The Influence of Fiscal Strategy on the Financial Sector Stability Oversight

Andrii Zolkover *[1], Viacheslav Dereza [2], Mykhailo Bril [3], Olha Hubaryk [4], Sergiy Popenko [5]

[1] Department of Finance and Business Consulting, Faculty of Management and Business Design, Kyiv National University of Technologies and Design, Kyiv, Ukraine.
[2] Department of Economic Analysis and Finance, Faculty of Finances and Economics, Dnipro University of Technology, Dnipro, Ukraine.
[3] Department of Public Administration and Economic Policy, Institute of Economics and Law, Simon Kuznets Kharkiv National University of Economics, Kharkiv, Ukraine.
[4] Department of Accounting, Taxation and Management of Financial and Economic Security, Dnipro State Agrarian and Economic University, Dnipro, Ukraine.
[5] Interregional Academy of Personnel Management, Kyiv, Ukraine.
*Corresponding authour: zolkover.andrey@gmail.com

OIDA International Journal of Sustainable Development, Ontario International Development Agency, Canada.
ISSN 1923-6654 (print) ISSN 1923-6662 (online) www.oidaijsd.com
Also available at https://www.ssrn.com/index.cfm/en/oida-intl-journal-sustainable-dev/

Abstract: It is the role of monetary policy to continue ensuring the financial stability of the banking sector, particularly in times of global economic crises and the digitalisation of financial services. Monetary measures remain a topical issue as the impact of traditional regulatory instruments in ensuring the security of banks depends on the economic conditions. The study aims to evaluate the consequences of the monetary policy on the banking sector's financial security and to find the best regulatory mechanisms to reduce banking risks. The research method depends on the analysis of the connection between the monetary indicators' level and stability of the banking system, on the research of the dynamics of the key macroeconomic indicators, on the comparison of the international experience, on the economic and mathematical modelling of the action of various regulatory measures effectiveness. The study's results confirm the efficiency of using changes in interest rates and required reserves as an instrument of banking risk control, but only in terms of their effectiveness, which mainly depends on the financial system. Both opportunities for bringing more people into the financial system and new regulatory issues arise from central banks' and digital financial technologies' introduction of digital currencies. The effectiveness of the first type – aggressive use of quantitative easing – is shown to lead to financial instability, while the second – macroprudential measures – are the significant tools to prevent banking crises. Finally, the practical significance of its results is in the possibility that they should be applied to the development of a monetary policy more adaptable to current financial trends and risks. Central banks can use the proposed recommendations to make banking security policy measures more effective in countries where the economy is unstable, and they can propose a set of suitable measures to tackle these shortcomings.

Keywords: monetary policy, banking security, financial stability, monetary regulation, central bank digital currencies (CBDCs), financial technologies (fintech), interest rates, macroprudential measures, banking risks, quantitative easing.

Introduction

Economic stability and financial securitisation of the banking sector depend on the role of monetary policy. Monetary regulation has become important in the global context of economic instability, financial crisis, and the fast-paced digitalisation of financial services. Central banks have a wide array of instruments at their disposal, including changes in the interest rate, imposition of reserves to the banks, and open market operations. Still, the question remains: What are the long-term impacts of these instruments on banking system stability? Notably, financial technologies (fintech) and central bank digital currencies (CBDCs) are already changing the classical banking model and how the regulation has to change. Dufrénot [1], Wu and Zhang [2], Baglioni [3] and other authors analyse scientific studies and show that the problem of the influence of the monetary policy on bank security is

commonly discussed in their works. However, they stress the preferability of monetary instruments for supporting the financial sector while simultaneously indicating the uncertainty of the course of events if the facilitation of central bank intervention in the credit market excesses. Schairer [4] and Rouanet and Hazlett [5] also signal the downside to unconventional monetary policy measures like quantitative easing: financial imbalances. For instance, some authors (e.g., Abdelhadi and Bashayreh [6], Xu and Li [7]) emphasise the implications of the digitalisation of banking operations and the oldness of the regulatory mechanisms.

However, plenty of questions are still open. Much less has been done on what happens to banking system stability or monetary policy transmission in the long run from central banks' digital currencies. Second, there is no uniform idea about the optimal emergence of modern and traditional methods of regulating banking activities in the phase of economic tension. Also, it would be worthy to evaluate the efficacy of macroprudential measures in preventing banking crises, particularly in transition economies.

The main objective of this paper is to examine how monetary policy affects bank security and which are the best regulatory instruments to lower financial risks. To accomplish this, the following tasks are envisaged: analyse the key tool of regulation of the monetary sphere, study the impact of modern financial technologies on banking stability, assess the effectiveness of modern banking instruments in reducing banking risks, and make proposals for improving monetary policy in light of present-day world tasks.

Analysis of the latest research and publications

Research papers related to studying modern monetary policy and its repercussions on the banking sector's security are widely spread in the literature. This also entails recent publications on monetary regulation tools, digitalisation of the banking sector, and macroprudential measures. Specifically, Dufrénot [1] examines the challenges of the monetary policy in global instability and the need for changing regulatory instruments. According to Wu and Zhang [2], CBDCs can help restore monetary policy effectiveness by stabilising the banking sector. Later, Chen et al. [8] highlight the linkage between liquidity regulation, banking risk and shadow banking with a macroprudential approach.

Other authors consider non-standard monetary regulation measures such as quantitative easing (QE). Baglioni [3] evaluates the interest in its application in the context of green monetary policy and developing digital currencies. Lakdawala et al. [9] examine the effects of India's monetary policy during the COVID-19 pandemic, in particular its impact on government bond yields. Similarly, Schairer [4] analyses the controversies of unconventional monetary policy, including its impact on inequality and shadow banking. Special attention is paid to the banking sector's financial security and regulatory challenges. Abidi et al. [10] examine the causes of banking crises and risk management mechanisms. Cabral [11] analyses bank resolution and reorganisation approaches within a banking union. Oliinyk et al. [12] examine economic security through the lens of criminal policy and financial crime.

Considerable attention is paid to financial technologies (fintech) and their impact on the banking sector. Basdekis et al. [13] examine the rapid growth of fintech and its implications for traditional banking, while Kanjula and Sravya [14] analyse artificial intelligence in banking security. Liargovas and Papageorgiou [15] cover the evolution and current economic and monetary policy challenges in the European Union, focusing on the institutional aspects of financial regulation. Liu [16] analyses the transmission mechanism of China's monetary policy, focusing on the effectiveness of regulatory measures in a controlled economy. Abdelhadi and Bashayreh [6] analyse how financial technology (fintech) affects the banking system's profitability, highlighting both positive effects and potential risks. Xu and Li [7] examine the regulation of fintech banking in China, considering the need to adapt supervisory mechanisms to the current conditions of the digital economy.

The problems of banking risk management and regulatory supervision are covered by Abidi et al. [17], who examine the causes of bank failures and measures to minimise risks, and Shpachuk and Trinh [18] analyse current international and national approaches to banking regulation. In turn, Gvindadze [19] examines the evolution of the Georgian banking system in the context of economic reforms, providing an example of the financial sector's adaptation to the challenges of globalisation. Thus, issues relating to banking cybersecurity are also treated in the regulatory aspect. Hodgins [20] reasons there are risks to regulating cybersecurity in financial institutions and must ensure a balance between data protection and economic efficiency. Ozili [21] studies the impact of monetary policy on sustainable development with a special focus on the interrelationship of monetary, fiscal, and regulatory policies to stabilise the economy. Along these lines, Rouanet and Hazlett [5] also study the political side of monetary regulation and demonstrate the power of central bank decisions over the redistribution of economic resources in society.

The issue of optimising business processes within the banking market is worth mentioning. Kasych et al. [22], Zomchak and Miskiv [23] analyse the impact of digitalisation on achieving efficiency in business processes and

demonstrate the importance of digitalisation for the competitiveness of financial institutions. Cabral [11] studies the modalities of bank liquidation and reorganisation in the context of a banking union, considering the role of efficient regulation in crisis periods. These conclusions apply to countries that have highly volatile financial markets. Samantaraya and Mohanty [24] reveal the relation of monetary policy and banking risks in India. Wutscher [25] provides a view on decentralised money and banking and its consequences for the conventional financial sector. Petrakis et al. [26] examine the impact of the European Central Bank on the banking sector. They study the impact of the ECB's non-standard operations on bank lending in various European countries.

Specific to banking regulation in Saudi Arabia, Çakmak [27] compares it to European standards of financial supervision. In the digital age, monetary policy priorities change focus, as Dötsch [28] explains, on conceptualising financial stability. Juhro et al. [29] focus on Islamic monetary policy and its – specialities – as per the modern economy. In context, Haribaskar et al. [30] study the role of central banks' digital currencies in enhancing the performance of monetary policies.

According to the analysis of the latest studies, modern monetary policy is a multi-dimensional regulatory instrument comprising traditional instruments (e.g., interest rates, reserve requirement) and new instruments (e.g., CBDC, quantitative easing, macroprudential regulation). However, further research should focus on developing a tool to assess the effectiveness of these instruments in different macroeconomic conditions and studying the effect of financial technology and digital currency on the bank sector stability. Yet, no solutions have been proposed regarding the long-term effect of central banks' digital currencies on financial stability. There is also no consistent regulation strategy for shadow banking in the globalised financial markets environment.

Research methods

Monetary policy research approaches were adopted to analyse the impact of monetary policy on the security of the banking sector. System analysis methods were used to determine the relationship between monetary instruments and the financial stability of banks. The statistical analysis allowed us to assess the dynamics of changes in the banking sector under the influence of the monetary decisions of central banks. The comparative method was used to analyse international experience in banking regulation and economic and mathematical modelling to predict the effectiveness of various regulatory measures. In addition, the article uses content analysis of scientific publications and official reports of international financial organisations to summarise current trends in monetary policy.

Research results

The bank's safety depends on the monetary policy as it controls economic stability. The instruments central banks use to promote relative financial stability, mitigate risks and avoid banking crises are widely scattered. Such policies mainly aim to control inflation, provide liquidity, and control the lending banks' activities. The discount rate is a key instrument defining the cost of credit resources for commercial banks. Higher discount rates raise interest rates on loans, discouraging risky lending and limiting financial institutions' failure probability [1]. Conversely, a rate cut fosters lending and economic growth, crucial in an economic slowdown.

The reserve requirement ratio is another important mechanism that determines how much of the commercial banks' funds are required to be held in the central bank. Raising these ratios will limit the banking system's excessive liquidity and reduce the probability of financial bubbles [2]. However, on the contrary, reserve requirements reductions will mean lending can expand, but along with risks of instability. Central banks also actively use open market operations to buy or sell government bonds. The increased liquidity in the banking system makes it easier for people to buy securities, stimulating lending and economic activity. Selling bonds can help to "withdraw" excess money from circulation and reduce the risk of overheating the market [3].

Besides the classical tools, central banks also employ macroprudential measures such as bank capital regulation, loan-to-deposit ratio or control over shadow banking. These measures assure the banking system's longevity, prevent financial crises and maintain overall economic stability [8]. Fintech is also changing the traditional banking ecosystem, another challenge for central banks. The introduction of central bank digital currency (CBDC), automated risk management and other new technologies provides opportunities to improve financial security [30], necessitating the adaptation of the existing regulatory mechanisms. Hence, the safety of the banking sector is dependent on monetary policy. The liquidity can be controlled, and risks can be contained using modern and traditional tools to promote financial stability. As the global economy and the financial technologies changed dynamically, the banking system stability requires continuous changes in monetary policy.

Monetary policy is the primary means of economic regulation by central banks to maintain macroeconomic stability. Since it has become much more important under globalisation and increased financial risks, its role has increased considerably. The role of regulators is now changing due to global economic crises, the COVID-19 pandemic, rising debt burdens, and the digitalisation of the financial sector [31, 32]. Given these problems, monetary policy is becoming more flexible, more comprehensive, and risk management-oriented [1].

In today's environment, regulatory policy responds to crises using traditional monetary instruments and novel approaches. This includes non-standard measures such as quantitative easing, the introduction of digital currencies, and the strengthening of macroprudential control. So, here are the key trends that describe modern monetary policy. Table 1 represents the main trends in the NBU's current monetary policy.

Table 1. Key trends in current monetary policy

Trend	Description and features
Quantitative easing (QE)	A policy of buying back government and corporate bonds to increase liquidity in the financial system [3].
Low interest rates	Keeping rates at a minimum for a long time to stimulate economic growth [2].
Strengthening macroprudential regulation	Introducing stricter capital requirements for banks, controlling risky assets and lending [8].
Digitalisation of monetary policy	Central banks (CBDCs) issued digital currencies and developed fintech solutions for monetary regulation [30].
Anti-crisis measures	Temporary programmes to support bank liquidity and refinancing of sectors most affected by crises [9].

Source: authors' elaboration based on [1, 2, 3, 8, 9, 30]

The changes taking place in modern monetary policy are primarily due to the global economic crises and new financial challenges. More comprehensive measures, such as quantitative easing, macroprudential regulation, and digitalisation, are also taken by traditional methods to assist by supplementing its changes to interest rates and required reserves. Along with this, central bank digital currencies (CBDCs) are actively developed and implemented, leading to the possibility of changing the ways to regulate monetary policy.

Already, regulatory policy has been slowly changing towards a proactive approach, where not only preventive but even suppression of the consequences of financial crises are possible. In the future, such development of digital financial instruments will continue, and, at the same time, central banks of different countries will become increasingly engaged in each other's affairs for the sake of global financial stability.

Central banks use monetary regulation as an important economic policy tool for stabilising the financial market and promoting economic growth. The classical methods of regulation used in central banks for decades on various accounts include variations of compulsory reserve requirements, control over the available money, and the most well-known method: the change of primary key policy rate. However, recent modern financial challenges, such as globalisation, financial digitalisation, and market volatility, have urged regulators to introduce new approaches in quantitative easing, macroprudential supervision, and digital currency mechanisms [2].

Table 2 provides a comparative analysis of the effectiveness of the old classical and modern methods of monetary regulation, helping us identify their strengths and weaknesses.

Next page

Table 2. Comparison of classical and modern methods of monetary regulation

Method	How it works	Efficiency	Advantages	Disadvantages
Discount rate	Setting the cost of credit resources for commercial banks	High in a stable economy, low in times of crisis [1]	Easy to use, quick effect	Losing efficiency at zero rates
Mandatory reserves	Determining the minimum reserves that banks must keep with the Central Bank	Moderate effectiveness, especially in regulated economies [3]	Control over the money supply	This may cause a lack of liquidity
Open market transactions	Purchase/sale of government bonds to regulate liquidity	Highly effective in stable conditions, limited in times of crisis [8]	Flexibility, quick impact on the market	Needs a developed financial market
Quantitative easing (QE)	Buyback of Central Bank assets to increase liquidity	High in a low-rate environment [2]	Reduces deflation risks and stimulates lending	Can cause financial bubbles
Macroprudential regulation	Controlling banking risks and setting capital requirements	Highly effective in preventing crises [8]	Prevents systemic risks	Complexity of implementation
Digital currencies (CBDCs)	Use of digital assets to regulate money circulation	Promising, still in the testing phase [30]	Increases financial inclusion	Uncertainty about the impact on banks

Source: developed by the author based on [1, 2, 3, 8, 30]

In a stable economy, classical monetary regulation methods should remain effective, whereby the introductory policy rate or money supply change leads to a predictable change. However, during the economic crisis, their effectiveness was drastically undermined, and central banks were forced to use modern methods of quantitative easing, macroprudential regulation, and digital financial technologies. Today, there are more precise ways of controlling the risk that can propel the economy even in rate states and also protect it from financial crises. However, their regulation is also necessary at the same time, while they might also create unexpected consequences, for example, the risk of an overheating of financial markets or an increase in the inequality of access to credit. Therefore, combining classical and modern methods of monetary regulation is most effective considering the specific features of an economic cycle and financial risks. Monetary policy is an area of development that emerges as promising as it moves forward with incorporating digital technologies into the monetary policy, which will subsequently make it more flexible and adaptive to global challenges in the future.

The modern banking system faces numerous challenges that may threaten its stability. In the context of monetary policy, the main risks are liquidity, credit, and systemic threats. These factors can be caused by both internal problems of financial institutions and macroeconomic shocks, including changes in central banks' monetary policy, financial crises, and the digitalisation of banking services [2]. Central banks play an important role in regulating banking safety by influencing access to liquidity, limiting credit risks, and preventing systemic crises through monetary control mechanisms. Below, we consider the main threats to the banking sector in the form of SmartArt (Figure 1).

Next page

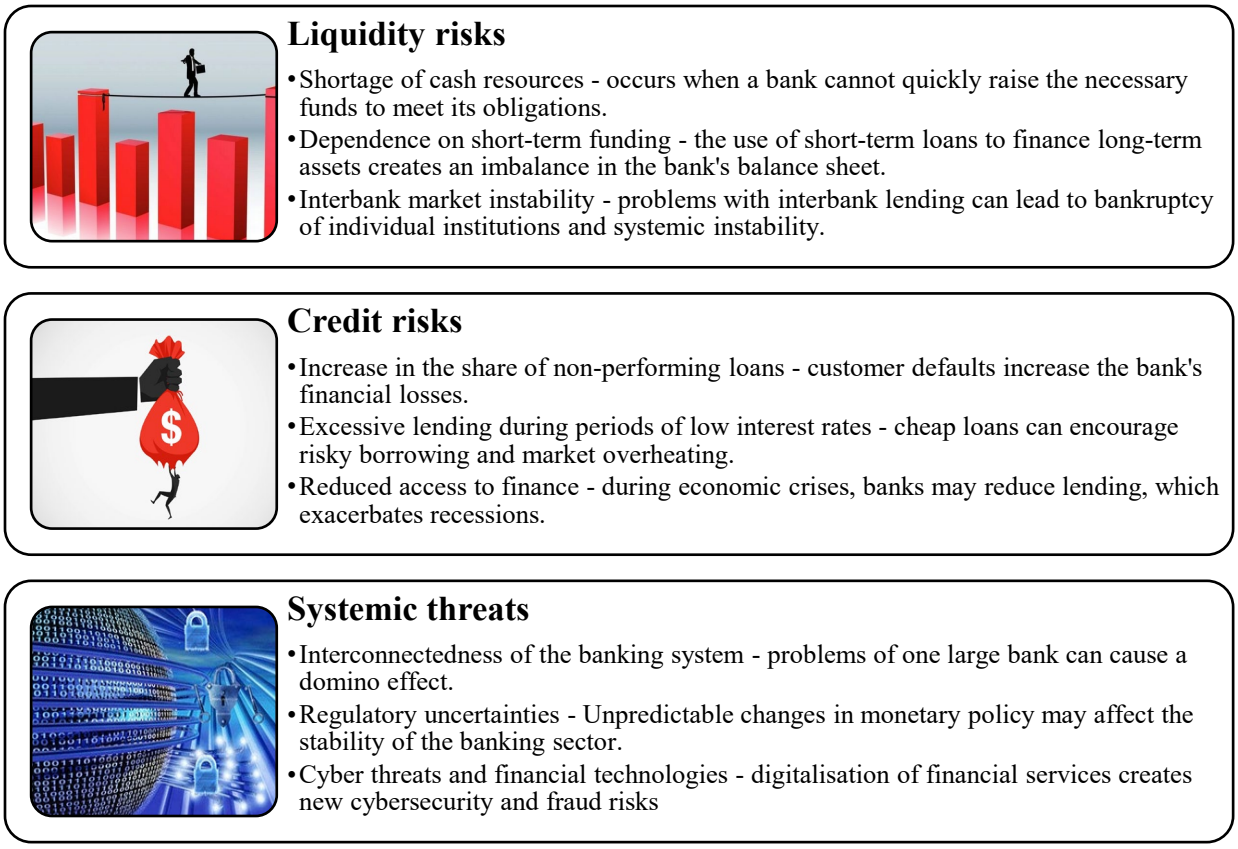

Figure 1. Primary threats to banking security
Source: developed by the author

Monetary policy directly affects the level of risks in the banking sector. A low interest rate policy may encourage excessive lending and increased credit risks, while a sharp increase in interest rates may cause a liquidity crisis. At the same time, the digitalisation of financial services requires updated regulatory mechanisms to minimise systemic threats. Central banks should balance supporting economic growth and ensuring financial stability to prevent a crisis in the banking sector.

We conducted a study that used a comparative analysis of monetary regulation in developed and transition economies based on data from international financial institutions. Wu and Zhang [2] used financial security indices of liquidity, credit risks and regulatory measures to analyse the banking stability of various countries. The impact on central bank interest rates was evaluated through a dynamic analysis in 2020–2024 [3]. The data were collected from official sources such as the International Monetary Fund (IMF) report, the World Bank (WB) report and other academic publications. Having the graphical interpretation (Figure 2 and Figure 3) in our hands enables us to understand the difference between countries and highlight the main interests in the banking sector regulation.

Next Page

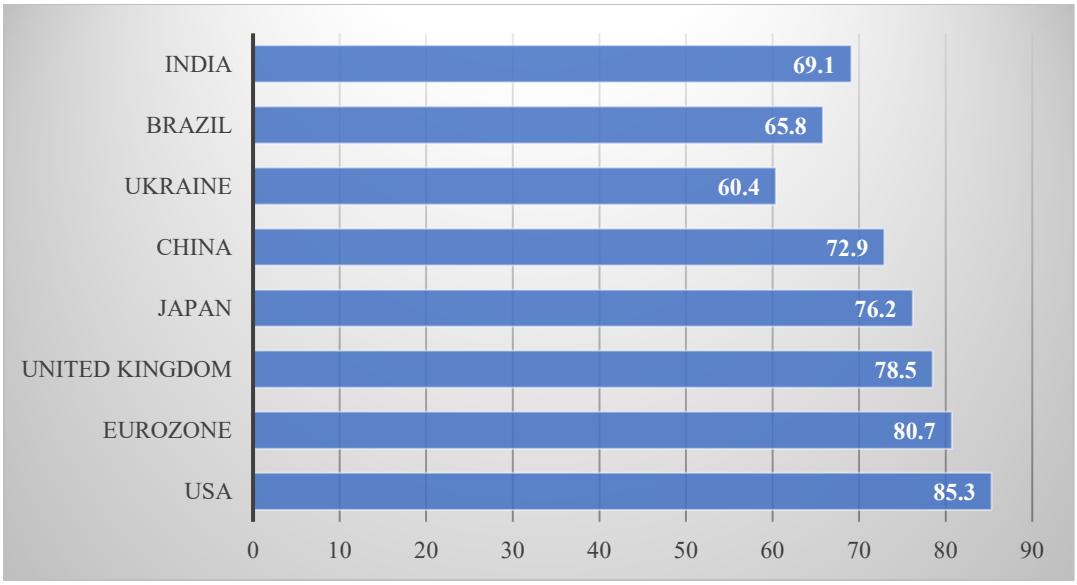

Figure 2. Level of banking stability in different countries
Source: developed by the author based on [1, 2, 3, 8, 30]

Graph 2 shows the level of banking stability in different countries, measured in points from 0 to 100. These indicators help us to judge if a country's financial system can absorb the economic crisis, liquidity or external shocks. Similarly, the level of banking stability is the highest in the United States (85.3). This is because of the Fed's good financial regulation, sound monetary policy flexibility and strong banking infrastructure. Just as the level of stability is high, so is the level of diversified bank assets and capital protection. There is also high banking stability in the UK (78.5) and the Eurozone (80.7). The European Central Bank (ECB) actively applies monetary regulation mechanisms, which allows it to effectively control financial risks. The UK's strong financial system is supported by robust banking supervision and regulation.

Japan (76.2) demonstrates a stable banking system, although its financial sector faces challenges from low interest rates, which may hamper bank profitability. China (72.9) has a relatively high level of stability but still faces risks from high debt levels, a shadow banking sector and possible liquidity crises. Ukraine (60.4), Brazil (65.8), and India (69.1) demonstrate a lower level of stability compared to developed countries. In Ukraine, instability is attributed to economic challenges, including military risks, high inflation, and the need for tight monetary measures to control the financial system. In Brazil, many banking sectors are exposed to variable economic factors, including exchange rate fluctuations and debt. Although a growing economy, India faces the challenges of uneven financial infrastructure development and high credit risks. Overall, the graph clearly distinguishes between developed economies (the US, Eurozone, UK, Japan), which have high financial stability, and emerging economies (Ukraine, Brazil, India), which face more significant challenges in banking safety and soundness.

Next Page

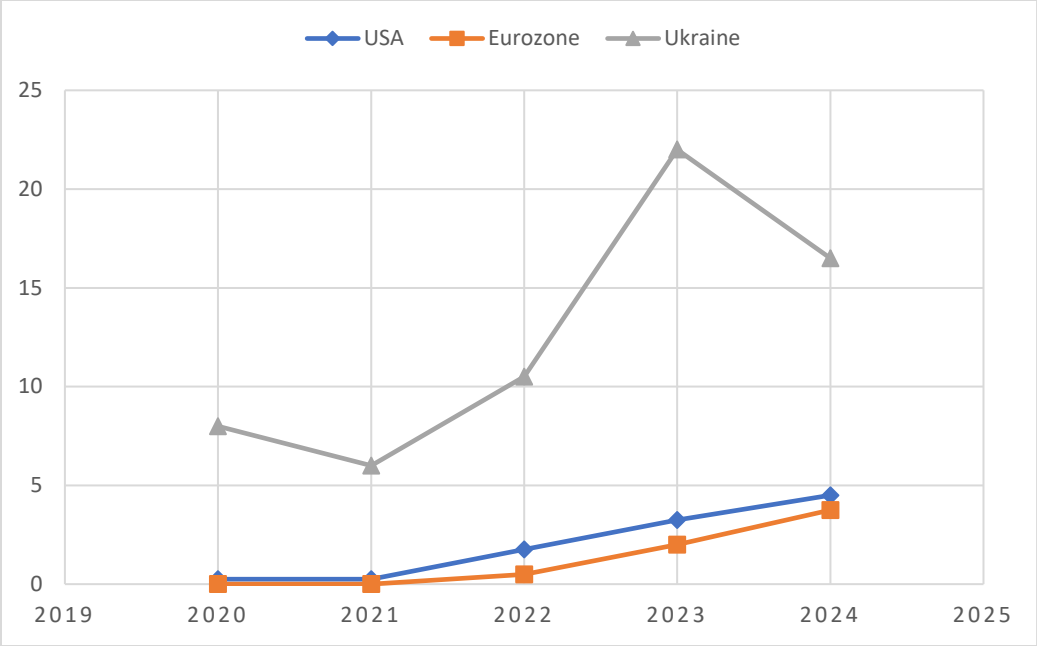

Figure 3. Dynamics of central bank interest rates (2020–2024)
Source: developed by the author based on [1, 2, 3, 8, 30]

The graph shows the dynamics of interest rates of the central banks of the United States, the Eurozone, and Ukraine in 2020–2024. It is noticeable that in the US and the Eurozone, interest rates gradually increased, especially after 2021, in response to rising inflation and the need to tighten monetary policy. In the Eurozone, rates began to rise in 2022, peaking in 2024, reflecting the European Central Bank's tighter policy. Ukraine saw a sharp jump in interest rates in 2022–2023, driven by economic instability caused by external and internal factors. In 2023, the rate reached 22%, which is exceptionally high compared to the US and the Eurozone. In 2024, it declined, indicating the economy is stabilising. Overall, the data show different approaches to monetary regulation: in the US and the EU, central banks are gradually adapting rates, while in Ukraine, there are more abrupt changes due to the impact of the crisis.

The study showed that banking stability is highly dependent on the effectiveness of monetary regulation. An analysis of international experience shows that countries with developed financial systems (the United States, the Eurozone, and the United Kingdom) apply flexible and proactive monetary policies that help keep credit risks low and maintain liquidity in the banking system. At the same time, transition economies, including Ukraine, face significant challenges, such as interest rate volatility, high credit risks and dependence on external factors. The sharp changes in interest rates observed in Ukraine highlight the need to improve forecasting mechanisms and stabilise the financial environment. To ensure the long-term sustainability of the banking system, more comprehensive monetary regulation measures should be implemented, and international experience should be adapted to national economic conditions.

The following summary can be made of the recommendations for improving monetary policy.

1. Adopt an adaptive interest rate policy. Central banks should gradually adapt the main policy rate to the particular economic situation. An excessive rise in interest rates may cause banks to halt lending or enter a recession, or an excessive fall may increase inflationary risk. A flexible forecasting system based not only on macroeconomics but also on the situation in the banking sector is suggested.

2. Strengthen macroprudential regulation. Indeed, to curb financial crises, banks should be required to increase their capitalisation requirements while also taking charge of the quality of their loan portfolios. The anti-crisis buffers will prevent liquidity problems in the case of a macro shock. It is also important to control shadow banking, which may bring additional risk to the financial system.

3. Digital monetary policy instruments are being used. The digitalisation of the banking system paves new ways for more efficient monetary regulation. Central bank digital currencies will help regulate monetary circulation both within

the country and reduce dependence on traditional financial instruments. Also, knowledge of artificial intelligence and big data analysis will predict financial risks more accurately.

4. Build up the international cooperation in the area of financial stability. In the context of the globalisation of financial markets, it is therefore needed to improve coordination with international financial institutions, foremost with the IMF, the World Bank, and the Basel Committee on Banking Supervision. It will allow countries in economies in transition to apply the best practices in the field and develop mechanisms ensuring the stability of banking.

In light of these recommendations, improvements in monetary policy will facilitate further financial stability of banks, reduce the risk of instability, and foster economic growth even in times of crisis.

Discussion

The results of the study justify the role of monetary policy as the principal tool for the process of maintaining the financial stability of the banking sector. Many researchers have depicted Monetary instruments, such as interest rates, reserve requirements, and open market operations, particularly by Dufrénot [1] and Wu and Zhang [2], as major contributors to the resilience of banking systems. Our analysis also confirms our findings: these instruments are best used effectively to reduce financial risks. Nevertheless, some authors, e.g. Schairer [4], Rouanet and Hazlett [5], point to the contradictory effects of monetary policy. Moreover, they claim that if the cuts in interest rates are aggressive and the process of quantitative easing takes place to an extent, that would cause credit expansion and financial instability. While these findings run a bit at odds with other researchers' claims, like Baglioni [3] and Lakdawala et al. [9], that modern approaches to monetary policy are capable of adjusting to macroeconomic challenges and responding adequately to financial crises, there are still many ways forward.

On digital financial technology, Abdelhadi and Bashayreh [6] and Xu and Li [7] discuss its positive impacts on the performance of a banking system and regulatory challenges in the financial digitalisation area. At the same time, Hodgins [20] also covered the perils of cybersecurity that may be perceived as a threat to the banking sector's stability. It also discusses whether the approach to banking regulation is appropriate. Therefore, if there is a need for strict control of banking operations, this is even more vital in the transition economies as, even with minimal overpayments in those economies, reserves can shrink over time. At the same time, Cabral [11] indicates that excessive regulation may retard the development of banking by restricting loans to the real economy. Our results show the relationship between the effectiveness of regulatory measures, the specifics of the economic environment, and the level of the financial sector development.

Therefore, our analysis shows that monetary policy is a relevant instrument to stabilise the financial system, although its impact on the banking system is ambiguous. Next, we should research the long-term implications of digital financial technologies. We will assess the use of monetary instruments in a crisis and develop a more balanced regulatory policy that combines the need for financial stability with economic growth.

Conclusion and prospects for further research

The study shows that monetary policy is an important instrument for maintaining the financial stability of the banking sector, where the efficiency of the monetary policy instruments depends on macroeconomic conditions and monetary policy measures applied. It has also been discovered that the digitisation of financial services and the adoption of financial technologies are transforming the traditional banking sector and developing new avenues in addition to the regulatory challenges. Here, it is established that quantitative easing used aggressively may bring on financial instability while using macroprudential measures is an efficient tool for limiting banking risks. Different ways of regulating the banking sector have been studied by analysing the country's economic development status and examining which aspects of the regulation have merits and demerits. The significance of the research results at the practical level is linked with the possibility of applying the results to regulatory policy development, particularly anticipating periods of financial instability. The study is limited because digital financial technologies are challenging to quantify in terms of the long-term effects on banking security. Work should be done further to develop adaptive models of regulation, which account for the dynamic development of digital banking technologies, the presence of cyber risks, and the requirement to preserve financial stability in global crises. Therefore, it is advised that research on the consequences of these central banks' digital currencies for monetary policy and their relation with conventional banking control devices should be further studied.

References

[1] Dufrénot, G. (2023). New challenges for monetary policy. In: *New challenges for macroeconomic policies.* (pp. 259–332). Palgrave Macmillan. https://doi.org/10.1007/978-3-031-15754-7_6

[2] Wu, B., & Zhang, M. (2024). The impact of central bank digital currency on monetary policy effectiveness. *Economic Change and Restructuring, 57,* 135. https://doi.org/10.1007/s10644-024-09720-y

[3] Baglioni, A. (2024). Future challenges: CBDC and greening policy. In: *Monetary policy implementation.* (pp. 217–254). Palgrave monetary Macmillan. https://doi.org/10.1007/978-3-031-53885-8_7

[4] Schairer, S. (2024). The contradictions of unconventional monetary policy as a post-2008 thwarting mechanism: Financial dominance, shadow banking, and inequality. *Review of Evolutionary Political Economy, 5*, 1–29. https://doi.org/10.1007/s43253-024-00115-3

[5] Rouanet, L., & Hazlett, P. (2023). The redistributive politics of monetary policy. *Public Choice, 194*(1-2), 1–26. https://doi.org/10.1007/s11127-022-01009-w

[6] Abdelhadi, S., & Bashayreh, A. (2024). Consequences of fintech on the profitability of banking system. In: A. M. A. Musleh Al-Sartawi, A. A. Al-Qudah, & F. Shihadeh (Eds.), *Artificial intelligence-augmented digital twins. Studies in Systems, Decision and Control.* (Vol. 503, pp. 563–570). Springer. https://doi.org/10.1007/978-3-031-43490-7_42

[7] Xu, Y., & Li, Z. (2024). Prudential regulation of the banking-like business of fintech companies in China. In: M. Bodellini, G. Gimigliano, & D. Singh (Eds.), *Commercial banking in transition.* (pp. 389–416). Palgrave Macmillan. https://doi.org/10.1007/978-3-031-45289-5_18

[8] Chen, X., Wu, Y., Ding, Y., & Zhang, X. (2024). Exploring the nexus of liquidity regulation, bank risk-taking, and shadow banking: A comprehensive analysis of Chinese commercial banks. *Journal of the Knowledge Economy*. Advance online publication. https://doi.org/10.1007/s13132-024-02013-9

[9] Lakdawala, A., Pratap, B., & Sengupta, R. (2023). Impact of RBI's monetary policy announcements on government bond yields: Evidence from the pandemic. *Indian Economic Review, 58*(Suppl 2), 261–291. https://doi.org/10.1007/s41775-023-00171-2

[10] Abidi, N., Buchetti, B., Crosetti, S., & Miquel-Flores, I. (2024). The role of banking. In: *Why do banks fail and what to do about it. Contributions to Finance and Accounting.* (pp. 1–26). Springer. https://doi.org/10.1007/978-3-031-52311-3_1

[11] Cabral, R. (2024). The banking union's resolution or liquidation approach. *Journal of Banking Regulation, 25*(2), 123–140. https://doi.org/10.1057/s41261-024-00244-z

[12] Oliinyk, O. S., Shestopalov, R. M., Zarosylo, V. O., Stankovic, M. I., & Golubitsky, S. G. (2022). Economic security through criminal policies: A comparative study of Western and European approaches. *Revista Científica General José María Córdova, 20*(38), 265–285. https://www.redalyc.org/journal/4762/476273700002/html/

[13] Basdekis, C., Christopoulos, A., Katsampoxakis, I., & Sariannidis, N. (2022). FinTech's rapid growth and its effect on the banking sector. *Journal of Banking and Financial Technology, 6*(2), 159–176. https://doi.org/10.1007/s42786-022-00045-w

[14] Kanjula, M. R., & Sravya, J. (2025). AI-driven security in banking: Boon or bane. In: M. Chakraborty, S. P. Chakrabarty, A. Penteado, & V. E. Balas (Eds.), *Proceedings of 5th International Ethical Hacking Conference. eHaCON 2024. Lecture Notes in Networks and Systems*. (Vol. 1148, pp. 225–232). Springer. https://doi.org/10.1007/978-981-97-8457-8_15

[15] Liargovas, P., & Papageorgiou, C. (2024). Economic and monetary policy: Origin, evolution and current challenges. In: *The European integration.* (Vol. 2, pp. 287–331). Springer. https://doi.org/10.1007/978-3-031-47176-6_8

[16] Liu, W. (2023). An empirical study on the transmission mechanism of monetary policy in China. In: *Research on China's monetary policy system and conduction mechanism.* (pp. 225–274). Springer. https://doi.org/10.1007/978-981-19-9060-1_7

[17] Abidi, N., Buchetti, B., Crosetti, S., & Miquel-Flores, I. (2024). Risk management and banking failures. In: *Why do banks fail and what to do about it.* (pp. 27–56). Springer. https://doi.org/10.1007/978-3-031-52311-3_2

[18] Shpachuk, V., & Trinh, V. Q. (2024). Features of modern international and national banking regulation. In: *Modern banking and digitalisation. Contributions to Finance and Accounting.* (pp. 89–119). Springer. https://doi.org/10.1007/978-3-031-71422-1_4

[19] Gvindadze, D. (2023). Banking. In: *The transformation of Georgia from 2004 to 2012.* (pp. 287–310). Palgrave Macmillan. https://doi.org/10.1007/978-3-031-18264-8_16

[20] Hodgins, M. W. (2024). The perils of cybersecurity regulation. *The Review of Austrian Economics*. Advance online publication. https://doi.org/10.1007/s11138-024-00660-4

[21] Ozili, P. K. (2024). Economic policy for sustainable development: Role of monetary policy, fiscal policy and regulatory policy. *Circular Economy and Sustainability, 4*, 2625–2656. https://doi.org/10.1007/s43615-024-00406-1

[22] Kasych, A., Yakovenko, Y., & Tarasenko, I. (2019). Optimisation of business processes with the use of industrial digitalisation. In: *2019 IEEE International Conference on Modern Electrical and Energy Systems (MEES)* (23-25 September 2019). (pp. 522–525). Kremenchuk, Ukraine. https://doi.org/10.1109/MEES.2019.8896531

[23] Zomchak, L., & Miskiv, D. (2024). Structural model of Ukrainian economic performance: interactions between GDP and industrial output. *Smart Economy, Entrepreneurship and Security, 2*(2), 7–16. https://www.science-smart.com/index.php/smart/article/view/15

[24] Samantaraya, A., & Mohanty, M. (2022). Monetary policy accommodation and banking risk: An Indian perspective. In: N. Yoshino, R. N. Paramanik, & A. S. Kumar (Eds.), *Studies in international economics and finance.* (pp. 97–115). Springer. https://doi.org/10.1007/978-981-16-7062-6_6

[25] Wutscher, R. (2024). The economics of decentralised money and banking. *SN Business & Economics, 4*, 134. https://doi.org/10.1007/s43546-023-00493-6

[26] Petrakis, N., Lemonakis, C., Floros, C., & Zopounidis, C. (2024). The impact of the ECB's non-regular operations on bank credit: Cross-country evidence. *Operational Research, 24*, 51. https://doi.org/10.1007/s12351-024-00860-7

[27] Çakmak, C. (2024). Banking control law of Saudi Arabia. In: M. Ustaoğlu & C. Çakmak (Eds.), *The Palgrave encyclopedia of Islamic finance and economics.* (pp. 1–10). Palgrave Macmillan. https://doi.org/10.1007/978-3-030-93703-4_83-1

[28] Dötsch, J. J. (2024). Primacy of monetary policy. In: *Economic policy in the digital age. Contributions to Economics.* (pp. 69–108). Springer. https://doi.org/10.1007/978-3-031-53047-0_5

[29] Juhro, S. M., Syarifuddin, F., & Sakti, A. (2025). Islamic monetary policy practices. In: *Inclusive welfare.* (pp. 225–250). Springer. https://doi.org/10.1007/978-981-96-0051-9_12

[30] Haribaskar, R., Madhusudhanan, R., Gopidas, S., Arunkumar, B., Eshan, M. R., & Sherly Steffi, L. (2025). Reforming monetary policy: A comprehensive analysis of central bank digital currencies (CBDC's). In: A. Hamdan & U. Braendle (Eds.), *Harnessing AI, machine learning, and IoT for intelligent business. Studies in Systems, Decision and Control.* (Vol. 555, pp. 603–612). Springer. https://doi.org/10.1007/978-3-031-67890-5_54

[31] Kussainov, K., Goncharuk, N., Prokopenko, L., Pershko, L., Vyshnivska, B., & Akimov, O. (2023). Anti-corruption management mechanisms and the construction of a security landscape in the financial sector of the EU economic system against the background of challenges to European integration: Implications for artificial intelligence technologies. *Economic Affairs (New Delhi), 68*(1), 509–521. https://doi.org/10.46852/0424-2513.1.2023.20

[32] Meshcheriakov, A., Bodenchuk, L., Liganenko, I., Rybak, O., & Lobunets, T. (2023). Trends in the Development of the Banking System of Ukraine under Conditions of Military Actions and Globalization Influences. *Financial and Credit Activity: Problems of Theory and Practice, 3*(50), 8–22. https://doi.org/10.55643/fcaptp.3.50.2023.3993