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# STRATEGIES FOR OPTIMIZING THE STRUCTURE OF COMMERCIAL BANK ASSETS AND INCREASING EFFICIENCY IN UZBEKISTAN

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**Abstract:** This article examines the issues of optimizing the asset structure and improving the efficiency of commercial banks in the context of the transformation of the banking system of Uzbekistan. The study analyzes the quality indicators of bank assets, diversification of the loan portfolio, and strategic directions for improving the risk management system. Furthermore, scientific and practical recommendations are proposed to increase return on assets (ROA) and reduce the share of non-performing loans (NPL) through the introduction of digital technologies.

**Key words:** commercial banks, bank assets, optimization, efficiency, loan portfolio, liquidity, profitability, risk management, transformation, digital banking.

## INTRODUCTION

The processes of globalization and digital transformation taking place in the modern world economy are assigning new strategic tasks to the financial and banking system. In particular, within the framework of the banking system reform strategy being implemented in the Republic of Uzbekistan, restructuring the activities of commercial banks on the basis of market principles and enhancing their competitiveness in the international arena have been identified as priority directions. Today, the main objective of banking reforms is not only to increase the capitalization level of banks, but also to optimize the quality of the asset structures they manage and, through this, achieve higher economic efficiency.

The structure of commercial bank assets is a key factor determining a bank's financial stability, liquidity level, and profitability. Although the volume of bank assets in our country has grown significantly in recent years, the need to further improve their quality and income-generating capacity remains relevant. In particular, the concentration of assets in certain sectors within banks with state participation, as well as the presence of problematic assets in loan portfolios, calls for renewed approaches to systemic risk management. Therefore, asset optimization is not merely a matter of allocating funds; rather, it is the art of ensuring the most appropriate balance between risk, profitability, and liquidity.

The relevance of this article lies in the fact that it analyzes the existing challenges in managing the assets of commercial banks in Uzbekistan and proposes scientifically grounded strategies for addressing them and improving asset efficiency. In addition, special attention is given to the issues of diversifying asset structures, minimizing credit risks, and using modern innovative financial instruments in the context of the development of digital banking services and the transformation of banking operations. The development of strategies for improving the efficiency of commercial bank activities ultimately creates a solid foundation for providing financial support to the real sector of the national economy and enhancing public welfare.

## LITERATURE REVIEW

Issues related to the management of commercial bank assets and the optimization of their structure have long remained one of the fundamental areas of research for economists and banking specialists. In international practice, theories aimed at improving the efficiency of bank assets are primarily focused on maintaining a balance between risk and profitability. In particular, Harry Markowitz, the founder of modern portfolio theory, scientifically demonstrated in his studies the possibilities of minimizing risks through asset diversification. According to his view, allocating bank funds across different sectors is one of the most effective ways to reduce unsystematic risks when forming the asset structure of banks.

Among Western economists, Peter Rose and Joseph Sinkey, in their works devoted to bank management, comparatively analyzed “liquidity-oriented” and “profit-oriented” asset management strategies. They emphasized that the stability of banks directly depends on the quality of assets, particularly on their ability to be converted into cash in a timely manner. In addition, the recommendations and standards developed by the Basel Committee on Banking Supervision serve as a methodological basis for assessing risky assets and determining capital adequacy requirements.

Among Uzbek scholars, the studies of Sh. Abdullaeva, O. Olimov, and F. Mullajonov have extensively covered the structural characteristics of domestic commercial bank assets and issues related to their transformation. In particular, Professor Sh. Abdullaeva paid special attention to the classification of assets and the impact of provisions formed against them on banks’ financial results. In her opinion, in order to improve asset efficiency in the banking system of Uzbekistan, it is necessary to move away from excessive reliance on collateral in lending processes and transition toward the analysis of clients’ cash flows.

At the same time, recent scientific research has increasingly focused on the role of FinTech and artificial intelligence technologies in optimizing bank assets. Many modern researchers argue that traditional asset management methods are gradually losing relevance under the digital banking model, and that banks should now place greater emphasis on “intellectual assets” and high-technology services.

The literature review demonstrates that although the theoretical foundations for optimizing bank assets are sufficiently developed, there remains a need to further improve practical mechanisms for transforming state-owned banks and adapting their asset structures to market requirements under the specific economic conditions of Uzbekistan. This article is aimed precisely at linking these theoretical perspectives with practical application and developing suitable strategies for the national banking system.

## RESEARCH METHODOLOGY

A systematic approach, comparative analysis, and economic-mathematical modeling methods were applied in developing strategies for optimizing the structure of commercial bank assets and improving their efficiency. The methodological foundation of the study is based on the principles of objectivity, logical consistency, and scientific forecasting. During the research process, the overall condition of the banking system of Uzbekistan was examined as an integrated system, while the structure of bank assets and their interrelationships were analyzed through the decomposition of their individual components.

The quality of assets and profitability indicators of domestic banks were studied in the dynamics of recent years and comparatively assessed against international banking standards. In this regard, the coefficient method was used to compare the efficiency of asset management between banks with state participation and private banks. Financial indicators such as return on assets (ROA), return on equity (ROE), and net interest margin (NIM) formed the quantitative basis of the study.

Through data grouping and correlation analysis, the impact of the volume of bank assets on the amount of net profit was examined. The empirical base of the research consisted of official reports of the Central Bank of the Republic of Uzbekistan and publicly available financial statements of commercial banks. By means of the scientific deduction method, general conclusions were derived from existing theoretical perspectives, while the induction method was used to generalize the positive experience of individual banks into strategic recommendations for the entire system. This comprehensive methodology serves to ensure the reliability of the research findings and the scientific validity of the proposed strategies.

## ANALYSIS AND RESULTS

The study of the structure of commercial bank assets in Uzbekistan shows that in recent years significant transformation processes have taken place in the banking system aimed at reducing state participation and increasing the share of the private sector. The analysis confirms that within the structure of loan portfolios, the share of retail services — especially microloans and mortgage lending — has been increasing. This trend reduces banks’ dependence on only large corporate clients and state enterprises, while creating opportunities to diversify risks across a broader customer base. However, in assessing asset efficiency, maintaining the stability of the net interest margin (NIM) remains a key task, since stronger market competition and the rising cost of funding sources require banks to adopt renewed approaches to managing asset profitability.

One of the most important factors affecting the efficiency of bank assets is the condition of mechanisms for dealing with non-performing loans (NPLs). In domestic banks, the decline in asset quality is often associated with inaccurate assessment of clients’ future cash flows during the lending process and overestimation of the liquidity of collateral. The conducted observations show that banks applying artificial intelligence-based scoring systems in credit risk management demonstrate significantly higher asset quality compared to banks relying

on traditional methods. This confirms that technological modernization in asset optimization is directly linked to economic efficiency and the bank's ability to generate stable profits.

In addition, the balance between highly liquid funds and the investment portfolio within bank assets is of considerable importance. The results of the analysis indicate that banks can increase return on assets (ROA) by allocating their temporarily idle funds not only to refinancing instruments of the Central Bank of the Republic of Uzbekistan, but also to profitable government securities and corporate bonds. Diversification of investment assets not only generates additional income for the bank, but also strengthens its liquidity position. The analysis of asset-liability maturity matching in bank management shows that the risk of financing long-term assets with short-term resources still remains, which necessitates extending the maturity structure of the funding base within asset management strategies (Table 1).

**Table 1. Strategies for Optimizing the Assets of Commercial Banks in Uzbekistan and Their Impact on Economic Efficiency Indicators<sup>1</sup>**

Strategic Directions	Implementation Mechanisms	Objective of Optimization	Main Efficiency Indicators (KPI)
Loan Portfolio Diversification	Redirecting resources from large state enterprises to small business and private entrepreneurship sectors.	Reducing credit concentration risk and expanding income sources.	Reduction in NPL (non-performing loans) ratio, growth in net interest margin.
Technological and Digital Transformation	Introducing AI-based scoring models and remote service platforms.	Reducing human-factor dependency, lowering operating costs, and increasing service speed.	Growth in ROA (return on assets) and ROE (return on equity).
Investment Portfolio Management	Allocating idle funds in the money market to highly liquid government bonds and corporate securities.	Generating additional non-interest income while maintaining liquidity levels.	Increase in the share of commission and investment income in total bank revenues.
Asset and Liability Management (ALM)	Eliminating maturity mismatches (Gap) between attracted funds and placements.	Ensuring solvency and stability of the bank, managing interest rate risk.	Liquidity Coverage Ratio (LCR) and Net Stable Funding Ratio (NSFR).

The first direction is the strategy of loan portfolio diversification. The analysis shows that a significant share of assets in the banking system of Uzbekistan is still concentrated in large state-owned enterprises, which increases systemic risk. The mechanism proposed in the table suggests redirecting resources toward small and medium-sized businesses, allowing banks not only to spread risks more effectively, but also to achieve higher interest margins in line with market conditions. This, in turn, serves as an important factor in reducing the share of non-performing loans (NPLs).

The direction of technological and digital transformation represents the most innovative part of the table, aimed at improving the operational efficiency of banks. Transitioning from traditional lending practices to automated scoring models reduces the human factor and related errors. The main economic result of this strategy is reflected in the significant improvement of return on assets (ROA) and return on equity (ROE). Under the digital banking model, the cost associated with each unit of assets decreases substantially.

The investment portfolio management strategy helps reduce excessive dependence on lending activities alone. The mechanism presented in the table — investing in government bonds and other securities — enables banks to manage their liquidity reserves more efficiently. In this context, “efficiency” means transforming idle funds (cash in vaults or non-interest-bearing balances held with the Central Bank of the Republic of Uzbekistan) into low-risk but income-generating assets.

The Asset and Liability Management (ALM) direction functions as a “safety cushion” ensuring the financial stability of the bank. The gap-management method noted in the table minimizes liquidity risk. Under the conditions of Uzbekistan, banks often finance long-term projects with short-term deposits, which creates a maturity gap. As a result of implementing this strategy, improvement in the Liquidity Coverage Ratio (LCR) strengthens the bank's resilience to external shocks.

Mathematical models and a system of ratios serve as the main analytical tools for evaluating the quality of commercial bank asset management strategies. In this process, the return on assets indicator occupies a central place and is determined by the formula:

<sup>1</sup> Developed by the author on the basis of the banking system reform strategy of the Central Bank of the Republic of Uzbekistan and the annual financial reports of commercial banks.

$$ROA = \left( \frac{P_n}{A_{avg}} \right) \times 100\%$$

This indicator reflects how much net profit is generated by each monetary unit of bank assets. From an economic perspective, a high value of this indicator demonstrates the quality of bank management and the effective allocation of resources. If return on assets shows a downward trend, it means that the share of non-performing or low-yield assets has increased, which necessitates the prompt optimization of the asset structure.

At the same time, the efficiency of a bank's core operating activities can be understood more deeply through the net interest margin indicator, which is calculated using the formula:

$$NIM = \frac{I_{in} - I_{ex}}{A_{inv}}$$

Under conditions of increasing competition in the banking system of Uzbekistan and the rising cost of the funding base, maintaining the stability of the net interest margin has become one of the most complex tasks of asset management. This scientifically substantiates the need to orient strategy not only toward traditional lending, but also toward increasing the share of commission-generating and lower-cost digital assets.

In assessing asset quality, the non-performing loan ratio is one of the most important indicators and is determined by the following relationship:

$$K_{npl} = \left( \frac{L_{np}}{L_{total}} \right) \times 100\%$$

An increase in this indicator means that the share of healthy assets is declining and that larger provisions should be allocated for potential future losses. Within the framework of optimization strategy, reducing this ratio requires transitioning to automated scoring systems that limit the human factor in lending decisions, as well as applying flexible restructuring mechanisms for problematic assets.

Another important aspect of bank stability is expressed through the Liquidity Coverage Ratio, which measures the bank's resilience under stress conditions according to the following requirement:

$$LCR = \frac{HQLA}{NCOF} \geq 100\%$$

Since there is an inverse relationship between liquidity and profitability — meaning highly liquid assets usually generate lower returns — a bank's strategy should aim to find the optimal balance between these two factors. The asset structure should therefore be formed in such a way that the bank preserves solvency while also maintaining profitability opportunities.

Finally, the degree of asset diversification is assessed using the Herfindahl–Hirschman Index, expressed as:

$$HHI = \sum S_i^2$$

This index mathematically determines the sectoral concentration of the loan portfolio. A high index value indicates that the bank is excessively dependent on a particular sector and may face elevated systemic risk during periods of economic stress. Therefore, the main objective of an asset optimization strategy is to minimize risks and improve overall efficiency by distributing resources across different sectors of the

## CONCLUSION AND RECOMMENDATIONS

As a result of studying strategies for optimizing the structure of commercial bank assets and improving their efficiency, it can be concluded that the stability of the banking system directly depends on the quality of assets and the degree of their diversification. The transformation processes taking place in the banking sector of Uzbekistan are encouraging banks to move from the traditional lending model toward a high-technology and market-oriented system. Maintaining the optimal balance between risk and profitability in asset management not only improves the financial performance of individual banks, but also plays an important role in ensuring the overall stability of the national economy.

Based on the results of the study, it is advisable to propose the following recommendations for improving the activities of commercial banks. First of all, banks should reduce sectoral concentration within their loan portfolios and increase the share of financing directed toward small and medium-sized business projects. In this regard, it is important to reduce excessive reliance on collateral requirements and more broadly implement lending systems based on the borrower's future cash flows and the feasibility of business plans. In addition, when

dealing with non-performing loans (NPLs), it is necessary to strengthen not only judicial recovery mechanisms, but also restructuring arrangements with borrowers and business rehabilitation measures.

Secondly, banks should increase the share of digital products and high-technology-based services within their asset structures. The introduction of risk management systems based on artificial intelligence and big data analytics will not only reduce operating costs, but also accelerate asset turnover. Thirdly, banks should intensify their investment activities and actively participate in profitable securities markets. This will enable more effective liquidity management and diversification of income sources.

It should be emphasized that the strategy for optimizing commercial bank assets must remain flexible and adaptable to continuously changing macroeconomic conditions. The practical implementation of the above-mentioned recommendations will contribute to increasing the profitability of bank assets, minimizing risks, and ultimately strengthening the international standing of the national banking and financial system.

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