



MODERN METHODS OF ASSET MANAGEMENT OF COMMERCIAL BANKS

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ABSTRACT

Annotation: This article analyzes modern methods of asset management of commercial banks and their practical significance. The essence of modern approaches such as asset-liability management (ALM), portfolio diversification, technological innovations, liquidity management, stress tests, and ESG-based management and their role in the activities of banks are deeply covered. Also, detailed information is provided on the application of each method and their advantages. The results of the study show that they expand the possibilities for banks to increase financial stability, reduce risks, and enhance competitiveness.

KEYWORDS

Commercial banks, asset management, ALM, diversification, technological innovation, liquidity, stress testing, ESG criteria, financial stability, risk management.

Introduction

Asset management of commercial banks is one of the most important aspects of the modern financial system. In the context of globalization processes, the rapid development of digital technologies and the complexity of financial markets, banks are forced to use new approaches and methods to effectively manage their assets. Bank assets are the bank's income-generating resources, and their proper management is important not only for the stable operation of the bank, but also for the strength of the entire financial system. In modern conditions, traditional asset management methods are losing their effectiveness and new, innovative solutions are required.

The banking system of Uzbekistan is also not left behind global trends. The economic reforms being implemented in our country, in particular, fundamental changes in the banking and financial sector, require commercial banks to introduce an asset management system that meets international standards. In the context of the liberalization of the national exchange rate, changes in the inflation rate, the emergence of new financial instruments and an intensified competitive environment, banks are forced to look for ways to manage their assets more effectively. New regulatory requirements of the Central Bank of the Republic of Uzbekistan, the gradual introduction of Basel III standards also require commercial banks to use modern methods in asset management.

The process of digital transformation is leading to a paradigm shift in bank asset management. While traditional methods relied mainly on historical data and expert assessments, modern approaches are

based on real-time data analysis, forecasting models and automated decision-making systems. Machine learning algorithms are being used to assess credit risk, optimize portfolios and predict market trends. Cloud technologies are expanding the capabilities of data storage and processing. These changes not only increase operational efficiency, but also allow the creation of new business models.

The evolution of risk management is central to the development of modern methods of managing bank assets. In addition to traditional credit, market and operational risks, modern banks are faced with new threats such as cybersecurity risks, risks associated with climate change, reputational risks. Advanced risk assessment methods such as stress tests, scenario analysis, Monte Carlo simulations are widely used. Integrated risk management systems allow for a comprehensive assessment and management of all types of risks. These approaches allow banks to increase their preparedness for unexpected situations and improve the quality of assets.

The changing regulatory environment requires new approaches to managing bank assets. The increased requirements for capital adequacy, liquidity and leverage under the Basel III agreement are fundamentally changing the activities of banks. Macroprudential policy tools, such as countercyclical capital buffers and additional requirements for systemically important banks, require a strategic approach to asset management. ESG (Environmental, Social, Governance) criteria are also becoming an important factor in asset valuation and management. Asset Quality Reviews (AQR) and stress tests conducted by central banks require banks to constantly monitor and optimize their asset portfolios.

The emergence of financial technologies (FinTech) and non-traditional competitors is putting serious pressure on the traditional banking model. The entry of peer-to-peer lending platforms, digital currencies, neo-banks and BigTech companies into the financial services market is forcing commercial banks to reconsider their business models. In this context, improving the efficiency of asset management is an important factor in maintaining competitiveness. The concept of open banking, the API economy and the ecosystem approach are creating new opportunities in bank asset management. Partnership models and platform strategies are expanding the concept of traditional assets.

Liquidity management is becoming an increasingly complex task in modern conditions. Real-time payment systems, instant money transfers, and the growth of transactions in digital channels lead to rapid changes in liquidity positions. Intraday liquidity management, dynamic hedging strategies, and optimization of liquidity buffers have become an integral part of modern ALM (Asset-Liability Management) systems. Artificial intelligence and forecasting models are being used to predict liquidity flows and maintain optimal liquidity levels. LCR (Liquidity Coverage Ratio) and NSFR (Net Stable Funding Ratio) are indicators

Literature Analysis

In the process of analyzing the literature on the topic, scientific research was conducted by several leading economists and experts from around the world on modern methods of managing assets of commercial banks. In particular, Bektemirov A., Omonov A.A., Khaydarov Z.Sh., Niyozov Z.D. in their studies “covered the theoretical, methodological and legal and regulatory foundations of asset and liability management in commercial banks. Modern management methods, strategic directions and methods of their implementation in practice”¹ were described in detail.

¹ Bektemirov A., Omonov A.A., Khaydarov Z.Sh., Niyozov Z.D. Textbook on the subject of “Management of assets and liabilities of commercial banks”. – Samarkand: SamISI, 2020. 240 pages

Solihjonov Akbarmirzo, & A.A.Qosimov in their research believe that “Asset and liability management is not only an important component of the bank's internal policy, but also the main tool for adapting to the external financial environment. The main problem in asset-liability management is the imbalance in terms of time and volume. In this case, the fact that liabilities are short-term and assets are long-term creates liquidity problems”².

Tursunov, F. M., & Narzulloyev, J. N. believe that “properly calculating the value of bank assets and planning the income from them can lead to the efficiency of bank operations, while incorrect calculation of the value of assets and their placement can create difficulties in the financial condition of the bank”³.

Khojibekova Z.Sh. believes in her research that “Effective asset management allows banks to receive higher returns with a lower level of risk, and as a result contributes to their overall financial health and stability. As is known, in ensuring the financial stability of commercial banks, an important consideration is to ensure a reasonable level of the ratio between highly liquid assets and high-yielding assets”⁴.

Aswath Damodaran in his research believes that “the balance between risk and value creation is crucial in managing bank assets. Modern banks should create value by assessing and managing risk, not avoiding it. Strategic risk-taking is not only an opportunity for banks, but also a prerequisite for remaining competitive”⁵.

Viral Acharya in his research believes that “the COVID-19 pandemic has shown that it is vital to consider stress scenarios and tail risks in managing bank assets. Banks should prepare for extreme events, not for ‘normal’ conditions. Systemic risk is not an individual bank problem, but a matter of the stability of the entire financial system”⁶.

Markus Brunnermeier believes in his research that “The emergence of digital currencies and DeFi (Decentralized Finance) is fundamentally changing the paradigm of traditional bank asset management. Banks now need to be prepared to work not only with traditional assets, but also with tokenized assets and smart contracts. This creates ‘The Resilience Imperative’ - the resilience imperative”⁷.

Hyun Song Shin believes in his research that “Global financial cycles and dollar dominance require new approaches to bank asset management. An integrated approach is needed to manage cross-border capital flows and exchange rate risks. In the context of geopolitical fragmentation, banks need to be

² Solihjonov Akbarmirzo, & A.A.Qosimov. (2025). Improving methods of managing assets and liabilities of commercial banks. *Modern Education and Development*, 25(5), 319–323. Retrieved from <https://inlibrary.uz/index.php/mead/article/view/87028>

³ Tursunov, F. M., & Narzulloyev, J. N. o’o’li. (2023). Structural structure of assets of commercial banks and the need for their management. *scholar*, 1(35), 102–108. Retrieved from <https://researchedu.org/index.php/openscholar/article/view/5825>

⁴ Khojibekova Z.Sh. “Assets of commercial banks "Improving the efficiency of" Educational Innovation and Integration Issue 22_6th Edition_June -2024

⁵ Damodaran, A. (2022). "Strategic Risk Taking in Banking: A Value Creation Perspective." *Journal of Applied Corporate Finance*, 34(2), 22-35. <https://pages.stern.nyu.edu/~adamodar/pdfiles/papers/strategicrisk2022.pdf>

⁶ Acharya, V. V., & Steffen, S. (2023). "The Risk of Being a Fallen Angel and the Corporate Dash for Cash in the Midst of COVID." *The Review of Financial Studies*, 36(3), 717-763. <https://academic.oup.com/rfs/article/36/3/717/6889456>

⁷ Brunnermeier, M. K. (2024). "The Digitalization of Money and Banking: From Traditional Assets to Digital Finance." *Annual Review of Financial Economics*, 16, 89-114. <https://scholar.princeton.edu/markus/publications/digitalization-money-banking-2024>

prepared for multiple equilibria”⁸.

Robert Engle believes in his research that “Climate risk has created a new dimension in bank asset management. Traditional risk models cannot properly assess climate-related shocks. Banks need to manage climate beta by monitoring climate news flow in real-time and using dynamic hedging strategies”⁹.

Research Methodology

In covering this topic, the methods of abstract-logical thinking, generalization, comparison, analysis and synthesis, and systematic analysis were used. Financial and economic indicators of the industry were analyzed and compared, and conclusions and proposals were developed based on the results obtained from the study.

Analysis and Discussion of Results

The importance of modern asset management methods in the activities of commercial banks is manifested, first of all, in ensuring financial stability. In a market economy, banks are exposed to various financial risks, therefore, proper and effective asset management serves to increase their long-term competitiveness. With the help of modern management methods, banks quickly adapt to market changes and keep risks to a minimum.

Secondly, asset management based on digital technologies and artificial intelligence improves the quality of customer service. Advanced technologies such as credit scoring, data analytics, and scenario modeling provide banks with speed and accuracy in decision-making. This makes banks' loan portfolios healthier, reduces losses, and helps strengthen relationships with customers.

Thirdly, systematic approaches such as asset and liability management (ALM) allow for effective management of liquidity and interest rate risks. Through these methods, banks maintain the ability to meet their obligations on time and ensure a constant flow of funds in the lending process. As a result, financial stability increases and the confidence of investors and depositors is strengthened.

Fourth, the possibility of reducing risks increases through diversification strategies. Based on modern portfolio theory, banks distribute investments across different geographical regions, industries and financial instruments. This allows banks to strengthen their financial position even in the event of economic downturns or sectoral crises.

Fifth, banks are focusing on asset management based on ESG (Environmental, Social and Corporate Governance) criteria to achieve sustainable development. This not only increases social responsibility, but also improves the image of the bank in international financial markets. As a result, banks achieve long-term and reliable financial results, adhering to the principles of environmental and social sustainability.

⁸ Shin, H. S. (2023). "Global Banking amid Geopolitical Tensions: Managing Cross-Border Assets in a Fragmented World." *BIS Working Papers*, No. 1089. <https://www.bis.org/publ/work1089.pdf>

⁹ Engle, R., Giglio, S., Kelly, B., Lee, H., & Stroebel, J. (2023). "Hedging Climate Change News." *The Review of Financial Studies*, 36(3), 1306-1351. <https://academic.oup.com/rfs/article/36/3/1306/6324617>

Table 1 Modern methods of asset management of commercial banks

№	Modern approach	Description	Importance
1	Asset and liability management (ALM)	Ensuring the compatibility of asset and liability terms and interest rates.	Increasing financial stability and reducing interest rate risk.
2	Portfolio diversification	Allocation of assets across sectors, regions and financial instruments.	Reducing risks and stabilizing income.
3	Technological innovations	Management through Big Data, artificial intelligence and blockchain technologies.	Making quick and accurate decisions, providing quality customer service.
4	Liquidity management	Formation of a portfolio of assets that can be converted into cash in the short term.	Maintaining solvency and reducing liquidity risks.
5	Stress testing and scenario analysis	Scenario analysis to assess resilience to macroeconomic shocks.	Increasing the stability of the bank and the ability to take rapid measures in crisis situations.
6	ESG-based management	Asset management in accordance with environmental, social and governance principles.	Ensuring sustainable development and improving the image of the bank.

Commercial banks widely use asset and liability management (ALM) to ensure a balance between their assets and liabilities. In this method, banks adjust the maturity, interest rates, and liquidity characteristics of assets and liabilities. Interest rate and liquidity risks are controlled using modern tools such as GAP analysis and duration analysis. The ALM method allows the bank to adapt to changing economic conditions and maintain stability even in stressful situations. The main advantage is that the bank constantly monitors its financial condition, reduces risks, and optimizes profit margins.

Diversification is one of the most important risk management tools of commercial banks. Banks distribute their loan portfolios, investment assets, and other financial instruments across different sectors, geographic regions, and financial instruments. This method ensures that factors such as macroeconomic shocks, industry crises, or political instability have a lesser impact on the bank's operations. Diversification reduces risk and increases sources of income, stabilizes the bank's cash flows, and stimulates long-term growth.

In recent years, commercial banks have begun to widely use technological innovations in asset management, in particular artificial intelligence, big data, and blockchain technologies. The use of AI models for credit scoring, risk prediction, and investment portfolio optimization allows banks to make quick and informed decisions. Blockchain technology, in turn, increases the transparency of asset movements and transactions. These innovations not only reduce operating costs, but also allow for highly personalized services to customers, which increases the bank's competitiveness.

One of the main problems that banks face every day is the proper management of liquidity needs. Based on indicators such as LCR (Liquidity Coverage Ratio) and NSFR (Net Stable Funding Ratio), banks maintain sufficient liquid assets to cover short- and long-term financial obligations. By forming liquidity portfolios, banks are able to respond to unexpected customer demands and maintain solvency. This approach allows the bank to withstand changes in the financial system and increase customer confidence.

Stress testing and scenario analysis allow banks to assess their assets and liabilities under various uncertain economic conditions. With the help of these analyses, banks prepare for situations such as changes in interest rates, sharp fluctuations in exchange rates, and financial crises. Based on the results of stress tests, the bank can strengthen its risk management strategy and increase capital reserves. This method allows banks to identify risks in advance and take prompt action in a crisis.

Modern banks are increasingly paying attention to pursuing an investment policy based on environmental, social, and governance (ESG) principles. By investing in "green" bonds and social projects, banks not only receive financial benefits, but also achieve positive social and ecological results. ESG criteria strengthen the bank's social responsibility, increase its brand value, and attract the attention of foreign investors. As a result, the bank will not only become economically stable, but also strengthen its reputation in the eyes of society.

Modern methods of asset management for commercial banks play an important role in financial stability, risk reduction and competitiveness. Through ALM, diversification and technological innovations, banks adapt to changing market conditions and expand their sources of income. Liquidity management and stress tests protect banks from unexpected financial shocks. Management based on ESG criteria not only increases the bank's social responsibility, but also its credibility in the international arena. Thus, the use of modern asset management methods is becoming a prerequisite for the long-term success and development of banks.

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