

## ANALYZING THE PROFITABILITY STRUCTURE OF COMMERCIAL BANKS' ASSET PORTFOLIOS: A STRUCTURAL AND TEMPORAL ASSESSMENT

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### **Abstract**

This article attempts a comprehensive analysis of the profitability structure within the asset portfolios of commercial banks. As a fundamental indicator of the operational efficiency of banking institutions, the profitability ratio—its temporal dynamics and influence across structural asset components—is rigorously examined. During the analysis, the principal elements constituting the balance sheet assets of commercial banks (including cash assets, loans, investments, tangible assets, and others) are evaluated from a profitability perspective to assess their variability, performance indicators, and economic significance. Based on statistical data, a dynamic analysis is conducted, leading to substantive conclusions concerning the financial sustainability and efficiency of commercial banking operations.

**Keywords:** Commercial banks, asset portfolio, profitability, structure, dynamic analysis, financial efficiency, asset components, bank assets, economic analysis.

### **Introduction**

Under market economy conditions, the banking system is considered a fundamental financial pillar of the national economy. In particular, through their operations, commercial banks play a direct role in economic growth by efficiently allocating financial resources, financing investment processes, and lending to the real sector. Therefore, analyzing the profitability of the asset portfolios of commercial banks is of crucial importance in evaluating their financial stability and operational efficiency.

Currently, the structure of assets, the degree of their utilization, and profitability indicators in banking operations are highly influenced by a changing economic environment. In particular, inflationary pressures, changes in monetary policy, and the expansion of digital finance technologies require a re-evaluation of asset management approaches. In this context, determining the profitability levels of key asset components—especially loans, investments, and liquid assets—and analyzing their structural and temporal changes provide a strategic basis for decision-making in commercial banks.

This research focuses on examining the asset portfolio composition of commercial banks from the perspective of profitability, analyzing temporal changes, and assessing their impact on the financial stability of banks. Based on the findings, practical recommendations will be developed to enhance asset efficiency, optimize resource use, and strengthen bank profitability.

### **Literature Review**

The issue of analyzing the profitability of commercial banks' asset portfolios remains a highly relevant topic even in developed banking systems. In recent years, numerous economists have conducted empirical research in this direction.

According to international literature, Mishra and Zhao (2023), in their study on the banking sectors of the United States and Canada, found a direct correlation between changes in inflation rates, interest rates, and the profitability of credit portfolios. Their analysis revealed that as the share of high-interest-bearing assets increased, the overall profitability of banks improved.

Becker and Stren (2023), through their research in Germany, assessed how asset diversification and revaluation affect profitability indicators. They concluded that a structurally balanced asset portfolio helps stabilize bank income, especially in volatile economic conditions.

Tan and Floros (2024), studying banks in the Asia-Pacific region, emphasized the significance of asset liquidity and the quality of loan portfolios as the main drivers of profitability.

In Uzbekistan, recent research has increasingly focused on the practical aspects of this topic. For instance, Xoliqulov and Ergashev (2023) analyzed the role of investment portfolio structure in determining the profitability of commercial banks' assets, emphasizing the need to evaluate profitability by asset segmentation.

Nosirova M. (2023), in her article, analyzed the quality of commercial banks' credit portfolios, reclassification mechanisms, and their effects on profitability. She highlighted the importance of accurate risk assessment and control to improve asset profitability in Uzbek banks.

Another significant study by Karimov A. (2024) demonstrated a statistical correlation between the share of illiquid assets on commercial bank balance sheets and overall profitability. His findings support the idea that diversification of bank resources can effectively increase asset profitability.

### **Research Methodology**

This study employs economic-statistical and analytical approaches to evaluate the profitability structure of commercial banks' asset portfolios. Structural analysis, trend analysis, and correlation techniques were used to assess the influence of various asset types on overall profitability. Data were processed using Microsoft Excel, with visualizations provided through charts and diagrams. The key criteria used include asset segments, net interest margin, and overall profitability indicators.

### Analysis and Results

Different components of bank assets—such as loans, investments, cash, and other liquid instruments—exhibit varying degrees of profitability. The profitability of these assets is closely linked to the bank's asset management strategy, interest rate policy, financial market conditions, and broader macroeconomic policies. Hence, examining the profitability and its dynamics across commercial bank assets, along with analyzing the trends in these indicators, holds significant theoretical and practical value for assessing internal operational efficiency.

Moreover, identifying the correlation between asset composition and profitability enables commercial banks to determine the most efficient allocation of financial resources, to develop appropriate asset diversification strategies, and to apply optimal risk management approaches. Particularly under current global financial instability, maintaining regular monitoring over the quality and profitability of bank assets becomes a strategic imperative to ensure macroeconomic stability.

The primary components of commercial bank assets include loans, investments, and cash reserves. Loans represent the principal source of interest income and exert the most substantial influence on the overall profitability of banks. Investments—comprising government bonds and corporate securities—typically yield relatively stable returns. Cash reserves, on the other hand, play a critical role in ensuring liquidity and fulfilling short-term obligations. Therefore, the composition of a bank's asset portfolio serves as a vital indicator of its financial performance and sustainability.

*Table 1*

### Structure of Commercial Banks' Assets in the Republic of Uzbekistan (2020–2024)

Asset Item	01.01.2021	01.01.2022	01.01.2023	01.01.2024	01.01.2025
Cash and other payment documents	9,734.6	10,686.3	19,309.1	20,201.8	25,154.3

<b>Funds at the Central Bank</b>	18,851.4	31,514.6	36,592.1	33,228.0	34,511.8
<b>Funds in other banks – resident institutions</b>	13,146.0	13,302.5	17,423.7	24,368.5	29,175.9
<b>Funds in other banks – non-resident institutions</b>	21,700.5	25,074.0	37,688.3	28,862.5	36,039.3
<b>Investments and other securities</b>	9,447.7	19,633.7	31,507.9	32,548.3	59,613.9
<b>Customer liabilities on financial instruments</b>	1,575.9	1,251.0	1,606.3	3,334.0	432.4
<b>Net loan allocations</b>	270,212.8	316,382.4	378,909.2	457,847.1	514,692.6
<b>Net fixed assets</b>	8,314.2	11,031.9	14,242.9	19,874.9	24,955.8
<b>Accrued interest on assets</b>	7,881.6	9,387.1	12,295.3	19,249.8	23,835.8
<b>Other proprietary assets of the bank</b>	1,131.2	1,339.4	3,065.5	4,483.5	6,558.9
<b>Other assets</b>	4,125.1	5,319.6	4,105.8	8,158.7	14,359.5
<b>Total assets</b>	<b>366,121.1</b>	<b>444,922.5</b>	<b>556,746.3</b>	<b>652,157.1</b>	<b>769,330.4</b>

During the period of 2020–2024, the total volume of assets held by commercial banks in Uzbekistan demonstrated steady growth, rising from UZS 366.1 trillion in early 2021 to UZS 769.3 trillion by the beginning of 2025.

This increase is primarily attributed to the expansion of financial instruments and loan placements, indicating the ongoing growth and deepening of the banking sector.

**Loan placements constituted the dominant component of bank assets, surpassing a 90% increase to reach UZS 514.7 trillion.**

Meanwhile, the segment of investments and securities experienced more than a sixfold rise, progressively occupying a more significant share within the overall asset structure. Additionally, the rise in accrued interest, foreign bank deposits, and fixed assets indicates an enhancement in banks' profitability and infrastructure capacity.

These dynamics confirm that the structural composition of bank assets in Uzbekistan is undergoing a stable process of improvement, characterized by increasing diversification and the formation of a more profitable and balanced asset portfolio.

**Table 2.**

**Key Indicators of Commercial Banks in the Republic of Uzbekistan (by Sector, 2020–2024) (in billion UZS)**

Date	Total Assets			Total Loans		
	Total	State-owned Banks	Other Banks	Total	State-owned Banks	Other Banks
<b>01.01.2021</b>	366,121.1	310,729.5	55,391.6	276,974.8	244,483.9	32,490.9
<b>01.01.2022</b>	444,922.5	362,421.9	82,500.6	326,385.6	280,073.6	46,311.9
<b>01.01.2023</b>	556,746.3	435,135.6	121,610.7	390,048.9	324,680.8	65,368.2
<b>01.01.2024</b>	652,157.1	441,777.2	210,379.9	471,405.5	333,298.1	138,107.4
<b>01.01.2025</b>	769,330.4	503,187.0	266,143.4	533,121.2	366,730.5	166,390.7

During the period 2020–2024, the total assets of commercial banks in Uzbekistan more than doubled, increasing from UZS 366.1 trillion to UZS 769.3 trillion. This growth was primarily driven by state-owned banks, whose assets rose from UZS 310.7 trillion to UZS 503.2 trillion (+62%). At the same time, the assets of “other banks” — comprising private and foreign-capital institutions — grew nearly fivefold, from UZS 55.4 trillion to UZS 266.1 trillion.

A similarly positive trend was observed in the loan portfolio. The total volume of loan allocations, which amounted to UZS 276.9 trillion in 2021, reached UZS 533.1 trillion by the beginning of 2025. Notably, the loan portfolio of “other banks” increased fivefold — from UZS 32.5 trillion to UZS 166.4 trillion — reflecting the intensification of competition in the financial market and the rising significance of non-state banks.

Overall, although state-owned banks still dominate a significant share of the financial sector, the relatively faster growth of private banking institutions indicates an emerging environment of diversification and competition. This trend is expected to contribute to enhanced financial stability and improved quality of banking services in the long run.

**Table 3.**

**Loans Issued by Commercial Banks of the Republic of Uzbekistan by Sectors (2020–2024), in billion UZS**

Year	Total	Industry	Agriculture	Construction	Trade and Catering	Transport and Communications	Individuals
2020	127,207.5	41,603.0	18,772.2	4,939.5	18,262.1	4,366.4	28,466.6
2021	166,673.5	51,335.6	21,133.2	6,745.4	26,849.6	6,309.6	40,520.9
2022	203,126.6	60,198.7	15,963.9	7,828.5	30,303.7	7,217.8	65,288.5
2023	251,401.5	66,913.9	14,602.5	6,826.8	30,511.1	9,594.3	100,234.8
2024	287,181.5	75,719.8	20,326.0	8,096.4	38,345.8	7,156.2	104,675.3

During the period 2020–2024, the total volume of loans issued by commercial banks in Uzbekistan increased from 127.2 trillion UZS to 287.2 trillion UZS, representing a growth of approximately 2.3 times. This reflects the expanding role of the banking sector as a financial intermediary within the national economy.

The majority of loans were traditionally directed toward the industrial sector, where lending increased from 41.6 trillion to 75.7 trillion UZS. The fastest-growing segment was loans to individuals, which rose 3.7 times to reach 104.7 trillion UZS, indicating a significant surge in retail financing.

Steady growth in lending was also observed across the agriculture, trade, construction, and transportation sectors, confirming the ongoing and consistent financial support provided to the real sectors of the economy.

**Table 4.**

**Revenues and Expenses of Commercial Banks of the Republic of Uzbekistan for 2020–2024 (from the beginning of the year)**

Year	Interest Income (bln UZS)	Interest Expenses (bln UZS)	Non-interest Income (bln UZS)	Non-interest Expenses (bln UZS)	Operating Expenses (bln UZS)	Net Non-interest Income (Profit/Loss) (bln UZS)
2020	37,066.9	23,018.5	11,801.4	3,516.4	8,145.5	139.5
2021	47,391.6	30,796.2	17,250.9	4,944.3	10,997.8	1,308.8

<b>2022</b>	61,727.8	37,566.1	33,182.3	11,811.9	14,876.5	6,493.9
<b>2023</b>	86,679.1	57,683.3	42,053.7	13,272.8	19,563.3	9,217.6
<b>2024</b>	111,866.4	77,674.6	55,120.0	22,619.3	23,715.4	8,785.3

Between 2020 and 2024, the financial indicators of commercial banks in Uzbekistan experienced significant growth. Interest income increased from UZS 37.1 trillion to UZS 111.9 trillion, demonstrating more than a threefold rise. This indicates both the expansion of the credit portfolio and improved efficiency in interest rate management.

Although interest expenses also grew proportionally—from UZS 23 trillion to UZS 77.7 trillion—the profit margin remained relatively stable when compared to income. Notably, non-interest income surged sharply beginning in 2022, reaching UZS 55.1 trillion by 2024. This reflects the growing diversification of banking services and the increased activity in fee-based operations.

Non-interest and operational expenses also gradually increased, which can be attributed to the expansion of banking activities and the rising costs associated with technological development. Net non-interest income rose from UZS 139.5 billion in 2020 to UZS 8.8 trillion in 2024, underscoring a strengthening in the financial stability of the banking sector.

### Conclusion

Between 2020 and 2024, the total assets, credit volume, and financial performance of commercial banks in the Republic of Uzbekistan demonstrated consistent and proportional growth. This trend is a direct outcome of strategic reforms in the financial sector and the country's ongoing efforts toward liberalizing its banking system.

Firstly, the twofold increase in the total volume of bank assets—particularly the rapid expansion of credit placements and investment portfolios—reflects more efficient use of bank resources. The volume of loans reached UZS 514 trillion, up from UZS 270 trillion, forming the foundation of banks' income base.

Secondly, the internal competitive environment within the banking sector has intensified, with a marked expansion of privately owned and foreign-capitalized financial institutions. This development promotes greater diversification and improved service quality across the sector.

Thirdly, an analysis of loans by industry reveals that the industrial sector and the retail segment (individual borrowers) dominate in volume. Notably, loans to individuals increased 3.7 times, signaling the growing popularity and penetration of retail financial services.



Fourthly, the year-on-year growth in both interest and non-interest income, along with a steady trend in net non-interest profit, affirms the effectiveness of banks' business models and their operational stability. In particular, interest income rose from UZS 37 trillion in 2020 to UZS 112 trillion in 2024, highlighting sustained bank profitability.

In general, during this period, Uzbekistan's banking system has experienced rapid development, approaching the performance benchmarks of advanced financial systems. The changes in asset composition, sectoral balance in lending, and the dynamics of income and profit underscore effective bank management practices and adaptive responses to macroeconomic shifts. This will serve as a critical foundation for ensuring profitability and financial stability in the coming years.

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