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**SYSTEM-STRUCTURAL ANALYSIS AS A TOOL FOR IMPROVING THE EFFICIENCY  
OF PRIVATIZATION OF THE UKRAINIAN BANKING SECTOR**

*The article highlights the specifics and key elements of system-structural analysis as a tool for improving the efficiency of privatization of the banking sector of Ukraine. The main types of structures and stages of system-structural analysis based on the principles of the systemic approach are stated. The system-structural analysis of the banking sector of Ukraine is carried out. The banking system of Ukraine is considered, taking into account the preparation for the privatization of banks with a controlling stake in state ownership during the military invasion, as a set of interconnected elements that interact with each other in order to achieve certain goals, its mission and role are indicated. The dynamics of changes in the number of banks from 2017–2024, the banking classification adopted in Ukraine and the structure of the banking system of Ukraine in 2024 are determined. At the stage of grouping the elements into substructures, the status of the systemic importance of banks and their profitability are analyzed. In establishing various links and relationships between the elements, substructures and the whole, Ukrgasbank and Sense Bank are considered as elements of the whole. It has been determined that Ukrgasbank and Sense Bank are two systemic state-owned banks that have; 4% and 6% of net assets, respectively; a wide network of branches; 2.894 million and 1.548 million depositors; 3.44 and 3.43 overall rating; 12th and 13th place among all Ukrainian banks; 3.4 and 3.2 depositors' loyalty; 6th and 9th place in the ranking of retail deposits; sufficient regulatory capital; real estate and liquid property. Thus, it has been established that Ukrgasbank and Sense Bank are state-owned banks that have: a developed customer base, a banking business that works and generates profit, real estate, and a well-known brand in the Ukrainian market, which is why they are attractive assets even in wartime.*

**Keywords:** *structure; system-structural analysis; banking sector; privatization of the banking sector of Ukraine.*

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**СИСТЕМНО-СТРУКТУРНИЙ АНАЛІЗ ЯК ІНСТРУМЕНТ ПІДВИЩЕННЯ  
ЕФЕКТИВНОСТІ ПРИВАТИЗАЦІЇ БАНКІВСЬКОЇ СФЕРИ УКРАЇНИ**

*У статті висвітлено специфіку та ключові елементи системно-структурного аналізу як інструменту підвищення ефективності приватизації банківської сфери України. Констатовано основні типи структур та етапи системно-структурного аналізу, заснованого на принципах системного підходу. Проведено системно-структурний аналіз банківської сфери України. Розглянуто банківську систему України з урахуванням підготовки до приватизації банків з контрольним пакетом державної власності під час військового вторгнення, як сукупність взаємопов'язаних елементів, які взаємодіють між собою з метою досягнення певних цілей, зазначено її місію та роль. Визначено динаміку зміни кількості банків з 2017–2024 роки, банківську класифікацію, яка прийнята в Україні та структуру банківської системи України у 2024 році. На етапі групування елементів у підструктури проаналізовано статус системної важливості банків та їх прибутковість. При встановленні різних зв'язків і відносин між елементами, підструктурами і цілим розглянуто Укргазбанк та Сенс Банк як елементи цілого. Визначено, що Укргазбанк та Сенс Банк – два системні державні банки, які мають; 4% і 6% чистих активів відповідно; широкую мережу відділень; 2,894 млн. та 1,548 млн вкладників; 3,44 та 3,43 загальний рейтинг; 12 та*

*13 місце серед усіх українських банків; 3,4 та 3,2 лояльність вкладників; 6 та 9 місце в рейтингу по депозитах фізосіб; достатній регулятивний капітал; нерухомість та ліквідне майно. Отже, встановлено, що Укргазбанк та Сенс Банк – це державні банки, які мають: розвинену клієнтську базу, банківський бізнес, що працює і генерує прибуток, нерухомість, та достатньо відомий бренд на ринку України, саме тому вони є привабливими активами навіть в умовах воєнного часу.*

*Ключові слова: структура; системно-структурний аналіз; банківська сфера; приватизація банківської сфери України.*

**Statement of the problem.** The main goals of privatization in Ukraine are: fighting corruption at state-owned enterprises in the management of state property; attracting direct investment and investors from both Ukraine and other countries; creating effective prerequisites for the reconstruction and economic recovery of the state; attracting additional budget revenues from both sales and, subsequently, from tax revenues from business; improving the performance of enterprises or the quality of property use by finding an effective owner; modernizing production or re-profiling facilities. However, during a full-scale invasion, another goal of privatization is an additional opportunity to replenish the budget.

Privatization is the paid alienation of state-owned property in favor of individuals or legal entities [1].

After the full-scale invasion, small-scale privatization of state property (book value of objects up to UAH 250 million) resumed in September 2022. In 2023, small-scale privatization of state and municipal property replenished the budgets of various levels by more than UAH 3.3 billion [2]. The state budget received over UAH 2.6 billion, and community budgets over UAH 650 million. [2]. On average, the starting price for objects put up for auction triples. On average, 5.15 bidders participate in auctions for the acquisition of property. All of this indicates that the process of small-scale privatization is competitive and generates revenues for the budget.

However, during the war, military and hybrid risks increase, so the price of assets may decrease. To ensure effective privatization in the banking system during wartime, it is necessary to: strengthen control over participants in privatization tenders, take into account the qualification aspect in the selection of buyers, as well as the potential systemic impact of privatization results on the banking system and the economy as a whole.

Of particular importance for the economy and security of the state in wartime is the sustainable functioning of public sector banks, which ensure the stability of the banking system [12]. That is why, by the decision of the National Bank of Ukraine dated April 24, 2022 "On Approval of the List of Ukrainian Banks Involved in Work (Operations) in the Conditions of a Special Period", public sector banks were included in the list of critical infrastructure facilities in the banking system of Ukraine and the list of authorized banks of Ukraine involved in work (operations) in the conditions of a special period [12].

Thus, privatization of banks with a controlling stake in state-owned enterprises during martial law should be preceded by systemic and structural analysis of the banking system of Ukraine.

**Analysis of recent publications on the issue.** Studies of the peculiarities of the structure of Ukrainian banking system and possible ways to improve its weaknesses are reflected in the scientific works of prominent domestic economists, such as E. Gataulina, A. Moroz, O. Vasyurenko, V. Mitenko, O. Gura, S. Ksyondz, Y. Onishchenko, V. Mishchenko, M. Savluk, O. Vovchak, M. Krupka, O. Lavrushyn, I. Bodnar, O. Kolodizev, O. Baranovsky, O. Kireev and others [8, 9].

**Unresolved parts of the study, the purpose of the study, the presentation of the main results and their justification.** The issue of the impact of the war on the efficiency of privatization of banks with a controlling stake in state ownership requires further research and more detailed coverage.

*The purpose of this study* is to conduct a systemic and structural analysis of the banking system of Ukraine in view of preparations for privatization of banks with a controlling stake in state-owned enterprises during the military invasion.

System-structural analysis is a branch of scientific research methodology based on the consideration of an object as an integral set of elements and a set of relations and connections between them [6]. System-structural analysis provides an opportunity to analyze, forecast, design, and make decisions in complex systems of various kinds based on a systematic methodology.

The concept of "system" (from Greek – a whole consisting of parts) is defined as: a set of interconnected elements that interact with each other in order to achieve certain goals [5].

The concept of "structure" is a set of parts or forms (elements) that are in interaction and in a specific order necessary for the realization of certain functions [7]. The structure of a system characterizes the stable ordering in space and time of the system elements and their connections. The structure of a system can be characterized by different types of connections that prevail in it. The main types of structures can be depicted graphically, in the form of a description (verbally), matrices, or in other ways [7]:

- linear structure, elements are arranged in a sequence one after the other. Each element is connected only to the previous and next elements;
- matrix structure, the elements are organized in the form of a matrix, where each element can be linked to any other element;
- network structure, the elements are interconnected in the form of a network, where there may be different ways of communication between them;
- hierarchical structure, elements are organized in a hierarchy, where each element has its own parent and can have subordinates;
- tree structure, the elements form a tree-like structure.

The system-structural analysis based on the principle of the system approach consists of several stages [5]:

- defining the object to be analyzed as a whole;
- detection of elements of a whole;
- grouping elements into substructures;
- establishing various connections and relationships between elements, substructures, and the whole.

These stages help to approach complex tasks in a structured and logical way, ensuring comprehensive analysis and optimal decision-making.

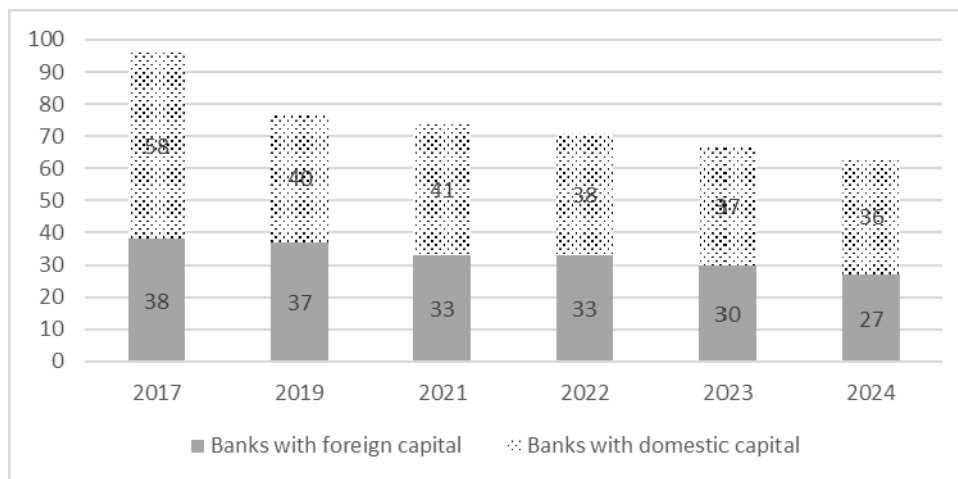
Thus, at the first stage of the systemic-structural analysis, we will consider the banking system of Ukraine as a whole, taking into account the preparation for the privatization of state-controlled banks during the military invasion. Also, at this stage, it is advisable to specify the mission and role of the whole. The Main (Strategic) Areas of Activity of Public Sector Banks during Martial Law and Post-War Economic Recovery states that the mission of public sector banks during martial law and post-war economic recovery is to actively participate in ensuring the financial stability of Ukraine [12]. The banks play an important role in maintaining and sustaining the functioning of the banking sector, as well as in providing financing for priority sectors of the economy and the smooth functioning of critical infrastructure enterprises, including those in state ownership [12].

At the second stage, namely the identification of the elements of the whole, we will determine the dynamics of changes in the number of banks from 2017–2024, the banking classification adopted in Ukraine and the structure of the banking system of Ukraine in 2024.

The dynamics of changes in the number of banks in 2017–2024 shows a steady decline in the number of operating banks, from 96 in 2017 to 63 in 2024 (Figure 1). During the years of the full-scale war, the number of operating banks decreased by 8, which is 11%. The number of banks with domestic capital exceeds the number of banks with foreign capital, with an average ratio of 55% to 45%.

Since 2017, Ukraine has adopted a banking classification based on ownership only:

- state-owned banks (in which the state owns more than 75%);
- banks of foreign banking groups;
- banks with private capital (at least 50% of the authorized capital).



Source: developed by the authors based on [1, 2, 15].

**Fig. 1. Dynamics of changes in the number of banks in 2017–2024**

In 2024, there were 63 banks operating in Ukraine, including 14 with foreign capital, 43 with private capital, and 6 state-owned banks: Privatbank, Ukreximbank, Oschadbank, First Investment Bank, Sense Bank, and Ukrgasbank [4].

Oschadbank and Ukreximbank have been state-owned since their establishment [14]. Other banks became state-owned in the course of nationalizations that took place in different years [14].

Ukrgasbank was nationalized in 2009 due to solvency problems after the global financial crisis. The state now owns 94.94% of the shares. In the first two years, the state spent UAH 7.4 billion to rescue the bank. By 2020, total expenditures on its support reached UAH 13.1 billion [14].

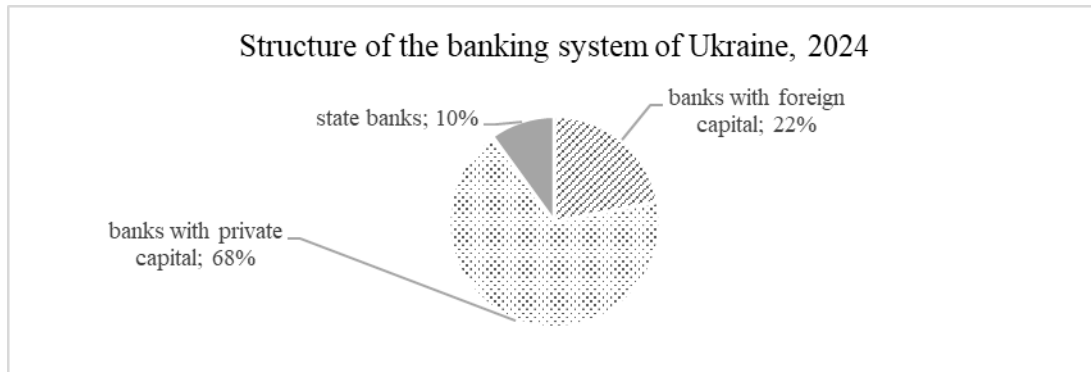
PrivatBank was nationalized at the end of 2016, and the government spent UAH 150 billion to rescue it [14].

In July 2023, Sensee Bank (until December 1, 2022, Alfa Bank) was nationalized as it was owned by Russian oligarchs [14].

Thus, the structure of the banking system of Ukraine in 2024 includes 22% of banks with foreign capital, 68% with private capital, and 10% of state-owned banks (Figure 2).

It should be noted that in Ukraine the state is a monopolist in the banking market: the state's share in the banking sector is 53.6% by net assets [15]. State-owned banks are the largest participants in state programs of preferential lending, such as "Affordable Loans 5–7–9%",

"eOselya", support for farmers under the state guarantee for portfolio loans, and are the largest creditors of the country's budget [14].

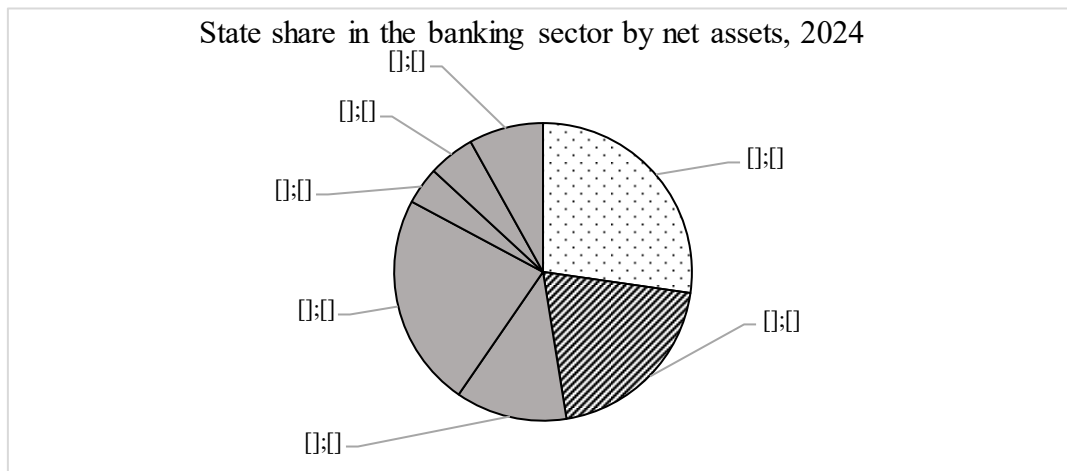


Source: developed by the authors based on [1, 2, 15].

Fig. 2. Structure of the banking system of Ukraine, 2024

At the next stage of the systemic and structural analysis: grouping elements into substructures, we will determine the status of the banks' systemic importance and their profitability.

In 2024, 15 banking institutions, 5 from each classification group, will have the status of systemic importance (Figure 3).



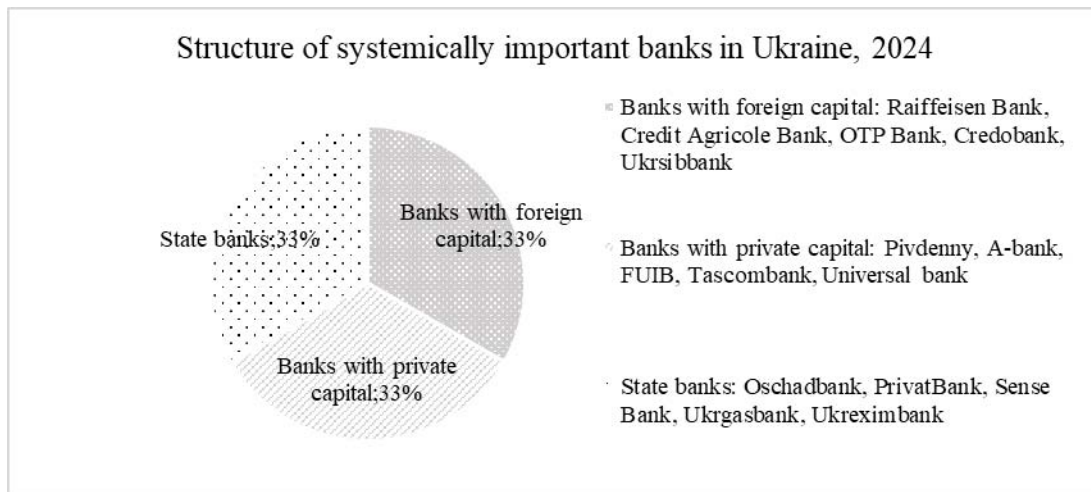
Source: developed by the authors based on [2, 12, 15].

Fig. 3. State share in the banking sector by net assets, 2024

The 6 state-owned banks account for 60% of the total profit of all institutions – UAH 24.28 billion [4]. Only the First Investment Bank, which has recently come under state control, suffered a loss of UAH 7.6 million in Q1 2024 [4].

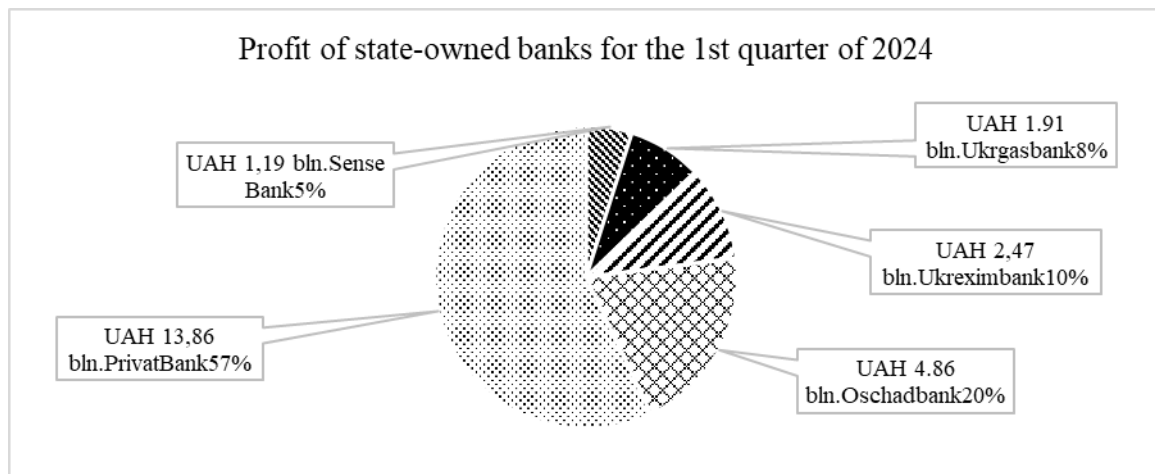
Privatbank earned UAH 13.86 billion in Q1 2024. This is a third of the profit of all banks. However, this is 14% less than in the same period last year – UAH 16.04 billion (Fig. 4). In Q1 2024, Ukrainian banks paid UAH 10.34 billion in income tax, which is one and a half times more than last year [4]. State-owned Privatbank paid almost half of this amount – UAH 4.84 billion [4].

The updated Memorandum between Ukraine and the International Monetary Fund (IMF) provides for the privatization of state-owned banks: Ukrgasbank and Sense Bank [13].



Source: developed by the authors based on [2, 12, 15].

**Fig. 4. Structure of systemically important banks in Ukraine in 2024**



Source: developed by the authors based on [4, 6, 13].

**Fig. 5. Profit of state-owned banks in Q1 2024**

That is why, at the next stage of the system-structural analysis, namely establishing various links and relations between elements, substructures and the whole, we will consider Ukrgasbank and Sense Bank as banks as elements of the whole. Ukrgasbank and Sense Bank are two systemic state-owned banks that have [3, 16]:

- 4% and 6% of net assets, respectively;
- a wide network of branches: Sense Bank – 120 branches, Ukrgasbank – 218 branches;
- number of depositors: Sense Bank – 2.894 million depositors, Ukrgasbank – 1.548 million. The volume of household deposits in Sense Bank is over UAH 47.756 billion, and in Ukrgasbank – UAH 33.648 billion. The overall rating of the banks is 3.44 and 3.43, which allows them to rank 12th and 13th among all Ukrainian banks. The depositors' loyalty is 3.4 and 3.2, which demonstrates the trust of citizens despite the war. The ranking for retail deposits is 6th and 9th, respectively;
- the regulatory capital of Sense Bank is over UAH 8.398 billion, and that of Ukrgasbank is UAH 10.073 billion. This allows them to meet all the NBU's economic standards with a sufficient margin of safety;
- banks have real estate and liquid assets on their balance sheets.

Thus, Ukrgasbank and Sense Bank are state-owned banks that have a developed customer base, a banking business that is operating and generating profits, real estate, and a well-known brand in the Ukrainian market, which is why they are attractive assets even in wartime.

**Conclusions and prospects for further research.** The war in Ukraine has forced the search for additional sources of income. One of these sources is the privatization of state and municipal property. However, during the war, military and hybrid risks must be taken into account, as they affect the attractiveness of assets and their price. The systemic and structural analysis made it possible to present the structure of the banking sector of Ukraine through the organization of subsystems from the highest level to individual elements. The dynamics of changes in the number of banks in Ukraine has a constant tendency to reduce the number of operating banks. Also, the number of banks with domestic capital exceeds the number of banks with foreign capital. The banking classification adopted in Ukraine contains only three features by form of ownership: state-owned banks (in which the state owns more than 75% of the share) account for 10%, banks of foreign banking groups – 22%, and banks with private capital (at least 50% of the authorized capital) – 68%. The systemic and structural analysis also revealed that the state is a monopolist in the banking market: state-owned banks receive more than half of the total profit of all institutions. Analyzing Ukrgasbank and Sense Bank as elements of the whole, it was found that they are attractive assets even in wartime.

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