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INTRODUCTION

Finances are the nerves of the state... [this] is the Archimedes' principle that drives the world.
—Armand-Jean du Plessis, duc de Richelieu

Extended contemplations, animated debates, and thorough scrutiny of global banking systems have significantly reshaped the perspectives of the author of this book. Exploring the paradigmatic foundation of contemporary banking systems, this work delves into the factors that drove the paradigm shift within banking and assesses its far-reaching consequences. The question of whether the state should establish a financial system paradigm is also addressed. Furthermore, the book examines potential paradigm shifts in the post-crisis era. We anticipate that readers will uncover responses to these inquiries and numerous others within the pages of our publication.

The prolonged evolution of financial markets, spurred by global transformations, has given rise to concurrent processes in banking that exhibit significant paradigmatic distinctions among the central banking systems worldwide. The idiosyncrasies in mechanisms and regulatory approaches within individual countries' banking sectors have yielded substantial shifts in perspectives on banking. This impelled the author to conduct a more profound analysis of global banking systems.

While the conventional portrayal of banks as institutions facilitating the exchange of monetary assets between savers and borrowers, without entailing the creation of new money, remains prevalent, proponents of an alternative viewpoint highlight that in the contemporary landscape, banks predominantly fund borrowers through the creation of money. Both assertions find representation in diverse theoretical and conceptual frameworks concerning the fundamental nature of a bank as a financial intermediation entity.

Following many studies, we may suggest that **a bank is a financial and credit institution endowed with economic and legal independence, which carries out banking operations by national legislation, in which economic relations are established in the field of monetary policy and monetary circulation to make a profit and meet customers' ends. Even**

if the task of making a profit is not set, as in Islamic banks, meeting customers' needs remains the bank's goal.

Contemporary economic realities necessitate a comprehensive exploration of national banking systems. We firmly believe that scrutinising paradigmatic shifts within both foreign and domestic banking systems is imperative to ascertain their efficacy and resilience in the face of changes within the volatile and crisis-prone global competitive landscape.

In the 1990s, it appeared that globalisation would heighten interdependence among banking systems while also fostering a gradual alignment of lending processes with the economic landscape, institutional framework, and regulatory structure of specific groups of nations that had previously exhibited significant disparities in financial intermediation approaches. The connection between domestic savings and lending volumes became less pronounced in open economies, including those in transition. A notable instance is the credit surge observed during 2006–2008 in Central and Eastern Europe, as well as Ukraine, which was predominantly financed through borrowing from foreign banking institutions.

Well-known foreign scientists contributed to the theoretical understanding of the evolutionary development of banking systems in the global economic space: P. Samuelson, J. Sinkey, F. Hayek, J. Hicks, J. Schumpeter, Yu. Veshkin, D.V. Abdullah, J. Attali, B. Bernanke, A. Greenspan, M. Camdessus, H. Avahian, E. Avgouleas, F. Mishkin, etc. Domestic scientists B. Danylyshyn, S. Arzhevitin, S. Tsyganov, I. Granovska, Y. Onyschenko, V. Borysevych, O. Aborchi, O. Mishchenko, M. Savluk, V. Shevchuk, etc. made their contribution. O. Baranovskyi, I. Diakonova, G. Karcheva, E. Mordan, P. Melnyk, O. Mozgovyi, L. Tarangul, A. Filipenko, O. Gordei, and V. Kyrylenko, O. Sharova, O. Shnyrkova, A. Chukhna, and others investigated banking systems in a broader analytical context. Peculiarities of regulation and organisation of banking systems of foreign countries and Ukraine were studied by M. Shchegliuk, L. Konopatska, M. Goivaniuk, I. Baryliuk, N. Paitra, Z. Vasylchenko, O. Vasiurenko, O. Sydorenko, O. Mozghovyi, O. Pavliuk, R. Novikova, M. Amara, S. Babenkova and others.

The fundamental works of foreign and domestic scholars laid the theoretical and methodological foundations for interpreting the essence of banking and the functioning of banking systems. However, these works do not focus on paradigmatic features of the central banking systems of today; they lack a holistic conceptualisation of the evolution of banking systems and the methodology of economic and statistical analyses of qualitative characteristics of banking systems, which are essential for determining the financial intermediation. Theoretical approaches to the positioning of the banking system in modern models of monetary policy remain to be

improved since they differ in terms of competing schools of economic theory and identification of banking systems' stages, including Ukraine, based on systemic institutional and regulatory changes.

Our study is centred on the comprehensive analysis of the functional and institutional attributes inherent in the banking systems of the principal "centres" within the global economy. Leveraging insights from our examination of both accessible and institutional characteristics within our own banking systems, we have established a conceptual framework that underpins the investigation into paradigmatic disparities and the evolutionary trajectories of banking systems amid the backdrop of global shifts. In doing so, we delve into the institutional milieu that shapes contemporary macroeconomic processes.

Furthermore, we have illuminated the processes underpinning the formation and execution of intermediary functions by commercial banks within the worldwide financial landscape. This entails refining the methodological aspects that contribute to bolstering the effectiveness and competitiveness of banking systems.

We tried to solve several practical issues by setting a clear goal given all the above.

Chapter 1, *'Paradigmatic Basis of Modern Banking Systems',* analyses the change of theoretical views on the banking system's functioning, paradigmatic status and differentiation of modern banking systems, and global dimensions in the paradigm of international banks (IBRD, EBRD, international development banks). We have *improved* the structural and substantive characteristics of theoretical approaches to the positioning of the banking system in modern models of monetary policy in the context of competing schools of economic theory. The main differences relate to the substantive and methodological discourse, principles, and institutional mechanisms of banking management in the Anglo-Saxon, European and Islamic banking systems. We have proved that the paradigmatic basis in the Anglo-Saxon banking sector is theoretical positions, methodological principles, and institutional mechanisms of neoclassical economic doctrine. Keynesian (post-Keynesian) scientific paradigm prevails in the European continental banking system; the paradigm of the Islamic banking system has an interdisciplinary nature, i.e., the use of Sharia law in the context of ethics and morals and economic principles and rules that ensure the optimal functioning of banking institutions given socially important goals facing the banking sector of Islamic countries.

Chapter 2, '*Methodological Aspects of Studying the Evolution of Banking Systems Within the Context of Global Transformations',* defines the paradigmatic standards for transforming European, Anglo-Saxon and

Islamic banking systems. Significant emphasis is also placed on the conceptual foundations of the effective development of the banking system of Ukraine in the transformation of the national economic space. The main result of the Chapter is that the convergence of lending volumes and the dependence of the lending process on savings are local. Thus, European countries only partially confirmed the initial hypothesis about the intersection of banking systems in globalisation.

Chapter 3, '***World Financial Environment for the Development of Banking Systems',*** presents "crisis" evolution. It proposes considering the crisis as an indicator of the financial system's weakness, characterised by globalisation and unpredictability, complex political, economic, financial, social, and psychological phenomena taking place at different times. The chapter highlights four models of financial systems functioning in the conditions of globalisation and the role of central banks in them. It studies the measures taken by central banks to ensure the sustainable development of the country's banking system. Noteworthy are the improved methodological approaches to the analysis of the links between banking and the functioning of financial markets, which revealed the peculiarities of the banking sector as an instrumental environment for the multiplication of money, especially for low-income countries; established the optimal ratio between the two types of financial intermediation with the help of commercial banks or financial market companies; developed reliable banking regulators that can ensure the stability of not only local financial markets but also the global economic environment.

Chapter 4, '*Functioning of the Banking Systems of Foreign Countries and Ukraine After the Global Financial Crisis of 2008 – 2009',* examines the state of modern European, Anglo-Saxon, and Islamic banking systems and the effectiveness of the banking system of Ukraine. *We showed* that the financial crisis of 2008–2009 was affected by several paradigmatic shifts in the functioning of banking institutions. First, the ultra-low interest rate policy has led to a reduction in bank margins and the profitability of commercial banks. Second, the number of commercial banks in Anglo-Saxon and European countries declined significantly.

Chapter 5, *'Mechanism for Regulating the Organisation and Functioning of Banking Systems of Foreign Countries and Ukraine',* examines the evolution of state regulation of European, Anglo-Saxon, and Islamic banking systems and the corresponding processes in Ukraine. We are convinced of the need for regulatory changes in national banking systems that do not impose restrictions on capital movements but mainly increase the reliability of the banking system. It revealed the potential benefits of implementing the Basel Committee's rules on commercial banks'

capital adequacy. It proved that this step is universal in today's globalised financial environment but differs in its impact on lending volumes and the loan portfolio's quality in individual countries.

Chapter 6, *'Algorithm of Efficiency and Competitiveness of The Banking System',* consistently considers the problems and consequences of the Basel III agreement in the activities of foreign and Ukrainian banks, models for verifying the stability of banking systems, and the features of digital elements in banking.

The significance and intricacy of the subjects outlined by the authors necessitate their theoretical framing and an evaluation of the banking systems' reliance on technological advancements. The integration of contemporary digital platforms offers a harmonious equilibrium between enhancing operational efficacy and susceptibility to diverse cyber threats and other malicious actions. This scope encompasses the establishment of international frameworks for coordinating economic policies to facilitate worldwide oversight through stress tests, gauging individual nations' susceptibility to crises, and ascertaining equilibrium exchange rates for the globe's major economies.

When criticising, criticise the opinion, not its author.
—Leonardo da Vinci

While not aiming to exhaustively address every aspect and conclusion presented above, the authors acknowledge that certain inquiries may not have been completely resolved, and certain topics may have received only a cursory exploration. Consequently, the authors are appreciative of constructive criticism, recommendations, and suggestions from readers. These inputs are welcomed as valuable contributions to further enhance the depth and breadth of the study.

CHAPTER 1

PARADIGMATIC BASIS OF MODERN BANKING SYSTEMS

1.1. The Banking System and Money Circulation as Interpreted by the Primary Schools of Economic Thought (Neoclassicism, Post-Keynesianism, Neo-institutionalism)

It is challenging to view various issues of the banking system functioning separately from the existing monetary regime (gold standard, currency peg to one of the world's currencies, free or regulated "floating", inflation targeting) or in a broader sense from conceptual views on the role of money in the economy and the parameters of optimal monetary policy. The evolution of views on money, which will serve to understand better the paradigmatic status of modern banks and the prospect for their further development, is presented below. It is natural that the research first characterises the logic of the classical school, then proceeds to the analysis of the peculiarities of Keynesian theory and the initial provisions of the new institutional economics. The logical outcome of the investigation will be the study of the basic features of modern neoclassical, neo-Keynesian and post-Keynesian views on money and banks.

According to R. Werner (2012, 1–17), the financial crisis of 2008–2009 triggered a new consensus among economists of different schools on the necessity to include a banking sector in existing macroeconomic models. Previously, the relevant issues were either not considered significant or viewed fragmentarily. That was not supposed to affect economic life or monetary policy fundamentals significantly.

Classical economists A. Smith, D. Ricardo, and D. Mill denied the dependence of economic growth on the amount of money in circulation due to the denial of earlier postulates of mercantilism about the decisive influence of gold and silver on the wealth of nations (Korol 2020, 311–314). As the value of the accumulated reserves of precious metals increased, price levels increased, and the incentives for investment as a factor of long-run growth weakened. To date, such considerations were reflected in the thesis

that “money is income-neutral”[1]; accordingly, there is no need to analyse the banking system, which only serves the purposes of money circulation (Dostaler 2000, 235–256). It was not until the late 1980s that Nobel laureate R. Lucas (2014, 1619–1631) argued that economists “badly over-stress” the impact of the financial system on economic growth.

Yet classical economists recognised that money supply could be a source of macroeconomic imbalances in the short term (Smithin 2002, 1–15). Later, J. Schumpeter introduced the division of economic effects into real and nominal[2]. On the contrary, Keynesian economists recognise that money can be as important in production as capital or labour. The argument between the supporters of both the classical and Keynesian schools is further complicated by the contradictions between the proponents of the three alternative views on money, i.e., the Austrian, Marxist, and post-Keynesian.

For the first time, neoclassical economists addressed the issue of banking activities in the late nineteenth century (Bagehot (1871), Menger (1871), Bohm-Bawerk (1890)), when it was necessary to explain the downward phase of the business cycle[3]. Later, I. Fischer (1907) and D. Hicks (1939) suggested using banking regulators to minimise cyclical fluctuations. K. Wicksell (1965) feared the uncontrolled growth of lending provided by potentially insolvent banks. The prolonged search for new investment opportunities through research was considered the natural growth factor. It was argued that the artificial reduction in interest rates

[1] In the late 1960s, M. Friedman argued that the impact of quality monetary policy on economic growth is minimal and almost always only short-lived (Friedman 1968, 1–17). However, recently the estimates have been changing. In the third edition of the popular textbook, D. Romer argued that "the inclusion of money in the model of long-term growth only worsens the transparency of analytical structures" (Romer 2006, 678), in the last fifth edition of this textbook, supplemented by models of financial markets and the behaviour of the banking system (Chapter 10) and the economy's "zero interest rate" (Zero level bound - ZLB) (Chapter 12), this phrase is absent (Romer 2018, 800).

[2] Analysis of indicators in real terms suggests that the most critical macroeconomic dependencies can be understood based on barter conditions of trade in goods and services and the interactions between production factors (Sejiny 2015). Instead, monetary economists believe the dependencies of employment and investment on the expectations of economic indicators prevail. Accordingly, money and its value (interest rate) are considered essential in the production process.

[3] It is believed that the most significant differences between neoclassical, Keynesian, and Marxist theories relate to explaining the leading causes, ways of overcoming, and the nature of business cycles (or economic cycles) (Wolff 2012, 2).

could only accelerate inflation and transition from an economic boom to a decline in production.

In the example of the Great Depression of 1929–1933, neoclassical models predicted a deep downturn in production (which occurred) and a rapid recovery of the US economy in 1936, which did not happen (Cole 1999, 2–24). The pre-crisis income level was reached only in 1939, despite restoring the banking system, productivity growth and the end of deflation. Classical economists believe that this slow production recovery was the New Deal. This program by US President Franklin D. Roosevelt strengthened the monopolisation of the economy and unproductive redistribution of income.

Monetarism first emerged as a branch of Keynesian theory[4]. Still, by the end of the 1950s, it had transformed so much that its proponents began to accept the thesis of neutral monetary policy (GDP). Ideologists of monetarism such as A. Marshall (1923) or M. Friedman (1948) recognised the need for institutional measures to reduce information asymmetry and develop the credit market. Banks were recognised not only as an essential element of open market operations, which were supposed to regulate the money supply and interest rate, but also as a factor in the investment process.

The modern neoclassical models combine the theoretical apparatus of long-run growth models with analytical constructions of monetary policy[5]. For example, M. Goodfriend and B. McCallum (Goodfriend 2007, 1480–1507) proposed a neoclassical model that considers the impact of money supply and the banking system in a standard theoretical construct with rational expectations. The example of the United States shows that changes in the banking system's performance or the collateral quality require significant changes in central bank rates. Some neoclassical models even

[4] Proponents of monetarism initially only denied the dependence of money demand on interest rates (vertical LM line). In contrast, the dependence of investment and private consumption on the value of credit resources was considered high (horizontal IS line). Under such conditions, fiscal policy cannot stimulate revenue, while maintaining the effectiveness of the monetary policy. However, it was later proved that the "monetary" appearance of the IS and LM lines leads to a lack of impact of money supply on income, given the dependencies of the labour market (AD-AS model).

[5] The standard neoclassical model of economic growth, for example, the well-known Solow model, assumes the dependence of income (GDP) only on the means of capital and labour. Each of the factors of production is characterised by a diminishing return, which ensures the process of convergence of countries with different incomes. As Solow's model suggests, innovation can be the only source of economic growth.

recognise the role of consumer lending as a factor in monetary policy, which explains the "catching up" growth in monetary integration with industrialised countries (Backe 2008, 458–470). At the same time, it can be noted that the development of consumer credit is often considered a factor of severe macroeconomic imbalances and even currency crises (“World Economic Outlook” 2012) (“World Economic Outlook” 2017). Such an "anticipatory" indicator of crisis phenomena revealed the relationship between money supply and foreign exchange reserves, which is entirely consistent with the logic of the neoclassical school.

The influence of the financial sector is recognised in endogenous growth theory as a factor in the accumulation of capital and increase in savings (Romer 2006) or technological innovation (Aghion 1992, 323–351), (Grossman 1991, 517–526). D. Levine (2004, 116) determines the mechanism through which financial development influences economic growth: 1) accumulation of savings for investment projects and innovations in finance that improve the allocation of resources; 2) information about possible investments (financial intermediaries may reduce the costs of acquiring and processing the information); 3) monitoring of investments and implementation of corporate governance; 4) diversification and management of risk; 5) exchange of goods and services. The financial sector accelerates economic growth by supporting public sector investment projects and opportunities for intertemporal smoothing of private consumption and investment in human capital.

Close to the predictions of neoclassical models are the arguments of Hodgman (1961), King (1986) and Sinkey (1979), who emphasise the importance of banks as a means of obtaining a money multiplier effect from the expansion of the deposit base. This corresponds to the positioning of banks as intermediaries between savers and borrowers. Unlike the situation until the mid-twentieth century, modern banks can generate a money supply without attracting deposits from households and businesses (the effect of a banking multiplier). This feature allows the neutralisation of one of the factors reducing aggregate demand because the accumulation of funds on deposits in one way or another limits aggregate demand. Side effects increase the risks of banking activities in the economy with the accelerated growth of the money supply. Usually, the "surplus" of the money supply is accompanied by accelerating inflation, the emergence of various "bubbles", and the distortion of investment "signals", which eventually leads to a cyclical decline in production.

Even though neoclassical models consider the peculiarities of the banking system, objectively, the effect of the banking multiplier is an argument in favour of Keynesian models with the stimulation of aggregate

demand. However, this is not the case. Initially, Keynesians focused on the feasibility of fiscal instruments, since they combined a significant dependence of need for money on interest rates with a weak dependence of private consumption and investment from this indicator; under such conditions, monetary policy became unable to stimulate aggregate demand, and therefore interest in banking activities had no proper justification. Although J. M. Keynes recognised the importance of money as a part of contracts between entrepreneurs (Davidson 2007, 544) and the feasibility of a two-tier banking system and the use of central bank rates as instruments for controlling banks' credit (Huber 2014, 38–57), in practice, he was primarily concerned with the consequences of a declining money supply, which could lead to a wave of "insolvencies, defaults and collapses" (Dimand 2011, 233–245). The threat of inflation and related crises in the banking system was not considered. Similarly, J. M. Keynes repeatedly stressed the risks of overlending and various price "bubbles", but later Keynesians mostly supported the development of bank lending. For instance, in the early 1950s, D. Robinson argued that banks did not respond appropriately to post-war economic growth (Robinson 1952).

The high inflation of the 1960s and 1970s led to a shift away from Keynesian economic policy schemes favouring neoclassical models with rational expectations, which denied the expected changes in the money supply. From the early 1980s, scholars began to focus on real business cycle (RBC) models, which did not predict the influence of price factors on the dynamics of the equilibrium trend of GDP. However, neo-Keynesian models soon emerged, including price stabilisation mechanisms (at least in the short term) in RBC models.

Gradually, a class of Dynamic Stochastic General Equilibrium (DSGE) models emerged, which today are the primary tools for analysing monetary policy in the research departments of central banks. Although such models represent a coherent synthesis of methodological principles with the view that nominal wages and prices are sticky, nevertheless, the global financial crisis of 2008–2009 revealed that they do not provide a sufficiently detailed (and therefore realistic) view of the incentives, the constraints and the behaviour of financial intermediaries including banks (Cukierman 2011, 251–269)[6]. It is suggested that somewhat similarly to the Great Depression of 1929–1933 that led to the reconsideration of the economic doctrines of

[6] In general, the main feature of neo-Keynesian economics is the consideration of insufficient price flexibility and monopolistic competition in the model environment of neoclassical RBC models. Thus, there is a transition from neoclassical analysis to Keynesian models, defining income in aggregate demand.

the time, the Great Recession of 2008–2009 will trigger a revaluation and refocusing of currently accepted views on monetary policy.

In particular, the current revival of Keynesian theory draws attention to two problems in the banking sector, which have been known since the Great Depression of 1929–1933 and affect monetary policy (Dimand 2011, 233–245). First, there has been a deviation from sound banking principles, partly due to the prolonged economic stability since the mid-1980s, which underestimated systemic risks. Second, due to insufficient regulatory restrictions, the overconfidence of bankers and other financial market participants led to the emergence of a "bubble" in the real estate market, especially in the United States, which catalysed the financial crisis of 2008–2009.

There is an emerging body of research on various aspects of the banking system. In one recent neo-Keynesian model, the banks' behaviour depends on their leverage ratio imposed by banking regulations (Boitani 2017, 30). Corresponding changes affect income, employment, and consumption. Macroeconomic shocks may be absorbed if banks decrease leverage during an economic boom. Otherwise, the economy becomes susceptible to more instability. The persistence of financial shocks becomes more robust if there is the interaction of procyclical leverage with hysteresis in the labour market.

On the other hand, under the influence of the crisis of 2008–2009, the positions of critics of the above-mentioned economic mainstream were strengthened, which essentially denies the significant impact of money supply and the banking system on economic growth. R. Werner notes that until about the mid-1980s, the hitherto prevailing approaches (classical, many neoclassical, Keynesian, monetarist and post-Keynesian approaches, as well as most eclectic models), despite their differences, included the quantity equation $MV = PY$, whereby M stands for the money supply (monetary aggregates M0, M1, M2, M3 or M4); V denotes the velocity of money (originally the number of times gold was said to circulate during an observation period); P is the GDP deflator (the appropriate price level); and Y symbolises real GDP (Werner 2012, 1–17). However, since the early 1980s, the adequacy of the quantitative equation of money circulation has been undermined by empirical studies showing instability in the velocity of money and money demand. Neglect of the banking system occurred despite many banking crises, more than 100 over post-war years. Similarly, there is no evidence of a significant effect of interest rates on cyclical dynamics; at least such an effect is much weaker than theoretical models suggested. There are also no signs of the decisive influence of aggregate supply factors. R. Werner showed that banking crises could be avoided if bank credit is

mainly used for investment purposes ("productive credit creation"). It may be done via regulation by the government or central bank restricting credit creation for transactions that do not contribute to GDP. Another suggestion is the design of the banking structure that was not engaged in credit creation for non-productive purposes. Ideally, it will consist of small, locally headquartered banks, including municipality-owned banks and credit unions, which account for about 70% of the banking market in Germany.

Such proposals are not without weaknesses. Using the capacity of state-owned banks to strengthen economic growth potential came true in Japan in the 1950s and 1960s and was repeatedly practised in developing countries, but with little success. Latin American countries can be a good example (relevant issues are discussed below).

Equally controversial is the proposal for direct borrowing of the Ministry of Finance from commercial banks. This method of financing government spending should strengthen the investment orientation of government spending and, just as significantly, increase credit and effective demand. At first glance, the proposal avoids the issuance of government bonds, which can be a source of several related problems (abnormal returns, vulnerability to the sentiments of local and foreign investors, etc.), but can lead to excessive issuance activity and payment imbalances. It is even worse if commercial banks use refinancing loans from the central bank instead of private-sector savings to provide loans.

Somewhat paradoxically, the significant growth of the financial sector since the early 1980s is often seen as an argument against the neoclassical interpretation of monetary policy, which never provided benefits from the currency issuance. K. Bresser-Pereira, for instance, considers the financial crisis of 2008–2009 to be a consequence not only of "fictitious" financial wealth but also of the "reactionary" ideology of neoliberalism, based on assumptions about self-regulation of financial and commodity markets. This is contrasted by the period of "30 Golden Years of Capitalism" (1948–1977), when government regulation avoided severe crises, while at the same time, there was a steady increase in the welfare of the largest industrialised countries. Instead, the deregulation of the 1980s and 1990s, especially in the financial sphere, created the preconditions for chaotic and unstable development.

Criticism of the financial mechanisms of the last three decades has sufficient grounds in empirical studies. An inverse relationship between credit to the private sector and economic growth was found for 16 Central and Southeastern Europe (CSEE) countries; instead, the money supply has a favourable effect (Petkovski 2014, 55–66). This result may be a consequence of the large stock of non-performing loans and the banking

crises experienced by these economies at the beginning of the transition period. To facilitate the situation, it is proposed to strengthen the banking system and expand the range of banking services.

It should be recognised that some neoclassical economists also propose measures to refocus banks and financial companies to provide credit to the real economy, especially in economically depressed regions (Uysal 2019, 140–145). This should increase the demand for money and national currencies in bilateral trade. In the early 1930s, I. Fischer argued that investment is necessary for the GDP growth rate to exceed interest rates (to prevent debt growth). However, this position has its drawbacks. P. Samuelson (1958) and J. Tirole (1985) showed that bubbles in the markets of individual assets could persist given the high growth rate and low interest rate ("Can China's Economic Miracle Continue" 2020).

In our opinion, it is wrong to identify the processes of globalisation and excessive growth of financial markets with the logic of neoclassical models of economic development. First, neoclassical models do not offer any long-term benefits from the inflated money supply, typically the root cause of crises. Second, openness to capital flows alone does not present any problem unless confidence in the economy is lost and the various financial sector regulators are strong enough to prevent speculative processes. This generally draws attention to the root causes of the increase in monetary aggregates. If this happens due to increased savings and a robust macroeconomic environment, there is no basis for a crisis. Otherwise, it may result in the accelerated growth of money supply, which can occur for the following reasons: a) attempts to monetise capital inflows and thus avoid strengthening the currency; b) lobbying efforts of the banking sector, interested in increasing consumer credit; and c) populism in economic policy, which prevents the budget deficit control.

The endogeneity of money supply is a widely discussed topic, especially in new and post-Keynesian macroeconomics, when the supply and demand of the money supply both respond to the income level. These issues are often neglected in neoclassical type models (Georg 2008, 30). Neo-Keynesian models use the Taylor rule when the interest rate is determined based on the achieved level of inflation and the business cycle phase. Post-Keynesian economists developed two approaches: accommodationism and structuralism. Both schools share assumptions about the issuance capabilities of the banking system but differ in the interpretation of bank reserves. The accommodation approach argues that an increase in credit demand leads to a need for increasing the money base by the central bank (in this case, the banking sector plays a minor role).

In contrast, the structuralist approach argues that in response to an increase in credit demand, it is necessary to change the banking system's structure of assets and liabilities.

Accommodationists base their views on the position of the Austrian economists of the early twentieth century (Dow 2011, 35–51). It is argued that the endogeneity of the monetary base corresponds to the realities of the current behaviour of most central banks, especially the Anglo-Saxon countries (USA, Canada). It relates to the ability of central banks to maintain a stable level of short-term interest rates and affect the behaviour of the banking system, which prevents the emergence of the excess money supply.

On the other hand, structuralists provide equally compelling arguments that central banks of the United States, the United Kingdom, and the eurozone proved unable to control the appropriate level of the money supply (Dow 2011, 35–51). This requires the management of bank reserves, which will form the proper preferences of commercial banks to extend credit. Banks affect lending through the reverse effect on the central bank's refinancing rate, setting credit rates and deposits due to the oligopolistic structure of the financial market, trying to avoid buffers, increasing equity, and determining additional credit conditions. Growing competition between banks and non-banking institutions has been the cause of financial deregulation, which has led to excessive risks, especially in the banking system.

Assessing the arguments of both neo-Keynesian and post-Keynesian economists, we can conclude that the current situation with a low-interest record rate undermines the credibility of the Taylor rule as a regulator of the money supply. On the other hand, the post-Keynesian trend negatively assessed the consequences of the "surplus" of money supply in the pre-crisis years of 2002-2008. Still, it did bring about proposals for ways to limit excessive growth of the money supply. Typically, raising interest rates is criticised as preventing investment, while administrative measures to manage bank reserves may prove ineffective. Instead, bank reserves to manage the money supply may be accompanied by increased interest rates.

Over the past decade, post-Keynesians have attempted to create a new coherent Modern Monetary Theory (MMT) (Wray 2019, 5–22). The starting point is endogenous money, which depends not on the public savings but public debt. The central bank's monetary base may be due to increased government spending or public debt. To some extent, the second option is even more important, as government spending is financed by government borrowing. This position is entirely consistent with the view of the Keynesian school that fiscal policy prevails. The central bank cannot control the money supply, but it can determine the level of short-term

interest rates, as is accepted in standard neo-Keynesian models. However, this is not enough to maintain the money market balance.

The equilibrium level of the monetary base, which corresponds to the optimal supply of money, can be determined only through open market operations involving government bonds. Thus, public debt is necessary to manage the money supply rather than government spending. This determines the popularity of MMT because it is about lifting restrictions on increasing public debt and budget deficits (Coats 2019, 563–576). The only limitation for the monetary financing of the budget deficit is the availability of productive resources in the economy (inflation will appear only after reaching some optimal level of income with full employment). Maintaining the interest rate at a "zero" level is appropriate, stimulating investment and reducing public debt servicing.

Such proposals are criticised from several perspectives: the recognition of inflation only in the event of "overheating" of the economy, the outsized impact of fiscal policy and the ability of current government spending to generate tax revenues in the future, and the lack of public debt safeguards (Sumner 2019, 9). G. Mankiw is sceptical about both an unlimited increase in the budget deficit and the lack of the usual link between money supply and inflation, despite the experience of recent post-crisis years when a significant acceleration of inflation did not accompany the substantial rise in the money supply (Mankiw 2019). There is also no belief that even economically viable government regulation can be implemented in practice.

T. Palley (2019) calls MMT an "over-simplified and incomplete" interpretation of long-known Keynesian ideas. One of the biggest failures of the new theory is ignoring the expectations of market participants. If printing money raises expectations of accelerating inflation in the future, it is likely to lead to higher long-term interest rates. Accordingly, the cost of long-term credits, which mainly finance investment projects, will increase. Instead, cheap short-term loans will likely cause bubbles in individual asset markets.

Proponents of MMT find it appropriate to administratively regulate the banking system in such a way as to prevent dysfunctional and antisocial behaviour (Mitchell 2017, 256). This continues the tradition of Keynesians, who have always viewed the banking system as a source of potential problems, but exacerbates the rhetoric of approaches to corrective actions. Banks should become operators of the lending process, in which government spending is used instead of household deposits, and as a result, public goods are created.

MMT theorists believe that deposits are not a source of credit, but on the contrary – the lending process creates appropriate deposits (Huber 2014,

38–57). Accordingly, investments are not dependent on deposits. The banking sector, not the central bank, determines the money supply. Banks create credit first according to their demand and only then do they receive adequate reserves in the central bank. Modern banking systems are criticised for instability, asset inflation, redistribution of monetary assets favouring the financial sector and increased vulnerability to crises. In this context, the subject of criticism is the current practice of partial redundancy and the existing paradigm when a specific inflation target is considered an indicator of money supply adequacy.

Assessing the MMT, it should be noted that the assumptions about the emission financing of the budget deficit permanently may be provisional and apply mainly to industrialised countries with developed financial markets and high confidence in the economy. Low-income countries lack certainty about the ability to service their public debt through local currency borrowing, accelerating inflation and completing the experiment to stimulate the economy through emission financing of the budget deficit.

Like the Keynesians' views on the banks, the arguments of institutionalists regarding the explanation of economic processes have undergone radical changes (Zavadska 2018, 68–73). The classics of institutionalism (Veblen 1907; Commons 1934) assessed bank capital as parasitic and denied the positive influence of banks on economic growth (Zavadska 2018, 68–73). Social and psychological factors of market participants seemed to be much more critical. In the post-war years, D. Galbraith (1967) supported the idea of the adverse impact of banks on the economy. Institutionalists, however, were the first to identify the importance of analysing economic processes considering legal and political factors. Later, the relevant arguments were developed by R. Coase (1990) and O. North (2005), who acknowledged the possibility and need for state influence on monetary, financial, and credit institutions. The study of such categories as "consumption", "utility" and "alternative costs" "revived" the earlier proposals of J. Schumpeter (1912) on the recognition of the essential role of banks in economic life and the need for their autonomy, but under the condition of strengthening their connection with the real sector of the economy and the formation of the market of banking products and services.

The practicality of financing investments with the help of bank credits is unobjectionable, but the negative experience of state-owned banks is a concern. At first glance, this should achieve accelerated economic growth since it is easy to refocus such banks on investment projects only. However, there is funding for either inefficient government projects or, even worse, consumer expenditures in practice. As a result, state banks become the source of the crisis. According to a study of 38 developing countries, the

higher share of private banks in the banking system's assets is favourable for economic growth, streamlining the legal system, restricting foreign investment and labour market liberalisation (Yildirim 2016, 347–359).

Today, the new institutional school supporters emphasise researching the conditions preventing contract compliance (Currie 1998, 171–204). This is important for the banking sector because non-performing loans cause crises. An increase in transaction funds is considered the main reason. Attention to the problem of compliance with contracts is close to the neo-Keynesian models, which assume several equilibrium states depending on the state of individual markets. Still, in this case, there are disparities between supply and demand for labour, savings, investment, etc.

Contract enforcement institutions organically (spontaneously) emerge in the initial stages of market development as unintended and unforeseeable results from the pursuit of individual interests (Greif 2005, 727–786). Cultural and social factors influence the emergence of a specific architecture of certain institutions. Over time, based on spontaneous institutional decisions, higher-level institutions that meet the demands of market participants emerge in an entirely organised manner. In this sequence, it is easy to trace the logic of the gradual complication of regulating the financial sector, including intergovernmental institutions.

The task of banks is to reduce individual risks and moral hazards in the credit market. This position corresponds to the business cycles analysis by J. Schumpeter (1939), later developed by D. Diamond (1984). Banks have opportunities for collecting all necessary information to facilitate the evaluation of project profitability and control over the use of funds received. Banking intermediation is justified by double asymmetry: 1) between borrowers and creditors and 2) between banks and the owners of deposits. This view is easily extended to the global practice of banks.

World discussions regarding the role of banks in the economy and the architecture of monetary policy evoke a response in Ukraine. Neo- and post-Keynesians predominate (Korol 2019, 270–273). D. Zavadska, for instance, suggests stimulating the credits for innovative purposes, which is entirely consistent with the neo-Keynesian theory's logic; this logic does not contradict certain monetarist theses (Zavadska 2018, 68–73).

S. Korablin vigorously criticises neoliberal reforms, which led to the Great Recession of 2008-2009 and had caused the crisis in Central and Eastern Europe (CEE) countries and the former Soviet Union (Korablin 2018, 59–72). It is noted that the average credit/GDP ratio (53.8% of GDP) of CEE countries in 2011–2017 was almost twice as low as the whole EU (101.9% of GDP) (Korablin 2019, 96–108). However, revenues from the

European Structural and Investment Funds became an essential factor in the money supply in CEE countries.

S. Shumska (2018, 302–325) is equally critical regarding the reduced monetisation of Ukraine's economy (the ratio of “monetary aggregate M2/GDP”) and refers to the experience of Asian countries, wherein periods of catching-up modernisation led to monetisation increasing in Japan 2.4 times, in Korea more than five times, Singapore 2.2 times, Malaysia 4.2 times, and India 1.9 times.

T. Unkovska (2015, 115–125) audaciously speaks about the "blow of the global crisis of 2008 on the orthodox macroeconomic dogmas" of the Washington Consensus and "canonical standards" on the role of the financial system and monetary policy for economic development. Such a claim immediately brings about associations with the "new monetary theory". The subject of criticism is the traditional paradigm of monetary policy, which ensures price stability (for example, inflation, at 2% for EU countries, and the primary condition for success is the central bank’s independence from other macro-regulatory bodies). The stability of financial markets was to be ensured only through micro-prudential measures (banking regulation and supervision), and the goals of economic growth were ignored by central banks (except for the US Federal Reserve, whose mandate also includes the promotion of high employment). An example of the "failure" of the NBU's monetary policy is the operation with NBU certificates of deposit at excessively high rates (today it is 18%), while "the real economy is in a state of stagnation due to the collapse of productive loans."

V. Yurchishin (2018, 132–201) quite unexpectedly states that in Ukraine, "the relationship between the money supply and inflation is rather the reverse", and "real economic growth was achieved only in years when there was a significant increase in the money supply (supply of broad money)". In another paper, the author argues that accelerated monetary expansion with low inflation contributes to the economy flooding with "non-inflationary" resources, which positively affects current economic dynamics and creates positive expectations of economic agents regarding access to financial and monetary resources in the medium term (Yurchishin 2019, 5–54). The resumption of monetary expansion is called "a necessary condition for economic recovery in Ukraine".

Yu. Bazhal (2019, 61–70) believes that during the financial crisis management of 2008–2009, neither the European Union nor Ukraine, and partly the USA considered the “textbook recommendations” of J. M. Keynes and M. Friedman. On the contrary, there was an increase in the money supply based on Schumpeter's paradigm of economic development,

where the main factor of economic growth is innovation. This is proposed to expand the supply of "advance" money.

In all proposals to stimulate economic growth in Ukraine, there are calls to increase money supply and credit. At the same time, N. Polyak (2014, 201–207), on the eve of the crisis of 2014–2015, noted that in Ukraine, the loan portfolios of commercial banks are growing, but there is a tendency to reduce the efficiency of lending to banks. After the financial crisis of 2014–2015, which was accompanied by the mass bankruptcy of Ukrainian banks, N. Shapran and V. Shapran (2019, 147) suggested that the consequences of the banking crisis will reduce the effectiveness of the credit channel for the economy of Ukraine for several years. A. Drobiazko (2019, 85–95) warns that the NBU's attempts to artificially support the monetisation of the economy without adequate demand for money from commodity production ended with the aggravation of the economic crisis in 2009 and 2014. Equally compelling is N. Sheludko's (2019, 147) conclusion that even such a powerful monetary mechanism as in the United States cannot replace measures to modernise the real sector and develop manufacturing based on innovation. This means recognising the neutrality of monetary policy in the long run.

Summarising the review of theoretical approaches to interpreting the banking system and monetary policy in general, it is easy to conclude that there is no prevailing view on both issues today. The paradigm of monetary policy is determined by the traditional assumption of money neutrality about income and relatively new elements of the endogeneity of money supply and the institutional role of the banking system in the process of lending to the economy.

1.2. Paradigmatic Status and Differentiation of Modern Banking Systems

Due to the long path of evolution and modernisation of the main activities, a wide variety of operations, and different methods of regulating banking within individual countries today, there is no single definition of the concept of "bank". The above analysis shows that competing theoretical schools give different meanings of the place of the banking system in the modern economy and have different views on lending mechanisms.

The crisis of 2008–2009 was affected by the "rescue" with the help of government funds of most prominent American banks, such as Bear Stearns or Citigroup, and Lehman Brothers had to go bankrupt. Europe's largest banks proved resilient to the crisis, but three Icelandic banks did not escape bankruptcy. Like the Great Depression of 1929–1933, this led to a revision of at least a significant change in views on the banking system's functioning,

which, in turn, generated the theoretical discussion around the mechanisms of money circulation in general. Over the last decade, interest in banks as generators of money supply has resumed, which is crucial for economic growth (Ravn 2019, 1–18).

Today the dominant view defines banks as financial intermediaries that transfer money from savers to borrowers (Angeles 2019, 381–399). Understood in that way, banks do not create new money. An alternative view advances that banks finance borrowers via money creation. Both statements are present in various theoretical and conceptual approaches to the concept of the bank as an institution of financial intermediation (Table 1.1).

Table 1.1

Theoretical and conceptual approaches to the concept of "bank."

Scholars	Concept
H. White (1902)	A bank is a manufactory of credit and a machine for facilitating exchanges (White 1902).
E. Sykes (1905)	A bank is a financial institution that accepts deposits from the public and creates a demand deposit (Sykes 1905).
Robert H. Howe (1915)	A bank is an institution that deals in money and its substitutes and provides other money-related services (Howe 1915).
P. Samuelson (1964)	A bank is an institution in which individuals benefit from the use and preservation of their funds and to which individuals entrust their funds when they do not need them (Samuelson 1964).
D. Kinley	A bank provides service to its clients and, in turn, receives perquisites in different forms (Vetrova 2017, 30–35).
P. Rose (1997)	A bank is a company that provides financial services carried out by professional lenders (Rose 1997).
Charles J. Woelfel (2000)	A bank is an organisation engaged in any of the bank's various functions of banking that is receiving, collecting, transferring, paying, lending, investing, exchanging, and servicing (safe storage, asset management, agent representation, care) of money and applications for money both domestically and abroad (Woelfel 2000).

B. Buchwald (2002)	A bank is an enterprise engaged in various operations: money, credit, and the like (Buchwald 2002).
B. Casu, C. Girardone & P. Molyneux (2006)	The bank is a financial intermediary offering deposit, loaning, and payment services (Prabhavathi 2018, 745–753).
R.Wright (2009)	A bank is an organisation authorised by the government to accept deposits, pay interest, issue loans, act as an intermediary in financial transactions and provide other financial services to its clients (Wright 2012).
S. Cecchetti (2012)	A modern bank is a financial supermarket selling financial services (Cecchetti 2012, 7).
Mehdi Khosrow-Pour (2017)	Banks are institutions set up for subsidised lending to specific sectors (Prabhavathi & Dinesh 2018, 745–753).
G. Tazhina (2020)	The bank is a credit institution, the primary purpose of which is to make a profit; it has its authorised capital set by the central bank, as well as the right to perform at least four operations: attracting deposits, issuing loans, opening bank accounts, and managing them (Tazhina 2020, 294).
V. Usoskin (1994)	Banks are those financial intermediaries through which the interregional and intersectoral redistribution of money capital are provided in the society (Usoskin 1994, 320).
S. Mochernyi (1996)	Banks are financial institutions that accumulate money and savings, issue credits, make cash payments, put money in circulation, carry out securities transactions, gold transactions, and others (Mochernyi 1996).
O. Vasiurenko (2000)	A bank is a universal financial enterprise that carries out professional management of society's monetary resources. It performs relevant specific functions in the economy legally and under the jurisdiction of state bodies that provide regulation and control of banking activities (Vasiurenko 2000).

V. Stelmakh (2001)	A bank is a specific monetary institution, an economic body that operates in the financial market, accumulates temporarily free cash and savings, provides loans, makes cash payments, makes transactions with promissory notes, foreign currency, gold, precious stones, puts into circulation (issues) money and securities, provides various services of financial and economic nature, and performs other functions ("Entsyklopediia bankivskoi spravy Ukrainy" 2001).
O. Lavrushyn (2005)	A bank is a monetary institution that regulates payment transactions on cash and non-cash bases ("Bankovskoe delo" 2005).
S. Moiseiev (2006)	A bank is a credit organisation that has the exclusive right to carry out the following banking operations: attraction of funds of legal entities and individuals; placement of the said funds on its behalf and at its own expense; opening and maintaining bank accounts of legal entities and individuals (Moiseiev 2006).
N. Bielohlazova (2009)	Banks are specialised organisations that accumulate temporarily free funds of legal entities and individuals, provide them for temporary use in the form of loans, provide intermediary services in mutual payments and settlements between enterprises, institutions, or individuals, provide cash services to individuals and legal entities, and carry out other transactions with money and monetary capital ("Dengi. Kredit. Banki" 2009, 392).
O. Dziubliuk (2009)	Banks are institutions of the market economy that perform three primary operations: accepting deposits, providing loans, and making payments ("Bankivski Operatsii" 2009).
I. Sokyrynska & T. Zhuravlova (2016)	A bank is a multifunctional financial institution that provides a wide range of credit and payment services and performs various functions for any legal entity or individual to make a profit (Sokyrynska & Zhuravlova 2016, 192).