O'ZBEKISTON RESPUBLIKASI MARKAZIY BANKI

Debt Burden Analysis and Risks

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This is a translation of the original version in Uzbek, which is the sole authoritative text.

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Summary

Although Uzbekistan's credit to private sector-to-GDP ratio is broadly consistent with the countries in the same income group, it is higher than in most countries of the Commonwealth of Independent States (CIS). The total debt burden and its components have increased significantly in recent years. In particular, the credit to private sector-to-GDP ratio remains higher than the trend line.

Several developments may pose risks to financial stability. Within the 25th and 75th percentile thresholds, Uzbekistan's credit-to-GDP ratio increases faster than that of comparable countries. Crossing the 75th percentile may induce vulnerabilities in the financial system.

The average number of loan agreements per borrower reached 1.2. The growing number of borrowers means a relatively faster increase in debt burden in the future. A coefficient greater than 1 indicates that the debt burden of individual borrowers may be high and trigger systemic vulnerabilities in the event of a sharp economic deterioration.

The decrease in the share of the low-income population (excluding the COVID-19 pandemic period) and their transition to higher-income groups will increase the number of people eligible for credit. Consequently, the population's debt burden may rise due to increased credit demand.

The bank consumer loans-to-GDP ratio is only 2 percent. However, the rising popularity of installment-based sales of consumer goods and services at retail stores may have resulted in unchanged customer demand for bank consumer loans. Furthermore, data for bank car loans does not capture installment-based car sales in the primary (i.e., new cars) and secondary (i.e., used cars) markets outside the banking system. Because non-bank installment loans are not reported to credit bureaus, the indicator of bank loans cannot fully capture the population's debt burden. The population's debt burden may be greater than it appears if their retail installment-based purchases outside the banking system are taken into account.

Amid the housing construction boom in Uzbekistan, purchasing new apartments in installments, without bank mortgage loans, has become possible. Thus, individuals' non-bank financial liabilities associated with

home purchases come on top of bank-financed mortgages—the latter accounts for 5 percent of GDP.

If the population is excessively indebted, most of their income is spent on loan repayment, resulting in subdued future consumer demand. Lower disposable income can lead to non-performing loans, putting financial stability at risk.

In international practice, debt burden analysis is not limited to financial sector indicators. Various surveys can assess the level of the debt burden more accurately. The CBU plans to conduct surveys among the population and business representatives in the future.

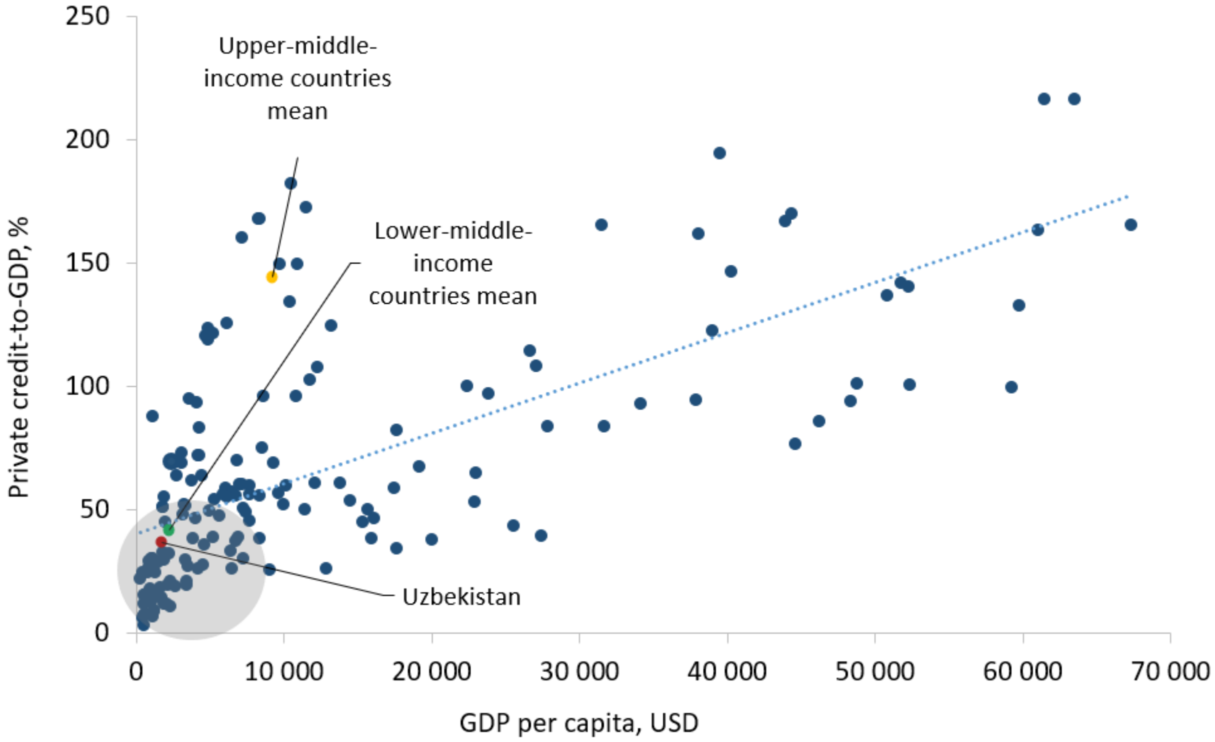
Introduction

The debt burden level is a crucial indicator of financial stability. The rapid increase in the debt burden was among the causes of the financial crisis of 2007–2008. The macroeconomic developments in Uzbekistan in recent years call for an in-depth analysis of the debt burden and the identification of associated risks. A number of indicators are used to measure debt burden, such as the credit-to-GDP, loans to private sector-to-GDP, loans to individuals-to-GDP, and loans-to-disposable income ratios.

1. Loans to private sector-to-GDP ratio

Research[1] shows a positive correlation between the GDP per capita and the private sector loans-to-GDP ratio. According to the 2020 data, a higher private sector loans-to-GDP ratio in developed countries corresponds to a higher GDP per capita. Higher financial intermediation, financial inclusion, and the broader use of financial market instruments can explain this.

Figure 1. Loans to Private Sector-to-GDP ratio and GDP per Capita in All Countries, 2020[2]

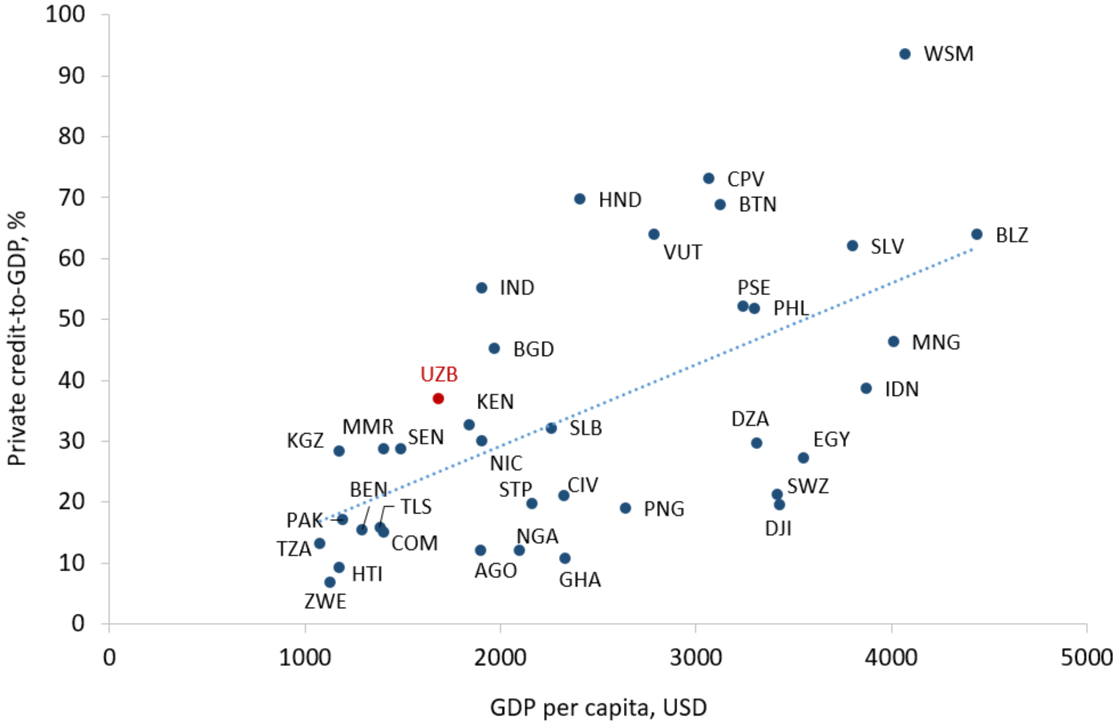


Source: World Bank and CBU staff calculations.

[1] Egert, B., Backe, P., Zumer, T. Credit growth in Central and Eastern Europe: New (over) shooting stars? ECB Working Paper, No. 687.
[2] The scatter plot includes indicators for 170 countries.

Uzbekistan's private sector loans-to-GDP ratio reached 36 percent, close to the trend line and the average for lower-middle-income countries[3]. The private sector loans-to-GDP ratio for upper-middle-income countries[4] was much higher (144 percent).

Figure 2. Loans to Private Sector-to-GDP Ratio and GDP per Capita in Lower-Middle-Income Countries, 2020



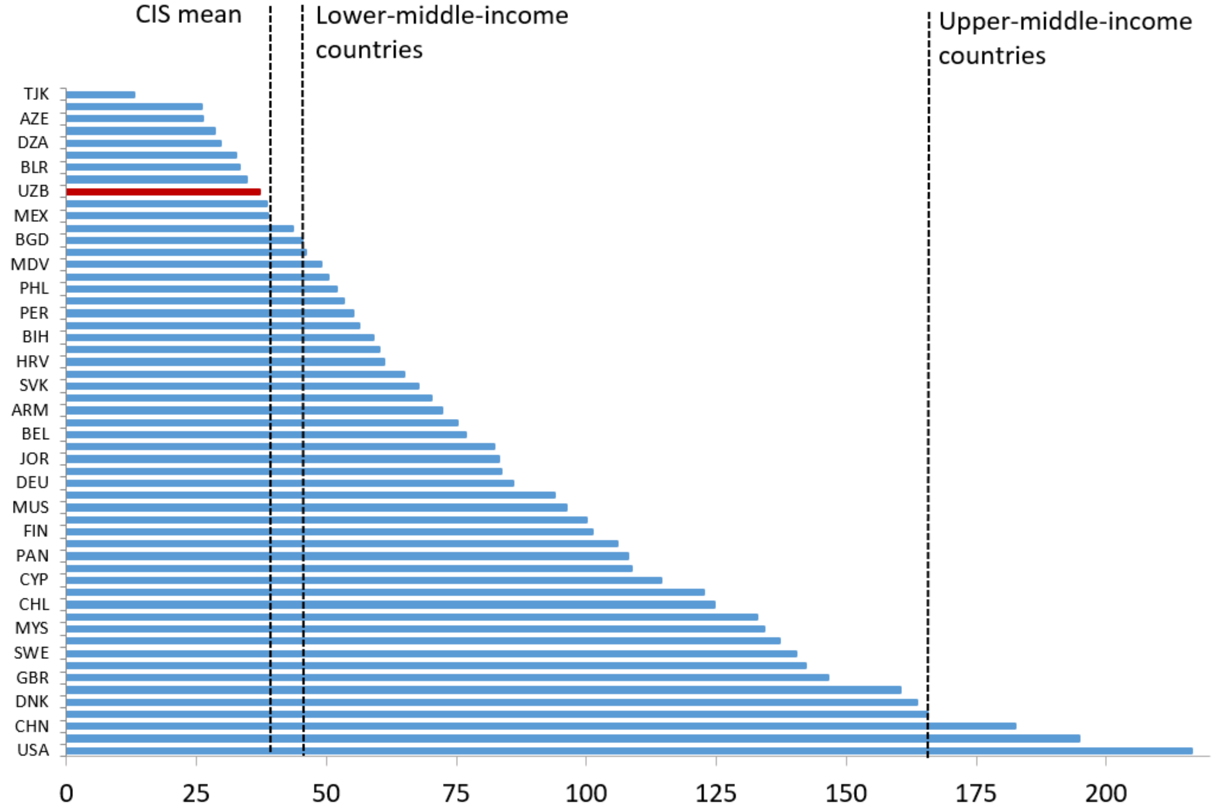
Source: World Bank and CBU staff calculations.

In 2020, the average private sector loans-to-GDP ratio was 150 percent worldwide, 167 percent in high-income countries[5], 42 percent in lower-middle-income countries, and 37 percent in the CIS countries. The percentile bands illustrate how Uzbekistan compares to other countries with a similar level of economic development. Uzbekistan's private sector loans-

[3] As of July 1, 2021, according to the World Bank country classifications by income level, lower-middle-income countries include 55 countries with gross national income per capita from 1,046 to 4,095 US dollars, including Uzbekistan.
[4] As of July 1, 2021, according to the World Bank country classifications by income level, upper-middle-income countries include 55 countries with gross national income per capita from 4,096 to 12,695 US dollars.
[5] As of July 1, 2021, according to the World Bank country classifications by income level, high-income countries include 80 countries with gross national income per capita above 12,696 US dollars.

to-GDP ratio was slightly lower than the average for lower-middle-income countries but very close to the CIS average[6].

Figure 3. Loans to Private Sector-to-GDP in 2020, %



Source: World Bank and CBU staff calculations.

The relatively narrow interquartile range for the private sector loans-to-GDP ratio for the CIS countries means that their indicators are close to each other. The median's proximity to the 25th percentile denotes a lower private sector debt burden in most CIS countries. In contrast, due to their heterogeneity, lower-middle-income countries have a wide interquartile range. The median's location within the interquartile range indicates a normal distribution of the proportionality between the GDP per capita and private sector debt burden.

[6] A type of visual analysis that shows an indicator's location in the second and third quartiles, or the middle half of a data set, and how far the indicator is from the median.

Figure 4. Loans to Private Sector-to-GDP Ratio in CIS Countries, %

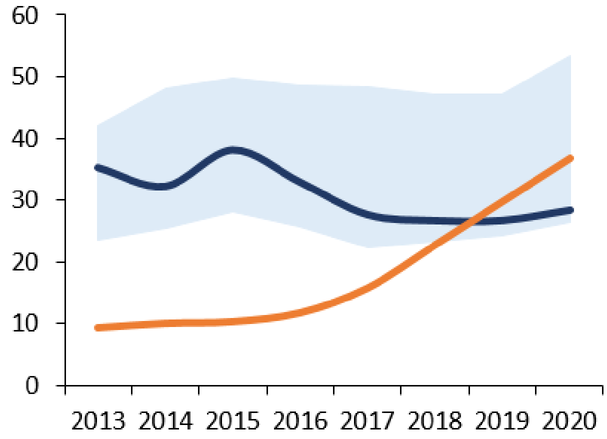
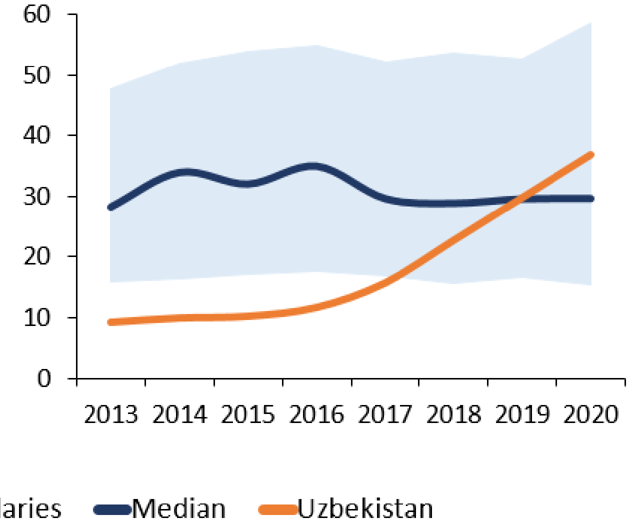


Figure 5. Loans to Private Sector-to-GDP Ratio in Lower-Middle-Income Countries, %



Source: World Bank and CBU staff calculations.

Since 2019, Uzbekistan's private sector loans-to-GDP ratio has outpaced the median for the CIS and lower-middle-income countries. Such rapid growth and approaching the 75th percentile may intensify financial stability vulnerabilities.

2. Total credit-to-GDP ratio

The fast credit growth in Uzbekistan since 2017 was driven by supply and demand factors. The credit supply increased due to the liberalization of the foreign exchange market, the expansion of lending funded by the government and external creditors, and increased access to finance. On the demand side, reforms facilitated business and consumer activity, leading to greater credit demand.

Figure 6. Total Loans-to-GDP Ratio, %

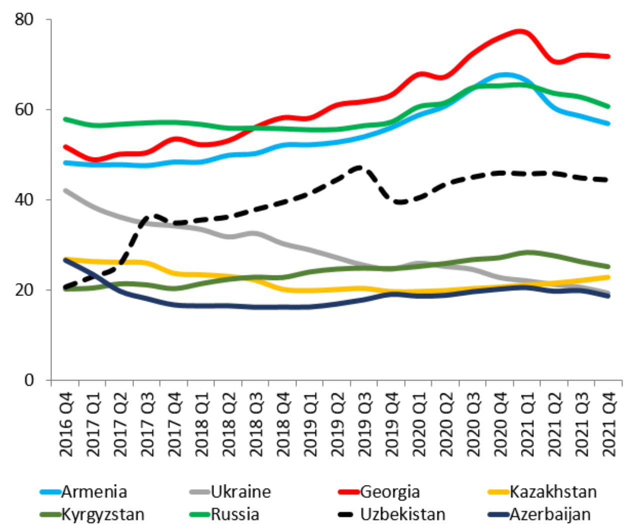
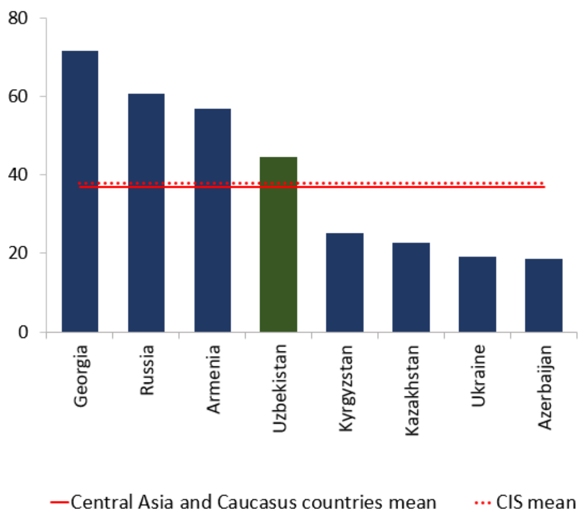


Figure 7. Total Loans-to-GDP Ratio in Q3 2021, %



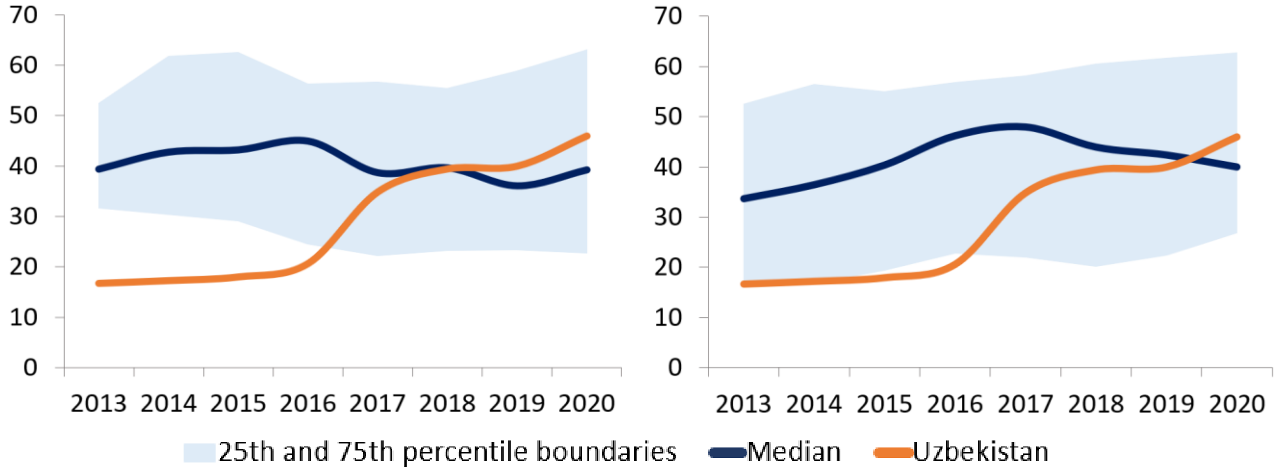
Source: World Bank and CBU staff calculations.

Since 2020 Uzbekistan's total loans-to-GDP ratio has stabilized at 40-45 percent. In Q3 2021, the total loans-to-GDP ratio for the Caucasus and Central Asia[7] and the CIS countries averaged 49 and 43 percent, respectively. The ratio fell after a slight increase during the Covid-19 pandemic in Armenia, Azerbaijan, Belarus, Georgia, and Russia due to an economic slowdown and a sharp decline in loan repayment.

Uzbekistan approaches the 75th percentile in the total loans-to-GDP ratios' interquartile ranges for the CIS and lower-middle-income countries.

Figure 8. Total Loans-to-GDP Ratio in CIS Countries, %

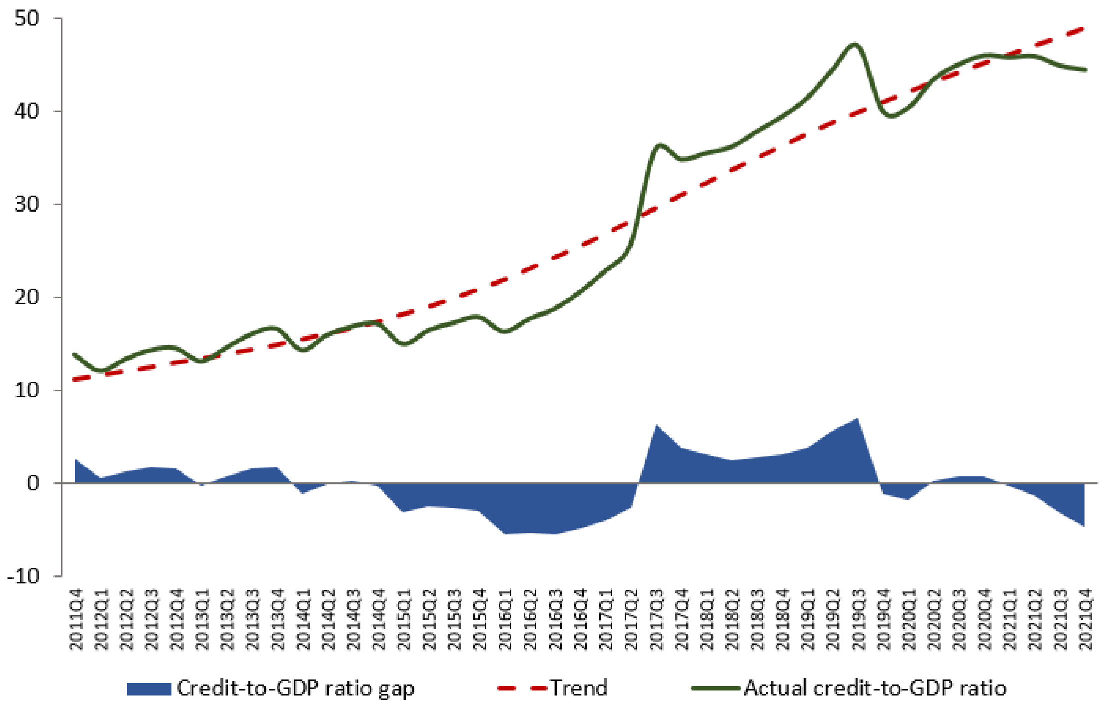
Figure 9. Total Loans-to-GDP Ratio in Lower-Middle-Income Countries, %



Source: World Bank and CBU staff calculations.

[7] The Caucasus and Central Asia countries include Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan.

Figure 10. Credit-to-GDP Gap[8], %



Source: CBU staff calculations.

The credit-to-GDP gap is often used as an early warning indicator of systemic financial vulnerabilities. From Q3 2017 to Q3 2019, Uzbekistan's credit-to-GDP gap ranged from 2.5 to 7.1 percentage points. The positive gap suggests that credit supply exceeded credit demand implied by the potential GDP. The pent-up investment demand could be the reason for this. In 2021, the credit-to-GDP ratio gap turned negative. However, a positive gap may reappear if lending expands while economic growth slows down.

As loans to individuals and legal entities grew at a similar pace recently, their shares in total loans remained almost unchanged.

[8] The credit-to-GDP gap is calculated using the Hodrick-Prescott (HP) filter.

Figure 11. Decomposition of Total Loans-to-GDP, %

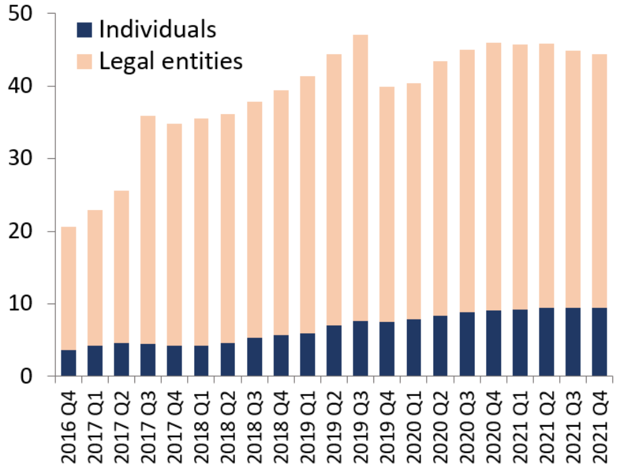
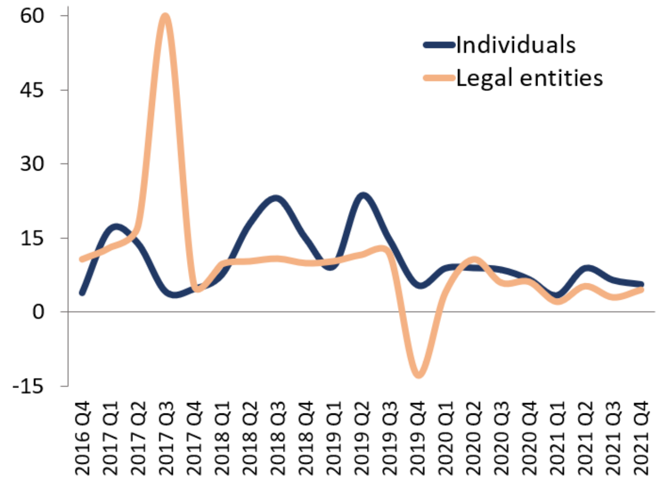


Figure 12. Quarterly Credit Growth, %



Source: CBU staff calculations.

The high share of corporate loans in Uzbekistan is consistent with other countries (79 percent in Kyrgyzstan, 73 percent in Belarus, 69 percent in Russia, 64 percent in Moldova, 57 percent in Armenia, and 53 percent in Kazakhstan[9]).

Figure 13. Credit Outstanding to Individuals by Maturities, in trillion soums

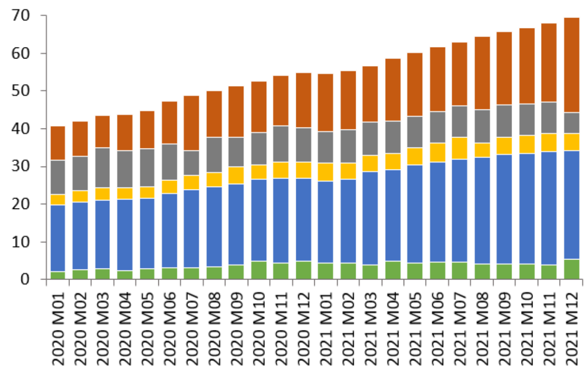
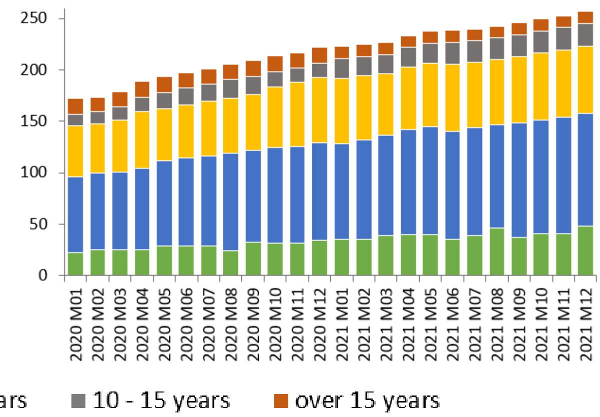


Figure 14. Credit Outstanding to Legal Entities by Maturities, in trillion soums



Source: CBU staff calculations.

Almost 43 percent of loans issued to individuals and legal entities have a maturity of 1 to 5 years. Due to mortgage lending expansion in

[9] Data is from the official websites of the central banks as of end-2020.

recent years, the share of loans to individuals with a maturity of more than 15 years increased and by end-2021 reached about 36 percent.

Figure 15. Unsecured Credit Outstanding by Sectors, trillion soums

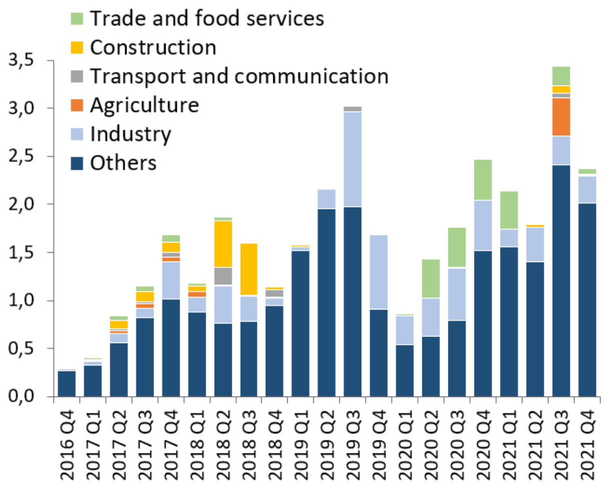
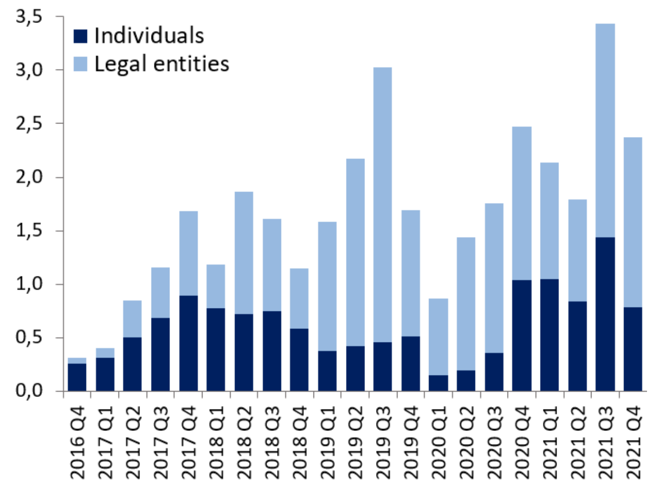


Figure 16. Unsecured Credit Outstanding by Borrower Types, trillion soums



Source: CBU staff calculations.

Loans with a maturity of 5 to 10 years account for 26 percent of total loans issued to legal entities. The small share of loans to individuals with a maturity of 1 year (8 percent) suggests high inflation expectations of borrowers.

The share of unsecured loans in total loans in Uzbekistan was only 2.4 percent as of January 1, 2022.

3. Sector analysis

The industrial sector received approximately 35-40 percent of total loans in Uzbekistan, while its share of GDP is, on average, 23 percent. The industrial sector loans-to-GDP ratio was about 16 percent in 2021.

Figure 17. Decomposition of Total Loans-to-GDP by Sectors, %

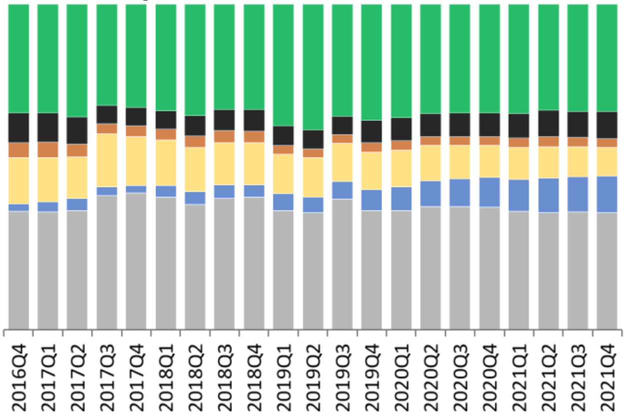
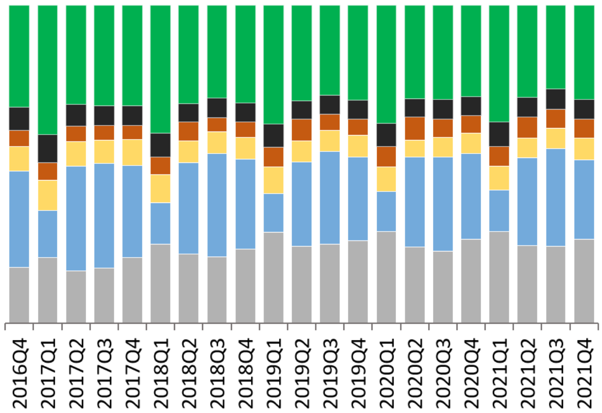


Figure 18. Decomposition of GDP by Sectors, %



Industry Agriculture Transport and communication Construction Trade and service Others

Source: CBU and Statistics Committee.

Although the share of agriculture loans in total loans is small, it continues to grow. In 2021, it amounted to 11 percent, an increase of 5 percentage points compared to 2017. Despite the small size of lending to agriculture, the sector accounts for 30 percent of GDP. The large share of lending to the industry can be explained by the high demand for fixed assets, i.e. for modern machinery and equipment. The lower demand for credit in agriculture may be due to the high demand for labor and work seasonality.

4. Debt burden of individuals

Individuals' credit outstanding-to-GDP ratio in Uzbekistan has been growing significantly since 2018. The increased popularity of financial services and financial assistance to the population through state programs have stimulated lending to individuals. In 2021, the loans-to-GDP ratio for individuals was 9.5 percent, while the loans-to-disposable income ratio for individuals[10] was 14.4 percent.

[10] Disposable income is part of individuals' income after tax.

Figure 19. Loans to Individuals, %

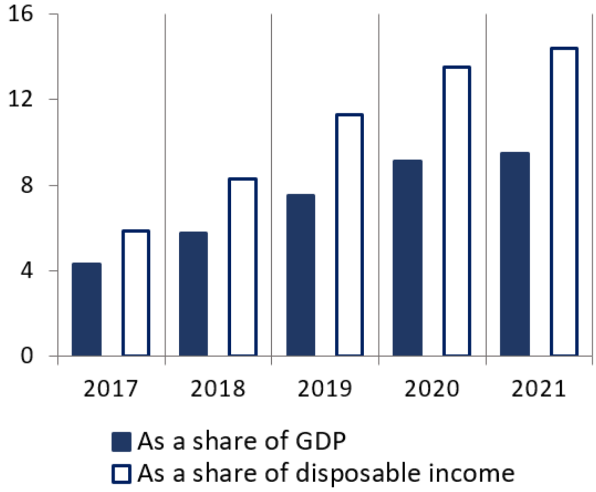
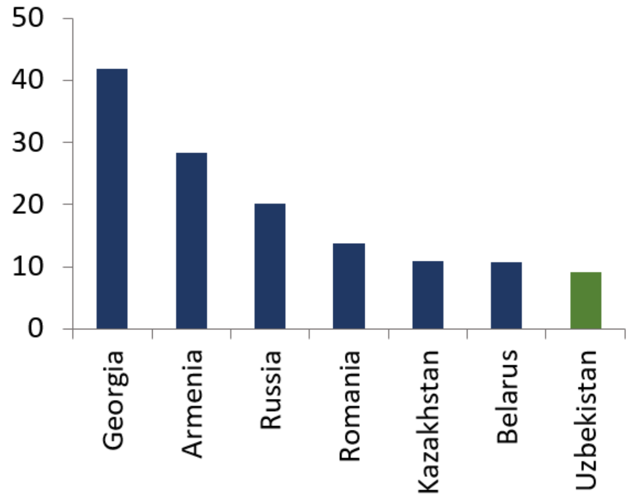


Figure 20. Loans to Individuals-to-GDP in Selected Countries in 2020, %



Source: IMF, CBU and Statistics Committee.

In Uzbekistan, the loans-to-GDP ratio for individuals is lower than in Russia, Kazakhstan, Armenia, and Georgia, indicating Uzbekistan's unsaturated retail lending market. Mortgages account for the largest share in the decomposed ratio. As of January 1, 2022, the mortgage loans-to-GDP ratio was 5 percent. The loans-to-GDP ratio for individuals increased in recent years but stabilized in 2021. The ratio's structural composition has changed over the years.

Figure 21. Loans to Individuals, % of GDP

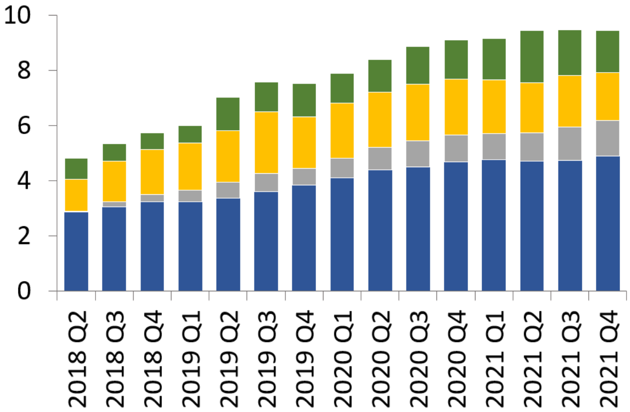
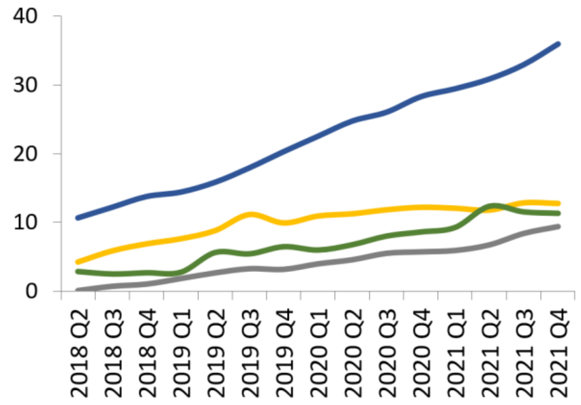


Figure 22. Outstanding Loans to Individuals, in trillion soums



Source: CBU staff calculations.

The housing construction acceleration, the development of the mortgage market, natural population growth, and the population's pent-up demand for housing fostered the rapid growth of mortgage lending to individuals. The increase in individuals' outstanding microdebt can be explained by the rising popularity of such a loan product due to the simplified disbursement process through cash, bank cards, or mobile applications. Bank consumer loan volume has mostly stayed the same owing to a large extent to the growing practice of installment-based sales of consumer goods at retail stores.

The credit demand of individuals depends on their income and the stratification level. According to the income distribution of the population in Uzbekistan by 10 equal groups (deciles), the largest share corresponds to the X decile, i.e., the group with the highest income, and the smallest share corresponds to the I decile, i.e., the group with the lowest income.

Figure 23. Income Distribution by Deciles[11], %

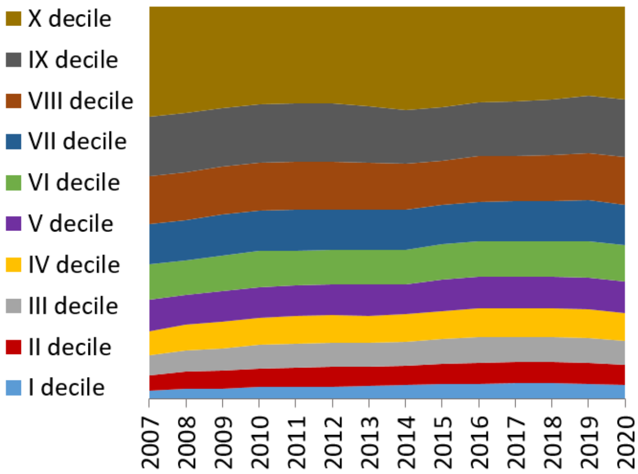
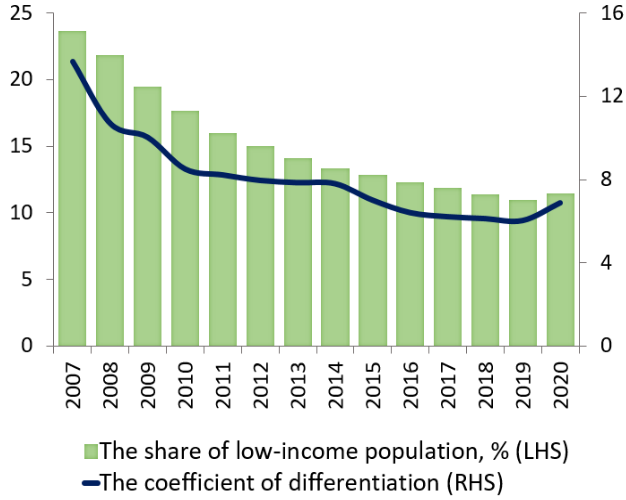


Figure 24. Share of Low-Income Population[12] in Total Population (%) and Coefficient of Differentiation of Population by Deciles[13]



Source: Statistics Committee.

The decline of the X decile by 5.2 percentage points during 2007–2020 and the increase in the share of the middle-class deciles indicates a decrease in the uneven income distribution. Also, from 2007 to 2019, the differentiation coefficient fell from 13.7 to 6 but rose slightly to 6.9 in 2020 due to the COVID-19 pandemic. Because of the decrease in the I decile and the increase in the X decile, the differentiation coefficient change shows that the income distribution gap is widening, and the number of people potentially eligible for taking a loan is growing. Excluding the

[11] The income distribution by deciles shows the share of the population belonging to each group by dividing the difference between the lowest and highest incomes by 10 equal groups. In this case, all deciles add up to 100 percent.

[12] Effective in 2022, a family is recognized as low-income if the average monthly total income for each family member does not exceed the minimum consumer expenditure.

[13] The income differentiation of the population is calculated as a ratio of the X decile to the I decile.

pandemic period, the share of the low-income population in the total population is declining. As Uzbekistan's population grows annually, an increase in the number of middle- and high-income earners and their better access to credit may create additional demand for loans.

5. Non-performing loans (NPLs)

The share of NPLs in total loans increased significantly in 2021, reaching 5.2 percent as of January 1, 2022. The decline in real economic activity due to strict quarantine measures implemented since March 2020 negatively impacted the quality of bank assets.

Figure 25. Share of NPLs in Total Loans of SOBs and Private Banks, %

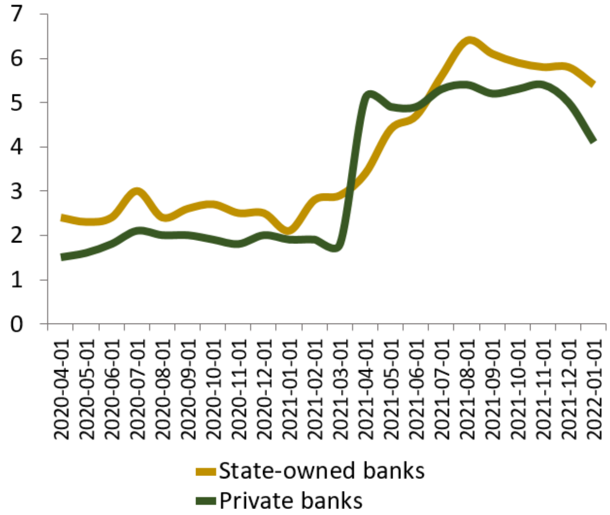
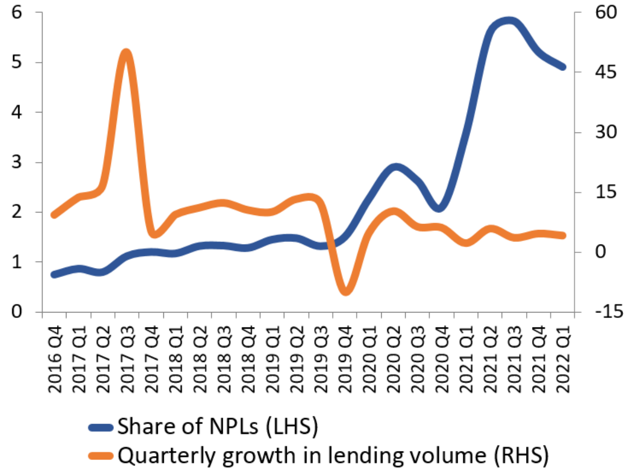


Figure 26. Share of NPLs in Total Loans and Credit Growth, %



Source: CBU.

The NPL ratio also increased due to the CBU measures to improve the accuracy of NPL reporting by banks.

Figure 27. NPL Ratio in Selected Countries, %

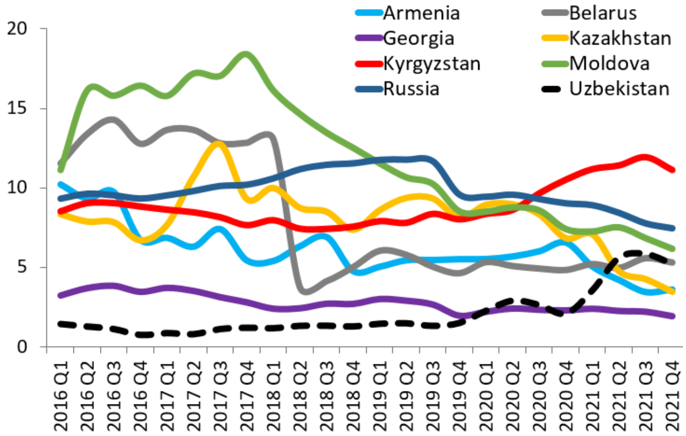
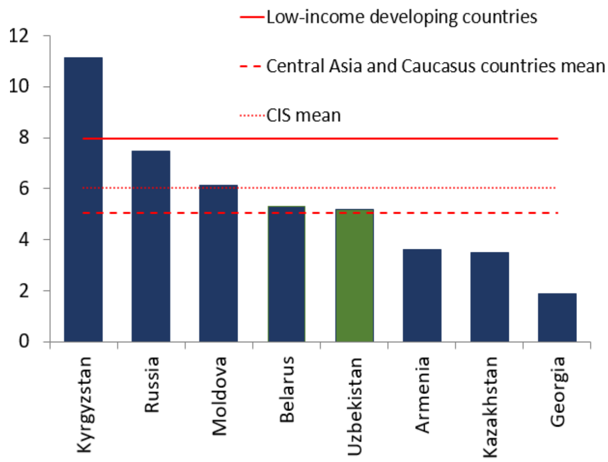


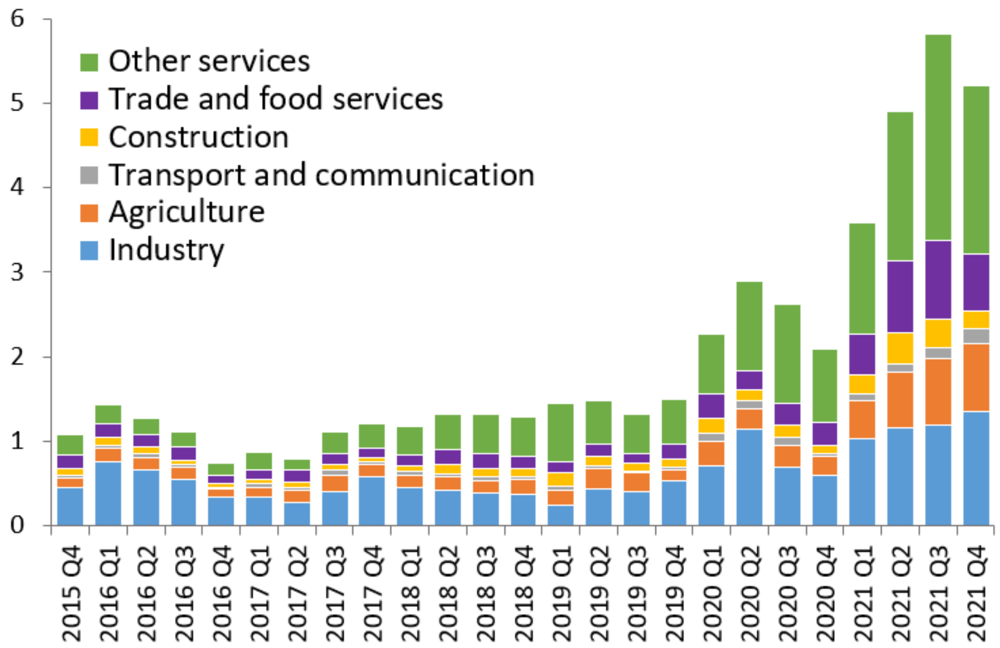
Figure 28. NPL Ratio in Selected Countries in Q3 2021, %



Source: IMF and CBU staff calculations.

By the end of Q3 2021, the average share of NPLs in low-income developing countries was 9 percent[14], while in the CIS, Caucasus and Central Asia countries it was 6 percent. In most countries, the rise in the NPL ratio due to the pandemic and quarantine restrictions continued until the end of 2020. However, loan deferments and other regulatory anti-crisis measures slowed the sharp increase in the share of NPLs.

Figure 29. NPL Decomposition by Sectors, %



Source: CBU staff calculations.

NPLs were most prevalent in the industrial and other services sectors. Due to a decrease in other services, trade and food services, the NPL ratio fell from 5.8 to 5.2 percent in Q4 2021.

6. Analysis by the number of borrowers

The borrower debt burden can also be assessed by calculating the number of borrowers and loan agreements per borrower. As of January 1, 2022, there were 2.8 million borrowers, of which 96 percent or 2.7 million were individuals. In 2021, the total number of borrowers increased by 7 percent, of which the number of individuals grew by 8 percent, while the number of legal entity borrowers decreased by 11 percent.

[14] The average NPL ratio for low-income developing countries is calculated based on available data for 18 out of 59 countries.

Figure 30. Number of Borrowers, million

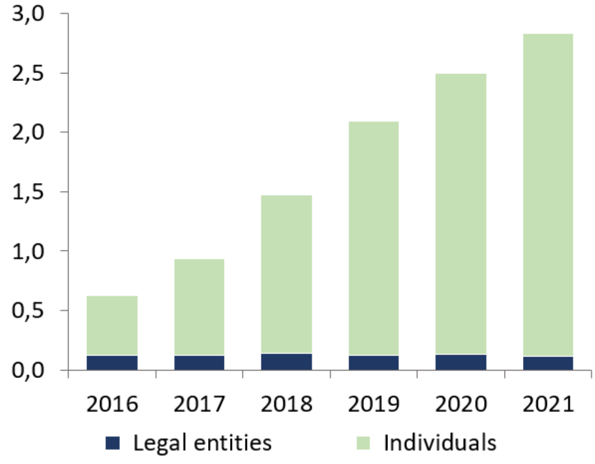
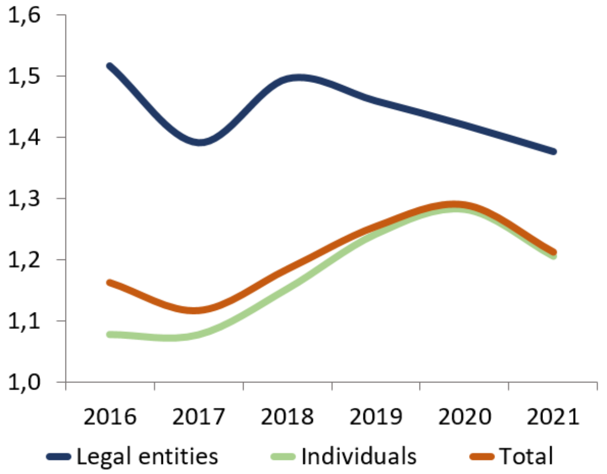


Figure 31. Number of Loan Agreements per Borrower



Source: CBU.

From 2016 to 2021, the number of loan agreements per borrower was above 1, indicating that some borrowers had two or more loans. A gap between the loan agreements per borrower for legal entities and individuals narrowed as the numerator decreased for the former and increased for the latter. The number of loan agreements per legal entity borrower has declined since 2018 and reached 1.4 in 2021. The decrease in the number of loan agreements per individual borrower in 2021 can be attributed to a decline in the number of borrowers and the introduction of the debt burden limit for individuals[15]. The loan agreements per borrower greater than 1 means that the debt burden of some borrowers may be significantly higher than the total credit-to-GDP ratio.

[15] Since 2020, the average monthly loan or microloan repayments to the average monthly income of a borrower should not exceed 50 percent.