Internal Economic Activities of the Bank

Andrii Meshcheriakov[1,*], Olena Shevtsova[2], Luydmila Novikova[1], Natalia Arkhireiska[1] and Iryna Panaseyko[1]

[1]*Department of Finance, Banking and Insurance, University of Customs and Finance, Dnipro, Ukraine.*

[2]*Department of Finance, Banking and Insurance, Oles Honchar Dnipro National University, Dnirpo, Ukraine.*

Abstract: The relevance of the subject of scientific research lies in the need to form a new approach to the definition of the concept of internal economy of the bank. The purpose of this research is to consider the main component of the cost of a bank's interest-bearing products, such as the cost of paying a portfolio of liabilities. This scientific research uses methods of statistical analysis of data obtained during the practical application of the "General fund of financial resources" model and an analytical study of the general dynamics of the distribution of interest expenses of interbank lending units within the bank, as well as the direction of financial flows directly within the bank. Results were obtained that indicate the need to comply with the basic principles for determining resource sources at all stages of the formation of banks' assets and liabilities in the process of implementing their internal economic activities, as well as clearly demonstrating the effectiveness of the application of bank asset and liability management models. In addition, there has been formed an example of an objective scientific approach to the problems of functioning of the banking asset and liability management system in case of any changes in the external economic situation, as well as assessing the actual cost of banking products in the current economic situation.

Keywords: Banking; Economic Activities; Commercial Bank; Money; Financial Market; Economy.
JEL Codes: E5; E50.

1. INTRODUCTION

The basis of the bank's activities is the redistribution of funds in the economy. This macroeconomic function of the bank is implemented in the provision of services for attracting and placing temporarily free cash resources. As rightly noted by L. Onyiriuba (2016) in his own study of the risks of modern banking and economic activities, effective asset and liability management is the main guarantee of stability and profitability of the bank. A comprehensive solution to this problem is of great relevance at the present stage, since it ensures a consistent reduction in the risks of banking activities and stabilization of processes in the economy as a whole. The problems of the participation of commercial banks in the financing of investment projects were considered in a joint scientific study by A.B. Sherov and Kh.M. Radzhabov (2021). The researchers note that as of now, the development of the banking system in the modern economic realities, like that of any bank, in particular, is moving towards improving asset and liability management. The constant problem of each bank in any economic system is the definition of a rational relationship between the key opposite components of banking, such as profitability and liquidity (Mishchenko et al., 2021).

A similar topic was considered in a scientific study by A.B. Sherov and Kh.A. Khudaykulov (2021), who studied the key aspects of the activities of a commercial bank in the global financial markets. The scientists came to a joint conclusion that the problem of pricing for the active products of the bank can only be solved by determining the cost of the resources that form a particular asset. But what liabilities form the corresponding assets? How the cost of resources is reflected in the price of the asset formed by it? What exactly is the role of the treasury (if any) in this process? Banks receive their money through business checking or deposit accounts, service fees, as well as by issuing certificates of deposit and bankers' acceptances, money market instruments backed by letters of credit used in trade finance and commercial papers (Trusova et al., 2021; Kyfyak et al., 2022; Sarybayev et al., 2021). Commercial banks offer such services as trade finance, project finance, payroll, foreign exchange and trading, collection safes, and general corporate finance.

In turn, N.K. Savelyeva and T.A. Timkina (2019) conducted a study of the features of obtaining economic information on the bank's financial activities. According to researchers, in the current economic conditions, the study of the real financial condition of banks should be considered the most promising, since the level of competition in the banking sector is growing, and customers seek to get the widest possible range of banking services, which forces banks to resort to competitive methods in order to be prepared for changes in the external environment and ensure success in this struggle. And in order to determine its competitive advantages, the bank needs to evaluate the effectiveness of its internal financial and economic activities in order to form an emphasis on its own competitive advantages and make efforts to eliminate

*Address correspondence to this author at the Department of Finance, Banking and Insurance, University of Customs and Finance, 49000, 2/4 Volodymyr Vernadsky Str., Dnipro, Ukraine;
Email: ameshcheriakov@hotmail.com

shortcomings (Kireyeva et al., 2021; Naumenkova et al., 2022).

R. Kumar (2014) conducted an independent study of the peculiarities of developing the economic strategy of banks and other modern financial institutions. The scientist came to the conclusion that the choice of a strategy undertaken by any bank or other financial institution in the field of its own internal policy is determined by a number of factors, among which considerations should be noted to ensure the safety of financial assets. According to the author, this applies to both the sphere of interbank lending and the issuance of loans to bank customers (Pham, 2021). The financial sector includes many tools to ensure the security of financial transactions, taking into account the specifics of bank lending and the development of the economic situation in the country as a whole and economic sector in particular. In this context, any financial institutions act as intermediaries between lenders and borrowers, and therefore, the issues of ensuring the economic security of such operations are closely related to the problem of creating a scientific approach to assessing the principles of bank finance management, as well as determining the real value of bank products in the current economic situation (Ivanov et al., 2021).

The research problem lies in the need to create a high-quality scientific approach to assessing the bank's asset and liability management system, as well as determining the real value of banking products in real economic conditions. Based on the consideration of existing approaches to the formation of the bank's resource base for term assets, an approach is proposed to the bank's asset and liability management system, calculation of the percentage component of the cost and value of banking products associated with the redistribution of funds in the economy, the formation of an asset portfolio, taking into account the cost of the resource base and internal bank cash flows (Kredina et al., 2022).

The purpose of the scientific research is to comprehensively study the costs of a bank's liability package as the main component of its interest-bearing products.

2. MATERIALS AND METHODS

The methodological approach in this scientific research is based on a combination of the method of statistical analysis of data obtained in the course of using the "General fund of financial resources" model with an analytical study of the dynamics of the distribution of interest expenses of interbank lending units within the bank, as well as the direction of financial flows directly within the bank. The use of the statistical data analysis method made it possible to systematize information on the volume of credit funds, clients' own funds, securities and other financial liabilities that appeared in the process of using the "General fund of financial resources" model in order to form a qualitative and objective scientific approach to assessing the overall effectiveness of the system for managing banking assets and liabilities, which also involves an assessment of the real value of banking products in the current economic conditions. The use of this scientific research method involves the formation of a number of tables with data that reflect a number of key parameters necessary to create an objective scientific assessment of the system for managing the volumes of assets and liabilities at the disposal of the bank. An analytical study of the dynamics of the distribution of interest expenses of interbank lending units within the bank, as well as the direction of financial flows directly within the bank, is necessary to form a complete picture of assessing the cost of paying for the portfolio of liabilities, as a key component of the cost of interest-bearing banking products.

The combination of the above scientific research methods led to the presence of several stages necessary for a complete and objective consideration of the stated subject. At the initial stage of the scientific research, the principles of creating the "Bank inside the bank" and "General Fund of Financial Assets" models necessary for the distribution of key banking resources as well as their distribution among specific financial assets were studied. The sequence of using varieties of bank capital was also formulated. The data on the volume of interest income and expenses of the bank's aggregate balance sheet and the share of income-earning assets and paid liabilities of the bank are presented in the relevant tables.

At the next research stage, the structure of attracted and borrowed funds without an interbank loan was presented. The data was presented on the share of bank liabilities without an interbank loan, the distribution of interest expenses of the interbank loan unit within the bank, as well as the share of bank liabilities without securities and the internal bank distribution of interest expenses of the securities unit. The presentation of information in the form of tables ensured the visibility of data and the possibility of calculating the financial results of all bank units selected for scientific research. The data is also presented in the corresponding table as a percentage of income and expenses in accordance with the share of assets used.

At the final stage of the scientific research, the bank's aggregate balance sheet data, key areas of cash flow distribution, as well as final data on the real value of attracted and profitability of placed funds are presented. The study of the real volumes of resources that were actively used in the performance of active banking operations enables assessing the effectiveness of this type of investment. Based on the results obtained, the final conclusions of the scientific paper were formulated, acting as their logical reflection and summing up the entire complex of scientific research.

3. RESULTS

The cost of interest-bearing products of the bank is determined by interest and non-interest expenses, taking into account the level of the required margin. The main part of the cost of interest-bearing products of the bank is the costs associated with paying for attracted and borrowed funds from customers. Non-interest expenses occupy an insignificant share in the cost price, but should also be taken into account when calculating the final costs of building a portfolio of assets (Kanungo et al., 2018). In order to determine which interest expenses should be attributed to a certain interest-bearing banking product. To this end, it is necessary to find out what resources its resource potential is based on. Of course, the resources that the bank accumulates merge into a somewhat impersonal fund, and it is difficult to determine exactly from what source the funds came from when forming assets. The "Bank inside the bank" model defines several

Table 1. Aggregate Balance Sheet of the Bank.

Liabilities	Amount	Assets	Amount
Equity capital	4451440	Fixed assets	566019
Funds of banks	47448	Funds in other banks	6591535
Term deposits of clients	13782316	Customer loans	19393162
Clients' funds on demand	11200748	Cash	2117473
Securities	1353415	Securities	2173294
Creditors	48584	Debtors	46428
Other financial obligations	125111	Other financial assets	121151
Total liabilities	31009062	Total assets	31009062

Note: indicators of annual interest income and expenses; income – UAH 54039; expenses – UAH 22919.

Table 2. The Share of Performing Assets and Paid Liabilities of the Bank.

Liabilities	Amount	%	Assets	Amount	%
Equity capital	4451440	14%			
Interbank loans (borrowed)	47448	0%	Interbank loans (provided)	6591535	23%
Term deposits of clients	13782316	45%	Customer loans	19393162	69%
Clients' funds on demand	11200748	36%			
Securities	1353415	4%	Securities	2173294	8%
Total liabilities	30835367	100%	Total assets	28157991	100%

"liquidity-profitability centers" that are an integral part of a bank. They are used to allocate resources that the bank receives from available channels (Casanova et al., 2017; Baykal, 2021). Structures of this kind were called "Bank inside the bank" due to the fact that the distribution of finance from each center was not related to the distribution of finance from other centers. The bank has a demand fund collection bank, a savings deposit bank, a term deposit bank, and a principal capital bank.

The "General fund of financial resources" model is based on the idea of pooling all resources and then distributing them among the types of financial assets needed. In the "General fund of financial resources" model, for the implementation of a planned financial operation, it does not matter where the resources came from if the distribution allows solving the problems facing the bank. However, the current asset management concept of "Bank inside the bank" provides for a clear delineation of areas for the use of resource sources in the formation of specific assets in accordance with the economic essence of the operations carried out by the bank and the need to maintain an acceptable level of risks and liquidity. Capital is used in the following order: fixed assets; securities; commercial loans; interbank loans.

The stability and safety of the banking system are duties of banking regulators. However, risk management is more crucial than ever for a variety of reasons. The chance that events, whether anticipated or unanticipated, could negatively impact a bank's capital or profits is often referred to as banking risk. The management of any bank can examine and keep track of its balance sheet and income statement through an internal method. Every bank also has employees. They undergo ongoing evaluations to make sure they function as expected and possess the abilities needed to manage risk for the bank (Miethlich et al., 2022). Every bank also has particular control systems in place, whether they have to do with the separation of roles, auditing, or perhaps credit review operations. The main principles for determining resource sources in the formation of assets are as follows. The assets with the least liquidity involve the most stable liabilities. Liabilities and assets must comply in terms of maturity (Makina, 2019; Kuchma and Gatalevych, 2022; Shalbolova et al., 2012). Examples of distribution of cash flows within the bank using the two indicated models of asset and liability management. Data on the amount of interest income and expenses are required when using the "General fund of financial resources" model. Statistical data obtained during the internal audit of the bank in the second half of 2021. The economic condition of the bank in this period is regarded as stable (Table **1**).

Let's determine the structure of assets without taking into account non-profitable assets and liabilities. Capital and accounts payable are not taken into account (Table **2**).

The formula for calculating the share of paid liabilities of the bank is as follows:

$$S_P = R \times P \qquad (2)$$

where: R – expenses, P – interest rate.

Now we distribute the cost of liabilities (UAH 22919) in accordance with the first principle. Interbank loan 23% of assets 22919 * 0.23 = UAH 5365. Securities 8% of assets 22919 * 0.08 = UAH 1833.5 Client loans for 69% of assets 22919*0.69 = UAH 15814.5. In accordance with the second principle, we determine the amount of interest costs redistributed between units in accordance with the share of resources that they have collected in the total liabilities. The bank's own funds and the resources of the unit under study are not taken into account. Thus, UAH 5365, which is paid by the resource dealing unit (interbank loan) is redistributed within the bank among other divisions in proportion to their percentage in the formation of attracted and borrowed funds (without an interbank loan). The structure of attracted and borrowed funds without an interbank loan is as follows (Table **3**).

Table 3. Share of Paid Liabilities of a Bank without an Interbank Loan

Interbank Loan (Borrowed)	**47448**	**0%**
Term deposits of clients	13782316	52%
Clients' funds on demand	11200748	42%
Securities	1353415	6 %
Total liabilities	26383927	100%

This structure is used to reallocate internal payments to available resources of units (Table **4-8**)

Table 4. Distribution of Interest Expenses of the Interbank Loan Unit Within the Bank.

Paying unit	**Recipient unit**	**Deposit unit**	**Calculations unit**	**Securities unit**
	% units without interbank loan	**52%**	**42%**	**6%**
Interbank loan unit	5365	2790	2253	322

Securities unit 8% of assets 22919 * 0.08 = 1833.5 UAH.

Table 5. The Share of Paid Liabilities of the Bank without Securities.

Interbank loan (borrowed)	**47448**	**0%**
Term deposits of clients	13782316	55%
Clients' funds on demand	11200748	45%
Total liabilities	25030512	100%

Table 6. Distribution of Interest Expenses of the Securities Unit within the Bank.

Paying unit	**Recipient unit**	**Deposit unit**	**Calculations unit**
	% of units without securities	**55%**	**45%**
Securities unit	1833.5	1008.4	825.1

The lending unit does not accumulate resources and has 69% of assets, i.e., it pays out 22919 * 0.69 = 15814.5 UAH.

Table 7. Distribution of Interest Expenses of the Lending Unit within the Bank.

Paying Unit	**Recipient unit**	**Deposit unit**	**Calculations unit**	**Securities unit**
	% of units without interbank loan	**52%**	**42%**	**6%**
Lending unit	15814.5	8223.5	6642.1	948.9

Table 8. Distribution of Interest Expenses of the Lending Unit within the Bank.

% of income in accordance with the share of assets 54,039*0.08	4323
% of expenses in accordance with the share of assets 22,919*0.08	1833.5
Intrabank income	
From interbank loan unit	322
From lending unit	948.9
Total = 4323 - 1833.5 + 322 + 948.9	3760.4

Calculation of financial results of other divisions is carried out in a similar way. At the same time, it should be taken into account that the lending unit does not accumulate resources, while the deposit unit does not place them. There is an estimate of internal cash flows in the "Bank inside the bank" model. From the very beginning, the balance sheet items are grouped according to economic content, then the difference between certain aspects of the asset and liability is established. We start by compiling an aggregated balance sheet and determining the difference between the relevant assets and the sources of their primary formation (Table **9**; **10**).

Table 9. Aggregate Balance Sheet of the Bank.

Liabilities	**Amount**	**Assets**	**Amount**	**Difference**
Equity capital	4451440	Fixed assets	566019	3885421
Interbank loan (borrowed)	47448	Interbank loan (provided)	6591535	-6544087
Term deposits of clients	13782316	Credits and debts of clients	19393162	-5610846
Clients' funds on demand	11200748	Cash and cash equivalents	2117473	9083275
Securities	1353415	Securities	2173294	-819879
Creditor debt	48584	Accounts receivable	46428	2156
Other financial obligations	125111	Other financial assets	121151	3960
Total liabilities	31009062	Total assets	31009062	0

Table 10. Directions of Cash Flows within the Bank.

Negative Difference Between an Asset and a Liability		Securities	Loans to Clients	Interbank Loan (Provided)
Positive difference between an asset and a liability		-819879	-5610846	-6544087
Equity capital	3885421	3065542	-2545304	
Clients' funds on demand	9083275		6537971	-6116
Creditor debt	2156			-3960
Other financial obligations	3960			0

Table 11. Weighted Average Cost of Resources.

Assets	Amount	Weighted Average Profitability	Liabilities	Amount	Weighted Average Cost
Fixed assets	566019	0%	Equity capital	4451440	0%
Interbank loan (borrowed)	6591535	13%	Interbank loan (provided)	47448	12%
Credits and debts of clients	19393162	20%	Term deposits of clients	13782316	15%
Cash and cash equivalents	2117473	0%	Clients' funds on demand	11200748	0.6%
Securities	2173294	18%	Securities	1353415	
Accounts receivable	46428	0%	Creditor debt	48584	0%
Other financial assets	121151	0%	Other financial obligations	125111	0%
Total	31009062			31009062	

Table 12. Interest Expenses.

Asset Item	Source of Coverage	Coverage Amount	Cost of Coverage	Weighted Average Coverage Cost (%)
Interbank loan (UAH 6591535)	Interbank loan	47448	12%	(47448 * 12 + 6537971 * 0.6) / 6591535 = 0.68%
	Clients' funds on demand	6537971	0.6%	
	Creditor debt	2156	0%	
	Other financial obligations	3960	0%	
Loans to clients (UAH 19393162)	Term deposits	13782316	15%	(13782316 * 15 + 2545304 * 0.6) / 19393162 = 10.74%
	Client funds on demand	2545304	0.6%	
	Equity capital	3065542	0%	

After the formation of fixed assets, the bank had UAH 3885421 left. free cash. They were used in the formation of a portfolio of securities in the amount of UAH 819879. and a loan portfolio in the amount of UAH 3065542. Unfunded share of the loan portfolio in the amount of UAH 2545304 is covered by non-monetary funds on demand of the clients. The unfinanced share of the interbank loan was maintained in a state of balance due to accounts payable of UAH 2156 as well as UAH 3960 of other financial obligations. Taking into account information regarding the sources and volumes of formation of various asset items, based on the real value of each type of resources, it is possible to determine the percentage component of all types of deposits. Table **11**; **12** contain information on the weighted average cost of attracting resources.

Expenses not related to the payment of interest include all other expenses of the bank for organizing the sale of interest-bearing products. These expenses are proposed to be included in the cost based on the calculation of the cost indicator per employee of the bank's functional units. To determine the price of a product, some margin must be added to its cost. An analysis of the real volumes of resources that were actively used in the performance of active operations allows drawing conclusions regarding the effectiveness of this type of investment (Table **13**).

Thus, the profit received from loans issued to customers significantly exceeds the profit from interbank loans. This fact takes place against the backdrop of a significantly higher cost of raising funds (10.74% vs. 0.68%), while the margin on interbank loans is slightly higher (12.32% vs. 9.26%). Taking into account the data presented above, the total profit received from client loans exceeds the total profit from interbank loans by more than two times.

Table 13. Aggregate Data on the Cost of Attracted and Profitability of Placed Funds.

Assets	Amount of Investments	Price of Attracting Funds (%)	Price of Placing Funds (%)	Margin (%)	Profit (UAH)
Interbank loans	6591535	0.68%	13%	12.32%	812077
Loans to clients	19393162	10.74%	20%	9.26%	1795807

4. DISCUSSION

The scientist I.V. Poryadina (2016) in her own scientific study of measures for forecasting the activities of commercial banks touches upon the issues of assessing the effectiveness of the internal economic activities of banks. According to the researcher, market uncertainty, combined with the government program of quantitative and qualitative mitigation, as well as increased requirements for credit institutions, determine the specifics of the implementation of a conservative credit policy, control over the liquidity of financial resources and more effective interaction with clients. The author notes that for this reason, the urgency of finding new ways to form forecasts is sharply increasing, which is especially important in conditions of financial instability (Sharma and Choubey, 2022). The effective activities of commercial banks largely depend on how reliably they foresee the prospect of their development, which means that this kind of efficiency depends directly on forecasting (Naumenkova et al., 2020; Wang et al., 2022). The author's conclusions complement the results obtained in this research paper in the context of ensuring control over the liquidity of financial resources. At the same time, the issue of the relevance of the formation of forecasts of banking activities as a means of overcoming the instability of financial markets seems debatable and requires further systematic research (Patashkova et al., 2021; Kurniawanet al., 2022).

The issues of the internal economic activities of the bank are discussed in scientific research by Yu.G. Shvetsov and V.G. Koreshkov (2016), who conducted a joint study of existing methods for assessing the cost of bank capital. The researchers came to the conclusion that a significant concentration of banking in large credit institutions is one of the most significant problems of the modern banking system. The authors note that backbone commercial banks do not show a serious interest in the formation of healthy competition and the development of a new line of banking products and services. Instead, they do not use their own position to extract maximum profit by issuing loans mainly to sectors of the economy with a rapid turnover of capital; lobbying the relevant interests, which ensures the distribution in their favor of state subsidies, grants, special powers that allow them to redistribute profits directly within their own structure. The conclusions of the researchers coincide with the results of this scientific paper, expanding them in the context of assessing the real position of modern banks in the existing financial system (Trusova et al., 2020; Vovk et al., 2021).

Yu.S. Tatkova (2022) considers the issues of the internal economic activities of the bank through the prism of its economic security. According to the researcher, financial security, as a functional component of the economic security of any modern bank, ensures the preservation of the proper level of stability of its financial position, which guarantees the safety of key financial interests and allows it to achieve targeted competitive positions in the face of external and internal economic threats. The author's conclusion does not directly contradict the results of this research, while it should be noted that the study of the principles of protecting the banking sector from various economic threats is a separate, very promising field of scientific research in the area of interest. A team of scientists represented by M. Melvin and S. Norrbin (2022) conducted a joint study of a number of problematic aspects of managing the economic activities of a bank through the prism of modern trends in the global financial system. The authors came to the conclusion that banks play a crucial role in the global economic system, acting as a link in conducting financial transactions in various currencies. At that, while organizing the sales of specific bank loan products, one should take into account the specifics of expenses not related to the payment of interest on loans (Jomartova et al., 2021; Dmytruk et al., 2022). The opinion of the researchers fully coincides with the results of this scientific research. Effective capital management and budgeting procedures support individual banks' safety and soundness, which in turn supports the smooth operation of the financial system. In fact, they enable banks to recognize risk levels effectively and allocate equity capital where returns to shareholders can be realized. This in turn contributes to ensuring that banks have viable business plans.

In turn, A. Berger and R. Roman (2020) studied the issues of building the economic policy of the bank in the context of the financial crisis. The researchers note that financial crises cause certain difficulties in banking activities and this necessitates the development of a strategy to counter such phenomena within the banks themselves. In particular, the development of a Troubled Asset Relief Program (TARP) is regarded by the authors as a universal strategy for overcoming crisis situations. Such a conclusion seems debatable, due to the complexity of the practical application of all aspects of international experience in Ukrainian realities. Researcher D. Stowell (2017), who considered in his scientific study the issues of developing the economic activities of funds and investment banks, notes that the dynamics of the development of investment activities of banks and investment funds over the past 20 years indicates a significant increase in risks since 2008. The author points out the need to ensure the proper level of economic security of banking operations in the current economic conditions. The conclusions of the researcher resonate with the results of a scientific research of the already mentioned Yu.S. Tatkova (2022), while they do not contain direct contradictions to the results of this scientific paper.

In turn, a group of authors represented by S. Greenbaum, A. Thakor, A. Boot (2019) conducted a joint scientific study of

the issues of modern intermediation in various financial transactions. The researchers came to the conclusion that the events of any financial crisis are closely related to the inability of the heads of specific banking institutions to ensure a high level of liquidity of financial transactions. According to the authors, the internal economic activities of the bank should take into account the available financial opportunities and the real economic situation at the time of banking operations. Thus, the researchers develop the topics raised in the papers of the above authors and partially repeat the results of this scientific paper. J. Hill (2018), examining a number of problematic aspects of the transformation of existing financial institutions, notes that the future of banking largely depends on the ability of banking industry leadership to use the possibilities of financial technologies when conducting foreign exchange transactions between banks and individual clients without significant losses and with minimal risks (Darayseh and Alsharari, 2022; Peleshenko et al., 2017). It is also indicated that today such technologies can significantly reduce the time of banking operations and increase their efficiency, provided that the bank managers strictly follow the available instructions (Hsieh and Lee, 2020; Yildiz et al., 2019). The author's conclusions complement and expand the results obtained in the course of this scientific research, opening up additional opportunities for further research.

This topic is further developed by E. Lechman and A. Marszk (2019) in a joint work devoted to the peculiarities of the development of the financial sector in modern economic conditions. The authors note that ICT (information and communication technologies) have significantly changed the modern financial sector and banking, opening up additional opportunities for improving the efficiency of banking operations and increasing the profits. Researchers demonstrate additional opportunities for improving the efficiency of banking activities in general and for conducting the internal economic policy of banks in particular due to the capabilities of modern information and communication technologies. Y. Tan (2016) conducted scientific research of the level of competition and the overall efficiency of banking in China. The scientist came to the conclusion that the key to the success of the domestic economic policy of the country's banks is the strict adherence to the job descriptions of employees at all levels of the Chinese banking system, combined with the high professionalism of employees and the high technological security of banking operations at all levels. The author's conclusions complement the results of this scientific research in the context of assessing the importance of high-quality technical equipment of banking institutions for the effective conduct of the internal economic policy of the banking structure.

A team of authors represented by F. Economou, K. Gavriilidis, G. Gregoriou (2017) carried out a joint scientific study of the features of banking investment in the context of the financial crisis. The authors came to the conclusion that the competent use of the tools and methods of behavioral financing in a specific economic situation enables achieving high profits in banking operations and preserve financial assets, regardless of the influence of external crisis phenomena, which is generally consonant with the results obtained in this scientific paper. According to the scientists, a special approach to the study of financial crises is of key importance in the modern financial landscape, especially since the accelerated process of globalization has made outbreaks of financial crises at the international level more common than in previous decades. V.A. Canto (2018) considered the issues of developing the internal economic policy of the bank in the conditions of economic disturbances and the equilibrium of the global integrated economy. The author came to the conclusion that real economic shocks strongly affect the internal policy of the bank, necessitating the adoption of measures for careful control of assets in order to ensure their intended use. According to the researcher, the cost of interest-bearing products of the bank is closely related to the assessment of income and expenses due to payments on interest-bearing loans, the risks of which increase significantly during the global economy crisis (Bakashbayev et al., 2020; Miethlich et al., 2021). The conclusions of the scientist as a whole coincide with the results of this scientific paper, emphasizing the importance of controlling the targeted use of banking assets in crisis economic conditions.

5. CONCLUSIONS

The effectiveness of approaches to the analysis of the activities of banking units responsible for the development and implementation of domestic economic policy depends on the accuracy and objectivity of calculations of the current market value of banking assets and liabilities. Estimated determination of the value of bank assets and liabilities makes it possible to evaluate the effectiveness of the functioning of the bank's units, which are responsible for the distribution of resources administered by the bank. In this case, the ultimate financial result of such profit centers is determined by subtracting the volume of direct costs caused by attracting resources and the volume of the bank's own direct costs from the income actually received from external sources. One of the key problems of any bank in a real economic situation is to determine the optimal ratio between the two key components of banking activities – liquidity and profitability. In this context, the use of the "Bank inside the bank" model enables identifying destination centers that are a key component of the banking sector and are responsible for the redistribution of resources. At the same time, the bank receives the resources distributed by them from the channels available to it. Structures of the described type are called "Bank inside the bank", since the distribution of funds from each center is in no way connected with the distribution of funds from other centers.

The issue of pricing, in relation to the active products of the bank, can only be solved by determining the cost of the resources that form a particular asset. At the same time, one should take into account what liabilities form the corresponding assets, how the cost of resources is reflected in the price of the asset formed by it, and what exactly is the role of the treasury (if any) in this process. Thus, building effective internal economic activities of the bank is inextricably linked with the search for the optimal ratio between the liquidity of banking products and the profitability of their intended use. At the same time, an analysis of the real volumes of

resources, as well as assets and liabilities that were involved directly during the active phase of banking operations, give grounds to formulate conclusions regarding the ultimate efficiency of this kind of financial operations.

REFERENCES

Bakashbayev, A., Nurgaliyeva, A., Gumar, N., Khamidullina, Z. and Saduakassova, M. (2020). Examining the trends in bank deposits through internal and external factors based on the supply chain strategies: A primary and secondary data survey. *International Journal of Supply Chain Management, 9*(2), 526-536.

Baykal, F.Y. (2021). The polluter should... pay? *Heritage and Sustainable Development*, 3(1), 71-77.

Berger, A. and Roman, R. (2020). *TARP and other Bank Bailouts and Bail-Ins around the World*. London: Academic Press.

Canto, V.A. (2018). *Economic Disturbances and Equilibrium in an Integrated Global Economy*. London: Academic Press.

Casanova, L., Cornelius, P. and Dutta, S. (2017). *Financing Entrepreneurship and Innovation in Emerging Markets*. London: Academic Press.

Darayseh, M. and Alsharari, N.M. (2022). Determinants of merger and acquisition in the banking sector: An empirical study. *Meditari Accountancy Research*, 4, 23-28.

Dmytruk, A.A., Gatalevych, A.I. and Kuchma, M.I. (2022). Stable range conditions for abelian and duo rings. *Matematychni Studii*, 57(1), 92-97.

Economou, F., Gavriilidis, K. and Gregoriou, G. (2017). *Handbook of Investors' Behavior during Financial Crises*. London: Academic Press.

Greenbaum, S., Thakor, A. and Boot, A. (2019). *Contemporary Financial Intermediation*. London: Academic Press.

Hill, J. (2018). *Fintech and the Remaking of Financial Institutions*. London: Academic Press.

Hsieh, M.-F. and Lee, C.-C. (2020). Bank liquidity creation, regulations, and credit risk. *Asia-Pacific Journal of Financial Studies, 49*(3), 368-409.

Ivanov, V., Lvova, N., Pokrovskaia, N., Andrianov, A. and Naumenkova, S. (2021). Testing the Hypothesis of Corporate Investment Life Cycle: The Case of Russia. *Springer Proceedings in Business and Economics*, 169-180.

Jomartova, S., Mazakov, T., Mukhaev, D., Mazakova, A. and Tolegen, G. (2021). Intelligent System for Assessing the Socio-economic Situation in the Region. *Communications in Computer and Information Science*, 1463, 437-447.

Kanungo, R., Rowley, C. and Banerjee, A. (2018). *Changing the Indian Economy*. Oxford: Elsevier.

Kireyeva, A., Kangalakova, D., Kredina, A., Satpayeva, Z. and Urdabayev, M. (2021). Managing research and development process in conditions of economic growth of Kazakhstan: Methods and analysis. *Problems and Perspectives in Management*, 19(3), 185-196.

Kredina, A., Nurymova, S., Satybaldin, A. and Kireyeva, A. (2022). Assessing the relationship between non-cash payments and various economic indicators. *Banks and Bank Systems*, 17(1), 67-79.

Kuchma, M.I. and Gatalevych, A.I. (2022). Triangular form of Laurent polynomial matrices and their factorization. *Mathematical Modeling and Computing*, 9(1), 119-129.

Kumar, R. (2014). *Strategies of Banks and Other Financial Institutions*. London: Academic Press.

Kurniawan, F., Nugroho, S., Hidayat, R., Hidayat, A.S. and Rohmansyah, N.Z. (2022). Development of Web-Based Learning Media in the Era of Pandemic. *Health Education and Health Promotion*, 10(4), 1-11.

Kyfyak, V., Verbivska, L., Alioshkina, L., Galunets, N., Kucher, L. and Skrypnyk, S. (2022). The Influence of the Social and Economic Situation on Agribusiness. *WSEAS Transactions on Environment and Development*, 18, 1021-1035.

Lechman, E. and Marszk, A. (2019). *ICT-Driven Economic and Financial Development*. London: Academic Press.

Makina, D. (2019). *Extending Financial Inclusion in Africa*. London: Academic Press.

Melvin, M. and Norrbin, S. (2022). *International Money and Finance*. New York: William Andrew Publishing.

Miethlich, B., Beliakova, M., Voropaeva, L., Ustyuzhina, O. and Yurieva, T. (2022). Internal Corporate Policy: CSR and Employee Satisfaction. *Employee Responsibilities and Rights Journal*. https://doi.org/10.1007/s10672-022-09406-5

Miethlich, B., Belotserkovich, D., Abasova, S., Zatsarinnaya, E. and Veselitsky, O. (2021). The Impact of COVID-19 on Digital Enterprise Management. *IEEE Engineering Management Review*, 49(4), 16-29.

Mishchenko, V., Naumenkova, S. and Mishchenko, S. (2021). Assessing the efficiency of the monetary transmission mechanism channels in Ukraine. *Banks and Bank Systems*, 16(3), 48-62.

Naumenkova, S., Mishchenko, V. and Mishchenko, S. (2022). Key energy indicators for sustainable development goals in Ukraine. *Problems and Perspectives in Management*, 20(1), 379-395.

Naumenkova, S., Tishchenko, I., Mishchenko, S., Mishchenko, V. and Ivanov, V. (2020). Assessment and mitigation of credit risks in project financing. *Banks and Bank Systems*, 15(1), 72-84.

Onyiriuba, L. (2016). *Bank Risk Management in Developing Economies*. London: Academic Press.

Patashkova, Y., Niyazbekova, S., Kerimkhulle, S., Serikova, M. and Troyanskaya, M. (2021). Dynamics of Bitcoin trading on the Binance cryptocurrency exchange. *Economic Annals-XXI*, 187(1-2), 177-188.

Peleshenko, S., Korzhyk, V., Voitenko, O., Khaskin, V. and Tkachuk, V. (2017). Analysis of the current state of additive welding technologies for manufacturing volume metallic products (review). *Eastern-European Journal of Enterprise Technologies*, 3(1-87), 42-52.

Pham, H.N. (2021). How does internal control affect bank credit risk in Vietnam? A Bayesian analysis. *Journal of Asian Finance, Economics and Business, 8*(1), 873-880.

Poryadina, I.V. (2016). Measures for forecasting the activities of commercial banks. *Finance and Credit*, 26, 2-8.

Sarybayev, K.E., Lakbaev, K.S., Suleimanov, A.F., Jiyembaev, R.K. and Rysmagambetova, G.M. (2021). Control and supervisory function of the National Ombudsman in the activities of law enforcement agencies aimed to ensure the well-being of society. *Rivista di Studi sulla Sostenibilita*, (2), 155-169.

Savelyeva, N.K. and Timkina, T.A. (2019). Formation of a system of economic information on the activities of banks based on quantitative and qualitative parameters. *Vestnik NNSUEE*, 4(95), 49-57.

Shalbolova, U., Narmanova, R., and Elpanova, M. (2012). Methodical peculiarities of tariff setting at oil transportation via main pipelines. *Actual Problems of Economics*, 138(12), 540-555.

Sharma, M. and Choubey, A. (2022). Green banking initiatives: A qualitative study on Indian banking sector. *Environment, Development and Sustainability, 24*(1), 293-319.

Sherov, A.B. and Khudaykulov, Kh.A. (2021). Activity of a commercial bank in the world financial markets. *Scientific Progress*, 2(1), 1261-1265.

Sherov, A.B. and Radzhabov, Kh.M. (2021). Commercial banks as a subject of financing investment projects. *Scientific Progress*, 2(1), 889-893.

Shvetsov, Yu.G. and Koreshkov, V.G. (2016). Methods for assessing the cost of capital of a commercial bank. *Finance and Credit*, 5, 12-22.

Stowell, D. (2017). *Investment Banks, Hedge Funds, and Private Equity*. London: Academic Press.

Tan, Y. (2016). *Efficiency and Competition in Chinese Banking*. Oxford: Chandos Publishing.

Tatkova, Yu.S. (2022). The use of financial information to assess the economic security of commercial banks. *Issues of Student Science*, 1(65), 84-88.

Trusova, N.V., Melnyk, L.V., Shilo, Z.S. and Prystemskyi, O.S. (2021). Credit-investment activity of banks of the Ukraine: Financial globalization, risks, stabilization. *Universal Journal of Accounting and Finance*, 9(3), 450-468.

Trusova, N.V., Tanklevska, N.S., Synchak, V.P., Prystemskyi, O.S. and Tereshchenko, M.A. (2020). State support of agro-insurance of agricultural risks in the market of goods derivatives of Ukraine. *Industrial Engineering and Management Systems*, 19(1), 93-102.

Vovk, V., Denysova, A., Rudoi, K. and Kyrychenko, T. (2021). Management and legal aspects of the symbiosis of banking institutions and fintech companies in the credit services market in the context of digitization. *Estudios De Economia Aplicada, 39*(7), 16-21.

Wang, Y., Liu, L., Geng, Y., Wang, C. and Li, S. (2022). Formation of a Costs Model for Patient Rehabilitation. *Iranian Journal of War and Public Health*, 14(3), 303-309.

Yildiz, A., Džakmić, Š. and Saleh, M. Ahmed. (2019). A short survey on next generation 5G wireless networks. *Sustainable Engineering and Innovation*, 1(1), 57-66.

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