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ENSURING THE FINANCIAL STABILITY AND COMPETITIVENESS OF COMMERCIAL BANKS IN THE CONTEXT OF BANKING SYSTEM TRANSFORMATION: EVIDENCE FROM UZBEKISTAN

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ABSTRACT

The banking system of Uzbekistan has been going through a deep transformation since 2020: state-owned banks are being privatised, foreign investors are entering the market, regulation is moving towards Basel III, and digital channels are changing the way banks compete. This article examines how these changes have affected the financial stability and competitiveness of commercial banks. Using aggregate data of the Central Bank of the Republic of Uzbekistan for 2019–2025, the study analyses capital adequacy, asset quality, liquidity and profitability indicators, decomposes return on equity with the DuPont model, estimates the Z-score of the banking system, and measures market concentration with the Herfindahl–Hirschman index (HHI) and the CR5 ratio. The results show that the sector has kept capital and liquidity buffers well above regulatory minimums, while profitability remains volatile and sensitive to credit risk, as the sharp fall in earnings in 2024 demonstrated. Concentration has declined steadily, and private banks now show higher returns and better asset quality than state-owned banks. The findings suggest that greater competition has not weakened stability so far. However, high loan-to-deposit ratios, foreign currency exposure and the gap in cost efficiency remain the main constraints. The article proposes a set of indicators and policy measures for balancing stability and competitiveness during the transformation period.

KEYWORDS

Commercial banks, banking system transformation, financial stability, competitiveness, Z-score, capital adequacy, market concentration, Herfindahl–Hirschman index, privatisation, Uzbekistan.

Introduction

The role of commercial banks in an economy depends not only on how much credit they provide, but also on how reliably they do so over time. This is why financial stability and competitiveness are usually discussed together: banks must be strong enough to absorb shocks and, at the same time, efficient enough to offer competitive prices and services to their clients.

For transition economies, this balance is especially difficult to maintain. In Uzbekistan, the banking sector was dominated for a long time by state-owned banks that financed government programmes, often on preferential terms. The Strategy for Reforming the Banking System for 2020–2025, approved by Presidential Decree No. UP-5992 of 12 May 2020, set out a different model. It aimed to raise the share of private banks in total assets to 60 percent, to reduce the role of directed lending, to strengthen corporate governance and risk management, and to introduce modern information technologies in banking. Since then, several large banks have been prepared for sale, Ipoteka-bank was acquired by the Hungarian OTP Group in 2023, and new digital banks have entered the market.

These changes bring clear benefits, but they also create new risks. Privatisation and the arrival of new players increase competition for borrowers and depositors. Higher competition can push banks to cut margins and accept riskier clients. At the same time, rapid credit growth in previous years, a high share of foreign currency loans and the dependence of banks on borrowed funds make the system sensitive to external shocks. The decline in banking sector profit from 12.4 trillion UZS in 2023 to 7.0 trillion UZS in 2024, largely caused by higher loan loss provisions, showed how quickly these vulnerabilities can surface.

The aim of this article is to assess the financial stability and competitiveness of commercial banks in Uzbekistan during the transformation of the banking system and to develop recommendations for strengthening both. To achieve this aim, the study seeks to answer three questions: (1) how have the key stability indicators of the banking sector changed during the reform period; (2) has the reduction of market concentration been accompanied by greater or lower risk; and (3) what differences exist between state-owned and private banks in terms of stability and efficiency.

Literature review

The relationship between competition and stability in banking has been debated for several decades, and the literature offers two opposing views. According to the “competition–fragility” view, stronger competition reduces the franchise value of banks and encourages them to take more risk. Keeley (1990) showed that the erosion of market power among US banks in the 1980s was followed by lower capital ratios and higher default risk. Allen and Gale (2004) argued that in many models a certain degree of market power is necessary for banks to remain prudent.

The “competition–stability” view reaches the opposite conclusion. Boyd and De Nicolò (2005) demonstrated that banks with market power charge higher loan rates, which pushes borrowers towards riskier projects and increases the probability of loan defaults. Empirical studies have found evidence for both views. Berger, Klapper and Turk-Ariss (2009) showed that banks with more market power have less overall risk exposure but riskier loan portfolios, meaning that the two views do not necessarily exclude each other. Beck, De Jonghe and Schepens (2013) found that the effect of competition on stability varies strongly across countries and depends on regulation, deposit insurance and the quality of supervision.

A second group of studies concerns the measurement of stability. The Z-score, which relates a bank’s capital and returns to the volatility of its returns, has become a standard indicator of distance to insolvency. Laeven and Levine (2009) used it to show that ownership structure and regulation jointly affect bank risk-taking, while Lepetit and Strobel (2013) proposed time-varying versions of the Z-score that are better suited for short samples.

The third strand deals with ownership. State-owned banks in developing countries tend to have lower profitability and weaker asset quality, partly because they pursue policy objectives rather than commercial ones. More recently, research has focused on the impact of technology on competition. Vives (2019) and Thakor (2020) noted that fintech firms and digital platforms reduce the cost advantage of incumbent banks and change the structure of the market, while Stulz (2019) emphasised that banks which successfully adopt new technologies can strengthen rather than lose their position.
Studies on Uzbekistan mostly look at stability or digitalisation separately. This study tries to fill the gap by combining stability, profitability and concentration indicators in one framework.

Research methodology

The study is based on aggregate annual data of the Central Bank of the Republic of Uzbekistan (CBU) for 2019–2025, including statistical bulletins, annual reports and published indicators of financial soundness. The analysis combines time-series analysis, ratio analysis, comparative analysis of bank groups and factor decomposition.
Financial stability was assessed using the capital adequacy ratio, the non-performing loans (NPL) ratio, liquidity ratios and the Z-score. The Z-score was calculated as follows:

$$\mathbf{Z = (ROA + E/A) / \sigma(ROA)}$$

where ROA is the return on average assets, E/A is the ratio of equity to assets, and σ(ROA) is the standard deviation of ROA over the period under review. A higher Z-score means that a larger shock to earnings is needed to wipe out the capital of the banking system.
To identify the sources of changes in profitability, return on equity was decomposed using the DuPont model:

$$\mathbf{ROE = ROA \times EM, \quad EM = A / E}$$

where EM is the equity multiplier (financial leverage), A is total assets and E is equity. The level of competition was measured through the concentration ratio of the five largest banks (CR5) and the Herfindahl–Hirschman index:

$$\mathbf{HHI = \Sigma\, s_i^2}$$

where s_i is the market share of bank i in total assets, expressed in percent. Following common practice, an HHI below 1,000 points indicates an unconcentrated market, 1,000–1,800 points indicates moderate concentration, and above 1,800 points indicates high concentration.

ANALYSIS AND RESULTS

Structural changes in the banking system. The scale of the banking sector has grown considerably during the reform period. As shown in Figure 1, total assets increased from 273.6 trillion UZS at the end of 2019 to about 842 trillion UZS at the end of 2025, that is, more than threefold in nominal terms. At the same time, the share of banks with state participation in total assets declined from 85.0 percent to 62.4 percent.

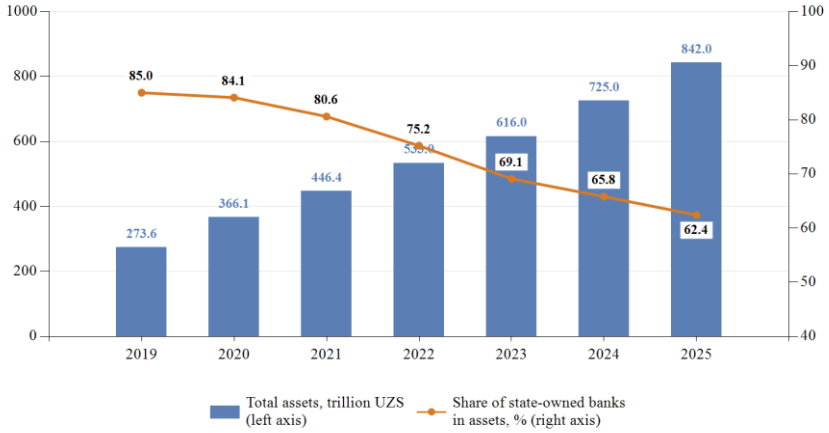


Figure 1. Total assets of the banking system and the share of state-owned banks

Source: compiled by the author based on CBU data.

Although the decline in the state share is significant, it is still far from the target of 40 percent set in the reform strategy. The slower pace of privatisation was largely related to the need to clean up the balance sheets of large state banks before sale and to the cautious approach of strategic investors after 2022. Still, private banks are growing faster than state banks, and the market is becoming more diverse.

Capital, asset quality and liquidity. Table 1 summarises the main financial soundness indicators of the banking sector. The capital adequacy ratio remained in the range of 17.4–18.0 percent throughout 2021–2025, which is well above the regulatory minimum of 13 percent. Tier 1 capital also exceeded the required 10 percent with a sufficient margin.

Table 1 Financial soundness indicators of the banking system of Uzbekistan, %

Indicator	2021	2022	2023	2024	2025
Capital adequacy ratio (CAR)	17.5	17.8	17.6	18.0	17.4
Tier 1 capital ratio	14.0	14.6	14.3	14.9	14.5
Non-performing loans (NPL) ratio	5.2	3.6	3.5	4.4	3.9
Liquidity coverage ratio (LCR)	196	203	189	182	176
Net stable funding ratio (NSFR)	112	118	116	121	124
Loans to deposits, times	2.09	1.93	1.92	1.79	1.64
Share of FX loans in total loans	48.6	46.5	43.8	41.0	38.5
Share of FX deposits in total deposits	37.2	33.9	32.1	30.4	28.7

Source: author's compilation based on CBU statistical bulletins and annual reports. Regulatory minimums: CAR – 13%, Tier 1 – 10%, LCR and NSFR – 100%.

The data show that the main risks of the system are concentrated not in capital or short-term liquidity but in the structure of the balance sheet. The loan-to-deposit ratio, although falling, was still 1.64 in 2025. This means that a large part of lending is financed by government resources, international borrowings and other non-deposit sources, which are more expensive and less stable. Dollarisation has decreased in both loans and deposits, but a share of foreign currency loans close to 40 percent still exposes borrowers, and therefore banks, to exchange rate risk.

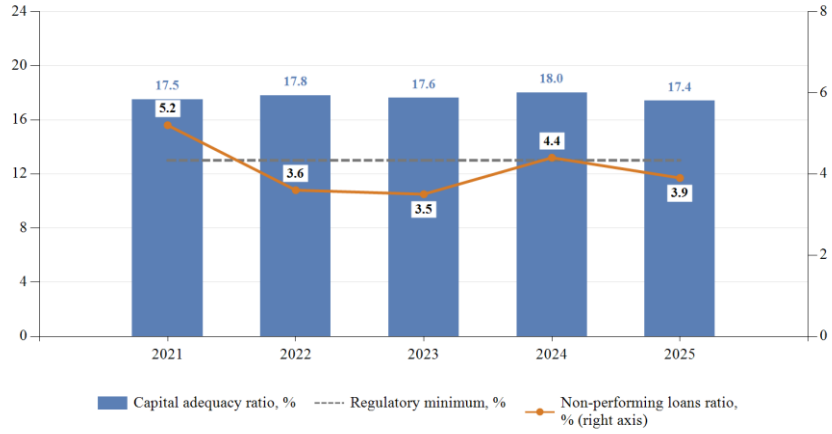


Figure 2. Capital adequacy and non-performing loans ratio of the banking system, %
Source: compiled by the author based on CBU data.

Figure 2 also shows that asset quality is the most volatile element of stability. The NPL ratio fell from 5.2 percent in 2021 to 3.5 percent in 2023 but then rose to 4.4 percent in 2024. The increase was linked to the slowdown of some borrowers after a period of rapid credit expansion, tighter monetary conditions and stricter classification requirements introduced by the CBU. In 2025, the ratio improved again to 3.9 percent, but the episode of 2024 confirmed that credit risk remains the main channel through which shocks can reach bank capital.

Profitability and its drivers. Profitability is an important link between stability and competitiveness. Table 2 presents the results of the DuPont decomposition together with efficiency indicators.

Table 2 Profitability and efficiency indicators of the banking system

Indicator	2021	2022	2023	2024	2025
Net profit, trillion UZS	3.9	10.0	12.4	7.0	15.5
Return on assets (ROA), %	0.96	2.04	2.16	1.04	1.98
Equity multiplier (EM), times	6.3	6.1	6.2	6.3	6.4
Return on equity (ROE), %	6.0	12.4	13.4	6.6	12.7
Net interest margin (NIM), %	4.6	5.3	5.1	4.7	4.5
Cost-to-income ratio (CIR), %	52.4	44.1	45.3	49.8	46.2
Share of non-interest income, %	24.5	27.8	30.6	33.9	36.2

Source: author's calculations based on CBU data. ROA is calculated on average assets; the equity multiplier equals ROE/ROA.

The decomposition shows that the equity multiplier stayed almost unchanged at 6.1–6.4 times. Consequently, the fluctuations of ROE were caused almost entirely by changes in ROA, that is, by the operating results of banks rather than by changes in leverage. This is a positive sign from the point of view of stability: banks did not try to maintain returns by taking on more debt. In 2024, ROA fell to 1.04 percent and ROE to 6.6 percent, mainly because of higher provisions, while in 2025 both indicators recovered close to their 2022–2023 levels (Figure 3).

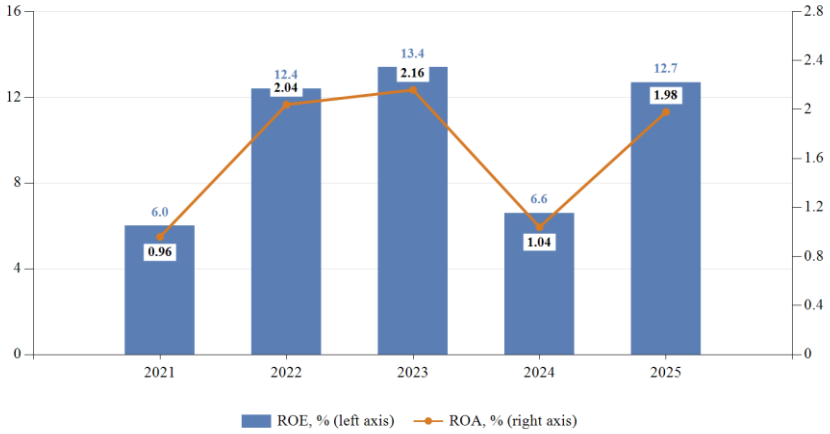


Figure 3. ROA and ROE of the banking system, %

Source: compiled by the author based on CBU data.

Two other trends deserve attention. First, the net interest margin has been narrowing since 2022, from 5.3 percent to 4.5 percent. This reflects stronger competition for borrowers and the rising cost of funding. Second, the share of non-interest income grew from 24.5 percent to 36.2 percent. Fees from payments, cards and mobile banking services are becoming an important source of income, which makes bank earnings less dependent on the interest rate cycle.

Distance to insolvency

To combine capital and profitability in a single measure, the Z-score of the banking system was calculated (Table 3). The standard deviation of ROA for 2021–2025 is 0.585 percentage points.

Table 3 Z-score of the banking system of Uzbekistan

Indicator	2021	2022	2023	2024	2025
ROA, %	0.96	2.04	2.16	1.04	1.98
Equity to assets (E/A), %	15.8	16.4	16.1	15.9	15.6
σ(ROA), p.p.	0.585	0.585	0.585	0.585	0.585
Z-score	28.7	31.5	31.2	29.0	30.1

Source: author's calculations. σ(ROA) is calculated as the sample standard deviation of annual ROA for 2021–2025.

The Z-score varied between 28.7 and 31.5. In other words, profits would have to fall by 29–31 standard deviations below their mean before equity was exhausted. Even in 2024 the Z-score stayed close to its 2021 level because the capital base was strong. The main contribution to the Z-score comes from the equity ratio, not from profitability; therefore, maintaining high capital buffers is the key condition for stability under the current structure of risks.

Competition and market structure

The transformation of the banking system has also changed the structure of the market. Table 4 shows that the number of banks increased from 33 to 36, while the number of banks with state participation fell from 13 to 9. The number of banks with foreign capital doubled.

Table 4 Indicators of competition and market structure in the banking sector

Indicator	2021	2022	2023	2024	2025
Number of commercial banks	33	32	35	35	36
of which with state participation	13	12	11	10	9
of which with foreign capital	6	7	9	10	12
CR5 by assets, %	60.5	58.7	56.1	54.3	52.0
HHI by assets, points	1052	981	906	862	818
Users of remote banking services, million	26.0	36.8	51.5	66.3	82.9

Source: author's compilation and calculations based on CBU data.

The HHI fell from 1,052 points in 2021 to 818 points in 2025, which means that the market moved from moderate concentration to an unconcentrated structure (Figure 4). The CR5 ratio also declined by 8.5 percentage points. Combined with the results in Tables 1–3, these data suggest that lower concentration has not led to weaker stability: the capital adequacy ratio and the Z-score remained at similar levels, and the NPL ratio in 2025 was lower than in 2021. In this sense, the experience of Uzbekistan in the reform period fits the "competition–stability" view better than the "competition–fragility" view.

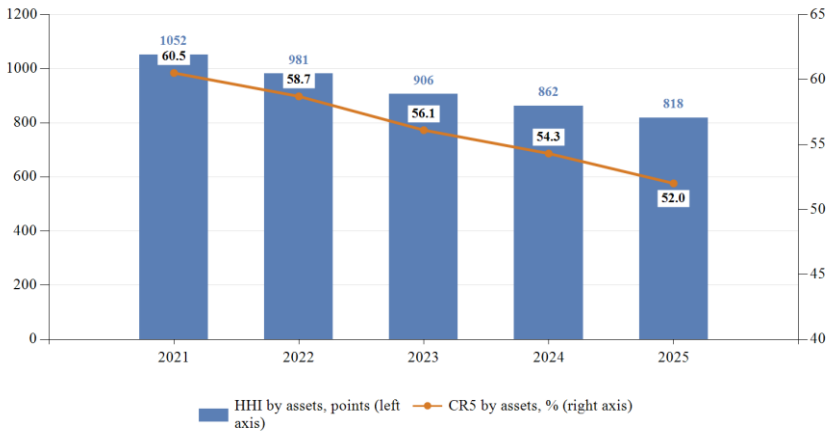


Figure 4. Concentration of the banking market by assets

Source: author's calculations based on CBU data.

State-owned and private banks. A comparison of the two groups of banks in 2025 helps to explain where competitive pressure comes from (Table 5).

Table 5 Comparison of state-owned and private banks, 2025

Indicator	State-owned banks	Private banks	Banking system
Share in total assets, %	62.4	37.6	100.0
Share in retail deposits, %	45.0	55.0	100.0
ROA, %	1.4	3.0	2.0
ROE, %	8.9	19.8	12.7
NPL ratio, %	4.6	2.7	3.9
Cost-to-income ratio, %	40.5	55.6	46.2
Loan portfolio growth, %	12.1	31.4	19.3

Source: author's calculations based on CBU data on bank groups.

Private banks are clearly more profitable and have better asset quality. Their ROA is roughly twice that of state banks, and their NPL ratio is almost two percentage points lower. They have also attracted the majority of retail deposits despite holding a smaller share of assets, which points to higher trust among

households and a stronger position in retail services. At the same time, private banks have a higher cost-to-income ratio, as they invest heavily in technology, branch networks and customer acquisition. State banks, on the other hand, benefit from cheap government funding and large corporate clients, which keeps their costs low but also concentrates their credit risk.

DISCUSSION

The results allow several conclusions to be drawn. The first is that, in Uzbekistan, the reduction of concentration has so far been compatible with financial stability. This finding is consistent with Boyd and De Nicolò (2005) and with the cross-country evidence of Beck, De Jonghe and Schepens (2013), who show that competition is less harmful to stability where capital requirements and supervision are strong. The relatively high capital requirements of the CBU seem to have played exactly this role.

The second conclusion concerns the nature of risk. The banking sector is well capitalised, but its stability depends heavily on asset quality. The events of 2024 showed that a moderate rise in problem loans can cut sector profit almost in half within one year. This is related to the legacy of rapid credit growth, the high share of foreign currency loans and the reliance on non-deposit funding. Such structural problems cannot be solved by capital buffers alone.

The third conclusion relates to competitiveness. The narrowing of the net interest margin indicates that price competition is becoming stronger. The growth of remote banking users to almost 83 million accounts and the rising share of non-interest income show that digital channels are already a key arena of competition. For private banks, the challenge is to turn high investment costs into lasting efficiency gains. For state banks, the challenge is to move from a policy-driven model to a commercial one before privatisation.

The study has some limitations. It relies on aggregate and group-level data, and the short time span does not allow robust econometric estimation. Bank-level panel data would make it possible to test the competition–stability relationship more formally, for example with the Lerner index or the Panzar–Rosse H-statistic (Panzar and Rosse, 1987), and to control for bank size, ownership and business model.

CONCLUSION AND RECOMMENDATIONS

The study shows that the transformation of the banking system of Uzbekistan in 2019–2025 has made the market more competitive without undermining its basic stability. The capital adequacy ratio remained at 17–18 percent, the Z-score stayed in the range of 28.7–31.5, and the HHI fell below 1,000 points. At the same time, profitability proved sensitive to credit risk, the loan-to-deposit ratio remains high, and the efficiency gap between state-owned and private banks is still large. Based on these results, the following recommendations are proposed.

First, commercial banks should strengthen credit risk management as the main condition of stability. This includes the use of early warning systems, stress testing of loan portfolios against exchange rate and interest rate shocks, and the gradual reduction of foreign currency lending to unhedged borrowers.

Second, it is advisable to reduce the dependence of banks on non-deposit funding by developing long-term deposit products, issuing bonds in national currency and expanding the deposit base through digital channels. This would bring the loan-to-deposit ratio closer to a sustainable level.

Third, the assessment of bank performance should combine stability and competitiveness indicators. Along with CAR, NPL and liquidity ratios, banks and the regulator should regularly monitor the Z-score, cost-to-income ratio, the share of non-interest income and market concentration indicators.

Fourth, the privatisation of state-owned banks should be continued, but each transaction should be preceded by a full review of asset quality and supported by strong corporate governance requirements for new owners. This will help ensure that privatisation increases efficiency rather than transferring hidden risks.

Fifth, competitiveness should be built on efficiency and service quality. Banks should invest in process automation, data analytics and open banking partnerships with fintech companies, while the regulator should ensure equal conditions of competition for all market participants.

In conclusion, financial stability and competitiveness are not opposing goals. Under strong capital requirements and effective supervision, competition pushes banks to become more efficient, and stable banks are able to compete over the long term.

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