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## **THREATS AND PROSPECTS OF THE CONCENTRATION OF UKRAINE'S BANKING SYSTEM**

### **Introduction**

The crisis in Ukraine's economy has become a catalyst for the implementation of the policy of "cleansing" the banking system, which ultimately led to an increase in the concentration of banking activities. In some cases, the concentration of the banking system can undermine the financial security of the state. Therefore, in the realities of the Ukrainian economy is a very important issue to study the causes and consequences of the concentration of banking, in particular in the direction of healthy competition, ensuring the activities of domestic enterprises and the development of the country's financial system.

Theoretical and methodological principles of the processes of concentration of the banking system are studied in the works of economists: Balanyuk M.V., Stepanenko S.V., Vasilchyshyn O.B., Gasyuk M.O. and others.

The purpose and objectives of the study. The purpose of the article is the theoretical and methodological justification of the concentration of banking in Ukraine..

### **Results of the research**

The banking system occupies a prominent place in the economic development of each state. Acting as a very important tool for the implementation of monetary policy, banking has a positive effect on attracting and using the funds of other entities, guarantees the fulfillment of financial obligations, is a key indicator for attracting investment.

Bank capital is the monetary basis of a market economy, as it creates the necessary conditions for the monetary support of both production processes and processes related to distribution, exchange and consumption.

"Banking Encyclopedia" defines bank capital as "a set of money capital raised by the bank, which it uses in the form of bank resources for credits, settlements, and other operations, when equity is a smaller share of bank capital" (Savluk, Podderohin, Moroz, et al., 1993).

The concept of "concentration" in the banking sector of Ukraine is considered to be quite controversial among economists. Thus, the authors of the economic dictionary-handbook define "the concentration of capital as an increase in the size of capital in the process of its accumulation due to the capitalization of part of the profits" (Ponovych, 2006). In the "Banking Encyclopedia" the concentration of capital is defined as "increasing the size of the bank's capital in the process of its accumulation" (Arbuzov, et. al., 2011).

O.B. Vasylchyshyn notes that "the concentration of banking is the accumulation of a significant share of ownership and banking operations in certain banks or groups of banks that form the basis of the country's banking system" (Vasilchishin, 2017). In A. Azrilian's dictionary, this concept is interpreted as "concentration of credit resources and operations in large and largest banks in order to ensure the growth of financial capital and enrichment of the financial oligarchy" (Large Economics Dictionary, 1998). There are several types of concentration of banking activity in the scientific literature, in particular: concentration of capital, concentration of assets, concentration of deposits, concentration of loans, etc. (Vasilchishin, 2017).

In addition to the above, there is a separate interdependence between the essential characteristics of the concepts of "concentration of bank capital" and somewhat similar concepts of "market concentration" and "concentration of the bank" (Sutormina, 2016). At the same time, we believe that the concept of concentration of bank capital is a separate form of expression of the concentration of banks. The concentration of bank capital is a consequence of the growth of banks' equity due to retained earnings of the bank.

A common indicator for assessing the level of concentration is the concentration index, which is designed to reflect the total share of individual banking institutions in the banking services market. If this figure approaches 100, the market is considered monopolized, but if the figure is above zero, the market can be considered competitive. Monitoring of market concentration indicators by the state supervisory body is very important given the regulation of the processes that take place there. The competitiveness of the banking sector of Ukraine can be ensured by the optimal level of concentration of banks in the positive dynamics of growth of their activities and reorganization through mergers and acquisitions (Musiy, 2013).

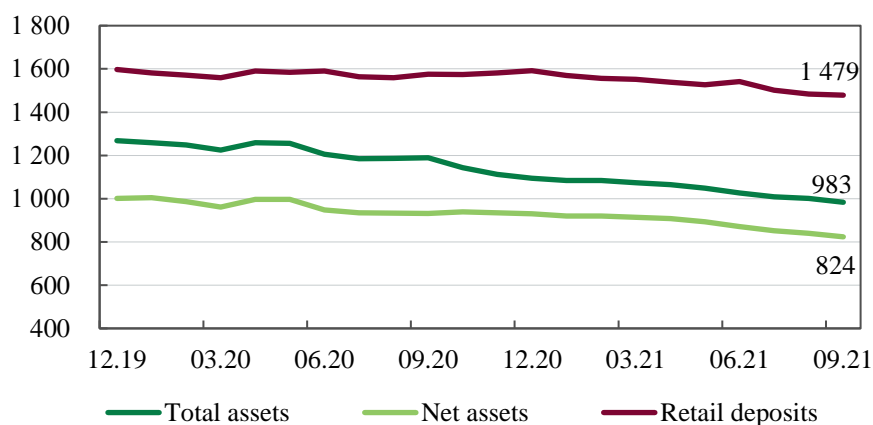
The mechanism of a market economy is not able to fully balance the state of banks, and therefore, there is a possibility of any unexpected changes in the structure and composition of banks. It should be noted that the tendency to increase the concentration of capital in the banking sector is typical for most developed economies. The only difference is that in Ukraine a significant part of the missing banks went bankrupt, creating serious problems for the financial system and the state budget. This situation highlights the problem of the optimal

number of banks in the domestic banking system, their size in the market (Namonyuk, 2017).

The regulator is also paying more attention to the assessment of concentration, as the list of key indicators of the Comprehensive Financial Market Development Program of Ukraine includes the Herfindahl-Hirschman Index (HHI), which is the sum of squares of all market participants with a value of at least 0.8 (more than 1000 - the market is concentrated) by assets (On Approval of the Integrated Program for the Development of the Financial Sector of Ukraine until 2020). Therefore, gradually from the subject of theoretical research the problem of concentration becomes a practical problem for the domestic financial regulator (Fig. 1).

The data of fig. 1 indicate that the Ukrainian banking sector is concentrated. Since 2016, after the disappearance of 45 banks, the empirical index of NIS has increased significantly. According to the last two years, there is a tendency to reduce the concentration of bank capital under the influence of two main factors.

At the same time, the processes of concentration in the banking system are not suspended in foreign countries. The globalization of economic processes, which includes their centralization and concentration, forces us to take into account the relevant changes in competitive relations in both the domestic and international markets. For clarity of data on the level of concentration of bank capital, we consider it appropriate to compare domestic indicators with similar ratios of foreign banking systems. To compare the calculated values of the concentration, data on the level of HHI of EU countries as of 01.01.2020 were used (Fig. 2).

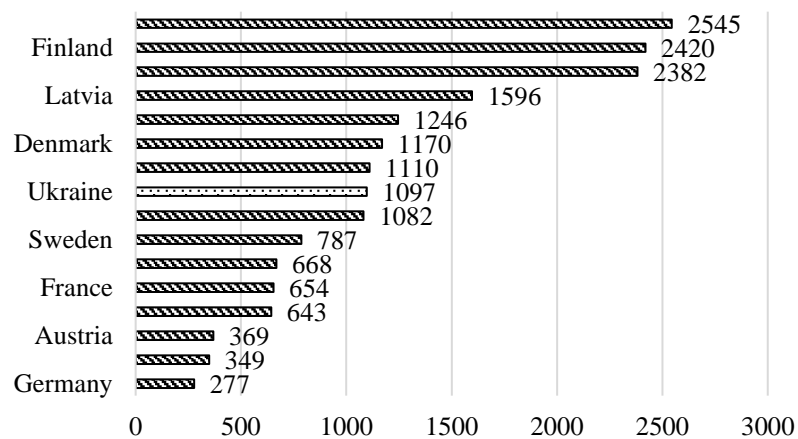


**Figure 1. Herfindahl-Hirschman index of the banking system of Ukraine**  
Source: Source: *Banking Sector Review*, November 2021

**Table 1. Dynamics of capital investments in Ukraine for 2010-2020**

Indexes	Year						Changes 2020 to 2010	
	2010	2012	2014	2016	2018	2020	+ / -	%
Capital investments, UAH billion	180,6	273,3	219,4	359,2	578,7	508,2	327,6	281,4
incl. bank loans and other loans, UAH billion	22,9	39,7	21,7	27,1	44,8	27,9	5,0	121,9
Share of credit funds in capital investments, %	12,7	14,5	9,9	7,5	7,7	5,5	-7,2	43,3

Source: compiled and calculated according to the data of State Statistics Service of Ukraine (Capital investment...2021).

**Fig. 2. Rating of the concentration indicator of the banking systems of the EU and Ukraine**

Source: compiled by the author according to data, (Report on financial structures // ECB. – 2020. URL : <https://www.ecb.europa.eu/pub/pdf/fie/ecb.fie202003~197074785e.en.pdf> Accessed 02.11.2021).

According to Figs. 2. It is established that on 01.10.2020 the most concentrated is the Estonian banking system (2545). The lowest share of concentration is observed in Germany, Sweden, Poland, France, Italy, Austria, Great Britain. Ukraine's banking system is similar in concentration to Belgium, Denmark and Spain.

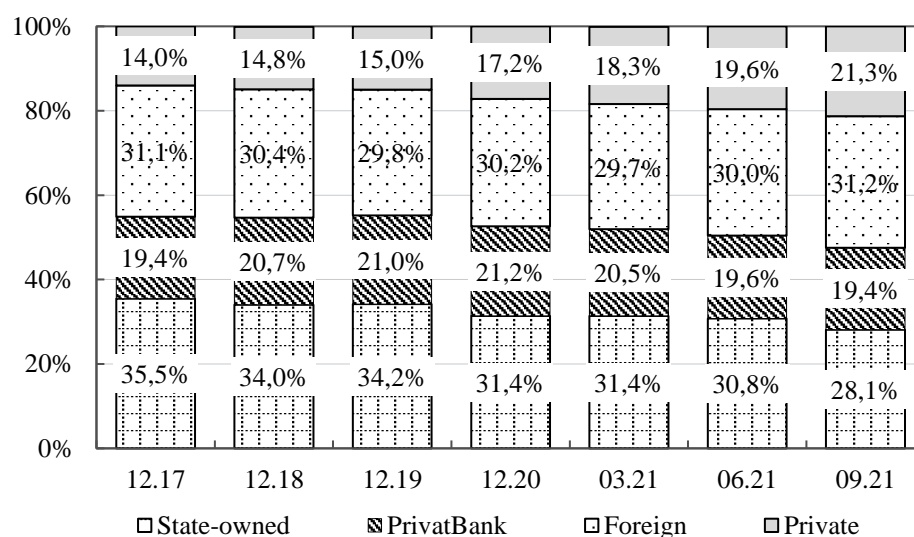
Among the five largest banks in Ukraine in terms of net assets, four banks are state-owned. This situation can be used to overcome shocks, but in terms of long-term growth and development for the financial system of Ukraine it is a limiting factor.

Note that determining the bank's market share through assets is more indicative than through equity, as it is the assets that determine the amount of services provided. However, after tightening the bank's capital adequacy

requirements, it is impossible for it to increase its market presence (increase assets, loan portfolio) without a corresponding increase in equity.

In general, the banking system has moved away from the theoretical optimal level for the largest banks, but has improved the situation in the group of small banks. This can be explained by the consequences of bankruptcies of a large number of banks: the transfer of assets of the largest banks to state-owned, the disappearance of a large number of small banks. Let us agree with V.E. Namonyuk that “the bankruptcy of a large number of banks was not the optimal way to clean up and optimize the structure of the banking market. From the point of view of economic security of the state and protection of the interests of investors, the strategy of mergers and acquisitions could be the best way out of the situation” (Namonyuk, 2017).

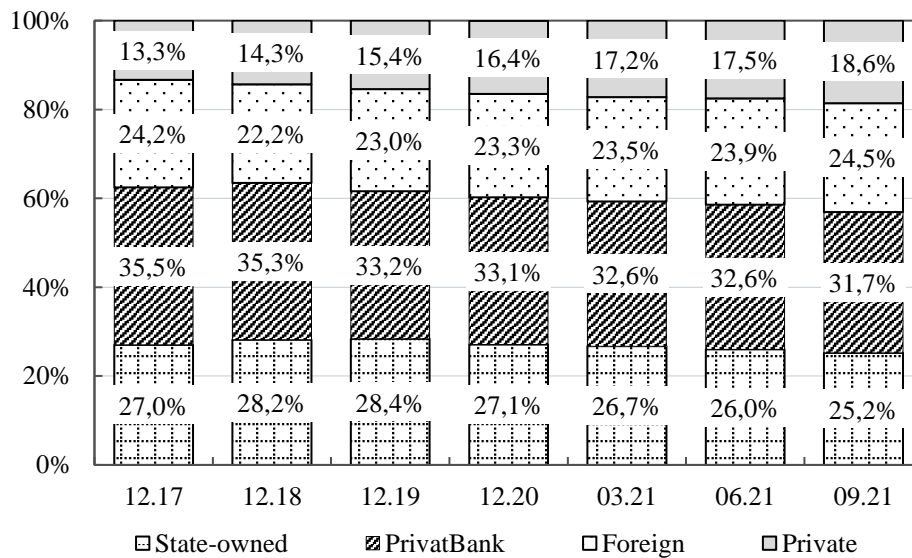
The high share of the state in the capital of the banking system also has a negative impact on the level of competition and the efficiency of the largest banks. At the beginning of October 2021, the market share of state financial institutions was 47.5% and 56.9% in net assets and household deposits, respectively (Fig. 3 and Fig. 4).



**Fig. 3. Structure of net assets by groups of banks, %**

Source: *Banking Sector Review, November 2021*, (*Banking Sector Review, November 2021. Official site of the NBU. URL : <https://bank.gov.ua/ua/news/all/oglyad-bankivskogo-sektoru-listopad-2021-roku>*, Accessed 21.10.2021).





**Fig. 4. Structure of household deposits by groups of banks, %**

Source: *Banking Sector Review, November 2021*, (*Banking Sector Review, November 2021. Official site of the NBU. URL : <https://bank.gov.ua/ua/news/all/oglyad-bankivskogo-sektoru-listopad-2021-roku>, Accessed 21.10.2021*).

The concentration of bank capital on the basis of the growth of borrowed resources is mainly due to deposit sources, loans and debt securities of own issue. The growth rate of borrowed funds indicates that the banking system is beginning to perform the function of transforming citizens' savings into loans to the real sector of the economy. Funds of the population are becoming the most important source of liabilities of the banking sector. However, this source of fund formation in Ukraine remains the most sensitive for banks.

Let's consider in more detail the volume of deposit activities of Ukrainian banks on the example of specific banking institutions (Table 1).

**Table 1. TOP 5 largest banks in terms of deposit portfolio, as of 01.10.2021**

Bank	Deposit portfolio, UAH million	Share in the total portfolio, %
JSC CB PrivatBank	298915,6	20,60
JSC Oschadbank	188188,8	12,97
JSC Ukreximbank	126403,0	8,71
JSC Raiffeisen Bank	101926,4	7,03
JSB UKRGASBANK	91105,1	6,28
Total for Top 5	806538,9	55,60
Total for the banking system	1450726,3	100,00

*Source: calculated according to data, (Financial sector statistics. Official site of the NBU (2021), available at: <https://bank.gov.ua/ua/statistic/sector-financial/data-sector-financial#3fa>, Accessed 02.11.2021).*

Privatbank is the absolute leader in the market of deposit services - UAH 298.9 billion, which is almost 1.6 times more than in Oschadbank. In general, the leaders in the deposit market of Ukraine are exclusively state-owned banks - Privatbank (20.6% of the total deposit portfolio), Oschadbank (12.97%) and Ukreximbank (8.71%). Raiffeisen Bank, the only bank with foreign capital, is among the top five. Its share in the deposit portfolio of the banking system of Ukraine is about 7%. Such a high share of individual banks increases the risks in the banking system, in particular the risk of increasing the burden on the Deposit Guarantee Fund for Individuals in the event of a bank's insolvency.

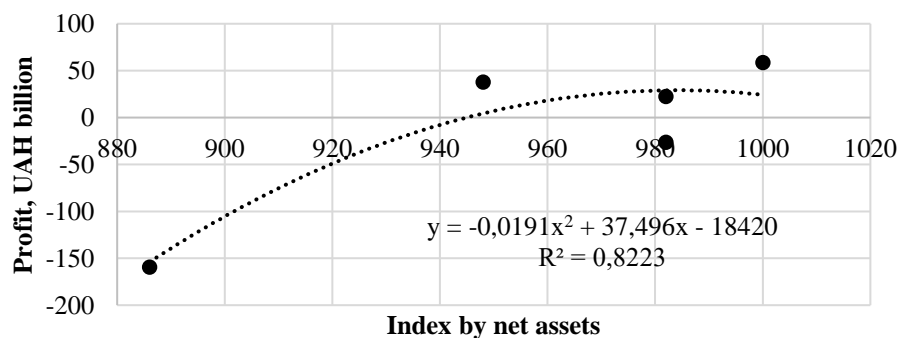
When analyzing the process of concentration of the banking system we take into account the patterns identified in the study of competition in specific markets. Thus, a high level of monopolization can be combined with a fairly efficient operation of the industry or its segment: maintaining the volume of production (services) in a crisis, high level of manageability, strong export potential and stable liquidity. However, in the long run, a high level of monopolization will be a brake on the development of Ukraine's financial sector, as competition is a way to select the best solutions to technological, organizational and financial problems facing financial institutions, which should be considered in antitrust markets regulation.

Studies clearly show that the higher the level of competition in the banking system, the lower the likelihood of destabilizing factors in the economy. In particular, researchers at the World Bank Center found a direct correlation between the level of concentration in the banking market and financial stability in the country, as increased competition encourages banks to take more diversified risks and make rational management decisions (How Does Bank Competition Affect Systemic Stability. Policy Research Working Paper 5981. The World Bank. 2012).

There are two completely opposite concepts on the relationship between the structure of the banking sector and financial stability in economic literature: "concentration - stability" and "concentration - instability". Proponents of the concentration-stability concept consider that non-concentrated banking systems are more vulnerable to crises than concentrated ones. This is due to the fact that banking systems with a high level of concentration are more resistant to external risks, easier to control by the state and more profitable (Gasyuk, 2016).

The analysis of the impact of the banking system concentration index by the indicator of net assets on the size of banks' net profit is presented in Fig. 5.

The correlation analysis showed that the size of the profitability of the banking system of Ukraine largely depends on the level of concentration and has a sufficient degree of closeness ( $R^2 = 0.8223$ ). The highlighted model is simplified in detail, as it is used only to partially predict the trends of influence and establish the level of dependence of the resultative characteristic (net profit) on the factor (the level of concentration of the banking system).



**Fig. 3. Influence of the banking system concentration index on the size of banks' net profit**  
*Source: own research.*

Protecting the market position of banks is one of the initial principles of state policy to ensure the stability of development and competitiveness of the national economy. With the development of globalization, building an effective state policy in the field of concentration of bank capital is becoming increasingly important.

In our opinion, the goal of the state policy in the field of monitoring and control over the processes of concentration of bank capital should implement the following tasks: to ensure the formation of its own banking system with several national leaders; to form and ensure the implementation of the five-year strategy for the development of the banking system; to promote the attraction and concentration of foreign bank capital; to provide preconditions for increasing the

level of development of the banking system in accordance with the tasks of socio-economic development of the country.

Creating conditions for increasing the competitiveness of the banking sector is an integral part of public policy, on the implementation of which depends the development of financial and real sectors of Ukraine's economy. In this regard, the need to define the basic principles of public policy aimed at maintaining the competitiveness of the banking sector through the regulation of mergers and acquisitions is urgent. Systematization of the experience of the US and EU banking sector in the relevant processes allows to identify some elements that should be adapted to domestic practice (Musiy, 2014).

It is expedient for Ukraine to take into account and implement the experience of the EU and other developed countries, which takes into account the existence of various forms of competition. Competition policy options take into account the need to address mergers and acquisitions.

## Conclusions

The profitability of Ukraine's banking system depends largely on the level of concentration and has a sufficient degree of closeness. In Ukraine, the number of banking institutions is gradually declining and the share of the largest banks is growing. A special place in the domestic banking system is occupied by JSC CB Privatbank, which controls about a fifth of the net assets of the entire banking system of Ukraine and the total deposit portfolio of banking institutions. The high share of the state in the banking system has an ambiguous impact on the level of competition and the efficiency of the largest banks.

State regulatory measures regarding the processes of concentration of bank capital should be aimed at creating a competitive environment. According to forecast calculations, there is a steady downward trend in the level of concentration in the banking sector of Ukraine in the coming periods.

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### **Abstract**

The share of the largest banks is growing in Ukraine. Since 2016, Ukraine's banking system has been similar in terms of concentration to Belgium, Denmark and Spain. An ambiguous influence on the level of competition and on the efficiency of the largest banks is exerted by a significant share of the state in the banking system.

It is established that the size of the profitability of the banking system of Ukraine largely depends on the level of concentration and has a sufficient degree of closeness. At the same time, net income in the banking system of Ukraine strongly depends on the level of concentration of net assets in banking.

It is proposed that state regulatory measures for the concentration of bank capital should be aimed at creating a competitive environment. It is expedient for Ukraine to take into account and implement the experience of the EU and other developed countries, which takes into account the existence of various forms of competition. Competition policy options take into account the need to address mergers and acquisitions of banks.

**Keywords:** banking system, concentration, state banks, concentration index.

*JEL Classification:* Q0,