

# MUHANDISLIK

## & IQTISODIYOT

№8

ijtimoiy-iqtisodiy, innovatsion texnik,  
fan va ta'limga oid ilmiy-amaliy jurnal

2025  
avgust



Milliy nashrlar

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08.00.00 - Iqtisodiyot fanlar



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# **muhandislik** **& iqtisodiyot**

ijtimoiy-iqtisodiy, innovatsion texnik,  
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# CORPORATE GOVERNANCE REFORMS AND FINANCIAL PERFORMANCE DYNAMICS: EVIDENCE FROM STATE-OWNED BANKS IN UZBEKISTAN

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**Abstract:** Uzbekistan's banking sector has been experiencing several structural changes these days and it requires a timely assessment of financial performance from recent reform initiatives. This research evaluates the effect of the 2020–2025 Banking Sector Reform Strategy on state-owned bank profitability, focusing on changes across key financial performance indicators like Return on Assets (ROA) and Return on Equity (ROE). Using a comparative research design employing panel data for a seven-year time span (2017–2023), T-tests are utilized to estimate pre- and post-reform performance. Findings reveal that reforms have yet to result in statistically significant increases in profitability, implying that their financial effect requires an even longer time frame before being realized. Contributions are made toward the current debate on banking reforms in emerging markets, and insights are gained for policy makers seeking to improve financial sector performance through structural reforms

**Keywords:** Uzbekistan, corporate governance reforms, profitability, ROA, ROE, emerging markets, T-test, state-owned banks.

**Annotatsiya:** O'zbekiston bank tizimi hozirda bir qator strukturaviy o'zgarishlarni boshdan kechirmoqda va bu jarayon so'nggi islohot tashabbuslarining moliyaviy natijalarini o'z vaqtida baholashni talab etadi. Ushbu tadqiqot 2020–2025-yillarga mo'ljallangan Bank tizimini isloh qilish strategiyasining davlat banklari rentabelligiga ta'sirini baholaydi va asosiy moliyaviy ko'rsatkichlar — aktivlarning rentabelligi (ROA) hamda kapitalning rentabelligi (ROE) o'zgarishlarini tahlil qiladi. Yetti yil (2017–2023) davr uchun panel ma'lumotlar asosida taqqoslash metodologiyasi qo'llanilib, islohotlardan oldin va keyingi davr natijalari T-test orqali baholandi. Natijalarga ko'ra, islohotlar rentabellikda statistik jihatdan sezilarli o'sishga olib kelmagan, bu esa ularning moliyaviy ta'siri yanada uzoqroq vaqt davomida namoyon bo'lishini anglatadi. Tadqiqot rivojlanayotgan bozorlarda bank islohtlari bo'yicha mavjud munozaralarga hissa qo'shadi va moliya sektori samaradorligini oshirishni maqsad qilgan siyosatchilar uchun foydali xulosalar beradi.

**Kalit so'zlar:** O'zbekiston, korporativ boshqaruv islohtlari, rentabellik, ROA, ROE, rivojlanayotgan bozorlar, T-test, davlat banklari.

**Аннотация:** Банковский сектор Узбекистана в настоящее время переживает ряд структурных преобразований, что требует своевременной оценки финансовых результатов недавних реформ. В данном исследовании оценивается влияние Стратегии реформирования банковского сектора на 2020–2025 годы на прибыльность государственных банков с акцентом на изменения ключевых показателей финансовой эффективности — рентабельности активов (ROA) и рентабельности капитала (ROE). Используя сравнительный дизайн исследования на основе панельных данных за семилетний период (2017–2023 гг.), применяются t-тесты для анализа показателей до и после реформ. Результаты показывают, что реформы пока не привели к статистически значимому росту прибыльности, что свидетельствует о необходимости более длительного временного горизонта для проявления их финансового эффекта. Работа вносит вклад в текущие дискуссии о банковских реформах на развивающихся рынках и дает полезные рекомендации для политиков, стремящихся повысить эффективность финансового сектора посредством структурных реформ.

**Ключевые слова:** Узбекистан, реформы корпоративного управления, прибыльность, ROA, ROE, развивающиеся рынки, t-тест, государственные банки.



## INTRODUCTION

The structural changes to Uzbekistan's banking industry have been a key part of the country's plan to modernize its economy as a whole. In 2017, the Uzbek government started substantial steps to open up the economy by letting the national currency float freely. This marked the start of a new financial age. After that, there were big changes to the law and institutions. For example, the "Law on Banks and Banking Activities" from 1996 was changed in 2019, and Presidential Decree No. 5296 was passed in January 2018 to further improve the function of the Central Bank.

In May 2020, the Presidential Resolution No. UP-5998 marked a major turning point. It started the 2020–2025 Banking Sector Reform Strategy. The plan would keep the government in charge of the financial industry while also increasing the amount of private bank assets from 18% to 60% of all bank assets by December 2025. Presidential Resolution No. PP-168 in March 2022 was meant to speed up this process of privatization even more. The reforms aim to do more than just make operations more efficient and competitive. They also want to make the financial sector more stable and give investors more trust. It is both timely and important to look at how these changes may affect the profitability of state-owned banks, since banks play such a big role in economic growth. As of 2023, state-owned banks in Uzbekistan made up over 65% of the country's GDP and held 69% of all bank assets (Dubko, 2023). Even if the reform plan is ambitious, it's still not obvious if these structural improvements have led to real financial gains for the banking sector. So, this study looks at how the 2020–2025 reform strategy affected two important profitability indicators: Return on Assets (ROA) and Return on Equity (ROE). This study adds to the policy conversation about how well market-oriented banking reforms work in transitional countries by offering real-world evidence.

Even after reforms, Uzbekistan's state banks still have problems with low transparency, inefficiency, and low profits. Key changes, like as privatization and restructuring, have not yet brought about the expected financial results, and the initial goals have not yet been reached (EBRD, 2023). Many studies have looked at different parts of banking reform in Uzbekistan, although most of them have concentrated on digitalization, privatization, or macroeconomics (Temirov, 2020; Umarkhojaeva, 2022; Mirpulatova, 2023). However, it is still unclear whether reforms have led to noticeable improvements in financial performance, given there has not yet been an empirical study that looks at this. This study's goal is to assist address this gap by finding out how the 2020–2025 Banking Sector Reform Strategy changed important measures of profitability, such as ROA and ROE, before and after it was passed.

The main goal of the research is to look at how state-owned banks reacted to Uzbekistan's Banking Sector Reform Strategy from 2020 to 2025 from a financial point of view. The study explores for answers about whether reform action has led to real gains in financial performance by analyzing changes in key profitability measures including Return on Assets (ROA) and Return on Equity (ROE) over a seven-year period (2017–2023).

Main Research Question is: What are the changes in key financial measures, such as Return on Assets (ROA) and Return on Equity (ROE), before and after the reform?

## REVIEW OF LITERATURE ON THE SUBJECT

Many emerging markets have implemented several reforms to their financial sectors to make them more open, competitive, and profitable. Many studies stress how important it is to look at the results of these kinds of changes, especially in state-owned banks that typically have trouble being efficient and making money (Musah & Adutwumwaa, 2021; Sarkar & Sarkar, 2018).

Globally, reforms have often concentrated on making governance better after events like the UK's Cadbury Report (Peter & Wong, 2023). However, the impacts of these changes on financial performance, especially in transitional countries, are still not well understood and are varied. According to Grove et al. (2011) and Affes and Jarboui (2023), the financial effects of governance improvements usually don't show up right away, but rather over time.

In Central Asia though, there isn't much real-world evidence to show that reforms have made profitability better. Most of the research done in Uzbekistan has focused on digital transformation or privatization (Temirov, 2020; Umarkhojaeva, 2022; Mirpulatova, 2023). Very little has been done to look at how state-owned banks did financially before and after changes. As these banks hold a significant share of the country's financial assets, understanding the effectiveness of the 2020–2025 Banking Sector Reform Strategy is essential to assess its real economic impact.

This study makes a valuable contribution to the existing body of literature by concentrating on the fluctuations in Return on Assets (ROA) and Return on Equity (ROE) during the seven-year period preceding the reform. It thereby assists in determining whether the intended financial benefits of the reforms are beginning to manifest.

## RESEARCH METHODOLOGY

This study uses panel data methods to look into how state banks in Uzbekistan reacted financially to the country’s Banking Sector Reform Strategy for 2020–2025. We looked at data from annual reports and accounts for each of the three largest state banks for seven years, from 2017 to 2023.

Because our sample size was small, we did a Fixed Effects regression to account for bank-specific characteristics that don’t change over time. A 1,000-replication bootstrapping was then used to make the results even more reliable. Subsequently, we added a dummy variable that separates the time before the reforms (0 for 2017–2019) from the time after the reforms (1 for 2020–2023). This let the study look at any possible effects of the reforms on profitability on their own.

Also, paired sample T-tests were conducted to see if there were any statistically significant variations in Return on Assets (ROA) and Return on Equity (ROE) before and after the reforms. Through this dual-method research design, it is feasible to acquire both cross-sectional and temporal analysis on profitability results connected with the timeline of reform.

The National Bank of Uzbekistan (NBU), SQB, and Asaka Bank are the three main state-owned banks in Uzbekistan that this study looks at. Their combined assets make up more than 60% of all state-owned bank assets, thus this sample is big enough to give us a good idea of how the industry is changing.

The study looks at the years 2017 to 2023 so that it can clearly compare how well the finances did before and after the 2020–2025 Banking Sector Reform Strategy was put into place. This time range lets us look at how the reforms affect profitability metrics immediately and in the short run.

We got the financial statistics, including Return on Assets (ROA) and Return on Equity (ROE), from the audited annual statements of banks. These statements can be found on the banks’ official websites and on the single corporate information portal [openinfo.uz](http://openinfo.uz). Reports from Tashkent’s Center for Economic Research and Reforms (CERR) provided information about how much ownership the governments have.

This study uses a Fixed Effects regression model to look at how the Banking Sector Reform Strategy from 2020 to 2025 affects the profits of state-owned banks. Using a binary reform-period indicator, the model predicts how Return on Assets (ROA) and Return on Equity (ROE) would evolve over time:

$$ROA/ROE = \alpha + \beta_1 * ReformDummy_t + u_i + \epsilon$$

ReformDummy is 0 for the years before the reform (2017–2019) and 1 for the years after the reform (2020–2023).

$u_i$  keeps features that don’t change over time and are unique to each bank.

$\epsilon$  is the error term

The Fixed Effects model is chosen for this study because it takes into account differences between banks that aren’t seen, like their internal governance culture or strategy orientation, which don’t vary over time. This makes it easier to have a better idea of how the reform era affected profits. Because the sample size was small, bootstrapping with 1,000 replications was used to make the results more reliable (Figure 1).

Variables	Measurement
Reform	Dummy variable: 1 for 2020-2023 and 0 for 2017-2019
Board Independence	Measured by the Ratio of Independent Directors and Total number of Board members
Board Size	Total number of Board members
GenderDiversity	Female board members divided by Total number of Board members
Audit Committee Size	Number of executive team in Audit Committee
Risk Committee Size	Number of executive team in Risk Committee
Government Ownership	Percentage of shares that government owns
ROA	Net Income/Total Assets
ROE	Net Income/Total Equity
Bank Size	Natural Log of Amount of Total Assets
Loan-to-Deposit Ratio	Total Loans/Total deposits

Figure 1. Corporate Governance and Financial Performance Variables



## ANALYSIS AND RESULTS

This section shows the main results of the T-test and the Fixed Effects regression that were used to see if Uzbekistan's Banking Sector Reform Strategy from 2020 to 2025 had a big effect on the financial performance of state-owned banks.

We used independent two-sample T-tests using ROA and ROE as the outcome metrics to compare profitability before and after the reforms. The reform dummy variable shows the difference between the time before reform (2017–2019) and the time following reform (2020–2023).

The average Return on Assets (ROA) before the reform was 1.08% (SD = 0.0081), and after the reform it was 1.05% (SD = 0.0062). The means were different by 0.00028, and the T-test gave a p-value of 0.9297, which suggests that the difference is not statistically significant at any normal level of confidence.

Before the reform, the mean Return on Equity (ROE) was 7.4% (SD = 0.0367), and after the reform, it was 7.63% (SD = 0.0454). The difference of -0.225 percentage points was also not statistically significant ( $p = 0.9041$ ).

These results reveal that, even though structural changes were made as part of the reform program, there have been no statistically significant changes in ROA and ROE in the short run. This is in accordance with prior research that show there are time lags between changes in governance and real financial results (Grove et al., 2011; Affes & Jarboui, 2023).

We utilized a panel regression with Fixed Effects and only a reform-period dummy variable as the regressor to control for bank-specific factors that don't change over time. Because the sample size was tiny, bootstrapping with 1,000 replications was performed to make the results more reliable. The reform dummy coefficients were not statistically significant for either ROA or ROE, which also backed up the T-test results. This means that improvements in the banking business haven't made a big difference in profits from 2020 to 2023 (Figure 2).

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
0	9	.0107778	.0026966	.0080898	.0045594	.0169961
1	12	.0105	.0017859	.0061865	.0065693	.0144307
combined	21	.010619	.0015	.0068737	.0074902	.0137479
diff		.0002778	.0031091		-.0062296	.0067852

diff = mean(0) - mean(1) t = 0.0893  
 Ho: diff = 0 degrees of freedom = 19

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0  
 Pr(T < t) = 0.5351 Pr(|T| > |t|) = 0.9297 Pr(T > t) = 0.4649

**. ttest roe, by(reform)**

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
0	9	.074	.0122304	.0366913	.0457966	.1022034
1	12	.07625	.0130315	.0451425	.0475679	.1049321
combined	21	.0752857	.0088925	.0407506	.0567362	.0938352
diff		-.00225	.0184289		-.0408222	.0363222

diff = mean(0) - mean(1) t = -0.1221  
 Ho: diff = 0 degrees of freedom = 19

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0  
 Pr(T < t) = 0.4521 Pr(|T| > |t|) = 0.9041 Pr(T > t) = 0.5479

Figure 2. Two-Sample t-Test Results for ROA and ROE by Reform

This study looks at how the financial performance of state-owned banks has changed since the 2020–2025 Banking Sector Reform Strategy in Uzbekistan was put into place. The results show that there have been no statistically significant increases in profitability, as assessed by ROA and ROE, over the first four years of implementing reforms, even though there have been structural changes and efforts to privatize.

These results support past research that found that financial spillovers from institutional improvements sometimes take a while to show up (Grove et al., 2011; Affes & Jarboui, 2023). In transition economies like Uzbekistan, the benefits of reform are more affected by things like how well the government can regulate, how quickly the changes are put into place, and how the bank evolves internally. This intricacy could show up in short-term drops in profitability.

Also, even while state ownership is going down and efficiency is going up because of the reform strategy, research shows that early-stage changes are not enough to bring about real financial improvements. To fully understand how reforms will affect performance in the banking industry, we will need to look at things over a longer period of time.

This study gives policymakers, bank regulators, and financial strategy planners in Uzbekistan and other emerging economies results that they can use in real life. The fact that profitability metrics didn't change much after the 2020–2025 Banking Sector Reform Strategy in Uzbekistan suggests that structural reforms probably won't have short-term effects on the finances of state-run banks.

This makes it clear that while creating and judging reform projects, it is important to set realistic timetables and goals. When looking at the effects of reforms, it's important to keep in mind that there may be delays in financial reaction, especially in transitional economies where institutional and systemic resistance may make it hard to see short-term advantages.

The paper also stresses the importance of ongoing monitoring, regulatory convergence, and implementation frameworks that make it easier for reforms to be put into action in a gradual way. Uzbekistan needs to keep the momentum going and make sure that institutions are ready to help with the rest of the reform process in order to get the results they want: a banking sector that is more efficient, profitable, and competitive in the market.

There are a number of problems with this study that should be kept in mind while looking at the results.

First, the study only looked at three state-owned banks over a seven-year period, so the conclusions may not be applied to the whole banking system in Uzbekistan or other emerging markets. Adding more banks or private banks to the sample could provide future studies a more complete view.

Second, it uses financial information that is publicly available, which may not show all of the factors that affect profitability inside the company. Even though this makes sure that information is clear, it might not take into account any qualitative alterations or operational adjustments that were made during the reform process.

Lastly, the fact that reforms begun only a few years ago in 2020 may make it hard to see how much they will cost in the long run. Because reforms normally take a long time to show real changes in performance, it is best to wait a longer time before making new assessments.

## CONCLUSIONS AND SUGGESTIONS

This study looked at how Uzbekistan's 2020–2025 Banking Sector Reform Strategy might affect state-owned banks' finances in the short term. Using ROA and ROE as the main measures, it was shown that there were no statistically significant variations in profitability between the time periods before and after the reforms. The results show that even while structural improvements are still going on, it may take more time for their financial benefits to be seen. The study shows that long-term evaluation and more policy assistance are key to making sure that banking reforms in transitional countries like Uzbekistan continue to be useful.

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# **muhandislik** **& iqtisodiyot**

ijtimoiy-iqtisodiy, innovatsion texnik,  
fan va ta'limga oid ilmiy-amaliy jurnal

**Ingliz tili muharriri:** Feruz Hakimov

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**Sahifalovchi va dizayner:** Iskandar Islomov

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**2025. № 8**

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"Muhandislik va iqtisodiyot" jurnali 26.06.2023-yildan  
O'zbekiston Respublikasi Prezidenti Adminstratsiyasi huzuridagi  
Axborot va ommaviy kommunikatsiyalar agentligi tomonidan  
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