

**IMPROVING THE EVALUATION OF RETAIL LENDING PRACTICES
EFFICIENCY IN COMMERCIAL BANKS OF THE REPUBLIC OF UZBEKISTAN**

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Abstract: *The development of competition in the market of retail credit services of the Republic of Uzbekistan requires the improvement of lending practices of individuals. In commercial banks, based on the needs of individuals, it is necessary to make quick decisions in the offer of retail credit products and in the lending process. In the period before the global financial and economic crisis that occurred in 2007, the active spread of retail banking services was motivated by the decrease in profitability in other segments of the banking market and the existence of the retail credit services market for individuals that was not sufficiently absorbed by competitors. It is for this reason that in the conditions of the unstable development of the financial market, banks face the issue of managing the quality of the portfolios formed and fundamentally changing the retail lending policy.*

The increase in the share of overdue debts of individuals in commercial banks, the requirements for the adequacy of the bank's own capital and reserves for covering risks on retail loans are increasing. It is very relevant to study the theoretical approaches of retail lending in banks, to analyze the processes of development of retail credit products, to determine the risk appetite and to develop directions for effective management of credit risks.

In order to evaluate the effect of efficiency factors on the retail credit portfolio of commercial banks, the exchange rate, official and interbank interest rates, GDP deflator should be analyzed as exogenous factors. As a result of the analysis of changes in these indicators, it is possible to assess the degree of influence of the level of credit risks on the quality indicators of the retail credit portfolio.

In this article, the practices of retail lending to individuals and the factors affecting it are statistically analyzed on the activities of ATB "Uzsanoatqurilish" and JSC "Aloqabank". Factors affecting the retail lending activity of "Uzsanoatkurilish" ATB and JSC "Aloqabank" were taken as variables, such as income of the population, inflation, Central Bank refinancing rate, bank deposits, weighted average interest rates on deposits. Statistical analysis Python programming language pandas, numpy, seaborn, StatModels, scipy.stats. implemented using libraries such as matplotlib, statsmodels.graphics.tsaplots, scipy.stats.

Also, according to the results of the statistical analysis, appropriate scientific proposals and recommendations were developed regarding the performance indicators of retail lending activities of banks.

Keywords: *retail credit, deposit, refinancing rate, borrower's purchasing power, credit risk, inflation, consumer price index, household income, mortgage loan, NPL, GDP, interest margin.*

INTRODUCTION

The analysis of credit efficiency in commercial banks can be conducted using various approaches and methods. Depending on the perspective taken toward credit efficiency, it is possible to evaluate and assess its effectiveness. Specifically:

1. Evaluating the effectiveness of the bank’s credit strategies.
2. Identifying issues within the credit portfolio and taking necessary measures.
3. Determining which credit products are most significant to the bank.
4. Assessing the impact of changes in interest rates on credit operations.

The growing intensity of competition in the banking services market is leading to a reduction in the revenues of commercial banks. In particular, payment services being handled by mobile operators and payment organizations, along with the rising number of producers and distributors acting as competitors to banks, is negatively affecting banks' efficiency indicators. Furthermore, the establishment of banks with various ownership structures in Uzbekistan and the expansion of digital technologies and online lending practices are pushing banks to compete for retail credit market customers.

In addition to increasing the volume of credit provided to the population and entrepreneurs and securing a stable position in the market, commercial banks face another critical issue: ensuring the timely repayment of loans issued to clients and reducing the proportion of non-performing loans. This requires not only sustaining high growth in retail lending but also effectively managing credit risks, thereby improving the quality of the credit portfolio.

Let’s examine the analytical aspects of the efficiency indicators of retail lending activities and their evaluation using the example of commercial banks.

MATERIAL AND METHOD

By reviewing scientific research and investigations into the efficiency of commercial banks’ lending activities, we can group the studies into the following directions:

1. Efficiency indicators of banks’ credit operations from the perspective of interest income generation;
2. Effective management of credit portfolio quality and credit risks, focusing on non-performing loans;
3. Fulfillment of a bank’s lending strategies and business-plan targets.

From the above, it is clear that banks’ lending operations have been interpreted and studied in various ways.

J. Isakov (2015) concluded that “the proper and rational organization of the lending process in commercial banks positively affects credit efficiency, drives the growth of bank income, and provides opportunities to attract additional resources.” [4]

A. Azlarova (2018) argued that “the ultimate goal of managing a commercial bank’s credit portfolio is to achieve optimal levels of risk, profitability, and liquidity indicators for that portfolio.” [1]

In **M. Khayitova’s research**, the transformation of banks was analyzed with respect to credit efficiency, primarily through bank ranking indicators and analysis of non-performing loans. According to the author, “the quality of strategies to improve credit efficiency in

commercial banks depends entirely on the qualifications and professional competence of the bank staff actively involved in their implementation.” [8]

A. B. Kalandarov maintains that reducing non-performing loans in commercial banks enables more efficient management of the credit portfolio. [6]

Building on the perspectives and literature of these authors and researchers, we offer our own view on evaluating banks’ credit efficiency. **Credit-efficiency evaluation** is the systematic analysis of a bank’s credit portfolio aimed at improving loan quality, ensuring higher income, and identifying directions for lending improvements.

Analyzing lending activities in commercial banks helps to identify potential problems related to credit and to decide whether to continue lending to a borrower, require collateral, or take other measures. It also enables continuous monitoring of the bank’s mission, strategy, and business-plan targets.

This study employs grouping, comparative and structural analysis, induction and deduction, analysis and synthesis, and other scientific cognition methods. Additionally, using an OLS regression model, we analyze practical data on retail lending activities of commercial banks operating in the Republic of Uzbekistan, assessing the reliability of factors affecting retail lending and their interrelationships.

RESULTS

The dynamics of growth in retail lending services to the population by commercial banks have outpaced both previous years and the overall growth rate of total credit placements. In recent years, the activity of newly established private banks in the retail services market has further increased.

Table 1

Changes in the Outstanding Balance of Loans to Individuals by Commercial Banks of the Republic of Uzbekista
(billion soums)

| Indicator | 01.01.2020 | 01.01.2021 | 01.01.2022 | 01.01.23 |
|--|-------------------|-------------------|-------------------|-----------------|
| Outstanding balance of loans to individuals | 39 934 | 54 888 | 69 496 | 100 949 |
| Mortgage loans | 20 326 | 28 301 | 35 946 | 46 460 |
| Consumer loans | 3 177 | 5 737 | 9 429 | 25 234 |
| Micro-loans | 5 492 | 12 237 | 12 795 | 14 651 |
| Micro-loans for the business activities of individuals | 6 467 | 8 613 | 11 326 | 14 567 |
| Other loans | 4 472 | 0 | 0 | 36 |
| Total loan placements | 211 581 | 276 975 | 326 386 | 390 049 |
| Share of retail loans in total loan placements, % | 19% | 20% | 21% | 26% |

The terms of loans provided to individuals by commercial banks, their increasing accessibility, and the reduction of various barriers in the lending process have contributed to the growth in the volume of lending. This is confirmed by the fact that the outstanding

balance of loans issued to individuals by commercial banks in 2022 amounted to 100,949 billion soums, which is 1.45 times or 31,453 billion soums more than in 2021 (69,496 billion soums).

In analyzing the efficiency indicators of retail banking activities, it is important to assess the average weighted interest rates on loans attracted from and issued to individuals, as well as the bank margin.

Table 2

Dynamics of the bank margin on loans attracted from and issued to individuals by commercial banks

| Indicators | 31.12.18 | 31.12.19 | 31.12.20 | 31.12.21 | 31.12.22 | Changes |
|--|----------|----------|----------|----------|----------|---------|
| JSC "Uzsanoatqurilish" | | | | | | |
| Average interest rate on retail loans | 15,9% | 16,6% | 14,7% | 13,5% | 16,3% | 0,4% |
| Average interest rate on retail deposits | 7,7% | 4,6% | 3,4% | 7,5% | 13,2% | 5,5% |
| Bank margin | 8,2% | 11,9% | 11,3% | 6,0% | 3,1% | -5,1% |
| JSC "Aloqabank" | | | | | | |
| Average interest rate on retail loans | 19,0% | 20,2% | 19,7% | 22,4% | 22,9% | 3,9% |
| Average interest rate on retail deposits | 5,8% | 6,7% | 8,4% | 9,3% | 13,0% | 7,1% |
| Банк маржаси | 13,2% | 13,5% | 11,3% | 13,2% | 9,9% | -3,3% |

Commercial banks in the Republic of Uzbekistan are taking measures to attract clients by increasing deposit interest rates and decreasing lending rates amid growing competition in the retail credit services market and efforts to mobilize financial resources. According to analytical data, Uzsanoatqurilishbank achieved a high-interest margin of 11.9% by the end of 2019. However, a declining trend has been observed, with the margin dropping to 3.1% as of January 1, 2023. Aloqabank’s interest margin has been unstable, reaching its peak of 13.5% at the end of 2019, but overall, the analysis period indicates a downward trend.

Commercial banks are attracting deposits at high interest rates. Despite the fact that today commercial banks offer deposits for individuals in the national currency at an annual rate of up to 24%, the average interest rate on deposits attracted from individuals remained low at 13% in 2022. This can be attributed to the funds held on population bank cards and in demand deposits.

Assessing the efficiency of retail lending by major commercial banks in the Republic of Uzbekistan and analyzing the influencing factors is of significant importance. In the course of this research, we conduct a statistical analysis of the retail loan portfolios and their determining factors for Uzsanoatqurilishbank JSCB and Aloqabank JSCB.

Based on this statistical analysis, we construct a functional model of the influencing factors as follows:

$$F(\mathbf{RL_AVR}) = X(\mathbf{RL, RD, BA, R_per_income, PR, IR, PINCOME})$$

The following variables were selected for statistical analysis:

Y – **RL_AVR** – average weighted interest rate on retail loans;

X1 – **RL** – retail loan portfolio balance;

- X2 – RD** – balance of deposits attracted from individuals;
- X3 – BA** – bank’s net asset balance;
- X4 – R_per_income** – interest income received from retail loans;
- X5 – PR** – refinancing rate of the Central Bank of the Republic of Uzbekistan;
- X6 – IR** – inflation rate;
- X7 – PINCOME** – population income.

Picture 1

Correlation analysis of factors influencing the retail lending activity of Uz sanoatqurilishbank JSCB

| | RL_AVR | RL | RD | BA | R_per_income | PR | IR | PINCOME |
|--------------|--------|-------|-------|-------|--------------|------|-------|---------|
| RL_AVR | 1.00 | 0.56 | 0.43 | 0.45 | 0.54 | 0.79 | 0.38 | 0.44 |
| RL | 0.56 | 1.00 | 0.96 | 0.98 | 1.00 | 0.68 | -0.11 | 0.97 |
| RD | 0.43 | 0.96 | 1.00 | 0.97 | 0.95 | 0.60 | -0.16 | 0.98 |
| BA | 0.45 | 0.98 | 0.97 | 1.00 | 0.97 | 0.60 | -0.08 | 0.99 |
| R_per_income | 0.54 | 1.00 | 0.95 | 0.97 | 1.00 | 0.68 | -0.15 | 0.95 |
| PR | 0.79 | 0.68 | 0.60 | 0.60 | 0.68 | 1.00 | 0.26 | 0.55 |
| IR | 0.38 | -0.11 | -0.16 | -0.08 | -0.15 | 0.26 | 1.00 | -0.14 |
| PINCOME | 0.44 | 0.97 | 0.98 | 0.99 | 0.95 | 0.55 | -0.14 | 1.00 |

The degree of interrelation among factors affecting the retail lending activity of Uz sanoatqurilishbank JSCB for the period 2010–2022 has been assessed. The analysis reveals a strong correlation (0.79) between the average weighted interest rate on the bank’s retail loans and the refinancing rate set by the Central Bank. However, the correlation between the average weighted interest rate on retail loans and the interest income generated from these loans is relatively low (0.54), suggesting a high proportion of preferential loans within the bank’s portfolio. Moreover, the retail loan portfolio shows a strong correlation with individual deposits (0.96), the bank's total assets (0.98), and household income levels (0.97), indicating that these factors significantly influence the volume of retail lending.

The results of the statistical analysis indicate that the reliability level of the observed factors influencing Uz sanoatqurilishbank JSCB’s retail lending activity over the period 2010–2022 is high, with an R-squared value of 0.94. This suggests that the model explains 94% of the variability in the retail lending activity. In the statistical model, the (P>|t|) value indicates the predictive significance of each variable. The analysis shows that household income, inflation rate, and the bank’s total assets have the most significant impact on the retail lending operations of Uz sanoatqurilishbank JSCB.

between the average weighted interest rate on retail loans and the Central Bank's refinancing rate (0.77), as well as with interest income from retail loans (0.95).

Furthermore, the average weighted interest rate on retail loans shows strong correlation with the retail loan portfolio balance (0.92), individual deposits (0.81), bank

assets (0.94), and household income (0.91), indicating that these factors are closely linked to the dynamics of the bank's retail lending operations.

The results of statistical analysis show that the reliability level (0.99) of the factors observed in the retail lending activities of JSC "Aloqabank" from 2010 to 2022 was high. In the statistical model, the indicator ($P > |t|$) is calculated to determine the statistical predictive significance of each factor.

This indicator shows that the statistical significance of the observed indicators in JSC "Aloqabank"'s retail lending activities is high. In the analysis, the $P > |t|$ value of the factors taken as variables being below 0.05 indicates their high statistical significance.

Research has been conducted on improving the efficiency of lending activities by commercial banks in the Republic of Uzbekistan. The analysis primarily focused on the overall portfolio performance indicators of banks.

CONCLUSION

Research on the retail lending activities of banks in the Republic of Uzbekistan led to the following conclusions:

1. Commercial banks pursue aggressive credit policies to capture market share and attract more retail clients.
2. The number of retail credit products is increasing, and online lending is growing.
3. Lending efficiency is a key indicator of bank performance, requiring regular analysis and evaluation.
4. The interest margin, a critical retail lending indicator, shows a declining trend in JSC "Uzsanoatqurilish" and JSC "Aloqabank."
5. Statistical analysis confirms the high reliability of observed variables affecting retail lending in JSC "Uzsanoatqurilish" and JSC "Aloqabank."

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