

Approaches To Interest Rate Risk Management In Uzbekistan's Commercial Banking Sector



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Abstract

This article examines the theoretical and practical foundations of interest rate risk management in commercial banks, analyzes the current state of this practice in commercial banks in our country, and develops scientific and practical recommendations in this area.

Keywords: Commercial Banks, Interest Rate Risk, Management Practices, Bank Risks, Risk Management Policy, Credit, Hedging.

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Introduction

The Strategy for Reforming the Banking System of the Republic of Uzbekistan for 2020-2025 identifies "improving the quality of credit portfolio and risk management, ensuring a balanced growth of lending volumes, pursuing a balanced macroeconomic policy, improving corporate governance and attracting managers with international practical experience, and ensuring the financial stability of the banking system through the implementation of technological solutions for assessing financial risks" as one of the key areas for reforming the country's banking sector [1].

Indeed, improving the quality of risk management in the banking system, especially in commercial banks, and accurately assessing

financial risks is of great importance, as it significantly affects the increase in banks' profits.

However, today, interest rate risk is emerging as one of the most significant risks affecting the operations of commercial banks. It is a type of risk directly related to the key interest rate in the country's banking system and, consequently, to the interest rates on loans and term deposits offered by commercial banks. One of the target indicators set for the banking sector in the "Uzbekistan-2030" strategy is to reduce loan interest rates to 10-12 percent by 2030 [2].

However, achieving such a level of credit interest rates, which would be directly affected by interest rate risk, involves a number of problems and shortcomings. These include fluctuations in the Central Bank's key interest rate, a relatively high interest rate on loans, changes in the inflation rate, instability in the exchange rate, a significant proportion of problematic loans in the credit portfolio, weak competition in the bank services market, volatility in external market rates, the existence of commercial banks with a charter capital of less than 200 billion soum, and a lack of sufficient understanding of interest rate risk among bank employees. To address these problems and shortcomings, there is a need to develop scientific proposals and practical recommendations for improving the practice of managing interest rate risk in commercial banks, which justifies the relevance of the topic of this scientific article.

LITERATURE REVIEW ON THE SUBJECT

Interest rate risk management practices in commercial banks are one of the issues being studied by foreign, CIS, and local researchers. Below, we provide a brief analysis of the approaches and perspectives on this topic.

John Stephens, an American researcher, emphasizes that in the practice of managing interest rate risk in commercial banks, the following areas should be given primary attention: automating interest rate risk management in commercial banks; managing interest rate risks using stress tests; hedging interest rate risks; and managing the bank's future interest rate risks. More detailed information on these areas is presented in Table 1 below.

Schedule 1

The main areas that should be considered in the practice of managing interest rate risk in commercial banks are [3].

Directions	Description
Automating interest rate risk management in commercial banks.	<p>Automation can significantly improve the integrity of data and assessments regarding interest rates by enabling real-time data collection, the creation of information dashboards, and detailed data analysis;</p> <p>Modernized management information systems and automated ETL (extract, transform, load) systems can easily convert data into reliable sources and upload it to the bank's core database;</p> <p>Such detailed reporting helps ensure consistency between management strategies and risk acceptance limits, and the bank's established risk tolerance levels and overall approach to managing interest rate risk.</p>
Managing percentage risks using stress tests.	<p>To fully assess their position on credit risk, commercial banks should use technology within their structures as much as possible, along with stress tests;</p> <p>Commercial banks should regularly conduct financial stress tests to prevent significant losses, which is necessary not only to inform management, but also to regularly assess their financial guarantees in order to meet the expectations of supervisory authorities and stakeholders, and so on.</p>
Hedging interest rate risks	<p>In the current environment of high interest rates, commercial banks also need to optimize their hedging strategies;</p> <p>It is recommended that commercial banks develop a sound funding plan strategy, and this strategy should</p>

	<p>be specifically tailored to control hedging costs while simultaneously reducing funding costs;</p> <p>Commercial banks should also have a well-documented funding plan in place to address emergency situations, i.e., unexpected events, and so on.</p>
<p>Managing the bank's future interest rate risks.</p>	<p>In recent years, disruptions in bank operations have heightened the awareness of commercial banks and regulatory bodies regarding interest rate risk, leading them to adopt a much more serious approach to interest rate risk, regardless of whether the Federal Reserve System raises or stabilizes interest rates;</p> <p>To maintain adaptability, commercial banks need to double their efforts in preparing for fluctuations by strengthening their interest rate risk monitoring with the help of more sophisticated data, and so on.</p>

According to the Russian researcher Samoylov N. A., the goal of managing interest rate risks in commercial banks is to protect the bank's profits from fluctuations in interest rates. To achieve this, he notes that banks need to perform the following tasks: define a policy regarding interest rate risks, develop a forecast of interest rate dynamics, and carry out hedging operations. According to Samoylov N. A., the main instruments for hedging interest rate risks include: forward interest rate agreements, money market futures, interest rate swaps, and interest rate options. Figure 1 below provides information about these instruments (excluding interest rate options):

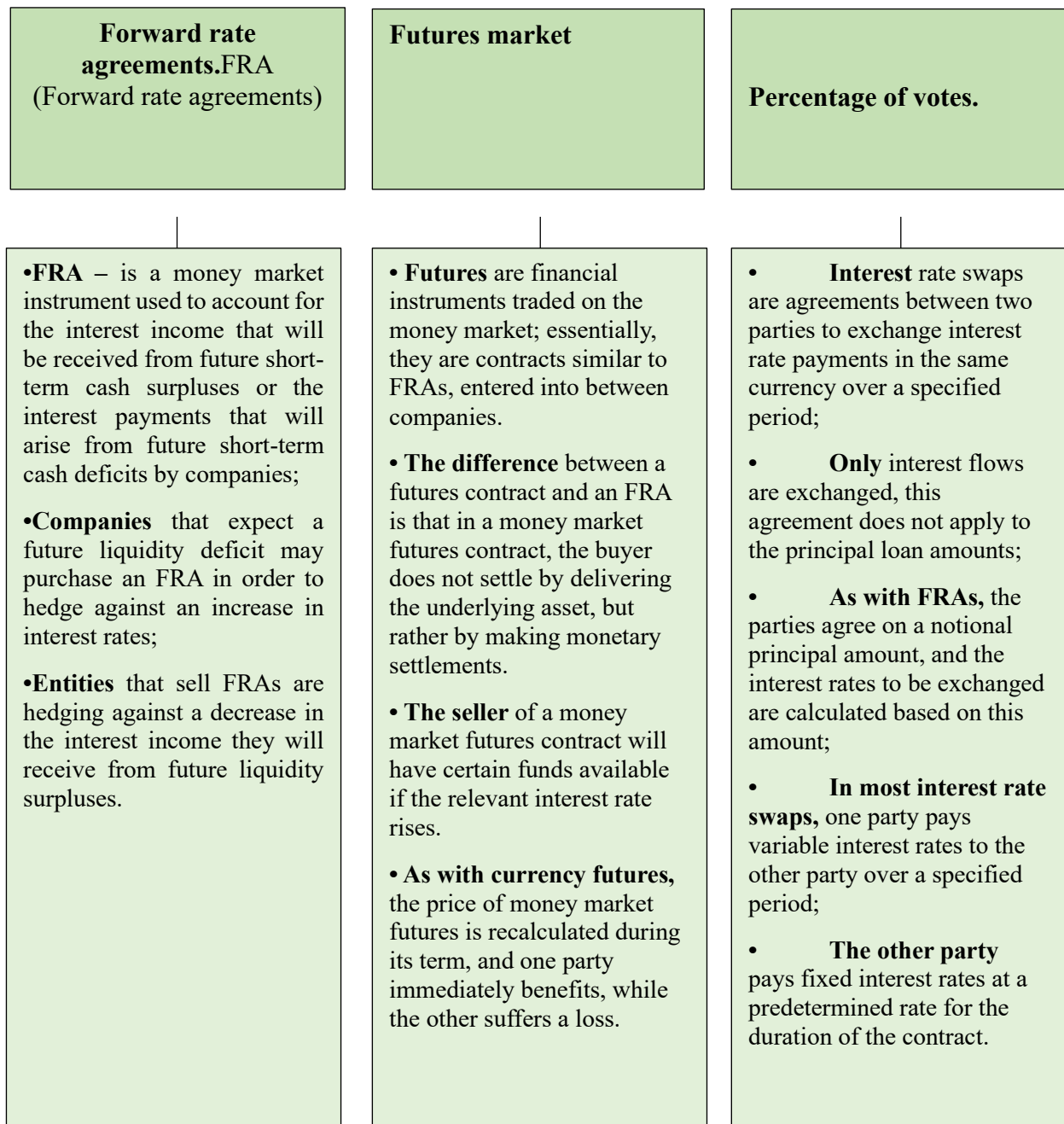


Figure 1. Key instruments for hedging interest rate risk [4]

Local researcher Hamroev Sh. recommends that, based on the requirements of the International Basel Committee, the following should be implemented to improve the system for managing and monitoring bank

risks, including interest rate risk:

first, each commercial bank should implement new stress-test models for operational, liquidity, interest rate, currency, and credit risks, based on its operations;

second, the process of managing and monitoring risks should include tools such as setting limits, distributing responsibilities, and establishing decision-making systems, as well as regular reporting on risks;

third, the bank's management bodies can achieve positive results by implementing a comprehensive risk assessment process, integrating the risk management process into the bank's business processes, and ensuring the "three lines of defense" (i.e., risk acceptance, risk management, and internal audit) [5].

In general, based on the conclusions of the aforementioned researchers, it can be said that while foreign and other CIS researchers, particularly those from Russia, are actively conducting research on the practice of managing interest rate risk in commercial banks, local researchers are paying more attention to the practice of managing overall bank risks rather than specifically focusing on interest rate risk. This, in turn, indicates that there is a lack of sufficient research on the practice of managing interest rate risk in Uzbek commercial banks, which further reinforces the relevance of the topic of our scientific article.

Materials And Methods

This article was prepared in accordance with the requirements of the international IMRAD structure, and it mainly used three research methods: the scientific-theoretical analysis method, the theoretical-practical analysis method, and the economic-statistical analysis method. The scientific-theoretical analysis method was mainly used in analyzing the data collected for the "Literature Review" section of the article, while the economic-statistical analysis method was used in analyzing the data collected for the "Analysis and Results" section. The theoretical-practical analysis method was used in both of these sections of the article. In the process of collecting data for the scientific article, the main sources were Google, Google Scholar, and Yandex search engines, as well as reports and statistical bulletins published on the official website of the Central Bank of the Republic of Uzbekistan.

When preparing the scientific article, we made every effort to maximize the use of information and data, adhere to logical sequence and consistency, and avoid the "copy-paste" method, which could lead to plagiarism. This approach helped us achieve the main goal of the research: to study the practice of interest rate risk management in commercial banks of Uzbekistan and to develop the necessary scientific and practical recommendations.

Analysis And Results

The Regulation, approved by Resolution No. 4/11 of the Board of the Central Bank of the Republic of Uzbekistan dated March 7, 2023, "On Approving the Regulations on Requirements for the Risk Management System of Banks and Banking Groups," outlines the risk management system for commercial banks, including interest rate risk. Figure 2 provides a description of this system. As can be seen from the figure, the risk management system in commercial banks consists of four parts, each of which we will briefly describe from the perspective of managing interest rate risk:

- The organizational structure of risk management serves as an important foundation for managing interest rate risk, enabling the orderly and systematic implementation of activities in this area.

- The culture of risk management is a crucial component specifically for managing interest rate risk, as it allows for increasing the awareness and knowledge of all employees regarding interest rate risk.

Unfortunately, many employees of commercial banks today do not have a sufficient understanding of this risk;

- Internal documents on risk management are of great importance for regulating interest rate risk using the bank's regulatory and legal documents, which leads to a serious approach to interest rate risk by management and employees;

- The effective operation of an information system designed for risk management and reporting preparation allows for timely and high-quality provision of information on interest rate risk for making appropriate management decisions. Almost all commercial banks in Uzbekistan pay attention to the requirements in Figure 2 when developing their risk management systems.

The "Regulations on the Requirements for the Risk Management

System of Banks and Banking Groups" contains a number of terms related to risk management, and below we will briefly discuss some of them, namely those that have been studied in many research works and those that are relatively new:

- risk appetite – this is the amount of all significant risks (both in aggregate and individually) that the bank is willing to accept in order to achieve its strategic goals and business plan indicators;

- risk appetite statement – this is a document approved by the bank's supervisory board that defines the bank's risk appetite;

- risk profile – this is the amount of significant risks (both in aggregate for all significant risks and individually) that exist in the bank on a specific date.

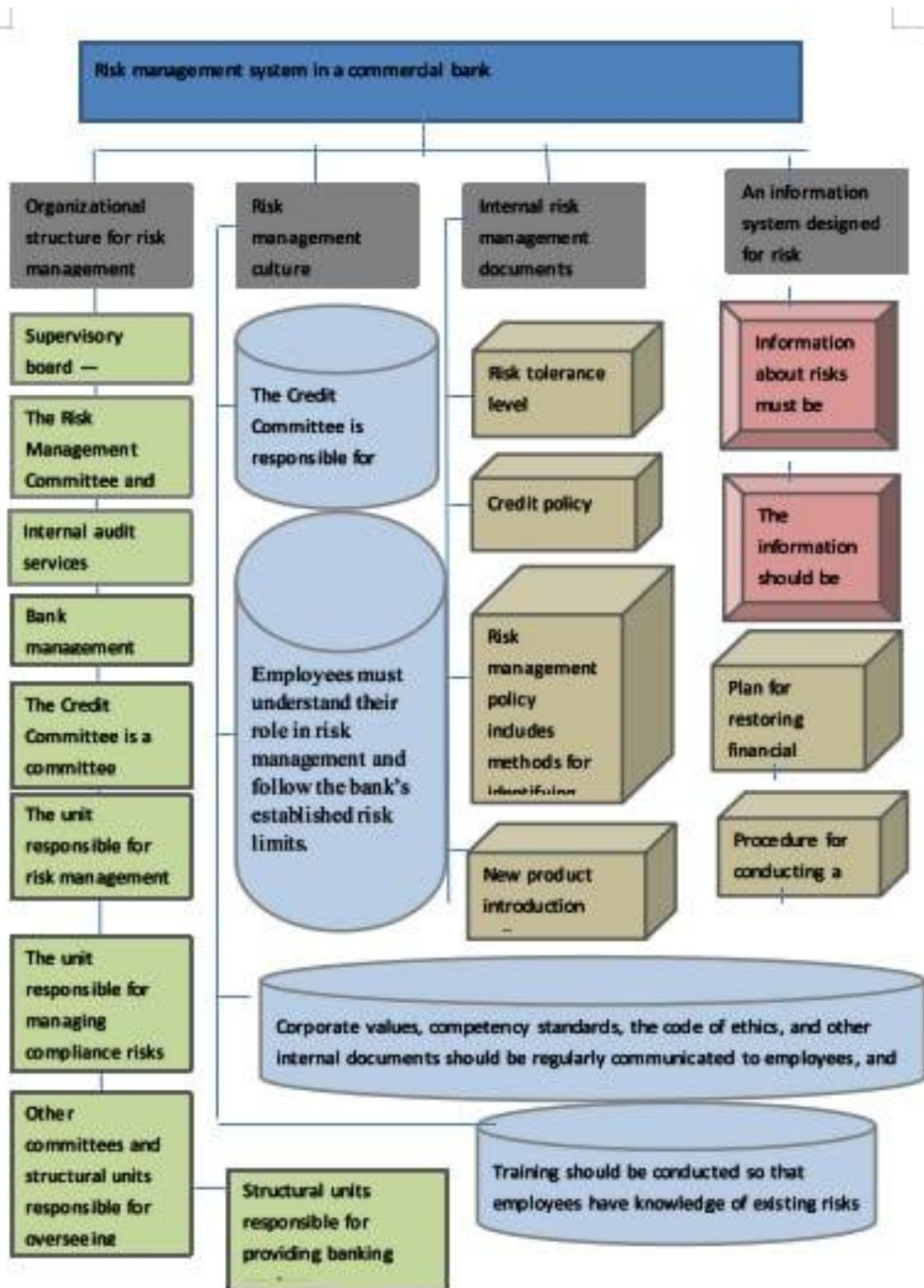


Figure 2. Risk management system in commercial banks [6]

- Conducting a stress test is a process of assessing the potential impact of events (risks) that may occur, even if they seem unlikely, on the

bank's financial condition;

- Significant risks include the bank's credit, liquidity, market, operational, and compliance risks;

- A risk management system is a system designed to systematically identify, measure, monitor, control, report, and mitigate all risks related to the bank's operations, as well as the system of interaction between the bank's management bodies and the departments responsible for risk management. The terms mentioned above, such as conducting a stress test, risk profile, significant risks (including credit, liquidity, market, and operational risks), and the risk management system, are commonly found in research papers. However, concepts such as risk appetite, risk appetite statement, and compliance risk are rarely encountered in research.

As we mentioned earlier, we believe the reasons why these relatively new concepts are rarely encountered in research are as follows:

- These terms may not have been fully explored by scientists and researchers. If they had been fully explored, we would have encountered them more often while analyzing the literature during the preparation of the scientific article;

- These terms may not be explicitly mentioned in local literature, including reports, because they are relatively new concepts for the banking system of our country;

- The very limited number of highly qualified specialists in risk management in commercial banks may be creating certain difficulties in the widespread practical application of these relatively new terms.

Regardless of the circumstances, the above thoughts represent our own personal views and assumptions, and based on them, we conclude that risk appetite, risk appetite statement, and compliance risk are areas that are not being thoroughly studied, and we will strive to explore these areas as we continue our research in the future.

Decree No. PF-6207 of the President of the Republic of Uzbekistan dated April 13, 2021, "On Measures to Further Develop the Capital Market" [7], Decree No. PQ-90 dated January 17, 2022, "On Additional Measures to Implement Effective Mechanisms for Supporting the Capital Market" [8], and Decree No. PQ-162 dated April 19, 2024, "On Additional Measures to Reduce State Participation in the Economy" [9] stipulate that the National Bank for Foreign Economic Activity, Halk Bank, Agrobank, Microcreditbank, and Qishloq Qurilish Bank (now the Business

Development Bank), as state-owned commercial banks, are preparing for an IPO, which involves the public placement of their shares through stock exchanges. Achieving success in this endeavor requires improving the corporate governance systems of these banks.

Therefore, today, the Central Bank is paying great attention to improving the corporate governance system in these commercial banks, and managing bank risks, including interest rate risk, is considered one of the important areas of this system. For this reason, we would like to briefly discuss the risk management system in the National Bank for Foreign Economic Activity among these commercial banks. The National Bank for Foreign Economic Activity has developed a separate risk management policy, which comprehensively covers the risk management system. We were particularly interested in the "three lines of defense" principle used by this bank. We can explain the reason for this in the "Analysis of Relevant Literature" section of our article, citing the conclusions of local researcher Hamroev Sh. on this matter.

Thus, in accordance with the National Bank's risk management policy regarding external economic activity, the Bank's organizational structure is designed to distribute functions and responsibilities among its divisions in accordance with the "three lines of defense" principle, taking into account the need to effectively manage risks, minimize conflicts of interest between risk acceptance, risk level limitation and control, and the audit of the risk management system. Within each line of defense, the listed functions may be performed not by a single organizational unit of the Bank, but by several of its divisions. Table 2 describes the Bank's risk management system based on the "three lines of defense" principle. When analyzing the current state of interest rate risk management practices in commercial banks of Uzbekistan, it is necessary to assess not only the risk management systems in place, but also the specific measures being implemented to minimize interest rate risk.

Currently, the Central Bank of the Republic of Uzbekistan is implementing many positive measures to reduce the keSchedule 2

y interest rate, increase the capital and net profit of commercial banks, and reduce the share of problematic loans in the credit portfolio. These measures, in turn, reflect the practice of managing interest rate risk in the commercial banks of our country. Based on global experience, we can say that diversifying the credit portfolio of commercial banks is one of

the ways to minimize interest rate risk. Therefore, from the perspective of the activities of commercial banks in our country, we will conduct a brief analysis of this issue.

Schedule 2

The system of risk management bodies of the National Bank in the field of foreign economic activity [10].

Defensive lines.	Risk management departments and the structures responsible for identifying, assessing, monitoring, and controlling risks, as well as preparing reports on risks.
1. Defensive line	All structural divisions of the bank: Executive Office, Treasury Department, Project Finance Center, Corporate Relations and Investment Department, Credit Department, Retail Business Department, Problem Loans Department, Mortgage Lending Department, State Programs Financing Department, Credit Debt Collection Department, Small and Medium Business Department, Interbank Settlement Center, Bank Network and Service Development Department, Marketing Services Center, Information Technology Department, Human Resources Department, Foreign Economic Activity Department, Operations Management Department, Accounting and Financial Management Department, Transformation Office, Information Service, Monitoring and Timely Debt Collection Department.
2. Defensive line	Department of Risk Management, Department of Internal Control, Department of Information and Bank Security, Legal Department.
3. Defensive line	Internal Audit Department

For this purpose, we would like to draw your attention to Table 3. The table analyzes the loans allocated by commercial banks for

entrepreneurial activities in 2022-2024, broken down by sectors. The area of interest here is precisely this: the fact that loans are directed not to one or two sectors, but to 6 or more sectors, which serves as an example of diversifying the loan portfolio. In this regard, we are observing significant positive changes in the commercial banks of our country. Just as the diversification of the bank's loan portfolio by sector, this diversification also prevents the risk of interest rate fluctuations affecting the loan. This is because, since the sectors are diverse, even if some of them are unable to repay the loan, the bank can maintain its profitability by relying on other sectors that can repay. It should be noted that if a bank consistently diversifies its loan portfolio, it means that the bank has a well-established system for managing risks, including interest rate risk.

This is one side of the issue, but the other side is that commercial banks that regularly diversify their credit portfolios will have the opportunity to strengthen their capital and liquidity as banks that operate based on market changes and demands.

**Loans allocated by commercial banks of Uzbekistan for
entrepreneurial activities in 2022-2024
(by sectors, in billions of soum) [11]**

T/p	Indicators	2022	2023	2024
Total loans issued:		69770,3	73009,4	92424,8
1.	Industry	20312,1	19423,4	23590,0
2.	Agriculture	6313,2	7879,4	14557,5
3.	Construction	6944,2	6439,6	7010,3
4.	Trade and catering	17159,9	18905,2	30636,7
5.	Transport and communications	8943,0	6465,5	4600,8
6.	For entrepreneurial activities of the population	9094,4	9495,2	6346,5
7.	Other	1003,6	4401,2	5683,1

In general, given that the main source of operating income for commercial banks is their margin, i.e., the difference between deposit and loan interest rates, we believe that they need to continuously improve their interest rate risk management practices compared to other bank risks. Currently, since a significant portion of commercial banks in the country

are state-owned, and private and foreign banks are relatively new players in the local market, the practice of managing interest rate risk in commercial banks is mainly supported by the Central Bank. However, the significant attention being paid to the privatization of state-owned commercial banks and the development of competition among banks in Uzbekistan will create opportunities for commercial banks to develop and implement competitive strategies for managing interest rate risk independently in the future, and consequently, to have appropriate practices.

Conclusions And Recommendations

In conclusion, despite the significant positive progress achieved in managing interest rate risk in our country's commercial banks, it is becoming increasingly important for banks to enhance their adaptability to the rapidly changing demands of international and domestic markets. Therefore, we would like to offer the following practical recommendations:

- Greater attention should be paid to the public placement of shares of state-owned commercial banks through the stock exchange and the successful implementation of an IPO, which will create opportunities for increasing the capital of commercial banks, enhancing their activity in the financial market, and, as a result, enabling them to better withstand interest rate risk threats.

This requires a significant amount of work, which includes the following: the state needs to actively develop a corporate governance system in these banks that meets the demands of the fund market and foreign investors; commercial banks need to qualitatively revamp the system of allocating a portion of their shares to employees, and so on;

- The Central Bank's Resolution No. 4/11 dated March 7, 2023, proposes requirements for a risk management system for commercial banks, developed to meet modern standards, and they need to pay extremely close attention to actively developing a system for managing interest rate risk within the scope of these requirements.

To achieve this, the following measures would be appropriate: a program should be developed to enhance the financial literacy of employees in commercial banks, specifically focusing on interest rate risk; attention should be paid to developing a comprehensive approach among all participants in order to effectively organize the interest rate risk

management system in commercial banks [by which is meant a type of thinking that emerges as a result of teamwork, which will stimulate the emergence of new ideas for the development of interest rate risk management]; and so on; • The development of companies that offer consulting services on interest rate risk management in the country should be supported, and such companies may provide the following consulting services: determining the level of exposure of a commercial bank to interest rate risk; explaining market changes in interest rate trends; offering solutions based on the use of a full range of services, including credit, deposit, and interest rate hedging products for commercial banks; and so on.

Banks should continue to develop the diversification of their credit portfolios, and the following may be important for this: they should develop a system for regularly studying, analyzing, and managing the capabilities, demands, and needs of commercial bank customers; it would be beneficial for representatives of commercial banks to participate in numerous online platforms where the opinions of experts on diversifying the credit portfolio are discussed; and significant attention should be paid to constantly monitoring the condition of bank assets, etc.

In general, the development of interest rate risk management practices in commercial banks of the country requires modern and advanced knowledge and technologies, and we believe that our small research conducted during the preparation of this article and the resulting practical recommendations will contribute to the achievement of these goals.

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