

## DIGITALIZATION IN THE BANKING SECTOR OF THE REPUBLIC OF MOLDOVA IN 2025

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**Abstract:** The paper describes the phenomenon of digitalization in the banking sector of the Republic of Moldova, outlining the changes that took place primarily in the year 2025 within the context of a financial market that is continuously adapting to global trends. The study investigates how the country's successful commercial banks have implemented digital technologies to respond to the increasingly diverse needs of consumers and to improve their internal processes, within an economic climate marked by transformation, constantly evolving regulations, and intensifying competitive pressures. The research aims to identify the strategic directions of digitalization that have already been adopted in the Moldovan banking system, as well as the factors that have conditioned and amplified this process and the challenges associated with the increasingly rapid implementation of technological innovations. The focus of the paper is on the role of digitalization as a means of redefining the relationship between the institution and the client, optimizing the operational infrastructure, and strategically repositioning financial institutions within a financial ecosystem that is increasingly interconnected and dependent on the implementation of information technologies. The article offers a practical analysis of digital transformation in relation to international trends, adapted to the national context, and highlights the ways in which digital integration contributes to strengthening the position of banks within the financial system, enhancing financial inclusion, and developing innovative, personalized, secure, and accessible products and services. The conclusions emphasize the necessity for financial institutions to maintain a balance between innovation and regulation, as well as the importance of financial and digital education as an integral part of the strategy for transforming the banking sector.

**Keywords:** digitalization, bank, transformation, regulations, operations, processes, banking sector

**JEL Classification:** O3, G20

**Introduction.** Digitalization in the banking sector refers to the process of integrating information and communication technologies into financial services, with the aim of transforming traditional operations into digital operations: internet/mobile banking, open banking, digital authentication, digital onboarding, automation, the use of AI, instant payments, etc. This process encompasses both the transformation of internal infrastructure (core banking systems, backend, security) and customer interfaces: applications, chatbots, and 24/7 online services (Bank for International Settlements, 2018).

**Economic and Technological Context of Moldova in 2025.** In recent years, Moldova has intensified its digital transformation efforts—the government has established a dedicated office for digitalization and has prioritized e-government projects, ICT infrastructure, and public digital services. The National Digital Transformation Strategy 2023–2030 identifies among its priority areas the “digitalization of finance” and the integration of digital infrastructure at all levels of the economy and society. From an economic, techno-scientific, and social perspective, the Republic of Moldova continues to undergo an intense digital transformation, influenced by European regulations, international partnerships, the growing adoption of smartphones and the internet, as well as consumers’ needs for fast and secure financial services. For example:

The adoption of Law No. 209/2022 amending the Law on Payment Services and Electronic Money (Law No. 114/2012), which transposes the EU PSD2 Directive into Moldovan legislation, with implementation deadlines entering into force in February 2025 (Duncan E., 2024).

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The existence of open banking initiatives and Instant Payment System projects launched by the National Bank of Moldova, aimed at facilitating interoperability and providing more accessible services (Fintech Moldova, 2023).

Clients are increasingly receptive to mobile applications, advanced digital authentication, contactless payments, and remote banking services.

**Theoretical Framework. Relevant Models and Theories.** Several models exist for analyzing and describing the level of digitalization in the banking sector:

The Digital Maturity Model outlines progressive stages of digitalization—initially the automation of internal processes, followed by the digitalization of client interfaces, and ultimately the full transformation of business models and integration with fintech/open banking (Westerman, G., Bonnet, D., & McAfee, A., 2014). Moldovan banks are positioned at different stages of transformation: some (for example, maib) have already transitioned to modern core banking systems, others (such as Victoriabank and OTP) are still in the phase of integrating with open banking, while some (like MICB) are only beginning to implement advanced authentication. This analytical model enables a comparative assessment of the digitalization stage of banks, which is precisely the objective of the case study undertaken in this research.

**The Theory of Technology Adoption (Technology Adoption Models, TAM / UTAUT)** explains how perceived usefulness, ease of use, credibility, and facilitating conditions influence adoption both by end users and by organizations (Davis, F. D., 1989; Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D., 2003).

This is a critical aspect because the success of digitalization depends not only on technological infrastructure, but also on user assimilation—both clients and employees. In Moldova, a persistent gap remains between urban and rural environments and between younger and older generations. This model helps to explain these differences, constituting a crucial element for understanding why some banking applications attract hundreds of thousands of active users, while others fail to gain traction among beneficiaries.

**Open Banking and Fintech Ecosystems:** this paradigm entails the opening of banking services through APIs, collaboration with third parties, external innovation, increased competition, and greater personalization of services. In 2025, the law transposing PSD2 and regulating open banking activities entered into force in the Republic of Moldova (Directive (EU) 2015). It represents the most relevant normative and technological framework for a comparative analysis, since each bank under study was required to implement APIs, strong customer authentication (SCA), and to open access for third parties. Without this framework, it would not be possible to explain the major transformations in the market and the collaborations with international fintechs (Salt Edge, Wultra, Tuum).

**AI / Machine Learning in Banking:** applied to decision automation, personalization, robots/chatbots, credit scoring, fraud detection, and more (Financial Stability Board, 2017). Large banks in Moldova (particularly maib and OTP) have begun testing AI for credit scoring, security, and chatbots. AI is not merely a “trend” but represents a differentiating factor: it provides automation and reduces costs. In the context of Moldova, where human and financial resources are limited, AI constitutes a means of increasing efficiency and has become a benchmark for the success of digitalization.

Key Concepts Used in Practical Research:

**Digital Banking:** financial services provided through digital channels (internet, mobile), including accounts, payments, loans, and fully digital auxiliary services (Malyshev A., 2025).

**Open Banking:** an infrastructure that allows third parties (fintechs, applications) to access banking data (with consent) and to initiate payments through APIs, under appropriate regulations, e.g., PSD2 (Investopedia, 2025).

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Fintech: non-banking companies/technologies that innovate financial services through applications, digital payment systems, alternative lending, etc.

AI in Banking: the use of artificial intelligence—machine learning, natural language processing, chatbots, predictive analytics—for efficiency, personalization, and security enhancement (Gambacorta, L., 2023).

Research Methodology. Four banks were selected based on the following criteria: market share (assets, deposits, loans); international recognition and awards for digitalization—titles such as “Best Digital Bank”, etc.; visible and recent digital projects—launches of digital products, high adoption of digital clients, implementation of open banking/advanced authentication; regulation and compliance—how PSD2/open banking/SCA have been adopted. On the basis of these criteria, the four banks studied are: maib, Victoriabank, Moldindconbank (MICB), and OTP Bank Moldova.

Maib. Maib is the largest commercial bank in Moldova in terms of assets (Pathe T., 2025).

**The digital projects implemented in 2025 are as follows:**

In 2025, Maib signed a partnership with Tuum, a core banking SaaS platform, to launch digital banking operations in Romania. The platform provides modules for payments, cards, loans, and other retail functionalities (Fintech Baltic, 2025).

The modernization of the internal core banking system was completed in 2024, with visible effects materializing in 2025 (Pathe T., 2025).

The maibank application continues to provide online credit, digitally accessible consumer loans, fast transfers, and related services (maib).

“Lifestyle features” (the Life page) have been introduced, integrating additional services (insurance, etc.) into the digital interface (maib, 2025).

Technologies employed by Maib include:

Modern core banking platforms: Temenos for internal operations and Tuum for external expansion (Pathe T., 2025).

Mobile applications and internet banking, digital onboarding, and online lending.

Pilot use of AI in collaboration with Mastercard for specific innovation projects (maib).

Digital authentication, security, and data integrity as integral components of modernization.

Results achieved by Maib (maib, 2025):

The number of digital application users increased to approximately 769,000.

75% of loans and deposits are issued digitally.

Growth in net profit in 2024.

Overall market performance: the loan portfolio increased by 28.1%, reaching MDL 30.3 billion; with a market share of approximately 37.9% of total loans.

Victoriabank. Victoriabank is one of the major banks in Moldova, part of the Romanian financial group Banca Transilvania, with a significant presence in both retail and corporate banking (The Fintech Times, 2024).

Recently implemented digital projects include:

A partnership with Salt Edge for open banking/PSD2 compliance. This initiative provides API-based facilities and fully online services such as card issuance/reissuance, KYC updates, credit applications, and instant transfers via T2A, among others (Duncan E., 2024).

Implementation of Strong Customer Authentication (SCA) rules as of 1 February 2025, applicable to offline payments, online payments, and transfers through VB24 Mobile/Web platforms (Victoriabank).

Introduction of a virtual banking assistant/chatbot (an earlier initiative but now integrated into the broader digital infrastructure) through a partnership with DRUID AI (DRUID AI, 2023).

Technologies employed and results achieved (Victoriabank, DRUID AI):

Open banking/API solutions from Salt Edge.

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Mobile and web banking applications (VB24).

Strict authentication protocols, including SCA, biometric elements when applicable, static codes/PINs, etc.

Results (The Fintech Times, 2024; Duncan E., 2024):

A fully online offering for both retail and corporate clients for selected services such as credit applications and card issuance/reissuance.

More than 300,000 active clients on digital channels.

Enhanced transaction security and compliance with the new legislation (PSD2/SCA).

Moldindconbank (MICB). Moldindconbank is one of the major banks in the Republic of Moldova, with a broad network of retail and corporate clients, offering a wide range of electronic services.

Digital projects implemented by MICB in 2025 include:

A mobile banking application (MICB Mobile Banking), which provides quick access to accounts, transfers, basic operations, and simplified authentication through access codes or biometric verification (micb).

A Web Banking service with functionalities such as account overview, transaction history, online payments, intra-bank transfers, statement generation, etc. (Moldindconbank, 2025).

Implementation of Strong Customer Authentication (SCA) for the MICB mobile application in 2025, as a measure of enhanced security (micb).

Technologies employed by Moldindconbank and results achieved (micb; Moldindconbank, 2025):

Authentication through biometrics/access codes combined with SMS/OTP, as well as facial or fingerprint recognition.

Mobile and web banking platforms; security infrastructure including 3D Secure for certain transactions.

Results:

High adoption levels—although no recent public figures are available regarding the exact number of digital users, the introduction of SCA and the availability of key functions online indicate an advanced stage of digital maturity.

Services are available 24/7 for many operations, reducing reliance on physical branches for routine transactions.

Clients can perform payments, transfers, and account monitoring remotely, thereby improving efficiency and customer satisfaction.

OTP Bank Moldova. OTP Bank Moldova is one of the banks experiencing an accelerated pace of digitalization; in 2025 it was recognized with the Best Bank 2025 award in the Republic of Moldova by Euromoney.

Digital projects implemented include:

Introduction of the MIA system, featuring instant P2P payments and Transfer Request services based on phone numbers, integrated into the Internet/Mobile Banking application (Euromoney, 2025).

Modernization of the ATM network—OTP Bank equipped ATMs with contactless (NFC) technology, enabling the use of digital wallets (Google Pay, Apple Pay, etc.), reducing fraud risk, and accelerating transactions (OTP Bank Moldova, 2025).

PSD2-compliant authentication solutions, designed with a mobile-first approach, developed in collaboration with technology providers ensuring advanced authentication methods (Masej G., 2025).

Technologies employed and results achieved (OTP Bank Moldova, 2025; Masej G., 2025):

Mobile and internet banking applications with integrated instant payment modules; SCA/mobile token authentication.

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NFC technology for ATMs; integration of digital wallets.

Results:

In the first week following the launch of MIA Instant Payments functionalities, more than 13,000 active users adopted the new features (OTP Bank Moldova, 2025).

The Best Bank Moldova 2025 award from Euromoney reflects recognition of performance, particularly innovations in digital products and services (Euromoney, 2025).

Improved user experience, reduced transaction times, and enhanced security.

**Challenges and Limitations in the Digitalization Process:**

Security and data protection: with open banking and digital authentication, higher risks of fraud emerge, making it necessary to implement strong cryptography, multi-factor authentication, etc.

Regulation and supervision: adaptation to European standards, compatibility with PSD2, and full implementation of SCA entail both financial and time costs.

Unequal digital access: rural areas often have weak connectivity; older users or those lacking digital skills face additional barriers.

Costs of change and organizational culture: the need for internal employee training, overcoming resistance to change, and managing the transformation process.

Risk of financial literacy and digital inclusion: there remains a risk of exclusion for individuals living in rural areas or with low levels of digital education, who may become marginalized.

**Recommendations for Bank Management:**

Adoption of an integrated digitalization strategy.

Investments in operational security, multi-factor authentication, biometrics, and encryption to maintain customer trust.

Focus on user experience—mobile applications that are easy to use, simplified onboarding, reduction of time/steps required for services. Even though technology enhances efficiency, the relationship with the client must remain human; digitalization should support human understanding rather than eliminate it. In this context, promoting digital financial inclusion through banking products tailored to rural populations is particularly important, as it would allow access to financial services and help reduce the urban–rural divide.

Collaborations with fintech companies, technology startups, and specialized external providers to implement open banking, AI, chatbots, etc., thereby accelerating the innovation process.

Monitoring and performance analysis of the process and outcomes of digitalization efforts within the bank.

Development of employees’ digital skills: through continuous training programs in banking IT, artificial intelligence, and data protection, ensuring the bank’s competitiveness through staff well-prepared for digital transformations.

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