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International Financial Markets of the Future: Technological Innovations and Their Impact on the Global Financial System

Lesya Kolinets

Doctor of Economics, Prof., Vilnius Gediminas Technical University, Vilnius, Lithuania, https://orcid.org/0000-0002-7005-0519

***Correspondence email:** *kolinets@wunu.edu.ua*.

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Abstract: Today, international financial markets are becoming not only catalysts for global economic growth but also a spectrum of unpredictable challenges and opportunities. The presence of technological revolutions has always determined and influenced the development of the financial sector, determining its ability to adapt to new conditions and changes. Today, among modern innovations, technological progress plays a central role in transformational changes in international financial markets, creating opportunities for efficiency and innovative solutions. The purpose of the study is to establish the theoretical, conceptual, and practical foundations of the impact of technological innovations on the global financial system in the context of international financial market development. To achieve this goal, the study defines the essence of the concepts of "technological innovations" and "international financial market", systemises the main types of modern technological innovations; provides a perspective overview of the evolution of technological innovations in the context of the international financial market formation, analyses the impact of modern technological innovations on the global financial system, and identifies the main trends that predict the development of technological innovations in the context of the international financial market formation in the future. For the purpose of the study, general scientific methods of cognition were used, including a critical analysis of the existing scientific literature on the topic, comparative analysis, systematisation of practical experience of introducing technological innovations, and the method of establishing cause and effect relationships. The research includes

the identification of modern types of technological innovations in the international financial market (blockchain technologies, artificial intelligence of fintech platforms, electronic money and digital currencies, crowdfunding, and PR projects). The study offers its own view on the stages of development and formation of technological innovations in the international financial market, as well as an assessment of the development of modern technological innovations in the financial market, including a forecast for the future. The study presents the main trends that determine the future development of technological innovations in the global financial market. Artificial intelligence, open banking, hyper-personalised banking, blockchain, the Internet of Things, cybersecurity, immersive technologies, digital robots and bots, and quantum computing are defining a new dimension of the financial sector, opening up new opportunities for improving services and optimising processes. The adoption of these technologies will contribute to a more innovative and competitive international financial market that can better meet customer needs and ensure the stability and security of financial transactions. Future research in this area could include a deeper analysis of the impact of specific technological innovations on different segments of the international financial market and the development of adaptation strategies for financial institutions. The research could also expand its scope and explore the relationship between innovation in finance and the global economy.

Keywords: blockchain, fintech platforms, crowdfunding, artificial intelligence, banking.

Introduction

Today, technological progress is changing the world at a rapid pace. The financial system is one of the most important infrastructural components of an economic society, which is heavily influenced by innovation. Technological changes are transforming the way economic societies manage finances, interact with money and investments, which creates new opportunities (Oyadeyi, 2023).

The relevance of the research topic lies in the fact that the modern international financial market is undergoing significant changes caused by the rapid development of technology and innovation. The use of technological innovations such as blockchain, artificial intelligence, and fintech solutions is transforming traditional methods of financial transactions, trading, and asset management. Consequently, the future of the financial market depends heavily on how such technological innovations are integrated and utilised. They can provide greater efficiency and reliability in financial transactions, increase access to financial services for a wider range of people, and create new opportunities for investors and businesses. At the same time, however, such technological innovations pose new challenges and risks, such as cybersecurity, data privacy, and regulation of the international financial market to accommodate its innovation.

Research Problem

The literature review has revealed that there are certain unresolved issues related to the future of the global financial market. Among the unresolved issues is one of the key ones: forecasting and identifying technological innovations that will be used in the financial sector of the future. Addressing this issue requires in-depth analysis and systematisation of a variety of innovative trends and their potential impact on the financial system and international financial relations.

Research Focus

The research focuses on identifying and assessing opportunities created by the application of innovative technologies in the financial market, including the role of blockchain in increasing

transparency and security of transactions, the impact of artificial intelligence on decision-making in the investment process, and the development of fintech solutions to facilitate access to financial services.

Research Aim and Research

The aim of the study is to establish the theoretical, conceptual, and practical foundations for the functioning of technological innovations in the international financial market and to determine their impact on the global financial system.

To achieve this goal, the following tasks were performed in the course of the study.

1. The article considers the essence of the concepts of "technological innovations" and "international financial market" and systemises main types of modern technological innovations.
2. The article offers a view on the evolution of technological innovations in the process of formation of the international financial market.
3. The article assesses the development of technological innovations in the financial market and makes a forecast for the future
4. The main trends that point to its further development are identified.

Literature Review

Many authors and scholars have studied the theoretical and practical aspects of the functioning of technological innovations in the global financial market. Thus, O. Al_Kasasbeh et al. (2023) analyse and assess how new financial technologies and innovations affect the global financial landscape, the functioning of financial markets, and the interaction of financial institutions. The authors identify the main aspects and directions of fintech's impact on the global financial system, including digital payments, cryptocurrency markets, crowdfunding, financial technology infrastructure, and other aspects. They also assess the potential benefits and risks arising from the introduction of fintech innovations in the financial sector and discuss possible development trends in this context.

The study by S. M Alavi et al. (2022) analyses the impact of financial innovation and institutional quality on financial development in emerging markets. The authors conclude that the availability and successful implementation of financial innovation can have a positive impact on the level of financial development in such regions, including the development of new financial products, technologies, and approaches to financial services that can provide greater access to finance and support economic growth.

The author Ebrahimi, M. (2023) examines the success factors of business models in the fintech industry, including innovation, production efficiency, consumer demand, competitive advantages, and other key aspects. It also provides recommendations on how to create business models that have the potential to become successful in the international financial market.

Goldstein (2023) examines the role of information in the functioning of financial markets, highlighting their key role in resource allocation and the impact of current trends, such as the fintech revolution, on information processing and transmission. The study considers possible changes in the nature of information exchange in the future.

In his study, Gudlur (2023) focuses on cybersecurity in the context of financial technology (fintech). The author examines various aspects of data and transaction security in the fintech sector, proposing a model to prevent problems and ensure the security of financial transactions in the

future. Both studies reflect significant issues arising from the development of financial technologies and their impact on the modern financial landscape.

Kregel, J. A., & Savona, P. (2020) focus on the impact of technological innovations on the modern institutional environment of money and financial markets. The authors discuss the possibility of introducing a state monopoly on the issuance of cryptocurrencies and its impact on financial stability and the restoration of the link between finance and the real economy. Marszk, A., & Lechman, E. (2021) assess the relationship between the level of information and communication technology (ICT) penetration and the development of financial innovation on the stock exchanges of ten European countries. The main conclusions of the study are that technological innovations in the financial market are being actively implemented in many countries and create a solid foundation for the development of innovative financial products.

Taherdoost, H. (2023) objectively explains the key components of fintech and the impact of this new phenomenon on the financial market. The researcher also examines the challenges associated with the use of fintech and provides forecasts for the future of fintech in the global financial market. Zheng, M. et al. (2023) presented their empirical results, which show an important relationship between financial globalisation and technological innovation. According to the study, financial globalisation has a significant positive impact on technological innovation, and this impact becomes especially pronounced in the financial markets of the future.

Despite the large number of studies on the topic, the impact of technological innovations on the global financial system remains an open question and requires further research and analysis. In today's world, technological innovations are developing extremely rapidly and transforming various aspects of the financial sector. Understanding this impact will be a major challenge for financial institutions, regulators and researchers in the field of international financial markets in the future.

Research Methodology

The study is conducted to establish the theoretical, conceptual, and practical foundations of the functioning of technological innovations in the international financial market and determine their impact on the global financial system. There is a need for a detailed understanding and analysis of the impact of innovations on the financial sector due to the rapid growth of technological capabilities. Understanding these changes will help not only to predict future market trends but also to develop strategies for financial institutions and regulators aimed at optimising the efficiency and stability of the financial system in the face of rapid technological development.

This study is based on a systematic analysis of scientific publications and existing research on technological innovations in international financial markets. It is also based on the analysis of quantitative data aimed at assessing the impact of these innovations on the dynamics of financial processes in the global financial system.

In the process of studying technological innovations in the global financial market, a variety of methods have been used that cover a wide range of areas.

In this study, the economic and statistical method was used to analyse and forecast the dynamics of key indicators of technological innovation. The application of this method made it possible to estimate the international spending on blockchain solutions from 2017 to 2021, taking into account the growth of this sector and making forecasts for 2024 in billions of US dollars. This method was also used to estimate the size of the artificial intelligence (AI) market in the financial sector in 2021 and forecast to 2032. In addition, the economic and statistical method was used to

assess and analyse the use of fintech technologies in the global financial market, providing insight into the trends and potential of this sector for future development.

Thematic method. The study provides the most relevant key trends in the international financial market of the future, which affect the financial system, improving efficiency and ensuring greater security and customer satisfaction.

Schematic method. The use of diagrams and graphs made it possible to visualise the complex phenomena, processes, and patterns under study. In the context of the study of technological innovations in the global financial market, charts helped to identify the dynamics of such technological innovations as blockchain, fintech, and artificial intelligence.

Methods of analysis, synthesis, and comparison. The method of systematisation made it possible to thoroughly consider and organise the main types of technological innovations in the global financial market, while the method of comparison and synthesis allowed to formulate the main stages and features of the development of technological innovations in the global financial market.

The methods of induction and deduction were used to critically analyse the information received, which made it possible to identify the main trends in the future of the global financial market.

Results

In a rapidly evolving world, technological innovation is playing a key role in changing all aspects of life. One of the areas that has been most affected by such innovations is the financial system (Al Kasasbeh, 2023). From decentralised financial instruments to the application of artificial intelligence and the development of fintech platforms, technological change is transforming and reforming the global financial system, providing us with new opportunities and posing new challenges to economic society. Modern technologies, such as blockchain, allow payments to be made directly between users, avoiding intermediaries, and solve security and privacy issues in electronic transactions (Chong, 2019). At the same time, the development of artificial intelligence is making financial analysis more accurate and predictable, and fintech companies are forcing traditional financial institutions to look for new ways to compete and provide services.

Ebrahimi M. considers technological innovation as the process of creating, implementing, and disseminating new ideas, products, services, or processes based on advanced technologies and designed to improve or change existing methods and processes in various industries. Such innovations may include the development of new technical solutions, the introduction of new approaches to production, data analysis, and the creation of new products or services that meet modern consumer needs. Technological innovations are often aimed at increasing productivity, improving quality, and reducing costs in various sectors of the economy and society as a whole (Ebrahimi, 2023).

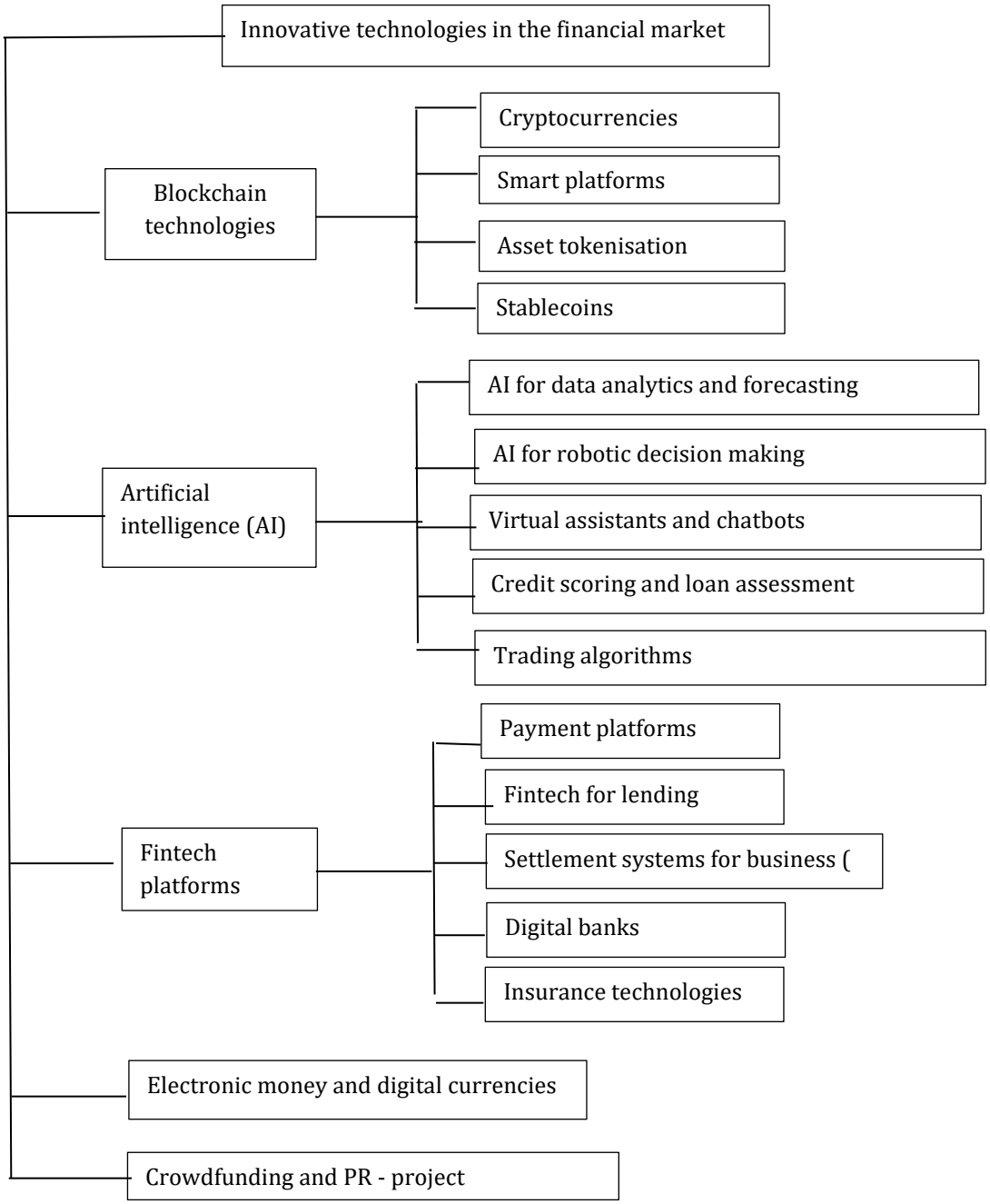
The international financial market is a collection of all financial instruments, services, and transactions that are carried out between different countries and financial institutions. It is a key part of the global financial system and has a huge impact on the global economy. In the context of the international financial market, technological innovation is playing an important role in changing the way financial transactions are conducted, risks are managed, and financial services are provided (Feyen, 2021).

In the context of the international financial market, technological innovation is playing an important role in changing the way financial transactions are conducted, risks are managed and financial services are delivered.

Figure 1 shows the classification of types of technological innovation in the international financial market

Figure 1

Types of Technological Innovations in the International Financial Market



Source: author's own development based on (Adrian, 2021; Alawi, 2022; Fong, 2021).

Consequently, technological innovations affect cross-border financial transactions, help to improve the efficiency and security of international financial transactions, and impact the global economy and trade.

Technological innovations have come a long way, so Table 1 offers the author's view on the periodisation of technological innovations in the global financial market (Table 1).

Table 1

Stages and Peculiarities of IFIs Development in the Global Financial Market

№	Period	Development features	Examples
1	Initial stage - up to the 20th mid-century - the emergence of technological innovations	At this stage, financial transactions were almost entirely in physical form, innovation was limited, and the main financial instruments were cash and securities.	Paper money, bills, bonds, gold and silver
2	The electronic processing stage (mid-20th century - early 21st century):	The emergence of electronic computing systems and data processing technologies has enabled the automation of financial transactions, the introduction of electronic trading platforms and electronic payment systems.	At this stage, innovations such as international banking systems and card payment systems emerged.
3	The Internet and fintech technologies (early 21st century - present)	The development of the Internet and digital technologies has enabled the emergence of fintech start-ups and new innovations in the financial sector.	Blockchain technology, digital currencies, artificial intelligence, machine learning and advanced data analytics
4	Future period	The future of technological innovation in the global financial market will be determined by further digital transformation, the growing influence of artificial intelligence, the development of digital currencies, increased cybersecurity, and the proliferation of global fintech ecosystems.	Improved and supplemented blockchain technology, digital currencies, artificial intelligence, etc.

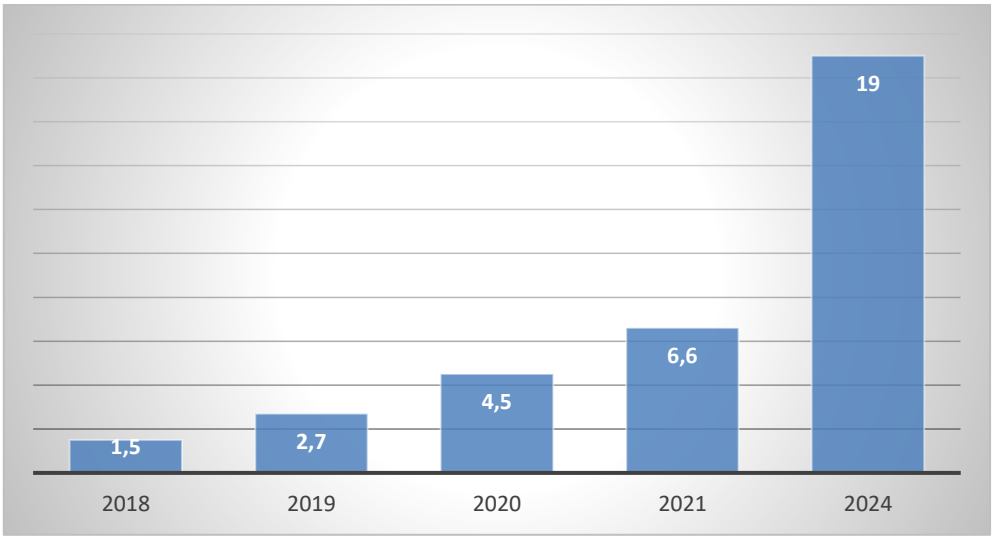
Source: Author's own elaboration based on (Goldstein, 2023; Kumar, 2023; Marszk, 2021; Murinde, 2022).

Thus, the periodisation of technological innovation in the global financial market reflects significant changes in the financial sector over the past centuries. Starting with traditional financial transactions that were carried out mainly physically, the modern financial market has been transformed by technological innovations. The development of computing systems, electronic payment systems, and fintech solutions has opened up new opportunities for the efficiency and accessibility of financial services. In the future, the impact of digital technologies such as artificial intelligence, blockchain, and digital currencies on the global financial market is expected to continue to grow. This will facilitate and accelerate financial transactions, expand the availability of financial services, and change the paradigm of financial services. Technological innovations will continue to transform the financial world, affecting all aspects of the global financial market (Taherdoost. 2023).

Technological innovations such as blockchain are having an important impact on cross-border financial transactions. They help to increase the efficiency and security of such transactions, which in turn has a significant impact on the global economy and trade. At the same time, an analysis of the data, as shown in Figure 2, on international spending on blockchain solutions from 2017 to 2021, with forecasts for 2024 in billions of US dollars, shows that the development of these technologies is actively developing and should reach USD 19 billion in 2024 (Worldwide spending on blockchain, 2022).

Figure 2

International Spending on Blockchain Solutions from 2017 to 2021, with Forecasts for 2024, Billion USD



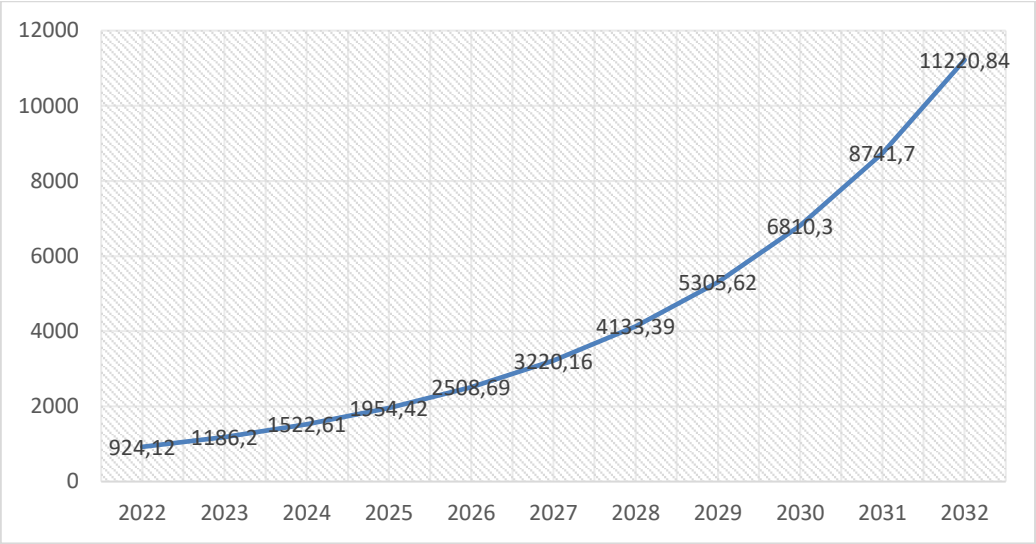
Source: developed by the author based on (Worldwide spending on blockchain...2022).

The use of AI in the financial market is becoming important as these technologies work together to help solve complex problems. Together with the use of blockchain technologies, they create a powerful symbiosis that influences the development of innovations and the efficiency of financial services and operations in the world.

In 2022, the global market for generative artificial intelligence in the financial services sector was worth USD 924.12 million (Figure 3). This amount is projected to reach USD 11,220.84 million by 2032, which means an expected CAGR of 28.36% between 2023 and 2032.

Figure 3

The Use of Artificial Intelligence in the Global Financial Market from 2022 with Forecasts to 2032, billion USD



Source: developed by the author based on (Generative AI in Financial Services..., 2022).

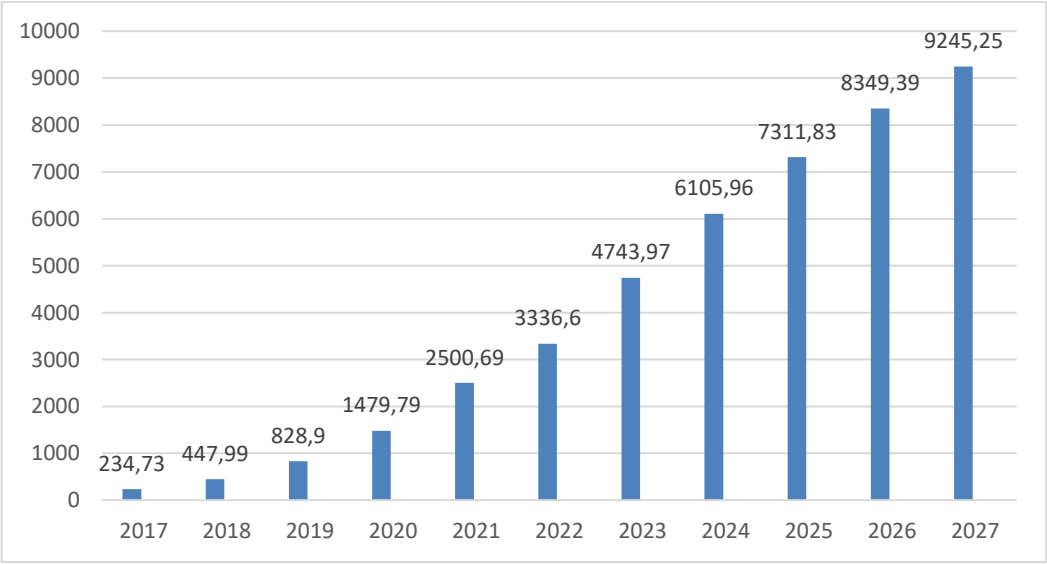
The financial technology (fintech) market is currently experiencing rapid growth. According to the Global Fintech Market Research Report, the market was worth $127.66 billion in 2018. It is projected to grow to $324 billion by 2026, representing a compound annual growth rate (CAGR) of around twenty-five per cent.

Fintech uses advanced technology to provide financial services such as mobile payments and peer-to-peer lending. Typically, fintech companies are start-ups that aim to offer more efficient and convenient options than traditional financial services.

Figure 4 shows the revenue dynamics of the global fintech industry from 2017 to 2027.

Figure 4

Revenue Dynamics of the FinTech Industry in the World from 2017 to 2027, Billion USD



Source: developed by the author based on (Revenue of fintech industry worldwide from 2017 to 2027, 2023).

Table 2 shows the main trends in the international financial market of the future

Table 2

Key Trends in the International Financial Market of the Future

№	Technological innovation	Country and company of development	Purpose
1. Artificial intelligence			
	NPL EWS - an early warning system for non-performing loans	USA, Capton	This technological innovation enables banks to effectively predict possible NPLs with high accuracy. Using artificial intelligence, machine learning, and customer behaviour analysis, the software assesses risks and makes predictions based on bank and external data.
	Neocova	USA	*Neocova is an American startup that facilitates the analysis of transactional data. The startup's cloud-based AI platform simplifies the management of customer data. It also allows financial institutions to better match customers with specific financial products, enabling targeted cross-selling and increased revenue.*
2. Open banking			
	BirAPI	Turkey	Turkish startup BirAPI develops innovative solutions for banks that meet the requirements of the Payment Services Directive 2 (PSD2) and the concept of open banking. They specialise in creating and securing channels of interaction between banks and consumers to ensure the safety and convenience of financial services.
	FinanceKey	Finland	FinanceKey is an innovation that simplifies treasury management for companies and organisations. Their software automates and centralises treasury accounting and financial control processes. It provides a dynamic dashboard for managing liquidity, payments, and regulatory compliance.
3. Hyper-personalised banking			
	OneBanc Technologies	India	An AI-powered digital platform acts as an interface between customers and financial institutions. It collects and analyses data on customer activity to provide hyper-personalised banking services. Through personalised digital banking, the startup adapts customers' financial needs to their lifestyle.
	Genify	UAE	The technological innovation of machine learning and a rule-based intelligent system powers the API to provide expense and budgeting information. The automatic budgeting system calculates personalised monthly budgets on an individual level.
4. Blockchain			
	Liberty Leaf AI	USA	A hybrid stablecoin based on artificial intelligence. It combines artificial intelligence and machine learning to analyse market conditions in real-time to manage the stability of coins. In addition, the cryptocurrency is backed by a basket of precious metals.
	SQ Solutions	Germany	A technological innovation that creates a smart distributed platform for asset exchange and trading. It

			uses blockchain and smart contracts to improve settlement processes for banks.
5. Internet things			
	SensePass	Israel	is an Israeli startup that aims to optimise digital payments to improve the customer experience. Their omnichannel payment network operates through various digital wallets and provides additional functionality through the SensePay payment gateway software and the SensePass IoT-enabled device.
	IndyKite	USA	A decentralised identity platform that works based on a model that encompasses various identities, including devices and non-human entities. The platform is designed for open banking and uses a knowledge graph to create connections between entities and their relationships in a real-world network. Using the Internet of Things (IoT), this startup offers an innovative solution for digital customer identification.
6. Cybersecurity			
	Fraud Hunting Platform, PayConfirm	Airome Technologies, Singapore	is a system for preventing fraud and client-side attacks, and PayConfirm is a mobile signature platform for authenticating transactions. The platforms detect signs of fraud in real-time and identify attempts to steal or use compromised credentials, banking Trojans, and web injections.
	Finosec	USA	It uses a five-step process that includes documenting a system map, gap analysis, management automation, user access control, and cybersecurity maturity tracking. This enables financial institutions to improve the efficiency and effectiveness of their cybersecurity programmes.
7. Immersive technologies			
	Runvido	Poland	A technology innovation that enables financial institutions to animate static images, such as credit card artwork, using smartphones. The innovation delivers interactive content that is location-based and provides institutions with information on customer engagement.
	XRG	South Africa	Financial institutions use this startup's technology to deliver remote financial training, which leads to the upskilling of their employees. The technology enables them to simulate new processes and customer service scenarios before implementing them, which helps institutions improve the learning experience and increase employee engagement and satisfaction.
8. Digital robots and bots			
	Flobotics	USA	The innovation creates software bots to automate financial transactions. They automate tasks such as mortgage lending, loan origination, document processing, transaction monitoring, financial comparisons, and quality control. Bots help institutions build an RPA system that reduces human error and increases operational accuracy.
9. Quantum computing			
	Qaisec	Bulgaria	Innovative quantum encryption solutions for institutions, including the use of quantum encrypted blockchain

			(QEB). The innovation conducts a thorough security assessment of financial institutions' digital networks and databases and develops a solution that protects them from potential quantum security threats.
	Quantum Mads	Q-Allocate, Spain	Innovative solutions that use advanced algorithms to optimise investment portfolios. This solution helps investors to manage their investments more efficiently and effectively, which in turn leads to better results and higher returns in the investment portfolio.

Source: author's own development based on (Adrian, 2021; Feyen, 2021; Fong, 2021; Seahawk, 2023; Zheng, 2023).

Thus, these trends help financial market participants not only reduce costs and risks, but also change their approach to providing financial services. It should be borne in mind that the financial sector is constantly evolving, and innovation plays a key role in maintaining competitiveness. Constantly looking for new opportunities and technologies to implement in the business is an important strategy for financial institutions in this fast-changing environment. Understanding and implementing these trends helps financial market participants to improve the quality of their services and remain at the forefront of the financial industry (Prakash, 2023).

Discussion

Predicting and identifying technological innovations that will potentially impact the financial sector in the future is a challenging task due to the dynamism and rapid pace of technological development. This challenge arises from the need for the financial system to adapt to the ever-changing technological landscape.

The analysis of technological innovations in the financial market has shown that technologies such as blockchain, fintech, and artificial intelligence are having a significant impact on global financial transactions and the economy as a whole. Blockchain, for example, is helping to improve the efficiency and security of cross-border financial transactions, which is having an impact on the global economy and trade. An analysis of data on international spending on blockchain solutions shows that in 2024, this spending is expected to reach USD 19 billion, which confirms the active development of this technology. In the financial services sector, the global market for generative artificial intelligence was worth USD 924.12 million in 2022. Forecasts show that by 2032, this amount may increase to USD 11,220.84 million, which indicates an expected annual growth of 28.36% between 2023 and 2032. The financial technology (fintech) market is also showing impressive growth, projected to reach $324 billion by 2026, with a CAGR of around twenty-five per cent. Such technologies are becoming key factors in the development of the international economy and are contributing to the emergence of new opportunities in the financial sector. The dynamics of their development indicate the prospects they open up for entrepreneurs and economic growth in general.

A study by *Al Kasasbeh* et al. (2023) found that various new digital technologies, such as blockchain and cryptocurrencies, are being actively used by financial market participants, leading to changes in the organisation of financial institutions. Such changes bring both positive and negative consequences. The authors' opinion is in line with the approach 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 spontaneity of the transformation process, predicting the consequences is a difficult task, and thus it is not always

possible to determine its outcomes in advance (Feyen et al. 2021; Ebrahimi, 2023). Thus, we can agree with the authors' opinion on the unpredictability of the development of innovative technologies in the future.

Alawi et al. (2022) emphasise the importance of financial innovation and institutional quality for the financial development of markets in developing countries. Their results show that both financial innovation and institutional quality have a positive impact on financial development. This is in line with observations that innovative technologies such as fintech, blockchain, and artificial intelligence may play a key role in the future development of the financial sector (Das, 2019; Chong et al., 2019).

It is worth agreeing with the authors' conclusions that institutional quality contributes to long-term well-being and the importance of good innovation management. This underlines the importance of developing and supporting innovation processes to ensure stability and competitiveness in markets.

One can also agree with the authors' (Kregel & Savona, 2020) approach, which emphasises the importance of discussing and introducing new innovations into the financial system. However, there may be tensions in assessing the temporary tension between maintaining the current system and introducing innovations. For example, the rapid adoption of new technologies may create instability or insufficient preparation for their introduction, potentially threatening stability. It is also worth considering that the process of innovation requires time, research, and ensuring that all parties are ready for change (Marszk, & Lechman, 2021; Oyadeyi, 2023). Resolving these contradictions may require a balanced approach to innovation to minimise risks and ensure the stability of financial systems.

The findings contributed to the understanding of the evolution of financial technologies, demonstrating the active development and potential of technologies such as blockchain and artificial intelligence as important catalysts for global financial change.

These technologies are opening up new opportunities in the financial sector, contributing to the efficiency and security of cross-border financial transactions, which affects the global economy and trade. Forecasts show impressive growth in the artificial intelligence and financial technology sectors, which are becoming important factors for the development of the international economy.

Unlike previous studies, this analysis focuses on specific technological trends and their impact on the financial sector, taking into account the projected development of these technologies in the future.

The practical value of these results is to contribute to the development of governance, regulatory, and technological innovation strategies to achieve a more stable and efficient financial system. This can be used to improve the quality of financial services, increase safety and security, and foster new opportunities for entrepreneurs and global economic growth.

Conclusions and Implications

Modern technological innovations are revolutionising the financial market, opening up new perspectives and influencing its evolution. The study analyses the essence of technological innovations and their impact on the international financial market. By systematising the main types of modern technological innovations, it was found that artificial intelligence, blockchain, cybersecurity, and other technologies determine the evolution of this market.

The study has analysed the evolution of technological innovations in the formation of the international financial market and the impact of modern technologies on its formation. The

presented view opens up opportunities for studying the impact of these innovations on the functioning of international financial systems.

The article assesses the current level of technological innovation in the financial market and makes a forecast for the future. It is noted that artificial intelligence, blockchain, and other new technologies will have a significant impact on the financial industry, with accelerated development expected by 2030.

The main trends indicating further development of the financial market through the use of artificial intelligence, blockchain, cybersecurity, and other innovations are identified. It is expected that these technologies will transform the way the financial market operates, causing significant changes in the banking, financial, and investment sectors.

Suggestions for Future Research

Over the past decades, technological innovations in finance have significantly transformed the global financial system. This process has been facilitated by the introduction of advanced information technologies that have changed the way global financial market participants operate and interact. Technological innovations have covered many aspects of the financial sector, including online payments, digital currencies, financial analysis, lending, investing, and others. Such innovations have opened up new opportunities for all financial market participants to access financial services and optimise financial transactions. However, the impact of these technological innovations on the global financial system remains an open question and requires further research. Despite its significant benefits, technological innovation also brings new challenges and risks, including cybersecurity, regulatory environment, and economic stability. The transition to a digital environment may require investment in new technologies, skills, and updated legislation. Further research could include analysing regulatory frameworks, identifying optimal strategies for banks and financial institutions in the context of the digital environment, and considering the social impact of technological innovation on financial inclusion and the sustainability of the global financial system. The future of the financial sector is vast and complex, and further research will help to better understand this transition and develop strategies to successfully navigate it.

Further research into technological innovation in the global financial system will have implications for both academia and practice. Unlocking new knowledge and understanding of how technological innovation affects the financial sector and the global economy will allow for more effective strategies for financial institutions, regulators, and other stakeholders. New research can help improve financial services, reduce risks, enhance financial resilience, and increase financial inclusion. The results of further research may also have an impact on the regulation of financial markets and contribute to the development of future policies in this area.

References

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-the-future-of-finance-and-the-global-economy

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

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

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

Bouveret, A. (April 2019). Cyber Risk for the Financial Services Sector. Journal of Financial Transformation, 49. Available at SSRN: https://ssrn.com/abstract=3381581.

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

Das, S. R. (2019). The future of fintech. Financial Management, 48(4), 981-1007. https://doi.org/10.1111/fima.12297

Ebrahimi, M. (2023). Business Models in Financial Technologies. In Mainstreaming Cryptocurrency and the Future of Digital Finance (pp. 118-137). https://doi.org/10.4018/978-1-6684-8368-8.ch005

Ehigiamusoe, Kizito Uyi, and Mohamad Shaharudin Samsurijan. 2021. What matters for the finance-growth nexus? A critical survey of macroeconomic stability, institutions, financial and economic development. International Journal of Finance & Economics 26: 5302–20. https://doi.org/10.1002/ijfe.2066

El Hajj, M., & Hammoud, J. (2023). Unveiling the Influence of Artificial Intelligence and Machine 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

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.

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-shaping-the-future-of-fintech

Generative AI in Financial Services Market Size, Report By 2032. URL: https://www.precedenceresearch.com/generative-ai-in-financial-services-market

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

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

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

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

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

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

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

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

Revenue of fintech industry worldwide from 2017 to 2027 (2023). URL: https://www.statista.com/statistics/1384016/estimated-revenue-of-global-fintech/

Seahawk, N. (2023). Technology as Transformation: The Future of Finance in 2023. URL:https://www.keiseruniversity.edu/technology-as-transformation-the-future-of-finance-in-2023/

Taherdoost, H. (2023). Fintech: Emerging Trends and the Future of Finance. In Financial Technologies and DeFi . Financial Innovation and Technology.

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/

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