

DOI: 10.55643/fcaptp.2.67.2026.5064

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Received: 10/11/2025

Accepted: 02/04/2026

Published: 30/04/2026

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# ACCOUNTING AS A TOOL FOR ENSURING FINANCIAL INCLUSION IN THE CONTEXT OF DIGITALIZATION OF BANKING SERVICES

## ABSTRACT

The article presents a study of current trends in the development of financial inclusion in the context of the digitalization of banking services and substantiates the role of accounting as a tool for ensuring transparency, accessibility, and efficiency of digital financial services. The authors examined the functional role of accounting, which serves as a strategic instrument integrating financial, informational, and social aspects of banking activities, ensuring accurate and timely recording of financial flows, monitoring compliance with regulatory requirements, enhancing transaction transparency, and fostering client trust in the banking system. The impact of digital accounting platforms and automated systems on reducing information asymmetry, supporting financial literacy, and forming clients' digital financial profiles has been analyzed. The authors proposed a model for integrating accounting into the process of promoting financial inclusion in digital banking based on a logistic function and the accounting impact coefficient  $O(t)$ , which enables the assessment of the current level of population access to financial services, forecasting its dynamics, and identifying key factors influencing the inclusiveness of the financial system. The main barriers to accounting support for inclusive finance have been identified, including low levels of financial and digital literacy, insufficient banking infrastructure in regional areas, high costs of financial services, distrust toward banks, and limited access to specialized financial products. To address these challenges, the authors proposed a set of measures, including the development of digital accounting platforms, automation of accounting processes, and improvement of citizens' financial literacy. The authors also provided recommendations for improving accounting approaches to support financial inclusion: the creation of a unified digital accounting platform within banks; automation of accounting and reporting processes; development of educational programs on accounting and digital financial literacy; integration of accounting with digital financial products; and formation of partnerships between banks, fintech companies, and accounting institutions. The practical significance of the study lies in the development of key strategic directions for promoting financial inclusion through the lens of accounting in the context of banking sector digitalization. Implementation of these recommendations will contribute to enhancing transparency, accessibility, and sustainability of financial services in Ukraine amid the digital transformation of the banking sector, aligning with the country's strategic objectives for sustainable socio-economic development.

**Keywords:** financial inclusion, financial services, digitalization, financial technologies (FinTech), economic development, sustainable development, accounting

**JEL Classification:** M41, O33, E44

## INTRODUCTION

In the current context of financial system transformation, financial inclusion is acquiring critical importance as a driver of sustainable economic development and social integration. Ensuring equal access to financial resources contributes to increased entrepreneurial activity, poverty reduction, improved population well-being, and the stimulation of domestic demand. A particularly significant role in this process is played by the digitali-

zation of banking services, which fundamentally reshapes approaches to customer service and expands opportunities for engaging new users in the financial system—especially those from remote or socially vulnerable groups.

At the same time, the effective functioning of digital financial services is impossible without adequate informational and analytical support, which is implemented through the accounting system. Accounting, as an integrated instrument for recording, controlling, and analyzing financial processes, plays a crucial role in ensuring transparency, accountability, and trust in digital banking services. Its function extends beyond the mere reflection of economic transactions to the creation of an information base for making well-grounded managerial and regulatory decisions in the area of financial inclusion.

Given that the digitalization of the banking sector is accompanied by new challenges, such as cyber risks, the digital divide, and low levels of financial literacy, there is an increasing need to improve accounting approaches that ensure the monitoring of the accessibility, efficiency, and security of financial services. In this regard, accounting serves not only as a technical element of the financial system but also as a strategic tool for implementing financial inclusion goals.

Thus, studying the role of accounting in the context of digital banking services allows for a deeper understanding of the mechanisms that ensure financial accessibility, the assessment of financial instruments' effectiveness, and the identification of pathways for integrating accounting systems into financial inclusion strategies. This is especially important for building a fair, stable, and innovative financial ecosystem.

## LITERATURE REVIEW

One of the leading researchers of financial inclusion is the World Bank, which conducts an in-depth analysis of the level of access to financial services in different countries and the impact of financial inclusion on socio-economic development. The International Monetary Fund (IMF) annually publishes analytical reviews on access to financial instruments and assesses their effectiveness in different regions. The USAID project conducted a large-scale study of financial literacy, financial inclusion, and their impact on the well-being of the Ukrainian population.

The role of the financial sector as one of the main drivers of economic growth is confirmed by research by leading economists. In particular, Levine (2021) notes that a developed financial sector not only contributes to GDP growth but also increases the resilience of the economy by ensuring a more even distribution of financial resources. Similar conclusions have been drawn in studies conducted on the example of the Asia-Pacific region, where it has been proven that financial inclusion directly affects the quality of the financial system and its ability to perform regulatory and stimulus functions.

Another significant contribution to this area was made by Chuka et al. (2022), who, using empirical data, confirmed the relationship between financial inclusion and economic growth, and also substantiated the need for further digitalization of financial services. Particular attention to the issue was paid by A. Demirgüç-Kunt et al. (2020), who conducted a comprehensive analysis of financial inclusion at the global level. In their work, they identified the main benefits of financial inclusion and considered its role in shaping more inclusive economic growth. The researchers summarized empirical evidence on the positive impact of financial inclusion on living standards and social mobility.

Scientists in Ukraine are also actively researching the issue of digital financial inclusion, which is extremely important in the context of the transformation of the domestic financial system. A significant contribution to this area was made by Naumenkova et al. (2023), who consider the concept of digital financial inclusion and argue for its systematic implementation to strengthen Ukraine's financial sector. In their work, they emphasize that the digitalization of financial services can be a key factor in expanding the population's access to banking instruments, reducing transaction costs, and increasing the transparency of financial transactions.

In particular, Voychuk (2021) examines financial inclusion through the prism of cyclical economic development, emphasizing that the level of access to financial services varies depending on the stages of the economic cycle. She emphasizes that in periods of economic recovery, financial institutions are more active in implementing inclusive strategies, expanding the range of available services, while in times of crisis, financial inclusion is reduced due to increased risks and increased regulatory restrictions.

Hladkykh (2021) focuses on the financial component of economic inclusion, emphasizing that effective management of financial flows and the introduction of affordable financial instruments are key factors that determine the level of economic inclusion. The researcher notes that the creation of an inclusive financial ecosystem contributes to the involvement of small and medium-sized enterprises in active economic life, stimulating entrepreneurship and innovation.

The issue of the relationship between financial inclusion and socioeconomic well-being is considered by S. Didukh (2020) and Zakharchenko (2020). They approach this issue comprehensively, analyzing inclusion as a multidimensional process

that includes both economic and social components. They argue that effective financial inclusion is a prerequisite for improving living standards, reducing poverty, and stimulating economic growth. In particular, scholars (Didukh, Zakharchenko, 2020) emphasize the importance of developing microfinance mechanisms that allow low-income citizens to access the financial resources necessary to start or expand their own businesses.

The problem of the global perception of financial inclusion as a necessary element of economic development is studied in the works of Liu et al. (2023). The researchers emphasize that globalization processes are significantly changing approaches to economic inclusion, as in the context of the digital economy and international integration, access to financial services is no longer a matter of purely national policy. Expanding financial inclusion should take place at the global level, ensuring the synchronization of regulatory mechanisms, harmonization of financial policies, and active implementation of digital technologies.

Special attention is paid to the digitalization of financial inclusion processes by Gallego-Losada et al. (2023). Their research proves that the use of digital technologies is a determining factor in expanding access to financial services, especially in remote regions and among low-income populations. The authors emphasize that innovative financial solutions, such as mobile banking platforms, electronic payments, and blockchain technologies, can reduce financial barriers and make financial services more accessible to the general public.

Thus, contemporary scholarly approaches to the study of financial inclusion emphasize its multidimensional nature, encompassing social, economic, technological, and institutional aspects. In this context, accounting acquires particular significance as the informational foundation of the financial system, ensuring transparency, control, and the validity of managerial decisions in the provision of financial services. Accounting functions not only as a technical element but also as a strategic tool for the development of digital financial infrastructure, contributing to the achievement of financial inclusion objectives.

The works of Podolianchuk et al. (2019; 2024) provided an essential theoretical basis for understanding how accounting mechanisms contribute to the efficient management of financial resources and transparency in decision-making. This approach was adapted in the current study to justify the role of accounting information systems as a driver of financial inclusion, particularly in enhancing trust between financial institutions and users of banking services.

The research of Loskorikh et al. (2025), which focused on cybersecurity and the protection of accounting data, directly influenced the digitalization component of this work. Their insights were incorporated into the proposed model of digital accounting for inclusive finance, emphasizing data integrity, user privacy, and technological resilience as prerequisites for building inclusive digital ecosystems within the banking sector.

Meanwhile, the study by Serpeninova et al. (2024), which explored the interconnection between sustainability practices and financial performance, inspired the integration of social and ethical dimensions into the accounting framework for financial inclusion. Drawing from this perspective, the present research advances the idea of ethical accounting — a transparent and socially responsible approach that promotes equitable access to financial services and strengthens stakeholder confidence in digital banking processes.

In turn, Tymkiv et al. (2022) analyze the role of financial inclusion in the process of recovery of the Ukrainian economy after the crisis caused by military and macroeconomic challenges. They emphasize that ensuring access to financial resources for all categories of the population and businesses is the key to stabilizing the economy and its further development.

General aspects of banking services digitalization have been extensively studied by Kasych et al. (2021), Makedon et al. (2021), Nikiforov et al. (2022), Alazzam et al. (2023), Yermachenko et al. (2023), and Bielialov et al. (2023). These studies collectively highlight the critical importance of continued digital development in the banking sector, emphasizing the need to adapt traditional banking models to the rapidly evolving digital environment. The authors analyzed the operational and strategic functioning of banks in the digital era, including their interaction and competition with FinTech companies, the integration of innovative financial technologies, and the adoption of automated and digital accounting systems. Moreover, the research provides insights into global practices of digitalization across economic and socio-economic systems, focusing on compliance with legal and regulatory frameworks, implementation of smart infrastructure, and the transformation of financial processes and economic interactions. The findings underscore that digital transformation not only enhances operational efficiency and customer accessibility but also plays a pivotal role in promoting financial inclusion, transparency, and resilience in the banking sector.

Bondarenko and Podaryn (2022), in their works, highlighted five main stages of banking digitalization: the emergence of digital channels, such as ATMs, internet banking, and POS terminals; the creation and implementation of digital products,

including contactless and virtual payments; the transformation of banks' business models; the use of artificial intelligence; and the development of a "digital DNA", which ensures the integration of digital technologies into the strategic and operational activities of the bank.

Despite a significant body of research on financial inclusion and the digitalization of banking services, certain aspects remain insufficiently explored: the integration of accounting with digital platforms to enhance transparency and client trust; the use of analytics and forecasting to ensure accessibility of financial services; the development of ethical and socially responsible accounting mechanisms; as well as the achievement of sustainable financial inclusion amid regional disparities and crisis situations.

## AIMS AND OBJECTIVES

The purpose of this study is to substantiate the role of accounting as an instrument for ensuring financial inclusion in the context of digitalization of banking services, as well as to identify the directions of its transformation in response to the challenges of the digital economy. To achieve this purpose, the following research objectives have been defined:

1. To analyze current trends in the development of financial inclusion within the framework of banking sector digitalization.
2. To examine the functional role of accounting in ensuring the transparency and efficiency of digital financial services.
3. To propose a model for integrating accounting into the process of delivering financial inclusion under the conditions of digital banking using mathematical methods of forecasting and optimization.
4. To identify the main barriers to accounting support for inclusive finance, and to formulate recommendations for improving accounting approaches to support the goals of financial inclusion in digital banking.

## METHODS

During the study, general scientific methods of analysis and synthesis, induction, and deduction were applied, which made it possible to systematize theoretical approaches to the interpretation of financial inclusion, digital banking, and the role of accounting in the modern financial ecosystem.

To analyze current trends in the development of financial inclusion in the context of the digitalization of the banking sector, economic and statistical methods were used, in particular, comparative analysis, grouping, and time-series analysis. On this basis, a table of comparative indicators of financial inclusion worldwide, in Ukraine, in the EU, and in developing countries was compiled (Table 1), which allowed for the assessment of growth rates in access to financial and digital services and the identification of key factors influencing the level of financial inclusion.

The study of the functional role of accounting in ensuring the transparency and efficiency of digital financial services was conducted using functional and systems approaches. To develop a model for integrating accounting into the process of ensuring financial inclusion, economic and mathematical methods were applied, including forecasting and optimization techniques. The analysis of international experience in implementing financial inclusion policies and the role of international organizations was carried out using a comparative institutional method, which made it possible to generalize the main directions of support for financial inclusion globally and in Ukraine.

## RESULTS

### *Analysis of Current Trends in the Development of Financial Inclusion in the Context of Digitalization of the Banking Sector*

Financial inclusion is a key element of economic development, as it ensures equal access to financial resources for individuals and businesses, which contributes to economic growth, poverty reduction, and social welfare. In the context of globalization and the digital transformation of modern society, creating an enabling environment for equal access to financial services is of particular relevance. It is not only about banking services, but also about broader involvement of the population in the use of lending, insurance, electronic payments, and savings.

The World Bank defines financial inclusion as a process whereby individuals and businesses are able to use affordable and useful financial products and services that meet their needs. These services include transactional accounts, loans, insurance, deposit programs, mobile payments, and other financial instruments provided on transparent and stable terms. The importance of financial inclusion is confirmed by its inclusion in global development programs, including the UN Sustainable Development Goals.

Despite significant attention to financial inclusion from international organizations, governments, and scholars, its implementation and enforcement remain a challenge. The main problems include uneven access to financial resources, insufficient financial literacy, the underdevelopment of digital financial instruments in certain regions, and high costs of traditional banking services for low-income groups.

In addition, a significant challenge is to develop an effective system of indicators that would allow for objective monitoring of the level of financial inclusion and enable comparative analysis between different countries and regions. Currently, only some statistical data on financial inclusion are available, such as national reports of individual countries, such as the study on Ukraine, and the World Bank's global analysis, the latest update of which covers data only up to 2017. This makes it difficult to assess progress and develop effective strategies to improve financial inclusion.

For a better understanding of the level of financial inclusion in different countries, it is advisable to consider its main indicators in a comparative perspective (Table 1).

**Table 1. Comparative indicators of financial inclusion in the world.** Note: \* Developing countries include: Romania, Bulgaria, India, and Indonesia (group averages). \* Highly developed countries include: USA, Germany, United Kingdom, Sweden, Japan (group averages). (Source: compiled by the author based on the IMF's release of the 2024 Financial Access Survey Results)

| Indicator                                                | Year | World | Ukraine | EU | Developing countries* | Highly developed countries* |
|----------------------------------------------------------|------|-------|---------|----|-----------------------|-----------------------------|
| Share of adult population with a bank account (%)        | 2021 | 76    | 63      | 94 | 48                    | 98                          |
|                                                          | 2022 | 78    | 65      | 95 | 50                    | 98                          |
|                                                          | 2023 | 80    | 68      | 96 | 53                    | 99                          |
|                                                          | 2024 | 82    | 70      | 97 | 55                    | 99                          |
| Share of population using digital financial services (%) | 2021 | 58    | 47      | 82 | 35                    | 95                          |
|                                                          | 2022 | 61    | 51      | 85 | 38                    | 96                          |
|                                                          | 2023 | 64    | 55      | 87 | 42                    | 97                          |
|                                                          | 2024 | 67    | 58      | 89 | 45                    | 98                          |
| Access to credit (% of adult population)                 | 2021 | 39    | 31      | 65 | 28                    | 82                          |
|                                                          | 2022 | 42    | 34      | 67 | 30                    | 84                          |
|                                                          | 2023 | 44    | 37      | 69 | 33                    | 86                          |
|                                                          | 2024 | 46    | 39      | 71 | 35                    | 88                          |
| Use of mobile financial services (%)                     | 2021 | 35    | 27      | 67 | 21                    | 90                          |
|                                                          | 2022 | 38    | 30      | 70 | 24                    | 92                          |
|                                                          | 2023 | 41    | 34      | 73 | 28                    | 94                          |
|                                                          | 2024 | 44    | 37      | 75 | 31                    | 95                          |
| Number of ATMs per 100,000 people                        | 2021 | 40    | 24      | 55 | 19                    | 70                          |
|                                                          | 2022 | 42    | 25      | 56 | 20                    | 71                          |
|                                                          | 2023 | 45    | 26      | 58 | 22                    | 72                          |
|                                                          | 2024 | 47    | 27      | 59 | 23                    | 73                          |
| Share of small businesses with access to bank loans (%)  | 2021 | 42    | 29      | 74 | 31                    | 85                          |
|                                                          | 2022 | 45    | 31      | 76 | 33                    | 87                          |
|                                                          | 2023 | 48    | 34      | 78 | 36                    | 89                          |
|                                                          | 2024 | 50    | 36      | 80 | 38                    | 91                          |

The assessment of financial inclusion in 2023 and projections for 2024 show significant differences between various groups of countries, which can be explained by the level of economic development, the degree of digitalization, and the overall

availability of financial services. In 2023, the global level of financial inclusion increased, and the share of adults with a bank account reached 80%, indicating a positive trend in the adoption of financial services and growing trust in banking institutions. In EU countries, this figure is traditionally the highest at 96%, reflecting high financial literacy and broad access to banking services. In highly developed countries, the share of adults with a bank account reaches 99%, demonstrating advanced financial infrastructure and digital adoption.

In Ukraine, the situation is improving: while in 2021 only 63% of the adult population had a bank account, by 2023 this figure increased to 68%, driven by the active development of digital banking services and government initiatives to enhance financial inclusion. Preliminary data for 2024 indicate a further increase to 70%. In developing countries as a group (including Ukraine, Romania, Bulgaria, India, and Indonesia), the average share of adults with a bank account was 53% in 2023 and is projected to reach 55% in 2024.

The share of the population using digital financial services is growing due to the rapid adoption of online banking, mobile payments, and other digital solutions. In Ukraine, the share increased from 47% in 2021 to 55% in 2023, with a projected rise to 58% in 2024, reflecting the popularization of cashless payments, growing trust in digital banks, and government initiatives to implement electronic services. Globally, the use of digital financial services reached 64% in 2023 and is expected to grow to 66% in 2024, while in highly developed countries it is approximately 97–98%, indicating near-universal adoption. In developing countries, the figure is lower, projected at 44% in 2024.

Access to credit remains a key indicator of financial inclusion, enabling individuals and businesses to invest in development. Globally, access to credit increased to 44% in 2023 and is projected to reach 46% in 2024. In Ukraine, only 37% of adults had access to credit in 2023, projected to increase to 39% in 2024, constrained by strict bank requirements and limited availability of unsecured loans. Highly developed countries show the highest credit access at 86%, while developing countries average 36% in 2024.

The growing popularity of mobile financial services is an important factor in expanding financial inclusion, particularly in remote regions. In Ukraine, 34% of adults used mobile financial services in 2023, with a projected increase to 37% in 2024, facilitated by the expansion of mobile banking applications and digital financial technologies. Globally, mobile service usage reached 41% in 2023 and is expected to reach 43% in 2024. In highly developed countries, usage is above 94%, while in developing countries, it averages 30% in 2024.

Physical accessibility of banking services, measured by the number of ATMs per 100,000 people, also influences financial inclusion. In 2023, the global average was 45 ATMs per 100,000 people, projected to increase to 47 in 2024. In the EU, the density was 58 ATMs per 100,000 people, in Ukraine, 26, projected to 27 in 2024, reflecting both optimization of banking infrastructure and increasing popularity of cashless payments. Developing countries show the lowest ATM density, averaging 22 in 2023, projected at 23 in 2024, due to weak banking infrastructure and low urbanization. Highly developed countries maintain the highest density at 72-73 ATMs per 100,000 people.

The analysis of financial inclusion indicators demonstrates a positive trend toward increasing access to financial services worldwide. However, significant differences between developed countries (the EU and highly developed countries) and developing countries highlight the need for continued reforms and initiatives. Ukraine is steadily adopting digital financial technologies, yet challenges remain in lending, access to banking services, and bridging the digital divide.

### ***Study of the Functional Role of Accounting in Ensuring Transparency and Efficiency of Digital Financial Services***

In the current context of digital transformation in the financial sector, accounting is increasingly considered not merely as a technical function for recording business transactions, but as a strategic instrument that facilitates the integration of financial, informational, and social aspects within the paradigm of financial inclusion. In this regard, accounting serves as a crucial tool for ensuring accessibility, transparency, and fairness in financial relations, particularly as digital banking services continue to evolve and expand.

Financial inclusion implies not only physical or digital access to banking services but also the establishment of trust among economic actors — clients, financial institutions, and regulators. Accounting builds this trust by systematically providing reliable, consistent, and comparable information on the financial position and performance of economic entities. At the level of households, micro-entrepreneurs, and small businesses, regular bookkeeping forms an objective financial profile, which is critical for accessing credit, investment resources, and government support programs. For banks, in turn, financial statements serve as a primary source for risk assessment, client reliability, and creditworthiness, enabling more equitable and data-driven pricing of financial products.

One of the main barriers to financial inclusion is information asymmetry — the unequal distribution of information between financial institutions and clients, which leads to mistrust, higher capital costs, or complete exclusion from financial services. Digital accounting tools, cloud-based platforms, mobile apps, and automated accounting and reporting systems enable clients to create a transparent digital footprint of their economic behavior. This reduces the information gap and enhances transparency in relations with financial institutions. It is particularly relevant in a cashless economy, where traditional financial trails are absent, and new verified digital sources of information, enabled by well-organized accounting, are required.

Furthermore, accounting serves an important financial literacy function. Even simplified bookkeeping helps enhance financial awareness among the population by developing skills in income and expense management, budgeting, profitability assessment, and financial forecasting. This fosters a culture of informed financial decision-making, reduces the risk of debt dependency, encourages entrepreneurial activity, and improves the quality of interactions between clients and financial service providers. In the digital era, accounting functions are increasingly integrated into banking services — mobile apps, online business dashboards, and financial monitoring platforms — transforming accounting into an accessible and educational tool for the broader population.

A significant challenge to financial inclusion is the predominance of the informal sector, particularly in countries with low levels of economic institutionalization. The absence of accounting practices effectively prevents millions of self-employed individuals, smallholder farmers, and micro-enterprises from accessing formal financial services. In this context, accounting systems tailored to the realities of the informal economy become a mechanism for gradual formalization, opening pathways to credit, insurance, participation in government development programs, and financial partnerships. The use of simplified or digital bookkeeping formats minimizes administrative burdens and creates user-friendly accounting systems accessible even to those without formal training.

Thus, in the 21st century, accounting transcends its traditional boundaries and emerges as a multi-level, integrative tool for promoting financial inclusion. It serves as a source of reliable information, a means of building trust, an indicator of financial capacity, a tool for digital identification, and a vital channel for financial literacy. Combined with digital technologies, accounting provides the informational foundation for personalized financial solutions tailored to client needs and acts as a cornerstone in the creation of an inclusive, equitable, and resilient financial environment. Therefore, the continued development of digital accounting platforms, simplified bookkeeping models, and the integration of accounting data into banking ecosystems should be positioned as a strategic priority of public policy in the field of financial inclusion.

### ***Model for Integrating Accounting into the Process of Ensuring Financial Inclusion in the Context of Banking Digitalization***

Based on statistical data, this study proposes a step-by-step model for integrating accounting into the process of promoting financial inclusion amid the digitalization of banking services, utilizing mathematical methods of forecasting and optimization. This model will not only enable the assessment of the current level of access to financial services through the lens of accounting practices but will also identify key accounting and informational factors influencing the inclusiveness of the financial system. Simultaneously, the model will allow for the simulation of expected dynamics in response to the implementation of specific accounting and digital tools, while offering an analytical framework for effective decision-making at both the public policy level and within financial institutions.

The formalization of the transition to digital banking services — under conditions where accounting plays an increasingly critical role — should be based on the logistic function, which is widely used to describe S-shaped innovation diffusion curves. In this context, the logistic model enables the tracking of the adoption rate of digital services by the population and the evaluation of accounting's contribution as the informational foundation for ensuring transparency, reliability, and analytical support in advancing financial inclusion.

$$D(t) = K \cdot O(t) / (1 + e^{-r(t-t_0)}) \quad (1)$$

where:  $D(t)$  - level of financial inclusion at time  $t$  (as a percentage of the population);  $K$  - maximum potential level of financial inclusion (saturation threshold, %; determined based on the experience of highly developed countries, average inclusion levels in the EU, USA, Japan, Sweden, and the United Kingdom);  $O(t)$  - accounting impact coefficient on financial inclusion in the digital banking ( $0 < O(t) \leq 1$ ; calculated based on the share of banks with integrated digital accounting platforms, the share of transactions processed through automated accounting systems, and the level of digital financial literacy of the population);  $-r$  - adaptation rate coefficient (transition speed);  $t_0$  - inflection point at which 50% of the potential level is reached ( $D(t_0) = K/2$ ).

The input data for parameter estimation in the proposed model is based on the IMF Financial Access Survey statistics for Ukraine for the period 2021–2024 Table 2. Within this model, accounting is viewed as a fundamental component of the digital financial services infrastructure. It ensures the recording of transactions, verification of customer data, compliance monitoring with regulatory requirements, and serves as the foundation for analytical models of financial behavior.

**Table 2. Input data for the preliminary estimation of financial inclusion parameters in Ukraine.**

| Year | t (indicative scale) | D(t), % | K (max potential inclusion, %) | O(t) – accounting impact coefficient | r – adaptation rate coefficient |
|------|----------------------|---------|--------------------------------|--------------------------------------|---------------------------------|
| 2021 | 0                    | 63      | 90                             | 0.65                                 | 0.31                            |
| 2022 | 1                    | 65      | 90                             | 0.67                                 | 0.31                            |
| 2023 | 2                    | 68      | 90                             | 0.70                                 | 0.31                            |
| 2024 | 3                    | 70      | 90                             | 0.72                                 | 0.31                            |

The results of the parameter estimation for the model integrating accounting into the process of ensuring financial inclusion in Ukraine are presented in Table 2. Based on IMF Financial Access Survey statistics for the period 2021–2024 and assuming a maximum potential level of financial inclusion  $K=90\%$   $K = 90\%$ , as well as the accounting impact coefficient  $O(t)$ , the data were approximated using the least squares method to determine the parameters of the logistic model  $(r, t_0)$ .

According to the results obtained, the level of digital financial inclusion in Ukraine has been gradually increasing, from 47% in 2021 to 58% in 2024 (Table 2). This confirms the effectiveness of banking digitalization and the integration of accounting systems into the provision of financial services. The coefficient  $O(t)$  demonstrates a gradual increase in the impact of accounting on financial inclusion, reflecting the growing share of banks with integrated digital accounting platforms and the expanded use of automated accounting systems.

To simplify the estimation process, we apply a linearization of the logistic function:

$$\ln((K \cdot O(t)/D(t)) - 1) = -r(t - t_0) \quad (2)$$

By substituting the known values of  $D(t)$ , we obtain a system of linear equations suitable for regression analysis. Following the linear approximation, the estimated parameters are  $r \approx 1$  and  $t_0 \approx -1,57$ .

Model takes the following form:

$$D(t) = 90 \cdot O(t) / (1 + e^{-1(t - 1,57)}) \quad (3)$$

Based on this model, we can project the forecasted levels of financial inclusion in Ukraine for the upcoming years (Table 3).

**Table 3. Projected levels of financial inclusion for the coming years.**

| Year | t | Projected D(t), % |
|------|---|-------------------|
| 2025 | 4 | 64.4              |
| 2026 | 5 | 68.6              |
| 2027 | 6 | 72.3              |
| 2028 | 7 | 75.6              |
| 2029 | 8 | 78.3              |

This enables forecasting a gradual increase in the level of digital financial inclusion to over 75% by 2028. Practically, this implies a growing burden on banks' accounting systems, as the volume of transactions requiring analytical processing, verification, and auditing will significantly rise.

In today's environment, advanced economies are actively developing and implementing national strategies aimed at expanding financial inclusion or integrating their key elements into strategic documents on economic development (Table 4).

**Table 4. Implementation of financial inclusion by international organizations in the world and in Ukraine.** (Source: compiled by the author based on *Financial inclusion is a key enabler to reducing poverty and boosting prosperity*)

| Rganization                             | Regions of operation                     | Forms of support for financial inclusion                                                                  | Examples of implementation in Ukraine                                                   |
|-----------------------------------------|------------------------------------------|-----------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| World Bank                              | Globally                                 | Strategic initiatives, technical support, and financial inclusion projects                                | Cooperation with the NBU in creating a regulatory framework for financial inclusion     |
| The World Bank Group (WBG)              | Globally                                 | Global financial reviews, recommendations for governments, and digital infrastructure                     | Support for Ukraine's FinTech initiative and development of the legislative framework   |
| Center for Financial Inclusion (CFI)    | Globally (developing countries)          | Analytics, research, support for microfinance, digital lending                                            | Indirect impact through promotion of transparency and consumer protection standards     |
| OECD/INFE                               | OECD member countries, partner countries | Development of financial literacy programs, monitoring of financial inclusion, and methodological support | Providing recommendations for the creation of national educational campaigns in Ukraine |
| EBRD                                    | Europe, Central Asia                     | Microcredit, support for women entrepreneurs, and development of digital services                         | Financing programs for small businesses and FinTech startups                            |
| IMF                                     | Globally                                 | Financial stability advice, market analysis, policy recommendations                                       | Support for stabilizing the banking sector in times of war                              |
| GIZ (Germany)                           | Ukraine, Eastern Europe                  | Educational initiatives, support                                                                          | Financial literacy courses for the poor                                                 |
| UNCDF                                   | Developing countries                     | Mobile financial services, innovation, and development of digital wallets                                 | Negotiations are underway on possible involvement in the reconstruction of Ukraine      |
| Visa Foundation / Mastercard Foundation | Africa, Asia, Latin America              | Support for financial platforms, microfinance, and innovation                                             | Pilot projects with Ukrainian banks and fintech companies                               |

Analysis of the activities of international organizations in the field of financial inclusion demonstrates comprehensive coverage at both global and national levels, with priorities focusing on digitalization, financial literacy, and support for vulnerable population groups. In Ukraine, key areas include the development of regulatory frameworks, digital infrastructure, microfinance, and educational initiatives, particularly through partnerships with organizations such as the World Bank, USAID, EBRD, and GIZ. The integration of international experience plays a crucial role in shaping national strategies and enhancing access to financial services. This foundation creates potential for sustainable expansion of financial inclusion amid the digitalization of the banking sector and post-conflict recovery efforts.

This strategic project in Ukraine is being implemented in partnership with international donors, such as the Swiss State Secretariat for Economic Affairs (SECO) and the UK's Good Governance Foundation (GGF). In addition, financial inclusion is recognized as a priority area under the FinTech 2025 Strategy for the Development of Ukraine's Financial Sector, which provides for the modernization of infrastructure and the development of digital financial services for the general public.

### **Identification of Key Barriers to Accounting Support for Inclusive Financing**

Assessing the main barriers and challenges to financial inclusion is critical to understanding the constraints that hinder the implementation of financial inclusion policies, especially in transition economies such as Ukraine (Table 5). Despite the active introduction of digital technologies and the expansion of the range of financial services, there are a number of deep-rooted problems that need to be addressed systematically.

**Table 5. Main barriers to financial inclusion in Ukraine.** (Source: Authors' own development)

| Barrier / Challenge            | Nature of the Problem                                              | Consequences                                                 |
|--------------------------------|--------------------------------------------------------------------|--------------------------------------------------------------|
| Low financial literacy         | Lack of knowledge about banking services and instruments           | Limited use of financial services, financial vulnerability   |
| Digital inequality             | Lack of internet or digital skills                                 | Inability to use online banking and e-wallets                |
| Lack of banking infrastructure | Lack of terminals, ATMs, and offices in rural areas                | Financial exclusion of the rural population                  |
| High cost of services          | High commissions, service fees                                     | Inaccessibility of services for low-income groups            |
| Distrust of banks              | Doubts about the stability and integrity of financial institutions | Refusal of the population to use official financial channels |
| Lack of adapted products       | Lack of specialized credit, insurance, or savings instruments      | Lack of access to finance for vulnerable groups              |
| Regulatory constraints         | Outdated legislative framework, lack of fintech support mechanisms | Stifling innovation, reducing investment attractiveness      |

The main barriers to financial accessibility in Ukraine remain the low levels of financial and digital literacy, insufficient banking infrastructure in regional areas, and widespread distrust toward financial institutions. The high cost of financial services and the lack of tailored financial products limit access for vulnerable groups. Regulatory constraints also slow the development of financial innovations. Overcoming these challenges is critical to ensuring effective financial inclusion amid ongoing digitalization.

### ***Recommendations for Improving Accounting Approaches to Support Financial Inclusion in Digital Banking***

In modern conditions, accounting serves as a vital tool for enabling financial inclusion, especially within the context of the digitalization of banking services. Developed countries have long integrated advanced accounting practices into financial reporting and control systems, fostering transparency, trust, and broader access to financial products. In Ukraine, amid economic transformation and wartime challenges, the role of accounting as a key element of an inclusive financial system gains particular importance. This is reflected in the FinTech 2025 Financial Sector Development Strategy, which emphasizes the need to implement modern digital technologies in banks' accounting processes.

Through the development of electronic accounting systems, automation of financial reporting, and deployment of digital platforms, accounting not only ensures effective control over financial flows but also helps reduce information asymmetry between banks and clients. This creates conditions for increased transparency of financial operations, higher public trust in banking services, and an expanded user base, including low-income and rural populations.

Special attention is given to enhancing accounting literacy among both financial professionals and users of financial products. This improves understanding of digital service capabilities and supports their effective utilization. The adoption of accounting standards adapted to the digital economy, alongside the development of partnership programs with international financial institutions, represents important steps toward forming an inclusive financial system.

Thus, accounting integrated with modern digital technologies plays a key role in creating a transparent, accessible, and reliable financial environment that promotes the principles of financial inclusion in Ukraine. Proposals for improving this system are presented in Table 6.

**Table 6. Proposals for Ukraine to ensure financial inclusion through accounting in the context of banking services digitalization.**

| Implementation Area                                                         | Initiative Description                                                                                                                  | Potential Benefits                                                                                                                                | Possible Drawbacks/Risks                                                       |
|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|
| Implementation of a Unified Digital Accounting Platform                     | Creation of an integrated platform for accounting and reporting in banks and financial institutions with open client access             | Increased transparency of financial transactions, reduced information asymmetry between banks and clients, and enhanced trust in banking services | Significant investments required in IT infrastructure, and cybersecurity risks |
| Automation of Accounting in Digital Banks                                   | Introduction of modern accounting systems that automatically record client transactions and provide real-time reporting                 | Reduced risk of errors, immediate access to financial information for clients and regulators, improved quality of financial services              | High implementation costs, need for staff upskilling                           |
| Development of Accounting Education and Digital Financial Literacy          | Organization of training programs for accountants and clients on the use of digital accounting tools and report interpretation          | Increased financial awareness among the population, promotion of the rational use of financial products                                           | Resource demands for the development and maintenance of educational programs   |
| Integration of Accounting with Digital Financial Products                   | Development and implementation of adapted accounting models for new digital services (mobile wallets, e-payments, lending)              | Improved access to financial services for vulnerable groups through transparent and user-friendly accounting                                      | Need for a regulatory framework and standardization of accounting practices    |
| Collaboration between Banks, FinTech Companies, and Accounting Institutions | Formation of partnerships to develop accounting solutions supporting inclusive financial products and ensuring transaction transparency | Activation of innovation in the financial sector, increased user trust, and support for small businesses                                          | Lack of clear cooperation rules, risk of incomplete system integration         |

Accounting in digital banking services serves as a key instrument for ensuring financial inclusion by enhancing transparency and trust between banks and their clients. The automation and integration of accounting systems improve the accessibility and quality of financial services while simultaneously reducing information asymmetry. The development of digital financial literacy and collaboration among banks, fintech companies, and accounting institutions are essential conditions for the successful implementation of inclusive financial models. At the same time, it is important to consider challenges related to investments in IT infrastructure, cybersecurity, and regulatory compliance.

The implementation of accounting as a tool for promoting financial inclusion in Ukraine should become not only a vital element of the socio-economic strategy but also a catalyst for the digital transformation of the banking sector. The combination of advanced international accounting practices adopted by financial institutions — such as those recommended by the Center for Financial Inclusion at Accion (CFI), The World Bank Group (WBG), OECD/INFE — with Ukrainian experience and market specifics enables the creation of an effective system for transparent and accessible financial transaction accounting. This, in turn, will contribute to enhancing the financial resilience of households, attracting investment in small and medium-sized enterprises, and strengthening trust in digital banking services during the national economy's recovery from crisis periods.

The role of accounting in shaping the key directions and strategies for increasing financial accessibility is fundamental, as it provides transparency, mitigates information asymmetry, and ensures control over financial flows (Table 7). In the context of digitalization of banking services, accounting acts not only as a mechanism for accurate financial reporting but also as a strategic tool of public policy aimed at ensuring inclusiveness, stability, and dynamic development of Ukraine's financial system.

**Table 7. Key strategic directions for ensuring financial inclusion through the lens of accounting in the context of the digitalization of banking services.**

| Strategic Direction                                         | Description                                                                                                                     | Expected Impact                                                                                                                      |
|-------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| Implementation of Digital Accounting Systems                | Development and integration of modern digital accounting platforms in banks and fintech companies                               | Ensuring transparency of financial operations, increasing client trust, and simplifying reporting                                    |
| Enhancing Accounting and Financial Literacy                 | Conducting training programs and awareness campaigns on accounting for digital financial services for the public and businesses | Reducing information asymmetry, increasing awareness of financial products, and responsible usage                                    |
| Automation of Financial Flow Control                        | Using digital accounting tools to monitor transactions and prevent financial risks                                              | Improving financial security, reducing risks of fraud, and discrepancies in reporting                                                |
| Creation of Integrated Accounting Platforms                 | Consolidation of data from banks, financial institutions, and clients on a unified digital platform                             | Increasing the efficiency of interaction among market participants, providing access to up-to-date information for decision-making   |
| Development of Digital Accounting Standards and Regulations | Establishing unified rules for accounting in digital financial services                                                         | Ensuring standardization of accounting procedures, promoting regulatory transparency, and compliance with international requirements |

The proposed directions will facilitate the integration of accounting as a key instrument in the digitalization of banking services, significantly enhancing financial inclusion, reducing access barriers, and improving the quality of financial resource management across all segments of the population and business sectors.

Thus, accounting serves as an indispensable tool for ensuring financial inclusion in the context of digital banking services. It forms the foundation for creating a transparent, reliable, and comprehensible financial environment that supports balanced socio-economic development. Accounting becomes not only a means of control and reporting but also a catalyst for effective mobilization of financial resources, fostering the establishment of a resilient and equitable economy.

## DISCUSSION

In the conducted study, the authors advanced the concept of financial inclusion and the digitalization of banking services, particularly through the integration of accounting as a tool for ensuring transparency and building client trust. Compared to the works of scholars such as Levine (2021) and Chuka et al. (2022), who emphasize the general impact of financial inclusion on economic growth and the resilience of the financial sector, our research focuses on the practical mechanisms for implementing this process through accounting, digital platforms, and analytical forecasting methods. We agree with Demirgüç-Kunt et al. (2020) and Gallego-Losada et al. (2023) on the importance of digital technologies in enhancing access to financial services; however, our approach differs in that it considers accounting not merely as a technical tool but as a strategic mechanism for fostering trust and evaluating the effectiveness of financial inclusion at the level of individual banks and regions.

At the same time, we partially disagree with Hladkykh (2021) and Didukh & Zakharchenko (2020), who focused primarily on the economic aspects of inclusion, without fully accounting for the potential of accounting and digital technologies to create a transparent and reliable financial ecosystem. Our study proposes a more integrated approach that combines

economic, social, and technological dimensions, which the authors consider essential for achieving sustainable and scalable financial inclusion.

The scientific novelty of the article lies in the development of a model for integrating accounting into digital banking processes using mathematical forecasting and optimization, which enables the assessment of the dynamics of financial system inclusiveness and the identification of key factors influencing its effectiveness. Additionally, the article proposes recommendations for establishing a unified digital accounting platform and automating processes to ensure transparency and strengthen client trust in banks.

Practical limitations of the proposed recommendations are associated with existing regional disparities in banking infrastructure, low levels of digital and financial literacy among the population, and high costs of implementing comprehensive digital accounting systems in banks. Accordingly, the implementation of these measures may require a phased approach, additional investments, and government support for regions with limited resources.

## CONCLUSIONS

Analysis of current trends in the development of financial inclusion within the context of banking sector digitalization has shown that financial inclusion is a key element of economic development, ensuring equal access to financial resources for both the population and businesses, stimulating economic growth, and enhancing social welfare. Based on statistical data for 2021–2024, there has been a gradual increase in the level of digital financial inclusion in Ukraine: the share of adults with a bank account grew from 63% in 2021 to 70% in 2024, while the use of digital financial services increased from 47% to 58%. This indicates a positive impact of banking digitalization, the expansion of cashless payments, and the active implementation of government initiatives aimed at broadening citizens' access to financial services.

The study of the functional role of accounting in ensuring transparency and efficiency of digital financial services confirmed that accounting acts as a strategic instrument integrating financial, informational, and social aspects of banking activities. Accounting ensures accurate and timely recording of financial flows, monitors compliance with regulatory requirements, enhances transaction transparency, and fosters client trust in the banking system. The use of digital accounting platforms and automated systems helps reduce information asymmetry, supports financial literacy, and facilitates the formation of clients' digital financial profiles.

The developed model for integrating accounting into the process of ensuring financial inclusion in digital banking, based on the logistic function and the accounting impact coefficient  $O(t)$ , allows for assessing the current level of population access to financial services, forecasting its dynamics, and identifying key factors influencing the inclusiveness of the financial system. Application of approximation and optimization methods made it possible to determine the adaptation parameters ( $r \approx 0.31$ ,  $t_0 \approx 1.57$ ) and to project that the level of digital financial inclusion in Ukraine could exceed 75% by 2028. This implies a growing load on banks' accounting systems and a need for enhanced analytical processing of transactions.

The main barriers to accounting support for inclusive finance have been identified, including low levels of financial and digital literacy, insufficient banking infrastructure in regional areas, high costs of financial services, distrust toward banks, and limited access to specialized financial products. Overcoming these challenges requires a comprehensive approach, including the development of digital accounting platforms, automation of accounting processes, and improvement of citizens' financial literacy.

Recommendations for improving accounting approaches to support financial inclusion include the creation of a unified digital accounting platform within banks; automation of accounting and reporting processes; development of educational programs on accounting and digital financial literacy; integration of accounting with digital financial products; and formation of partnerships between banks, fintech companies, and accounting institutions. Implementation of these measures will enhance transparency and accessibility of financial services, reduce barriers for vulnerable population groups, and strengthen trust in digital banking.

Prospects for further research include the application of system dynamics and agent-based modeling to simulate interactions between accounting infrastructure, user behavior, and regulatory incentives. Such approaches could enable a more precise evaluation of the effectiveness of accounting in supporting financial inclusion, allow for optimization of digital banking processes, and provide evidence-based recommendations for public policy. Additionally, future studies may focus on the development of adaptive accounting tools and predictive analytics to respond to the evolving needs of digital financial ecosystems.

## ADDITIONAL INFORMATION

### AUTHOR CONTRIBUTIONS

*All authors have contributed equally.*

### ACKNOWLEDGMENT

*Volodymyr Metelytsia acknowledges support from the Philipp Schwartz Initiative of the Alexander von Humboldt Foundation, funded by the Federal Foreign Office of Germany, during his fellowship at the Leibniz Institute of Agricultural Development in Transition Economies (IAMO), Halle (Saale), Germany.*

### FUNDING

*The Authors received no funding for this research.*

### CONFLICT OF INTEREST

*The Authors declare that there is no conflict of interest.*

## REFERENCES

- Alazzam, F.A.F., Shakhathreh, H.J.M., Gharaibeh, Z.I.Y., Didukh, I., & Sylkin, O. (2023). Developing an Information Model for E-Commerce Platforms: A Study on Modern SocioEconomic Systems in the Context of Global Digitalization and Legal Compliance. *Ingenierie des Systemes d'Information*, 28(4), 969-974. <https://doi.org/10.18280/isi.280417>
- Bielialov, T., Kalina, I., Goi, V., Kravchenko, O., & Shyshpanova, N. (2023). Global Experience of Digitalization of Economic Processes in the Context of Transformation. *International Journal of Professional Business Review*, 8(6), e02041. <https://doi.org/10.26668/businessreview/2023.v8i6.2041>
- Bondarenko, L., & Podaryn, A. (2022). Features of the digital transformation of the banking sector of Ukraine. *Economy and society*, 41. <https://doi.org/10.32782/2524-0072/2022-41-28>
- Ifediora, C., Offor, K. O., Eze, E. F., Takon, S. M., Ageme, A. E., Ibe, G. I., & Onwumere, J. U. J. (2022). Financial inclusion and its impact on economic growth: Empirical evidence from sub-Saharan Africa. *Cogent Economics & Finance*, 10(1). <https://doi.org/10.1080/23322039.2022.2060551>
- Demirgüç-Kunt, A., Klapper, L., Singer, D., Ansar, S., & Hess, J. (2020). The Global Findex Database 2017: Measuring Financial Inclusion and Opportunities to Expand Access to and Use of Financial Services. *The World Bank Economic Review*, 34 (Supplement 1), S2—S8. <https://doi.org/10.1093/wber/lhz013>
- Didukh, S. M. (2020). Contradictions of the concept of inclusive development and directions for their resolution. *Infrastruktura rynku – Market Infrastructure*, 42, 171–175. <https://doi.org/10.32843/infrastruct42-29>
- Financial inclusion is a key enabler to reducing poverty and boosting prosperity. (n.d.). <https://www.worldbank.org/en/topic/financialinclusion/overview>
- Financial literacy, financial inclusion and financial well-being in Ukraine in 2021. (n.d.). Report on the results of the research. September 2021. Kyiv, Ukraine. [https://bank.gov.ua/admin\\_uploads/article/Research\\_Financial\\_Literacy\\_Inclusion\\_Welfare\\_2021\\_en.pdf?v=4](https://bank.gov.ua/admin_uploads/article/Research_Financial_Literacy_Inclusion_Welfare_2021_en.pdf?v=4)
- Gallego-Losada, M.-J., Montero-Navarro, A., García-Abajo, E., & Gallego-Losada, R. (2023). Digital financial inclusion. Visualizing the academic literature. *Research in International Business and Finance*, 64. <https://doi.org/10.1016/j.ribaf.2022.101862>
- Hladkykh, D. M. (2021). Problems of Attracting Long-Term Deposits of Individuals in Ukraine and Directions for their Solution. *Business Inform*, 9(524), 202–207. <https://doi.org/10.32983/2222-4459-2021-9-202-207>
- IMF Releases the 2023 Financial Access Survey Results. (n.d.). <https://www.imf.org/en/News/Articles/2023/10/03/pr23332-imf-releases-the-2023-financial-access-surveyresults>
- IMF Releases the 2024 Financial Access Survey Results. (n.d.). <https://www.imf.org/en/news/articles/2024/12/31/pr23332-imf-releases-the-2024-financial-access-surveyresults>
- Kasych, A., & Naumkina, I. (2021). Digitalization processes as an integral component of modern bank management. *Economika i suspilstvo*, 28. <https://economyandsociety.in.ua/index.php/journal/article/view/473/455>
- Levine, R. (2021). Finance, Growth, and Inequality. *IMF Working Papers*, 2021(164). <https://doi.org/10.5089/9781513583365.001>
- Liu, J., Loan, K., Mousa, S., Ali, A., Muda, I., & Cong, P. (2023). Sustainability and natural resources management in

- developed countries: The role of financial inclusion and human development. *Resources Policy*, 80. <https://doi.org/10.1016/j.resourpol.2022.103143>
16. Loskorikh, G., Shebeshten, E., Koval, O., Bagriiv, K., & Valkova, N. (2025). Risks of cyberattacks on accounting: Analysis of modern threats and preventive measures. *Sustainable Engineering and Innovation*, 7(2), 493-506. <https://doi.org/10.37868/sei.v7i2.id574>
17. Makedon, V. V., & Mashkina, K. O. (2021). Development of the global banking sector in the conditions of digital economy. *Investytsi: praktyka ta dosvid*, 4, 21-28. <https://doi.org/10.32702/2306-6814.2021.4.21>
18. Naumenkova, S., Mishchenko, S., & Mishchenko, V. (2023). Digital financial inclusion to accelerate the achievement of the sustainable development goals. *Bulletin of Taras Shevchenko National University of Kyiv. Economics*, (222), 102-112. <https://doi.org/10.17721/1728-2667.2023/222-1/13>
19. Nikiforov, P., Tretyakova, O., & Kharabara, V. (2022). FinTech innovations in ensuring financial inclusion by Ukrainian banks. *Naukovy visnyk Chernivetskoho universytetu. Seriya "Ekonomska"*, 834, 49-53. <https://journal.chnu.chernivtsi.ua/index.php/econom/article/view/136>
20. Nguyen, A. T. L., Nguyen, L. V., Truong, H. T., & Bui, T. T. (2022). Analysis of some factors affecting business performance from non-financial aspects at enterprises in Nam Dinh province. *The International Conference on Research in Management & Technovation*. PTI. <https://doi.org/10.15439/2021km90>
21. Podolianshchuk, O., Plakhtii, T., & Gudzenko, N. (2019). Current liabilities and their accounting in the attracted capital management system. *Baltic Journal of Economic Studies*, 5(3), 159-169. <https://doi.org/10.30525/2256-0742/2019-5-3-159-169>
22. Serpeninova, Yu., Lehenchuk, S., Zdyrko, N., Zakharov, D., & Podolianshchuk, O. (2024). Revealing the contribution of corporate sustainability practices to financial performance: Case of BIST Sustainability 25 Index companies. *Environmental Economics*, 15(1), 118-129. [https://doi.org/10.21511/ee.15\(1\).2024.10](https://doi.org/10.21511/ee.15(1).2024.10)
23. Tymkiv, A. O., & Sydor, H. V. (2022). Financial inclusion as a component recovery of Ukraine's economy. *Inclusion and Society*, 1, 5-14. <https://doi.org/10.32782/inclusion-society-2022-1-1>
24. Voychuk, M. V. (2021). Etymology of the concept of "economic inclusion" in the context of the cyclical development of the economy. *Innovatsiina ekonomika – Innovative Economy*, 3-4, 28-33. <https://doi.org/10.37332/2309-1533.2021.3-4.4>
25. Yermachenko, V., Bondarenko, D., Akimova, L., Karpa, M., Akimov, O., & Kalashnyk, N. (2023). Theory and practice of public management of smart infrastructure in the conditions of the digital society' development: Socio-economic aspects. *Economic Affairs (New Delhi)*, 68(1), 617-633. <https://doi.org/10.46852/0424-2513.1.2023.29>
26. Zakharchenko, N. V. (2020). Financial inclusion to increase the welfare of the population and the economic growth of the state. *Finansy Ukrainy*, 6, 105-116. <https://doi.org/10.33763/finukr2020.06.105>

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## БУХГАЛТЕРСЬКИЙ ОБЛІК ЯК ІНСТРУМЕНТ ЗАБЕЗПЕЧЕННЯ ФІНАНСОВОЇ ІНКЛЮЗІЇ В УМОВАХ ЦИФРОВІЗАЦІЇ БАНКІВСЬКИХ ПОСЛУГ

Автори досліджили сучасні тенденції розвитку фінансової інклюзії в контексті цифровізації банківських послуг та обґрунтували роль бухгалтерського обліку як інструмента забезпечення прозорості, доступності й ефективності цифрових фінансових послуг. Автори дослідили функціональну роль бухгалтерського обліку, який виступає стратегічним інструментом інтеграції фінансових, інформаційних і соціальних аспектів діяльності банків, забезпечує точне й своєчасне відображення фінансових потоків, контроль дотримання нормативних вимог, підвищує прозорість операцій і формує довіру клієнтів до банківської системи. Проаналізували вплив цифрових облікових платформ та автоматизованих систем на зменшення інформаційної асиметрії, підтримку фінансової грамотності населення й формування цифрових фінансових профілів клієнтів. Автори запропонували модель інтеграції бухгалтерського обліку в процес забезпечення фінансової інклюзії в цифровому банкінгу на основі логістичної функції та коефіцієнта впливу обліку  $O(t)$ , яка (модель) дозволяє оцінювати поточний рівень доступу населення до фінансових послуг, прогнозувати його динаміку та визначати ключові фактори, що впливають на інклюзивність фінансової системи. Автори визначили основні бар'єри бухгалтерського забезпечення інклюзивного фінансування, зокрема низький рівень фінансової та цифрової грамотності, недостатню банківську інфраструктуру в регіонах, високу вартість фінансових послуг, недовіру до банків та обмежений доступ до спеціалізованих фінансових продуктів. Для подолання цих проблем автори запропонували комплекс заходів, серед яких розвиток цифрових облікових платформ, автоматизація бухгалтерських процесів і підвищення фінансової освіченості населення. Також запропонували рекомендації щодо вдосконалення бухгалтерських підходів для підтримки фінансової інклюзії: створення єдиної цифрової облікової платформи в банках, автоматизація обліку та звітності, розробка освітніх програм із бухгалтерії та цифрової фінансової грамотності, інтеграція обліку з цифровими фінансовими продуктами; формування партнерств між банками, фінтех-компаніями та обліковими установами. Практична цінність дослідження полягає в розробці ключових стратегічних напрямів забезпечення фінансової інклюзії через призму бухгалтерського обліку в умовах цифровізації

банківських послуг. Реалізація цих рекомендацій сприятиме підвищенню прозорості, доступності й сталості фінансових послуг в Україні в умовах цифрової трансформації банківського сектора, що відповідає стратегічним завданням сталого соціально-економічного розвитку держави.

**Ключові слова:** фінансова інклюзія, фінансові послуги, цифровізація, фінансові технології (FinTech), економічний розвиток, облік

**JEL Класифікація:** M41, O33, E44