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Causes Of The Emergence Of Non-Performing Loans In Commercial Banking Practice

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Abstract: Non-performing loans (NPLs) are a key indicator of credit portfolio quality and a direct source of pressure on bank profitability, liquidity, and capital. This study examines the factors associated with the emergence and recent dynamics of NPLs in Uzbekistan's commercial banking sector and assesses the practical implications for credit risk management. The analysis is based on publicly available bank-level data of the Central Bank of the Republic of Uzbekistan for January 1, 2025 and January 1, 2026, using descriptive, comparative, grouping, and ratio analysis. As of January 1, 2025, the banking system recorded UZS 533.121 trillion in loans and UZS 21.185 trillion in NPLs, equivalent to 4.0% of the loan portfolio. By January 1, 2026, the aggregate loan portfolio had expanded to UZS 604.002 trillion, while NPLs declined to UZS 18.055 trillion and the system-wide NPL ratio fell to 3.0%. The improvement was not uniform across banks, indicating that portfolio growth, underwriting quality, borrower monitoring, and workout practices remain important bank-specific determinants. The findings support wider use of early-warning systems, borrower-level monitoring, portfolio segmentation, timely restructuring of viable exposures, and data-driven credit risk management.

Keywords: non-performing loans; credit risk; commercial banks; loan portfolio quality; early-warning systems.

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Introduction

Credit operations are among the principal income-generating activities of commercial banks, but they also create the largest concentration of credit risk. When borrowers fail to meet contractual repayment obligations, loans migrate into non-performing categories, weakening interest income, increasing provisioning needs, and reducing the resources available for new lending. For this reason, the level and structure of NPLs are widely used to assess the quality of a bank's credit portfolio and the effectiveness of its risk management system [1].

Modern bank information systems can strengthen credit risk management by integrating loan origination, borrower verification, repayment monitoring, portfolio analytics, and early-warning signals [2]. Digital monitoring is particularly relevant where loan portfolios expand rapidly, because deterioration may first appear in payment behavior, borrower cash flow, concentration indicators, or repeated restructuring before it becomes visible in the aggregate NPL ratio. Technology therefore complements, rather than replaces, sound underwriting, internal control, and professional judgment [3].

In Uzbekistan, the banking system combines large state-owned institutions with a growing group of other commercial banks that differ substantially in portfolio size, business model, and risk profile. These differences make bank-level analysis important: an identical NPL ratio may represent very different absolute exposures, while a high ratio at a small bank may have limited system-wide significance [4].

The objective of this study is to identify the main factors associated with the emergence of NPLs in commercial banking practice and to evaluate recent changes in NPL levels and ratios across Uzbekistan's banking sector using comparable official data [5].

Berger and DeYoung established an important link between problem loans and bank operating efficiency. Their findings support both the "bad management" mechanism, under which weak cost efficiency can precede deterioration in loan quality, and the reverse channel through which problem loans increase operating costs. Nkusu emphasizes the macro-financial dimension, showing that adverse macroeconomic conditions are associated with higher NPLs and that rising NPLs can, in turn, weaken credit supply and economic activity [6].

Louzis, Vouldis, and Metaxas demonstrate that NPLs are jointly influenced by macroeconomic fundamentals and bank-specific management quality, with the strength of these effects varying across mortgage, consumer, and business loan portfolios [7]. Klein reaches a similar conclusion for Central, Eastern, and South-Eastern Europe, finding that GDP growth, unemployment, and inflation interact with bank-level factors in explaining NPL dynamics. Using a 75-country sample, Beck, Jakubik, and PiloIU identify real GDP growth, lending interest rates, exchange rates, and asset prices as significant macroeconomic determinants of NPL ratios [8].

Recent research focused on Uzbekistan also confirms the practical importance of loan classification, provisioning, and portfolio-quality monitoring. Khidirov, using the case of JSCB "Mikrokreditbank," analyzes changes in loan quality and the role of provisions in assessing lending effectiveness. Taken together, the literature suggests that NPL formation cannot be attributed to a single cause: macroeconomic shocks, rapid credit expansion, borrower-specific repayment capacity, portfolio concentration, weak underwriting, delayed monitoring, and inefficient recovery processes can reinforce one another [9].

The literature nevertheless leaves room for updated descriptive evidence on the cross-bank distribution of NPLs in Uzbekistan and on how system-wide improvement can coexist with deterioration at individual institutions. This study addresses that gap by combining a bank-level baseline for January 1, 2025 with the most recent comparable sector indicators for January 1, 2026, while interpreting the results through established macroeconomic and bank-management explanations [10].

Materials and Methods.

The study uses secondary quantitative data published by the Central Bank of the Republic of Uzbekistan. The baseline dataset is the bank-level table "Information on Non-performing loans of commercial banks as of January 1, 2025". For year-end comparison, the study uses the corresponding banking-system statistics as of January 1, 2026 and the Central Bank's Financial Stability Report for 2025. The baseline covers the commercial banking system and distinguishes banks with state ownership from other banks.

The principal indicators are the gross loan portfolio, the absolute volume of NPLs, and the NPL ratio. The NPL ratio is calculated as NPL volume divided by the gross loan portfolio and multiplied by 100. Group concentration is assessed by comparing each bank or ownership group with system totals. Year-on-year changes are evaluated through absolute differences and percentage-point changes in NPL ratios. The analysis applies descriptive statistics, grouping, comparative analysis, and synthesis; no inferential statistical tests are used because the study evaluates published population-level banking statistics rather than a sample. Tables and figures are compiled from the cited Central Bank data.

The study uses only publicly available institutional statistics and does not involve human participants, personal data, clinical information, or experimental interventions; therefore, ethics committee approval was not required.

Results and Discussion.

This section presents and interprets the empirical results on the scale, structure, and distribution of non-performing loans in Uzbekistan's commercial banking sector. The

analysis begins with a baseline assessment of the loan portfolio and NPL indicators as of January 1, 2025, followed by a comparison of the relative position of state-owned and other commercial banks [11]. Particular attention is paid to differences in loan portfolio size, absolute NPL volumes, and NPL ratios across individual institutions, since these indicators jointly provide a more comprehensive assessment of credit risk than any single measure considered in isolation. The baseline results are summarized in Table 1 and subsequently complemented by graphical analysis of the loan portfolio and NPL distribution among state-owned banks [12]. The 2025 baseline is then compared with the corresponding indicators as of January 1, 2026 in order to identify the direction and magnitude of recent changes in credit portfolio quality [13].

Table 1. Non-Performing Loans of Commercial Banks as of January 1, 2025

No.	Bank name	Loan portfolio, UZS bn	NPLs, UZS bn	NPL ratio, %
Total		533 121	21 185	4.0%
Banks with State Ownership		366 731	14 344	3.9%
1	National Bank of Uzbekistan (NBU)	108 014	3 275	3.0%
2	Uzpromstroybank (SQB)	65 498	1 844	2.8%
3	Agrobank	59 436	2 903	4.9%
4	Asakabank	38 717	1 752	4.5%
5	People's Bank (Xalq Bank)	29 620	1 253	4.2%
6	Business Development Bank	22 527	1 915	8.5%
7	Mikrokreditbank	17 416	804	4.6%
8	Turon Bank	12 944	242	1.9%
9	Aloqa Bank	12 558	354	2.8%
Other Banks		166 391	6 841	4.1%
10	Ipoteka Bank	35 094	3 577	10.2%
11	Kapitalbank	31 584	1 437	4.5%
12	Hamkorbank	19 178	319	1.7%
13	Ipak Yuli Bank	14 228	218	1.5%
14	Orient Finance Bank	12 565	23	0.2%
15	InFinBank	7 929	109	1.4%
16	TBC Bank	7 468	160	2.1%
17	Davr Bank	7 019	135	1.9%
18	Anorbank	6 858	167	2.4%
19	Trustbank	5 705	195	3.4%
20	Tenge Bank	4 217	98	2.3%
21	Asia Alliance Bank	3 865	78	2.0%
22	KDB Bank Uzbekistan	3 367	0.0	0.0%
23	Ziraat Bank	2 028	66	3.3%
24	Universal Bank	1 675	19	1.1%
25	Hayot Bank	1 161	0.3	0.0%
26	Garant Bank	797	118	14.8%
27	Madad Invest Bank	307	74	24.1%
28	Poytaxt Bank	302	0.0	0.0%
29	AVO Bank	283	36	12.5%
30	Apex Bank	213	0.0	0.0%
31	Octobank	190	0.0	0.0%
32	Yangi Bank	138	12	8.7%
33	Uzum Bank	131	0.0	0.0%
34	Smart Bank	68	0.0	0.0%
35	Saderat Bank	21	1.4	6.6%
36	Eurasian Bank	0.0	0.0	0.0%

Source: compiled by the author from Central Bank of the Republic of Uzbekistan data [7].

During 2025, Uzbekistan's commercial banks expanded their aggregate loan portfolio by UZS 70.881 trillion, from UZS 533.121 trillion at the beginning of the year to UZS 604.002 trillion by January 1, 2026, equivalent to approximately 13.3% growth [14].

Table 1 provides the baseline structure of loan quality at the beginning of 2025. Commercial banks held UZS 533.121 trillion in loans, of which UZS 21.185 trillion were

classified as NPLs, producing a system-wide NPL ratio of 4.0% [7]. Banks with state ownership accounted for UZS 366.731 trillion of loans and UZS 14.344 trillion of NPLs. Accordingly, they represented approximately 68.8% of the system loan portfolio and 67.7% of total NPLs, while their group NPL ratio (3.9%) was slightly below that of other banks (4.1%).

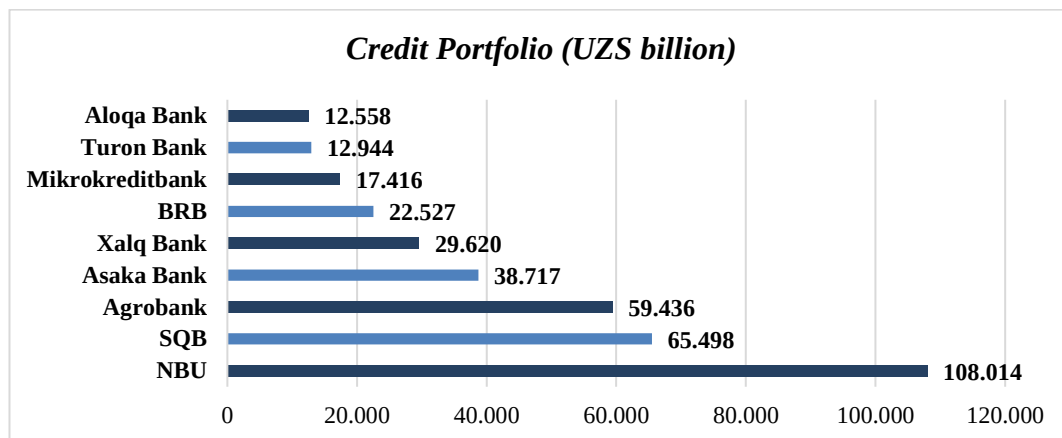


Figure 1. Loan Portfolio of State-Owned Banks as of January 1, 2025 (UZS billion) [7]

Figure 1 illustrates the distribution and concentration of the loan portfolio among state-owned banks as of January 1, 2025. The National Bank of Uzbekistan (NBU) held the largest loan portfolio, amounting to UZS 108.014 trillion, followed by SQB with UZS 65.498 trillion and Agrobank with UZS 59.436 trillion. Together, these three institutions accounted for approximately 63.5% of the total loan portfolio of state-owned banks, indicating a relatively high degree of credit concentration within the largest institutions [15]. Asaka Bank ranked next with a loan portfolio of UZS 38.717 trillion, followed by Xalq Bank at UZS 29.620 trillion and the Business Development Bank (BRB) at UZS 22.527 trillion. Smaller portfolio volumes were recorded by Mikrocreditbank (UZS 17.416 trillion), Turon Bank (UZS 12.944 trillion), and Aloqabank (UZS 12.558 trillion). The substantial differences in portfolio size demonstrate the heterogeneous scale of lending operations across state-owned banks and confirm that a significant proportion of credit activity is concentrated in a limited number of large financial institutions. From a credit-risk management perspective, such concentration is particularly important because changes in the asset quality and credit performance of the largest banks may have a comparatively greater influence on aggregate indicators of the state-owned banking segment.

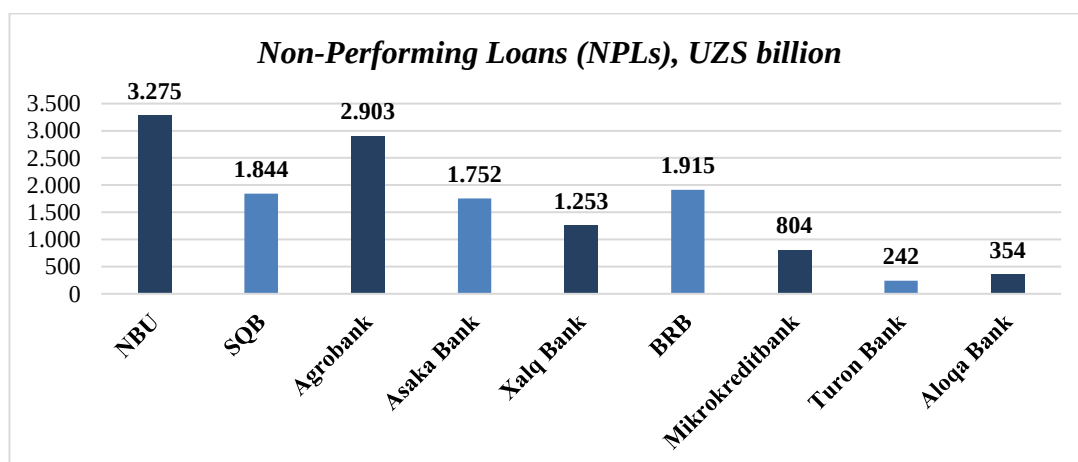


Figure 2. Non-Performing Loans of State-Owned Banks as of January 1, 2025 (UZS billion)

Figure 2 shows that the state-owned segment was concentrated in several large lenders, particularly NBU, SQB, and Agrobank. Figure 2 demonstrates that absolute NPL exposure was also concentrated: at the baseline date, NBU reported UZS 3.275 trillion in

NPLs, Agrobank UZS 2.903 trillion, the Business Development Bank UZS 1.915 trillion, SQB UZS 1.844 trillion, and Asaka Bank UZS 1.752 trillion. This distinction between absolute NPL volume and the NPL ratio is important. A large bank may carry a high absolute stock of problem loans while maintaining a moderate ratio, whereas a small bank can record a high ratio with limited system-wide exposure.

By January 1, 2026, the banking system's gross loan portfolio had increased to UZS 604.002 trillion, while the stock of NPLs declined to UZS 18.055 trillion. The system-wide NPL ratio consequently fell to 3.0% [8, 9]. The reduction occurred despite continued credit expansion, indicating an improvement in aggregate asset quality over the year. NPLs in banks with state ownership declined to UZS 12.834 trillion, with the group ratio falling to 3.2%, while other banks recorded UZS 5.221 trillion in NPLs and an NPL ratio of 2.6%.

The improvement, however, was heterogeneous across institutions. Bank-level data show substantial reductions in several institutions that began 2025 with elevated NPL ratios. For example, the ratio at Ipoteka-bank declined from 10.2% to about 3.5%, at the Business Development Bank from 8.5% to about 4.5%, and at Agrobank from 4.9% to about 3.3%. At the same time, NPL ratios increased at several banks, including TBC Bank, Anorbank, Turon Bank, and Davr Bank [8]. These differences indicate that a favorable system-wide trend should not be interpreted as uniform improvement at every institution.

The cross-bank variation is consistent with the literature that treats NPLs as the outcome of both common economic conditions and bank-specific management practices. Berger and DeYoung show that weak operating efficiency can precede deterioration in loan quality, while Louzis emphasize management quality alongside macroeconomic variables. The Uzbekistan data similarly suggest that portfolio-level outcomes depend not only on the general operating environment but also on underwriting discipline, the composition and speed of credit growth, borrower monitoring, and the effectiveness of collection and restructuring processes.

The findings should be interpreted descriptively rather than causally. The data do not identify which factor caused the change in each bank's NPL ratio. Nevertheless, the simultaneous expansion of total lending and decline in the aggregate NPL ratio indicates that portfolio growth is not mechanically associated with deterioration when screening, monitoring, provisioning, and recovery processes are effective. Conversely, increases in NPL ratios at individual banks warrant closer analysis of loan vintages, borrower segments, concentration, repayment behavior, and restructuring history.

From a risk-management perspective, the most practical response is to strengthen early detection rather than rely only on ex-post recovery. Integrated bank information systems can combine payment delays, changes in account turnover, debt-service indicators, collateral revaluation, sector risk, and credit-bureau information to identify weakening borrowers before default becomes persistent. This approach is consistent with the broader international move toward more comparable NPL identification, forbearance assessment, and cure-period requirements noted for Uzbekistan in the 2026 IMF assessment.

For banks with high absolute NPL volumes, specialized workout units and segmentation of large corporate exposures may be more important than a single portfolio-wide collection strategy. For smaller or rapidly expanding retail portfolios, automated behavioral scoring, vintage analysis, debt-burden monitoring, and tighter exception controls can provide earlier warning. In both cases, timely restructuring should be reserved for borrowers with demonstrable repayment capacity, while repeated restructuring without evidence of recovery can delay recognition of credit deterioration.

The comparison also shows why the NPL ratio should be read together with absolute NPL volume, portfolio growth, provisions, and concentration indicators. A falling ratio can result from genuine recovery, write-offs, portfolio expansion, or a combination of these effects. Consequently, bank management should monitor both stock and flow measures, including new NPL formation, cures, recoveries, write-offs, migration between risk stages, and the coverage of NPLs by provisions.

Overall, the 2025–2026 evidence points to improved system-wide loan quality but persistent bank-level heterogeneity, reinforcing the need for institution-specific credit risk diagnostics and continuous portfolio monitoring.

5. Conclusion.

This study examined the factors associated with the emergence of non-performing loans and evaluated recent NPL dynamics in Uzbekistan's commercial banking sector. The analysis confirms that NPL formation is multidimensional: borrower repayment capacity and macroeconomic conditions interact with bank-specific factors such as underwriting quality, portfolio concentration, credit growth, monitoring intensity, operating efficiency, and recovery practices. At the system level, loan quality improved during 2025: while the aggregate loan portfolio expanded, the NPL stock declined from UZS 21.185 trillion at the beginning of 2025 to UZS 18.055 trillion at the beginning of 2026, and the NPL ratio fell from 4.0% to 3.0%. The principal practical implication is that banks should move from reactive problem-loan collection toward continuous, data-driven prevention. Early-warning systems should combine repayment behavior, borrower cash-flow indicators, debt burden, collateral information, sector exposure, and credit-bureau data. Portfolio management should be supported by vintage and migration analysis, stress testing, concentration limits, and regular review of exceptions to lending standards. For already distressed exposures, economically viable borrowers should be restructured at an early stage under verifiable recovery plans, while non-viable exposures should be transferred promptly to specialized workout and recovery processes. Finally, NPL management should be evaluated using a set of complementary indicators rather than a single ratio. Tracking absolute NPL volumes, new defaults, cures, recoveries, write-offs, provisioning coverage, and portfolio growth provides a more accurate assessment of credit risk. These measures can improve the quality of lending decisions, protect bank liquidity and capital, and support sustainable expansion of commercial bank credit.

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