

# “Capitalization of banks: theory, practice and directions of ensuring”

## AUTHORS

Mark Myronenko  <https://orcid.org/0000-0001-7412-4362>

Olena Polova  <https://orcid.org/0000-0002-7120-7944>

Olha Khaietska  <https://orcid.org/0000-0002-0262-1455>

Natalia Koval  <https://orcid.org/0000-0002-7293-3331>

## ARTICLE INFO

Mark Myronenko, Olena Polova, Olha Khaietska and Natalia Koval (2018). Capitalization of banks: theory, practice and directions of ensuring. *Banks and Bank Systems*, 13(1), 173-183. doi:[10.21511/bbs.13\(1\).2018.16](https://doi.org/10.21511/bbs.13(1).2018.16)

## DOI

[http://dx.doi.org/10.21511/bbs.13\(1\).2018.16](http://dx.doi.org/10.21511/bbs.13(1).2018.16)

## RELEASED ON

Friday, 27 April 2018

## RECEIVED ON

Thursday, 29 March 2018

## ACCEPTED ON

Monday, 23 April 2018

## LICENSE



This work is licensed under a [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/)

## JOURNAL

"Banks and Bank Systems"

## ISSN PRINT

1816-7403

## ISSN ONLINE

1991-7074

## PUBLISHER

LLC “Consulting Publishing Company “Business Perspectives”

## FOUNDER

LLC “Consulting Publishing Company “Business Perspectives”



NUMBER OF REFERENCES

21



NUMBER OF FIGURES

2



NUMBER OF TABLES

2

© The author(s) 2024. This publication is an open access article.



BUSINESS PERSPECTIVES



LLC "CPC "Business Perspectives"  
Hryhorii Skovoroda lane, 10, Sumy,  
40022, Ukraine

[www.businessperspectives.org](http://www.businessperspectives.org)

**Received on:** 29<sup>th</sup> of March, 2018

**Accepted on:** 23<sup>rd</sup> of April, 2018

© Mark Myronenko, Olena Polova,  
Olha Khaietska, Natalia Koval, 2018

Mark Myronenko, Doctor of Public  
Administration, Associate Professor  
of the Department of Finance,  
Vinnytsia Trade and Economic  
Institute KNTEU, Ukraine.

Olena Polova, Doctor of Economics,  
Associate Professor of the  
Department of Finance, Vinnytsia  
National Agrarian University,  
Ukraine.

Olha Khaietska, Ph.D. in Economics,  
Senior Lecturer of Economics  
Department, Vinnytsia National  
Agrarian University, Ukraine.

Natalia Koval, Ph.D. in Economics,  
Associate Professor of the  
Department of Finance, Vinnytsia  
National Technical University,  
Ukraine.



This is an Open Access article,  
distributed under the terms of the  
[Creative Commons Attribution 4.0  
International license](https://creativecommons.org/licenses/by/4.0/), which permits  
unrestricted re-use, distribution,  
and reproduction in any medium,  
provided the original work is properly  
cited.

Mark Myronenko (Ukraine), Olena Polova (Ukraine), Olha Khaietska (Ukraine),  
Natalia Koval (Ukraine)

# CAPITALIZATION OF BANKS: THEORY, PRACTICE AND DIRECTIONS OF ENSURING

## Abstract

In the article, the essence of the concept of a banking institution "capitalization" is revealed. The current state of capitalization level of domestic banks is investigated. The directions of strengthening the capitalization are offered, which will increase the competitiveness of domestic banking institutions in the world financial market and will ensure the national economy stability on the way toward integration into the world economy.

It is proved that the prospects for the development of any bank are largely determined by its capitalization level. Lack of proper development inhibits both individual banks and the banking sector as a whole.

In the context of the recent financial crisis, the provision of sufficient capital for banks has been one of the key issues, because the lack of capital was the greatest threat to the banking system stability. With this in mind, the issue of the banking system capitalization is particularly topical.

Today, the development of the Ukrainian banking system under economic instability has faced the increase in competitiveness of domestic banks compared with foreign ones, in order to preserve the national priorities of the banking system in general under conditions of foreign capital movement.

The processes of concentration in the banking system of Ukraine are analyzed using Herfindahl-Hirschman index in terms of assets and equity, allowing to estimate the level of monopolization and, therefore, the impact on economic development. To consider the increase in the level of capitalization and reliability of the banking institutions of Ukraine, it would be advisable, first of all, for banks to improve the quality of capital and to ensure a sufficient level of coverage of risks taken by banks.

## Keywords

bank, bank system, capitalization, authorized capital of the bank, Herfindahl-Hirschman index, capital, foreign capital

## JEL Classification

E22, G21

## INTRODUCTION

Banks play a special role, since they are leading financial intermediaries which ensure the transfer of financial resources between individual regions, sectors and economic entities in order to meet their needs and demands. This process requires commercial banks to increase volumes, optimize the structure and improve the organization of the resource base. Sufficient volume and balanced resource base of banks is an important prerequisite for their profitability, sufficient liquidity and the market participants confidence.

Strengthening the resource base contributes to increasing the banks ability to meet the current and investment needs of economic entities for additional financial resources. At the same time, currently the problems of the formation and use of bank resources have become noticeable. Necessity to speed up production and limited stock markets have resulted in too high demand for bank loans, which in turn

requires rapid build-up of bank resources. The formation of long-term resources, the demand for which is growing most dynamically among enterprises and the population, is especially acute.

The purpose of the paper is to study the level of capitalization of the banking sector in Ukraine, as well as to determine the main directions of domestic banks capitalization to ensure the stable functioning of the banking system.

---

## 1. LITERATURE REVIEW

In the context of the growing financial crisis, one of the main problems faced by the domestic banking system is to maintain its stability and reliability, which allows banks to perform their functions in providing economics with sufficient financial resources. Changing the market situation not only jeopardizes the profitability of banks, but also their functioning in general. The main reason for the cessation of banks activities is their inability to neutralize existing risks in the banking sector and to be responsible for their obligations due to lack of resource base in financial and credit institutions.

There is a problem related to the formation of long-term resources, the demand for which is growing most dynamically among enterprises and the population. It should be noted that the National Bank of Ukraine takes measures to provide banks with a sufficient level of bank capital through the establishment of specific standards. However, questions arise about the methodological principles for assessing the bank's capital in terms of taking into account the risks inherent in banking activities, definition and application of effective methods to increase capital.

The term of "bank capital" is often used by economists when considering the banking system, the availability of resources economy. However, it should be noted that in the economic literature there is no consensus on its definition. The ambiguity and versatility of interpretations stem from discrepancies and uncertainties in the interpretation of the concept of "capital".

Smith (1979) considers the accumulated capital as that remaining after consumption, stock. Accumulation of capital creates preconditions for increasing labor productivity as a result of its

further redistribution. With that in mind, Smith divided the capital into the main capital and the reverse one. The last was the cash.

Lutyi (2008) emphasized the definition of capital provided by Marx – capital is not a thing, which is expressed as a capital good, but a certain relationship between the capitalist and the hired worker. He also argued that capital is a self-increasing value.

The complexity and multiplicity of the capital category affects the interpretation of the essence of bank capital. According to Myshkin (1998), capital is the difference between the sum of assets and liabilities, which forms the net assets of the bank. These funds are mobilized through the sale of new shares or retained earnings. Loan non-repayment provisions are also an important component (Myshkin, 1998). Rose (1995) and Shinky (1994) interpret the concept of bank capital primarily as an authorized capital of the bank.

Encyclopedia of Banking of Ukraine (2001) defines bank capital as a set of cash capital (own and borrowed) operated by the bank, which in turn generates profit. In the Encyclopedia of Banking, the concept of "bank capital" is considered as a set of different types of cash capital, the funds that the bank uses in the form of bank resources to secure its activities, the implementation of various banking operations and profit. Consequently, one can conclude that some scholars identify the concepts of "bank capital" and "banking resources".

According to Alekseenko (2002), Vozhzhov (2003), Vladychin (2002), and Maslak (2004), bank equity is the property of a bank, free of liabilities, or the property of the bank, the strategic reserve, which creates conditions for its development, absorbs losses, if necessary, and is one of the most important pricing factors when it comes to the price of the bank itself.

After analyzing the existing interpretation of the concept of “bank capital”, it is appropriate to attribute the following main components to it: own capital and borrowed capital.

There is a need to thoroughly consider the issue of expanding the sources of bank capital formation under financial and economic instability and investment-innovation modernization.

Rosenberg (1997) represents bank capital, such as share capital and long-term debt. In addition, he defines capitalization as total liabilities, i.e. the funds invested by its owners. Raizberg (2008) identifies the concepts of “bank capital” and “bank resources”, since in the context of globalized financial and credit processes, banks are trying to find the new sources for credit projects financing. Reinhart and Rogoff (2009) describe capitalization of assets in general terms as follows. First, it is a property right (on the terms of alienation, seizure, usage, lease right), and second, it is the modernization of collateral property.

It should be noted that integration and globalization affect positively the world financial markets development, generate a significant number of benefits to their participants. But at the same time, it should be remembered about the increase of risks which can be neutralized regulatory capital. It should be noted that in European countries the so-called economic capital of the bank is often used. Economic capital is the capital that a bank must have in terms of its risks. It is a function of risks, volatility, diversification and concentration. Thus, according to the Basel Capital Accord, each bank should have the minimum required amount to cover the main types of risks, such as credit, market and operating. The major function of economic capital is capital management, which balances equity, income and risks.

Therefore, it can be argued that economic capital is smaller than regulatory capital and is only a part of it. Economic capital is a category that reflects the bank’s policy for assessing the needs and the formation of the required amount of capital to cover the risks that the bank takes as a result of its activities and possible losses in order to maintain financial stability and competitiveness.

Foreign experience in the capitalization of banking institutions indicates that an increase in banks’ capital is a positive factor, but different methods of raising capital are used for each economic system.

In the United States acquisitions of small banks by bigger one and mergers of banks with large capital are most often rised. United States banking institutions also increase their capital by issuing additional shares and subordinated bonds and increasing the redistributed profits fund. The effectiveness of the chosen methods is due to the fact that currently, four US banks are among the top ten banks in the world by the rate of capitalization. Analyzing the practice of banking institutions capitalization in China, it should be noted that Chinese banks are currently the most capitalized in the world. A specific feature of the implementation process of capitalization of banks in China is using a tool such as a public offering on the Stock Exchange – IPO. The characteristic features of European practice are the individual banking services (private banking), mergers and acquisitions and IPO.

Koval (2015) notes that the countries of Central and Eastern Europe mainly attracted foreign capital to solve the problem of capitalization. In some countries, the share of foreign capital in the banking system is significant – particularly in Poland, foreign capital is about 80% of the total capital of the banking system.

## 2. METHODS

Over the past decade, many different methods of analysis and approaches to determining the level of concentration have been developed, the main of which is the concentration index (structural approach) or the index of Herfindahl and Hirschman (Herfindahl-Hirschman index – HHI) (1964). The Herfindahl-Hirschman index is referred to as the full information index, because it takes into account the peculiarities of the distribution of the financial and credit structures. The Herfindahl-Hirschman index is used for banking supervision purposes, as well as to analyze the banking market structure.

The analysis of concentration processes in the banking system of Ukraine begins with an assess-

ing the level of monopolization of the banking services market (by assets, equity, liabilities) using HHI.

HHI – is an indicator used to assess the level of the economy sectors monopolization. It is calculated as the sum of the squares of the particles of a separate activity indicator by the formula:

$$I = \sum_{k=1}^N \left( \frac{P_k}{P} \right)^2, \quad (1)$$

where  $I$  – Herfindahl-Hirschman index value;  $P_k$  – a certain indicator of the activity of a separate bank (for example, equity), which is used to assess the level of the market monopolization;  $P$  – the value of the relevant indicator for the whole banking system; and  $N$  – number of banks in bank system.

In order to characterize the level of concentration, according to the criterion of monopolization in banking, indicators such as equity, assets, credit portfolio, amount of borrowed funds, etc., are used. The Herfindahl-Hirschman index can range from 0 to 1. The following grading scale of concentration level is established, depending on the HHI level:

- 1) 0 – minimum concentration;
- 2) from 0 to 0.1 – low level of concentration;
- 3) from 0.10 to 0.18 – average concentration;
- 4) more than 0.18 – high level of concentration. If there is one bank in the market, that is, a complete monopoly, the HHI will equal 1. In practice, other kinds of gradations are used – from 0 to 1000 or up to 10,000 points.

In practice, the following concentration factors are more often used: market shares of three (CR3), five (CR5) and ten (CR10) leading banks, as well as Herfindahl-Hirschman index. The index of concentration of three (CR3), five (CR5) and ten (CR10) leading banks or banking institutions is calculated according to the formulas:

$$CR3 = \sum_{i=1}^3 Y_i, \quad CR5 = \sum_{i=1}^5 Y_i, \quad CR10 = \sum_{i=1}^{10} Y_i, \quad (2)$$

where  $Y_i$  – market share of  $i^{\text{th}}$  bank.

### 3. RESULTS

The term of “bank capital” given by Rosenberg (1997) is often used by Ukrainian and foreign economists. But it should be noted that in the economic literature there is no consensus on its definition. The ambiguity and versatility of interpretations stem from discrepancies and uncertainties in the interpretation of the concept of “capital”. Equity capital consists of authorized capital (shareholders’ contributions), reserve capital and retained earnings. It is the property of the bank and is accumulated to avoid the negative effects of a temporary fall in the value of assets, as well as to trust the bank.

According to Lutyi (2008), in order for banks to successfully operate in the financial market, they not only use their own capital, but also the borrowed one. These two types of capital represent a significant share in the capital structure of each bank.

The attracted capital, as a rule, far exceeds the own capital of a bank. It includes temporarily free funds of individuals and legal entities involved in bank deposits.

Loan capital – loans borrowed from the interbank market or central bank, as well as funds from the sale of debt securities in the money market.

The common feature for both types of capital is that it is someone else’s money for a bank that is in its temporary utilization, but the existing differences between them should be taken into account (Table 1).

It is up to borrowing capital to include foreign and international capital. In the financial dictionary, the concept of “foreign capital” is disclosed through a variety of forms of capital, such as joint stock, financial, industrial, state owned by non-residents.

Integration and globalization have a positive effect on the development of the financial markets in the world, which gives a significant number of benefits to their participants.

According to Larionova (2000) it should be remembered about the increase of risks, which can

be neutralized by regulatory capital. In European countries, the so-called economic capital of the bank is often used.

**Table 1.** The main differences between the attracted capital and the borrowed bank capital

Source: Elaborated by the authors.

Typical difference	Attracted capital	Borrowed capital
The borrowing initiative	From clients (depositors), the position of the bank is passive	From the bank, because it is proactive
Fee for using the funds	Largely determined by the bank	The payment for use is determined by the lender
The term for which the resources are provided and their number	The investor determines in terms of his own needs and interests	The borrowing bank determines
Requirements for which the funds will be used	To carry out active operations	To maintain liquidity (in most cases)
The need for additional costs	Marketing costs	No additional costs

Economic capital is the capital that a bank must have in terms of its risks. It is a function of risk, variability, diversification and concentration. Thus, according to the Basel Capital Accord, each bank should have the minimum capital to cover the main types of risk of financial institutions, such as credit, market and operating. According to Lutyi (2008), the main function of economic capital is capital management, which balances capital, income and risks. In the economic literature, there are two main approaches to the characteristics of economic capital. According to the first, it is defined as the amount of capital needed to cover a certain set of specific risks. In this case, the economic capital may be as large as or smaller than the amount of regulatory capital.

Consequently, one can state the following: if the economic capital is much smaller than the regulatory one, then the banking institution carries out low-risk activities. The opposite case means either greater riskiness of the bank's operations, or the inclusion of more risks or incurring unexpected losses.

The second approach is based on the definition of the most reliable and sustainable component of regulatory capital, which is able to cover a certain set of risks and the result of their complex interac-

tion. On this basis, it can be argued that economic capital is smaller than the regulatory capital and constitutes only a certain part of it.

Consequently, economic capital is a category that reflects the bank's policy for assessing the needs and the formation of the required amount of capital to cover the risks taken as a result of the bank activities and possible losses in order to maintain financial stability and competitiveness.

Thus, bank capital is monetary and equivalent funds held by a bank (own, borrowed or loaned), used for active operations, for the purpose of obtaining profits, compensation of losses as a result of the influence of banking risks, as an indicator of people's trust, as well as the maintenance of competitive positions in the market.

An adequate amount of bank capital not only enables the efficient functioning of the banking system, but also of the economy as a whole. The quality of bank capital in Ukraine does not meet the world standards due to its high percentage of low-credibility components. The most stable and reliable component of bank capital is the authorized capital.

However, in recent years, in the context of globalization and integration processes in the economy, the economic capital that allows the bank to cover the main types of risks, namely: credit, market and operational, becomes an issue of special urgency.

From this, it can be argued that economic capital is a function of risk, variability, diversification and concentration. Therefore, it is expedient for commercial banks to diagnose the capitalization of a banking institution, the essence of which is to determine the level of capitalization of the banking institution at the present stage, as well as to assess the influence of factors on the capital base. It is expedient to diagnose the level of capitalization of a banking institution in the following main areas:

- definition of key indicators that affect the level of capitalization of the banking institution;
- analysis of the level of capital adequacy;

- resource efficiency;
- identification of factors that will determine the level of capital of a banking institution in the future.

It is clear that the efficient functioning of bank capital depends on the quality of components that form its structure. Capital is largely formed due to special funds and reserves created in the bank, and their share in total capital is much higher in large banks. It should be concluded that the structure of bank capital is influenced by the cost of the formation of own funds, as well as the requirements of the organizational plan.

The Ukraine’s involvement with the processes of globalization contributes to the influx of foreign bank capital. The presence of banks with foreign capital in the banking system of Ukraine meets the interests of the development of the domestic financial system, promotes the attraction of foreign investment and the expansion of the resource base of socio-economic development. However, a number of financial risks associated with the rapid growth of the share of foreign bank capital should be taken into account. They can lead to the loss of sovereignty in the area of monetary policy, the possible increase in instability, unexpected fluctu-

ations in liquidity of banks, the possible outflow of financial resources. Under the influence of foreign bank capital in Ukraine, one can expect the creation of a qualitatively new financial and economic environment, the emergence of new opportunities, but also new problems.

As of January 1, 2017, 96 banking institutions had the license of the National Bank of Ukraine (including 38 banks with foreign capital). Since 2016, the number of functioning banking institutions has decreased by 21. Starting from June 1, 2016, the Board of National Bank of Ukraine adopted several decisions on giving permission of banking institutions self-liquidation. PJSC “Finance bank” and PJSC “Investment-Trust Bank” were the first cases. Full details on the dynamics of changes in banking system of Ukraine during 2016 can be seen in Figure 1.

During 2015–2016, there is a tendency towards a decrease in a number of banking institutions with partially foreign capital. Beginning with 2015, a decision was made on liquidation of financially unstable commercial banks which caused its reduction by 40%. One of the most important reasons for recognizing banks as insolvent apart from legislation violation, which regulates the prevention and counteraction of legalizing profits from

Source: Annual report of the National Bank of Ukraine.

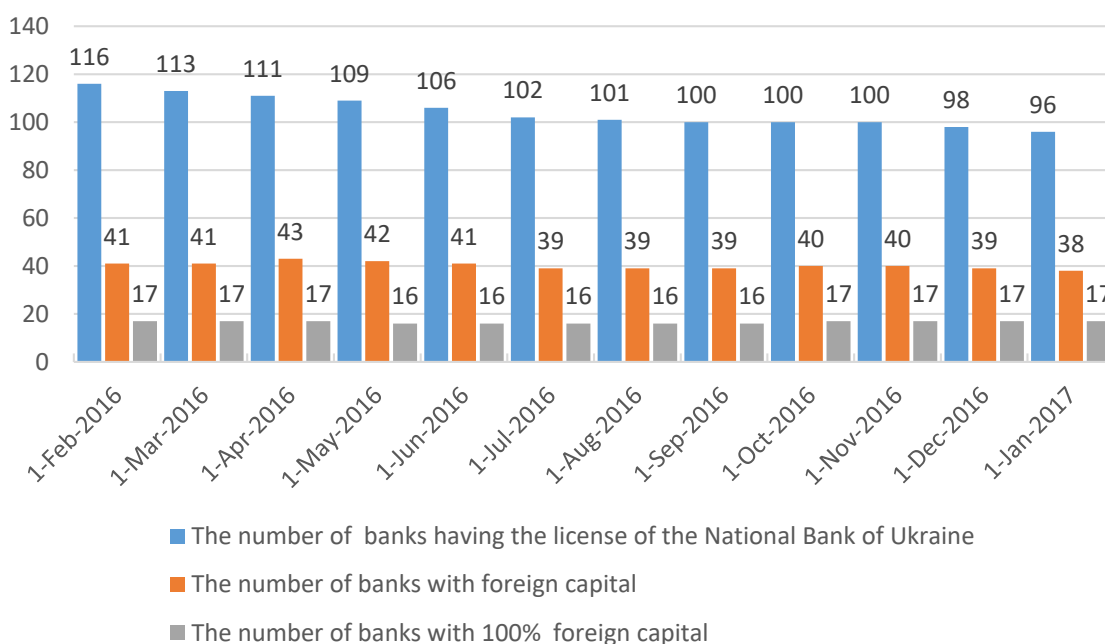


Figure 1. Changes in banking system of Ukraine during 2016

crime, is an inadequate level of its capitalization and the inability of shareholders to provide the appropriate level of financial support.

If the inflow of foreign bank capital is properly regulated and controlled, the structure of bank system improves, domestic banks receive more incentives to enter international stock markets, the efficiency of the monetary policy transmission mechanism increases, and interest rates on loans decrease.

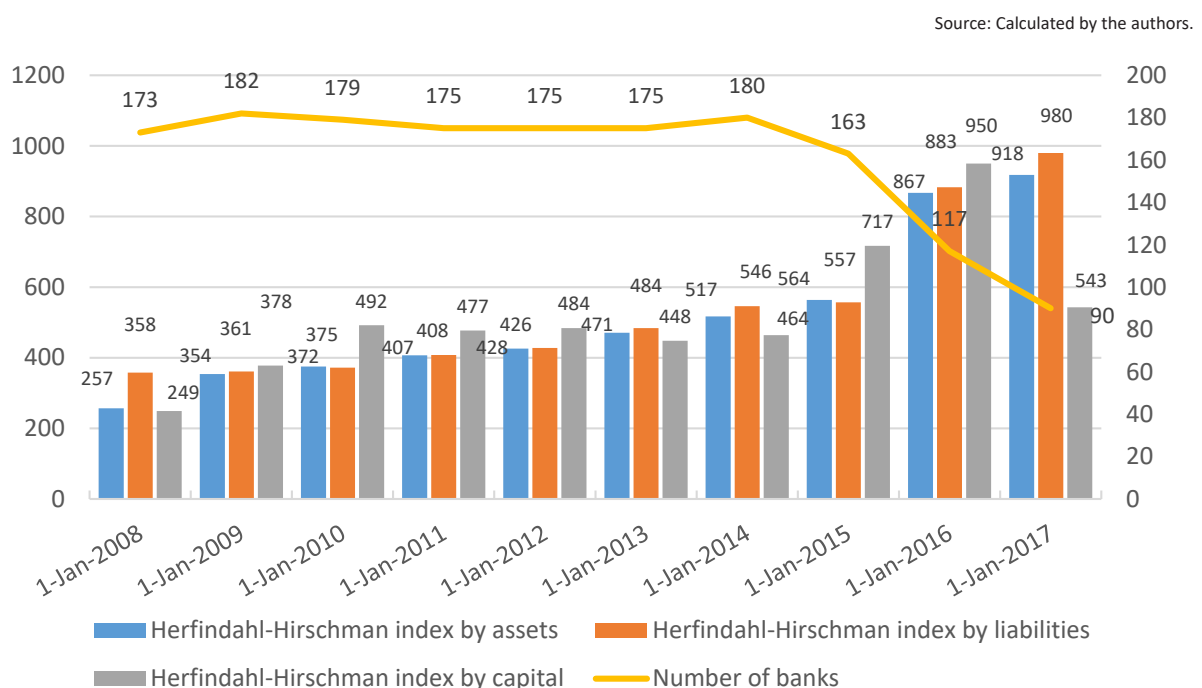
The formation of commercial banks of Ukraine matched the growing crises in economy, which predetermined in general their financial state. The reliability of commercial banks is of particular concern to shareholders, depositors, and control bodies, since bank failures have more impact on the economy than bankruptcy of enterprises. The crisis situation of banks is due to insufficient attention to the formation of capitalization, as a means of ensuring long-term commercial success.

Concentration of capital in Ukrainian banking system is caused by the need to scale up and increase the efficiency of activities, as well as to ensure financial stability of banks, especially in times of liquidity crisis, outflow of deposits and distrust to the banking system.

Over the past few years, the NBU has been conducting a policy of improving the banking system through the elimination of financially unstable banks. At the same time, the market of banking services in Ukraine can be called low-concentrated, since the calculated Herfindahl-Hirschman index is less than 1000 points. The constant growth of the HHI index to 918 points on assets and up to 980 points on liabilities (Figure 2) indicates an increase in concentration and is positive for ensuring the stability of the Ukrainian banking system.

An increase in the capital index to 950 points in 2015 is due to the withdrawal of insolvent banks from the market. In 2016, withdrawal of capital from the banking sector of Ukraine is observed, which is largely due to financial and economic instability.

Given the heterogeneity of the banking system of Ukraine, in which a large share of assets refers to the largest banks, it is appropriate to estimate the level of concentration by the chosen indicator (by assets, equity and liabilities) carried out through the grouping of banks by number, namely the first group – the three largest banks; the second group – five largest banks; and the third group – ten largest banks.



**Figure 2.** Dynamics of Herfindahl-Hirschman index in the banking system of Ukraine in 2007–2016



Concentration (by assets, equity and liabilities) of the largest banks is increasing all the time and indicates that the structure of bank system of Ukraine is deformed and ineffective. The calculations show that the first group includes banks with state capital – PJSC “Privatbank”, PJSC “Oshchadbank”, and PJSC “Ukreximbank” – with 42.76% of assets, 43.06% liabilities and 39.95% of capital of the entire banking system. For seven years, these banks increased their market share by assets almost two times due to the aggressive growth policy of PJSC “Privatbank”.

Concentration of five banks in the second group (PJSC “Privatbank”, PJSC “Oshchadbank”, PJSC “Ukreximbank”, PJSC “Prominvestbank”, and PJSC “Sberbank Rossii”) is not so impressive, compared to the top three, their share of assets is 51.46%, liabilities – 51.96%, and capital – 46.82% of the banking system of Ukraine. This difference between the indicators shows a significant lag behind the top three leaders. The share of foreign capital in this banking group is 40%.

Ten banks (PJSC “Privatbank”, PJSC “Oshchadbank”, PJSC “Ukreximbank”, PJSC “Prominvestbank”, PJSC “Sberbank Rossii”, PJSC “Reiffeisen Bank Aval”, PJSC “Ukrsocbank”, PJSC “Alfa Bank”, PJSC “UkrSibbank”, and PJSC “PUMB”) concentrate 68.26% of assets, 68.8% of liabilities and 63.16% of

capital of the banking system of Ukraine. The share of foreign capital in this banking group is 70%.

The value of the concentration index for the three largest banks of Ukraine means: if  $CR3 < 45\%$ , the level of the banking market is considered to be relatively low-concentrated; if  $45\% < CR3 < 70\%$ , the level of concentration of the banking services market is considered to be medium-concentrating; and if  $CR3 > 70\%$ , then – highly concentrated. Regarding the significance of the CR5 and CR10 concentration indexes, if the share of five (or ten) largest domestic banks in the banking market is less than 40%, then such a market is characterized by low concentration and free competition; if from 40% to 60%, then – the average concentration and monopolistic type of competition; if from 61% to 80%, then – with high concentration and oligopolistic competition; if more than 80%, the banking services market is characterized by a very high concentration and indicates a monopoly.

It is necessary to calculate the index of concentration of three, five, and ten largest Ukrainian banks according to Herfindahl-Hirschman index in order to determine the level of market power of banks and the level of concentration of the banking services market, as well as studying its development trends. According to formulas (2), the main indicators of banks are calculated and shown in Table 2.

**Table 2.** Level of concentration of the banking services market of Ukraine with different number of banking institutions for 2015–2016

Source: Calculated by the authors.

Number of banks	By capital		By assets		By capital		By assets		By capital		By assets	
	CR 3		CR 3		CR 5		CR 5		CR 10		CR 10	
	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016
1												
2	36.4	35.2	77.6	76.5								
3					43.7	43.5	80.5	80.4				
4												
5			–						48.9	49.9	86.7	86.9
6												
7												
8			–									
9												
10												

According to the indicators from Table 2, it is clear that the value of the concentration index for three banks in terms of capital in 2016 was 35.2%, which is a rather high criterion in terms of the theory of market coverage. As for the concentration of capital in 5 and 10 banking institutions of Ukraine, their share was 43.5% and 49.9%, respectively. The value of the concentration index for the three leading asset banks in 2016 is 76.5%; for 5 banks – 80.4%; and for 10 banks – 86.94%. This is explained by a change in the share of banks in terms of assets and their change in the rating of Ukrainian banks. It should be noted that in recent years there has been a decrease in the share of the largest banks and a change in the top three leaders. During 2015–2016, PJSC “Privatbank” became the leader in volume of assets, making it the key system bank of Ukraine.

Thus, using calculations and data from Table 2, one can see that in 2015–2016, the market for banking services in terms of assets was highly concentrated, while the size of capital of the three and five biggest Ukrainian banks was low concentrated; and the size of capital of the 10 biggest banks in Ukraine was mostly moderately concentrated and close to monopoly.

In the context of financial and economic instability, one of the main problems facing the domestic banking system is to maintain its stability and reliability, which enables banks to perform their functions in providing the economy with sufficient financial resources.

With regard to increasing the level of bank capitalization as the basis of the reliability and competitiveness in the domestic and international markets, the following measures should be taken:

- to attract new shareholders, including foreign investors, in order to increase their capital according to the established requirements and taking into account the development of their affiliate network;
- to improve the assets quality by reducing the proportion of non-working, problem assets in order to reduce deductions in reserves;
- to form reserves for active operations to the required degree;

- to maintain the bank’s own capital at a level sufficient to protect against risks associated with bank operations;
- to more intensively apply bank reorganization procedures by joining and merging small and financially unstable banks, as well as restructuring large banks by closing (selling) their unprofitable branches, etc.;
- to stimulate the creation of banking associations of all types (corporations, bank holding groups, financial holding groups) in order to concentrate capital of banks, increase their overall liquidity and solvency, and ensure coordination and oversight of their activities.

## 4. DISCUSSION

The functioning of the national economy on a market basis is inextricably linked with the efficient operation of the bank system. In conditions of profound changes in the national economic model, the issue of capital adequacy in domestic banks becomes relevant to fulfill the basic functions of providing the country with financial resources.

At the current stage of the bank system development under economic instability, the issue of increasing the competitiveness of banks compared with foreign banks is acute, with the preservation of national priorities of the banking system as a whole in the context of foreign capital movement. It is necessary to provide a management system that would, on the one hand, ensure the domestic banks stability, and, on the other hand, their efficiency and dynamic growth due to the intensive increase of the share of foreign capital in banks of Ukraine.

An important step towards the development of the domestic banking market should be the promoting of the opening of branches of foreign banks in certain cities and special economic zones, which, on the one hand, will promote the development of the banking services market in all regions, and on the other hand, will allow domestic banks to compete and cooperate with foreign partners.

It is necessary to establish a general quota of foreign capital in the structure of the authorized capital of

the Ukrainian banking system, and set limits on the active and foreign exchange operations of banks with foreign capital.

The need for such a restriction is that, along with the development of banks with foreign capital in Ukraine, there was the possibility of developing and improving the performance of domestic

banking capital. In case of unforeseen situations in the country (political or economic), when foreign banks can stop their activities in Ukraine, domestic banking capital should be sufficient to prevent crises in the banking system and prevent a downturn in the economy. The total quota for the participation of foreign bank capital in Ukraine should be determined by law.

## CONCLUSION

The current stage of the Ukrainian economy development is characterized by increased requirements for the banking system, which should contribute to sustainable economic growth and increase the national economy competitiveness. In view of this, the general state of banking in Ukraine does not correspond to the real needs of accelerated economic growth and ensuring high and stable rates of production development. Its main disadvantages are related mainly to the formation and use of the resource base of individual banks and their systems in general: low level of bank capitalization, lack of a reliable mechanism for attracting additional funds to maintain their liquidity, the risk of placement of mobilized resources by banks, etc.

In general, it can be noted that the concentration of capital in all groups of banks is lower than in assets, which indicates an insufficient capitalization of Ukrainian banks. If the pace of concentration of the top three leaders is maintained, prior to 2021 they will control half of the assets of the Ukrainian banking system.

Thus situated, it is important for each bank to have a balanced portfolio of resources that it can use to carry out active operations. The successful operation of the bank in the market of banking services depends on the qualitative solution of this issue.

## REFERENCES

1. Alekseenko, M. D. (2002). *Bank's capital: questions of theory and practice* (276 p.). Kyiv: KNEU.
2. Baranovsky, O. (2010). Banking crises: the essence, factors of origin and peculiarities of manifestation. *Economy of Ukraine*, 2, 34-48.
3. Dolan, E. (1991). *Грошовий банкінг та монетарна політика [Hroshovyi bankinh ta monetarna polityka]* (448 p.). Lviv: Profiko.
4. Galchinsky, A. S. (1996). *Theory of money* (413 p.). Kyiv: Osnovy. Retrieved from <http://library.univer.kharkov.ua/OpacUnicode/index.php?url=/notices/index/Id-Notice:47400/Source:default>
5. Hirschman, A. (1964). The paternity of an index. *American Economic Review*, 54(5), 761.
6. Koval, S. (2015). Theoretical Foundations of the Bank's Own Equity Formation Mechanism. *TNEU Bulletin*, 1, 106-116.
7. Kozmenko, S. M. (2006). Limits and limits of the presence of foreign capital in the domestic banking system. *The Bulletin of the Ukrainian Academy of Banking*, 2, 105-109.
8. Larionova, I. V. (2000). *Reorganization of commercial banks* (368 p.). Moscow: Finances and Statistics.
9. Lutyi, I. (2008). Features of the Global Economic Environment of Banks. *Bulletin of the National Bank of Ukraine*, 4, 46-51.
10. Maslak, N. G. (2004). Problems of capitalization of the banking system of Ukraine. *Current Problems of the Economy*, 11, 31-39.
11. Mishchenko, V. (2008). Problems of Capitalization and Consolidation of the Banking System of Ukraine. *Bulletin of the National Bank of Ukraine*, 10, 2-7.
12. Myshkin, F. S. (1998). *Money Economy, Banking and Financial Markets* (963 p.). Kyiv: Osnovy.
13. Rayzberg, B. A. (2008). *State administration of economic and social processes* (384p.). Moscow: Infama-M. Retrieved from <http://elbib.in.ua/gosudarstvennoe-upravlenie-ekonomicheskimi.html>
14. Rose, P. S. (1995). *Banking Management* (768 p.). Moscow: Delo Ltd. Retrieved from <https://ru.scribd.com/doc/237860809/Peter-S-Rose-Sylvia-C-Hudgins-Bank-Management>
15. Rosenberg, D. (1997). *Словарь банковских терминов [Slovar bankovskikh terminov]*

- bankovskikh terminov*] (360 p.). Moscow: INFRA-M.
16. Sinky, G. (1994). *Управление финансами в коммерческих банках [Upravleniye finansami v kommercheskikh bankakh]* (820 p.). Moscow: Catallaxy.
  17. Smith, A. (1979). *An Inquiry into the nature and causes of wealth of nations* (684 p.). Reprint. Originally published: Oxford: Clarendon Press. Retrieved from [http://files.libertyfund.org/files/220/0141-02\\_Bk.pdf](http://files.libertyfund.org/files/220/0141-02_Bk.pdf)
  18. Stelmakh, V. S. (Ed.) (2001). *Encyclopedia of Banking of Ukraine* (680 p.). Kyiv: Molod.
  19. Vladychin, U. V. (2002). Capitalization of the banking system of Ukraine. *Finance of Ukraine*, 7, 145-150.
  20. Vozzhov, A. P. (2003). Capital of commercial banks as a component of banking system resources. *Banking*, 4, 83-95.
  21. Yepifanov, A. O., Maslak, N. H., & Salo, I. V. (2007). *Операції комерційних банків [Operatsii komertsiiynykh bankiv]* (523 p.). Sumy: Universitetska knyga. Retrieved from <http://mybook.biz.ua/?mode=book&id=51439>