 million by then.

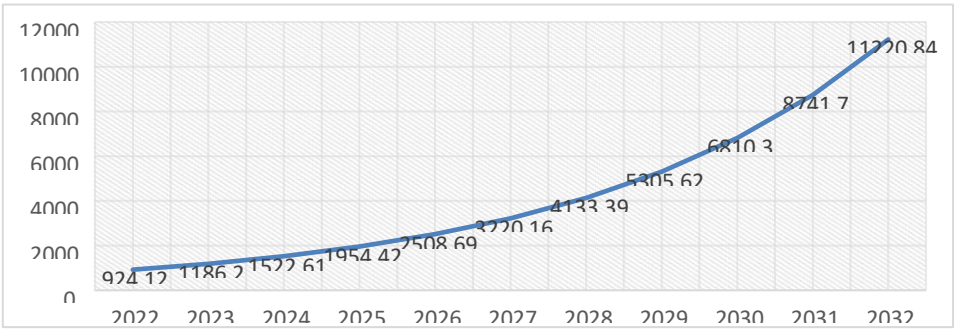

Figure 2: Forecasts for the use of AI in the global financial market from 2022 to 2032. (Billions of dollars)

The financial technology (fintech) industry is expanding rapidly. The Global Fintech Market Research report states that the market's 2018 valuation was $127.66 billion. By 2026, it is expected to have grown to $324 billion, or a compound annual growth rate (CAGR) of almost 25%.

Fintech offers financial services such as peer-to-peer lending and mobile payments through cutting-edge technologies. Fintech businesses are usually start-ups that want to provide more practical and effective alternatives to conventional financial services.

The global fintech industry's revenue patterns from 2017 to 2027 are depicted in Figure 3.

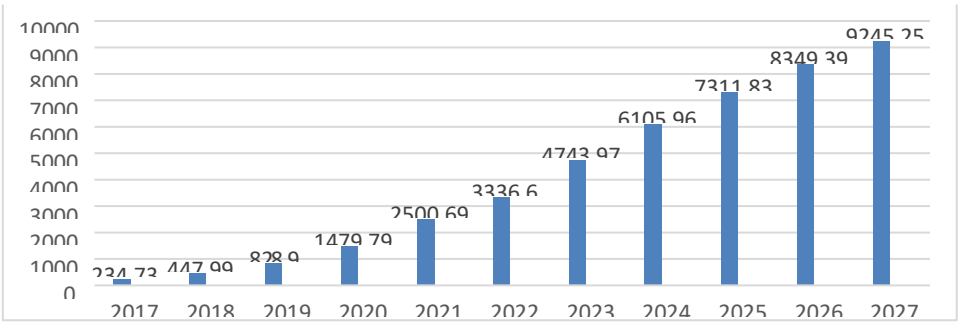

Figure 3 shows the global FinTech industry's revenue dynamics from 2017 to 2027. (Billions of dollars)

As technical progress has advanced significantly, the authors' views on the main trends of the future global financial market are presented below. Key developments for the global financial market in the future

1. Artificial Intelligence

- Early Warning System for Non-Performing Loans (NPL EWS)
- Country/Company: USA, Kapton
- Purpose: Banks can now accurately and efficiently predict possible non-performing loans because of this technical advancement. Based on bank and external data, the software evaluates risks and generates

predictions using artificial intelligence, machine learning, and consumer behavior analysis.

- Neokova
- Country/Company: USA
- Purpose: An American business called Neocova makes transaction data analysis simple. The startup makes client data management easier with its cloud-based artificial intelligence platform. Additionally, it enables financial institutions to more effectively match clients with particular financial products, resulting in more targeted cross-selling and higher profits.

2. Open Banking

- BirAPI
- Country/Company: Turkey
- Purpose: The Turkish firm BirAPI creates cutting-edge banking solutions that satisfy the standards of the open banking concept and the 2nd Payment Services Directive (PSD2). To ensure the safety and convenience of financial services, they specialize in establishing and safeguarding communication channels between banks and customers.
- FinanceKey
- Country/Company: Finland
- Purpose: An invention called FinanceKey makes treasury management easier for businesses and institutions. Their program centralizes and automates financial control and treasury accounting procedures. To manage payments, liquidity, and regulatory compliance, it offers a dynamic dashboard.

3. Personalized Banking Technologies

- OneBanc Technologies
- Country/Company: India
- Purpose: OneBanc Technologies is a digital platform driven by AI that serves as a conduit between clients and financial organizations. To offer highly customized financial services, it gathers and analyzes data on consumer behavior. The firm helps users match their financial needs with their lives by offering bespoke digital banking.
- Genify
- Country/Company: UAE
- Purpose: Genify APIs can now give budget and cost data thanks to advancements in machine learning technology and rules-based intelligence. Individualized monthly budgets are computed by the automated budgeting system.

4. Blockchain

- Liberty Leaf AI
- Country/Company: USA

- Purpose: An artificial intelligence-based hybrid stablecoin. It manages the coin's stability by analyzing current market conditions using a combination of artificial intelligence and machine learning. Furthermore, a basket of precious metals supports the cryptocurrency.
- SQ Solutions
- Country/Company: Germany
- Purpose: A development in technology that produces a clever distributed platform for trading and exchanging assets. It enhances bank settlement procedures by utilizing blockchain technology and smart contracts.

5. Internet of Things (IoT)

- SensePass
- Country/Company: Israel
- Purpose: An Israeli firm that wants to enhance the customer experience by optimizing digital payments. SensePay payment gateway software and SensePass IoT-enabled devices offer extra functionality to their omnichannel payment network, which operates through a variety of digital wallets.
- IndyKite
- Country/Company: USA
- Purpose: A decentralized identification platform that uses a paradigm that includes non-human things and technologies as well as many identities. The technology, which is intended for open banking, connects things and their relationships in the real-world network using a knowledge graph. This firm provides a novel approach to digital client identification using the Internet of Things (IoT).

6. Cybersecurity

- Fraud Hunting Platform, PayConfirm
- Country/Company: Airome Technologies, Singapore
- Purpose: PayConfirm is a mobile signature platform for transaction authentication, and there is a system in place to avoid fraud and customer attacks. The platforms identify fraud indicators in real time and identify online injections, banking Trojans, and efforts to steal or exploit compromised account information.
- Finosec
- Country/Company: USA
- Purpose: Documenting a system map, identifying holes, automating governance, limiting user access, and tracking cybersecurity maturity are the five steps it takes. As a result, financial institutions can increase the efficacy of their cybersecurity initiatives.

7. Immersive Technologies

- Runvido
- Country/Company: Poland

- Purpose: A technological advancement that enables financial organizations to use cellphones to animate static graphics, including credit card images. The invention gives institutions data to engage customers and offers location-based interactive content.
- XRG
- Country/Company: South Africa
- Purpose: Financial institutions are upskilling their staff by employing the technology developed by this business to provide remote financial training. Before putting new procedures and customer service scenarios into practice, the technology enables them to model them, helping organizations enhance the educational process and increase employee happiness and engagement.

8. Digital Robots and Bots

- Flobotics
- Country/Company: USA
- Purpose: Software bots are developed by the invention to automate banking processes. Mortgage lending, loan origination, document processing, transaction monitoring, financial reconciliation, and quality control are among the tasks they automate. The bots assist organizations in developing RPA systems that improve operational accuracy and decrease human error.

9. Quantum Computing

- Qaisec
- Country/Company: Bulgaria
- Purpose: Quantum-encrypted blockchain (QEB) is one of the cutting-edge quantum encryption options available to organizations. The invention creates a system that shields financial organizations from possible quantum security risks after doing a thorough evaluation of the security of their databases and digital networks.
- Quantum Mads (Q-Allocate)
- Country/Company: Spain
- Purpose: Creative approaches that maximize investing portfolios using cutting-edge algorithms. Better outcomes and higher returns on an investor's portfolio result from this solution's support for more effective, efficient investment management.

Source: Authors' development (Adrian, 2021; Feyen, 2021; Fong, 2021; Seahawk, 2023; Zheng, 2023).

As a result, these changes will help participants in the financial industry improve how they provide financial services while also lowering expenses and risks. It is crucial to keep in mind that the financial industry is always changing and that innovation is essential to staying competitive. A key tactic for financial institutions in a rapidly changing environment is to continuously search for new business opportunities and technological advancements to leverage. Financial market participants can enhance the

quality of their services and maintain their leadership position in the financial industry by understanding and implementing these developments (Prakash, 2023).

Discussion

Given the rapid pace of technological development, it may be difficult to predict and identify future technical developments that may impact the financial industry. The necessity for the financial system to adjust to the evolving technology environment is the root cause of this difficulty.

Global financial transactions and the economy at large are being significantly impacted by technologies such as blockchain, fintech, and artificial intelligence, according to an examination of technological advancements in the financial market. Blockchain, for instance, improves the effectiveness and security of cross-border financial transactions, which affects international trade and the economy. According to a study of global spending on blockchain solutions, these expenses are expected to reach $19 billion by 2024, confirming the technology's ongoing development. In 2022, the global market for generative AI in the financial services industry was valued at $924.12 million.

According to projections, this sum can reach $11,220.84 million by 2032, with an anticipated yearly growth rate of 28.36% from 2023 to 2023. By 2026, the financial technology (fintech) market is expected to reach $324 billion. These technologies are playing a significant role in the growth of the global economy and opening up new financial sector prospects. Their development patterns provide new opportunities for entrepreneurs and overall economic expansion.

In a study by Al Kasasbeh et al. (2023) it was found that various new digital technologies, such as blockchain and cryptocurrencies, are actively used by financial market participants, which leads to changes in the organization of financial institutions. Such changes have both positive and negative consequences. The authors’ opinion aligns with the view that the development of fintech technologies requires regulation and cooperation to ensure the stability and security of the financial sector (Kregel & Savona, 2020; Kumar & Kaur, 2023). However, given the spontaneous nature of the transformation process, predicting its consequences is difficult, and therefore, its outcome cannot always be determined in advance. (Feyen et al., 2021; Ebrahimi, 2023). Thus, we agree with the authors’ view that future technological development is unpredictable. Therefore, we concur with the authors that it is uncertain how future novel technologies will emerge.

Alavi et al. (2022) emphasize the importance of financial innovation and institutional quality for the growth of financial markets in underdeveloped nations. Their findings demonstrate that financial development is positively impacted by both institutional quality and financial innovation. This aligns with findings suggesting that cutting-edge technologies such as blockchain, fintech, and artificial intelligence may be

crucial to the financial industry's future growth (Das, 2019; Chong et al., 2019).

One can also concur with the authors' strategy (Kregel & Savona, 2020), which highlights the importance of discussing and implementing new developments in the financial system. Assessing the temporal tension between bringing innovations and preserving the current system, however, may present challenges. For instance, instability may result from the rapid adoption of new technology or inadequate planning for its launch. The fact that the innovation process requires time, study, and the preparation of everyone for change should also be taken into account (Marszk & Lechman, 2021; Oyadeyi, 2023). A balanced approach to innovation may be necessary to resolve these disputes, reduce risks, and maintain the stability of financial institutions.

The results provide insight into how financial technology has changed over time, emphasizing the rapid pace of innovation and the promise of technologies such as blockchain and artificial intelligence as significant drivers of global financial change.

By improving the effectiveness and security of cross-border financial transactions that affect the global economy and trade, these technologies are creating new opportunities in the financial sector. Financial technology and artificial intelligence are predicted to increase at astonishing rates and are becoming crucial components of the global economy.

In contrast to earlier research, this analysis considers the anticipated future growth of these technologies while focusing on specific technological developments and their effects on the financial industry.

These findings have practical implications for the creation of governance, regulatory, and technology-innovation policies to establish a more stable and effective financial system. Enhancing the quality of financial services, boosting security, creating new business opportunities, and promoting global economic growth are all possible with this.

Conclusion and suggestions

Contemporary technological advancements are transforming the financial market, creating new opportunities and impacting its development. The study examined the fundamentals of technological advancements and their impact on the global financial market. Systematizing the primary categories of contemporary technological advancements revealed that the development of this market is influenced by technologies such as blockchain, cybersecurity, and artificial intelligence.

The study examined how technical advancements have shaped the global financial market and how contemporary technology have influenced its development. Opportunities to investigate how these developments affect the operation of global financial systems are made possible by the overview that is provided.

The essay evaluates the current state of technological innovation in the financial market and projects future developments. The financial sector is expected to be significantly impacted by new technologies like blockchain and artificial intelligence. For instance, it is anticipated that fast development will continue until 2030.

The primary patterns indicating the financial market's continued growth through the application of blockchain, cybersecurity, artificial intelligence, and other advancements have been identified. It is anticipated that these technologies will fundamentally alter the banking, finance, and investing industries, as well as the way the financial market functions.

Research ideas for the future:

The global financial system has seen tremendous transformation in recent decades due to technical advancements in the banking sector. The emergence of sophisticated information technologies, which have altered the interactions and activities of participants in the global financial market, has aided this process.

Numerous facets of the financial industry have been impacted by technological advancements, such as digital currencies, online payments, lending, investment, and financial analytics. All participants in the financial industry now have more opportunities to utilize financial services and maximize financial transactions thanks to these advances. However, further research is needed to determine how these technological advancements may affect the global financial system. Technological innovation presents new risks and challenges, including cybersecurity, regulatory environments, and economic stability, despite its many advantages.

The shift to a digital world might necessitate spending money on new tools, training, and updated laws. Analysing regulatory frameworks, determining best practices for banks and other financial institutions in a digital setting, and accounting for the social effects of technological innovation on financial inclusion and the stability of the global financial system are among the possible avenues for future research. The financial sector has a complex and uncertain future, and further study can help us better understand this shift and develop management plans.

References:

1. Adrian, O. (2021). The Future of Finance and the Global Economy: Facing Global Forces, Shaping Global Solutions. URL: https://www.imf.org/en/News/Articles/2021/09/27/sp092721-thefuture-of-finance-and-the-global-economy
2. Al Kasasbeh, O., Khasawneh, O., & Alzghoul, A. (2023). The real effects of fintech on the global financial system. International Journal of Professional Business Review, 8(3), 01-12. e01725
3. Alawi, S. M., Abbassi, W., Saqib, R., & Sharif, M. (2022). Impact of Financial Innovation and Institutional Quality on Financial Development in Emerging Markets. J. Risk Financial Manag., 15(3), 115. https://doi.org/10.3390/jrfm15030115

4. Bernards, N., & Campbell-Verduyn, M. (2019). Introduction to Review of International Political Economy Special Issue 'The Changing Technological Infrastructures of Global Finance'. Review of International Political Economy, 26(5), 773-789. https://doi.org/10.1080/09692290.2019.1625420
5. Bouveret, A. (April 2019). Cyber Risk for the Financial Services Sector. Journal of Financial Transformation, 49. Available at SSRN: https://ssrn.com/abstract=3381581.
6. Chong, A., Lim, E., Hua, X., Zheng, S., & Tan, C. (2019). Business on chain: A comparative study of five blockchain-inspired business models. Journal of Association for Information Systems, 20(9), 1310–1339. http://dx.doi.org/10.17705/1jais.00568
7. Das, S. R. (2019). The future of fintech. Financial Management, 48(4), 981-1007. https://doi.org/10.1111/fima.12297
8. Ebrahimi, M. (2023). Business Models in Financial Technologies. In Mainstreaming Cryptocurrency and the Future of Digital Finance (pp. 118-137). https://doi.org/10.4018/978-1-6684-83688.ch005
9. Ehigiamusoe, Kizito Uyi, and Mohamad Shaharudin Samsurijan. 2021. What matters for the financegrowth nexus? A critical survey of macroeconomic stability, institutions, financial and economic development. nternational Journal of Finance & Economics 26: 5302–20. https://doi.org/10.1002/ijfe.2066
10. El Hajj, M., & Hammoud, J. (2023). Unveiling the Influence of Artificial Intelligence and Machine
11. Learning on Financial Markets: A Comprehensive Analysis of AI Applications in Trading, Risk Management, and Financial Operations. Journal of Risk and Financial Management, 16(10), 434. https://doi.org/10.3390/jrfm16100434
12. Feyen, E., Frost, J., Gambacorta, L., Natarajan, H., & Saal, M. (2021, July). Fintech and the digital transformation of financial services: Implications for market structure and public policy. Bank for International Settlements. ISSN 1682-7651.
13. Fong, D., Han F., Liu, L., Qu,J. & Shek, A.(2021). Seven technologies shaping the future of fintech. URL: https://www.mckinsey.com/cn/our-insights/our-insights/seven-technologies-shapingthe-future-of-fintech
14. Generative AI in Financial Services Market Size, Report By 2032. URL: https://www.precedenceresearch.com/generative-ai-in-financial-services-market
15. Goldstein, I. (2023). Information in Financial Markets and Its Real Effects. Review of Finance, 27(1), 1-32. https://doi.org/10.1093/rof/rfac052
16. Gudlur, T. D. V. V. R. (2023). Fintech Future Business & Cyber Vulnerabilities and Challenges. In 2023 IEEE 8th International Conference On Software Engineering and Computer Systems (ICSECS). https://doi.org/10.1109/ICSECS58457.2023.10256315
17. Kregel, J. A., & Savona, P. (2020). The impact of technological innovations on money and financial markets (Public Policy Brief No. 150). Levy Economics Institute of Bard College. ISBN 978-1-936192-66-3. Retrieved from http://hdl.handle.net/10419/251474
18. Kumar, T., & Kaur, S. (2023). Evolution of Fintech in the Financial Era. In M. Naved, V. Ajantha Devi, & A. Kumar Gupta (Eds.), Fintech and Cryptocurrency (Chapter 1). Retrieved from https://doi.org/10.1002/9781119905028.ch1
19. Marszk, A., & Lechman, E. (2021). Reshaping financial systems: The role of ICT in the diffusion of financial innovations – Recent evidence from European countries. Technological Forecasting and Social Change, 167, 120683. https://doi.org/10.1016/j.techfore.2021.120683

20. Murinde, V., Rizopoulos, E., & Zachariadis, M. (2022). The impact of the FinTech revolution on the future of banking: Opportunities and risks. International Review of Financial Analysis, 81(11), 102103. https://doi.org/10.1016/j.irfa.2022.102103
21. Oyadeyi, O. (2023). Financial development, interest rate pass-through, and interest rate channel of monetary policy. Cogent Economics & Finance, 11(1), Article 2209952. https://doi.org/10.1080/23322039.2023.2209952
22. Prakash, A. A., Leelavathi, R., Rupashree, R., & Jisha, V. G. (2023). Fintech Apps: An Integral Tool in Titivating Banking Operations. In Fintech and Cryptocurrency (Eds. Mohd Naved, V. Ajantha Devi, Aditya Kumar Gupta), Chapter 7. https://doi.org/10.1002/9781119905028.ch7
23. Revenue of fintech industry worldwide from 2017 to 2027 (2023). URL: https://www.statista.com/statistics/1384016/estimated-revenue-of-global-fintech/
24. Seahawk, N. (2023). Technology as Transformation: The Future of Finance in 2023. URL: https://www.keiseruniversity.edu/technology-as-transformation-the-future-of-finance-in2023/
25. Taherdoost, H. (2023). Fintech: Emerging Trends and the Future of Finance. In Financial Technologies and DeFi . Financial Innovation and Technology.
26. Worldwide spending on blockchain solutions from 2017 to 2020, with forecasts for 2021 and 2024. URL: https://www.statista.com/statistics/800426/worldwide-blockchain-solutions-spending/
27. Zheng, M., Feng, G.-F., Wang, Q.-J., & Chang, C.-P. (2023). Financial globalization and technological innovation: International evidence. Economic Systems, 47(1), 101048. https://doi.org/10.1016/j.ecosys.2022.101048