An innovative approach to managing the interest margin: economic and statistical analysis of the resource base of a commercial bank

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Abstract
The dynamics of interest income, that is, the difference between the average rates on active and passive operations of the bank, has been analyzed. It was found that the increase in the share of term deposits in the total amount of the bank's mobilized resources is positive, despite a temporary decrease in net interest income. It has been substantiated that the deposits of legal entities are a stable part of the attracted resources. The purpose of the article is to improve an innovative approach to managing the interest margin based on the economic and statistical analysis of the bank’s resource base. The scheme of the bank interest income management process is proposed. The size of interest income, trends and factors of its change have been determined. The indicator of the minimum interest income was calculated on the basis of which the bank covers expenses but does not ensure profit. The level of profitability of bank loan operations has been determined. It has been established that a change in interest income can be caused by an increase or decrease in rates on active operations of the bank, interest on attracted resources and the shares of the latter in the total volume of credit investments. A mechanism for the formation of bank interest income is proposed. The possibility of reducing the spread of interest rates and placement rates in the bank through the use of the proposed funding mechanism has been scientifically substantiated.

Keywords: bank, deposit, efficiency, customers, interest margin, interest rate, resources.

Introduction
In the context of the globalization of financial markets, the penetration of foreign capital into the Ukrainian banking system and, as a result, the growth of competition with international financial intermediaries represented by subsidiaries of transnational bank holdings, the search for optimal ways of organizing the activities of banks is of particular relevance. Transformations in the construction and functioning of the banking sector have become the starting point for the development of the direction of "banking financial management" in economic science. But now, not all issues of financial management in the bank have been worked out by scientists deep enough, which is due to the specifics of the activities of a commercial bank as a single economic entity that systematically manages all functions of money.

The path towards the formation of a
powerful banking sector in Ukraine increases the importance of the issues of performance management of each specific bank for the banking system as a whole. Therefore, the problem of assessing the effectiveness of a commercial bank and taking measures to improve it requires a detailed study and development of a scientific concept.

Banks redistribute resources in the economy, accumulating free cash resources in their accounts (deposits) and lending them for temporary use (loans). The main goal of the bank's activities is to obtain maximum profit while ensuring stable long-term operation and a solid position in the market. The profit of a commercial bank is the financial result of the bank's activities in the form of an excess of income over expenses. Thus, the main components that form the bank's profit are interest and non-interest margins. Interest margin - the difference between interest income and bank expenses, between interests received and paid. It is the main source of the bank's profit and is designed to cover taxes, losses from speculative transactions and the so-called “cargo” – the excess of interest-free income over interest-free costs, as well as banking risks. The size of the margin can be characterized by an absolute value in national currency and by many financial indicators.

Since 2018, the interest margin of Ukrainian banks began to gradually decline. Ultimately, this affects the profitability of banks and the ability of individual banks to service their obligations. This means that the business models of many banks are at risk. This applies to those banks that have not begun to build a transactional business (based on commission income and does not depend on the level of interest rates in the market), invest little in increasing non-interest income, do not have pronounced advantages; rely on expensive liabilities from individuals and legal entities. For such banks, a decrease in interest margin, loss of income from operating activities, loss of competitive positions and residual investment attractiveness are likely.

**Material and methods**

The scientific literature discusses in detail the issue of the use of transfer pricing in banking in terms of the redistribution of financial results already obtained. However, insufficient attention is paid to how to obtain this financial result and optimize the procedure for obtaining it, at what level it is necessary to set interest rates on banking products that generate net interest income. There is no scientific justification for calculating the spread, which is used in transfer pricing between rates for attracting and placing resources.

An analysis of the determinants of corporate dividend policy was performed in (Ali et al., 1993; Andros, 2015). An innovative approach to ranking and regulating systemic risks with a lack of equity was proposed by scientists (Acharya et al., 2012; Marlina and Danica, 2009; Miles et al., 2013). An analysis of bank loan and deposit portfolios and interest rates was carried out by economists (Acharya et al., 2006; Barnett et al., 1992; Craig and Dinger, 2011; Rice and Örs, 2006). Non-interest income and results of bank deposit activities and financing strategies are considered in (Bokyung et al., 2019; Demirguc-Kunt and Huizinga, 2010; Diebold and Sharpe, 1990; Neumark and Sharpe, 1992; Hautsch et al., 2015). A model of reserves, bank funds and deposit insurance was proposed by scientists (Bryant, 1980; Rotemberg et al., 1991). A microanalysis of banking system stability was carried out by researchers (De Jonghe, 2010; De Young et al., 2013; Hannan and Berger, 1991). The theoretical and practical foundations of bank operating expenses were reflected in the works (Kovner et al., 2015; Lucas and Robert, 1972; Hughes and Mester, 2013). The determinants and the value of matching discretionary loan loss reserves have been studied by scientists (Morris et al., 2016).

Scientific studies of foreign authors are marked by a high level of professionalism. Note that each scientific work is devoted to a specific problem and only indirectly concerns a
comprehensive analysis of the bank’s resource base, which forms net interest income. In addition, there is no economic and statistical analysis of the resource base of a commercial bank, due to which it is possible to really assess the effectiveness of interest margin management.

Today, there is a need to develop adequate methodological and methodological methods for the use of interest. Research in the field of net interest income should be focused on the activities of commercial banks. It is necessary to equip Ukrainian banks with the new methodology and tools for managing net interest income. The new methodology and tools for managing net interest income should cover the entire technological cycle: setting the interest rate; its use in calculating interest payments; allocation of interest received and paid to expenses and income; interest income generation; obtaining a net financial result.

The purpose of the article is to improve an innovative approach to managing the interest margin based on the economic and statistical analysis of the bank's resource base.

Results and discussion

Managers need to know what margin is (including in relative terms) to make a decision in the field of marketing. Bank interest margin is the difference between interest income and expenses of a bank, between interest received and paid. Interest margin is a profitability ratio in the banking sector that measures how efficiently a bank makes investment decisions by comparing interest income and funding costs (Ali et al., 1993). Banks get most of the profits precisely from loans. Therefore, the cheaper they get the money and the more expensive they give, the better they work. Interest margin as the main source of profit, is designed to cover taxes, bank risks, losses from speculative operations and the so-called “weight”, that is, the excess of interest-free income over interest-free costs (Hughes and Mester, 2013).

It is not appropriate to compare the interest margins of different banks, since the nature of lending and deposit activity varies for each bank. Interest margin can be viewed from different perspectives. It can be borrowed money that is used to purchase securities (Marlina and Danica, 2009; Miles et al., 2013). The purchase of securities using borrowed funds carries great risks, since for the potential opportunity to make big profits; you have to pay significant financial losses. At the same time, the investor faces an additional risk - interest payment for the use of borrowed funds (Acharya et al., 2006).

The interest margin may be characterized by the absolute value in the national currency and other financial ratios (De Jonghe, 2010). The absolute value of margin can be calculated as the difference between the total amount of interest income and expenses of the bank (Barnett et al., 1992). The absolute value of the margin can be calculated as the difference between the interest income for certain types of active operations and the interest expenses associated with the resources used for these operations. For example, between interest payments on loans and interest expenses on loans (Bokyung et al., 2019).

The interest margin indicator measures the profit that the bank generates from lending to customers and payments on deposits from total interest assets. Banks use this ratio to analyze their investment decisions and track credit returns (Morris et al., 2016). Thus, banks can adjust their lending methods to maximize interest margin margins.

The dynamics of the absolute value of the interest margin is determined by the following factors: the volume of credit investments and other active operations that generate interest income; rate for active operations; rate on passive operations; the difference between the rates for active and passive operations (spread); the share of interest-free loans in the loan portfolio; share of risky active operations that generate interest income; the method of accrual and collection of interest; a system of generating income and expenses; inflation rate; the ratio between the amount of equity and
attracted resources; resource structure (De Jonghe, 2010). From a financial point of view, the resource management process is an activity related to the management of passive operations of a bank. It is passive operations that determine the volume, scale and direction of profitable operations, therefore passive operations play a decisive role in relation to active (De Young and Gökhan, 2013). In managing passive operations, it is necessary to regulate the amount of expenses on raising funds and the amount of income that can be obtained from investing these funds in credit operations or securities.

The totality of resources received by the bank is used to carry out active operations in order to generate income. The Bank places concentrated funds in various assets (loans, securities, cash and reserves) (Craig and Dinger, 2011; Rice and Örs, 2006). At the same time, the bank should strive to manage resources as efficiently as possible. Managers should take into account not only the purely professional aspects of banking, the requirements and standards of the National Bank of Ukraine or market competition issues, but also the desire of depositors and customers, the goals of the bank's shareholders and interests (Andros, 2015).

However, the goals of bank depositors and owners of its shares are sometimes incompatible. Such incompatibility appears in virtually every financial transaction of the bank and is reflected in the inevitable contradiction between the requirements of liquidity and the desired profitability of operations (Rotemberg et al., 1991). We consider this conflict between liquidity and profitability to be the key problem that the bank solves when placing funds. On the one hand, the bank's management is feeling pressure from shareholders who are interested in higher incomes (Bokyung et al., 2019). High incomes can be obtained by performing risky operations, lending to borrowers with dubious creditworthiness and reducing unused balances (Demirguc-Kunt and Huizinga, 2010). On the other hand, the bank's management understands that placing funds in more profitable investments and loans causes increased risk and seriously impairs the bank's liquidity (Andros, 2015).

Thus, an understanding of the relationship between active and passive operations management is critical to maintaining bank profitability. In this regard, it is necessary to determine the optimal combination of attracted sources, based on the specifics of a particular bank, as well as to effectively manage interest rates on attracted resources (Diebold and Sharpe, 1990). Given the above, we formulate general provisions for managing interest margin.

Firstly, the provision of loans is carried out at the expense of own sources, attracted funds of legal entities and individuals (Neumark and Sharpe, 1992). From the standpoint of financial security, it is not advisable to use interbank credit for lending purposes.

Secondly, attracting various sources of funds into circulation, the bank must constantly compare their volumes and value with the volumes and value of loans issued, thereby managing the interest margin.

Thirdly, funds of legal entities and individuals attracted by the bank are placed in loans, factoring, leasing and securities in full, without a balance (Hautsch et al., 2015).

Harmonizing relationships between different parties and at the same time achieving profit targets can be helped by the liabilities distribution model (De Young et al., 2013). It allows you to streamline financial resources and form optimal directions for the transformation of passive operations into active operations. The process of managing the net yield on interest-bearing assets (interest margin) is presented in Fig. 1.
Each of the three blocks shown in Fig. 1, exists more or less autonomously. The first block provides ongoing payments. The second block allows you to reliably place long-term financial resources. The third block forms the funds, assets and property of the bank, working for the future. The advantage of the proposed approach is that it provides a distinction between the sources of attracting financial resources in accordance with the norms of required reserves, terms of attraction, the rate of turnover of funds and the potential yield on interest-bearing assets that they can bring. Indeed, own funds do not require the creation of reserves, have an unlimited nature of attraction and are able to bring maximum yield on interest-bearing assets (Bryant, 1980). Own funds do not require liquid assets and are used to invest in fixed assets (buildings, land), and the remaining funds are intended for long-term loans and less liquid securities. In other words, they are aimed at increasing the bank’s income (Marlina and Danica, 2009).

Conversely, demand deposits require a high rate of required reserves compared with savings and fixed deposits. The speed of their turnover is much higher than that of other types of deposits (Neumark and Sharpe, 1992). Sometimes it reaches 25 and even 45 revolutions per year. Interbank credit is auxiliary and is not considered as a source of coverage of assets (Rotemberg et al., 1991; Hannan and Berger, 1991).

Demand funds are not advisable to be placed in long-term securities and fixed assets. Demand deposits should be directed to the formation of required reserves. Demand deposits should be placed in short-term loans and in secondary reserves for investment funds in short-term government securities. Demand deposits and own funds can bring a higher yield on interest assets as compared to term and savings deposits (Miles et al., 2013; Morris et al., 2016).

Thus, the process for managing interest income assets considered in Figure 2 provides a methodological basis for making decisions on the allocation of borrowed funds and reduces the excess of liquid assets, as opposed to savings and fixed-term deposits and equity.
Next, we evaluate the state of other resources of the bank. The information base for the analysis is the data of the annual financial statements of Piraeus Bank.

Assume that the condition of the resource base of Piraeus Bank is characterized by the data presented in Table 1.

Table 1: General condition of the resource base of Piraeus Bank thousand UAH

<table>
<thead>
<tr>
<th>Bank resources</th>
<th>For the period 31.12.2019</th>
<th>For the period 31.12.2020</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The amount, thousand UAH</td>
<td>Average interest rate, %</td>
</tr>
<tr>
<td>1. Resources involved, including:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>funds of legal entities current / current accounts</td>
<td>1 796 940</td>
<td>-</td>
</tr>
<tr>
<td>term deposits</td>
<td>114 716</td>
<td>15,0</td>
</tr>
<tr>
<td>2. Bank’s own funds</td>
<td>541 588</td>
<td>13,38</td>
</tr>
<tr>
<td>Together resources</td>
<td>2 338 528</td>
<td></td>
</tr>
<tr>
<td>The amount of reserves created</td>
<td>7 734</td>
<td></td>
</tr>
</tbody>
</table>

Source: Authors’ Results

As a result, the amount that can be used to finance assets came out of the total amount of customer funds. As banking practice shows, part of the funds deposited on demand deposits will never be removed and therefore, with some caveat, it can be invested in long-term highly profitable securities.

The smallest daily account balance on demand of all bank customers limits the amount of funds that can be invested in assets in 2020.

The bank must carefully calculate this amount as a weighted average for previous periods, taking into account (for some banks) seasonal fluctuations (Andros, 2015; Kovner et al., 2015; Lucas and Robert, 1972; Hughes and Mester, 2013).

We determine the average term for attracting resources according to the arithmetic average formula:

\[ B_{\text{average balance}} = \frac{0.5 \times B_1 + B_2 + B_3 + \cdots + B_{n-1} + 0.5 \times B_n}{n - 1} \] (1)
where $B_{av}$ – the average balance in the accounts for the period, thousand UAH; $B_d$, $O_h$ – the actual daily cash balances at the beginning and end of the period, thousand UAH; $O_2$, $O_3$, $O_{1n}$ – actual daily balances for other dates within the period, thousand UAH; $n$ – is the number of days in the period.

The average term for attracting customer funds is 148 days (2019):

\[
\frac{213\times689,093+304\times114,716+31\times439,789+12\times444,201+150\times109,141}{689,093+114,716+439,789+444,201+109,141}=147,94=148 \text{ days}.
\]

The terms of placement of savings and term deposits are much longer, and the rate of turnover is much lower. It follows that the liquidity requirements for savings and term deposits are somewhat weaker; therefore, these funds should be allocated mainly to long-term loans and investments. It is necessary to strive to attract more deposits from legal entities, as they take money from the same bank where they have current accounts (Hannan and Berger, 1991).

While the bank is functioning efficiently, its debt to customers on deposits is minimized. Investments of this group of financial resources in long-term assets are justified.

The decisive factor when working with attracted resources is the question of how effectively managers manage interest rates (Craig and Dinger, 2011). Professionals need to understand that the interest paid by the bank to depositors on attracted resources is the main item of operating expenses (Kovner et al., 2015).

The average interest rate for customer accounts is 13.4% (2019):

\[
\frac{14\times689,093+15\times114,716+12\times439,789+13\times444,201+15\times109,141}{689,093+114,716+439,789+444,201+109,141}=13.38\%.
\]

Thus, the interest rate, firstly, is designed to ensure minimal operating expenses; secondly, it should be attractive to customers; thirdly, it serves as the basis for calculating interest rates on loans.

The average term for attracting customer funds is 214 days (2020):

\[
\frac{274\times752,163+360\times139,953+92\times447,478+183\times326,393+200\times106,807}{752,163+139,953+447,478+326,393+106,807}=213,64 \text{ days}.
\]

The average interest rate for customer accounts is 12.4% (2020):

\[
\frac{13\times752,163+14\times139,953+11\times447,478+12\times326,393+13\times106,807}{752,163+139,953+447,478+326,393+106,807}=12.3\%.
\]

The total amount of funds of legal entities and individuals is adjusted for created reserves:

\[
((689,093+114,716+439,789+444,201+109,141)-7,734)+541,588=2330,794.
\]

We get the amount that can be used for lending: 2 330 794 000 UAH. If the period of use of customer funds is less than a year, then to determine the total amount of interest expenses, we use the formula:

\[
S_i = (A_r \times A_{ir} \times D_{cf})/(360 \times 100)
\]

where $S_i$ is the sum of interest, thousand UAH; $A_r$ – amount of resources, thousand UAH; $A_{ir}$ – annual interest rate, %; $D_{cf}$ – duration of use of clients’ funds, days; 360 – the number of days that make up the financial year.

The amount of interest that the bank must pay for the use of customer funds is equal to:

\[
(2\ 338,528\times13,38\times147,94)/360 = 128,582 \text{ million UAH}.
\]

We received the first key parameter necessary to regulate the balance between the costs of attracting resources and the income from the placement of assets. Denote by $x$ the interest rate (Air) and transform the formula 2.

\[
A_{ir} = (S_i \times 100 \times 360) / (A_r \times D_{cf})
\]

Next, we will proceed from two main criteria for the effectiveness of resource allocation: all resources are allocated (no open position), the amount of interest that a bank will receive on loans is at least equal to the amount of interest
that it must pay for using customer funds. If the attraction of resources cost the bank 128.582 million UAH, then the income on assets should not be less than this amount. Consider a new algorithm.

The basic interest rate on loans will be equal to:

\[
\frac{(128,582\times100\times360)}{(2330,794\times147,94)}=462.8952/344817,66436=13,424\%.
\]

The interest rate received is the second indicator that the bank should focus on when managing financial resources. It characterizes the break-even level of lending, if all the resources of the bank are placed (Ali et al., 1993).

Let the target interest margin of the bank be 5%, and then the recommended interest rate on loans will be: 18,424% (13,424%+5%).

From formula 3 it follows that if the average loan term is longer than the average term for attracting resources, then the interest rate on loans should be lower, and vice versa. Suppose that a bank grants a loan not for 148 days, but for 360 days, then we have:

\[
\frac{(128,582\times100\times360)}{(2330,794\times360)}=462.8952/839085,84=5,52\%.
\]

Thus, the interest rate decreased from 13.4% to 5.5%.

A methodological approach to managing net interest income is presented in Figure 2.

**Fig. 2. Methodological approach to managing net interest income**

*Source. Improved by authors for [Morris et al., 2016]*.

From the presented methodological approach to the distribution of funds of bank customers, it follows that in order to manage yield on interest-bearing assets, it is necessary to regulate the following parameters: amounts, terms and interest rates for long-term liabilities and amounts, terms and interest rates for active operations of the bank. To increase bank interest margin, it is advisable to widen the gap between the value of liabilities and the value of assets.

In passive operations, the interest rate must be reduced, and in active operations – increase.

\[
A_{fr} = \frac{S_I}{A_r} \times \frac{360}{D_{cf}} \times 100\% \tag{4}
\]

The term for attracting liabilities should be slightly higher than the term for placing assets (Neumark and Sharpe, 1992). The most difficult and crucial step in managing financial resources is monitoring and ongoing adjustment of net interest income. Short-term current adjustment of the net yield on interest-bearing assets can be carried out by repeated restatements with an interval of one month or by using the index of interest rates (Craig and Dinger, 2011).

Consider the algorithm for applying the index of interest rates (Rice and Örs, 2006).

From the formula 2 shows that:

Index of changes in interest rates on assets placed in assets:
\[
I_{Air} = \sum \frac{S_{I1}}{A_{r1}} \times \frac{360}{D_{cf1}} \times Y_{Air1} 
\]

where \( S_{I1} \) and \( S_{I0} \) - interest expense on resources in the base and reporting periods, \( A_{r1} \) and \( A_{r0} \) - the sum of resources in the base and reporting periods, \( Y_{Air1} \) - the specific gravity of each element.

The summa is 3.0836.

The resulting formula will be identical to another, simpler, since \( A_{ir}=S_{I}/A_{r} \):

\[
I_{Air} = \sum \frac{A_{ir1}}{A_{ir0}} \times \frac{360}{D_{cf1}} \times Y_{Airi} 
\]

where \( A_{ir0} \) and \( A_{ir1} \) are the annual interest rate in the reference and reporting periods, %.

Using the data in Table 1, we calculate the index of interest rate changes by the formula 6.

\[
I_{Air}=[(13*360/274)/(14*360/213)]*Y_{Air1}+[14/2773070]*Y_{Air2}+(11*360/92)/(12*360/31]*Y_{Air3}+[(12*360/183)/(13*360/122)]*Y_{Air4}+[(13*360/200)/(15*360/150)]*Y_{Air5}
\]

The calculation results show that 2020 Piraeus Bank made informed decisions and effectively used financial resources.

**Discussion**

Since the banking crisis of 2008-2009, the US Federal Reserve has kept interest rates at zero levels. A decrease in the overall level of credit rates has reduced the interest margin of banks for more than 10 years. This affected the net expenses of banks in different ways. Interest expenses of powerful banks grew stronger than in small and medium-sized banks. This is probably because large banks were involved in speculative operations in the mortgage bond market, that is, they resorted to non-traditional forms of banking.

The main business model of the bank is to attract financing through short-term deposits and provide loans for the long term to various types of borrowers. Interest margin measures
the difference between the rates that a bank pays to depositors and which it receives from issuing loans. The banking crisis has seriously changed these spreads. It is important to understand these differences when comparing banks of different sizes and banks operating in different regions of the world.

For many Ukrainian banks, the average net interest margin is now 4.3%, and those banks that have significantly lower (less than 3%) are in the risk zone, with expectations of a further decline in interest rates. However, the risks of large banks are much lower. Large banks have the burden of expensive financing because they serve payroll projects, pay pensions, and thus receive cheap money from the public. The lack of such opportunities in small and medium-sized banks further reduces their profitability. Insufficient development of commission business and lack of cheap funding are not the only risk factors. Reducing the profitability of the banking sector in addition to the general volatile economic situation is associated with the development of financial and information technology, increased monetary regulation, increased competition from new players and increased customer requirements for the efficiency and quality of banking products and services.

Conclusions

The results of the analysis showed that the bank could increase interest rates for borrowers whom it lends or reduce deposit rates. Probably, the bank cannot raise interest rates too high; otherwise, the borrowers will go to other banks that offer better conditions for obtaining loans. In addition, depositors will keep their savings in the bank if interest rates on deposits are high. If deposit rates fall below a certain norm, depositors can withdraw funds and invest them in other banks or assets.

Criteria for the sensitivity of assets and liabilities to changes in the interest rate in the period under review are formulated: maturity repayment in a given time interval; the presence of an interim payment to repay the principal amount of the debt in the period under review; the presence of an interest rate on the outstanding balance of the principal amount of debt, which is floating and may change over a given period of time; the presence of an interest rate on the outstanding balance of the principal amount of the debt, which changes under the agreement during a given time interval.

Recommendations for managing financial resources are as follows. It is necessary to minimize the share of borrowed funds and increase the share of own resources, and then maintain the optimal ratio between the sizes of own and borrowed funds. In the structure of borrowed funds, it is important to increase the share of long-term financial resources. It is necessary to determine the optimal combination of attracted sources based on the specifics of a particular bank. To improve the quality of financial resources, it is necessary to attract the largest possible amount of cheap and reliable financial resources of legal entities and individuals. It is important to effectively manage interest rates on attracted financial resources based on unstable macroeconomic policies.

As a result of the study, it was proved that the largest increase in the financial result is observed with a minimum increase in the average volume of working banking assets. This means that an increase in assets is due to an increase in net interest margin. Since the net return on interest-bearing assets and average volumes of working assets is an inverse relationship. This dependence is observed in those banks where the share of net interest income in net operating income is the largest and tends to unity. This also applies to banks, where the growth rate of the ratio of net interest income to the average volume of working assets is greater than the growth rate of net interest income.

From our point of view, only joint efforts of the leaders of the credit institution and the state can lead to successful risk management. Regulators need to be aware of their responsibility to develop a sound regulatory
framework and sound monetary policy, and bank managers must adhere to risk margins and use adequate risk assessment methods.

The practical significance of the study lies in the fact that the methodology for managing the interest margin in the bank and the mechanisms for its implementation, developed by the authors, have been brought to specific proposals that are important for improving the efficiency of commercial banks. Contribution to the development of modern methods and mechanisms for the use of bank interest, are intended to make author's developments in the field of banking technologies for calculating and making interest payments, as well as managing interest income and bank expenses.

Prospects for further scientific developments are associated with the urgent need for scientific analysis and generalization of the best international experience and the opportunity to replenish the theoretical basis for managing interest rate risk and develop an organizational system for managing the interest rate risk of commercial banks adapted to Ukrainian conditions.

References


Hautsch, N., Schaumburg, J., Schienle, M.