

**CHAPTER 1. THEORETICAL FRAMEWORK  
FOR THE DEVELOPMENT OF NEOBANKS  
IN THE CONTEXT OF GLOBAL DIGITAL  
TRANSFORMATION**

DOI: <https://doi.org/10.30525/978-9934-26-482-5-1>

**1.1. Evolution of Scientific Approaches to the Definition of "Neobank"  
as an Innovative Form of Banking Activity**

A number of seminal studies in the fields of banking theory and practice have traced the evolution from classical to modern approaches to the development of the economic category of technological banking, with a particular focus on neobanking. This has involved an examination of the digitalisation of the banking sector [237-245]. Prior to the digital transformation, research was primarily concerned with the main theoretical aspects of banking, including the role of banks in the economy, the structure of the banking sector, and the impact of regulatory requirements [249-255]. Specific focus was dedicated to the interconnection between the banking sector and macroeconomic stability. In light of the advent of digital technologies, the scientific community has commenced an investigation into the impact of these developments on the traditional business models of the banking sector [239-247]. In this regard, the analysis of efficiency and opportunities for sustainable development offered by digitalisation to banks, including improving customer service, optimising internal processes, and expanding the range of services, is of particular importance. Leading studies [256-274] draw attention to the rapid development of neobanks and their impact on the traditional banking sector. In particular, neobanks offer innovative financial products and services, often with a higher level of customer service and lower costs for users, which represents a significant competitive challenge for traditional banks. In consequence, the banking sector is undergoing a process of adaptation to the changes brought about by technological advances. The growing interest in digitalisation and innovation in banking serves to highlight the critical importance of technology for the future development of the banking industry. Current research shows ways in which banks can change to meet the growing demands of the digital age,

## CHAPTER 1

---

---

including through the introduction of innovative technologies and approaches to customer service.

Accordingly, the economic category of neobanking is influenced by a wide range of general economic and specialised financial theories. Neobanking can be described through the prism of different theoretical approaches, which together help to understand its diversity and impact on the current micro- and macro-context [247-256]. This economic category is based on the theory of financial intermediaries, which shows how neobanks increase the efficiency of interaction between borrowers and investors by reducing transaction costs through digitalisation [258-263]. This is complemented by the theory of disintermediation, which emphasises the elimination of traditional banking intermediaries through direct connection between the parties to transactions [249-254]. Significant emphasis is placed on innovation, as embodied in the theory of innovation, showing how neobanks introduce the latest technologies and business models to meet the financial needs of consumers [237-241]. Network theory explains how digital technologies and the Internet strengthen interactions on a global scale, opening up new opportunities for financial services. In the context of the digital economy, neobanks embody the transition of financial services to the online environment, using Internet platforms and mobile applications for the convenience of users [267-272]. The behavioural approach is also of great consequence, as the theory of behavioural finance helps to elucidate the reasons behind consumers' preference for neobanks, which they perceive as more convenient and innovative than traditional banks. Finally, the theory of systemic importance demonstrates the potential of neobanks to influence financial stability and their role in regulating financial markets [251-262]. These factors converge in a unified context, underscoring the intricate influence of neobanking on the contemporary financial ecosystem. This has the potential to facilitate the advancement of financial services and challenge conventional notions of banking.

The advent of new technologies and their integration into various sectors of the economy have precipitated a transformation in the concept of banking. This has resulted in a migration of banking activities from the physical to the digital, virtual environment, which commenced actively from the beginning of 2009-2011 (the emergence of digital currencies and the growth of mobile devices) [172].

However, at present, the scientific literature has not yet formed unambiguous approaches to the interpretation of "neobank" as a new type of financial institution. This necessitates the definition of the conceptual and categorical apparatus of the study and the distinction between the concepts of "neobank", "neobanking", "virtual bank", "digital bank", "challenger bank", "direct bank", "Internet banking", "mobile banking", "remote bank services".

From the perspective of its core functions, a bank can be defined as a universal monetary intermediary. It performs four main functions in aggregate, namely credit intermediation, payment intermediation, securities intermediation and issuance of credit money. In a broad sense, a bank can be defined as a financial enterprise that acts as a universal monetary intermediary, performing the functions of credit intermediation, payment intermediation, securities market intermediation and issuance of credit money. Furthermore, it is required to conduct its activities in accordance with legal requirements in order to generate profit [182, p. 16].

Traditionally, banks are considered to be legal entities, financial institutions that provide banking services on the basis of a licence. The Law of Ukraine "On Banks and Banking Activity" [67] does not define the concept of "neobank", and Ukrainian legislation does not mention neobanks. In the scientific literature, "neobank" is considered as a new type of bank; a new type of financial institution; financial institutions operating on the Internet using ICT without physical offices; online financial services companies based on technological platforms.

It is important to highlight that the distinctive nature of neobanks as an economic category at both the micro- and macro-levels can be elucidated through an institutional approach that considers the specific characteristics of neobanks' strategy and operational activities in relation to regulation, infrastructure, client and other stakeholder relations, and other pertinent factors. The institutional approach is employed by the literature to interpret a neobank as a novel financial institution that establishes the most recent technological formats, standards, rules and procedures for the provision of banking services within the financial ecosystem. In particular, A. Martynenko considers the concept of the "new type of bank" from the perspective of the institutional approach. A neobank is defined as a financial and credit institution that operates exclusively via the Internet,

## CHAPTER 1

---

without the presence of any physical representative offices or branches. A similar definition of a neobank is given by S. Tesliuk, N. Matviichuk, N. Korkh, and O. Derkach, namely: "a neobank is an innovative bank that is available to customers through a mobile application, does not have classical bank branches and interacts with customers through Internet platforms". Researchers O. Kozlianchenko and A. Berezan unify the concepts and new types of banking ("mobile bank", "Internet bank", "virtual bank", "digital bank") under one term "neobank", which is used for all banks that go beyond the classical service [7]. The aforementioned researchers define the term "neobank" in three ways. First, they describe it as a financial institution that conducts various types of banking operations without using physical office branches. Instead, it relies on a virtual network and modern Internet platforms. Second, they view it as a form of modernised and constantly updated banking. This includes advanced modern functionality, forms of communication and data transmission. These elements often utilise the Internet, including websites, online offices and other digital platforms. Third, they characterise it as an online company. These companies are built from scratch on new technology platforms. They offer higher interest rates, sometimes charge card account maintenance fees and provide a higher degree and quality of customer interaction and support. In turn, O. Erkes, O. Kalyta, and T. Gordiienko distinguish the concepts of neobank, direct bank, and virtual bank from the concept of Internet banking, which is worth agreeing with, given their fundamental differences. The authors define neobanks as: first, banks that operate without physical branches and use mobile applications, Internet applications and other websites to provide services, the peculiarity of which is the provision of the latest financial products and instruments, in addition to traditional banking services (for example, payments in cryptocurrencies, participation in crowdfunding platforms); second, a modernised bank that provides a modern range of financial services, using innovative banking tools, including online service and support, electronic sales channels, round-the-clock Internet platforms, various mobile and Internet applications, chatbots, robot advisors, etc. A virtual bank is defined as a financial institution that provides banking services via the Internet or other electronic distribution channels, without the necessity for physical branches. Concurrently, the authors define Internet banking and e-banking as "channels for providing banking services

by a traditional bank". The principal distinction between a neobank (virtual bank) and a traditional bank is that the former does not possess any physical branches. Instead, its products and services are made available through the Internet and other electronic channels, in addition to the physical branches through which traditional banks conduct their operations. The authors define a direct bank, or direct/branchless bank, as a financial institution that lacks a physical network of branches but provides and offers its services remotely through internet banking and telephone banking, as well as through access to services through automated teller machines (ATMs), service terminals, mobile applications, and other digital channels. It is possible for traditional banks to act as providers of direct banking services, and interbank network alliances are created for this purpose [22]. Furthermore, direct banks operate remotely, offering services via telephone, mobile banking, the Internet, post, and ATMs through interbank network alliances.

The categorisation of a neobank as a challenger bank, direct bank or online financial services company is a more prevalent phenomenon in the context of foreign literature. To illustrate, in the United Kingdom, the concept of a *challenger* bank is pervasive due to the aspiration of these institutions to capture customer segments who are dissatisfied with the quality of service provided by traditional financial institutions. A review of the literature from other countries reveals a clear distinction between the concepts of a challenger bank, a neobank and a traditional bank. In particular, G. Hopkinson, D. Klarova, R. Turkan and V. Huliieva, based on the experience of neobanks' impact on the financial sector in Europe and Denmark, argue that neobanks represent a new form of direct banking that has emerged in the last decade and is attempting to challenge the traditional banking business model [161]. T. Bradford posits that a neobank lacking a charter cannot be considered a traditional bank. This is because a bank is a licensed financial institution, licensed to accept deposits and provide loans, and to offer other financial services, including capital management and currency exchange, among others. In contrast to neobanks, challenger banks are also relatively small licensed financial institutions, representing a more innovative approach to retail banking. They were established with the objective of competing in the financial market with large national banks. T. Bradford defines a neobank as a financial technology company

that provides its own financial services on the basis of a relationship with an authorised bank [109].

It is important to note that there is a discrepancy between the definitions provided by foreign and domestic scholars of the term "neobank". This is due to the fact that the concept is related to the market positioning strategy of these financial institutions, the technologies they utilise to conduct banking activities on the Internet, and their relations with other players in the financial system. A review of neobanks' activities and market positioning, together with an analysis of their websites (in terms of functions, market orientation and business model), led L. Fritchi to classify neobanks into three types. The first type of neobank is defined as a financial institution that has obtained a banking licence in the country of operation with the objective of reducing its dependence on partner banks. This category includes neobanks such as N26 and Revolut. The second category comprises neobanks that operate without a licence and collaborate with traditional banks or financial technology companies to comply with regulatory requirements. These institutions prioritise customer relations in the delivery of services and guarantee customer security (e.g., Neon in Switzerland). The third category of neobanks comprises digital banks, which function as subsidiary financial service providers of traditional banks. They offer customers a range of digital services comparable to those provided by traditional banks (e.g., Zak, a digital bank established by the Swiss bank Cler as a subsidiary financial service provider) [147].

The peculiarity of neobanks compared to traditional banks is that they have their own market positioning strategy and offer services using a powerful digital interface, often designed for specific consumer groups [109]. The next difference between traditional banks and neobanks is the difference in the business model, i.e., the way banking activities are conducted and organised [218]. This difference leads to differences in the operational efficiency of banks and neobanks, the ability and capacity to quickly adapt to changes in the environment, to changes in customer preferences and behaviour, and in the use and processing of collected data. It is thanks to digital technologies that neobanks are more efficient in data processing.

The operating costs of traditional banks are high due to the necessity of maintaining a network of branches and ATMs. In contrast, neobanks reduce

these costs by utilising the infrastructure of traditional banks through cooperation agreements and transitioning to fully online banking services [218]. As technology is an integral component of the neobank business model, these banks are able to create modern credit scoring methods that are used in the customer assessment process, which significantly expands the customer's lending opportunities. This enables them to gain a deeper understanding of their customers' needs and behaviours, allowing them to modify their products accordingly.

In light of the aforementioned characteristics, it can be posited that a neobank represents an innovative type of financial institution, characterised by the utilisation of digital technologies in its business model and operational procedures. The principal technological channels through which neobanks provide services are internet banking (websites), mobile banking (mobile applications), and technological platforms (in the case of a neobank positioning itself as a company providing online financial services via the Internet) used to provide remote banking services.

The concept of "Internet banking" or "web banking" (also known as "online banking") represents a specific type of remote banking service that provides customers with the ability to access their accounts and view account transactions at any time and from any computer via the Internet. Internet banking, otherwise known as online or web banking, is defined as "a type of remote banking service that provides access to accounts and banking transactions at any time via the Internet (using a computer, tablet or phone)" [93]. The term "Internet banking" is also used to describe a remote banking technology that enables customers to access banking services via the Internet [23]. Consequently, Internet banking (online banking) can be employed as a standalone instrument for the delivery of remote banking services based on technology and utilising the Internet without the establishment of a neobank and the registration of said neobank as a legal entity. Conversely, remote banking entails the provision of banking services at the behest of a client, eschewing direct interaction between the client and a bank employee [74]. The term "remote banking" is also used to describe a technology that enables customers to conduct banking operations without having to visit a physical bank location. In the context of remote banking services, O.G. Yesina perceives the bank's actions as an effort to enhance and operationalise the conventional banking procedures

through the utilisation of information systems. The various forms of remote banking services include video banking, PC banking (the traditional client-bank system), telephone banking, and internet banking [23]. In essence, Internet banking represents a set of technologies that facilitate remote banking services. Conversely, a neobank is a distinct, pioneering financial institution that can leverage Internet banking for the provision of remote services. It is important to note that traditional banking institutions are also capable of utilising internet banking technologies. Mobile banking is a system that enables users to manage their non-cash funds via a mobile phone, smartphone or tablet computer [5]. It is reasonable to agree with the definition of mobile banking as a type of Internet/online banking that provides access to accounts and banking transactions using a mobile application installed on a mobile device (smartphone). Both mobile and internet banking can be utilised by customers without the need for assistance from banking institution employees. Consequently, neobanks represent a novel financial institution that provides remote banking services to customers on the basis of a licence. They offer financial services utilising digital technologies and the Internet, thereby providing users with round-the-clock access to their accounts and banking transactions in accordance with their requests and requirements.

It should be noted that this definition is also consistent with the legislative interpretation of a financial institution as a legal entity "whose purpose is to carry out financial services activities and which, in accordance with the law, provides one or more financial services on the basis of a relevant licence issued by the NBU". Providers of support services (ancillary services and intermediary services) that do not also provide financial services, as well as other persons who have obtained a licence to provide financial services without obtaining the status of a financial institution, are not financial institutions [70].

The literature also defines the concept of "digital banking as a new promising concept in the field of electronic banking, which aims to enrich standard online and mobile banking, integrate digital technologies using various payment channels, social media, and innovative payment solutions". A digital bank serves as an accessible consultant, supplier, coordinator, aggregator, and service provider, possessing a comprehensive understanding of the needs, desires, and capabilities of customers [74].



The term "digital banking" encompasses the utilisation of a range of digital technologies, including blockchain, cloud computing, artificial intelligence, data analytics, the Internet of Things, instant and cashless payments, open banking technology, and digital e-wallets. It is important to note that these technologies can be employed to enhance the development and improvement of internet and mobile banking.

A study of the views of foreign scholars and financial practitioners on the essence of digital banking and its role in improving banking services has revealed that their perspectives primarily focus on the need to eliminate problems and enhance customer service, particularly in terms of quality. The essence of digital banking is based on components that are more human-centric than those typically associated with traditional banking. These include saving customers' time, reaching a broader customer base, and utilising psychological and emotional methods in service delivery [94]. V. Rysin and M. Rysin observe that digital banks currently operate primarily in a hybrid form, combining traditional and digital banking. This is due to the fact that they require a detailed IT infrastructure, which is cost-effective. Furthermore, they utilise centralised databases, cloud storage and basic interaction protocols to integrate traditional, classical banks with fully digital Internet banks. In contrast, fully digital banks employ the latest information technologies, eschew a single centralised data storage system due to the inherent security risks associated with it, and utilise customers' biometric data to control access to valuable information [74]. The paper [7] describes the main types of virtual banks. Neobanks either obtain a banking licence themselves or operate on the basis of one of the existing banks, in fact, buying wholesale services from a financial organisation that acts as a "financial intermediary" and selling them retail to customers. The first option is acceptable for most financial start-ups in the UK, which has embarked on a course of liberalisation of the financial industry over the past few years. The second option is for companies from other jurisdictions where obtaining a licence is too expensive and time-consuming. The range of services offered by virtual banks is analogous to those provided by traditional banking institutions, encompassing settlement operations, lending, capital resources management, deposit and investment. Concurrently, the service formats and procedures have been markedly streamlined, encompassing P2P lending, crowdfunding platforms, financial

## CHAPTER 1

---

advisors' services via messengers, chatbots, and the capacity to purchase and sell cryptocurrencies.

In addition to the concept of a neobank, the literature also employs the term "neobanking," which reflects the trends in the development of innovative banking and financial services in a much broader sense, thereby forming a new holistic paradigm of banking. In the context of globalisation, the dynamic digitalisation of the economy and the penetration of information and communication technologies (ICT) in various sectors, the banking system is performing new additional functions that differ from the traditional ones. This requires a detailed study. These additional functions are directly related to the latest information and communication technologies (ICTs) and have given rise to a qualitatively new format of banking services, which has come to be known as "neobanking". The functions of neobanking as described in the literature include the issuance of classic or virtual cards, mobile deposits, individual payments using smartphones, mobile devices, social network identifiers, emails, and mobile budgeting tools, among others [78]. It is important to note that the concept of "neobanking" is more expansive than that of a "neobank." It encompasses a range of innovative functions performed by financial institutions through the use of technology, significantly enhancing the traditional scope of banking activities.

The concept of neobanking, as defined in the literature, is based on financial technologies and involves the conduct of banking activities in a virtual form, with no physical manifestation of the banking function. It is important to note that the term "banking" in a broad sense encompasses banking activities that can be conducted via the Internet [209].

The study of theoretical and practical developments by domestic and foreign scholars indicates that the dynamic development of neobanks has resulted in the emergence of a holistic concept of neobanking. This is an innovative type of banking activity conducted on the Internet using ICT. The digitalisation of the banking sector and the penetration of technology into banking activities have contributed to the formation of a financial ecosystem, which includes neobanks, financial technology companies, and traditional financial institutions.

The Strategy of the National Bank of Ukraine posits that in the contemporary high-tech environment, an innovative financial ecosystem is being formed, in which banks are one of the principal actors interacting with

a number of other institutions, including insurance companies, financial companies, leasing companies, credit unions and pawnshops, factoring and investment companies, venture capital and pension funds, and other non-bank financial institutions. In the context of the active development of technology and the financial ecosystem, banks are regarded as financial service providers, occupying a pivotal role within the financial services market [80]. They utilise infrastructure and technology to offer services to key user groups, including households, businesses and the public sector. The primary components of the infrastructure are payment systems, ICT, IT solutions, and financial technologies. The key stakeholders include payment infrastructure service operators, cash collection, processing, and storage services, IT solution developers, telecommunications operators, merchants, postal operators, central securities depositories, central counterparties, stock exchanges, clearing members, depository institutions, virtual asset market participants, DLT providers, and financial technology sector entities. It is important to note that the term "provider" is understood to refer to a service provider that facilitates access to services through the Internet. Consequently, new technology banks function as providers of banking services, offering these through innovative infrastructure and interaction with financial ecosystem entities.

The NBU Strategy defines the financial ecosystem as "a set of financial market participants and other parties that interact with each other on the basis of cooperation and competition to create and provide financial products and services" [80]. Consequently, a novel approach to the operational framework of the banking system is being introduced in Ukraine. This approach entails collaboration and competition between the principal stakeholders, transparency within the system, multidimensional relations, and a codified set of rules governing interactions. These elements collectively facilitate the development of innovative financial products and services, with a customer-centric focus and consideration for the needs of customers who demand transparent, high-quality, and comprehensive financial services. The latter trend serves to intensify competition between banking sector players, which is reflected in the constant technological upgrades and the emergence of new services designed to improve and optimise the provision of services and maintenance. The primary strategic objective is to meet the needs of end customers in a manner that is aligned with the principles of

## CHAPTER 1

---

---

synergy, the consideration of the interests of all parties, and the pursuit of mutually beneficial outcomes for all participants.

As stated in the NBU Strategy, "participants in the financial ecosystem are able to assume different roles according to their own specific requirements". Consequently, a commercial bank may simultaneously serve as an investor, a provider, and a consumer of financial and technological services, as well as a provider of expertise. This signifies the transformation of the banking sector and the banking system as a consequence of local and global trends, whereby banks are regarded as "financial service providers", including technology service providers. In contrast to this, the classical perception of a bank was that of a universal intermediary in the provision of banking services. This signifies a considerable expansion of the capabilities of nascent banking institutions and an augmented scope of services offered to the general public. The activities of neobanks are effecting a transformation of the banking system and the financial sector, giving rise to new segments through the provision of innovative banking and financial services.

In the field of banking, the existing literature identifies a number of different approaches to the interpretation of the banking system. These include institutional, systemic and cybernetic, structural and legal, and structural and functional approaches. The latter definition of the banking system is as a set of banks in a country that are subject to certain norms and standards of operation in order to meet the needs of monetary regulation of the economy, lending, and settlement services for the turnover of businesses. In the monograph by V. Kovalenko, O. Koreniev, K. Cherkashyna, and O. Krukhmal, two approaches to the interpretation of the essence of the "banking system" are distinguished. The first is the institutional approach, proposed by O.V. Dziubliuk in accordance with national legislation. The second is the institutional and economic approach, considered by A.M. Moroz [49, p. 81]. The institutional approach regards the banking system as a configuration of constituent elements, as set forth in reference [15]. This approach also provides for the definition of the banking system as a set of banks that comprise it. The institutional and economic approach considers the banking system to be a set of various types of banking and other credit institutions, as well as other institutions that are interconnected with them. These institutions exist in a particular country and historical

period, and function within a single financial mechanism. They can be considered a component of the credit system [49].

The institutional approach to defining the essence of the banking system is also reflected in national legislation. Thus, according to Art. 4 of the Law of Ukraine "On Banks and Banking Activity" [67], the banking system of Ukraine consists of "the National Bank of Ukraine and other banks, as well as branches of foreign banks established and operating in Ukraine in accordance with the provisions of the Law and other laws of Ukraine". It is important to note that this approach views the banking system as a network of banking institutions that are integrated into the broader credit system. Furthermore, these definitions of the banking system do not encompass the characteristics that would enable the differentiation of neobanks as active participants.

The institutional and economic approach posits that the banking system does not emerge from a mere mechanical combination of individual banks. Rather, it is based on a pre-designed concept within which each type of bank and each individual bank occupies a distinct and defined position [21]. To illustrate, JSC Universal Bank functions in accordance with a strategic orientation that encompasses the objective of "high-quality servicing of Ukrainian business and organic growth" [1]. Accordingly, the institutional and economic approach entails an examination of the banking system in accordance with the economic, legal, and organisational conditions that substantiate the necessity for systemic regulation of banking activities. This approach considers the institutional conditions that facilitate the growth of the country's financial system, emphasising the significance of the concept in the evolution and development of banks.

The structure of the banking system is contingent upon certain socio-economic conditions [21], which in turn necessitates the formulation of a strategy for the functioning of banks. The practical activities of the NBU in adopting and implementing Ukraine's strategy in this area demonstrate that an institutional and economic approach is employed as the basis for regulating the banking system. While in the period 1991-2014, the banking system of Ukraine was in the stage of formation and overcoming the consequences of the financial crisis of 2008-2009 [33], in 2014-2021, the banking system of Ukraine was in the stage of stabilisation, characterised by the following features: resumption of lending, low inflation, stable,

## CHAPTER 1

---

---

transparent and efficient banking system, effective regulation of the financial sector, free movement of capital and financial inclusion.

The Institutional Strategy of the National Bank of Ukraine until 2025, approved by the NBU in 2021 [80] (hereinafter – the Strategy) defines the following goal for the development of the banking system "to intensify economic growth in the country and improve the efficiency of the financial ecosystem". The NBU is actively developing an innovative regulatory environment for the supervision and control of innovative products and services of financial ecosystem players, including banking institutions. Thus, in the context of digitisation of various sectors of the Ukrainian economy, neobanks should be considered in the context of the institutional and economic approach as a component of the financial ecosystem whose activities affect its efficiency, in particular through their use of ICT and digital technologies. In her study, H. Karcheva [33] puts forth a systemic and cybernetic approach to understanding the essence of the banking system and the criteria for its efficiency. By acting as an integrating paradigm of previous approaches, including institutional, legal, institutional, and economic, the systemic approach allows for the identification of qualitatively new characteristics of the banking system, which more accurately describe its current state and future directions of development.

Over the past decade, the financial market and banking system have transformed from a model of traditional corporate banking to an integrated financial ecosystem that includes banking and nonbanking markets and the activities of neobanks. In the context of digitalisation and market transformations, the banking system is undergoing significant changes. Central banks are focusing on the development of the financial ecosystem, which, through technology, serves to complement and continue the core business of a financial institution. Furthermore, it increases the efficiency of the core business in its traditional form through its transition to the digital environment, utilising the Internet, mobile applications, websites, chatbots and other remote service technologies. Consequently, the environment of neobanks extends beyond the conventional banking system, encompassing the financial ecosystem where technology assumes a pivotal role as a novel determinant of competitiveness.

Given the tendency for banks to become more actively involved in the innovative financial ecosystem, it is worth noting that in addition to

the traditional relationship between central banks and commercial banks, these entities will have a relationship regarding the process of creating innovative products and the regulatory influence of the central bank on the potential for their use by commercial banks. Previously, the traditional relationships within the banking system were defined as: 1) purchase/sale of foreign exchange and currency values; 2) refinancing of commercial banks/attraction of commercial bank deposits; 3) purchase/sale of securities [182, p. 21], today the cooperation of institutions of the financial ecosystem is a new format of interaction. Such cooperation can be seen, for example, in the creation of neobanks, which operate on the basis of mobile applications, online platforms based on the banking licence of a traditional bank, in effect acting as a digital complement to traditional banking activities.

This means that banks no longer operate as separate elements of the banking system, but are closely linked directly to individuals or legal entities in order to improve the quality of service and enhance their own competitiveness in the market. Technology has enabled new forms of communication and customer relationships, new services to broaden the customer base, and the financial ecosystem of banks is evolving. Technology is a driver of institutional change and therefore an important factor in the development of virtual banks. For example, the integration of technology in the public sector contributes to the development of e-democracy and e-governance by simplifying the rules and regulations for the interaction of financial ecosystem actors, and by facilitating the emergence and development of neobanks operating in an innovative financial environment.

Thus, the study of approaches to the interpretation of neobanks reveals the predominance of the institutional and economic definition of this concept. Scholars equate the concepts of neobank and virtual bank, interpreting them mainly from the point of view of the institutional approach (as a modernised bank, financial institutions, financial and credit institutions, innovative bank). Instead, the literature distinguishes between Internet banking and mobile banking as remote banking services using technology. The key distinction between neobanking as a concept and Internet and mobile banking is that the latter represent an additional component for the provision of remote banking services to customers, whereas neobanks have their own approach and are separate financial institutions with their own strategies for attracting a specific consumer

segment. The author of this study concludes that, from the perspective of the institutional approach, a neobank can be defined as both a financial and credit institution and an entity of the innovative financial ecosystem in a high-tech environment. It interacts on the principles of transparency, openness, and customer focus to provide quality financial, non-financial, and technological services to the main groups of customers. From an economic standpoint, neobanks are financial institutions that operate on the basis of licenses and a developed concept, which includes the use of technology to implement their own development strategies and improve competitiveness.

Technological advancements have significantly impacted the conventional institutional, economic, and systemic approaches to defining banks. These developments have markedly influenced the broader macroeconomic environment of banking, regulatory policy, and the emergence of digital forms of money. The classification of virtual banks is dependent on the type of technological solution, strategy and positioning concept. They can be categorised as either a separate platform for the provision of banking services, which is based on the banking licences of a traditional bank; a personal banking tool, which is based on a mobile application; or a separate technological product. Furthermore, the concept of neobanking can be operationalised through the utilisation of a website or mobile application, thereby facilitating the delivery of remote banking services. This integration of Internet and mobile banking represents a significant advancement in the field of financial technology. Additionally, neobanks are regarded as financial and technological online enterprises that considerably extend the scope of services, encompassing peer-to-peer lending, crowdfunding platforms, financial advisors' consultations via instant messaging, chatbots, and the capacity to purchase and sell cryptocurrencies.

It is therefore necessary to consider neobanks in the context of the institutional and economic approach, as a component of the financial ecosystem in the context of the digitalisation of various sectors of the Ukrainian economy. Virtual banks are not isolated elements of the banking system; rather, they are closely connected with individuals or legal entities with the objective of improving the quality of service and increasing their own competitiveness in the market. The advent of new technologies has given rise to novel forms of communication and customer relations, as well as the introduction of new services designed to expand the customer



base. These developments have contributed to the evolution of the financial ecosystem of banks.

In consideration of the aforementioned characteristics, a neobank may be defined as a financial institution that employs a distinctive strategy and an innovative approach to development within the financial ecosystem. It provides remote banking services to customers on the basis of a licence, utilising digital technologies and the Internet to offer round-the-clock access to accounts and banking operations, in accordance with the needs and requests of users.

### **1.2. Factors of the Internal and External Global Financial Environment and Their Impact on the Development of Neobanking**

Banks operate within a systemic and institutional regulatory environment that is influenced by a variety of internal and external factors that interact with each other and give rise to a constant need to update regulatory legislation. To illustrate, the integration of digital technologies and the advent of private sector digital currencies as a novel form of money have prompted central banks to recognise the necessity for further investigation into this phenomenon. This is due to the emergence of new regulatory requirements resulting from private sector pressure, heightened competition and the diversion of financial resources to private financial high-tech companies. Furthermore, technological advancement has facilitated the acceleration of globalisation, notably through the substantial reduction in the complexity of capital flows. In light of the aforementioned factors, a comprehensive examination of the macro- and micro-environments in which banking activities occur is imperative.

A set of factors influencing the development of the domestic banking system is responsible for profound transformations in its functioning at the national level. These factors include deregulation and liberalisation of international capital flows; development of new technologies that allow transactions to be conducted simultaneously in different financial markets; increased cross-border capital mobility; blurring of boundaries between different segments of the financial market, in particular between markets for short-term securities and markets for long-term debt capital; and a widening gap between the growth rate of real economy output and the growth rate of financial transactions; gradual blurring of boundaries between different

financial functions of credit institutions. These factors are currently exerting a decisive influence on the organisation of credit relations in society and the functioning of the national money market [16].

Technology has transformed the financial environment of the banking system, increasing competitiveness through new technological capabilities. The potential for the use of banking services is expanding through the integration of ICT, which allows for reduced transaction costs, automated customer service processes, round-the-clock, instant, easy-to-use access to accounts and a range of other benefits. Technology has also spurred the development of financial companies that allow customers to transact in digital currencies. The recent upward trend has forced central banks to explore the introduction of digital currencies, review the regulatory environment for their circulation and intensify competition in the financial sector. These trends require a detailed study of the internal and external financial environment as a factor in the development of neobanks.

The global digital transformation entails the utilisation of digital technologies across a range of economic sectors, including the financial sector. This has resulted in a notable transformation in the sector's structure, giving rise to the emergence of new structural elements, namely the neobanking sector, the financial and technological sector, and the regulatory and technological sector. These economic sectors and the activities of companies and financial institutions within them exert a considerable influence on the banking sector as a whole, particularly in the following ways:

1) The advent of new types of financial intermediaries and institutions has led to the development of innovative digital technologies that facilitate the digitisation of information and data. This transition from analogue to digital forms of data, information and knowledge, along with their transmission via digital devices and networks, has significantly impacted the banking sector, business processes and models, standards and rules of banking. The latter entails an enhancement of the level of openness, transparency, accessibility, simplicity of banking services, personalisation and customer focus in customer service.

2) Financial institutions are engaged in the active development and implementation of digital strategies in order to meet the demands of the external environment and the needs of users of innovative financial

services based on digital technologies. Furthermore, digital strategies entail alterations to the operational activities of banking institutions, the utilisation of technology to modify and enhance business models, and consequently, a reduction in the number of physical bank branches and an increase in remote banking.

3) Financial institutions and central banks are engaged in the development of initiatives aimed at the introduction of digital currencies. Central banks are engaged in active collaboration at the international and national levels with the objective of sharing their experience and knowledge in the introduction of digital currencies. A competitive environment is emerging at the global level, with central banks in different countries vying with one another to be the first to launch digital currencies.

4) The regulatory technology sector is undergoing significant advancement, with digital technologies playing a pivotal role in streamlining regulatory procedures for the financial sector. Technologies designed to facilitate regulatory processes in the financial sector are being introduced under the banner of regulatory technology (RegTech). Furthermore, supervisory technologies (SupTech) are being actively developed with the objective of utilising technology to enhance and streamline supervisory processes from the perspective of supervisors. The introduction of regulatory and supervisory technologies is aimed at building an innovative, efficient, and high-tech supervisory system and optimising the processes of compliance with regulatory requirements by financial sector participants.

5) Digital technologies are used to strengthen cybersecurity and protect personal data of neobanks' customers, as well as to protect against online fraud.

6) The advancement of financial and technology companies is precipitating heightened competition within the banking sector, prompting traditional banks to embrace digital technologies and cultivate enhanced digital infrastructure. Concurrently, banking institutions are engaged in collaborative endeavours with the financial and technology sectors, as well as high-tech companies, with the objective of integrating digital technologies into their operational processes.

The global digital transformation affects a number of factors and conditions, including political, economic (macroeconomic and microeconomic), integration, institutional, socio-demographic, and

technological factors, as well as changes in the operating environment of neobanks. It is now appropriate to consider these conditions for the functioning and development of neobanks in more detail.

*Condition 1.* The processes of globalisation and regionalisation have resulted in a significant increase in competition within the banking sector, necessitating a constant drive for innovation and improvement [28]. These processes have led to an expansion in the number of market participants seeking to attract customers with distinctive financial products, superior service quality, and cutting-edge technologies. Consequently, banks are continuously exploring new strategies to enhance their competitiveness and efficiency in the global and regional markets. The process of globalisation is accelerating the integration of the global economy, which in turn encourages banks to expand their presence not only domestically but also abroad, utilising a variety of international financial instruments. This necessitates that banks possess not only a profound comprehension of the particulars of local markets, but also the capacity to operate efficaciously within a global competitive milieu. In contrast, regionalisation prompts banks to concentrate their resources on specific geographical areas where they can leverage their competitive strengths. This may entail the creation of bespoke products or services that are designed to align with the specific needs and circumstances of the local population, culture, and economy. The regional approach enables banks to respond with greater precision to the requirements of their customers, which is a crucial element in the maintenance and advancement of long-term relationships with them. However, increased competition necessitates that banking institutions not only adapt to changes in the external environment, but also continuously improve internal processes, optimise product lines, enhance service quality and introduce the latest technologies. This gives rise to a necessity for unceasing competition, whereby success is gauged not only by financial performance, but also by customer satisfaction, innovation and the capacity to adapt to rapidly evolving market conditions.

*Condition 2.* European integration processes, which contribute to the development of the regulatory framework for the financial sector. For example, in 2017-2021 Ukraine adopted a number of regulatory acts in the financial sector [87]. In particular, in 2017-2018, in relation to: 1) improving the requirements for the identification of customer data when

using bank accounts or bank settlement books in accordance with EU law; 2) introducing additional due diligence measures in relation to customers in cases that may pose an increased risk of money laundering and terrorist financing; 3) establishing financial intelligence units to combat money laundering and terrorist financing in accordance with EU requirements; 4) ensuring the recording and storage of statistical data in accordance with EU standards; 5) approval of unified rules for supporting money transfers with information on the payer and recipient; 6) implementation of international standards and EU acts on the prevention of money laundering and terrorist financing. In 2019, the banking sector implemented the Basel Committee's principles of effective banking supervision; ensured the procedure for verifying the financial/property status of founders with significant participation when obtaining a banking licence; brought the requirements for publishing information on issued banking licences on the NBU website in line with EU legislation; optimised requirements for improving the efficiency of assessing the criteria for significant participation of credit institutions; settled issues related to administrative sanctions and enforcement actions of the NBU for non-compliance with licensing requirements for acquisition of substantial participation; established requirements for professional suitability and business reputation of bank managers; introduced requirements for solvency recovery plans; improved requirements for capital buffers; introduced requirements for internal capital adequacy assessment of banks (ICAAP); requirements for the risk management system in banks were established; requirements for the allocation of assets by risk and risk weights for them in the calculation of capital ratios were improved; capital requirements were introduced to cover operational and market risks; new liquidity ratios were introduced: short-term (LCR) and long-term (NSFR); disclosure requirements were established for capital, capital buffers, unencumbered assets, operational risk, and leverage ratios; improved requirements for corporate governance in banks in line with EU legislation; introduced forms of statistical reporting by banking groups on risk concentration; introduced forms of statistical reporting by banking groups on intra-group transactions; improved mechanisms for information exchange between financial services market regulators, etc. Concurrently, a series of regulatory amendments were introduced in associated domains, including market infrastructure

development, the money market, the securities market, insurance, and collective investment institutions in marketable securities. Indeed, a novel regulatory framework for the financial sector is emerging in Ukraine, which is conducive to the advancement of Ukraine's financial ecosystem and the banking system in particular.

*Condition 3.* The monetary policy of the central bank and central banks around the world, which establishes certain trends in regulatory influence contingent on the state of the global economy, determines the strategy of banking system development. The consistency of legislation and regulatory compliance with international law is also of critical importance, as it determines the pace of capital turnover and the protection of creditors' rights. In essence, legislation delineates the particulars of the banking system and the regulatory prerequisites for financial operations. The Ukrainian regulatory environment is currently undergoing a period of active updating and development. In 2021, the NBU supported the adoption by the Verkhovna Rada of the Law of Ukraine "On Payment Services" (Draft Law No. 4364), which will ensure the modernisation and further development of the Ukrainian payment services market, the integration of the Ukrainian and European payment markets based on modern requirements and the provisions of European regulations, in particular the Electronic Money Directive (EMD) and the Second Payment Services Directive (PSD2) [54].

Thanks to technological developments, new payment service providers are entering the payment market: under certain conditions, public authorities, postal operators (which carry out transfers and settlements), "electronic money institutions, branches of foreign payment institutions, account information providers, payment institutions – analogous to non-bank financial institutions, but with an extended list of payment services" [54]. The market for payment services will tend to be narrowly specialised, and market participants may concentrate their activities on one of these services. Thanks to the adoption of Law 4364, the issuance of payment cards and electronic money will be possible not only in traditional banks but also in other non-banking institutions [69; 71].

*Condition 4.* The level of dependence of the central bank on the legislative and executive authorities is determined by institutional factors, which encompass the development of institutions that influence the formal

and informal rules of operation of both financial institutions and banks as leading financial market participants. In particular, the development of other financial institutions and the country's financial market, as well as the state of the financial sector, also affect the activities of banks. Among the institutional factors behind the development of neobanks is the development of marketplaces as digital platforms within e-commerce that facilitate the exchange of payments for goods and services. The advent of marketplaces has necessitated an update to the regulatory environment, as evidenced by the enactment of the Payment Services Directive (PSD2) in 2016. This Directive required traditional marketplaces to obtain financial services licenses. Such trends indicate the existence of intricate causal relationships between the factors propelling the emergence of neobanks. In this instance, the advent of new technologies is effecting a transformation in the institutional environment, thereby necessitating the regulation of the virtual environment for banks. Consequently, the advent of virtual banks is driven by the necessity for marketplaces to attract financial intermediaries that facilitate secure, expedient, and convenient payment processing for customers.

*Condition 5.* Socio-demographic and cultural factors affecting the private sector's need for financial resources, rules and regulations of banks, the level of public confidence in banking institutions, and staffing levels.

*Condition 6:* Technological changes, in particular the spread of the Internet and mobile devices, the growth of smartphone users, the integration of technology into various sectors of the economy, which changes the structure of relations within and outside the banking system, changes in the needs and behavioural habits of users of banking products and services due to digitalisation and expansion of services, the growth of e-commerce and the introduction of e-governance, have had a significant impact on the banking sector. These trends contribute to the digitalisation of the banking system, which has become an even more significant phenomenon during the pandemic.

Macroeconomic and institutional factors have a significant impact on the internal microeconomic factors of bank development, namely, first, the management structure of Ukrainian banks, which determines the segments and areas of activity of banks, their spatial organisation; second, the desire of traditional banks to reduce operating costs (staff remuneration, servicing

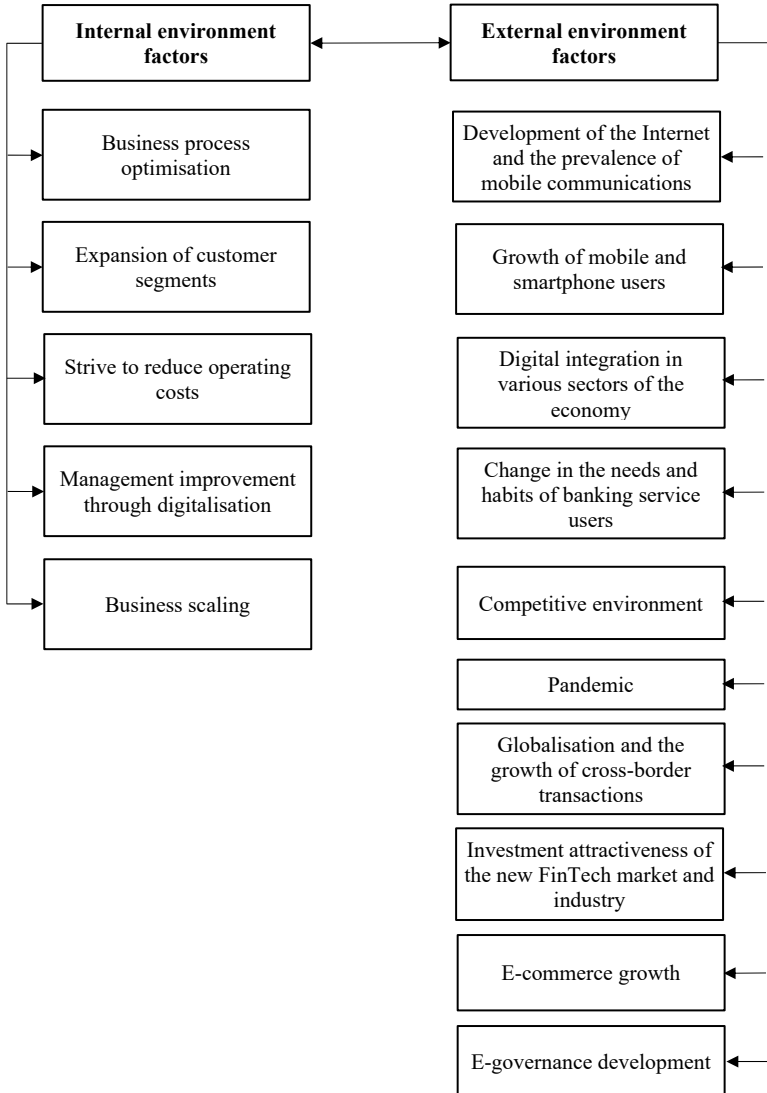
branches and customers), scale up activities to ensure sustainable growth and profitability, attract new customers, automate business processes.

The systematisation of scientific sources allows to identify the following factors of the emergence and development of neobanks [13]:

- growth in the number of Internet users, mobile communications, mobile devices and their widespread use, access to the Internet and social networks, the emergence of online stores, mobile applications and smartphones;
- development of digital technologies and their integration into various sectors of the economy;
- changing needs of banking customers in favour of fast, high-quality remote services, cashless payments, and changing payment habits;
- reducing operating expenses of banking institutions and improving operational efficiency;
- banks' desire to capture the segment of customers dissatisfied with the level of service provided by traditional credit institutions;
- the need to improve management through the digitalisation of banking activities;
- the desire to continuously improve business processes, and on the part of banks to improve their competitive position in the market;
- the pandemic and quarantine restrictions, which accelerated changes in citizens' payment habits in favour of non-cash payments (Figure 1.1).

A. Kasych and I. Naumkina [36] identify the following factors for the development of the digital economy: pandemic, digital finance, social networks, digital identification, data revolution, improved competitive position and investment attractiveness. In the author's opinion, these factors can also be considered drivers of the external financial environment for the dynamic evolution of neobanks. The development of neobanks is contingent upon the necessity for economic agents to engage in online transactions, a consequence of the proliferation of e-commerce, e-governance (including the remote administration of taxes and fees, online payment of fines, remote provision of administrative services, and so forth), electronic transfers, trading, electronic public procurement, the digitalisation of state social assistance, the utilisation of mobile money, and digital currency. The identified factors of the internal and external financial environment for the development of neobanks form a new financial ecosystem for





**Figure 1.1. Factors of the internal and external financial environment for the development of neobanks**

*Source: compiled by the author*

the functioning of banks. It is therefore evident that in order to ensure a competitive position in the market, banks must embrace digitalisation. Accordingly, the National Bank's Strategy until 2025 [81] identifies the digitalisation of the banking system as a catalyst for economic growth, facilitating institutional transformation and generating optimal value for customers. The advancement of the financial ecosystem entails the effective interaction and development of financial relations between its constituent actors.

The advancement of the digital economy and globalisation necessitates the expeditious processing of financial transactions in a secure, straightforward, rapid and continuous manner. The technologies and activities of virtual banks facilitate the simplicity and speed of transactions, thereby contributing to the development of digital finance and the recognition by central banks of their pivotal role in meeting the needs of the digital economy. The NBU Strategy [80] defines digital finance as a driver of economic digitalisation, encompassing the development of a cashless economy, increased financial inclusion, the advancement of financial sector innovations, and the enhancement of cyber security within the financial sector. The NBU is increasingly focusing its efforts on the provision of high-quality, affordable, and safe financial services, which have become a central aspect of its role as an institutional regulator. Consequently, in Ukraine, the private sector and households, as the primary consumers of banking services, are becoming the central element of the financial environment.

Furthermore, it would be beneficial to examine the principal factors that have shaped the development of Ukraine's banking system. These are outlined in the NBU Strategy until 2025 [81], which identifies the following key areas for the advancement of Ukraine's financial ecosystem:

1. *Political context.* 1) Ukraine will persist in its efforts to integrate with Europe and align its legislation with that of the EU; 2) Ukraine will continue to implement structural reforms and pursue institutional development; 3) the primary impediment to more active integration into the European community and attracting substantial investments is the lack of comprehensive judicial reform, which is a pressing societal need; 4) the risk of further escalation of Russia's military aggression in the eastern region of the country persists, which represents a significant obstacle to domestic and foreign investment.

2. *Economic context.* 1) In its foreign economic policy, Ukraine is deepening its relations with the EU with a view to EU membership, paying special attention to cooperation with the IMF; 2) green finance is developing, investments in environmental protection and rational use of natural resources are increasing; 3) transparency of financial transactions and the level of social responsibility are increasing; 4) the popularisation and spread of cryptoassets are encouraging states to develop optimal legal regulation; 5) labour migration and ageing will continue.

3. *Social context.* 1) The epidemic situation in Ukraine and the resulting social tension due to quarantine restrictions will determine the level of trust in government and financial institutions; 2) digitalisation and further development of technology will promote financial services, in particular, increased financial inclusion, online consumption of financial services, and increased demand for cashless transactions; 3) competition for staff from the IT sector makes it difficult to attract specialists to the banking sector.

4. *Technological context.* 1) The development of digitalisation and artificial intelligence technologies will increase the demand for automation, robotics, ready-made, fast technologies and security solutions; 2) financial services are becoming personalised: banks and insurance companies compete for customers with the convenience of mobile applications, using customer data and consumer behaviour, and personalise their services to maintain customer loyalty; 3) central banks are focusing on regulating technology companies that provide financial services.

Competition in the market for innovative banking services to expand business and increase the customer base is one of the drivers of digitisation. As rightly noted by A. Kasych and I. Naumkina [36], modern banks operate in a situation of rapid and irreversible changes in technology, competition in the market of banking services with an increase in the number of non-banking organisations, changes in customer behaviour and regulation. As a result, banks and their operating models will not be able to remain unchanged in the future.

Competition has increased customer demands for service and satisfaction with its use. Changing customer expectations are a new and growing trend that requires neobanks to continually innovate with technology solutions. Technological developments and reforms, such as open banking, have expanded the financial capabilities of technology banks. Competition has

enabled customers to access a wider range of banking service providers at the same time, especially through virtual banks. For example, small and medium-sized enterprises (SMEs), which have had negative experiences with banks' strict underwriting criteria, poor customer service and slow credit processes and decisions, are increasingly adopting financial technology [106]. SMEs are increasingly taking the availability of financial technology into account when making lending or service decisions (estimated to have risen to 25% and could rise to 64% based on current trends).

Mobile banking offers customers a range of advantages that are often not available with traditional branch-based services. These include simplicity, ease of use of both mobile banking and banking products and services, instant access to information on loans and deposits, immediate customer support without the need to visit a branch, accurate information and personalised support, speed of online transactions, and contactless payment transactions.

Central banks are acknowledging the significance of digital transformation within the financial system by developing analogous alternatives to private cryptocurrencies such as Bitcoin. To illustrate, in Mexico, financial regulation precludes banks from engaging in transactions with private cryptocurrencies, which results in a net loss of customers and a concomitant reduction in the level of deposits, with individuals instead seeking financial services from financial technology companies. In a report published on its website on 17 December 2021, Banxico, Mexico's central bank, outlined a plan to create a digital currency platform based on aspects of its own SPEI interbank payment system. However, the report did not include a launch date for the currency, only specifying that it can be used by the public without bank accounts [178].

According to the Atlantic Union [110], as of January 2022, 87 countries (representing more than 90% of global GDP) are exploring the possibility of launching a central bank digital currency (CBDC). For purposes of comparison, in May 2020, only 35 countries were contemplating the launch of the digital currency with the objective of optimising cross-border payments within global partnerships. Nine countries have already initiated the full implementation of digital currency, including the Bahamas, the Eastern Caribbean, and Nigeria. Nigeria has become the latest country to launch a digital currency, designated e-Naira, marking the inaugural

instance of such a launch outside the Caribbean region. At the launch of e-Naira in October 2021, Godwin Emefiele, Governor of the Central Bank of Nigeria, stated that 500 million e-Naira (equivalent to 1.21 million USD) had already been minted. Presently, only those with a bank account are able to access e-Naira by registering with the Nigerian bank identifier BVN. The subsequent phase of implementation will encompass the incorporation of non-banking services utilising the Nigerian National Identification Number (NIN), which has now reached 60 million registrations.

In comparison to the four largest central banks (the United States, the Eurozone, Japan, and the United Kingdom), the United States is the most underdeveloped in this regard. Fourteen countries, including China and South Korea, are currently engaged in the preliminary stages of digital currency implementation, with preparations underway for a potential comprehensive launch. In the absence of new standards and international coordination, the financial system may potentially encounter significant challenges in terms of digital currency interoperability in the future [110].

The advent of globalisation and the concomitant necessity to accelerate cross-border payments and diminish transaction costs have occasioned a need for meticulous consideration of the processes involved in the launch and regulation of digital currencies. The most recent trial of cross-border payments is Project Dunbar, a collaboration between South Africa, Singapore, Malaysia and Australia. In 2019, the United Arab Emirates and Saudi Arabia initiated a bilateral central bank digital currency pilot, designated as Project Aber. The pilot concluded that a DLT currency could facilitate cross-border transactions in a manner that was both secure and efficient. In February 2021, the United Arab Emirates became the fourth country to participate in a joint cross-border digital currency trial, alongside China, Hong Kong, and Thailand.

The primary reasons for the introduction of central bank digital currencies (CBDCs) can be summarised as follows: digital currencies are more cost-effective than physical cash due to lower transaction costs; they can enhance financial inclusion, meaning that the unbanked population can gain easier and safer access to money via a mobile device; digital currencies can compete with private companies, encouraging adherence to standards of transparency and the restriction of illegal activities; and digital currencies can facilitate the swift and unhindered implementation of monetary policy.

## CHAPTER 1

---

---

Thus, the study of the factors of neobanks' development gave grounds to systematise and classify them into macroeconomic and microeconomic ones. Macroeconomic factors include the following:

1. The processes of globalisation and regionalisation, which are leading to a sharp increase in banking competition and the need for constant competition.

2. European integration processes and the corresponding alignment of banking regulation legislation with various technological challenges and threats.

3. The monetary policy of the world's central banks, which sets trends in the regulation of neobanks and determines national strategies for the development of the banking system as a whole.

4. Legal norms in related areas (legislation governing capital markets, protection of creditors' rights, property rights, virtual currencies, etc.).

5. The macroeconomic and political situation in the country and globally, which affects the investment climate both at the national level and in certain regions, as well as the potential for scaling up neobanking operations through investment.

6. Institutional factors or institutional developments that determine the environment in which neobanks operate and their potential to grow as leading players in the financial ecosystem (e.g., the development of markets, e-commerce, e-democracy – essentially new institutions).

7. Socio-demographic and cultural factors that shape the demand for technological financial services.

8. Technological factors, such as Internet penetration, the prevalence of mobile devices, the growing number of smartphone users and the integration of technology into various sectors of the economy.

The microeconomic factors influencing neobank development include:

1. The management structure of banks, which affects the organization of virtual banks (platform, app, specific technological functions);

2. Cost reduction, scaling of operations, attracting new customers, and business process automation as interrelated factors.

The study also identified the key factors in the internal and external environments that contribute to the evolution of virtual banks. These internal and external factors shape a new financial ecosystem where digitalization is essential for maintaining a competitive market position. In the context of

neobanks in Ukraine, political, economic, social, and technological factors have been highlighted as crucial for their development.

### **1.3. The Concept of Global Digital Transformation as a Basis for the Development of Neobanks**

The expansion of banking institutions resulted in the establishment of a foundational banking business model predicated on the physical delivery of services through a network of branches. Nevertheless, the fundamental operations of the bank have remained unaltered; however, the manner in which they are conducted and the methods of delivering products to customers have undergone substantial transformations. In terms of the distribution channel and the level of reliance on innovative technologies for the sale and distribution of financial products and services, it can be argued that there are three main categories of banking business models [249]. Consequently, the digital bank business model allows banks to engage in the activities characteristic of the neobank business model. The provision of services by these banks may be facilitated by two means: firstly, by cooperating with an existing bank; and secondly, by obtaining a full banking licence through an appropriate application process. In consequence, a financial institution operating in accordance with the neobank business model may be granted a licence to provide payment accounts exclusively through online channels. This approach gained popularity in the wake of the 2008 financial crisis, as it permitted institutions that did not rely extensively on a physical branch network to provide financial products and services that had previously been the domain of traditional banks [276; 277]. It is notable that neobanks exhibit notable distinctions from conventional banks, despite offering comparable or analogous financial products. The concept of a neobank is distinguished by its cost-effective structure and the provision of multifunctional and personalised products and services that are readily accessible from any location at any time.

Over the past decade, there have been notable shifts in the manner in which banking products and services are provided to customers, as well as in the nature of the organisations responsible for their delivery. It is challenging to ascertain whether there are substantial discrepancies between the financial services and products provided by various banking business models. However, there are discernible contrasts in the strategies

## CHAPTER 1

---

---

employed to facilitate the delivery of these offerings to the end user, as well as in the product portfolios encompassed by the predominant business models [249]. The principal distinctions can be discerned in the duration of product accessibility, the time needed to attend to a customer, costs, and the geographical scope of services. Furthermore, the efficacy of customer service is inextricably linked to the experience and competence of bank personnel in conventional banking environments. Conversely, in the digital banking environment, customers can anticipate near-instantaneous service. A further notable distinction pertains to the geographical scope of the bank. A traditional bank may serve only the regions where it has physical branches, whereas a digital bank is not constrained by such geographical limitations and can provide its services almost anywhere. Consequently, traditional banking models are characterised by high costs, which are a consequence of the necessity to maintain an extensive network of branches. In contrast, the neobank model represents a comprehensive online banking model that obviates the necessity for substantial maintenance and labour costs. A further noteworthy distinction pertains to the technological components deployed in each model. Neobanks utilise cutting-edge technology, whereas traditional models may depend on technology that is no longer current. Furthermore, notable discrepancies exist with regard to the manner in which each model and organisational structure utilises data [276]. Neobanks use data in a way that enhances their understanding of customer requirements, enabling them to modify existing products and services or develop new ones. These banks have established themselves as customer-centric institutions. In contrast, conventional banks have limited ability to analyse their data in depth and prioritise product development in order to achieve economies of scale and maximise the use of their expensive equipment and facilities. In addition, the credit assessment models used by conventional banks are gradually becoming outdated as a result of modifications to some of the hard-coded characteristics [277]. Furthermore, technologically sophisticated financial institutions, such as digital banks or neobanks, can leverage technology to enhance their competitive advantage and tailor their offerings to align with consumer demands.

For an extended period, the banking sector was regarded as relatively conservative in its deployment of cutting-edge technologies. In the contemporary era, however, banking institutions and financial companies



are not eschewing technological advancement, primarily due to the considerable intensification of competition from financial companies whose activities are directly related to the provision of banking and other financial services. Consequently, an increasing number of studies in the scientific literature are examining the issue of digital transformation as a prerequisite for the development of virtual banks and online banking. The works of scholars V. Butenko, A. Drozdyna [9], O. Breheda [8], L. Zveruk [26], I. Liutyi [47], O. Moshenets, O. Solodka, B. King and others examine the challenges, problems and prospects for the digital transformation of banks. They also provide different approaches to the concept of digital banking and internet banking. Furthermore, the research examines the distinctive characteristics of the digital transformation of banking in Ukraine and evaluates the potential for the advancement of neobanking. Scholars have established the theoretical basis for ensuring financial security in the context of digitalisation in the economy [12], digitalisation of banking activities [6; 14; 24; 30; 50; 77], and digital banking (Internet, chatbots, mobile applications, SMS messages, etc.).

The concept of digitalisation can be defined as the practical transformation of processes or objects that are originally (partially or fully) physical or analogue, whereby they are converted into digital ones. This process involves the conversion of these objects into those based on discrete signals. In addition to the potential for efficiency gains, the effect of digital transformation is that it renders the object more adaptable and flexible to the current conditions of technological development. This allows for an increase in customer satisfaction and the availability of any services. One of the forms of digitalisation in the banking sector is the creation of a financial ecosystem that functions as a logical extension of the institution's core business. This method addresses existing issues related to the efficiency of the institution's core business in its traditional form by transferring it to the Internet space through the use of mobile applications, chatbots, online assistants, and other digital tools [45].

Digitalisation is viewed as the enhancement of existing business processes, driving changes in business models and products through the implementation of digital technologies such as internet-based products, cyber systems, cloud, mobile, quantum, biometric, and 3D technologies, as well as blockchain, among others. As noted by V. Butenko and A. Drozdyna [9],

digitalisation in banking practice entails not only the development of mobile applications and the provision of remote access to basic banking services but also the complete transformation of banking infrastructure and a shift in the management model of banking institutions. This involves creating fully digital products that eliminate the need for paper documentation, as well as tight integration of banking software systems with CRM systems and software that allows tracking customer activity, analysing the information received and predicting future customer needs based on past experience. Finally, it simplifies customer service and interaction while expanding the range of services provided.

Banking institutions are actively transforming their operational strategies as a foundation for the development of innovative banking business models. The most common among these models are considered to be: the "smart multichannel bank," the "socially-oriented bank," the "customer-oriented bank," and the bank as a "financial/non-financial digital ecosystem" [52] (Table 1.1). Most banks adhere to the "smart multichannel bank" model. However, in practice, various elements of these strategies can often be observed, as there is a growing trend towards adopting an omnichannel marketing strategy in banking operations.

Omnichannel customer interaction is a new integrated, more personalised approach to customers, which implies the ability to provide services to customers through different distribution channels, virtual or real, to inform them quickly and to take into account their requests. It is also worth noting that omnichannel interaction takes place within the framework of financial institutions (ecosystems – dynamic communities of different actors that jointly develop, shape, create and deliver new value through more advanced models of simultaneous cooperation and competition) [64]. The financial services ecosystem can be defined as a business model for financial intermediation that enables more productive cooperation and competition to create a better customer experience, in which partnerships are established with all producers of financial products and services and related products [64].

The "smart omnichannel bank" model is based on omnichannel integration with a focus on digital channels. One can identify the following main elements of this model [52]: first, it is state-of-the-art omnichannel integration focused on digital channels; second, it is comprehensive analytics based on effective customer data collection, segmentation and

predictive modelling to create a balanced portfolio of banking products; third, it is real-time management; fourth, it is innovative advisory services related to the use of digital channels and personal analytics; and fifth, it is product offerings and pricing schemes based on micro-segments. In her dissertation study, I. Karcheva employs an analytical approach to examine existing classifications of banking innovations. She considers the trends in the development of innovative activities of banks, including technological advancements, automation of banking processes, virtualisation and internetisation, institutional changes, and regulatory shifts. She then classifies modern banking innovations based on the following criteria [35]:

- Product innovations (online products, real-time payments, mobile, cardless, contactless payments; remote lending, payment mini-terminal);
- transformation of sales channels (omnichannel (omnidirectional)) service, new branch (ecosystem for customer service), development and expansion of the RASS, use of social media as a new channel, automation and self-service);
- technological innovations (cloud data storage, cloud computing);
- processing of Big Data, open banking – API, intelligent data analysis, BaaS – banking as a service, which is characterised by its component nature;
- institutional changes (improvement of banking legislation, optimisation of the branch network, internetisation and virtualisation, optimisation of business processes, organisational and economic innovations);
- risk management (scoring models, integrated risk management systems, forecasting and modelling, stress testing, systemic risk management);
- regulation and management (corporate and strategic governance, centralisation of management, early warning systems, capital management, improvement of market withdrawal mechanisms);
- market innovations (context-dependent and geolocation-based proactive servicing, 24/7 digital banking, banking security, marketing innovations, and so forth [35]).

One of the forms of digitalisation in the banking sector is the creation of a financial ecosystem, which acts as a logical extension of the institution's core business and is also a method of solving existing problems related to the efficiency of the institution's core business in its traditional form by transferring it to the internet. This is done, among other things, through mobile applications, chatbots, online assistants, etc. Today, the transition to the digital world has become a general trend for all market participants [45].

Table 1.1

**Innovative models of banking business**

Model	Key elements
Smart omnichannel bank	Modern omnichannel integration, focusing on digital channels and integrated architecture. Comprehensive analytics based on efficient customer data collection, micro-segmentation and predictive modelling to determine a balanced product portfolio. Management in real-time interaction mode. Advanced advisory services using digital channels and personal analytics. Product offerings and associated pricing schemes based on micro-segments and optimised for channel characteristics.
Socially-oriented bank	Social media monitoring to identify opportunities to engage customers, mitigate risks and ensure rapid response to challenges. Social digital marketing, based on clustering to enable the bank to identify relevant content for individual social media users. Social CRM, which updates customer data with information from social media to help create more effective offers.
Bank as a financial or non-financial digital ecosystem	Mobile payments based on NFC or mobile wallet technology, which strengthens the bank's competitiveness in the payments sector and helps to attract and retain customers. Use of mobile commerce tools focused on financial and non-financial offers, mobile marketing, mobile loyalty and mobile analytics. Alliances and partnerships with non-banking institutions and co-creation of content.

*Source: compiled by the author on the basis of [9; 27; 34; 43]*

The latest developments in the financial system, collectively known as FinTech companies, are based on the extensive use of digital technologies in the delivery of financial services. In the banking market, the activities and product offerings of FinTech companies are represented by a range of services, including bank payments (including mobile payments), personal loans and direct payments (P2P), insurance and even financial advice. These services have historically been considered part of a comprehensive traditional banking service. FinTech companies focus on three main segments of retail banking, namely payments, lending and borrowing, and insurance. This focus allows them to identify areas where there is an opportunity to bridge the gap between customer expectations and the financial institution's

ability to meet their demand. The development of business models for these companies is based on a number of key characteristics, including accessibility, transparency, ease of customer acquisition, ease of use of financial instruments and banking services, attractiveness to the customer, and relevance to the original specialisation. In the contemporary era, the financial sector is demonstrating a growing inclination towards the tenets of digital ecosystems and platforms, which are hallmarks of the FinTech paradigm. In more recent times, banks have begun to implement the creation of financial supermarkets, which offer customers a wide range of products and services, not only banking services, but also those provided by companies with which the bank has a collaborative relationship. This approach is beneficial and profitable for all parties involved: for customers, for the banks themselves and for their partners, who have been able to increase sales of their products at the expense of the financial institutions' customers. In addition, banks have been able to reduce the costs of traditional positioning of their own services and customer service, as well as create additional sources of income by developing new products and adapting them to the modern environment [45]. In the study by I. Kochuma [43], the author identifies the systemic components of the digital transformation of the modern banking sector. These are as follows: 1) the application of modern digital technologies in the banking sector; 2) the interaction with new financial market participants; 3) the use of innovative models of banking business; 4) the stage of development of digital transformation of the banking system.

The National Bank of Ukraine defines digitalisation as a mechanism of economic growth due to the ability of technology to positively influence the efficiency, effectiveness, cost and quality of economic, social and personal activities [11]. Digitalisation ensures the optimisation of banks' business processes, reduction of bureaucratic procedures, introduction of innovative services and increased competitiveness. During the COVID-19 pandemic, minimising social contacts through the introduction of online services was important. As of October 2020, more than 25 million Ukrainian citizens were able to use the services of banks using digital documents, and the digital document sharing service is available in PrivatBank, Monobank and A-Bank, with more than 30 banks preparing to switch to a new format of customer interaction. The process of digitisation of the Ukrainian banking

system is being facilitated by the technical preparation of the Ministry of Digital Transformation, which is developing the necessary documentation, describing it, and assisting banks with implementation and testing. The NBU, together with the Ministry of Digital Transformation, is implementing the concept of the "Digital State" [53]; in particular, Ukraine has become one of the first countries in the world to implement the possibility of transferring digital documents from clients to a banking institution, which has significantly simplified the implementation of the main functions of banks. The transfer (sharing) of e-passports in the Diia app is a service that allows citizens to identify themselves in a bank and provide documents in digital format to open a bank account without having to visit a branch.

The national literature identifies the following key stages of digital transformation in the banking sector:

1. *Digital channels emergence*. This stage characterises the beginning of digital changes in business, where the user is at the centre of the system, expressing a need to interact with the bank through any available channels at a convenient time: the development of ATMs, the spread of POS terminals, the emergence of internet banks, mobile banks, the use of chatbots, etc.

2. *Digital products emergence*. Advanced software is used to create E2E (end-to-end) products designed to meet customers' financial needs around the clock: contactless payments, virtual cards, Big Data, artificial intelligence, machine learning, etc.

3. *Full digital service cycle creation*. At this stage, banks are not only adding digital services to their traditional products, but are also changing their business model and expanding their business boundaries.

4. *"Digital Brain" creation*. It automatically and continuously analyses data across all business segments, departments, product lines and services, giving the bank a more complete understanding of its capabilities and customer needs.

5. *"Digital DNA" creation*. This involves the formation of a new coordinate system for making strategic decisions throughout its life cycle [46, p. 73].

The concept of digital transformation in the banking sector originated in the early 1990s and has evolved in conjunction with the emergence of neobanks. As illustrated in Table 1.2, this evolution can be summarised as follows.

Table 1.2

**The concept of global digital transformation  
and stages of neobanking development**

<b>Period</b>	<b>Characteristics of the global digital transformation</b>	<b>Neobanking development stage</b>
1989-2000	Telephone banking, some elements of Internet banking (e-mail, SMS, phone calls)	Remote service concept with some elements of Internet banking
2000-2010	Online banking, development of online banking platforms, continuation of call centres	Online banking concept (Internet banking for individuals and legal entities)
2010 - to date	Expansion of the functionality of digital platforms, use of messengers and chatbots, mobile applications, and artificial intelligence to analyse customer data	Digital banking transformation concept, open banking concept

*Source: compiled by the author*

An analysis of the scientific literature and technological characteristics of the global digital transformation allows us to identify the main stages of neobanking development:

- 1990-2000 – the concept of remote work without branches, based on the operation of call centres and web portals for round-the-clock customer service;

- 2000-2010 – the concept of Internet banking (neobanking), the emergence of Internet banks, the active development of telephone banking, and the integration of technology into banking activities through call centres and Internet portals;

- 2010 – to date – the the concept of digital transformation of banking and open banking [236]: introduction of data analytics, blockchain, development of digital currencies as a new form of money, spread of the mobile banking concept due to the growing number of mobile device users, active use of communication and service tools by banks such as messengers, mobile applications, artificial intelligence, chatbots for customer support, and, as a result, the emergence and rapid development of new financial start-ups (e.g., Monzo, Revolut, Starling, Atom, Wise). Over the past five years, the concept of open banking has been the subject of considerable development, with the objective of uniting payment service providers and technology platforms into a unified payment ecosystem.

## CHAPTER 1

---

As B. King rightly notes [172], over the past 40 years (since the early 1980s), the world has moved from branches as the only channel of access to banking services to multichannel (several ways of communicating with customers) and omnichannel, and finally to "digital omnichannel" as the most effective way of interacting with customers in a digital format. Some banking institutions have initiated a partial digital transformation by integrating new technologies into existing processes (e.g., website integration), thereby streamlining certain business operations. Nevertheless, a number of pioneering start-ups have facilitated customer access to services via mobile devices, irrespective of their banking product affiliation. This has precipitated the advent of a novel banking paradigm. The innovation concerned the ability to open accounts, obtain loans or make deposits independently by remotely submitting documents via a mobile device, receiving a physical card by post, and conducting transactions instantly.

The recent wave of digitalisation in banking – mainly in payments – and the use of access and network technologies have created a variety of opportunities for new entrants, such as financial technology companies and neobanks, non-banks, enabling them to occupy certain market niches, redefine their market position and redefine value in the context of customer centricity. In this regard, banking institutions can choose to embrace change because of the opportunities that arise from the integration of technology, which enables interaction with a larger ecosystem of market participants and other service providers. Banks also have the opportunity to protect their market position by focusing on developing competitive solutions for all customers and products across different banking segments. Adoption of the new version of the Payment Systems Directive 2 or the Second EU Payment Directive (PSD2 is a Directive that requires traditional marketplaces to obtain licences to provide financial services [193]), which was implemented in 2018 in Europe, as well as the Open Banking Initiative in the UK, aimed at creating an open and secure environment through the introduction of an open API – a publicly available application programming interface that provides developers with software access to their own software or web service. An API is a set of requirements that define the manner in which one application can communicate and interact with another.

The Second EU Payment Directive represents a regulatory framework for payment services, implemented in January 2016 on the basis of



the 2009 Payment Directive [131]. The Directive sets forth expanded requirements pertaining to the information, rights, and obligations of users and providers of payment services that facilitate the transfer of funds. The principal objectives of PSD2 are to integrate and support a more efficient EU payments market, as well as to foster competition in the financial and technological environment, which is witnessing the emergence and development of new players (financial and technological start-ups and virtual banks, services, etc.) and a new generation of payment products and services. The adoption of the Second EU Payment Directive is also aimed at increasing the level of innovation in the financial sector, ensuring a higher level of transparency, security, quality of service, and reducing the cost of services for users. In order to stimulate competition, the Directive sets out requirements for banks to ensure the protection of customers' personal data and prevent unlawful access to customer data and accounts by third parties. In this context, APIs are considered to be the most reliable and proven technologies to facilitate safe and secure access to customer accounts. The PSD2 regulatory framework outlines the roles and responsibilities of account information service providers (AISPS) and payment initiation service providers (PISPS).

In parallel with the EU regulatory reform, in August 2015 the UK government, through the Treasury, commissioned an Open Banking Working Group to develop a regulatory framework for an open API standard in the banking sector, which became the basis for creating an ecosystem for new innovative payments. Unlike PSD2, the UK's open banking initiative aimed to define and develop the necessary APIs, as well as security and messaging standards.

Nevertheless, despite the legislative framework, the potential consequences of such regulation, the opportunities for different actors in the financial market, and the mechanisms for implementing the new legislative provisions remain uncertain. Previous regulatory reforms aimed at increasing competition in various EU network industries, such as telecommunications, energy, and transport, have generally been associated with an impact on long-term price levels and productivity [177]. Empirical studies demonstrate an enhancement in the calibre of services provided to consumers of financial services, as well as an increase in investment in research, development and innovation. Nevertheless, the attainment of

such outcomes frequently hinges upon the capacity of participants across a spectrum of economic sectors, including the banking sector and the labour market. This is due to the necessity of aligning these outcomes with the evolving macroeconomic and regulatory landscape [45].

In the context of a competitive banking environment, where a variety of platforms are in operation, those that are the most straightforward to use, simple and convenient for users – that is to say, wholesale and retail banking customers – will ultimately prevail. It is therefore the ease of use that will determine the customer experience. Concurrently, banking institutions must guarantee the expansion and administration of the technological component (platform, mobile application, etc.) through the investment in fundamental technological solutions that enhance the enterprise and provide value to customers. The formation of such an ecosystem will result in an increase in potential transaction costs. In the context of the digital transformation and transition to an open API economy, banks and other licensing institutions seeking to become leaders in the financial platform market must also determine the level of openness that will determine the growth potential of their customer base [236].

Financial technology experts and practitioners have attempted to create a taxonomy of banking platforms, differentiating between various conceptualisations of banking, including banking as a platform, banking as a service, banking as a marketplace, and other organisational structures within the banking sector. Such classifications are useful, but they reflect a general paradigm rather than a systematisation of the concepts of banks' strategic activities in developing platforms that meet the requirements for specific roles and characteristics. A valuable scientific development is the classification of various functions of bank platforms [145], which are performed by platform users depending on the level of their openness, forming a network of connections (Table 1.3).

In the academic literature, the main platform users are classified as follows: 1) those who utilise the platform to generate demand, frequently designated as "end users"; 2) those who utilise the platform to generate supply, including innovative app developers offering enhancements to the core platform; 3) those who operate the platform as the primary point of contact for users and ensure the functionality of the digital infrastructure; and 4) those who hold ownership rights and are responsible for determining

access to the platform and the established network, as well as overseeing the development of technological solutions.

Table 1.3

**Classification of different functions of bank platforms performed by platform users depending on their level of openness**

Users	Open source API platforms source code (e.g., the Open Banking Project)	API banking platforms (e.g., token)	Challenger banks (Monzo, Starling)	The majority of existing traditional banks
Platform users who create demand	Open	Open	Open	Open
Platform users who generate supply and offer	Open	Open	Open	Closed
Platform providers	Open	Open	Closed	Closed
Platform sponsors	Open	Closed	Closed	Closed

Source: [145]

Decision-making for each of the above users will shape different strategies for banking openness in the context of the banking platform, but also helps to determine the level of banking openness in each case.

It can be argued that the concept of digital transformation provides the foundation for the development of neobanking and the adaptation of banking activities to the dynamic conditions of technological development. The process of digitalisation is regarded as a paradigm for optimising the organisation of existing business processes, which in turn gives rise to changes in the strategies of banks and their business models, services, and products through the introduction of digital technologies. The digitalisation of banks entails the development of mobile applications and remote access to fundamental banking services, a comprehensive transformation of the banking infrastructure and a shift in the management model of a banking institution. Banking institutions are actively transforming their business strategies to include a digital component as the basis for innovative banking business models. The most common among them are: "smart omnichannel bank", "socially-oriented bank", "customer-oriented bank" and a bank in

the form of a "financial/non-financial digital ecosystem". The main stages of digitalisation in the banking sector that contributed to the development of neobanks are: emergence of digital channels, emergence of digital products, creation of a full cycle of digital services, creation of a "digital brain", creation of digital DNA. Based on the analysis of scientific research, the author identifies three stages of development of neobanks with the allocation of concepts and technologies used at each stage: 1989-2000 – the concept of remote servicing with some elements of Internet banking; 2000-2010 – the concept of online banking (Internet banking of individuals and legal entities), 2010 – to the present day – the concept of digital transformation of banking, the concept of open banking. Some banking institutions have initiated a partial digital transformation by integrating new technologies into traditional activities (e.g., website integration), thereby streamlining specific business processes associated with service delivery. However, a number of pioneering start-ups have facilitated customer access to services via mobile devices, independent of any banking product, which has given rise to a novel form of banking. Furthermore, digital transformation has precipitated a shift in the regulatory environment, delineating the obligations for neobanks, their degree of transparency and openness.

### **Conclusions to Chapter 1**

The following conclusions were drawn in Chapter 1 of this research:

– It is evident that neobanks, in their economic essence at both macro- and micro-levels, should be regarded as integral components of the financial ecosystem in the context of global digital transformation. A neobank is both a financial institution and an entity of an innovative financial ecosystem in a high-tech environment. Its interactions with other participants and customers are based on the principles of transparency, openness, and customer focus.

– The concept of global digital transformation provides the foundation for the development of neobanking and the adaptation of banking activities to accommodate the evolving technological landscape. Digitalisation should be regarded as a paradigm for enhancing the organisation of existing business processes, which gives rise to modifications in the strategies of banks and their services through the proactive incorporation of digital technologies as the foundation for innovative models of neobanks.

– The global digital transformation of the banking sector in its theoretical and methodological foundations should focus on the following areas: 1) transition from simple to complex banking services, from one-time to renewable services, from standardised to individualised services; 2) dynamic development of the open banking concept; 3) transition to new stages of digital transformation in the banking sector by creating digital business models for neobanks; 4) crypto-transformation, development of private cryptocurrencies by banking institutions, digital currencies of central banks; 5) transformation of the regulatory environment; 6) development of the financial and technological ecosystem, transformation of the financial technology industry into an independent sector of the economy.

– In the context of the institutional and economic approach, the term "neobank" is defined as a financial institution that employs a distinctive strategy and an innovative concept of development within the financial ecosystem. It provides remote banking services to customers on the basis of a licence, utilising digital technologies and the Internet to offer round-the-clock access to accounts and banking operations in accordance with user requests and requirements.

– The principal distinction between the concept of neobanking and those of Internet and mobile banking is that the latter represent an additional component for the provision of remote banking services to customers. The nature of neobanks varies depending on the technological solutions, strategy, and positioning concept employed. They may be conceived as a standalone platform for the delivery of banking services, operating under the auspices of traditional banking licences, or alternatively, as a personal banking tool based on a mobile application, conceived as a discrete technological product.

– Neobanking is influenced by a wide range of macro- and microeconomic factors. Macroeconomic factors include: 1) globalisation and regionalisation processes; 2) European integration processes and approximation of legislation in the field of banking regulation; 3) monetary policy of central banks; 4) macroeconomic and political situation in the country and in the world, which affects the investment climate, the possibility of scaling up neobanks' activities by attracting investments; 5) institutional factors that determine the environment for neobanks and their development potential (development of marketplaces, e-commerce,

## CHAPTER 1

---

---

e-democracy); 6) socio-demographic and cultural factors that shape the demand for technological financial services; 7) technological factors, such as the widespread availability of the Internet, mobile devices, the growing number of smartphone users, and the integration of technology into various sectors of the economy.

– The microeconomic factors influencing the development of neobanks include: 1) the management structure of banks, which impacts the organization of virtual banking operations (platform, application, specific technological functions); 2) cost reduction, scaling operations, attracting new customers, and business process automation as mutually reinforcing factors.

– The principal stages of digitalisation in the banking sector that facilitated the advent of neobanks can be delineated as follows: the emergence of digital channels, the emergence of digital products, the creation of a comprehensive digital service ecosystem, the creation of a "digital brain," and "digital DNA". The study identifies three stages of development of neobanks, highlighting the concepts and technologies used at each stage: 1) 1989-2000 – the concept of remote servicing with some elements of Internet banking; 2) 2000-2010 – the concept of online banking (Internet banking of individuals and legal entities); 3) 2010 – to the present day – the concept of digital transformation of banking, the concept of open banking.