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BANKING SYSTEMS OF UKRAINE AND POLAND: A COMPARATIVE ANALYSIS ON THE PATH TO THE EUROPEAN UNION

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Key words:

banking system, NBU, NBP, financial sector, economic policy, stress testing, assets, stability. To improve the solvency and liquidity of banks and to respond promptly to contemporary realities, there is a constant need to identify effective methods for regulating and supervising Ukraine's banking system. Since the banking systems of Ukraine and Poland demonstrate both similar and somewhat different approaches to the development of financial institutions, Poland's experience may be of interest to Ukrainian banking institutions. Each country independently forms its banking system, relying on its beliefs, historical experience, and economic and political development conditions. Comparing the banking systems of different countries allows for an understanding of strengths and weaknesses, identification of differences in regulatory approaches, definition of areas of responsibility for stakeholders, and evaluation of the effectiveness of such solutions (approaches). Despite differences in the functioning of central banks and regulatory mechanisms, both systems share common goals: supporting the stability of the banking sector and fostering economic development while considering heightened risks of political and military instability.

БАНКІВСЬКІ СИСТЕМИ УКРАЇНИ ТА ПОЛЬЩІ: ПОРІВНЯЛЬНА ХАРАКТЕРИСТИКА НА ШЛЯХУ ДО ЄВРОПЕЙСЬКОГО СОЮЗУ

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Ключові слова:

банківська система, НБУ, NBP, фінансовий сектор, економічна політика, стрес-тестування, активи, стабільність.

З метою покращення платоспроможності, ліквідності банків та вчасного реагування на реалії часу постійно виникає необхідність виявлення дієвих методів регулювання та нагляду за банківською системою України. Оскільки банківські системи України та Польщі демонструють як схожі, так і дещо відмінні підходи до розвитку фінансових інституцій, досвід Польщі може бути цікавим для українських банківських установ. Кожна країна самостійно формує банківську систему, спираючись на власні переконання, історичний досвід, економічні та політичні умови розвитку. Порівняння банківських систем різних країн дозволяє зрозуміти сильні та слабкі сторони, виявити відмінності у підходах до регулювання, визначити зони відповідальності сторін та оцінити ефективність функціонування таких рішень (підходів). Попри відмінності у функціонуванні центральних банків та регуляторних механізмах, обидві системи мають спільні цілі— підтримку стабільності банківського сектору та розвиток економіки зважаючи на посилені ризики політичної та військової нестабільності.

Statement of the problem

In the modern world, an increasing number of processes require enhanced analysis, control, and supervision, especially in the economic sphere, where such processes impact the stability of the state. One of the main components of the financial system is the banking sector. It ensures the flow of capital, has the capacity to support businesses, and maintains economic resilience.

Considering this, neighboring countries such as Poland and Ukraine provide interesting examples for comparative analysis, as they exhibit several similarities and some differences in the development of their banking systems.

Analysis of recent studies and publications

Research on the stability of Ukraine's banking system is a popular topic, leading to a continuous increase in the number of scholars exploring this issue. Notable among them are O. Dzyublyuk [1], A. Moroz [2], M. Krupka, Ye. Andrushchak [3], I. Dzyuba [4], N. Sytnyk [5], B. Lutsiv, M. Savluk, B. Adamyk, I. Ivanets, M. Shchepansky, M. Khmeliarchuk, T. Hirchenko, O. Serdyukova, N. Hongalo, Y. Prytsak, O. Vinnytska, L. Chvertko, and others.

Objectives of the article

The purpose of this article is to describe the structure and status of the banking systems of Poland and Ukraine, their dynamics, and responses to political and economic challenges over recent years. It also aims to review regulatory bodies and attempt a comparison of the results of stress tests conducted in these countries, which are currently available in the public domain.

The main material of the research

The efficiency of financial institutions is one of the key components for maintaining the stability of a state's economic framework. As mentioned earlier, the state oversees numerous spheres, one of which is the financial system. Within its structure, banks and their "lifespan" occupy a special place. Therefore, to better understand the topic, it is essential to delve into the essence of the banking system.

The website of the Encyclopedia of Modern Ukraine defines the concept of a banking system as: "...a set of various types of banks and banking institutions in their interconnection, functioning within the territory of Ukraine" [4]. A similar but more detailed definition is provided in the textbook on the banking system by N.S. Sytnyk, which states that it is: "...a legislatively defined, clearly structured, and subordinated set of financial intermediaries that engage in banking activities on a permanent professional basis and are functionally interconnected into an independent economic structure" [5].

Turning to the perspective of Polish online communities, some describe this system as a complex (a holistic entity) of banking institutions along with the standards that define their mutual relationships and interactions with the environment [6]; others define it as a logical and coherent whole, created by the banking and financial institutions of a particular country and governed by its norms [7]. Thus, summarizing the above, the banking system includes all

banking institutions present in a country with legalized operational confirmation, operating according to the standards applicable within that territory.

There are concepts of one-tier, two-tier, and three-tier banking systems. According to the legislation of both Poland and Ukraine, their structures can be attributed to a two-tier system with a clear distinction between the tasks of the central bank, which performs only specific functions in accordance with the monetary policy, and those of independent operational banks that operate on commercial principles. This system significantly differs from a one-tier structure characteristic of a centralized economy and from a three-tier structure, where a third tier is allocated for non-banking financial institutions (credit, financial, insurance, investment companies, etc.).

Referring to official sources, Article 4 of the Law of Ukraine "On Banks and Banking Activities" mentions the levels of the system, stating: "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 within the territory of Ukraine in accordance with the provisions of this Law and other laws of Ukraine" [8].

The first tier is the National Bank of Ukraine (NBU), which carries out regulation and banking supervision through prudential norms and regulatory and legal support for banking operations.

In Ukraine, banks can independently determine their areas of activity and specialization. The NBU has the authority to define the types and procedures for a bank to acquire the status of a specialized bank; however, there are currently no narrowly specialized banks.

The banking system of Ukraine includes several systemically important banks, comprising both state-owned and commercial banks. The NBU determines the list of such banks based on factors such as the size of the bank, the degree of financial interconnections, and areas of activity.

Similarly, the structure of the banking system in Poland is also two-tiered but has its own features enshrined in legislation and adapted to European Union standards. According to sources, the system is often further divided into three groups of institutions: stabilizing, marketforming, and auxiliary (Fig. 2).

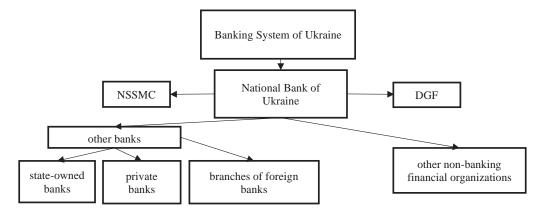


Fig. 1. – Diagram of Ukraine's Banking System [2]

The first, stabilizing component includes: Narodowy Bank Polski (National Bank of Poland, NBP), Komisja Nadzoru Finansowego (Financial Supervision Authority), and Bankowy Fundusz Gwarancyjny (Bank Guarantee Fund). This is where similarities and differences begin to emerge. Similarities can be found in certain activities and the scope of powers held by the central bank.

In both Ukraine and Poland, the central bank is responsible for regulating activities, controlling the liquidity of banks, and maintaining financial stability in the banking sector.

They equally perform functions in the area of currency issuance, act as a "bank of banks," and serve as the state's bank. Additionally, they have the authority to manage gold and foreign currency reserves and handle cash operations related to the state budget [9].

However, there are important differences stemming from the varying approaches to regulating financial systems. For instance, unlike the NBP, the NBU does not manage the state budget; this responsibility lies with the Ministry of Finance of Ukraine. Another distinction concerns supervisory functions. The NBP does not have the authority to issue licenses for banking activities or directly supervise banks, insurance companies, or other financial institutions. These functions are assigned to an independent regulator - the KNF, which serves as the central supervisory authority for both banking and nonbanking structures. In Ukraine, the supervision of banks and the issuance of licenses remain the responsibility of the NBU, which centralizes these functions within a single body. Meanwhile, the non-banking sector is regulated by other institutions, such as the National Securities and Stock Market Commission.

The final component of the institution, the BFG, is functionally similar to the Deposit Guarantee Fund in Ukraine, with the main difference lying in its foundation, standards, and legislation, which are derived from the European Union (Poland) and the IMF alongside the World Bank (Ukraine) [10, 11].

The second institution, the market-forming one, includes the banking sector, representing the total number

of banks that constitute the market. The third institution, the auxiliary one, encompasses all other entities that do not engage in deposit and lending activities: insurance institutions, National Depositories of Securities (KDPW), the National Clearing House (KIR, which oversees transaction flows, online payments, and e-signature technology), the Credit Information Bureau (BIK), and non-banking issuers of payment cards [9].

According to research, the Polish banking system exhibits a more detailed division among existing institutions. The banking sector plays a key role in this division, with the central bank overseeing it and making decisions to improve the system. Therefore, let us focus on the quantitative dynamics of banks in the two countries in recent years for a better understanding of the system's condition.

Table 1 – Number of Solvent Banks in Ukraine and Poland

Years	Number of Solvent Banks		Difference	
	Ukraine	Poland	(Deviation)	
2017	96	64	32	
2018	82	63	19	
2019	77	62	15	
2020	75	66	9	
2021	74	67	7	
2022	71	64	7	
2023	67	63	4	
2024	63	62	1	
2025	61	62	-1	

Sources: 12,13

Let us first examine the changes separately for each country. In Ukraine, a trend of decreasing the number of solvent banks can be observed. Over the past nine years, the number of banks has decreased by 35, which accounts for 36.5%. Unlike Ukraine's rather sharp dynamics, Poland shows moderate changes, with no abrupt fluctuations or

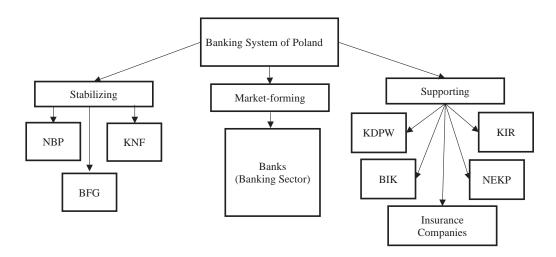


Fig. 2. – Brief Scheme of the Composition and Functioning of Poland's Banking System [6, 7, 9]

unexpected jumps. The indicators remain stable and do not exceed variations between -3 and +4 banks during the period.

This trend demonstrates that overall year-to-year changes in Poland are also gradually declining. At the beginning of the analyzed period (in 2017), the difference in the number of banks was 32 in favor of Ukraine. However, as of January 1, 2025, the number of banks in Poland exceeded that of Ukraine by one.

The reduction in the number of banks in both countries indicates the cleansing of the market from insolvent banks. However, this indicator alone is insufficient to assess real financial stability. An important aspect for analysis is the total assets of banks and their annual dynamics. These figures reflect the scale of activity and, to some extent, the level of readiness to face economic challenges.

Table 2 reflects the dynamics of changes in total assets over the years in the countries and the percentage change relative to the previous year. Ukrainian banks demonstrate a sharp annual increase in assets. This trend is especially noticeable in 2023-2024, and compared to 2017, the total assets have increased 2.72 times. In Poland, the situation is similar, with the total assets in the banking sector growing moderately each year. The most significant growth occurred in 2019 and in recent years.

In Ukraine, the number of solvent banks decreases annually, but the Polish banking market demonstrates greater stability. However, when comparing the total assets, we observe that despite the decline in the number of Ukrainian banking institutions, total assets tend to grow.

In our opinion, attention should be paid to such indicators as inflation and the key policy rate. Total bank assets are measured in monetary equivalents, and inflation directly affects their real value. For example, if assets grow nominally but there is high inflation, the real growth of this indicator may be insignificant or even negative.

The data in Figure 3 illustrate the dynamics of changes in inflation and key policy rates in Ukraine and Poland. In Ukraine, inflation fluctuated within the range of 104-113% (the maximum increase, 15%, to a level of 126.6, was observed in 2022). The National Bank of Ukraine's (NBU)

key policy rate underwent significant changes during the analyzed period, reaching a low of 6% in 2020 and a high of 25% in 2022. The dynamics of these indicators demonstrated that between 2018 and 2020, the country's economic situation stabilized, while the indicators for 2022–2024 were influenced by the full-scale invasion by russia

In Poland, effective economic policies up until 2022 were confirmed by inflation and key policy rate indicators. For example, inflation remained acceptable (101-103%) until 2020, considering the country aims to maintain a 2.5% benchmark, as is common in developed economies. However, starting in 2022, inflation rose significantly, prompting the central bank to increase the key policy rate by 5.4 times, reaching 6.75%. This situation in Poland is also linked to the challenging macroeconomic and economic environment caused by Russia's war in Ukraine.

These indicators are presented with the understanding that they are interdependent. Initially, the state (authorized bodies) monitors factors such as the level of money supply in circulation, transactions, and other indicators, establishing the inflation rate. If inflation rises, the central bank increases the key policy rate to control price levels (in Poland, this is analogous to the reference rate, "Stopa referencyjna," which determines the minimum allowable interest rate on bank loans. Different approaches apply to non-bank institutions). This is done to reduce the money supply in the economy. Accordingly, higher interest rates set by banks make loans more expensive, reducing consumer capacity and willingness to invest. Simultaneously, deposit rates are raised to attract resources to banks and encourage savings.

Conversely, when inflation decreases, as the country aims for, prices stabilize. Loan rates decrease, encouraging businesses and individuals to take loans, purchase real estate, and invest overall. At the same time, deposit rates may decline when banks no longer need additional funds, making deposits less attractive.

Comparing the tables reveals that the dynamics of banking assets correlate with changes in inflation and key policy rates. In both Ukraine and Poland, inflation

Table 2 – Dynamics of Total Bank Assets in Ukraine and Poland

Years	Total bank assets				
	Ukraine (million UAH)	Deviation from the previous year, %	Poland (million PLN)	Deviation from the previous year, %	
2017	1 260 617	-	1 612 359	-	
2018	1 333 831	5,8%	1 689 646	4,79%	
2019	1 359 703	1,94%	1 780 157	5,36%	
2020	1 493 298	9,83%	2 106 036	18,31%	
2021	1 822 841	22,07%	2 307 868	9,58%	
2022	2 053 232	12,64%	2 466 160	6,86%	
2023	2 351 678	14,54%	2 720 449	10,31%	
2024	2 945 030	25,23%	3 022 519	11,1%	
2025	3 422 600	16,22%	3 374 413	11,64%	

Sources: 14,15

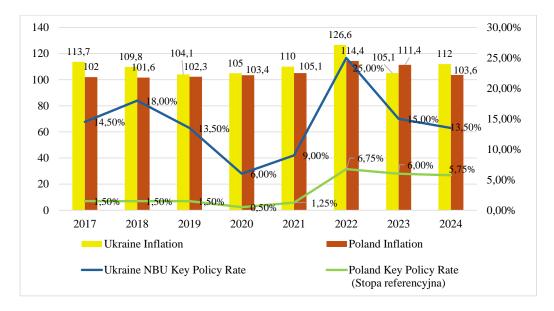


Fig. 3. – Dynamics of Inflation and Key Policy Rates in Ukraine and Poland

Sources: 16,17,18,19

indicators are interconnected with all sectors of the national economy, including the banking sector, and have a direct impact. However, their consequences differ.

On one hand, the NBU employs strict high-rate methods to curb inflation, but these actions lead to higher loan costs, which can negatively affect the real growth of banking assets. On the other hand, the NBP maintained lower rates for an extended period, focusing on forecasting and facilitating the gradual development of the financial system. The spikes in 2022 and 2023 were necessary temporary measures to combat inflation.

Quantitative indicators of the banking system, such as asset volumes or the number of solvent banks, are undeniably important. However, they are not synonymous with "quality," as the resilience of these banks to crises and shocks is equally significant. To assess these factors, banks undergo stress testing, which helps determine their preparedness for unexpected crises.

In Ukraine, annual stress testing is conducted under the NBU's supervision. To assess the resilience of banks, a baseline macroeconomic scenario is applied. It consists of three stages that determine the required level of capital adequacy norms (with a focus on bank liquidity). Under the baseline scenario, it is assumed that:

- Bank balance sheets are static, affected by changes in asset quality and exchange rates.
- Current profits are capitalized throughout the forecast period.

According to the NBU, stress testing this year will involve 21 banking institutions, accounting for over 90% of the banking system's assets. These banks were selected based on three criteria: the size of risk-weighted assets, the volume of deposits attracted from households, and the volume of net loans provided to households.

The list of banks includes: JSC "PrivatBank," JSC "Oschadbank," JSC "Ukreximbank," JSC "Ukrgasbank," JSC "Sense Bank," JSC "Raiffeisen Bank," JSC

"UkrSibbank," JSC "OTP Bank," JSC "Credit Agricole Bank," JSC "ProCredit Bank," JSC "KredoBank," JSC "Pravex Bank," PUMB, JSC "Bank Pivdenny," JSC "Tascombank," JSC "Universal Bank," JSC "Credit Dnipro," JSC "Bank Vostok," JSC "A-Bank," JSC "MTB Bank," and JSC "AKB Lviv."

In contrast, Polish banks undergo more rigorous stress tests prescribed by European Central Bank standards. The latest test occurred in 2024 under the supervision of the previously mentioned KNF, in collaboration with the NBP. The objective was to assess the impact of negative macroeconomic and market shocks and the cost of foreign-currency-denominated housing loans. The analysis is conducted using two scenarios: a reference (baseline) scenario and a shock scenario.

The reference scenario, based on the 2022 macroeconomic inflation forecast report, assumed moderate real GDP growth under stable interest rates. The shock scenario was designed using NBP's macroeconomic forecasting models and historical data on macroeconomic variables during financial crises in other countries. It assumes GDP stagnation and declining market interest rates, among other restrictive factors.

Summarizing the stress test results for the banking sectors in Ukraine and Poland, generally positive indicators of banking resilience and performance can be noted.

In Ukraine, among the 20 institutions analyzed, only a few demonstrated a capital adequacy ratio below the minimum threshold. Nevertheless, most banks confirmed their ability to function stably even under the war and economic crisis conditions.

In Poland, all banks successfully passed the reference (baseline) scenario tests, meeting capital requirements. However, as emphasized by the NBP, the implementation of the shock scenario could have a significant negative impact on the banking system, primarily due to high levels of foreign-currency-denominated housing loans,

which pose specific risks in the context of macroeconomic changes.

Conclusions

Thus, the study analyzed the banking systems of Ukraine and Poland and provided a comparative characterization. The gathered information allowed for identifying key similarities and differences influenced by a range of factors. It is essential to consider that Ukraine is currently in a state of war.

Although both countries have a two-tier structure of the banking system, which includes the central bank and other banks (state, private, mixed, foreign), the regulation mechanism, functions, and shares of responsibility differ somewhat. The National Bank of Ukraine (NBU) plays the primary role in Ukraine, focusing on supervision, control, and analysis. In contrast, in Poland, these functions, especially the oversight of the banking system, are decentralized and involve an additional institution – the KNF.

The quantitative dynamics of institutions in the two countries show different trends. Over the past decade, Ukraine's banking sector has undergone significant cleansing from insolvent banks due to reforms, stricter regulatory requirements, and economic instability in the market. In Poland, this indicator remains stable, reflecting the relative resilience of the system.

The general analysis of total assets showed significant growth in both Poland and Ukraine, despite the difference in the number of institutions. In Ukraine, this growth is particularly notable even since 2022, the start of the full-scale invasion. Partially, this may be explained by the

fact that a larger share of assets is concentrated in large banks. At the same time, it is necessary to consider factors that may have influenced this increase, one of which is inflation. Inflation in Ukraine is significantly higher, which could reduce the real value of assets.

In analyzing stress test reports for banks, the focus was on conclusions: in cases of deviations from regulatory indicators, financial institutions were given a certain period to address the situation and recommendations for developing strategies to improve financial stability.

However, if Ukraine aims to meet European Union standards and integrate into the European financial system, it must not only fulfill basic requirements defined at the local level but also implement additional mechanisms for assessing bank resilience. One such step could be the gradual expansion of additional stress-testing practices, particularly the adoption of modern methodologies used by leading EU countries.

Implementing more in-depth risk analysis and modeling and adapting to methods based on European approaches will provide an objective assessment of the state of the banking sector. This will allow comparisons of the performance of Ukrainian banks with institutions in more developed countries, help identify "weak spots," and reveal opportunities for developing gap-bridging strategies. Additionally, an in-depth analysis of stress resilience will foster increased trust in Ukrainian banks among investors and organizations at the international level. Thus, improving new approaches to stress testing could contribute not only to enhancing the stability of the financial system but also to improving the country's economic condition.

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