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THE ROLE OF THE CENTRAL BANK IN STRENGTHENING THE RESILIENCE OF PAYMENT MECHANISMS IN TIMES OF CRISIS

Abstract. *The purpose of the article is to provide a comprehensive theoretical generalisation and an in-depth justification of the central bank's role in enhancing the resilience of payment mechanisms under conditions of heightened economic and geopolitical uncertainty. The study aims to substantiate how the implementation of a national digital currency and modernised regulatory approaches can strengthen the stability of the financial ecosystem, ensure uninterrupted functioning of the payment infrastructure, and reduce systemic vulnerabilities that may emerge or escalate during crises. In addition, the article seeks to identify the most effective institutional mechanisms, technological solutions, and policy tools that enable the central bank to maintain trust in the monetary system, safeguard the integrity of financial transactions, and prevent the transmission of financial shocks across the economy. The study summarises theoretical and methodological approaches to determining the role of the central bank in strengthening the stability of payment mechanisms in crisis conditions. It has been proven that the effectiveness of the financial system largely depends on the central bank's ability to provide timely liquidity support, monitor risks, coordinate actions with other government agencies, and influence the formation of economic expectations of market participants. It has been established that the central bank performs key functions to ensure the stability of the payment infrastructure: from regulating banking activities and maintaining macrofinancial stability to implementing anti-crisis measures aimed at preventing the spread of systemic instability. The use of a comprehensive set of monetary, supervisory and administrative tools makes it possible to minimise the impact of financial shocks, maintain confidence in the banking system and ensure the continuity of payments. The experience of the National Bank of Ukraine confirms that the stability of payment mechanisms during periods of armed aggression and economic challenges largely depends on the speed of regulatory decisions, the ability to adapt risk management approaches, and the implementation of crisis support instruments for the banking sector. Further strengthening of the payment infrastructure requires improving the system of stability indicators, developing technological solutions, and enhancing coordination between state and international institutions. The results obtained allow us to form scientifically sound approaches to strengthening the role of the central bank in maintaining financial and payment stability, which is important for ensuring sustainable economic development in the context of growing global and domestic risks.*

Keywords: *payment system, central bank, financial security of the state, financial stability, financial infrastructure.*

Formulation of the problem. In the current climate of global financial turbulence, it is particularly important to ensure the stable functioning of the payment infrastructure, as its reliability determines the continuity of money circulation, the stability of the financial system, and the confidence that economic agents have in state institutions [8]. Crises caused by geopolitical conflicts, technological transformations, cyber activity and structural imbalances in the global economy are placing an increasing burden on national payment systems, requiring the development of robust protection and adaptation mechanisms [2].

In view of this, the role of the central bank in organising, regulating and modernising payment mechanisms is growing significantly. The central bank forms the regulatory, technological and organisational foundations on which the payment system operates, setting security standards, monitoring systemically important participants and ensuring coordination between financial intermediaries [9]. During times of crisis, the central bank plays a pivotal role in ensuring the smooth operation of financial settlements, supporting the liquidity of the banking sector and implementing anti-crisis measures to minimise the risk of payment disruptions and maintain the stability of the financial infrastructure [4].

This issue is particularly relevant for Ukraine, where the payment system is operating amid external shocks, war, significant structural changes to the economy and an accelerated transition to digital financial technologies. A reliable and adaptive payment infrastructure is essential for ensuring macro-financial stability, supporting economic activity and integration into the European financial system [5].

Although a significant body of research has been devoted to specific aspects of central bank activities and the development of payment systems, further scientific study is required to systematically assess their role in enhancing the stability of payment mechanisms in times of crisis. This highlights the importance of research that clarifies the central bank's functional priorities, identifies channels of influence on payment mechanism stability, and develops methodological approaches to increasing adaptability in conditions of high external environmental volatility.

Literary review. The role of the central bank in strengthening financial stability and ensuring the reliable functioning of payment mechanisms occupies an important place in scientific literature. Among foreign researchers whose work has become fundamental to the formation of the modern approach to financial system regulation, K. Borio, P. Lowe [9], V. White, P. Callow, and others should be highlighted. Their works focus on expanding the mandate of central banks to control not only consumer price dynamics, but also changes in the value of financial assets, such as securities and real estate. Some foreign economists argue that the regulator's attention to the formation of 'bubbles' in financial markets should become an integral part of monetary policy, since timely response to imbalances can minimise systemic risks and prevent destabilisation of the financial infrastructure.

Domestic scholars also pay considerable attention to the issue of central bank involvement in maintaining financial and, in particular, payment stability. A significant contribution to the study of these issues has been made by O. Boldueva, A. Gorbunova, Y. Kusakova [1], O. Grygorash, V. Pugach [3], V. Kozuk [6] and others. Their work provides a comprehensive understanding of the functional potential of the central bank in conditions of growing internal and external risks, and emphasises the importance of the institutional capacity of the regulator as a key element of the financial system.

Despite the significant contribution of scientists, it should be acknowledged that a number of important aspects related to the stability of payment mechanisms in crisis conditions remain insufficiently researched. In particular, further attention should be paid to the interaction between monetary policy and regulatory instruments in the areas of payment infrastructure, mechanisms for preventing payment failures and cyber attacks, as well as the impact of digital transformation on the system's ability to ensure continuity of settlements during periods of shock. This necessitates further scientific research aimed at determining the optimal role of the central bank in conditions of growing uncertainty and structural transformations in the financial environment.

The purpose of the article is to provide a theoretical generalisation and in-depth justification of the role of the central bank in strengthening the stability of payment mechanisms in times of crisis, as well as to identify key instruments and regulatory approaches that ensure the smooth operation of the payment infrastructure and minimise the risks of financial instability spreading.

The main section. Central banks are key institutions responsible for maintaining financial stability and ensuring the proper functioning of the payment infrastructure, which is particularly important in times of crisis [1]. Their decisive role is due to the fact that the regulator is traditionally responsible not only for the stability of the national currency, but also for the stability of the banking sector, which is a fundamental component of the financial system. Any disruption to its stability can cause large-scale imbalances, which transform into systemic risks and have significant socio-economic consequences for the state.

At the same time, full responsibility for the state of the financial system cannot be placed solely on the central bank, since ensuring the stability of the financial environment is a multidimensional task that requires coordinated action by state institutions – ministries of finance, banking and non-banking supervisory authorities, structures responsible for regulating capital markets, and other entities of the financial architecture. It is inter-institutional cooperation that creates the conditions for a timely response to shocks and prevents the spread of crisis phenomena.

In this context, in our opinion, the main tasks of the central bank in ensuring financial and payment stability can be presented as a comprehensive system of instruments and functional areas:

1. Creating macroeconomic conditions for the effective operation of banking institutions, including maintaining moderate inflation, predictability of monetary policy and availability of financial resources.
2. Smoothing out short-term liquidity fluctuations, which helps to prevent local imbalances from spreading to the entire sector and ensures the smooth operation of interbank settlements.
3. Monitoring the stability and solvency of banks, as well as assessing systemic risks associated with changes in the credit, currency and market environment.
4. Analysing the vulnerability of the banking sector to external and internal shocks, including macro-financial, geopolitical and technological ones.
5. Protecting the interests of depositors and creditors, developing and improving deposit guarantee mechanisms.

6. Ensuring the smooth operation of the national payment system, which is a basic condition for the stability of the financial infrastructure, especially in times of crisis.

7. Expanding international cooperation necessary to harmonise regulatory standards and reduce cross-border risks.

8. Preparing regular financial stability reports, which serve as a tool for informing the public, increasing transparency and shaping realistic economic expectations.

Informing financial market participants about current risks is particularly important, as raising awareness promotes more responsible behaviour by economic agents, reducing the likelihood of panic and destabilisation of the system [7]. Thus, the central bank's communication policy is an integral part of preventive risk management.

We will analyse how structural changes in the banking sector reflect the effectiveness of the NBU's regulatory decisions and their impact on the payment infrastructure (Fig. 1).

The dynamics of the payment infrastructure directly depend on the state of the banking sector, as banks are key providers of payment services and major participants in settlement systems. In this context, the number of banking institutions is an important indicator of the stability and structural transformations of the financial system. Data on the development of the Ukrainian banking market show a long-term trend towards a reduction in the number of banks between 2014 and 2025: from 180 institutions in 2014 to 62 in 2025. This process was gradual but consistent: 2015 – 163 banks, 2016 – 117, 2017 – 96, 2018 – 82, 2019 – 77, 2020 – 75, 2021 – 73, 2022 – 71, 2023 – 67, 2024 – 63.

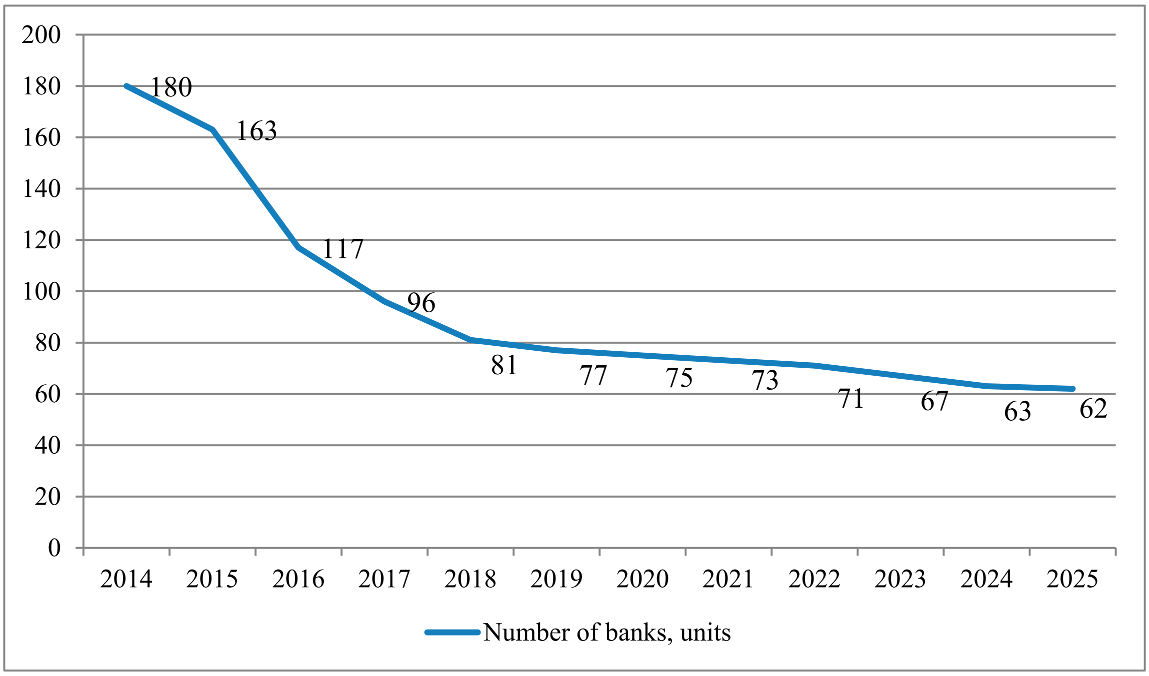

Figure 1 – Dynamics of the number of banking institutions in Ukraine

Source: compiled by the author based on [8]

This trend reflects not so much a contraction of the market as a cleansing of the banking sector of financially unstable institutions that did not meet regulatory requirements or had significant liquidity and solvency risks. The significant reduction in the number of banks in 2014–2017 was a response to macroeconomic shocks, tighter prudential supervision and the introduction of higher capital and ownership transparency requirements. Thus, the concentration of the banking market was not a sign of a deterioration in the competitive environment, but rather the result of structural reforms aimed at ensuring its stability.

In subsequent years, the pace of decline slowed, indicating that the sector had achieved a new level of stability and adaptation to external challenges, including pandemic and military risks. Despite unprecedented shocks, the payment system continued to function without disruption, confirming the effectiveness of the central bank's regulatory decisions. The gradual decrease in the number of banks in 2022–2025 (from 71 to 62) is mainly due to optimisation and merger processes, stricter risk management requirements and higher technological standards for payment services.

In general, the data obtained indicate that the central bank plays a key role in strengthening the stability of payment mechanisms by improving the quality of the banking sector, introducing liquidity control mechanisms, and implementing policies aimed at minimising systemic risks. The reduction in the number of banks, which is taking place against the backdrop of the continued smooth operation of the payment system, confirms the effectiveness of the regulatory model and its ability to ensure financial stability even in extreme conditions.

In a situation of crisis imbalances, it is the central bank that acts as the primary response link. Through the use of monetary and regulatory instruments, it ensures the restoration of liquidity, the stabilisation of payment flows, the mitigation of negative expectations of economic agents and the gradual restoration of confidence in the banking system [6, 10]. Its capabilities include:

– use of traditional monetary instruments (interest rate policy, reserve requirements, open market operations);
– application of short-term and long-term refinancing procedures;
– introduction of temporary administrative measures to limit capital outflows;
– implementation of programmes for recapitalisation, asset restructuring and financial recovery of banks;
– strengthening of supervisory requirements and prudential standards;
– introduction of depositor protection mechanisms aimed at minimising losses and restoring confidence.

The comprehensive use of these measures allows the central bank to maintain the stability of the financial infrastructure, prevent further deepening of the crisis, and create conditions for the rapid recovery of the banking sector.

Practice during the full-scale war in Ukraine confirmed the effectiveness of this approach. Timely and coordinated actions by the National Bank of Ukraine made it possible to maintain the functionality of the banking system even in conditions of military aggression, high volatility and massive cyber attacks. The regulator ensured the stability of the payment infrastructure, maintained sufficient liquidity and created conditions for preserving customer confidence in banking institutions [3]. In the post-war period, the key tasks will be to restore the financial infrastructure, modernise payment mechanisms and strengthen their resilience to future shocks, which necessitates the development of a modern system of indicators and a model for comprehensive assessment of financial stability.

Conclusions. The study summarised theoretical and methodological approaches to determining the role of the central bank in strengthening the stability of payment mechanisms in crisis conditions. It has been proven that the effectiveness of the financial system largely depends on the central bank's ability to provide timely liquidity support, monitor risks, coordinate actions with other government agencies, and influence the formation of economic expectations of market participants.

It has been established that the central bank performs key functions to ensure the stability of the payment infrastructure: from regulating banking activities and maintaining macrofinancial stability to implementing anti-crisis measures aimed at preventing the spread of systemic instability. The use of a comprehensive set of monetary, supervisory and administrative tools makes it possible to minimise the impact of financial shocks, maintain confidence in the banking system and ensure the continuity of payments.

The experience of the National Bank of Ukraine confirms that the stability of payment mechanisms during periods of armed aggression and economic challenges largely depends on the speed of regulatory decisions, the ability to adapt risk management approaches, and the implementation of crisis support instruments for the banking sector. Further strengthening of the payment infrastructure requires improving the system of stability indicators, developing technological solutions, and enhancing coordination between state and international institutions.

The results obtained allow us to develop scientifically sound approaches to strengthening the role of the central bank in maintaining financial and payment stability, which is important for ensuring sustainable economic development in the context of growing global and domestic risks.

REFERENCES

1. Boldueva O., Gorbunova A., Kusakova Yu. (2024). Tsyfrova transformatsiia platizhnykh system i rol bankiv u hlobalizatsii finansovoi infrastruktury [Digital transformation of payment systems and the role of banks in the globalisation of financial infrastructure]. *Ekonomika ta suspilstvo,* vol. 69. URL: https://salo.li/Fdd1a9C (accessed November 8, 2025)

2. Gisem M., Korol M. (2023). Problemy finansovoi bezpeky bankivskoho sektoru Ukrainy pid chas povnomasshtabnoho rosiiskoho vtorhnennia [Problems of financial security in Ukraine's banking sector during the full-scale Russian invasion]. *Stalyi rozvytok ekonomiky,* vol. 2(47), pp. 43–49. DOI: https://doi.org/10.32782/2308-1988/2023-47-6 (accessed November 3, 2025)

3. Grygorash O., Pugach V. (2024). Finansova stiikist Ukrainy v umovakh viiny: realii ta perspektyvy [Ukraine's financial stability in wartime: realities and prospects]. *Ekonomika ta suspilstvo,* vol. 65. DOI: https://doi.org/10.32782/2524-0072/2024-65-57 (accessed November 15, 2025)

4. Davydenko N. M., Kolodyazhna V. O. (2020). Otsiniuvannia finansovoi bezpeky bankivskoi systemy Ukrainy [Assessment of the financial security of the banking system of Ukraine]. *Naukovyi visnyk Khersonskoho derzhavnoho universytetu. Seriia "Ekonomichni nauky",* vol. 40, pp. 51–58.

5. Davydenko N. M., Kushnir O. O., Davydenko M. A. (2025). Rozvytok suchasnykh platizhnykh system v Ukraini [Development of modern payment systems in Ukraine]. *Naukovo-vyrobnychyi zhurnal "Biznes–navihator",* vol 3(80), pp. 196–200. DOI: https://doi.org/10.32782/business-navigator.80-34 (accessed November 13, 2025)

6. Kozuk V. V. (2009). Monetarni osnovy hlobalnoi finansovoi stabilnosti: monohrafiia [Monetary foundations of global financial stability: monograph]. Ternopil: TNEU (in Ukraine).

7. Martsenyuk O. V., Ruda O. L., Buyalska V. M. (2024). Tendentsii rynku bankivskykh posluh v umovakh voiennoho stanu ta u pisliavoiennomu vidnovlenni Ukrainy [Trends in the banking services market under martial law and during Ukraine's post-war recovery. *Ahrosvit,* vol. 6, pp. 134–142. Available at: https://salo.li/eFB4326 (accessed November 6, 2025)

8. Natsionalnyi banku Ukrainy, Statystyka finansovoho rynku Ukrainy [National Bank of Ukraine, Statistics of the Ukrainian Financial Market]. Available at: https://bank.gov.ua/ua/markets (accessed November 15, 2025)

9. Borio C., Lowe P. (2002). Asset prices, financial and monetary stability: exploring the nexus. *BIS Working Papers.* June, № 114. Available at: http://www.bis.org/publ/work114.pdf (accessed November 22, 2025)

10. Davydenko N., Buriak A., Titenko Z. (2019). Financial support for the development of innovation activities. *Intellectual economics,* vol. 13(2), pp. 144–151.

СПИСОК ВИКОРИСТАНИХ ДЖЕРЕЛ

1. Болдуєва О., Горбунова А., Кусакова Ю. Цифрова трансформація платіжних систем і роль банків у глобалізації фінансової інфраструктури. *Економіка та суспільство.* 2024. №69. URL: https://salo.li/Fdd1a9C

2. Гісем М., Король М. Проблеми фінансової безпеки банківського сектору України під час повномасштабного російського вторгнення. *Сталий розвиток економіки.* 2023. № 2(47). С. 43–49. DOI: https://doi.org/10.32782/2308-1988/2023-47-6

3. Григораш О., Пугач В. Фінансова стійкість України в умовах війни: реалії та перспективи. *Економіка та суспільство.* 2024. № 65. DOI: https://doi.org/10.32782/2524-0072/2024-65-57

4. Давиденко Н. М., Колодяжна В. О. Оцінювання фінансової безпеки банківської системи України. *Науковий вісник Херсонського державного університету. Серія «Економічні науки».* 2020. Вип. 40. С. 51–58.

5. Давиденко Н. М., Кушнір О. О., Давиденко М. А. Розвиток сучасних платіжних систем в Україні. *Науково-виробничий журнал «Бізнес–навігатор».* 2025. №3(80). С. 196 – 200 DOI: https://doi.org/10.32782/business-navigator.80-34

6. Козюк В. В. Монетарні основи глобальної фінансової стабільності: монографія. Тернопіль : ТНЕУ, 2009.

7. Марценюк О. В., Руда О. Л., Буяльська В. М. Тенденції ринку банківських послуг в умовах воєнного стану та у післявоєнному відновленні України. *Агросвіт.* 2024. № 6. С. 134–142. URL: https://salo.li/eFB4326

8. Національний банку України, Статистика фінансового ринку України. URL: https://bank.gov.ua/ua/markets

9. Borio C., Lowe P. Asset prices, financial and monetary stability: exploring the nexus. *BIS Working Papers.* June, 2002. № 114. URL: http://www.bis.org/publ/work114.pdf

10. Davydenko N., Buriak A., Titenko Z. Financial support for the development of innovation activities. *Intellectual economics.* 2019. №13(2). pp. 144–151.

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РОЛЬ ЦЕНТРАЛЬНОГО БАНКУ У ЗМІЦНЕННІ СТІЙКОСТІ ПЛАТІЖНИХ МЕХАНІЗМІВ В УМОВАХ КРИЗОВИХ ВИКЛИКІВ

Анотація. *У статті досліджено комплексний вплив центрального на стійкість платіжних механізмів у періоди кризових явищ та фінансових потрясінь. Підкреслено, що центральні банки виступають ключовими інститутами забезпечення фінансової стабільності, а їх діяльність охоплює як монетарну сферу, так і широкий спектр наглядових, регуляторних та координаційних функцій. В статті обґрунтовано, що системні кризи найбільш швидко проявляються у банківському секторі та платіжній інфраструктурі, що робить їх надзвичайно чутливими до зовнішніх та внутрішніх шоків. У цьому контексті, на думку автора, важливою є здатність центрального банку оперативно реагувати на порушення у функціонуванні розрахунково–платіжних механізмів, забезпечуючи належний рівень ліквідності, підтримуючи довіру учасників ринку та запобігаючи ефекту ланцюгової передачі ризиків. Розкрито ключові напрями діяльності центрального банку у сфері зміцнення фінансової та платіжної стійкості, серед яких: створення сприятливого макроекономічного середовища для банків, згладжування коливань ліквідності, оцінювання вразливості фінансових установ, захист інтересів вкладників, функціонування системи гарантування вкладів, забезпечення безперебійної роботи платіжної інфраструктури, співпраця з міжнародними регуляторами та підготовка звітів про фінансову стабільність. Показано, що у кризових ситуаціях саме центральний банк фактично виконує роль «першої лінії оборони», застосовуючи як традиційні монетарні інструменти, так і спеціальні антикризові заходи, спрямовані на відновлення ліквідності, стабілізацію очікувань і мінімізацію системних ризиків. На прикладі діяльності*

Національного банку України окреслено важливість своєчасних рішень та адаптивних регуляторних підходів у період воєнних і економічних потрясінь. Підкреслено, що стабільність платіжної системи є фундаментальною умовою стійкого функціонування фінансового сектору та економіки загалом, а отже, потребує розроблення сучасних індикаторів, удосконалення механізмів моніторингу та посилення інституційної спроможності центрального банку. Отримані результати поглиблюють теоретико-методичні підходи до оцінювання ролі центрального банку у зміцненні стійкості платіжних механізмів та формують підґрунтя для подальших досліджень у сфері фінансової стабільності.

Ключові слова: *платіжна система, центральний банк, фінансова безпека держави, фінансова стійкість, фінансова інфраструктура.*

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