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Article

Lending Expansion and Funding Pressure in Uzbekistan's State-Owned Banks: Evidence from 2017–2024

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Abstract: The aim of this article is to analyze lending intensity, funding pressure and accounting-based equity stability for a group of 13 Uzbek banks identified as state-owned in October 2020. Bank-level data on financial performance were used for the years 2017-2024. This allows the combination of an annual description of trends with a pairwise comparison of pre-reform (2017-2019) and reform-period (2020-2024) average values for each bank, as well as cross-bank analysis. The loan-to-assets ratio developed from a cohort annual average of 43.7% in 2017 to 61.5% in 2024, the pairwise development from 46.77% to 60.49% ($p = 0.0008$). The loan-to-deposit ratio remains high, although the increase in the pairwise comparison from 203.92% to 298.74% does not reach significance ($p = 0.137$). Equity-to-assets declines from 23.53% to 20.76%, without reaching significance at the 5% level ($p = 0.065$). This underlines the necessity to distinguish individual banks when using aggregate figures. The results support the need for differentiated asset/liability management and funding oversight. They cannot show that the reform caused these developments or that there is a regulatory shortage of liquidity.

Keywords: State-owned banks; loan-to-assets; loan-to-deposit; funding structure; asset–liability management; Uzbekistan.

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1. Introduction

Banking-sector development requires credit intermediation, and higher rates of lending do not necessarily reflect healthier bank balance sheets. Banks need funding to provide loans; the costs, sources and terms of that funding influence their lending capacity [1]. The process of converting short-term liabilities into long-term assets involves liquidity risk [2]. Diamond and Rajan [3] provide a framework to understand the tradeoff between liquidity creation and financial fragility. Berger and Bouwman [4] highlight the importance of understanding how the composition of bank balance sheets affects liquidity creation. Understanding the relationship between lending and funding is important in banking systems undergoing institutional changes.

Uzbekistan is an interesting case study for such an analysis. The Banking System Reform Strategy for 2020-2025 was announced by presidential decree PF-5992 [5], which sets out objectives for reforming the banking system, financial stability and reducing reliance on state resources. There were thirteen banks listed as having state ownership according to the Central Bank of Uzbekistan [6] as of 1 October 2020. However, since then the composition of the state-owned banks has changed through privatization and restructuring. Explicitly identifying a historical cohort of state-owned banks is therefore a useful approach to analyze the balance-sheet composition during the period of reforms.

This bank-year data show that the average loan-to-assets ratio for this group of banks rose from 43.7% in 2017 to 61.5% in 2024. Average loan-to-deposit ratios were 179.4% and 388.5%, respectively. Note that these are unweighted averages of bank-level ratios, not ratios based on aggregate sector loans and deposits. Do rising loan-to-asset ratios correspond to clear signs of improvement in deposit-funding coverage and accounting equity ratios?

This article provides a reply by relying on an existing bank-year dataset that combines bank financial statements. The main contributions of this article are threefold. First, it considers differences between annual trends and bank-level pairwise comparisons. Second, it notes the significant variations among the thirteen banks studied. Third, it points out potential lessons regarding funding and capital monitoring without interpreting the actual ratios as directly indicating the impact of regulation on liquidity or the effectiveness of governance reforms. Its aim is to complement, but also to differ from, the author's previous analysis on profitability trends that covered ROA and ROE for the period 2017-2023 [7].

2. Data and Methodology

Thirteen commercial banks identified by the Central Bank as state owned on 1 October 2020 are included in this study: National Bank of Uzbekistan (NBU), Uzpromstroybank (SQB), Asaka Bank, Ipoteka-bank, Agrobank, Xalq Bank, Qishloq Qurilish Bank (later Business Development Bank, BDB), Microcreditbank, Aloqabank, Turonbank, Asia Alliance Bank, Poytaxt Bank and Uzagroexportbank (later AVO Bank). Changes in ownership and names leave institutions in the historical time series. For example, state-owned banks throughout 2017-2024 is not an accurate description of this sample.

This results in 104 possible bank-year positions for the eight-year time frame (13 × 8). Data sources include audited financial statements, annual reports and official bank disclosures, which are cross-checked against Central Bank statistics. Missing data, i.e., those structural in nature, are not filled with zeros. Note that Poytaxt Bank has no available observations for 2017-2018. Hence, reported denominator values can differ by indicator.

Three accounting ratios are presented: loan-to-assets (reported loans divided by total assets), loan-to-deposit (reported loans divided by deposits), and equity-to-assets (total accounting equity divided by total assets). The three ratios refer to lending intensity, coverage of lending by deposits, and a general equity buffer, respectively. This paper relies on the finalized bank-year ratio series, not the creation of new balance sheet values from additional external data. All original rounding from the sources of loan-to-assets is retained.

Descriptive trends are explored first through annual cross-bank means. Means are computed for each bank in 2017-2019 and 2020-2024, and statistically tested via paired t-tests. Note that the comparison group is not each bank-year, but the bank itself. The comparison of period-wide bank averages identifies the variation between the two periods. The distinction between 2020 and 2024 follows the banking reform strategy, but no causality due to the reforms is implied here. Comparisons could result from other factors such as macroeconomic shocks, bank restructuring, differences in business models and individual financing arrangements.

3. Results

3.1. Annual Dynamics of Lending and Funding

Table 1 presents the annual cohort means for the three balance-sheet indicators. Lending intensity rose sharply after 2019 and remained above the 2017–2019 levels in every year from 2020 onward. The loan-to-assets ratio was 43.7% in 2017, 51.2% in 2019 and 61.5% in 2024, consistent with a larger proportion of the sampled banks' assets being allocated to loans.

Table 1. Annual means of lending, funding and equity indicators, 2017–2024 (%)

Year	Loan / assets	Loan / deposits	Equity / assets
2017	43.7	179.4	23.2
2018	44.4	236.4	19.1
2019	51.2	211.4	23.8
2020	59.2	251.9	20.0
2021	62.5	276.2	18.6
2022	60.9	371.1	21.7
2023	58.3	206.0	22.3
2024	61.5	388.5	21.2
2017–2024 mean	55.4	266.2	21.2

Source: Author's calculations from the sampled banks' financial statements and annual reports, 2017–2024. Figures are annual averages of bank ratios, not ratios of consolidated sector totals. Bank coverage varies where source observations are structurally missing.

Funding coverage exhibited a more complex pattern. The annual mean loan-to-deposit ratio increased from 179.4% in 2017 to 388.5% in 2024, but declined to 206.0% in 2023 after peaking at 371.1% in 2022. The variation suggests that this indicator should not be characterized as a smooth or constant decline. However, its mean for the full period of 266.2% indicates that there were more reported loans than reported deposits across the sampled bank-years on average. This measure also fails to reveal which other sources funded the shortfall, as there was no consistent separation between wholesale, institutional, development or state-related funding in the bank-year panel.

Equity-to-assets varied between 18.6% in 2021 and 23.8% in 2019, with an average value of 21.2% in 2024. The annual fluctuations offer no easy annual patterns. Given that this ratio uses accounting equity, it does not allow determination of regulatory capital adequacy or risk-weighted solvency.

3.2. Statistical comparison of pre-reform and reform period

Table 2 provides the bank-level paired-period results. Lending intensity is the clearest statistical finding: average loan-to-assets increased by 13.72 percentage points, from 46.77% to 60.49%, with $p = 0.0008$. This finding survives the sample sensitivity assessment excluding Poytaxt Bank. The estimated period difference is consistent with a shift in balance-sheet composition toward lending, although the design cannot attribute that shift solely to governance reform.

Table 2. Paired comparison of bank-level period means

Indicator (%)	2017–2019	2020–2024	Change (p.p.)	Paired p-value
Loan-to-assets	46.77	60.49	+13.72	0.0008
Loan-to-deposit	203.92	298.74	+94.82	0.137
Equity-to-assets	23.53	20.76	−2.78	0.065

Source: Author's calculations using the sampled banks' financial statements and annual reports, 2017–2024. Paired t-tests compare each bank's pre-reform and reform-period average; p.p. = percentage points. Poytaxt Bank's pre-reform mean uses 2019 only. Equity results are sensitive to its exclusion. Statistical significance is assessed at 5%.

The loan-to-deposit ratio went up in the paired comparison as well (by 94.82 percentage points), although the p-value is not strong enough to confirm a statistically significant difference at the 5% significance level ($p = 0.137$). This suggests that it is incorrect to assume that there was a uniformly greater need for deposit funding in the period of reforms for all banks in the sample. On the contrary, it makes sense to examine the structure, duration, and concentration of non-deposit funding on a bank-by-bank basis given the high levels in both periods.

Finally, the equity-to-assets ratio dropped by 2.78 percentage points (p = 0.065). This result is not significant at the conventional 5% level, and it depends on how to treat Poytaxt Bank. Although this change is not significant at the usual 5% level, it reinforces the need for caution about associating loan growth with strengthening equity cushions; however, it does not confirm an overall decline in the level of regulatory capitalization.

3.3. Difference across individual banks

The cohort average conceals substantial institutional variation. Table 3 reproduces the three balance-sheet ratios by bank over 2017–2024. BDB shows the highest average loan-to-assets ratio (70.5%), whereas Poytaxt and AVO show averages of 44.8%. The funding ratio ranges from 76.5% for Asia Alliance Bank to 743.5% for AVO Bank; this contrast is too large to support a single cohort-wide operational threshold.

Table 3. Bank-level mean lending, funding and equity ratios, 2017–2024 (%)

Bank	Loan / assets	Loan / deposits	Equity / assets
Agrobank	56.3	276.9	20.2
Aloqabank	50.2	114.4	15.4
Asaka Bank	57.0	254.2	11.1
Asia Alliance Bank	51.7	76.5	11.9
Ipoteka-bank	59.3	216.2	11.9
Microcreditbank	57.9	246.1	22.6
NBU	61.7	310.7	13.8
Poytaxt Bank	44.8	107.8	52.8
BDB / Qishloq Qurilish	70.5	332.0	10.6
Turonbank	51.4	221.1	15.5
AVO / Uzagroexport	44.8	743.5	69.1
SQB / Uzpromstroybank	60.5	388.5	12.2
Xalq Bank	51.9	133.7	16.8
Cohort mean	55.4	266.2	21.2

Source: Author's calculations using the sampled banks' financial statements and annual reports, 2017–2024. Values are bank-specific means over available years; Poytaxt Bank has no 2017–2018 observations. AVO's restructuring and unusual balance-sheet composition limit comparability. Cohort means are not weighted by bank size.

Largest lending-intensive banks may also have different funding compositions. NBU reports loan-to-assets of 61.7% and loan-to-deposit of 310.7%; SQB reports loan-to-assets of 60.5% and loan-to-deposit of 388.5%. A much lower average loan-to-deposit ratio of 76.5% is reported by Asia Alliance Bank. Lending intensity and deposit coverage reflect related but different aspects of bank balance-sheet composition.

AVO is an especially prominent cautionary tale. The average loan-to-deposit ratio of 743.5% and accounting equity-to-assets ratio of 69.1% at AVO were during a period of ownership and business-model transition. These are specific observations about each bank and should not be used to infer about the state of the banking sector as a whole. The equity-to-assets mean of 52.8% at Poytaxt Bank should similarly be taken as specific and should not be generalized. The differences highlight the importance of considering bank-specific details as well as aggregated figures.

4. Discussion and Policy Implications

There are three possible interpretations of the results, which need to be distinguished: The first is that lending increased significantly and this change between periods is statistically significant. The second is that loan books on average were larger

than customer deposits, which suggests that banks had or required additional liabilities or funding sources to support their lending activities. Reliance on non-deposit short-term funding has been found to make banks more vulnerable in international samples [8]. Longer-term funding can, however, come from institutional borrowings, development-finance credit lines, bonds, state capital or other liabilities that carry different refinancing risks [9]. The third is that the estimated change in loan-to-deposit ratios was not statistically significant for the thirteen paired banks, so the current study does not show that funding conditions generally became less stable after 2020.

The challenge for bank management is how to manage credit strategies and how these fit with the structure and maturity of funding. Asset-liability committees should consider the stability of deposits, reliance on specific lenders or credit lines, mismatches in maturities, refinancing options, currency risks and funding concentration. During the global financial crisis, banks that depended more on core deposits and equity financing reduced their lending less than banks with less stable funding [10]. In the same crisis, banks with better access to deposit financing cut their lending less than banks that relied on short-term debt [11]. The Basel Committee on Banking Supervision has a useful list of recommended practices including identifying liquidity risks, testing stress scenarios and having contingency plans [12]. It also has a more specific rule to test structural funding resilience, which would provide an alternative approach to the loan-to-deposit ratio [13]. However, such measures are designed to supplement and not replace the loan-to-deposit ratio.

For supervisory boards and state shareholders, the conclusion suggests selective monitoring. Large lenders with high loan-to-deposit ratios might benefit from attention to loan growth compared to deposit mobilization, term of external debt and contingency funding plans. Rising loan-to-deposit gaps have also been linked to the need for external support for banks with strained deposit flows [14]. The impact of a bank's restructuring on its profitability should be analyzed separately regarding its capital injections, legacy assets and changes in business models. In addition, the cohort mean of a particular loan-to-deposit ratio should never be taken as a one-size-fits-all target for a bank's risk appetite, level of systemic importance or available liquidity indicators.

Similarly, the accounting equity ratios should be complemented by other forms of prudential capital, risk-weighted assets, expected credit losses and credit quality. Evidence from U.S. banks shows that higher capital improves banks' survival and market share, particularly during banking crises [15]. The sample data do not always contain consistent reporting of the variables non-performing loans, Liquidity Coverage, Net Stable Funding and Regulatory Capital for each sampled bank-year. This implies that any statement on the relationship between compliance or financial distress is beyond the scope of this study. Any potential future claim about the impact of funding structure on profitability or loan losses would demand direct access to funding-composition data and an experimental design able to control for the confounding variables.

The intention of this paper is purely descriptive. The breakpoint in 2020 is the starting point of the intended reform strategy, and therefore no isolated natural experiment. It is possible that the funding ratios have been affected by COVID-19, macroeconomic developments, targeted lending, ownership shifts and bank restructuring. Further, this study relies on unweighted averages for each bank-year. There might be small banks with unusual structures, which affect the average more prominently. It would be useful to repeat the analysis using consistent reporting of funding liabilities and prudential liquidity measures.

5. Conclusion

This paper examined changes in credit growth, deposit funding, and capital adequacy during the post-independence era of reforms in Uzbekistan. In terms of loan growth, there has been an evident uptick in lending intensity among the thirteen banks

studied since 2017 through 2024. Their loan-to-deposit ratios have remained high yet varied widely. Lending intensities measured by loan-to-assets significantly increased before/during the reform period ($p = 0.0008$). However, increases in loan-to-deposit ($p = 0.137$) and equity-to-assets ($p = 0.065$) were not significant at the 5% level. Institutional variation between restructuring and smaller banks may be large enough to draw conclusions only cautiously based on averages for the entire cohort.

It appears that these results indicate a need for closer coordination between credit growth, liability management, and capital planning at the bank level. These findings cannot claim to show that observed trends were caused by reforms or imply liquidity or capital weaknesses. This study's applied value lies in its focused description of lending and funding conditions among Uzbekistan's cohort of reform-era banks.

REFERENCES

[1] A. K. Kashyap, R. Rajan, and J. C. Stein, "Banks as liquidity providers: An explanation for the coexistence of lending and deposit-taking," *J. Finance*, vol. 57, no. 1, pp. 33–73, 2002, doi: 10.1111/1540-6261.00415.

[2] D. W. Diamond and P. H. Dybvig, "Bank runs, deposit insurance, and liquidity," *J. Political Econ.*, vol. 91, no. 3, pp. 401–419, 1983, doi: 10.1086/261155.

[3] D. W. Diamond and R. G. Rajan, "Liquidity risk, liquidity creation, and financial fragility: A theory of banking," *J. Political Econ.*, vol. 109, no. 2, pp. 287–327, 2001, doi: 10.1086/319552.

[4] A. N. Berger and C. H. S. Bouwman, "Bank liquidity creation," *Rev. Financial Stud.*, vol. 22, no. 9, pp. 3779–3837, 2009, doi: 10.1093/rfs/hhn104.

[5] President of the Republic of Uzbekistan, "2020–2025-yillarga mo'ljallangan O'zbekiston Respublikasining bank tizimini isloh qilish strategiyasi to'g'risida" [On the strategy for reforming the banking system of the Republic of Uzbekistan for 2020–2025], Presidential Decree No. PF-5992, May 12, 2020. [Online]. Available: https://lex.uz/docs/-4811025 (accessed Nov. 2, 2026).

[6] Central Bank of Uzbekistan, "Information on major indicators of commercial banks as of October 1, 2020," Oct. 30, 2020. [Online]. Available: https://cbu.uz/en/statistics/bankstats/416090/ (accessed Nov. 2, 2026).

[7] Y. Pulatov and B. Islamov, "Corporate governance reforms and financial performance dynamics: Evidence from state-owned banks in Uzbekistan," *Muhandislik va Iqtisodiyot*, vol. 3, no. 8, 2025, doi: 10.5281/zenodo.17015021.

[8] A. Demirgüç-Kunt and H. Huizinga, "Bank activity and funding strategies: The impact on risk and returns," *J. Financial Econ.*, vol. 98, no. 3, pp. 626–650, 2010, doi: 10.1016/j.jfineco.2010.06.004.

[9] R. Huang and L. Ratnovski, "The dark side of bank wholesale funding," *J. Financial Intermed.*, vol. 20, no. 2, pp. 248–263, 2011, doi: 10.1016/j.jfi.2010.06.003.

[10] M. M. Cornett, J. J. McNutt, P. E. Strahan, and H. Tehranian, "Liquidity risk management and credit supply in the financial crisis," *J. Financial Econ.*, vol. 101, no. 2, pp. 297–312, 2011, doi: 10.1016/j.jfineco.2011.03.001.

[11] V. Ivashina and D. Scharfstein, "Bank lending during the financial crisis of 2008," *J. Financial Econ.*, vol. 97, no. 3, pp. 319–338, 2010, doi: 10.1016/j.jfineco.2009.12.001.

[12] Basel Committee on Banking Supervision, *Principles for Sound Liquidity Risk Management and Supervision*. Basel, Switzerland: Bank for International Settlements, 2008. [Online]. Available: https://www.bis.org/publications/200809-guidelines-principles-sound-liquidity-risk-management-and-supervision (accessed Nov. 2, 2026).

[13] Basel Committee on Banking Supervision, *Basel III: The Net Stable Funding Ratio*. Basel, Switzerland: Bank for International Settlements, 2014. [Online]. Available: https://www.bis.org/publications/201410-standards-basel-iii-net-stable-funding-ratio (accessed Nov. 2, 2026).

[14] V. V. Acharya and N. Mora, "A crisis of banks as liquidity providers," *J. Finance*, vol. 70, no. 1, pp. 1–43, 2015, doi: 10.1111/jofi.12182.

[15] A. N. Berger and C. H. S. Bouwman, "How does capital affect bank performance during financial crises?" *J. Financial Econ.*, vol. 109, no. 1, pp. 146–176, 2013, doi: 10.1016/j.jfineco.2013.02.008.