

UDC 330.3:658.713:338.432

JEL C53, G23, Q00

DOI <https://doi.org/10.32782/2786-8273/2026-12-8>**Volodymyr Kovalenko**

Candidate of Science in Public Administration,
Associate Professor of the Department of Fundamental and Special Disciplines,
Novovolynsk Educative and Research Institute
of Economics and Management of West Ukrainian National University
ORCID: <https://orcid.org/0009-0006-9797-0100>

Коваленко В.М.

Нововолинський навчально-науковий інститут
економіки та менеджменту
Західноукраїнського національного університету

MODERNISATION OF THE INSTANT PAYMENT SYSTEM AS A TOOL FOR IMPROVING THE COUNTRY'S FINANCIAL SECURITY

МОДЕРНІЗАЦІЯ СИСТЕМИ МИТТЄВИХ ПЛАТЕЖІВ ЯК ІНСТРУМЕНТ ПІДВИЩЕННЯ ФІНАНСОВОЇ БЕЗПЕКИ КРАЇНИ

Abstract. The article examines the role of instant payment systems in modernising the payment infrastructure and strengthening financial security in Ukraine. It is argued that traditional mechanisms of non-cash settlements, in particular interbank transfers and card acquiring, are accompanied by time delays and increased transaction costs, which negatively affect business liquidity and the efficiency of money circulation. Based on a comparative analysis, the advantages of instant payment systems, which provide real-time settlements, round-the-clock availability and reduced operational risks, are demonstrated. Particular attention is paid to the potential for integrating the instant payment system with the national payment system 'Prostir' as a tool for strengthening payment sovereignty and reducing dependence on external payment infrastructures. It is concluded that the development of instant payments has not only technological but also macro-financial significance, as it contributes to increased liquidity, transparency of financial flows and overall stability of the financial system in conditions of military and economic risks.

Keywords: instant payments, payment mechanisms, financial security of the state, infrastructure, financial services, digitalisation.

Анотація. Вступ. У сучасних умовах цифрової трансформації та зростання вимог до швидкості й надійності розрахунків традиційні платіжні механізми дедалі частіше виявляють обмеження, пов'язані з часовими затримками, високими операційними витратами та інфраструктурною залежністю. Це посилює актуальність переходу до нових моделей організації платежів. У цьому контексті система миттєвих платежів розглядається як інструмент модернізації платіжної інфраструктури та підвищення фінансової безпеки держави. **Метою статті** є обґрунтування ролі систем миттєвих платежів у модернізації платіжної інфраструктури України та визначення їх впливу на ліквідність, ефективність розрахунків і фінансову безпеку держави. **Методи дослідження.** У процесі дослідження використано системний та структурно-функціональний підходи для аналізу платіжної інфраструктури, порівняльний аналіз – для зіставлення традиційних платіжних інструментів і систем миттєвих платежів, а також методи узагальнення і логічного аналізу для формування висновків щодо їх впливу на фінансову безпеку. **Результати.** У статті досліджено роль системи миттєвих платежів у процесі модернізації платіжної інфраструктури України та їх вплив на фінансову безпеку держави. Обґрунтовано, що платіжна інфраструктура виступає ключовим елементом функціонування фінансової системи, оскільки саме через неї забезпечується рух грошових потоків між економічними агентами, формуються умови ліквідності та підтримується довіра до фінансових інститутів. Показано, що в умовах цифровізації фінансових послуг і зростання вимог до швидкості та зручності розрахунків традиційні платіжні механізми, засновані на клірингових процедурах і картковому еквайрингу, дедалі більше втрачають ефективність через часові затримки, високі комісійні витрати та інфраструктурні обмеження. **Висновки.** Система миттєвих платежів створює принципово нову модель організації розрахунків, що ґрунтується на режимі реального часу, цілодобовій доступності та цифрових каналах ініціювання операцій. Такий формат істотно знижує транзакційні витрати, мінімізує часову вартість грошей і підвищує прозорість фінансових потоків, що є критично важливим для підтримання фінансової безпеки держави.

Ключові слова: миттєві платежі, платіжні механізми, фінансова безпека держави, інфраструктура, фінансові послуги, цифровізація.

Introduction. The payment infrastructure is a fundamental element of the financial system, as it ensures the movement of funds between economic agents. Its reliability, speed and transparency determine not only the efficiency of settlements, but also the level of trust in the financial environment as a whole. In today's environment, payment systems must meet increased requirements for data security, transaction processing speed, interoperability

and clear regulatory control [11]. Failure to comply with these requirements reduces the quality of payment services and creates additional risks to financial stability.

Under such conditions, modernisation of the instant payment system becomes particularly important as a tool for reducing time and financial losses in payment transactions. The introduction of real-time settlements, round-the-clock availability and simplified payment initiation mechanisms

creates the conditions for increasing liquidity, reducing the operational burden on businesses and enhancing the transparency of financial flows [5]. This, in turn, creates a more stable payment environment, which is an important component of the country's financial security.

Literature review. The issue of payment system development, particularly instant payments, is widely represented in contemporary scientific research, where it is considered in the context of financial digitalisation and payment infrastructure transformation. The fundamental principles of payment system functioning and contemporary trends in their development are explored in the works of L. Vdynichuk-Virvan [2], O. Vovchak [3], N. Davydenko [5], O. Dzhusova [7], A. Savchenko [11], V. Kravets [11], O. Pilyak [7], I. Kopchikova [8] and I. Sytnik [12]. The works of O. Pavlovsky [9] focus on the role of financial technologies in changing the mechanisms of the banking sector and payment services. O. Tishchenko [13] studies the evolution of the NBU's electronic payment system and its importance for the stability of interbank settlements.

The development of retail payment instruments, in particular payment cards, money transfer systems, mobile and internet banking, was analysed in the works of N. Arkhireiska and O. Kuchkova [1]. General aspects of the regulatory and legal issues of the functioning of payment services in the works of M. Pozhidyayeva [10]. At the same time, the impact of instant payment systems on the financial security of the state in the context of military and macroeconomic challenges remains insufficiently systematised, which determines the relevance of further research in this area.

The purpose of this article is to substantiate the role of instant payment systems in modernising Ukraine's payment infrastructure and to determine their impact on liquidity, settlement efficiency and the financial security of the state.

Research methods. The study used a systematic and structural-functional approach to analyse the payment infrastructure, comparative analysis to compare traditional payment instruments and instant payment systems, and methods of generalisation and logical analysis to draw conclusions about their impact on financial security.

Results. The functioning of the payment infrastructure is one of the key factors in the stability of the modern financial system. For the banking sector of Ukraine, which is undergoing constant transformations and external shocks, the efficiency of payment mechanisms directly affects the speed of money circulation, the liquidity of market participants and the level of trust in financial institutions [3]. It is through payment systems that the

bulk of economic settlements take place, which gives them strategic importance from the point of view of the financial security of the state.

In economic terms, a payment system creates an organised environment within which cash flows between market participants [2]. It combines institutional structures, technological solutions and legal mechanisms that enable transfers, settlements and clearing. The effectiveness of such a system is determined not only by its ability to process large volumes of transactions, but also by its level of reliability, data security, payment processing speed and the ability to interact with other payment platforms [4]. Compliance with these parameters is a prerequisite for maintaining financial stability and minimising operational risks.

The digitisation of financial services and growing user demands for speed and convenience in payments have significantly changed approaches to the organisation of interbank settlements [6]. In Ukraine, despite significant progress in the development of non-cash payments, a large part of transactions still goes through mechanisms that involve a time lag between the initiation of a payment and its final crediting. Such delays mean a temporary withdrawal of funds from circulation, which is particularly noticeable for small and medium-sized businesses, where liquidity is critical to the continuity of operations.

These features of traditional payment mechanisms necessitate their comparative assessment with innovative payment models, primarily instant payment systems. To this end, it is advisable to compare the key parameters of traditional payment instruments and real-time settlement systems, in particular the speed of transactions, accessibility, cost level and impact on the liquidity of economic entities, as shown in Table 1.

In the context of strengthening financial security and reducing dependence on foreign payment infrastructures, Ukraine launched the Prosto state payment system. Its creation was an institutional response to the need to develop a state-controlled payment infrastructure capable of ensuring the smooth functioning of cashless payments in the national economy [13].

The Prostrir payment system serves as a universal tool for paying for goods and services, withdrawing cash, transferring funds between accounts, and other payment transactions using electronic payment methods. Prostrir payment cards allow transactions to be carried out in retail chains and online, as well as through ATMs and payment terminals, ensuring full integration of users into the national payment space.

From the perspective of financial security, by controlling key elements of the payment infrastructure, the state

Table 1

Comparative characteristics of traditional payment instruments and instant payment systems

Criterion	Traditional payment systems	Instant payment system (IPS)
Speed of crediting funds	From a few minutes to several hours (sometimes until the next banking day)	Up to 10 seconds
Accessibility	Limited by banking hours	24/7/365
Users' liquidity	Temporary blocking of funds during settlements	Instant funds transfer
Cost of operations	High fees for acquiring and interbank transfers	Potentially lower tariffs
The need for infrastructure	POS terminals, processing centres	QR codes, mobile applications, alias
Operational risks	Higher due to delays and clearing	Lower thanks to real-time calculations
Impact on financial security	Limited flexibility in managing funds	Improved stability and return on capital

Source: compiled according to [2; 4; 13]

reduces the risks of external influence on the circulation of funds, increases the stability of payment flows, and ensures greater transparency of financial transactions [9]. It is also important that Prostrir operates on the basis of open international standards, which allows it to be integrated into global payment ecosystems without losing national control.

The rebranding of NSMEP into the Prostrir system in 2016 reflected the transition from a highly specialised model to a full-fledged national payment platform focused on mass use, digitisation of settlements and increased operational efficiency.

At the same time, Prostrir's potential for improving financial security and payment efficiency can be significantly expanded through integration with the instant payment system. The combination of the national card infrastructure with real-time settlements creates conditions for:

- accelerating the turnover of funds;
- reducing dependence on card acquiring;
- increasing business liquidity;
- reducing transaction costs.

It is precisely this synergy between the national payment system and the IPS that forms the institutional basis for strengthening the country's financial security in the context of the digital economy and military challenges.

In addition to time constraints, the existing payment service model entails additional costs for businesses. First and foremost, these are commissions for card acquiring and other payment services, which increase the cost of operations and narrow the financial opportunities for low-margin enterprises. Taken together, this creates not only microeconomic losses for businesses, but also macroeconomic risks associated with a decline in the efficiency of money circulation and the accumulation of liquidity constraints in the financial system [1].

Traditional payment instruments also have organisational and technological limitations. Dependence on bank operating hours, the need for specialised infrastructure, the complexity of transaction confirmation, and the fragmentation of payment channels create an additional burden on financial flows [8]. This reduces capital turnover, increases transaction costs, and makes the system less adaptable to crisis situations, which is directly related to the country's level of financial security.

In such conditions, modernising the payment infrastructure based on instant payment systems becomes not only technologically important, but also strategically significant. The transition to real-time settlements, round-the-clock availability and simplified methods of initiating transactions creates the conditions for increasing liquidity, reducing operational risks and strengthening the stability of the financial system. That is why the development

of IPS should be considered as one of the tools for strengthening Ukraine's financial security in conditions of high uncertainty and growing economic challenges.

Given the above functional and security aspects, it is advisable to specify the shortcomings inherent in the current payment infrastructure and how they can be neutralised by the introduction of instant payment systems. A summary of the key problems and the corresponding tools for overcoming them is presented in Table 2.

The data presented in Table 2 show that most of the problems inherent in Ukraine's current payment infrastructure are systemic in nature and directly related to the time, technological and institutional constraints of traditional payment mechanisms. This primarily concerns delays in settlements arising from interbank clearing procedures and card acquiring. As a result, funds are temporarily withdrawn from economic circulation, which reduces the effectiveness of liquidity management, especially in the small and medium-sized business sector, where financial reserves are limited.

The high cost of payment transactions, caused by acquiring and interbank transfer fees, also puts additional pressure on businesses, reducing their profitability and encouraging the use of cash payments [7]. The introduction of instant payment systems creates the conditions for cheaper transactions through direct interbank clearing and a reduction in the number of intermediaries in the payment chain.

Special attention should be paid to the issue of operational accessibility of payment services. Restrictions related to banking hours, the need to use POS terminals, and the complexity of payment confirmation procedures reduce the flexibility of financial flows. In this context, the IPS, which operates 24/7 and supports modern methods of initiating transactions (QR codes, payment identifiers), significantly expands the possibilities for users and increases the speed of funds turnover [12].

From the perspective of financial security, it is also important that instant payments contribute to greater transparency of cash flows and reduced operational risks. Fast crediting of funds reduces the likelihood of fraud, minimises the risk of non-payment and increases the predictability of financial results for businesses and the banking sector.

Thus, analysis of the problems of the payment infrastructure and the potential of instant payment systems confirms that their development is not only technologically important but also has macro-financial significance, as it affects the liquidity, stability and resilience of the country's financial system as a whole.

Conclusions. The analysis shows that the functioning of the payment infrastructure has a direct impact on the stability of the financial system and the efficiency of

Table 2

Key problems of the payment infrastructure and ways to overcome them through IPS

The problem with traditional payments	Economic consequences	IPS's solution
Delays in crediting funds	Deterioration in capital liquidity	Real-time calculations
High commissions	Increased business costs, reduced profitability	Low operating costs
Limited operating mode	Disruption of financial flows	24/7 availability
Difficulty confirming payments	Operational errors and time wasted	Automated verification
Dependency on card infrastructure	Additional costs for IPSs	Transfers via mobile channels

Source: compiled according to [4, 5, 8, 11]

money circulation in the Ukrainian economy. Traditional mechanisms of interbank and card payments, despite their prevalence, have a number of limitations related to delays in crediting funds, high operating costs, and dependence on infrastructure and time factors. This has a negative impact on business liquidity, capital turnover speed, and the overall adaptability of the financial system to crisis challenges.

The implementation of instant payment systems creates a fundamentally new model for organizing settlements based on real-time mode, round-the-clock availability, and

digital channels for initiating transactions. This format significantly reduces transaction costs, minimises the time value of money and increases the transparency of financial flows, which is critical for maintaining the financial security of the state.

In strategic terms, the development of instant payments is not only a tool for technological modernisation, but also an important element in strengthening liquidity, financial stability and confidence in the national financial system in the context of military and macroeconomic risks.

References:

1. Arkhireiska N. and Kuchkova O. (2021). Suchasni trendy platizhnoho rynku Ukrainy – bezgotivkovi rozrakhunki ta elektronni hamantsi [Current trends in Ukraine's payment market – cashless payments and electronic wallets]. *Efektivna ekonomika – Efficient economy*, vol. 6. DOI: <https://doi.org/10.32702/2307-2105-2021.6.79>
2. Vidniychuk-Virvan L. A. (2017). Platizhni systemy: navch. posib [Payment systems: tutorial. Lviv: Mahnoliia plus. (in Ukrainian)]
3. Vovchak O. D., Rushchysyn N. M., Andreykiv T. Ya. (2015). Kredyt i bankivska sprava : pidruchnyk [Credit and banking: textbook. Kyiv: Znannia. (in Ukrainian)]
4. Vovchenko O. S. (2022). Napriamy rozvytku platizhnykh system v Ukraini v umovakh yevropeiskoi intehtatsii [Directions of development of payment systems in Ukraine in the context of European integration]. *Ekonomichnyi visnyk – Economic Bulletin*, Vol. 4, pp. 49–56.
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-vyrobnychiy zhurnal "Biznes – navigator" – Scientific and production journal "Business Navigator"*, Vol. 3(80), pp 196–200. DOI: <https://doi.org/10.32782/business-navigator.80-34>
6. Davydenko N. M., Klyuchka O. V. (2025). Rol blokcheinu v optymizatsii biznes – protsesiv tsyfrovoy ekonomiky [The role of blockchain in optimising business processes in the digital economy]. *Naukovyi visnyk Mizhnarodnoho humanitarnoho universtetu. Seriya: "Ekonomika i menedzhment" – Scientific Bulletin of the International Humanitarian University. Series: Economics and Management*, vol. 63, pp. 28–32.
7. Dzusov O. A., Pilyak O. I. (2020). Potochny stan, problemy ta perspektyvy rozvytku platizhnykh system v Ukraini [Current status, problems and prospects for the development of payment systems in Ukraine]. *Ekonomichnyi prostir – Economic space*, vol. 154, pp. 190–196.
8. Kopchikova I. V. (2021). Tekhnolohiia realizatsii ta oblik mizhbankivskykh rozrakhunkiv [Technology for implementing and accounting for interbank settlements]. *Ekonomika ta suspilstvo – Economy and society*, vol. 30. DOI: <https://doi.org/10.32782/2524-0072/2021-30-10>
9. Pavlovsky O.V. (2024). Deiaki osoblyvosti keruvannya ekonomichnoiu bezpekoiu finansovykh ustanov Ukrainy [Some features of economic security management in Ukrainian financial institutions]. *Suchasni problemy arkhitektury, mistobuduvannya, heodezii ta zemleustroiu. Economics and Management – Contemporary issues in architecture, urban planning, geodesy and land management. Economics and Management*. DOI: <https://doi.org/10.36919/2312-7872.2.2024.122> (accessed December 21, 2025).
10. Pozhidaeva M. A. (2021). Finansovo-pravove rehuliuвання platizhnykh system v Ukraini [Financial-legal regulation of payment systems in Ukraine]: dys. ... dok. yuryd. nauk: 12.00.07. Kyiv, 578 p. (in Ukrainian).
11. Savchenko A., Kravets V. (2001). Rozvytok platizhnoi systemy Ukrainy za desiatyrichchia v Ukraini [Development of Ukraine's payment system over the past decade]. *Visnyk NBU – NBU Bulletin*, vol. 5, pp. 10–12.
12. Sytnik I. (2022). Analiz stanu platizhnykh system v Ukraini v konteksti yevropeiskoho vektoru rozvytku tsyfrovoy ekonomiky ta hlobalizatsiointehtatsiinykh protsesiv [Analysis of the state of payment systems in Ukraine in the context of the European vector of digital economy development and globalisation and integration processes]. *Finansovo-kredytna diialnist: problemy teorii ta praktyky – Financial and credit activities: problems of theory and practice*, vol.6 (47). Available at: <https://fkd.net.ua/index.php/fkd/article/view/3901/3702> (accessed January 7, 2026).
13. Tishchenko O. I., Tishchenko V. V. (2024). Rozvytok systemy elektronnykh platezhiv natsionalnoho banku Ukrainy [Development of the electronic payment system of the National Bank of Ukraine]. *Visnyk skhidnoukrainskoho natsionalnoho universytetu imeni Volodymyra Dalia – Bulletin of the Volodymyr Dahl East Ukrainian National University*, vol. 6 (286). Available at: surl.li/vilefo (accessed January 2, 2026).

Бібліографічний список:

1. Архірейська Н. В., Кучкова О. В. Сучасні тренди платіжного ринку України – безготівкові розрахунки та електронні гаманці. *Ефективна економіка*. 2021. № 6. DOI: <https://doi.org/10.32702/2307-2105-2021.6.79>
2. Віднійчук-Вірван Л. А. Платіжні системи: навч. посіб. Львів : Магнолія плюс, 2017. 190 с.
3. Вовчак О. Д., Руцишин Н.М., Андрейків Т.Я. Кредит і банківська справа: підручник. Київ : Знання, 2015. 564 с.
4. Вовченко О. С. Напрями розвитку платіжних систем в Україні в умовах європейської інтеграції. *Економічний вісник*. 2022. № 4. С. 49–56.
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. Давиденко Н. М., Ключка О. В. Роль блокчейну в оптимізації бізнес – процесів цифрової економіки. *Науковий вісник Міжнародного гуманітарного університету. Серія: «Економіка і менеджмент»*. 2025. № 63. С. 28–32.
7. Джусов О. А., Піляк О. І. Поточний стан, проблеми та перспективи розвитку платіжних систем в Україні. *Економічний простір*. 2020. № 154. С. 190–196.
8. Копчикова І.В. Технологія реалізації та облік міжбанківських розрахунків. *Економіка та суспільство*. 2021. Вип. 30. DOI: <https://doi.org/10.32782/2524-0072/2021-30-10>

9. Павловський О.В. Деякі особливості керування економічною безпекою фінансових установ України. *Сучасні проблеми архітектури, містобудування, геодезії та землеустрою. Economics and Management*. 2024. DOI: <https://doi.org/10.36919/2312-7872.2.2024.122> (дата звернення: 21.12.2025).

10. Пожидасва М. А. Фінансово-правове регулювання платіжних систем в Україні: дис. ... док. юрид. наук : 12.00.07. Київ, 2021. 578 с.

11. Савченко А., Кравець В. Розвиток платіжної системи України за десятиріччя в Україні. *Вісник НБУ*. 2001. № 5. С. 10–12.

12. Ситник І. Аналіз стану платіжних систем в Україні в контексті європейського вектору розвитку цифрової економіки та глобалізаційноінтеграційних процесів. *Фінансово-кредитна діяльність: проблеми теорії та практики*. 2022. Т. 6 (47). URL: <https://fkd.net.ua/index.php/fkd/article/view/3901/3702> (дата звернення: 07.01.2026).

13. Тищенко О. І., Тищенко В.В. Розвиток системи електронних платежів національного банку України. *Вісник східно-українського національного університету імені Володимира Даля*. 2024. № 6 (286). DOI: <https://doi.org/10.33216/1998-7927-2024-286-6-129-140>

Дата надходження статті: 12.01.2026

Дата прийняття статті: 10.02.2026

Дата публікації статті: 02.03.2026