

FINANCIAL STABILITY REPORT

2024-II

November 29, 2024



Foreword

As the Central Bank of the Republic of Türkiye, we closely monitor financial stability issues, and the biannual Financial Stability Report provides a platform to share a summary of the recent developments with the public.

Since the previous issue of the report, the disinflation process has continued while financial conditions have remained tight. The tightness in financial conditions has contributed to the rebalancing of domestic demand, and the improvement in the current account balance has become more evident.

We keep supporting our tight monetary policy stance with macroprudential policies. As a result, credit growth remains in line with the disinflation path. As the monetary transmission mechanism is strengthened, prices in financial markets are formed in accordance with the policy rate and market expectations.

The disinflation process sustains the interest and confidence in Turkish lira assets. The steady rise in the share of Turkish lira deposits has continued. The substantial decline in the FX-protected deposit balance has strengthened the monetary transmission mechanism and reduced the risks to the central bank balance sheet. The tight monetary policy stance that we are decisively implementing will continue to ensure that deposit rates remain at levels that will support Turkish lira savings.

The current policy mix supports the improvement in risk sentiment and the subsequent decline in the risk premium. As a result, firms' and banks' ability to borrow from global financial markets has improved. Despite tightening financial conditions, the deterioration in asset quality has been limited due to low corporate indebtedness. Banks' strong capital and liquidity buffers, in addition to their prudent provisioning policies, keep risks at manageable levels.

I hope that the 39th volume of our Financial Stability Report, which covers current developments regarding financial stability as well as the global and domestic macro financial outlook, will be of benefit to all readers.

Fatih KARAHAN, Ph.D.

Governor

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I. Overview

Central banks of advanced economies have initiated rate cut cycles while the monetary policy stances of emerging economies vary. With central banks of advanced economies starting to cut rates, the expectations regarding the global growth outlook have begun to gradually improve, whereas the uncertainty surrounding the economic growth paths of emerging economies persists. Global uncertainties driven by geopolitical risks as well as the course of bond yields and the growth outlook expectations affect the risk appetite and the capital flows to emerging economies.

While domestic economic activity slowed in the second quarter of 2024, the rebalancing in domestic demand has continued. The foreign trade deficit narrowed on the back of this rebalancing, and the improvement in the current account deficit was maintained with the support of surplus in the services balance. In addition to the fall in the current account deficit, the rise in portfolio investments and other financing supported international reserves. While consumer inflation dropped to 48.6% due to the improvement in core good inflation, food inflation has increased in recent months.

Turkish lira (TL) and foreign exchange (FX) commercial loan growth rates have converged, and commercial loan growth rates have receded to disinflationary levels. The tight monetary policy stance and the complementary macroprudential framework that supports the tight financial conditions have been effective in keeping commercial loan growth on a moderate path. The current level of TL commercial loan interest rates implies continued tightness in financial conditions. Financing costs for long-term TL commercial loans are in a downward trend due to the change in maximum prepayment fees for commercial loans and the improvement in inflation expectations. This trend is projected to continue in the upcoming period. As the growth limit imposed on FX loans became more restrictive in July, FX loan growth has also converged to TL commercial loan growth.

Retail loan growth is predominantly driven by personal credit cards (PCC) and unsecured consumer loans, while there has been an upturn in housing loan growth recently. Moderate growth in retail loans is an important component of the rebalancing in domestic demand. The tight monetary policy stance and the complementary macroprudential measures slowed retail loan growth significant in the second quarter of 2024. The growth in the PCC balance, which was up slightly in the third quarter of the year due to education expenditures, appears to have returned to a moderate path in the last quarter. Housing loans, which had been declining as a ratio of the Gross Domestic Product (GDP), have begun to increase despite the high levels of housing loan rates and the continuation of tight macroprudential measures related to loan to value ratios.

Despite the tightening in financial conditions, the deterioration in asset quality indicators remains limited. The banking sector's non-performing loan (NPL) ratio increased slightly, driven by the rise in the retail NPL ratio. Nevertheless, the NPL ratio is below the historical average across all loan segments. A new restructuring facility was introduced for overdue PCC debt and unsecured consumer loans. In addition, PCC contractual interest rates were differentiated based on personal credit card debt of period, with higher rates defined for credit cards with higher debt. While differentiating credit card interest rates aims to slow down credit card debt accumulation, the restructuring facility intends to ease the cash flow of individuals having difficulties in repayment. These steps are expected to curb the rise in retail NPL and Stage 2 loan ratios.

While firms have a tendency to delay trade credit repayments (checks/bills), this has a limited impact on the asset quality of the banking sector. Although bad check and protested bill ratios of non-financial corporates (NFC) have increased, they remain significantly below the historical average. Meanwhile, there has been a slight rise in the commercial NPL ratio. A significant portion of overdue commercial loans are repaid within the legal period and do not turn into NPLs. High provisions, which banks allocate prudently, serve as an important buffer against deterioration in asset quality and support banks' balance sheets.

Despite the growth in FX loans, firms' buffers and the decline in the ratio of NFC debt to GDP limit the impact of tight financial conditions on NFC balance sheets. While the NFC's tendency towards FX loans has increased, the export revenues of firms using FX loans give them the capacity to cover their FX debts. The NFC's short FX position increased by USD 48 billion to USD 130 billion compared to end-2023 as firms opted for TL assets and internal financing despite increasing FX credit utilization. The NFC's financial leverage ratio is at historically low levels despite the rise in FX loans and the slowdown in financial asset growth. In 2024, the profitability and financing cost-coverage indicators of publicly traded firms deteriorated slightly, while firms' liquidity has remained relatively strong. The NFC sector analyses suggest that high profitability in the past has enhanced debt servicing capacity of the firms and facilitated the accumulation of liquidity buffers.

The ratio of household debt to GDP remained at a low level, while the share of PCC and overdraft account debts increased in the overall composition. The debt per capita and debt to income ratio continued to decline for consumer loans, albeit to a lesser extent for personal credit cards. In addition to tight financial conditions, the short maturity of retail loans leads to an increase in the credit risk of individuals with debt and income mismatches. Accordingly, the restructuring facility introduced for debts on unsecured consumer loans and personal credit cards will contribute to risk management. While the weight of TL-denominated assets in households' financial asset composition has grown, the share of FX-protected products continues to decline. Households continue to diversify their savings through alternative TL financial assets such as mutual funds, in particular, money market funds and pension systems.

The share of TL deposits is on the rise, while banks' FX and TL liquidity remains robust. The tightness in monetary conditions, macroprudential policies, the improvement in exchange rate expectations and the discontinuation of the temporary tax exemption on FX-protected deposits ensured that the share of TL deposits continued to increase steadily, while the share of FX-protected deposits fell below 7%. The rise in TL deposits, the CBRT's FX transactions, and its Treasury account activities led to an excess TL liquidity in the system. This excess TL liquidity is effectively managed via reserve requirements, deposit auctions, and additional sterilization tools introduced by the CBRT.

On the back of the decrease in the country risk premium, and rating upgrades by credit rating agencies, the improvement in external financing conditions has continued and banks' long-term external borrowing has increased. Despite heightened volatility in global financial markets and geopolitical risks, foreign investors' interest in Turkish banks' borrowing instruments has remained high. Banks' medium- and long-term external debt rollover ratios have increased, with the external debt rollover ratio well above 110%. The maturity of banks' external funding has increased, while the quality of external funding has been improving.

The maturity mismatch between interest rate-sensitive assets and liabilities in the banking sector is below its historical average. The decline in the average remaining maturity of loans and securities has contributed to keeping interest rate risk at manageable levels. Banks continue to have a balance sheet structure that is aligned with regulatory thresholds, and that provides a buffer against possible interest rate shocks. The banking sector's foreign currency position remains low and within legal limits.

Despite a decline in the profitability of the banking sector, the sector's internal capital generation capacity remains sufficient to support capital adequacy. Tight monetary policy and the macroprudential policy framework have been weighing on the net interest margin. Meanwhile, strong income generation from fees and commissions coupled with the moderate course in the cost of risk support the profitability outlook.

The banking sector's resilience is supported by strong capital adequacy. Capital ratios increased due to profits, subordinated debt issuances and the alignment of retail loan risk weights with Basel standards. Excess capital as well as precautionary provisions have been underpinning banks' capacity to absorb possible losses.

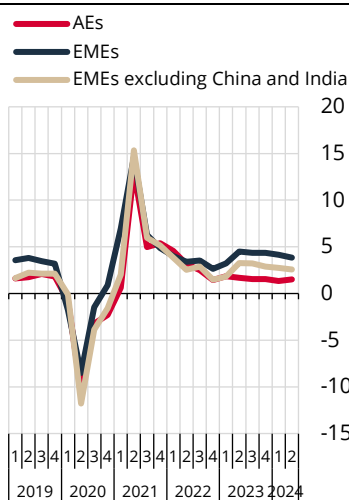
II. Macroeconomic Outlook

II.1 International Developments

Following the rate cuts by central banks of advanced economies, there has been a gradual improvement in expectations for global growth.

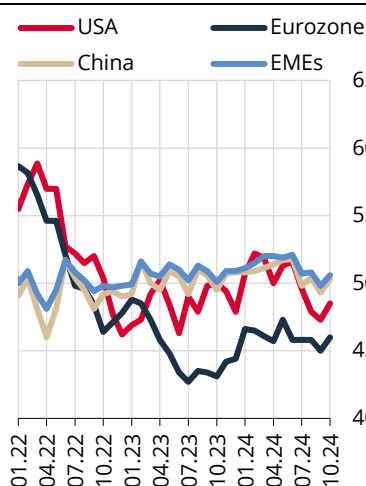
During the period marked by increased monetary tightening, global economic growth rates had moved on an almost flat path. After advanced economies (AEs) started to cut policy rates, global growth expectations have increased (Chart II.1.1). On the other hand, manufacturing purchasing managers' indices (PMI) continued to hover below the threshold level of 50, despite a recent slight increase (Chart II.1.2). The growth outlook for the US diverged positively from that of other AEs, while growth forecasts for the euro area were revised downwards. While global GDP forecasts for end-2025 show a gradual recovery in line with the monetary easing in the AEs, emerging economies (EMEs) continue to have the highest growth rates (Chart II.1.3).

Chart II.1.1: Countries' Growth Rates (%)



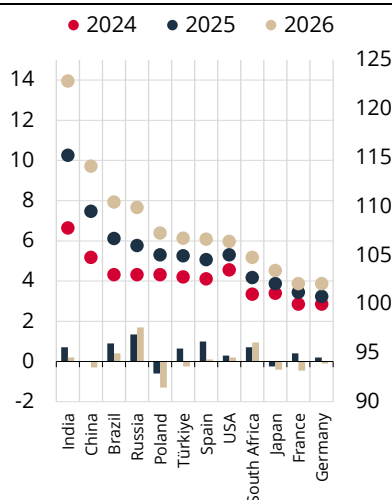
Source: Bloomberg Last Observation: 2024Q2

Chart II.1.2: Manufacturing PMI (Index)



Source: Bloomberg Last Observation: 10.24

Chart II.1.3: Real GDP Projections and Changes in Projections (Annual, 2023=100, % Change Point, Left Axis)



Source: Bloomberg

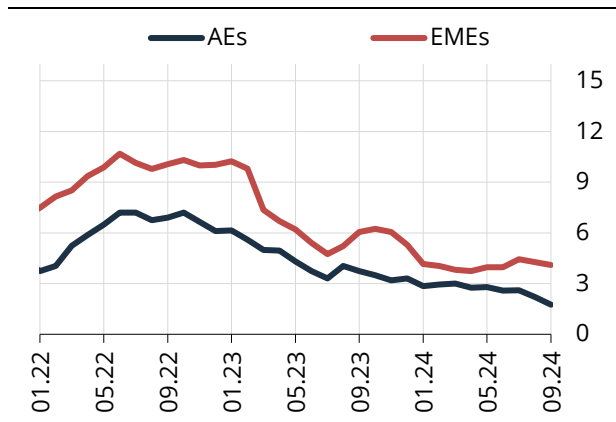
Note: AEs include the USA, the euro area, Japan, the United Kingdom, Canada, Korea, Switzerland, Sweden, Norway, Denmark, and Israel, while EMEs include China, Brazil, India, Mexico, Russia, Türkiye, Poland, Indonesia, South Africa, Argentina, Thailand, Malaysia, Czechia, Colombia, Hungary, Romania, the Philippines, Ukraine, Chile, Peru, and Morocco. In Chart II.1.3, the Bloomberg data is based on the World Bank method since the Indian fiscal year has a different period than the fiscal years of other countries. The column in Chart II.1.3 shows the difference between current forecasts and forecasts in May 2024.

While the inflation outlook is improving in advanced economies, the level of monetary tightness is being cautiously reduced.

While inflation in AEs has converged to the 2% target, it hovers slightly above the 3.5% target in emerging economies (Chart II.1.4). The easing of supply-side cost pressures in the global economy and the weaker demand composition due to monetary tightening steps stand out as the main factors keeping inflation on a moderate downtrend. Although supply-side risks to costs have diminished due to stable commodity prices, ongoing geopolitical uncertainties, fluctuations in the global supply chain and the recent increases in global food prices pose upside risks to global inflation. Even though central banks of advanced economies have started to cut interest rates in response to the decline in global inflation, they are expected to act cautiously

on the rate cut path. It is noteworthy that there is a divergence in expectations for interest rate cuts across AEs reflecting several factors including the risks to the inflation outlook (Chart II.1.5).

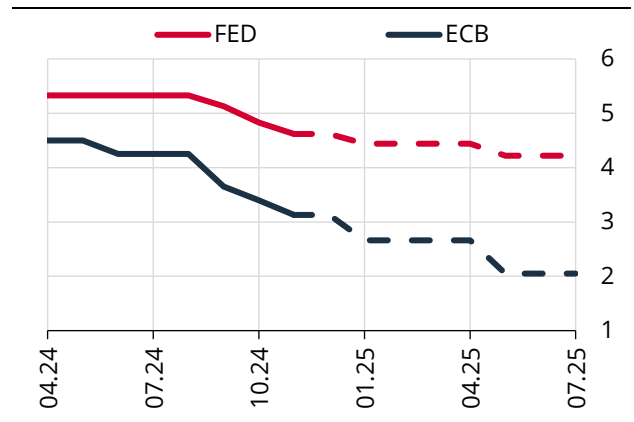
Chart II.1.4: Inflation Outlook in AEs and EMEs (Median, %)



Source: FRED, Bloomberg Last Observation: 30.09.24

Note: Inflation rates refer to the annual change in CPI in respective countries. EMEs include Brazil, Mexico, Russia, Poland, Indonesia, S. Africa, Thailand, Czechia, Colombia, Hungary, Romania, Romania and the Philippines. AEs include the USA, the euro area, Japan, the UK, Canada, S.Korea, Switzerland, Sweden, Norway, and Israel.

Chart II.1.5: Policy Rate Paths Implied by Market Pricing (%)

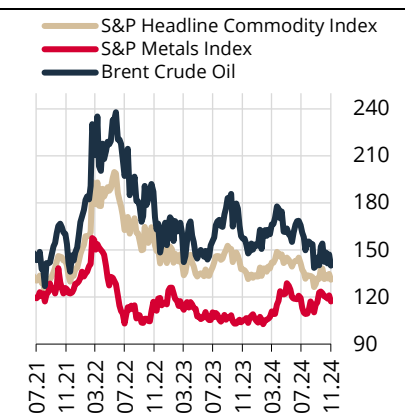


Source: Bloomberg Last Observation: 30.11.24

Note: Dashed lines shows implied policy rates.

Although commodity prices have declined significantly from their highest levels in the first half of 2022, there are divergences across commodity subgroups. In 2024, although metal prices fluctuated, commodity prices in general have been following a moderate course- an almost flat one (Chart II.1.6). Meanwhile, heightened geopolitical risks emanating from the Middle East keep supply-side upside risks to commodity prices alive, particularly to oil prices. Although the FAO's (the Food and Agriculture Organization of the United Nations) global food price index, which measures food prices in the global supply chain, has declined significantly from its post-pandemic peak, recent increases in the food index pose upside risks to the global inflation (Chart II.1.7). Even though services inflation in advanced economies has declined significantly since the beginning of 2023, it still hovers above historical averages (Chart II.1.8).

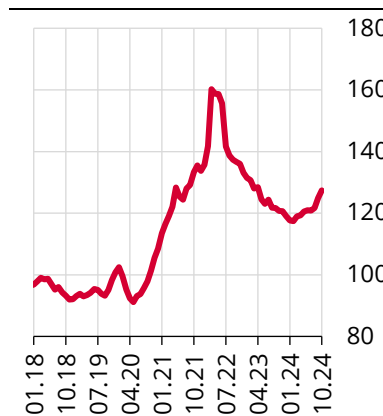
Chart II.1.6: Commodity Indices (Index, 25.12.2020=100)



Source: Bloomberg Last Observation: 15.11.24

Note: S&P Headline Commodity and Metals Indices are weighted by the futures prices of the most widely traded commodities and metals.

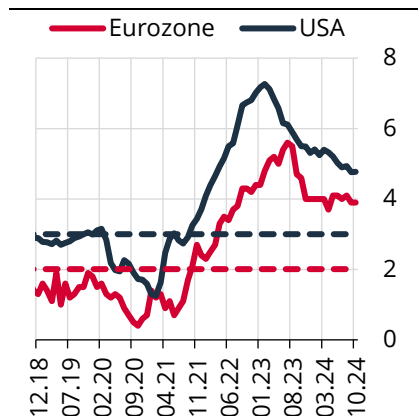
Chart II.1.7: Global Food Price Index (Index, 2015=100)



Source: Bloomberg Last Observation: 10.24

Note: Food price index published by the Food and Agriculture Organization of the United Nations is used.

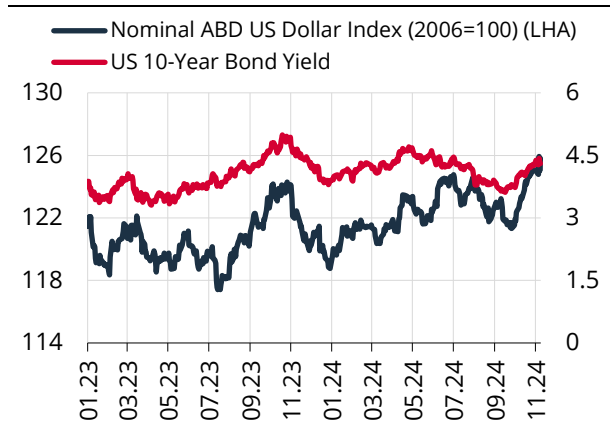
Chart II.1.8: Services Inflation in AEs (%)



Source: ECB, FRED Last Observation: 10.24

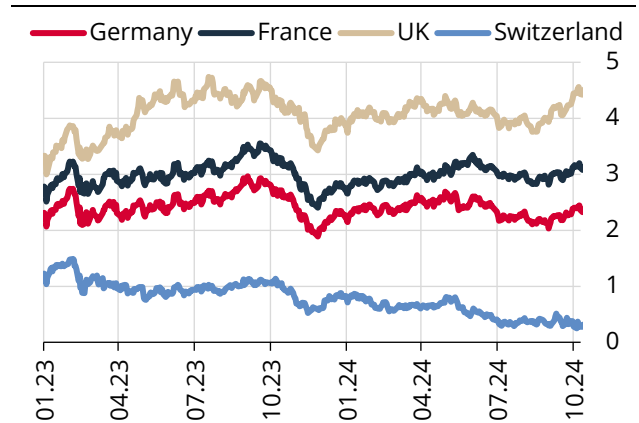
Note: Dashed lines represent the average of the respective services inflation for the 01.07 - 09.24 period.

Chart II.1.9: US Dollar Index and US 10-Year Bond Yields (Index, %)



Source: FRED, Bloomberg Last Observation: 08.11.24

Chart II.1.10: 10-Year Bond Yields in Europe (%)



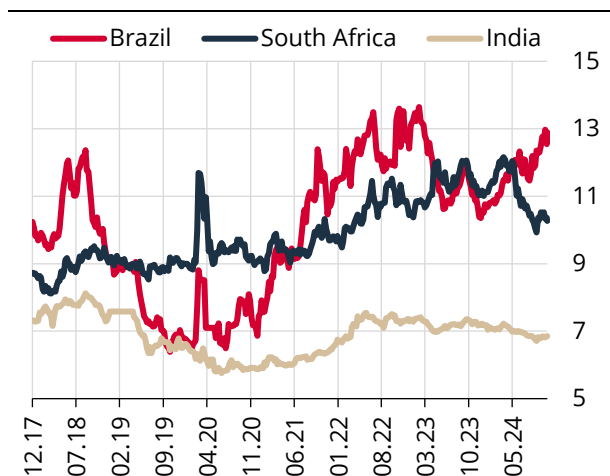
Source: Bloomberg Last Observation: 08.11.24

Interest rate cuts and related communications by advanced economies have had a positive impact on market indicators. Recent geopolitical uncertainties have limited further improvement in these indicators.

The Fed's rate cuts have led to a decline in the US dollar index. However, expectations that the Fed will continue to tighten its stance on the interest rate path and that the ECB will continue to ease monetary policy due to the weak growth outlook are supporting the US dollar. Due to escalating geopolitical risks and the divergence between monetary policy stances of the Fed and the ECB, the US dollar index has recently moved upwards again. A similar trend is also observed in the US 10-year bond yields (Chart II.1.9). In addition to falling inflation and sluggish economic growth, the UK, Swiss and European central banks signaled that they would continue to cut interest rates, which has put down pressure on 10-year bond yields. However, geopolitical risks and the stagnation in core inflation somewhat slowed the downward trend (Chart II.1.10).

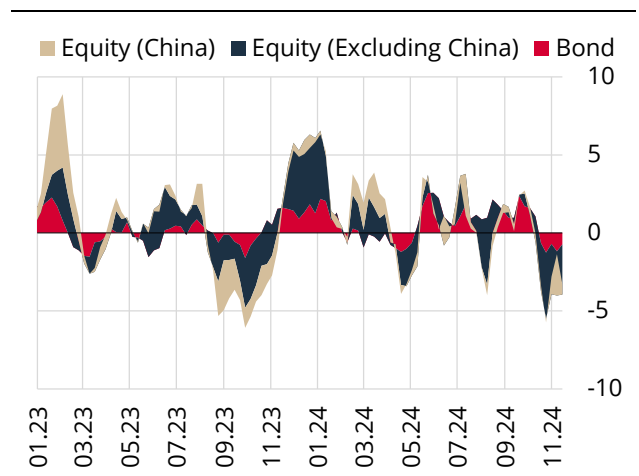
In EMEs, bond yields remain elevated due to diverging monetary policy stances and uncertainties regarding the inflation path (Chart II.1.11). Despite the Fed's interest rate cuts, the ongoing uncertainty over the monetary policy stance and fluctuations in the global risk appetite cause fluctuations in flow of funds to emerging economies (Chart II.1.12).

Chart II.1.11: 10-Year Bond Years in EMEs (%)



Source: Bloomberg Last Observation: 18.11.24

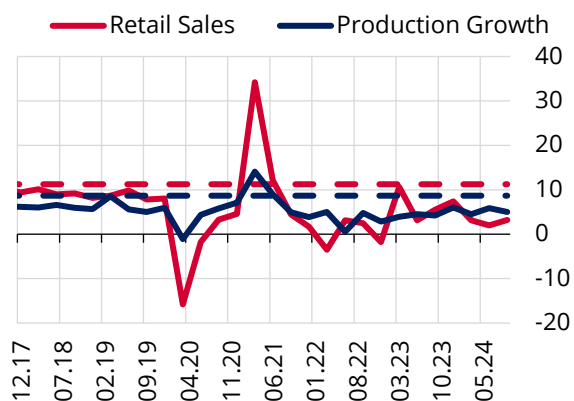
Chart II.1.12: Weekly Portfolio Flows to EMEs (4-Week Moving Average, Billion USD)



Source: IIF Last Observation: 15.11.24

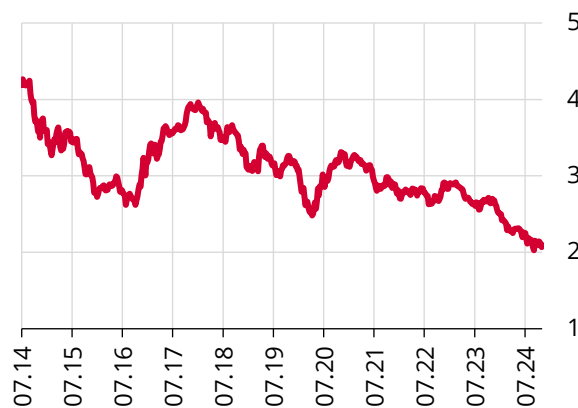
The persistently weak domestic demand in the Chinese economy, which is below its historical average, reinforces the expectation that growth will remain below its potential (Chart II.1.13). In response to weak domestic demand and stagnant production data, China has accelerated expansionary fiscal and monetary policy steps to stimulate economic growth, and the decline in Chinese bond yields have accelerated due to the fall in borrowing costs (Chart II.1.14).

Chart II.1.13: Economic Growth Outlook in China (Annual Change, %)



Source: Bloomberg Last Observation: 09.24
 Note: Dashed lines represent the average of the respective indicator for the 03.07 – 09.24 period.

Chart II.1.14: 10-Year Bond Yields in China (%)

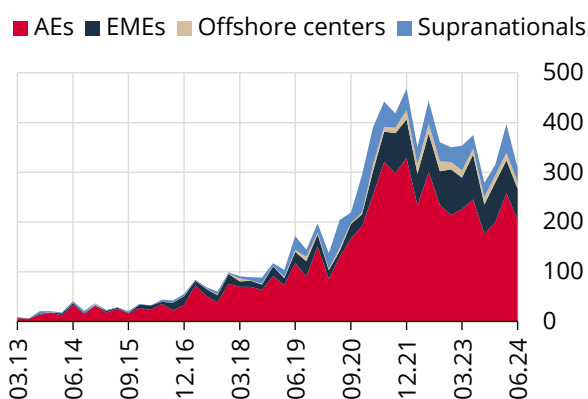


Source: Bloomberg Last Observation: 18.11.24

Advanced economies continued to have the largest share in environmental, social and governance (ESG) borrowing. Bonds have a large share in advanced economies' debt composition.

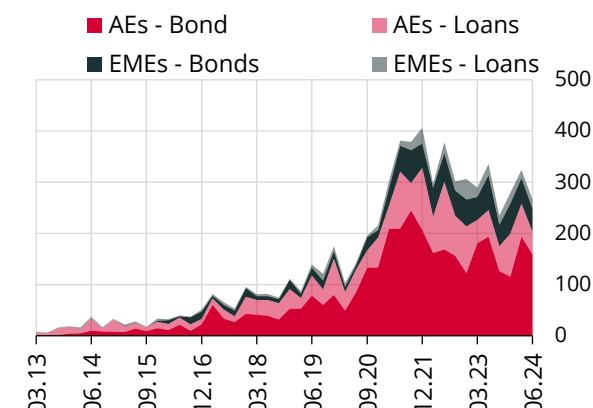
Although ESG borrowing declined slightly compared to the previous reporting period, it increased compared to the end of the second quarter of 2023 (Chart II.1.15). While bonds continued to have a significant share in the ESG debt diversification of AEs, bonds in their debt composition increased compared to the end of the second quarter of 2023 (Chart II.1.16).

Chart II.1.15: ESG Borrowing (Billion USD)



Source: IIF Last Observation: 2024Q2

Chart II.1.16: Breakdown of Bond Issues and Bank Loans for ESG Purposes (Billion USD)



Source: IIF Last Observation: 2024Q2

Note: Emerging Economies (EMEs), Advanced Economies (AEs), and offshore banking centers are the sum of 141, 35, and 24 different countries, respectively. Detailed information on country lists can be found on the Sustainable Debt Screen on the IIF corporate website. ESG borrowing can be provided in the form of both bonds and bank loans, and Chart II.1.16 analyzes this breakdown in detail for AEs and EMEs.

Box II.1.I: How Does Türkiye Differ from Other Countries in Indebtedness Indicators?

Introduction

Debt sustainability is defined as the capacity of a country's economic agents to repay current and future debt obligations without delay. Eroding the debt repayment capacity of economic sectors may lead to unsustainable debt levels. When the debt burden of government and non-financial sectors reach high levels, they face challenges in access to financing, see increases in the risk premium and financing costs, and this debt burden may lead to financial instability in the economy (Das et al., 2010; Mallikamas & Weigert, 2022).

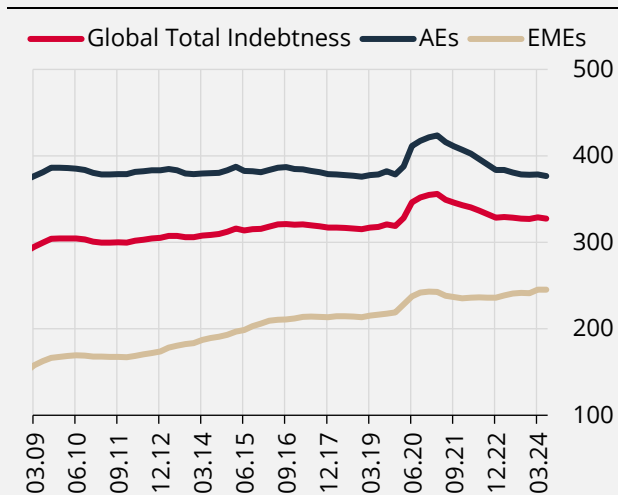
Global Indebtedness

After the global financial crisis in 2008, global total indebtedness surged in advanced (AEs) and emerging economies (EMEs) due to low financing costs and increased access to financing (Chart II.1.I.1). By the end of the second quarter of 2024, global total indebtedness hovered at USD 311.8 trillion, 3.3 times the global GDP. Recently, international financial institutions and relevant regulatory authorities have pointed to the upward trend in global indebtedness and warned that risks to debt sustainability may increase in the upcoming period (IMF, 2024; OECD, 2024).

In the last decade, the main drivers of debt growth in the AEs were the government and partly the non-financial sectors, while indebtedness growth in EMEs was seen across all segments (Charts II.1.I.2 and II.1.I.3). In the post-pandemic period, while the total indebtedness level of AEs followed a mild course, it continued to rise steadily in EMEs. International reports and relevant authorities state that EMEs have a high burden of maturing debt in the government and non-financial sectors. Refinancing this debt may add to financial stress in EMEs (OECD, 2024).

This box presents Türkiye's indebtedness developments in comparison with EMEs across all economic segments. The findings of the study show that Türkiye has diverged positively from global trends in total indebtedness indicators, but FX-denominated indebtedness still hovers at slightly high levels.

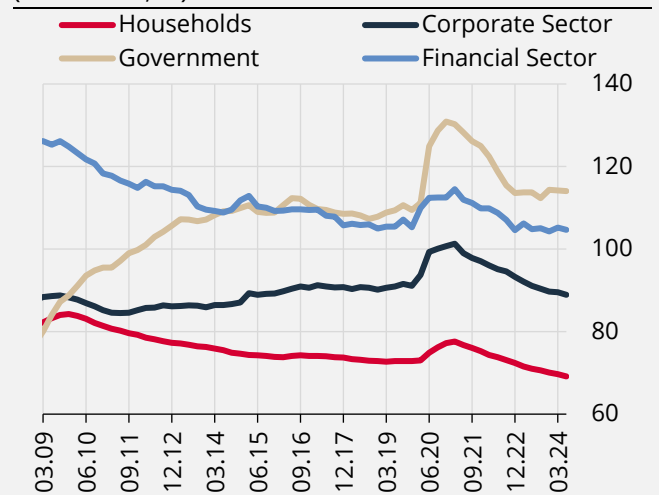
Chart II.1.I.1: Total Indebtedness (Debt/GDP, %)



Source: IIF

Last Observation: 06.24

Chart II.1.I.2: Indebtedness Levels in AEs (Debt/GDP, %)



Source: IIF

Last Observation: 06.24

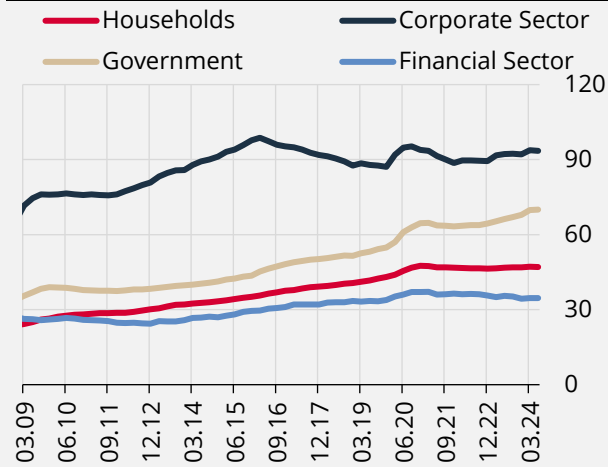
Indebtedness of Türkiye

An analysis of Türkiye's indebtedness composition reveals that, unlike emerging economies, indebtedness indicators across all sectors have declined considerably. While government and corporate sector indebtedness increased in EMEs, Türkiye's government and corporate sector indebtedness have declined by 14 and 30 percentage points, respectively, since end-2021 (Charts II.1.I.3 and II.1.I.4). Household indebtedness also remained low compared to EMEs. While financial sector indebtedness has remained flat in EMEs since end-2021, it has dropped by around 15 percentage points in Türkiye (Charts II.1.I.3 and II.1.I.4).

Inflationary pressures reduced fixed-rate debts in real terms and national income increased more than debts amid inflation, leading to a notable decline in the indebtedness of economic sectors. Moreover, the decline in TL financing

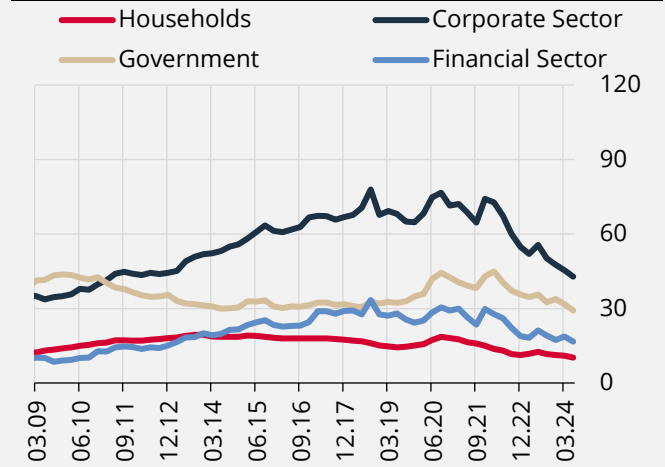
costs between 2021-2023 and the clearance of FX-denominated loans due to exchange rate volatility contributed to the decline in indebtedness. Therefore, Türkiye has diverged favorably from other EMEs in terms of indebtedness.

Chart II.1.1.3: Indebtedness of EMEs
(Debt/GDP, %)



Source: IIF Last Observation: 06.24

Chart II.1.1.4: Indebtedness of Türkiye
(Debt/GDP, %)

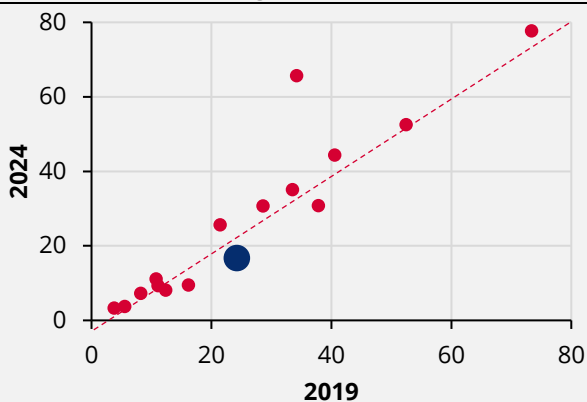


Source: IIF Last Observation: 06.24

In addition to the average indicators across country groups, the following section analyzes Türkiye's position among peer countries. Accordingly, financial sector indebtedness is limited across EMEs and hovers below 40%. Türkiye's financial sector has lower indebtedness than most EMEs, and its indebtedness has declined compared to end-2019 due to favorable domestic funding conditions (Chart II.1.1.5). Moreover, due to fluctuations in the country risk premium and shrinking long-term credit facilities, the financial sector reduced its external financing, which led to a fall in the financial sector's indebtedness.

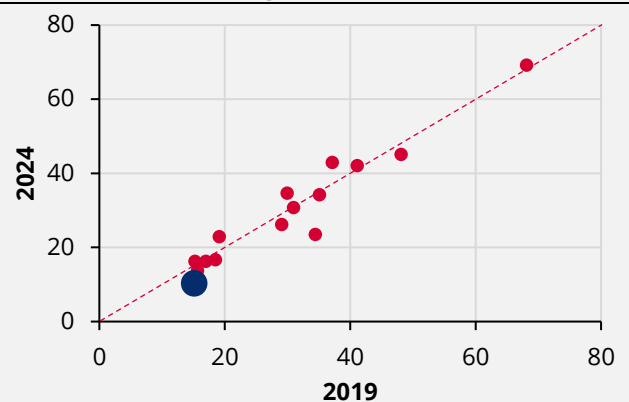
Türkiye's household indebtedness is quite low relative to peer countries. Compared to the pre-pandemic period, household indebtedness mounted in most EMEs, while Türkiye's household indebtedness displays more limited risk than peer countries (Chart II.1.1.6). Individuals' ability to borrow at fixed interest rates and macroprudential measures on personal loans account for the fall in indebtedness. Nevertheless, low household indebtedness holds significant potential for individuals' access to finance and a broad-based financial deepening in the years to come.

Chart II.1.1.5: Position of Financial Sector Indebtedness Among EMEs (Debt/GDP, %)



Sources: CBRT, IIF Last Observation: 06.24

Chart II.1.1.6: Position of Household Indebtedness Among EMEs (Debt/GDP, %)



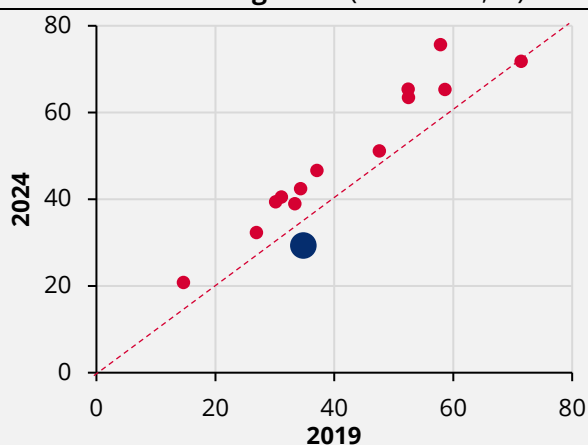
Sources: CBRT, IIF Last Observation: 06.24

Note: EMEs include Brazil, Chile, Colombia, Czechia, Hungary, India, Indonesia, Israel, South Korea, Malaysia, Mexico, Peru, Poland, Russia and South Africa. EMEs are shown with red dots and Türkiye with a blue dot. The 2019 Q4 values of the respective Debt/GDP ratios of countries are shown on the horizontal axis, while the 2024 Q2 values are indicated on the vertical axis. While indebtedness rose between 2019Q4 and 2024Q2 in countries above the dashed line, it decreased in countries below it.

In Türkiye, the low indebtedness of the government has been a noteworthy anchor for the fiscal discipline implemented for many years and has supported financial stability (Chart II.1.1.7). The budget balance was largely maintained, borrowing was made within a specific plan and in line with macro balances, thus preserving the soundness of the balance sheets of banks and funds holding government bonds. Government indebtedness increased in most EMEs compared to the pre-pandemic period, whereas it declined in Türkiye.

The corporate sector's indebtedness fell significantly compared to the pre-pandemic period (Chart II.1.1.8). In Türkiye, firms' indebtedness levels declined in the post-2019 period and the leverage diverged positively compared to EMEs. In this period, the decline in firms' FX loan balances and their increased profitability led by the inflationary environment were instrumental in the fall in the debt/GDP ratio of the corporate sector. The indebtedness of corporate sector firms operating in Türkiye displays a more favorable outlook compared to EMEs.

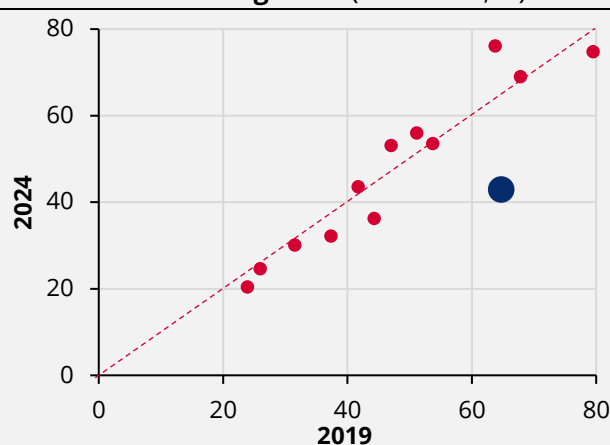
Chart II.1.1.7: Position of Government Indebtedness Among EMEs (Debt/GDP, %)



Sources: MTF, CBRT, IIF

Last Observation: 06.24

Chart II.1.1.8: Position of Corporate Sector Indebtedness Among EMEs (Debt/GDP, %)



Sources: CBRT, IIF

Last Observation: 06.24

Note: EMEs include Brazil, Chile, Colombia, Czechia, Hungary, India, Indonesia, Israel, South Korea, Malaysia, Mexico, Peru, Poland, Russia and South Africa. EMEs are shown with red dots and Türkiye with a blue dot. The 2019 Q4 values of the respective Debt/GDP ratios of countries are shown on the horizontal axis, while the 2024 Q2 values are indicated on the vertical axis. While indebtedness increased between 2019Q4 and 2024Q2 in countries above the dashed line, it dropped in countries below it.

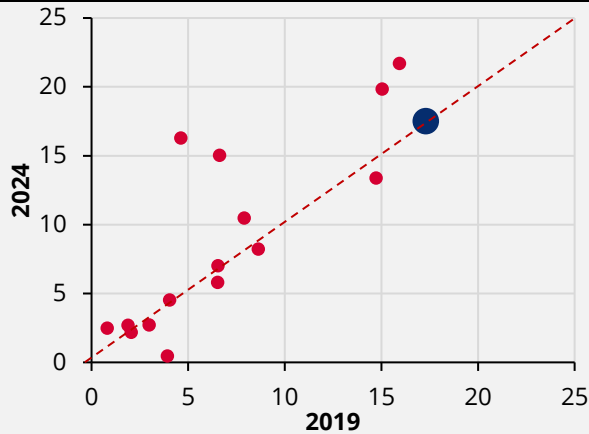
Compared to end-2019, Türkiye's FX-denominated government indebtedness remained flat among EMEs (Chart II.1.1.9). The FX-denominated government debt to GDP ratio of most EMEs is below 20%, with a limited increase compared to the pre-pandemic period. Although Türkiye's FX-denominated government debt followed a flat course in the 2019-2024 period, it is relatively high compared to the distribution of peer countries.

An analysis of the corporate sector debt in EMEs reveals that the ratio of FX-denominated liabilities to GDP remained below 40% and followed a moderate course compared to the pre-pandemic period (Chart II.1.1.10). Firms' FX-denominated borrowing is limited across EMEs. Although the corporate sector's FX debt in Türkiye is higher than that in EMEs, it dropped considerably after 2019. The exchange rate volatility has recently decreased due to the tight monetary policy and the disinflation path, while firms' demand for FX loans grew due to high TL borrowing costs. The corporate sector's FX indebtedness and the risks that may arise from this indebtedness are closely monitored. Therefore, the existing macroprudential framework¹ for FX credit utilization was supported by placing limits on FX credit growth.²

¹ With the amendment made to the Decree No. 32 on the Protection of the Value of the Turkish Currency in May 2018 regarding the exchange rate risk management of companies, the FX loan utilization of companies having an FX loan balance below USD 15 million obtained from domestic and foreign financial institutions and foreign partners is associated with the last three years' FX income.

² In May 2024, a growth limit of 2% for FX loans was introduced with the regulation on the macroprudential framework, and in July 2024, the monthly growth limit of 2% for FX loans was lowered to 1.5% with the regulation on the macroprudential framework. The CBRT decided to block Turkish lira-denominated reserve requirements equal to the amount of loans exceeding the limit for one year.

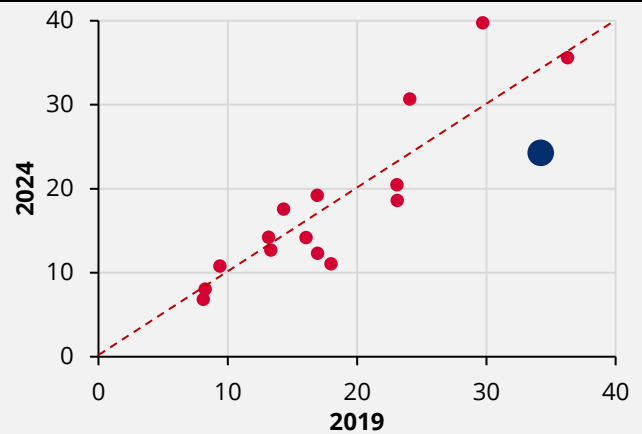
Chart II.1.I.9: Position of Government Indebtedness in FX Among EMEs (Debt/GDP, %)



Source: MTF, CBRT, IIF

Last Observation: 06.24

Chart II.1.I.10: Position of Corporate Sector Indebtedness in FX Among EMEs (Debt/GDP, %)



Source: CBRT, IIF

Last Observation: 06.24

Note: EMEs include Brazil, Chile, Colombia, Czechia, Hungary, India, Indonesia, Israel, South Korea, Malaysia, Mexico, Peru, Poland, Russia and South Africa. For local currency indebtedness, EMEs are shown with red dots and Türkiye with a blue dot. The 2019 Q4 values of the respective Debt/GDP ratios of countries are shown on the horizontal axis, while the 2024 Q2 values are indicated on the vertical axis. While indebtedness increased between 2019Q4 and 2024Q2 in countries above the dashed line, it dropped in countries below it.

In sum, changes in the level of indebtedness relative to GDP suggest that indebtedness indicators in AEs have slightly declined from high levels in recent years, while indebtedness in EMEs has remained on the rise. In the same period, indebtedness of all segments fell in Türkiye, while the sustainability of the debt level and composition improved. In the aftermath of the expansionary financial conditions during the pandemic, the corporate sector's indebtedness declined to a large extent, while household indebtedness fell to historically low levels. Government and financial sector indebtedness also declined. On the other hand, although the corporate sector's FX-denominated indebtedness has also receded in the same period, it is still somewhat high compared to other EMEs. This makes corporate sector firms sensitive to exchange rate volatility. Therefore, the macroprudential framework and FX loan growth limits for these loans were supported by the macroprudential framework. The macroprudential framework and policy actions, along with higher predictability, will ensure that the indebtedness of economic sectors follows a path that supports financial stability.

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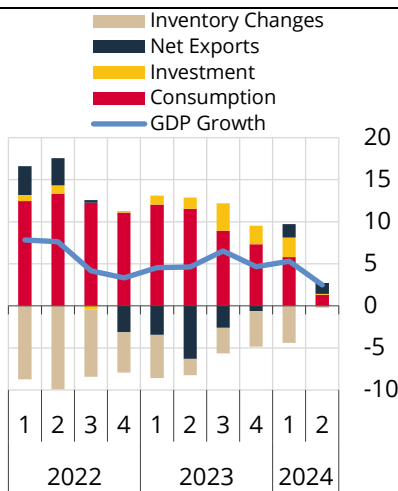
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II.2 Main Domestic Macroeconomic Developments

The rebalancing in domestic demand became more evident in the second quarter of 2024.

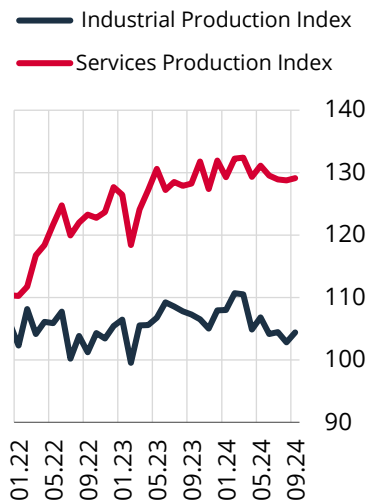
The buoyant domestic demand seen in previous years lost momentum in the second quarter of 2024, with growth reaching 2.5% compared to the same quarter of the previous year. The contribution of consumption and investment expenditures to growth decreased significantly in this period, while net exports have continued to make a positive contribution since the first quarter (Chart II.2.1). The upward trend in production indicators up to the first quarter of 2024 has weakened as of the second quarter. Leading indicators point to a further slowdown in production across services and industrial sectors (Charts II.2.2 and II.2.3).

Chart II.2.1: Annual GDP Growth and Contribution of Expenditures (% Points)



Source: TURKSTAT Last Obsv.: 2024Q2

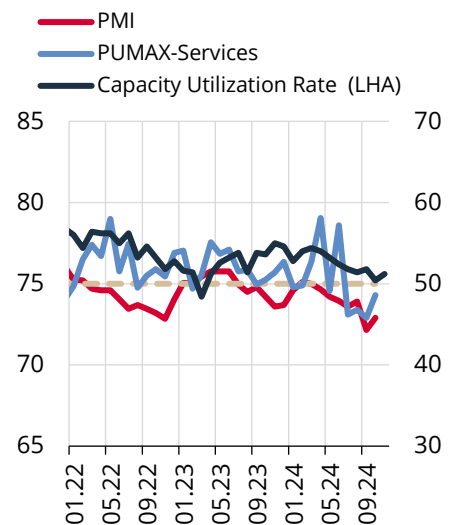
Chart II.2.2: Production Indices (Index, 2021=100)



Source: TURKSTAT Last Obsv.: 09.24

Note: Industrial and services production indices are adjusted for seasonal and calendar effects.

Chart II.2.3: Selected Leading Indicators of Economic Activity (Ratio, Index)



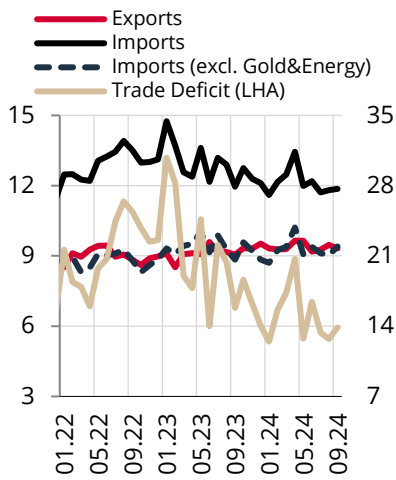
Sources: CBRT, ICI, MUSIAD Last Obsv.: 10.24

Note: Manufacturing industry capacity utilization rate and Services Sector Purchasing Managers' Index (PUMAX-Services) are adjusted for seasonal and calendar effects. Dashed line shows the stable state of the Manufacturing Industry Purchasing Managers' Index (PMI). The last observation date for the capacity utilization rate was November 2024.

The foreign trade deficit continues to narrow, and the favorable outlook in the services balance remains positive, meanwhile the current account balance has improved.

The foreign trade deficit narrowed further due to the significant decline in gold imports and the normalization in global energy prices (Chart II.2.4). The current account has performed similarly on the back of strong tourism revenues, with the 12-month current account deficit narrowing to around USD 10 billion and the ratio of the current account deficit to GDP falling below 1% (Charts II.2.5 and II.2.6).

Chart II.2.4: Foreign Trade
(Billion USD, 3-Month MA)



Sources: CBRT, TURKSTAT

Note: For foreign trade, seasonally/calendar adjusted monthly exports (fob) and imports (cif) data according to the general trade system have been used.

Chart II.2.5: Main Components of Current Account Balance
(12-Month, Billion USD)

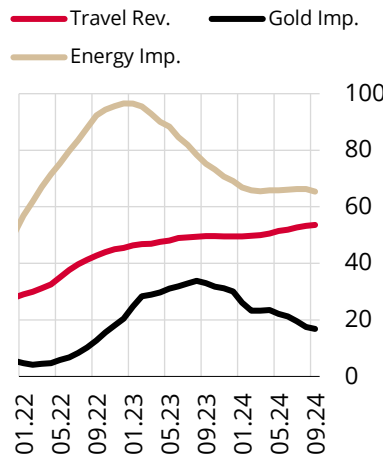
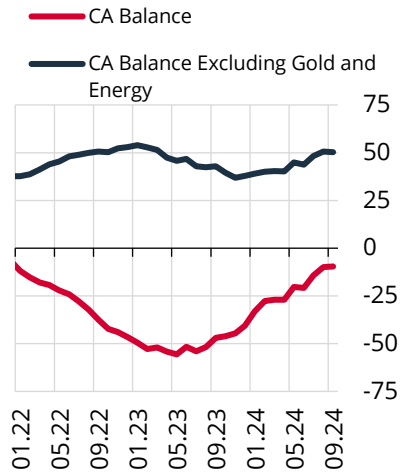


Chart II.2.6: Current Account Balance
(12-Month, Billion USD)

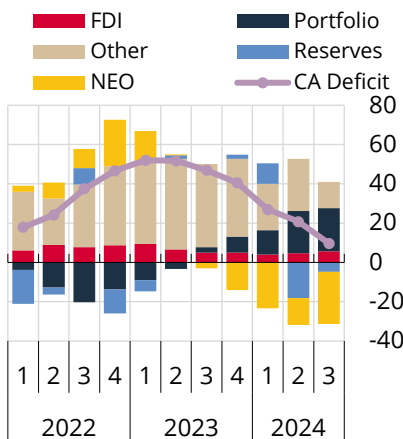


Last Observation: 09.24

Along with the decline in the current account deficit, the rise in portfolio investments and external financing transactions have strengthened international reserves.

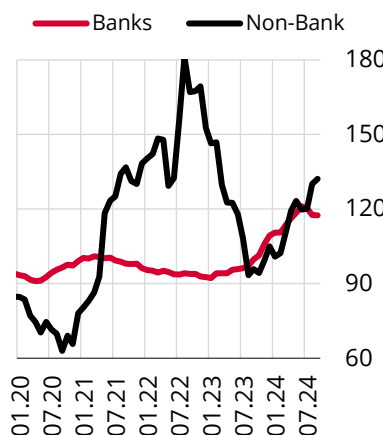
Portfolio investments positively contributed to the financing of the 12-month current account deficit in the second and third quarters of 2024. The slight decline in the contribution of reserves was offset by the increase in the net errors and omissions item (Chart II.2.7). Banks have been rolling over their external debt at a high rate in recent months, and as of September, the external debt rollover ratio of banks was 117%. Meanwhile, the external debt rollover ratio of the non-bank sector remained positive, rising to 132%. External borrowing by the private sector continues to positively contribute to the financing of the current account deficit (Chart II.2.8). The confidence in the current disinflationary policies reflects positively on gross reserves. The gross reserves of the CBRT have maintained their upward trend and reached USD 156.6 billion as of November 22 (Chart II.2.9). Net reserves excluding swaps rose to USD 41.8 billion when sell-side FX swaps conducted in domestic markets are added.

Chart II.2.7: Financing of Current Account Deficit
(12-Month Cumulative, Billion USD)



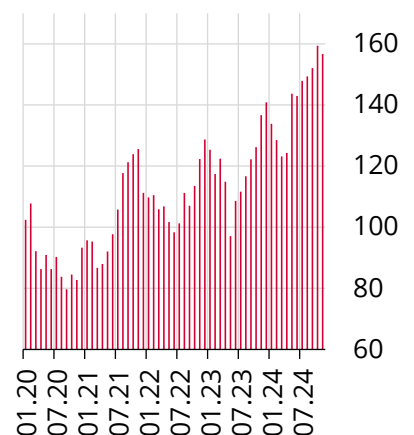
Source: CBRT Last Obsv.: 09.24
Note: "Portfolio", "FDI", and "Other" investments items are in net terms. The (-) sign in "Reserves" implies an increase.

Chart II.2.8: External Debt Rollover Ratio
(12-Month, %)



Source: CBRT Last Obsv.: 09.24
Note: External debt rollover ratios are calculated on short and long-term total debt in a 12-month window.

Chart II.2.9: CBRT Gross Foreign Exchange Reserves
(Billion USD)



Source: CBRT Last Obsv.: 22.11.24
Note: Gross reserves include gold and foreign exchange items.

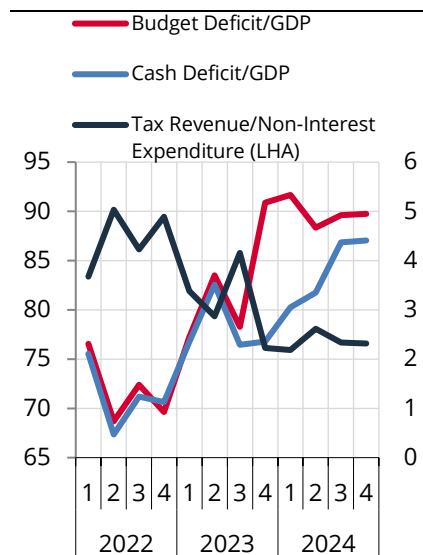
The annual budget deficit widened due to earthquake-related expenditures and increased current transfers.

The proportion of primary expenditures covered by tax revenues declined. This decline, in spite of the increase in tax revenues, was due to the fact that transfers to institutions increased primary expenditures (Chart II.2.10). Earthquake expenditures played an important role in determining budget balances in the current reporting period.

Consumer inflation receded to 48.6%, but the rise in food prices and the rigidity in services prices limited the decline in inflation rates.

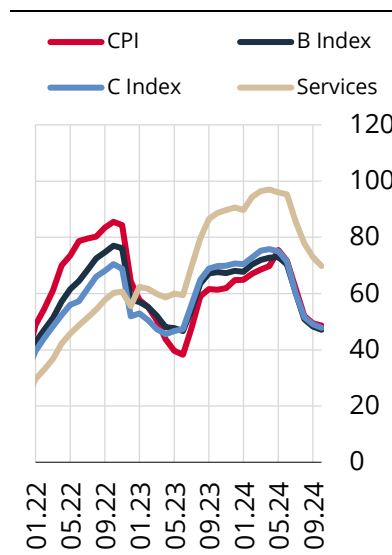
Headline inflation and trend indicators continue to decline. Meanwhile, services inflation is on an improving trend (Chart II.2.11). Monthly inflation developments have been on a downward trend due to mild goods inflation and the slowdown in services inflation but recorded a rise in recent months stemming mostly from food prices (Chart II.2.12). The services inflation outlook continues to be impacted by time-dependent pricing and backward-indexation behaviors. The price increases in rent and education subgroups have contributed to the high levels of inflation. The decline in contract renewal rates and rent renewal reference rates towards the end of the year, along with the continued decline in annual inflation and improvement in expectations, are expected to contribute to the slowdown in rent price increases.

Chart II.2.10: Central Government Budget Indicators
(12-Month Cumulative, %)



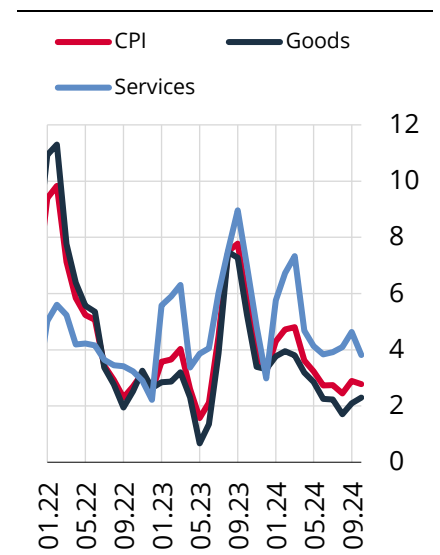
Source: MTF Last Obsv.: 10.24
Note: Estimated value for 2024 Q3 and Q4 GDP.

Chart II.2.11: Annual Inflation Developments
(Annual % Change)



Source: TURKSTAT Last Obsv.: 10.24
Note: The B index is obtained by excluding unprocessed food products, energy, alcoholic beverages, tobacco and gold items from the CPI, and the C index is obtained by excluding food and non-alcoholic beverages from the B index.

Chart II.2.12: Monthly Inflation Developments
(Monthly % Change, 3-Month MA)



Source: TURKSTAT Last Obsv.: 10.24

Box II.2.I: Steps for Effective Functioning of Financial Markets

This box presents, under main headings, a summary of measures and policy steps implemented in the current reporting period to strengthen macro financial stability and contribute to the functioning of market mechanisms.

Table II.2.I.1: Major Measures and Regulations for Financial markets

1. Policy Rate and Central Bank's Liquidity Management

Announcement/ Regulation Date	Measure/ Regulation
07.06.2024	FX collateral deposit buying rates was reduced from 4% to 3.75% for the euro for all maturities, FX collateral deposit selling rates for euro were reduced from 6% to 5.75% for one-week maturity, and from 6.50% to 6.25% for one-month maturity, The interest rate paid for the excess amount over the reserve requirement for notice FX deposit accounts was decreased from 4.75% to 4.5%.
27.06.2024	The one-week repo auction rate was kept unchanged at 50%.
27.06.2024	In the Turkish Lira Currency Swap Market, the total amount of outstanding swap sales (the CBRT's FX buying at the spot leg and selling FX on the maturity date) transactions was limited to 0.5% of the FX Markets transaction limits.
28.06.2024	Turkish lira Gold Swap Market transactions conducted via the quotation method were terminated.
19.07.2024	FX Gold Swap Market transactions conducted via the quotation method were terminated.
23.07.2024	The one-week repo auction rate was kept unchanged at 50%.
25.07.2024	Turkish Lira Currency Swap Market transactions conducted via the quotation method were terminated.
26.07.2024	In order to diversify and effectively use sterilization tools, in addition to the TRY deposit buying auctions held between 11:00-11:30, it was decided to open additional TRY deposit buying auctions during the day when deemed necessary.
02.08.2024	In order to diversify sterilization tools, the CBRT started to hold sell-side Turkish lira- currency swap auctions (FX sales against TRY by the CBRT on the maturity date).
12.08.2024	In addition to the additional instruments allowing sterilization through auctions, the CBRT decided to expand the instrument framework to allow borrowing from banks and non-bank financial institutions in other money markets via the quotation method.
20.08.2024	The one-week repo auction rate was kept unchanged at 50%.
13.09.2024	FX collateral deposit buying rates for the euro was reduced from 3.75%% to 3.5%% across all maturities. Meanwhile, FX deposit selling rates for euro were reduced from 5.75% to 5.5% for a maturity of one week and from 6.25% to 6% for a maturity of one month.
19.09.2024	The one-week repo auction rate was kept unchanged at 50 percent.
19.09.2024	The interest rate applied to FX collateral deposit buying rates for the USD was reduced from 5.50% to 4.75% across all maturities. Meanwhile, FX deposit selling rates for the USD were reduced from 7.75% to 7% for a maturity of one week and from 8.50% to 7.75% for a maturity of one month. The interest rate applied to the amount exceeding the required reserve amount for notice FX deposit accounts was reduced from 4.50% to 3.75%.
17.10.2024	The one-week repo auction rate was kept unchanged at 50%.
31.10.2024	In order to diversify sterilization tools, the CBRT started to hold sell-side Turkish lira Gold Swap Auctions (Gold sales against TRY by the CBRT on the maturity date).
21.11.2024	The one-week repo auction rate was kept unchanged at 50%.

2. Reserve Requirements

Announcement/ Regulation Date	Measure/ Regulation
28.06.2024	The CBRT terminated the additional reserve requirement maintenance based on the leverage ratio.
20.07.2024	<ul style="list-style-type: none"> - In the scope of the reserve requirement practice based on loan growth, the monthly growth limit for FX loans was lowered from 2% to 1.5% - The scope of the exemption for investment loans was expanded and it was decided to exempt investment loans extended in the scope of the funding provided by international development finance institutions from the growth limits for Turkish lira and FX loans.

29.08.2024	<ul style="list-style-type: none"> - The monthly growth target was increased to 0.8 points for banks with real person TRY deposit shares between 45% and 50%. - The monthly growth target was abolished for banks with real person TRY deposit shares exceeding 60%, and a condition was introduced to keep this share above 60%. - Legal persons' KKM accounts were included in the calculation of the total target for KKM accounts' transition to TRY and renewals. - The upper limit for the remuneration of required reserves, which should be maintained for TRY deposits based on the rate of transition to TRY, was increased to 84% of the policy rate. - The ratio for maintaining TRY required reserves in blocked accounts was increased by 5 points.
21.09.2024	<ul style="list-style-type: none"> - Reserve requirement ratios were increased from 12% to 15% for short-term TRY deposits, from 10% to 12% for long-term TRY deposits while the ratio for TRY-denominated required reserves that should be maintained for FX deposits were decreased from 8% to 5%. - It was decided that the remuneration of required reserves that should be maintained for TRY deposits would no longer be conditional on the transition-to-TRY rate. - The maximum commission rate of 5% applied based on the level of transition-to-TRY rate was raised to 8%.
22.11.2024	<ul style="list-style-type: none"> - Reserve requirement ratios for short-term TRY deposits were raised from 15% to 17%, and the ratio for TRY-denominated required reserves that should be maintained for foreign currency FX deposits were decreased from 5% to 4%. - The TRY deposit share target for legal persons was abolished. - The total target for KKM accounts' transition to TRY and renewals was reduced from 75% to 70%.

3. Rediscount Credits and Advance Loans

Announcement/ Regulation	Measure/ Regulation
01.07.2024	Following the reduction of the minimum rate of export proceeds to be sold to the CBRT from 40% to 30%, the minimum rate of FX selling obligation for rediscount credits for export and FX-earning services was revised as 30%.
09.09.2024	FX purchases equivalent to a maximum of USD 50,000 during the commitment period, FX sold within five business days after purchase, and FX purchases made with the balance at the end of maturity of conversion accounts and participation accounts were exempted from the firms' no-FX-buying commitment to be eligible for rediscount credits for export and FX- earning services.
8.10.2024	The daily limit for rediscount credits for export and FX- earning services was raised from TRY 3 billion to TRY 4 billion.
8.10.2024	<p>The condition of being a net exporter to be eligible to use rediscount credits for export and FX- earning services was cancelled and replaced with the implementation of an exporter score, to be effective as of January 13, 2025. Accordingly, it was decided that:</p> <p>Excluding rediscount credits/ financing extended by Turkish Eximbank, firms with an exporter score above the threshold value will be extended rediscount credit/financing, and the threshold value will be performance score or potential score above 40 points.</p> <p>It was decided that the following conditions will suffice for extending a rediscount credit/ financing without calculating the exporter score:</p> <ul style="list-style-type: none"> - Firms in the defense industries sector, - Firms seeking to use rediscount credit/ financing for financing FX-earning services, - Firms with a net sales revenue (turnover) of TRY 5 billion or more in the last fiscal year and export revenues of USD 500 million or more in the last fiscal year, - Firms applying with a commitment to export high-tech products, - Firms that will use rediscount credits/financing to finance exports after shipment, - Newly established companies, which will use rediscount credits/financing by declaring a proforma invoice or contract in the current year, provided that an export receivables insurance has been established, will be exempted from the exporter score practice.
11.11.2024	The interest rate and interest deduction items to be applied to advance loans against investment commitments have been revised to ensure that changes in the policy rate are reflected in the loan rate. Accordingly, it was decided that the base rate would be either 30% or 70% of the policy rate -whichever is the lower- the discount rates to be provided will be determined in proportion to the base rate.

22.11.2024	<p>It was decided that companies, which will use rediscount credits for export and FX-earning services and advance loans against investment commitment, shall submit a document stating that they have no finalized SSI premium debt or tax debt. It was stipulated that firms with finalized SSI premium debts or tax debts would pay off these debts first with the rediscount credits and advance loans that they are extended.</p> <p>As for rediscount credits arising from currency swap agreements, it was decided that it would be a prerequisite for the firms not to have SSI premium debts or tax debts before they can utilize the credits.</p>
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4. Deposits / Participation Funds and Payment Systems

Announcement/ Regulation Date	Measure/ Regulation
1.05.2024	<p>The withholding tax rates for income and earnings from deposits were set as follows:</p> <ul style="list-style-type: none"> - 7.5% for demand deposit accounts and time deposit accounts with maturities up to (and including) six months, - 5% for time deposit accounts with maturities up to (and including) one year, - 2.5% for time deposit accounts with maturities longer than one year. <p>The withholding tax rates for income and earnings from bonds and bills issued by banks, and income and earnings from lease certificates with these banks as the fund users were set as follows:</p> <ul style="list-style-type: none"> - 7.5% of the income provided to those with maturities up to (and including) six months, - 5% of the income provided to those with maturities up to (and including) one year, - 2.5% of the income provided to those with maturities longer than one year, - 7.5% of earnings derived from the disposal of those held less than (and including) six months, - 5% of earnings derived from the disposal of those held for less than (and including) one year, - 2.5% of earnings derived from the disposal of those held for more than one year. <p>It was decided to set the withholding tax rate at 7.5% for income and earnings from asset-based securities, mortgage-based securities, mortgage-backed securities, and asset-backed securities issued by mortgage finance institutions.</p>
20.07.2024	<p>It was decided that YUVAM accounts can only be opened if the foreign currency amount is received by transfer from abroad or upon submission of a document certifying that the foreign currency amount is brought from abroad in cash.</p>
1.08.2024	<p>It was decided that the withholding tax rate for KKM accounts, which was previously set at 0%, will be implemented as follows until October 31, 2024:</p> <ul style="list-style-type: none"> - 7.5% for KKM accounts with maturities up to 6 months (including 6 months) - 5% for KKM accounts with maturities up to 1 year (including 1 year) and the other rates will continue to be applied as they are until October 31, 2024 (including this date).
2.09.2024	<p>The deadline for conversion of resident real persons' FX deposit account, FX participation fund account and gold account balances in banks into conversion accounts, which was March 31, 2024, was extended until August 31, 2024.</p>
1.11.2024	<p>The withholding tax ratios to be applied to KKM (FX-protected) time deposit accounts / FX-protected time participation accounts and TRY deposit accounts that are converted from FX deposit accounts/ FX participation fund accounts over the conversion rate:</p> <ul style="list-style-type: none"> - 10% for accounts with maturities up to 6 months (including 6 months), - 7.5% for accounts with maturities up to 1 year (including 1 year), - 5% for accounts with maturities longer than 1 year, <p>The withholding tax ratios to be applied to TRY deposit accounts that are converted from gold deposit accounts/ gold participation fund accounts over on the conversion rate:</p> <ul style="list-style-type: none"> - 10% for accounts with maturities up to 6 months (including 6 months), - 7.5% for accounts with maturities up to 1 year (including 1 year), <p>The withholding tax ratios to be applied to deposit accounts:</p> <ul style="list-style-type: none"> - 10% for demand accounts, notice accounts and time deposit accounts with maturities up to 6 months (including 6 months), - 7.5% for time deposit accounts with maturities up to 1 year (including 1 year), - 5% for time deposit accounts with maturities longer than 1 year,

The withholding tax ratios to be applied to profit shares paid by participation banks to participation accounts:

- 10% for demand accounts, notice accounts, private checking accounts and time deposit accounts with maturities up to 6 months (including 6 months),
- 7.5% for time deposit accounts with maturities up to 1 year (including 1 year),
- 5% for time deposit accounts with maturities longer than 1 year,

The withholding tax rates for income and earnings from bonds and bills issued by banks, and income and earnings from lease certificates issued by asset leasing companies (both acquired between November 1, 2024 and January 31, 2025- this date included) with these banks as the fund users were set as follows;

- 10% for income provided to those with maturities up to six months (6 months included),
- 7.5% for income provided to those with maturities up to 1 year (including 1 year),
- 5% for income provided to those with maturities longer than 1 year,
- 10% for earnings derived from the disposal of those held less than (and including) six months,
- 7.5% for earnings derived from the disposal of those held for less than (and including) one year,
- 5% for earnings derived from the disposal of those held for more than one year.

The withholding tax rate will be 10% for income and earnings from mutual funds (excluding variable funds, mixed funds, Eurobonds, external borrowing funds, foreign funds, hedge funds and mutual funds with the term "foreign currency" in their titles) acquired between November 1, 2024 and January 31, 2025.

5. Regulations Regarding Loan Extension, Installments, and Debt Repayments

Announcement/ Regulation Date	Measure/ Regulation
28.06.2024	Effective July 01, 2024, the early loan repayment fee calculation method was changed. Accordingly, it was decided to calculate the early repayment fee for fixed rate Turkish lira loans based on the loan interest rate and the remaining weighted average maturity; for fixed rate FX loans or FX-indexed loans based on a fixed interest rate and the remaining weighted average maturity so as not to exceed the rate calculated by the formula determined by the Central Bank, and the early repayment fee for floating rate loans shall be at most 2% of the early repayment amount.
26.09.2024	As per the decision taken by the BRSA, <ul style="list-style-type: none"> - It was decided that the minimum amount to be paid from the term debt of credit cards was set at 20% of the term debt for credit cards with a limit of TRY 50 thousand or less, and 40% of the term debt for credit cards with a limit of over TRY 50 thousand.
26.09.2024	As per the decision taken by the BRSA, Regarding personal credit cards; <ul style="list-style-type: none"> - The existing debt balances of personal credit cards for which the minimum due amount for the term debt has not been paid as of the date of the decision may be restructured for a maximum of 60 months if requested by the cardholders; and the credit card limits allocated to the cardholder by the relevant bank shall not be increased until 50% of the credit card restructuring debt has been paid, Regarding general purpose loans; <ul style="list-style-type: none"> - Debt balances of general-purpose loans extended before the date of the decision and whose principal and/or interest payments are more than 30 days overdue as of the date of the decision, may be restructured for a maximum period of 60 months, if requested by the debtor within 1 year from the date of this decision.
27.09.2024	Effective from November 1, 2024, the maximum monthly interest rates to be applied to personal credit cards have been differentiated based on the term debt balance. Accordingly, over the current reference rate, the maximum monthly contractual interest rates to be applied to credit card transactions (excluding cash withdrawals or utilization transactions) in Turkish lira will be as follows; <ul style="list-style-type: none"> - 3.5% for personal credit cards with a term debt balance below TRY 25 thousand, - 4.25% for personal credit cards with a term debt balance between TRY 25 thousand and TRY 150 thousand, - 4.75% for personal credit cards with a term debt balance over TRY 150 thousand as well as for corporate credit cards irrespective of their term debt amount. Moreover, the maximum interest rate to be applied in the restructuring of personal credit card debts was limited to the reference rate.

6. Classification of Loans and Receivables, and Legal Ratio Limitations

Announcement/ Regulation Date	Measure/ Regulation
19.09.2024	In calculating capital adequacy standard ratios, the additional risk weights have been abolished for vehicle loans extended to consumers for buying passenger cars, for vehicle-backed loans and financial leasing transactions, general purpose loans (excluding overdraft accounts), personal credit cards (including credit card expenditures and cash withdrawals) and loans backed by residential house mortgages provided that the consumer themselves, their spouse or children under the age of 18 own a house, and it was decided to revert to relevant minimum standards set out in the Regulation on Measurement and Assessment of Capital Adequacy of Banks. It was decided that relevant minimum standards would be 35% for the first and other housing loans, and 75% for general purpose loans, vehicle loans and credit cards.

7. Other Regulations

Announcement/ Regulation Date	Measure/ Regulation
2.07.2024	<p>In the Capital Markets Law, regarding crypto assets:</p> <ul style="list-style-type: none"> - Definitions of crypto asset, wallet, crypto-asset service provider, crypto-asset custody service, platform and TUBITAK were added, - The procedures and principles regarding the establishment and operation of crypto-asset service providers were regulated, and the conditions to be sought in the partners of crypto-asset service providers were laid out, - It was stated that the Board was authorized to establish regulatory procedures regarding crypto-assets providing rights specific to capital market instruments, - Principles regarding the activities of crypto-asset service providers, and the transfer and custody of crypto assets were established, - It was stated that crypto-asset service providers would be given a certificate of authorization indicating the activities they will perform, and banks were obliged to receive an opinion of appropriateness from the BRSA, - It was stipulated that the Board was authorized to decide to remove the relevant content and/or block access to unauthorized capital market activities, - Measures to be applied regarding activities of crypto-asset service providers were specified, - The supervision of crypto-asset service providers and sanctions to be imposed were included, - It was decided to regulate the penalties to be applied to unauthorized activity, embezzlement offenses and personal liability issues in crypto-asset service providers.

III. Non-Financial Sector

III.1 Household Developments

Household indebtedness in Türkiye remains significantly below the average of advanced and emerging economies.

In the third quarter of 2024, the household debt/GDP ratio in Türkiye (9.8%) was significantly below those of peer countries as well as its average in the 2012-2022 period (Charts III.1.1 and Chart III.1.2). The decline in indebtedness in recent years is attributed to the relatively high growth in nominal GDP and the macroprudential policy framework for retail loans.¹ As well as the continuation of macroprudential measures on retail loans, the tight financial conditions have curbed the debt growth in 2024. Amid these tight financial conditions, the considerably lower level of personal indebtedness compared to other countries indicates that the risks driven by household debts are manageable.

Chart III.1.1: Household Indebtedness in Türkiye (Debt/GDP, %)

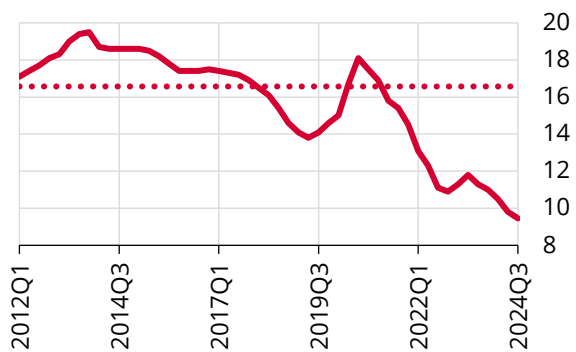
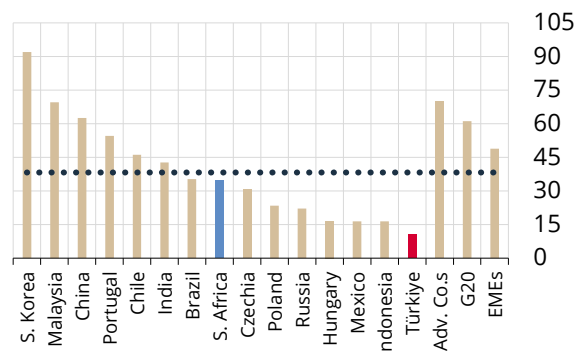


Chart III.1.2: Household Indebtedness in Peer Countries (Debt/GDP, %)



Source: BIS

Last Observation: 2024Q1

Note: Household indebtedness is calculated as the ratio of the total of debt securities and loans of households and non-profit institutions serving households to GDP. The dashed line in Chart III.1.1 shows the average of the relevant values in the 2012-2022 period. Türkiye's data for 2024 (Q2-Q3) has been estimated in Table III.1.1. The country marked in blue has median indebtedness in the sample. The dashed line in Chart III.1.2 shows the 2024Q1 average of the relevant sample.

Chart III.1.3: Ratio of Housing Loans to GDP (%)

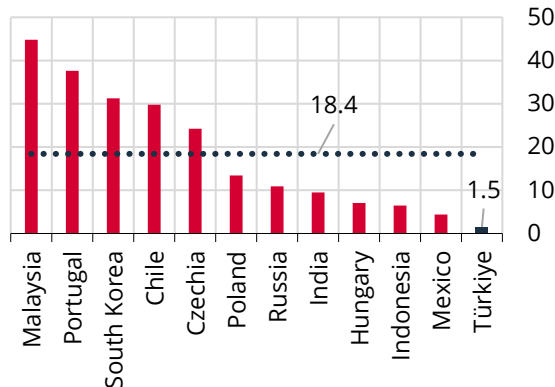
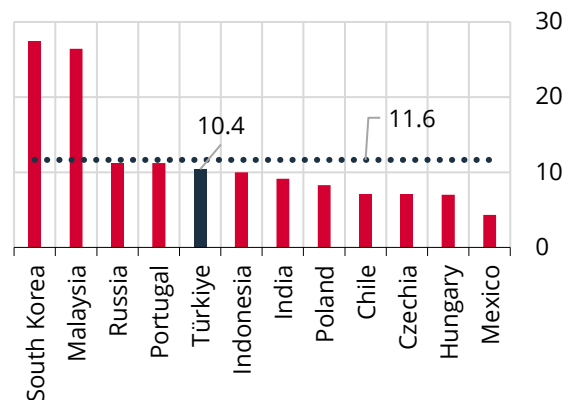


Chart III.1.4: Ratio of Retail Loans Excluding Housing Loans to GDP (%)



Sources: World Bank, Global Economy

Last Observation: 06.24

Note: The ratio is calculated as the current total housing loan and housing loans-excluded retail loan balance divided by end-2023 GDP. Horizontal lines are the average values for selected countries. Retail loan balance excluding housing loans includes all other types of loans extended to households (such as PCC, vehicle loans, and student loans) except housing loans.

¹ The BRSA's regulations on general-purpose, housing and vehicle loans, and the CBRT's loan growth limits have significantly contributed to the effectiveness of this macroprudential policy framework.

A breakdown of indebtedness reveals that the ratio of housing loans to GDP is well below the average of other countries, while the ratio of retail loans excluding housing loans to GDP is slightly below the average of peer countries. The elevated course of house prices in Türkiye, macroprudential regulations imposed on housing loans, and high loan interest rates have driven a decline in the share of housing loans in recent years. Moreover, the fact that housing loans in Türkiye are extended with shorter maturities compared to advanced economies and that house sales are mostly non-mortgage sales has also led the housing loan/GDP ratio to remain below the averages of other countries (Chart III.1.3). The relatively high ratio of retail loans excluding housing loans to GDP in Türkiye is driven by the fact that the credit cards, which have begun to replace cash payments, have offered an installment payment facility particularly in an inflationary period, and by the increasingly widespread use of cards due to the developments in payment systems and financial technologies in the post-pandemic period (Chart III.1.4).²

Table III.1.1: Household Financial Liabilities

	09.23		03.24		09.24		3-Month Growth (Annualized)
	TRY Billion	Ratio to GDP	TRY Billion	Ratio to GDP	TRY Billion	Ratio to GDP	
Total Liabilities	2,580	11.3	3,224	10.5	3,736	9.5	38.8
Housing Loans	507	2.2	512	1.7	539	1.4	17.6
Vehicle Loans	96	0.4	102	0.3	90	0.2	-38.0
General-Purpose Loans	949	4.2	1,130	3.7	1,350	3.4	41.0
ODA	148	0.6	225	0.7	380	1.0	142.0
General-Purpose (excl. ODA)	801	3.5	904	2.9	970	2.5	16.3
Personal Credit Cards	988	4.3	1,433	4.7	1,695	4.3	50.6
Installment PCC	434	1.9	616	2.0	573	1.5	43.0
Non-installment PPC	554	2.4	817	2.7	1,122	2.9	54.7
AMC Receivables	41	0.2	47	0.2	62	0.2	71.9

Sources: CBRT, BRSA, TOKI, Authors' calculations

Note: Liabilities also include NPL. Value for 2024Q3 GDP is estimated.

The rise in household financial liabilities is driven by non-installment credit card debts and overdraft accounts (ODA).

Factors such as consumer inflation in core goods and services, ease of use through increased digitalization, the decreased use of cash and wider use of cards in payments, and banks' large limit increases have been influential in the growth in the non-installment credit card balance. Another important development leading to a rise in household liabilities is the utilization of ODA, which is not subject to a growth limit and offers an easily accessible financing opportunity to consumers for their short-term needs (Table III.1.1). On the other hand, following the increase in the maximum contractual interest rates applicable to credit card cash withdrawals (including ODA) and credit card shopping transactions, as well as the introduction of installment limits in the first half of 2024, the growth in installment PCC balances slowed significantly. With the regulation introduced in September, effective from November 1, 2024, maximum interest rates on personal credit cards were differentiated based on the credit card term debt. This regulation is expected to reduce the users' motivation for delaying due payments with high credit card limits, who account for half of the total PCC balance.³

² For further details, see CBRT Blog, Recent Trends in Card Spending Preferences - 23.09.2024.

³ For further details, see CBRT Blog, Differentiation of Maximum Contractual Interest Rates for Personal Credit Cards Based on Balances - 27.09.2024.

Chart III.1.5: Households' Financial Liabilities to GDP Ratio (%)

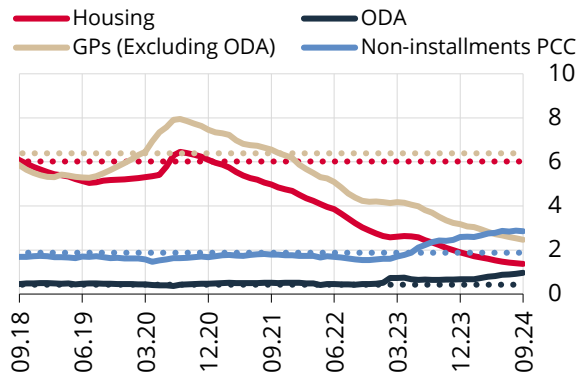
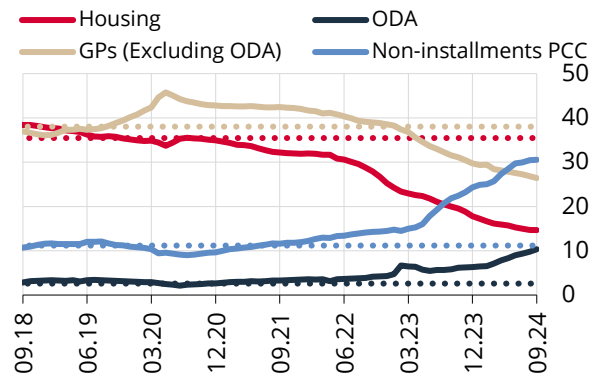


Chart III.1.6: Breakdown of Households' Financial Liabilities (% Share)



Sources: CBRT, BRTA, TURKSTAT

Last Observation: 09.24

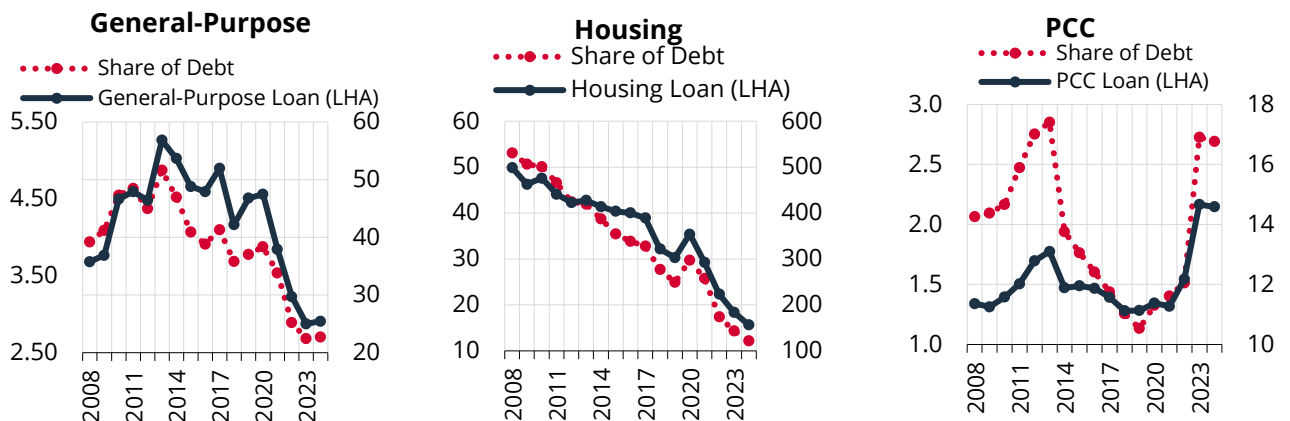
Note: Liabilities also include NPLs. 2024Q3 GDP is an estimated value. Dashed lines are the average values of the related series for the 2012-2022 period.

The downward trend in the ratios of housing loans and general-purpose loans excluding ODA to GDP continues (Chart III.1.5). The share of housing loans in retail loans, which was approximately 36% in the 2012-2022 period, fell below 15%. Meanwhile, non-installment PCC became the most widely used segment with a share of more than 30% in retail loans, outpacing the general-purpose loans excluding ODA. On the other hand, with its recently increasing use, the share of ODA reached 10% (Chart III.1.6).

While the balance of PCC debt has increased markedly in recent years, there was a slight decline in the real per capita PCC debt and the ratio of real per capita PCC debt to income.

The downward trend observed in the real per capita debt amount of general-purpose and housing loans, which account for nearly half of household indebtedness, has continued from 2013 into 2024 (Chart III.1.7). The fact that individuals' debt levels are in line with their income is considered to limit the risks to household debt repayment performance. However, it should be noted that this assessment is based on average income and thus may vary depending on borrowers' income profile and income distribution. On the other hand, the per capita PCC debt balance and its share in per capita income have been on an uptrend since 2020. This uptrend is considered to be driven by the widespread use of cards in payments due to the developments in payment technologies during this period and the increased cost of carrying cash in a high inflation environment.

Chart III.1.7: Per Capita Debt Balance in Consumer Loans and Share of Per Capita Debt in Disposable Income (% Inflation-Adjusted TRY Thousand)



Sources: BRTA, TURKSTAT

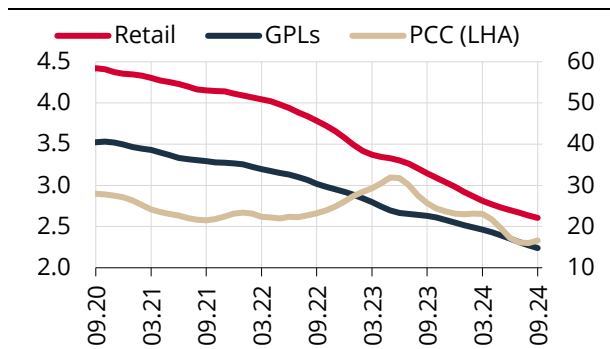
Last Observation: 09.24

Note: Dashed lines indicate the share of debt in per capita disposable income. Loan per capita is calculated by dividing the total loan balance in the related item by the number of borrowers aggregated at bank level. Per capita loan amount is deflated by the CPI. Real income is assumed to have remained unchanged in 2024. Per capita disposable income from the Household Consumer Tendency Survey is calculated by subtracting inter-household transfers (including alimony) and tax payments from income such as salaries, wages, rents, etc.

Average maturities of retail loans have been shortening, led by general-purpose loans and PCC.

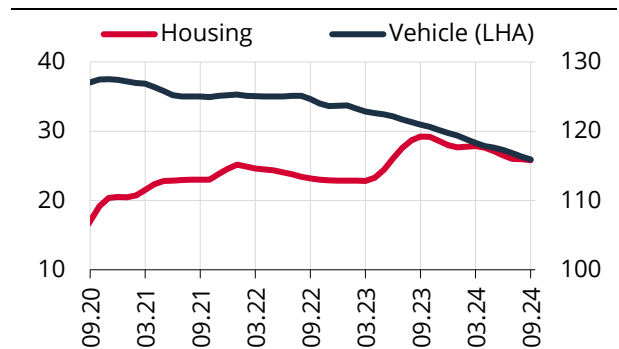
Average maturities in retail loans continue to shorten due to ongoing maturity constraints in general-purpose loans and the rise in the share of PCC (Chart III.1.8). This shortening is attributed to the marked decline in the share of housing loans and the macroprudential regulations imposed on vehicle loans based on the value of the vehicle (Chart III.1.9). The average maturity of retail loans, which had approached 60 months during the pandemic due to widely-utilized general-purpose and housing loans extended with long maturities and grace periods, decreased to 22 months as of September 2024. Coupled with high interest rates, the shortening in the average maturity of retail loans implies an additional tightening in households' financial conditions, which may lead to an increase in the credit risk of individuals with debt/income mismatch. In this context, the facility enabling delinquent PCC and general-purpose loan debts to be restructured up to 60 months is considered to help slow the additional deterioration in credit risk.

Chart III.1.8: Average Maturity in Retail Loans (Months)



Source: CBRT

Chart III.1.9: Average Maturity in Sub-Categories of Retail Loans (Months)

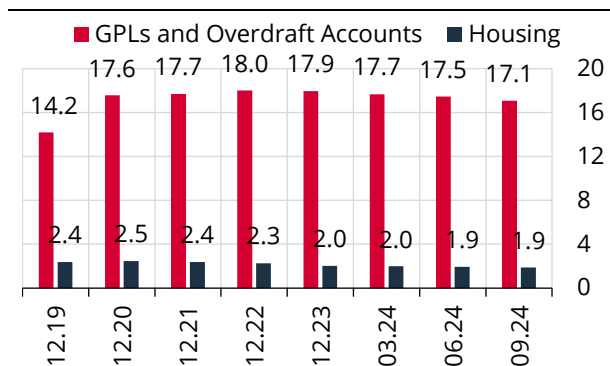


Last Observation: 09.24

The number of housing and general-purpose loan borrowers has been declining moderately.

Due to the still-high interest rates on general-purpose loans and the restrictive role of macroprudential measures, the number of borrowers has been decreasing (Chart III.1.10). This decrease is mainly driven by the segment of general-purpose loan borrowers with debts below TRY 100,000. In the current Report period, the number of borrowers with debts up to TRY 100,000 decreased by 940,000 to 9.2 million, while the number of borrowers with debts above TRY 100,000 increased by 300,000 to 2.9 million (Chart III.1.11). In the housing loan market, the elevated course of interest rates as well as the 75% reduction in the loan-to-value ratio for households' purchases of the second or more houses are considered to have been effective in the decline in the number of loan debtors.

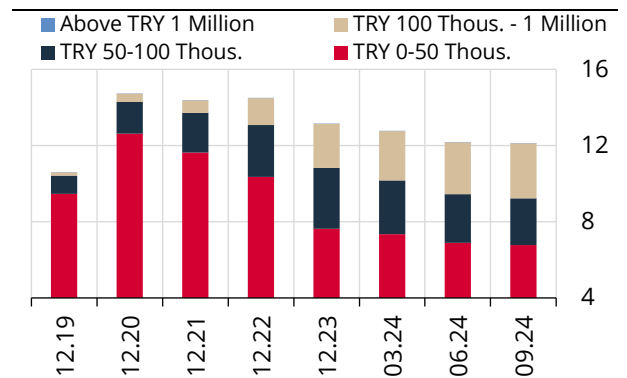
Chart III.1.10: Number of People with Consumer Loan Balance (Million People)



Sources: Risk Center, CBRT Last Observation: 09.24

Note: Reports the number of individual general-purpose and housing loan borrowers in the banking sector. General-purpose loans include ODA.

Chart III.1.11: Number of General-Purpose Loan Borrowers by Amount (Million People)



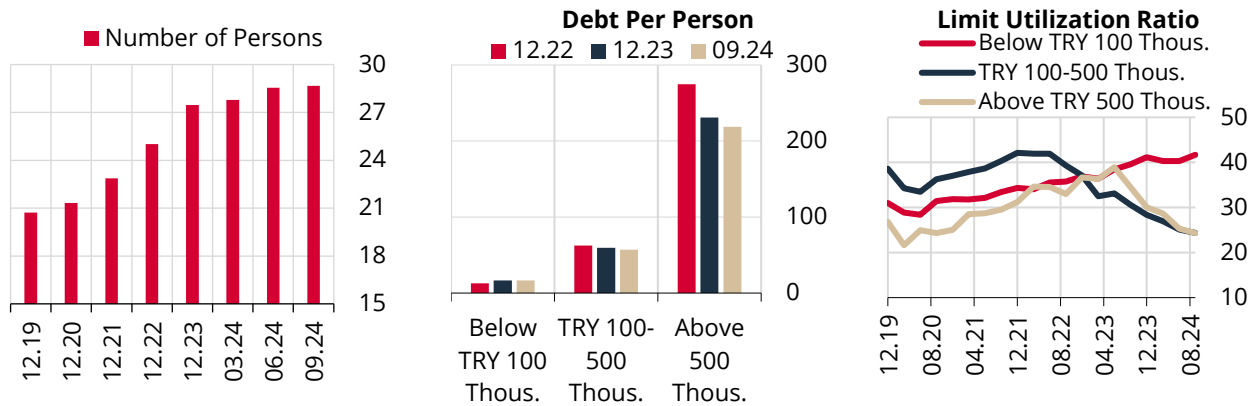
Sources: Risk Center, CBRT Last Observation: 09.24

Note: Amount brackets show the outstanding general-purpose loan debt amounts per person at all banks. The number of people is the total number of people in the relevant bracket. ODA and general-purpose loans classified as NPLs are excluded.

While the number of PCC debtors continues to grow at a decelerated rate, the limit utilization rate of cards with high limits is decreasing due to increases in limits.

The number of active credit card users approached 29 million as of September 2024. In this period, banks continued to raise credit card limits significantly. Actually, in high credit card limit groups with more significant limit increases, the per capita debt and the ratio of debt to the card limit decreased despite the increases in balances (Chart III.1.12). The decline in the per capita card balance was driven by the fact that a higher number of people shifted to the upper limit groups. In cards with a limit below TRY 100,000, the limit utilization rate continues to rise due to the price increases in goods and services.

Chart III.1.12: Number of People Actively Using PCC, Debt Per Person by Card Limit, Card Limit Utilization Rate (Million People, TRY Thousand, %)



Sources: Risk Center, CBRT

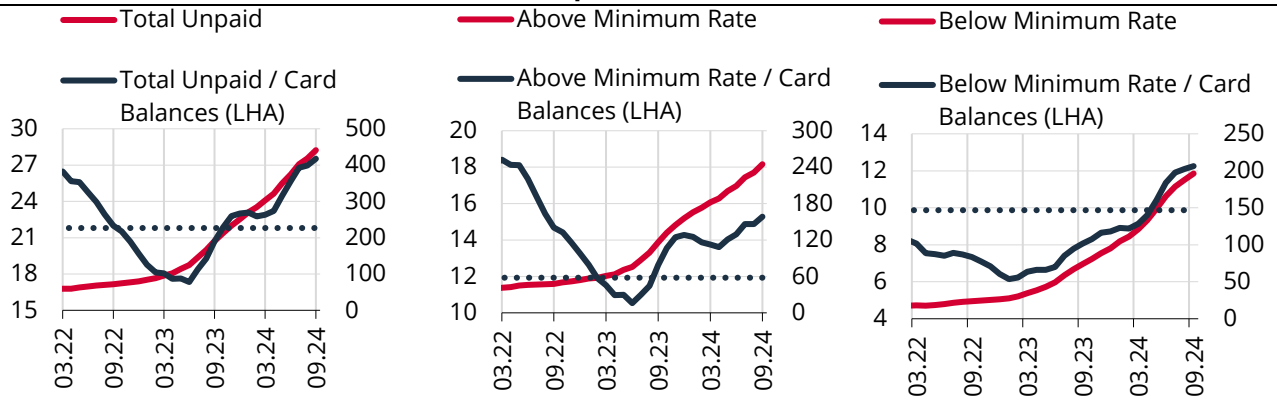
Last Observation: 09.24

Note: People with a credit card balance of zero have been excluded. The chart on debt per person shows the per capita balances of persons in the relevant limit brackets.

The ratio of unpaid credit card debt amount to the total credit card debt has exceeded its historical average.

The ratio of unpaid debt to total card balance rose to 15.3% on credit cards for which a payment of the minimum payment amount or more was made, and the ratio of unpaid debt to total card balance increased to 12.2% on credit cards for which less than the minimum payment amount was paid or no payment was made at all (Chart III.1.13). Thus, the ratio of total delinquent debts to total PCC balance climbed to 27.5%, exceeding its historical average. With increased credit card interest rates, not paying the credit card debt on time may increase the debt service burden, especially for individuals with income/borrowing mismatch. On the other hand, differentiation of the maximum contractual interest rate on credit cards based on the term debt, and the PCC debt restructuring facility are expected to have a favorable impact on individuals' payment performance.

Chart III.1.13: Personal Credit Cards with Unpaid Balances (TRY Billion, %, 3-Month MA)



Source: CBRT

Last Observation: 09.24

Note: "Above Minimum Rate" refers to the total outstanding debt for PCCs paid at or above the minimum payment rate, and "Below Minimum Rate" refers to the total outstanding debt for PCCs for which a payment is made below the minimum payment rate. Dashed lines show the average of the relevant ratios for the 2012-2019 period.

The ODA balance and the share of ODA in general-purpose loans continued to increase, which is thought to be driven by the regulation imposing a monthly growth limit on general-purpose loans excluding ODA. The ODA instrument, for which an installment facility has been offered in recent months, has had a share of nearly 30% in general-purpose loans. The share of cash advance balance in PCC debt, which had approached 25% in the first half of 2023, dropped sharply in the first half of 2024 following the increase in the cash withdrawal interest rate and the reduction in cash withdrawal limits (Charts III.1.14 and III.1.15).

Chart III.1.14: Periodic Development in ODA
(TRY Billion, %)

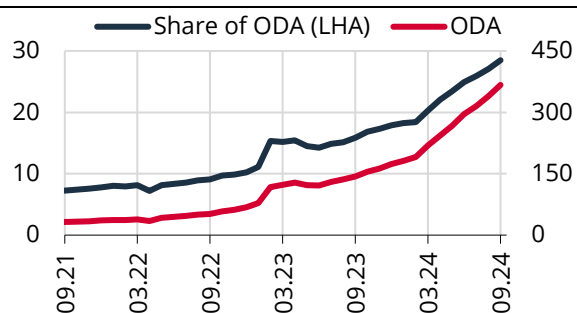
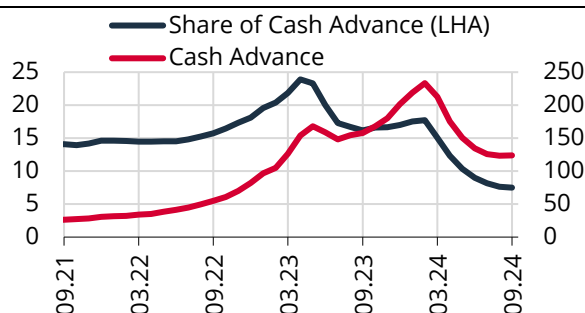


Chart III.1.15: Periodic Development in Cash Advances
(TRY Billion, %)



Source: BRSA

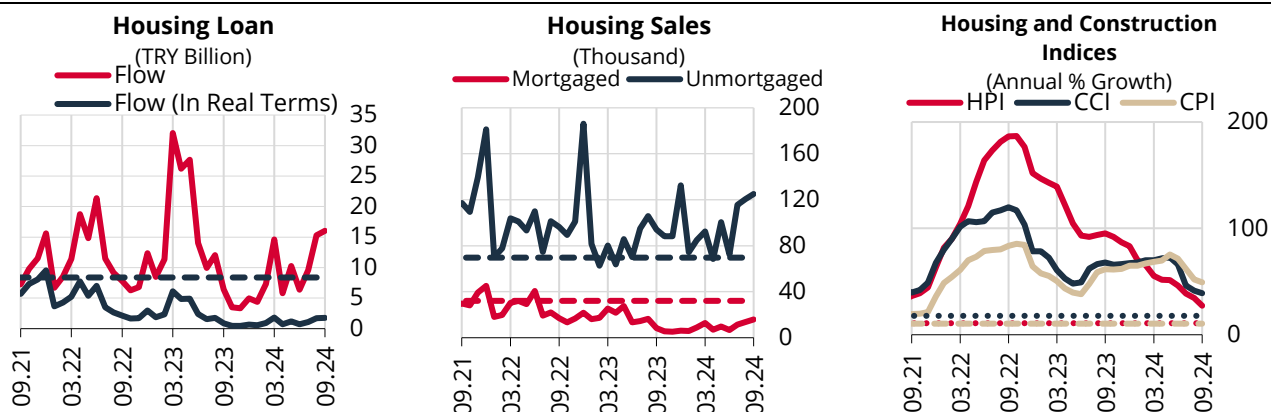
Note: "Share of ODA" is the share of real persons' ODA in general-purpose loans.

Last Observation: 09.24

Housing loan utilization remains below its historical average, while houses are sold mostly without mortgages.

The current level of house prices, the continued tightening in financial conditions, macroprudential policies for multiple home ownership, and the long period since a revision in loan-to-value ratios have limited housing loan utilization (Chart III.1.16). Against this backdrop, the annual rate of increase in house prices continued to decelerate, falling below the increases in the construction cost index (CCI) and the CPI. However, house sales and, accordingly, housing loan utilization have accelerated somewhat in recent months. Despite this acceleration, the share of mortgaged sales in total house sales has been significantly low in the recent period.

Chart III.1.16: Housing Loans, House Sales and House Prices



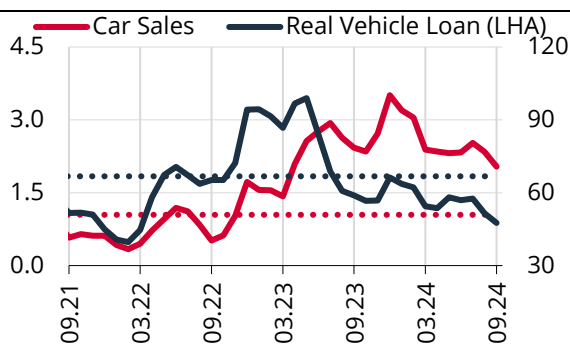
Source: CBRT

Note: Housing loans are shown in terms of monthly flow disbursements. Dashed lines show the average annual index changes in the 2012-2019 period (2016-2019 period for the CCI), real housing loans extended, and related house sales. Data have been deflated by the house price index (HPI).

Last Observation: 09.24

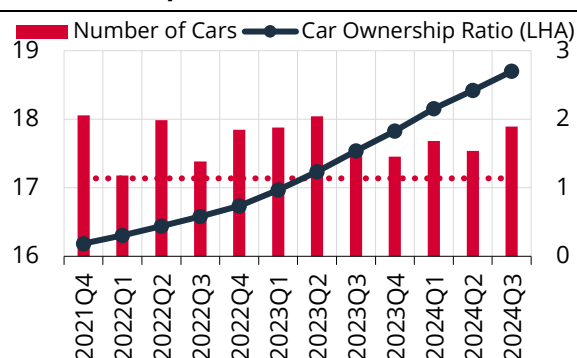
While vehicle loan utilization remains weak, campaigns continue to boost new car sales.

Sales of new cars still hover above their historical average despite a decline in recent months, while loan utilization has slowed (Chart III.1.17). Ongoing vehicle sales campaigns by firms as well as the normalization in vehicle supply boost the sales of new cars. On the other hand, in the loan-to-value ratio regulation, which is applied on a gradual basis according to vehicle prices, has significantly slowed the vehicle loan utilization. While the number of vehicles changing hands rose in the third quarter of 2024, the vehicle ownership ratio continued to increase as in recent years and approached 19% (Chart III.1.18).

Chart III.1.17: Vehicle Loans and New Car Sales
(Thousand Units, TRY Billion, 3-Month MA)

Sources: ODD, BRSA Last Observation: 09.24

Note: Data for monthly flow vehicle loans of banks and financing companies, and new car sales have been used. Deflated by the vehicle prices sub-index of the CPI. Dashed lines show the average real vehicle loan disbursements and car sales between 2012 and 2019.

Chart III.1.18: Number of Used Car Sales and Car Ownership Ratio
(Million Units, %)

Source: TURKSTAT Last Observation: 2024Q3

Note: Used car sales refer to vehicles whose ownership has changed hands once or more through public notaries. Shows the quarterly sums of the number of vehicles changing hands. Dashed line shows the average number of used car sales amounting to 1.1 million between 2012 and 2019 in quarterly periods. Car ownership ratio is the ratio of cars registered in traffic to the total population.

The share of TRY deposits and mutual funds in households' financial asset composition increases, whereas that of equities declines.

Among household financial assets, the ratios of TRY savings deposits and mutual funds to GDP remained on the rise (Table III.1.2). In this period when the shares of TRY deposits and non-deposit financial instruments increased, the share of FX-protected instruments decreased to 7.2%. In addition, there has been a significant increase in investor interest in low-risk, easily accessible liquid money market funds, which offer higher return compared to TRY deposits. The share of these funds has risen by 4.4 points since end-2023 to almost 6%. The rise in the share of TRY savings deposits is expected to continue on the back of the high levels that deposit and money market fund interest rates have reached in real terms following the monetary tightening, as well as the improvement in exchange rate expectations.

Table III.1.2: Household Financial Assets

	09.23		03.24		09.24		3-Month Growth (Annualized)
	TRY Billion	Ratio to GDP	TRY Billion	Ratio to GDP	TRY Billion	Ratio to GDP	
Total Assets	10,613	46.5	12,995	42.3	15,540	39.5	40.7
TRY Savings Deposits	1,833.6	8.0	3,197.7	10.4	5,072.4	12.9	90.2
KKM and DDM	2,495.5	10.9	1,617.2	5.3	1,114.3	2.8	-63.8
FX Savings Deposits	2,091.8	9.2	2,566.9	8.4	2,356.2	6.0	22.9
- (Billion USD)	76.7		79.8		69.4		3.8
Precious Metal Deposits	707.9	3.1	1,065.1	3.5	1,299.5	3.3	132.4
- (Billion USD)	25.9		33.1		38.3		96.4
Bonds and Bills	250.4	1.1	308.1	1.0	336.6	0.9	25.2
Mutual Funds	1,436.6	6.3	2,318.7	7.5	3,408.7	8.7	123.1
Pension Mutual Funds	593.3	2.6	803.0	2.6	1,006.7	2.6	51.6
Other Mutual Funds	843.3	3.7	1,515.7	4.9	2,402.0	6.1	165.4
Money Market Funds	128.5	0.6	290.9	0.9	889.5	2.3	703.3
Equity Securities	1,652.2	7.2	1,801.5	5.9	1,751.1	4.4	-33.2
Repo	16.2	0.1	23.5	0.1	30.7	0.1	293.8
Currency in Circulation	129.0	0.6	96.2	0.3	170.5	0.4	45.7

Sources: CBRT, MKK, PMC

Note: Month-end exchange rates have been used. Pension mutual funds show the total funds of participants in the Voluntary Participation System (IPS) and the Auto Enrollment System (AES), minus the state contribution. Deposits refer to resident real persons' deposits. Estimated value for 2024Q3 GDP data.

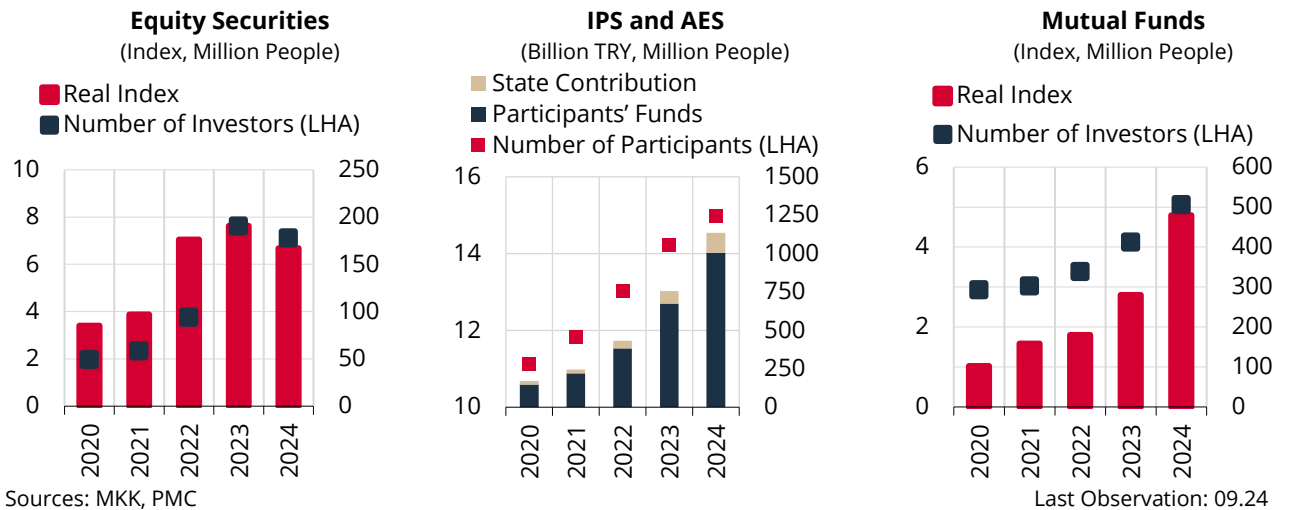
The share of households' holdings of equities, pension funds and mutual funds in their total financial assets has exceeded 33%.

Households' tendency to invest in the equity market, which had strengthened in recent years, has weakened in the recent period. The number of equity investors, which hit a historic peak at 8.5 million in the last quarter of 2023, dropped to 7.1 million at the end of September 2024. The real index of household equity portfolio decreased by more than 10% compared to end-2023.

Funds in the Voluntary Participation System and Automatic Enrollment System, which are among the major asset items of households, continue to increase at a moderate pace. Likewise, the number of participants in the pension system rose by approximately 5% to 15 million compared to the end of last year. Households' tendency to save in long-term instruments in long-term instruments is expected to contribute to financial stability.

Households' holdings of mutual funds continue to increase steadily. The number of investors in mutual funds was 5.1 million as of September 2024, while the size of mutual funds reached TRY 2.4 trillion. Compared to the end of 2023, the real index of households' mutual funds portfolio went up by more than 70% (Chart III.1.19).

Chart III.1.19: Changes in Households' Non-Deposit Assets



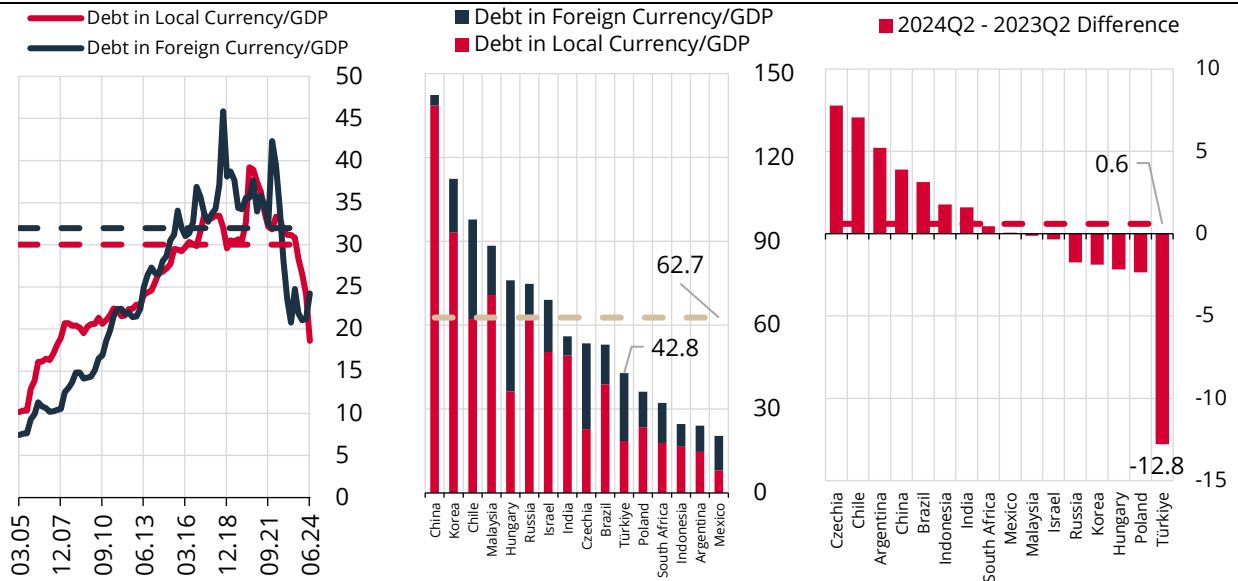
Note: The real index for equities and mutual funds is CPI-adjusted and indexed to 100 in January 2021. IPS and AES data are in aggregated terms, and the number of participants has been aggregated. Real index values for equities and mutual funds are 3-month moving averages.

III.2 Corporate Sector Developments

Financial indebtedness of corporate sector firms declined significantly.

The ratio of firms' Turkish lira debt to GDP continues to decline, whereas the FX-debt-to-GDP ratio has increased slightly. Meanwhile, the ratios of the corporate sector's Turkish lira debt and FX debt to GDP have increased slightly but remain below their historical averages. Over the past one-year period, the corporate sector debt-to-GDP ratio decreased by around 13 percentage points, while indebtedness in peer countries edged up (0.6 percentage points). Consequently, Türkiye's corporate sector debt-to-GDP ratio (42.8%) has fallen significantly below the average of peer countries (62.7%) (Chart III.2.1).

Chart III.2.1: Indebtedness Indicators of the Corporate Sector and Peer Countries (%)



Source: IIF

Last Observation: 06.24

Note: Dashed lines on the left chart denote the 2012Q4-2021Q4 historical average of the relevant ratio. The middle chart is based on the breakdown of debt in local and foreign currencies. Countries are presented in descending order according to their 2024Q2 Total Debt/GDP ratios. Dashed line shows the average of peer countries' indebtedness in 2024Q2. The chart on the right shows the average of the 2024Q2-2023Q2 change in peer countries.

The ratio of firms' Turkish lira loans to GDP continued to decline due to the weakening loan demand amid rising Turkish lira financing costs and the measures taken to limit Turkish lira loan growth. Meanwhile, the ratio of firms' FX loans to GDP rose moderately due to the relatively low FX financing costs and the measures taken against FX loan growth despite the improved exchange rate expectations. Over the past one-year period (between August 2023 and August 2024), the ratio of the corporate sector's financial debt to GDP fell by 8.8 percentage points to 37.8%. The decline in the financial debt ratio was mainly driven by Turkish lira loans and external financing (8.8 percentage points in total), while domestic FX loans recorded a limited decline (0.4 percentage points) (Table III.2.1).

The corporate sector maintained its relatively low financial leverage level.

In addition to the decline in the financial liabilities of the corporate sector, the ratio of financial assets to GDP also declined slightly, as firms turned to internal financing due to high credit costs. Despite the decline in firms' Turkish lira debt, the financial leverage ratio edged up as a result of the rise in FX debt and the slowdown in asset growth (Chart III.2.3). The current levels of the leverage ratio indicate that firms are resilient to tighter financial conditions and rising financing costs, while also limiting the potential risks to financial stability.

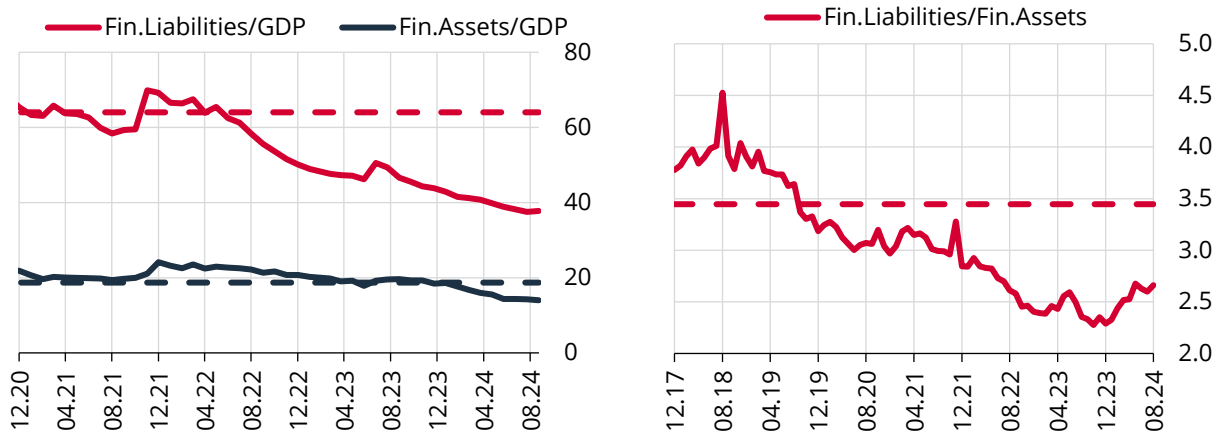
Table III.2.1: Financial Liabilities of the Corporate Sector (Billion TRY)

	08.23		05.24		08.24		3-Month Growth (Annualized) (%)
	Billion TRY	Ratio to GDP	Billion TRY	Ratio to GDP	Billion TRY	Ratio to GDP	
I. Domestic Loans (i+ii)	7,198.1	33.2	9,423.7	28.0	10,259.7	27.0	40.5
i. Turkish Lira	4,333.8	20.0	5,139.6	15.4	5,417.5	14.3	18.4
A. Bank	4,023.7	18.6	4,735.9	14.1	4,933.2	13.0	17.7
B. NBFI	239.4	1.1	336.2	1.0	342.1	0.9	7.1
C. Bonds Issued	70.8	0.3	121.5	0.2	142.3	0.2	88.2
ii. FX (FX-indexed loans included)	2,864.3	13.2	4,230.1	12.6	4,842.2	12.8	71.7
<i>USD Equivalent (A+B+C)</i>	107.4		131.7		142.8		38.2
A. Bank	102.2		126.5		137.1		38.1
B. NBFI	4.6		4.6		5.1		48.3
C. Past-Due Loans Taken Over by SDIF	0.5		0.5		0.5		0.7
II. External Loans	2,699.6	12.5	3,301.0	9.8	3,652.2	12.3	49.8
<i>USD Equivalent</i>	101.2		102.7		107.7		20.6
III. Bonds Issued Abroad	210.2	1.0	294.7	0.9	429.0	1.1	349.1
<i>USD Equivalent</i>	7.9		9.2		12.6		261.5
Total Financial Debt (I+II+III)	10,108.0	46.6	13,019.4	38.6	14,340.8	37.8	47.2
<i>For Info: Total FX Loans (Billion USD)</i>	216.5		243.6		263.1		21.5

Sources: CBRT, BRSA

Last Observation: 08.24

Note: The "Ratio to GDP" columns show the ratio of the relevant items to GDP. The last column denotes the annualized three-month change between May 2024 and August 2024. The last row shows the total FX loan balance difference between August 2023 and August 2024.

Chart III.2.3: Financial Debts and Assets of the Corporate Sector (% Ratio)

Source: CBRT

Last Observation: 08.24

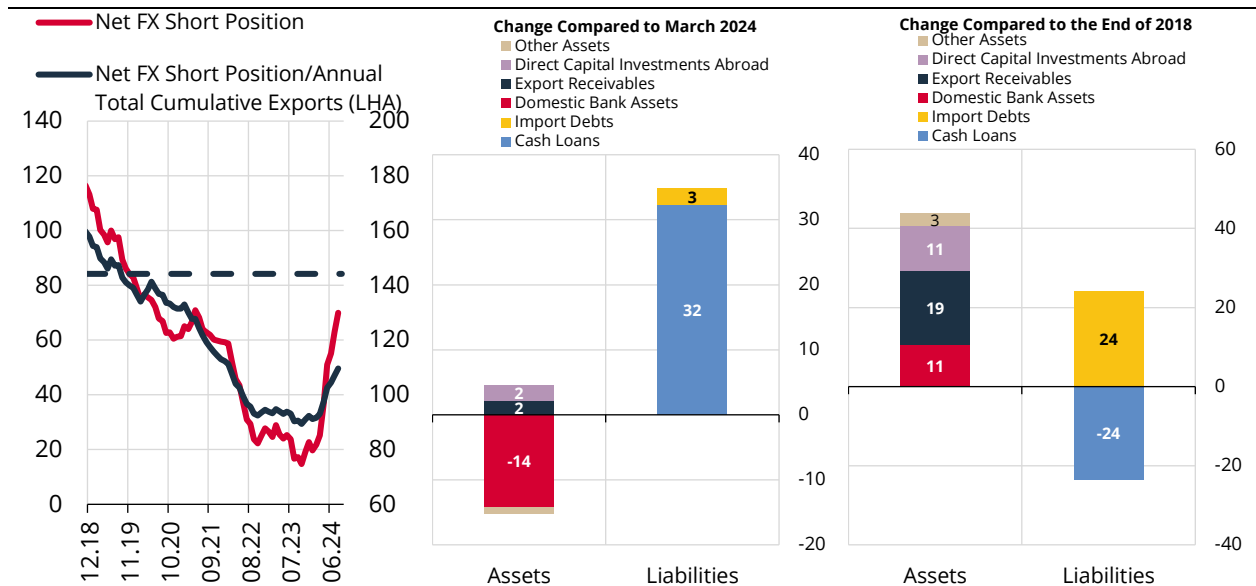
Note: Financial liabilities include the corporate sector's domestic and external loans, leasing, factoring debts, and bond issuances. Financial assets include Turkish lira and FX deposits and securities, but direct capital investments abroad and export receivables are not included. The CBRT calculates the 12-month cumulative GDP figures. The latest GDP data is the CBRT's estimate. Calculations are based on month-end foreign exchange buying rate. Dashed lines denote the historical average of the relevant ratio between December 2017 and December 2021.

Following the rise in FX loans and the decline in FX assets, the corporate sector's FX short position increased.

The increase in the FX short position of the corporate sector began in the last quarter of 2023, reaching USD 130 billion in August 2024, up from USD 75 billion in October 2023. The ratio of the FX short position to

12-month exports rose to 50% but remained low and below its historical average (84%). The increase in the net FX short position was driven by the rise in FX loans extended by domestic banks to firms and the decline in FX deposits at domestic banks (Chart III.2.4). In light of the amended regulation in July 2024, aiming to curb the rising risks in FX loans, the monthly growth limit for FX loans was reduced to 1.5%. In the period ahead, the increase in the FX short position is expected to be more moderate amid the rebalancing in FX loans.

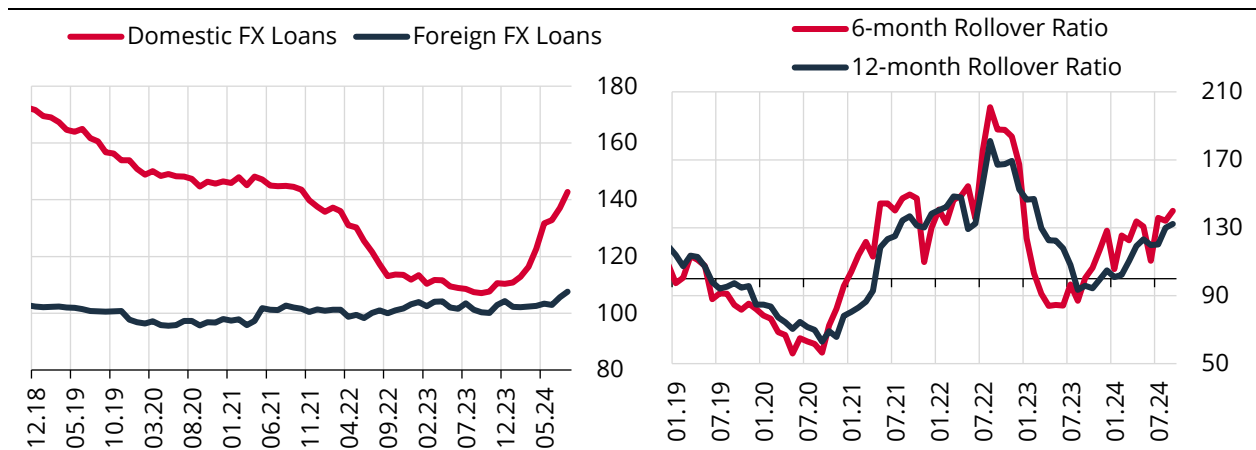
Chart III.2.4: FX Position of the Corporate Sector (Billion USD, %)



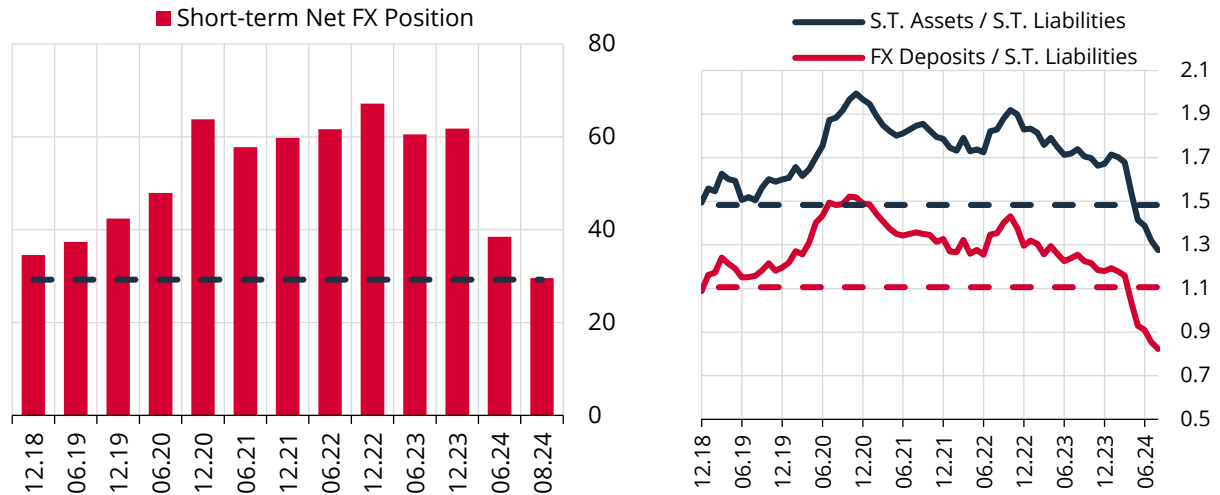
Source: CBRT Last Obsv.: 08.24 Source: CBRT Last Obsv.: 08.24 Source: CBRT Last Obsv.: 08.24
 Note: Export values are the sum of 12-month cumulative amounts. The change in the “Other Assets” item covers the change in the assets and securities with banks abroad. Dashed line denotes the historical average of the Short Position/Export ratio between December 2017 and December 2021.

Corporate sector firms continued to have access to external financing in the current reporting period, and their external debt rollover ratio rose above 130% (Chart III.2.5). The improvement in the macroeconomic outlook, the falling country risk premium, and rating upgrades have been instrumental in bolstering corporate sector firms' access to external financing. Moreover, the increase in firms' bonds issued abroad has fueled the upward trend in external debt rollover ratios.

Chart III.2.5: Indicators of Corporate Sector’s FX Loans and Debt Rollover (Billion USD, %)



Source: CBRT Last Observation: 08.24 Source: CBRT Last Observation: 09.24
 Note: External debt rollover ratio shows the ratio of the cumulative external borrowing over a 12-month and 6-month periods to the debt repayment in the same period.

Chart III.2.6: Indicators of Corporate Sector's Exchange Rate Risk (Billion USD, Ratio)

Source: CBRT

Last Observation: 08.24

Note: FX deposits are the total amount of FX deposits held by resident corporate sector firms at domestic and foreign financial institutions. Net FX position calculations include FX-protected deposits. Dashed lines show the historical average of the relevant data between January 2012 and December 2021. ST stands for “short-term.”

Firms' short-term net FX long position decreased, while the capacity of short-term FX assets to cover liabilities fell below its historical average.

The short-term net FX position, which was USD 61.8 billion at end-2023, fell below USD 30 billion as of August 2024 (Chart III.2.6). Despite this decline, the short-term net FX position remains slightly below its historical average. As firms' financial assets shifted towards Turkish lira and they opted for FX loans in their bank borrowings, short-term FX debt service coverage ratios declined. Nevertheless, firms still hold liquid FX assets that are approximately 1.3 times higher than their short-term FX debt. The CBRT closely monitors the FX loan and FX asset preferences of corporate sector firms so that they can effectively manage their exchange rate risks and to maintain the financial stability.

Firm-based indebtedness indicators show an increase in the number of firms utilizing FX loans, while these firms' capacity to cover their FX debt from export revenues continues to improve.

Pursuant to the May 2018 regulation, the FX credit utilization of firms with an FX credit risk of less than USD 15 million has been linked to their export revenues for the last three years. The FX credit utilization tendency of firms with an FX credit risk of less than USD 15 million (affected by the regulation) and more than USD 15 million (not affected by the regulation) has been analyzed using micro data. Accordingly, the FX credit risk of firms with an FX credit risk of less than USD 15 million increased by 30% from USD 22.3 billion as of October 2023 to USD 29.2 billion as of August 2024. Among this group, the number of firms utilizing FX loans increased by 32% to more than 29 thousand. Meanwhile, the credit risk of firms with an FX credit risk of more than USD 15 million increased by 12% from USD 166 billion as of October 2023 to USD 186 billion. The number of firms with FX loans in this group has increased by 19% (Chart III.2.7).

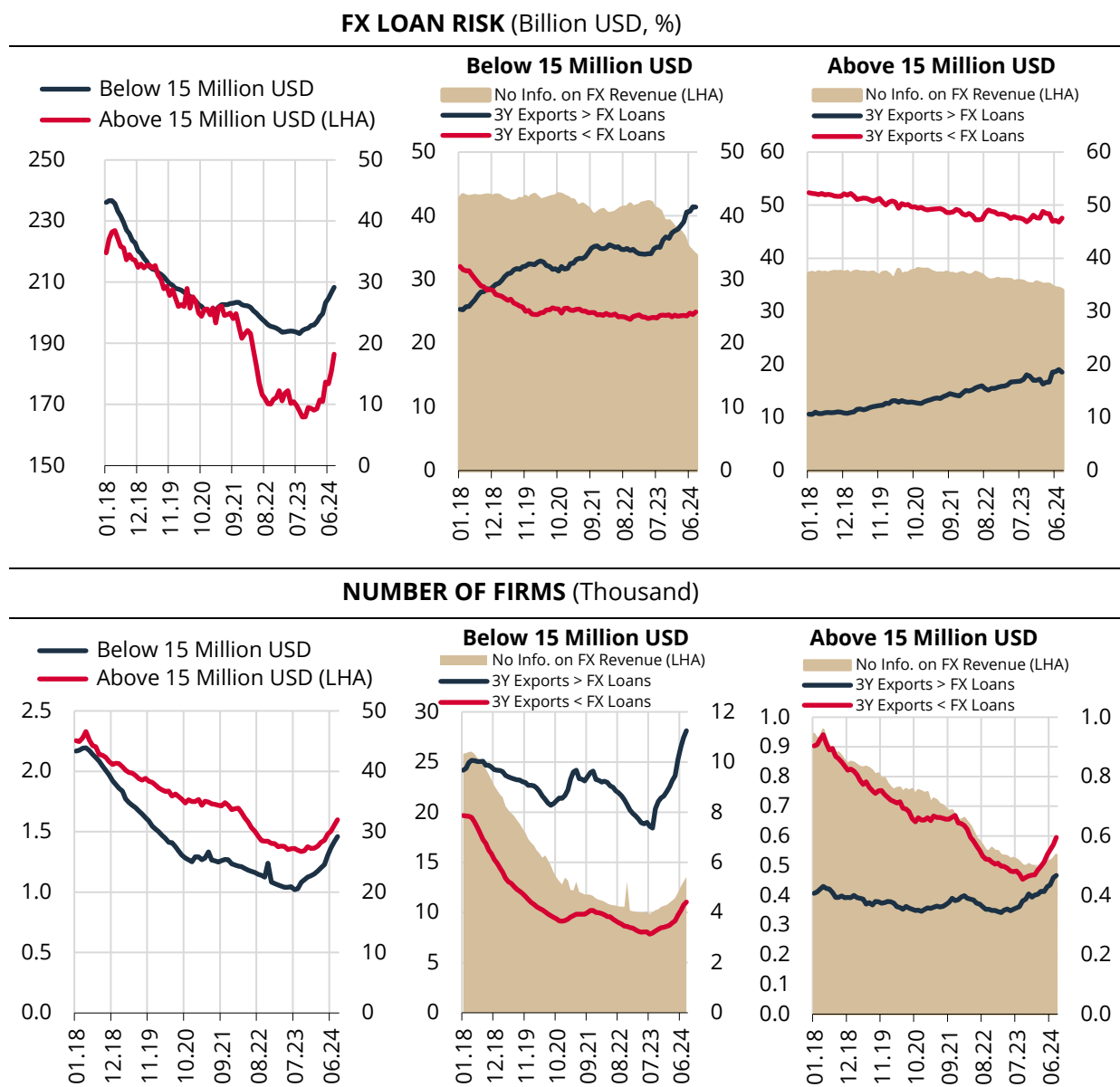
The share of firms whose export revenues for the last three years exceed their FX credit risk among the firms with an FX credit risk of less than USD 15 million has continued its upward trend since May 2023, reaching 41% as of August 2024. Among the firms with an FX credit risk of USD 15 million and above, and with no restrictions imposed by the regulation, the share of firms whose export revenues for the last three years exceed their FX credit risk has also increased. As the export tendency of firms increase, the share of firms with no available FX income information decreased.¹

An analysis in terms of the number of firms reveals that the number of firms with FX loans increased in both groups. On the other hand, this increase in the group “Below USD 15 Million” was mainly driven by

¹ FX income calculation is based on foreign trade data including only exports of goods. Therefore, firms with no available FX income information are likely to have FX income through exports of services.

firms with three-year export revenues above their loan balance. These indicators suggest that despite the increase in the FX credit risk and the number of firms utilizing FX loans, the improvement in the coverage of firms' FX credit risk by export revenues continues.

Chart III.2.7: FX Loan Balances and Number of Firms (Billion USD, Thousand)



Sources: Risk Center, CBRT, Ministry of Trade

Last Observation: 08.24

Note: FX credit risk calculation includes loans extended from abroad via domestic banks and excludes direct loans used from abroad. Firms' export revenues represent only the total revenues from exports of goods. Export revenues for the 2018-2024 period have been calculated using the 36-month sliding window method. Firms with no export revenue records in the database during the period covered for the export revenue calculation are classified under "No Information on FX Revenue." Firms that recorded export revenue even in one month during the period analyzed are classified as firms with FX revenue and placed under the relevant category through a comparison of their calculated three-year export amount and their FX credit risk.

While the share of Turkish lira deposits in the corporate sector's financial asset composition is growing, that of FX deposits is decreasing.

The upward trend in Turkish lira deposits of firms continued during the current reporting period (Table III.2.2). This trend was driven by the macroprudential policy steps taken by the CBRT in favor of the Turkish lira deposit preference to strengthen the monetary transmission mechanism and the improvement in expectations due to the decline in exchange rate volatility. Owing to the adopted macroprudential

measures, the shares of KKM and FX commercial deposits have been gradually declining. Firms continue to opt for internal financing amid tightening financial conditions. As a result of this internal financing tendency, the ratio of total assets to GDP declined slightly, yet the corporate sector's financial assets grew by 32% in annualized terms in the last three months.

Table III.2.2: Financial Assets of the Corporate Sector (Billion TRY)

	09.23		06.24		09.24		3-Month Growth (Annualized)
	Billion TRY	GDP Share	Billion TRY	GDP Share	Billion TRY	GDP Share	
Turkish Lira Commercial Deposits	2,654	11.7	3,280	9.3	3,533	9.0	34.6
KKM Accounts	809	3.6	578	1.6	394	1.0	-78.4
FX Commercial Deposits	1,829	8.1	1,938	5.5	2,018	5.1	17.6
<i>(Billion USD)</i>	<i>67</i>		<i>59</i>		<i>59</i>		<i>0.4</i>
Public Debt Instruments	44.0	0.2	53.3	0.2	60.6	0.2	66.5
Private Sector Debt Instruments	85.7	0.4	119.0	0.3	162.7	0.4	249.4
Total Assets	4,613	20.4	5,391	15.4	5,775	14.7	31.7
Total Assets / GDP	20.4		15.4		14.7		

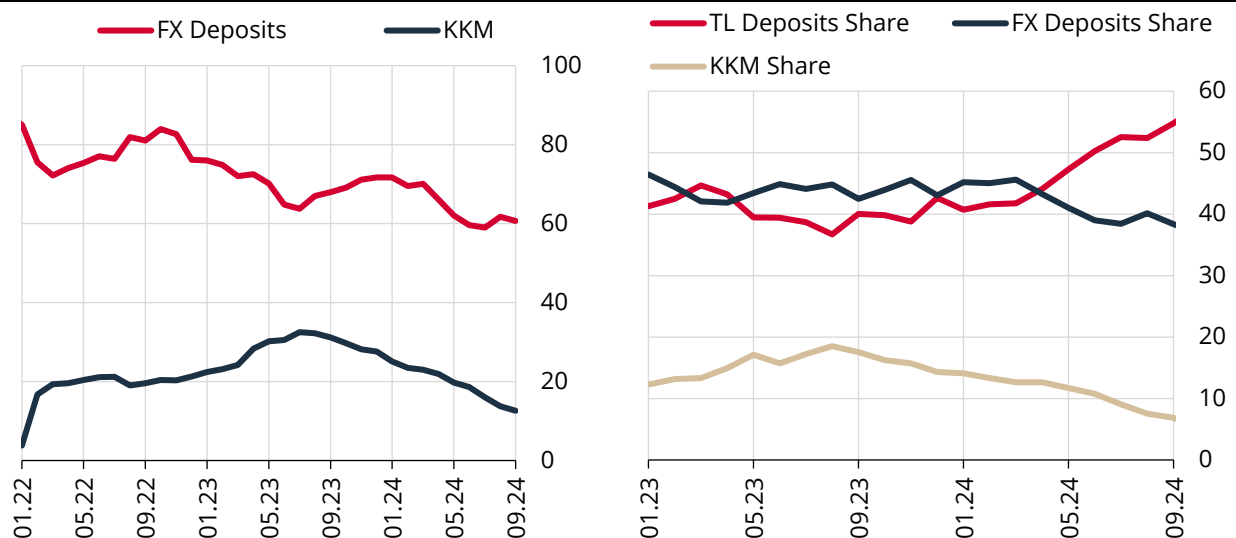
Source: CBRT

Last Observation: 09.24

Note: "GDP Share" shows the ratio of the relevant item to GDP. The last column denotes the annualized three-month change between June 2024 and September 2024.

The downward trend in firms' KKM accounts and FX deposits continues (Chart III.2.8). The share of Turkish lira deposits in total deposits, which has been on an upward trend since August 2023, has surpassed the share of FX deposits since April 2024. As of September, the share of Turkish lira deposits reached 55%, whereas that of FX deposits fell below 40%. In addition to the improved inflation and exchange rate expectations as a result of the ongoing tight monetary policy, firms' shift towards Turkish lira assets has also been driven by the policy steps such as reducing the minimum interest rate applicable to KKM accounts, amendments to KKM targets, termination of the tax exemption for legal person accounts, introduction of the withholding tax on KKM interest yields and abolition of the additional returns.

Chart III.2.8: Commercial Deposits (Billion USD, %)



Source: CBRT

Last Observation: 09.24

Source: CBRT

Last Observation: 30.09.2024

Note: FX deposits are the four-week moving averages. As of September 30, 2024, the shares of Turkish lira deposits, FX deposits, and KKM were 54.7%, 38.4%, and 6.9%, respectively.

In 2024, the profitability and financial expense coverage indicators of publicly traded firms deteriorated slightly, while their liquidity remained relatively strong.

Due to the recent adoption of inflation accounting in the reporting of balance sheets of firms listed on the BIST, comparisons with pre-2022 balance sheets are not feasible. Therefore, first, the balance sheet items of firms listed on the BIST, which have been revised applying inflation accounting for the period after 2022, are analyzed to provide information on the development of firms' profitability, liquidity, and solvency in the near term. Accordingly, profitability ratios, which were high in 2022 and 2023, have declined slightly in the first two quarters of 2024 due to rising financing costs. The current ratio, which measures liquidity, indicates that firms continue to meet their short-term liabilities. However, the liquid asset ratio, which shows the share of firms' liquid assets and inventories in assets, declined slightly in 2024. The decline in this indicator was also reflected across firms. The development in this indicator is attributed to the fact that firms reduced their bank debts due to tighter financial conditions and turned to their existing liquid assets (internal financing) to meet their financing needs. The financial expenses coverage ratio (FECR), which shows the capacity of firms to cover their financial expenses with their operating income, has been on a downward trend due to rising financing costs as a result of the tight monetary policy. On the other hand, more than half of the firms have a financial expenses coverage ratio above the threshold value of 1.5 (Table III.2.3). Even though the reflection of the tight financial conditions on firms' profitability and liquidity indicators is considered to be limited, the development in these indicators is closely monitored.

Table III.2.3: Profitability, Liquidity, and Indebtedness Indicators of Corporate Sector Firms Based on Inflation Accounting

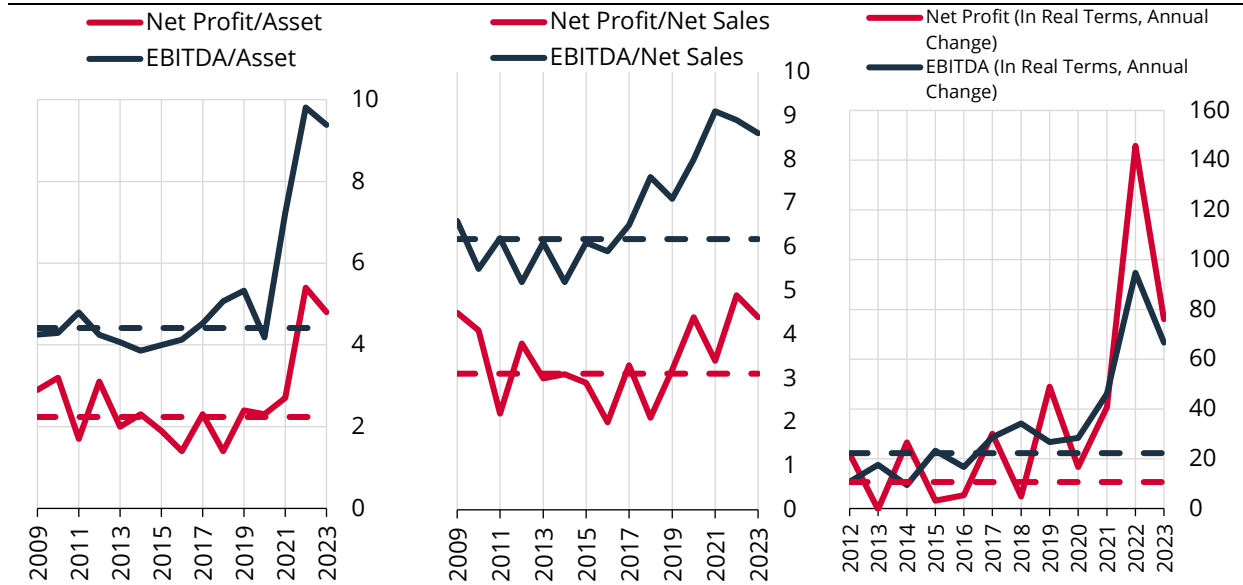
<i>Indicator Types</i>	Indicators	Long-Term Average	2022Q4	2023Q4	2024Q1	2024Q2
<i>Profitability</i>	EBITDA/Net Sales %)	13.5	13.4	13.7	11.0	11.7
<i>Profitability</i>	Net Profit/Net Sales (%)	6.3	7.9	10.7	4.6	5.0
<i>Liquidity</i>	Liquid Asset Ratio %)	21.7	22.6	20.8	19.4	18.7
<i>Liquidity</i>	Current Ratio	1.37	1.39	1.43	1.42	1.43
<i>Liquidity</i>	Share of Firms with Liquid Asset Ratio > 20%	53.8	57.5	52.8	47.6	47.5
<i>Liquidity</i>	Share of Firms with Current Ratio > 1 (%)	74.9	81.5	82.9	82.4	79.9
<i>Indebtedness</i>	FECR Ratio	3.27	3.02	2.10	1.61	1.58
<i>Indebtedness</i>	Share of Firms with FECR >1.5 (%)	59.9	67.9	61.8	50.3	51.9
	Number of Firms		395	392	380	398

Note: The analysis includes BIST-listed companies that have or have not applied inflation accounting. Financial indicators are median values of the relevant period. EBITDA = Net Operating Profit/Loss + Amortization Expenses. FECR= EBITDA/Financial Expenses. Liquid Asset Ratio = (Liquid Assets + Inventories)/Assets. Current Ratio = Current Assets/Short-Term Liabilities. The long-term average is the average of the annualized data between 2011Q4 and 2023Q3.

The profitability ratio of corporate sector firms, which is above the historical average, declined slightly in 2023.

In addition to the BIST sample, which consists primarily of a sample of large firms and enables the analysis of recent trends in the corporate sector, the CBRT's company accounts statistics, which also encompass data on whole non-financial firms, facilitate a more comprehensive analysis of the corporate sector. However, due to the approximately nine-month delay in relevant data publication, it is not feasible to conduct near-term analyses. Based on these reports, profitability indicators of the corporate sector remained flat from 2009 until the onset of the pandemic. Nonetheless, corporate sector profitability increased significantly above its historical average, in line with inflation realizations and strong domestic demand conditions after 2021. Due to increased monetary tightness, profitability ratios in the corporate sector began to decline, yet remained at robust levels as of the end of 2023 (Chart III.2.9).

Chart III.2.9: Profitability Indicators of Corporate Sector (%)



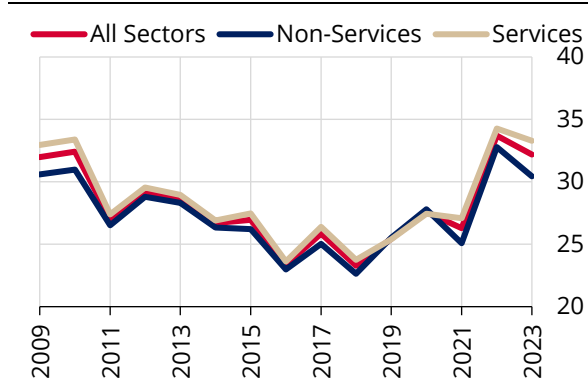
Source: CBRT-Company Accounts

Last Observation: 2023

Note: Dashed lines show the average annual real changes in long-term EBITDA/Asset, Net Profit/Asset, EBITDA, and Net Sales Income. These average values are calculated for the 2009-2019 period. The chart on the right shows the change in real three-year moving averages in EBITDA and Net Profit/Loss.

After 2021, in an environment of rising inflation, the number of companies that increased their profitability relative to their assets has increased. The share of firms with a net profit to assets ratio of 5% or above was 32%, while this ratio was 30% and 33% in the services and non-services sectors, respectively (Chart III.2.10). The share of firms with an EBITDA-to-total assets ratio of 5% or above is 45% (Chart III.2.11). The widespread rise in profitability ratios to historically high levels prior to 2023 has boosted bank balance sheets and capital structures and formed an important buffer for firms during the monetary tightening period.

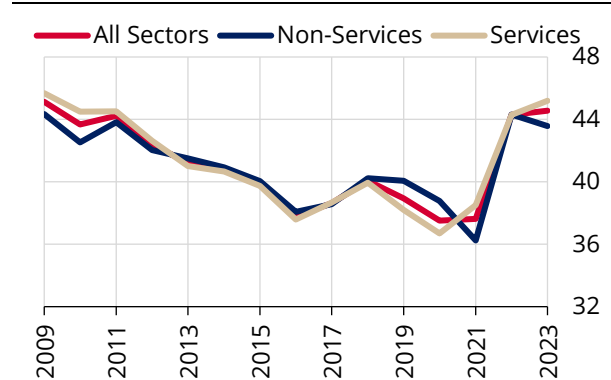
Chart III.2.10: Share of Firms with a Net Profit/Asset Ratio Above 5% (%)



Source: CBRT- Company Accounts Last Observation: 2023

Note: The shares of services and non-services firms are calculated using the number of firms in these sectors. Micro-scale firms are not included.

Chart III.2.11: Share of Firms with an EBITDA/Asset Ratio Above 5% (%)



Source: CBRT- Company Accounts Last Observation: 2023

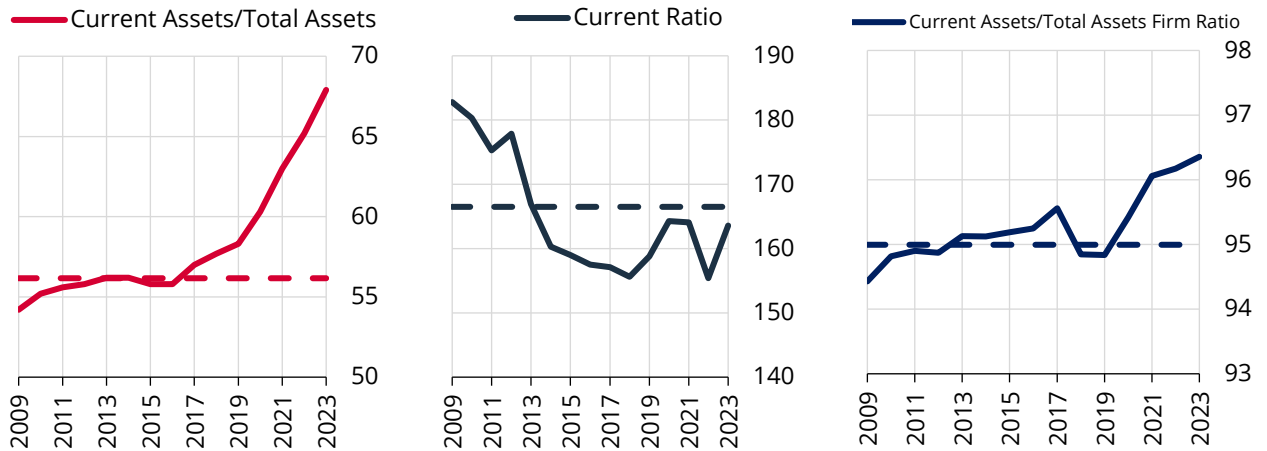
Note: The shares of services and non-services firms are calculated using the number of firms in these sectors. Micro-scale firms are not included.

The corporate sector had strong liquidity buffers prior to the financial tightening.

The ratio of current assets, including liquid assets, inventories, and receivables, to total assets indicates that the liquidity of the corporate sector is highly robust. The current ratio, which shows the sector's capacity to meet short-term liabilities, is very close to its historical average. The high levels of liquid assets of firms provide a buffer against potential fragilities and strengthen their balance sheets, along with their strong profitability (Chart III.2.12). Although liquidity indicators of BIST firms point to a downturn in 2024,

firms with strong liquidity buffers were able to cover their financing needs with their existing liquidity instead of borrowings, given the rising loan costs.

Chart III.2.12: Liquidity Indicators of Firms (%)



Source: CBRT-Company Accounts

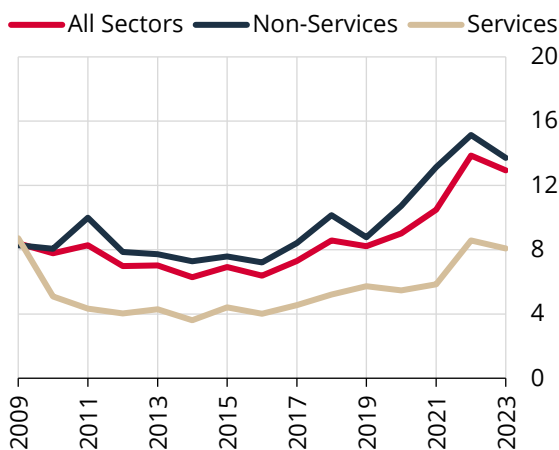
Last Observation: 2023

Note: Current assets are the sum of liquid assets and inventories for all firms. The Current Assets/Total Assets ratio is the median value of liquid asset ratios calculated for all firms. Current ratio is calculated as the ratio of current assets to short-term liabilities. Current Assets/Total Assets firm ratio shows the share of firms with a Current Assets/Total Assets ratio above 20%. Dashed lines show the historical average of the relevant indicator. Historical averages are calculated for the 2009-2019 period.

The high level of profitability has supported the corporate sector's debt service capacity.

The ratio of corporate sector's operating profitability to debt is on the rise, driven by the sector's high EBITDA, particularly over the past three years. Despite the fact that the EBITDA-to-debt ratio in the services sector remained below the corporate sector average, this ratio stood above the services sector's historical average (Chart III.2.13). Meanwhile, the number of firms with an EBITDA-to-debt ratio above 25% was higher in the services sector than in non-services sectors (Chart III.2.14). The fact that the corporate sector had a high debt service capacity before the monetary tightening not only supported the corporate sector against rising financing costs but also contributed to the low NPL ratio.

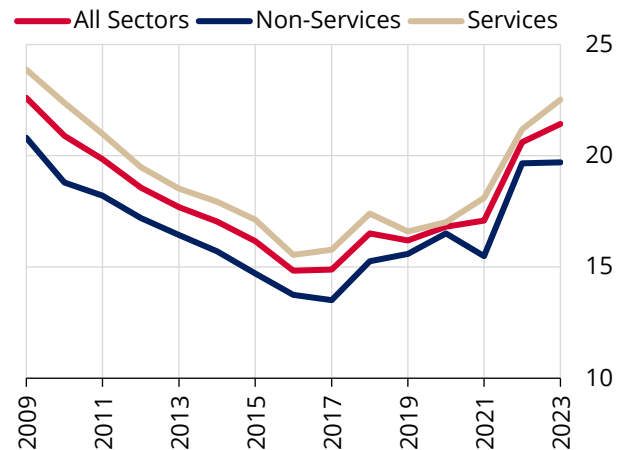
Chart III.2.13: EBITDA/Debt Ratio of Corporate Sector Firms (%)



Source: CBRT-Company Accounts Last Observation: 2023

Note: Shows the median EBITDA/Total Debt ratio. Micro-scale firms are not included.

Chart III.2.14: Share of Firms with an EBITDA/Debt Ratio Above 25% (%)



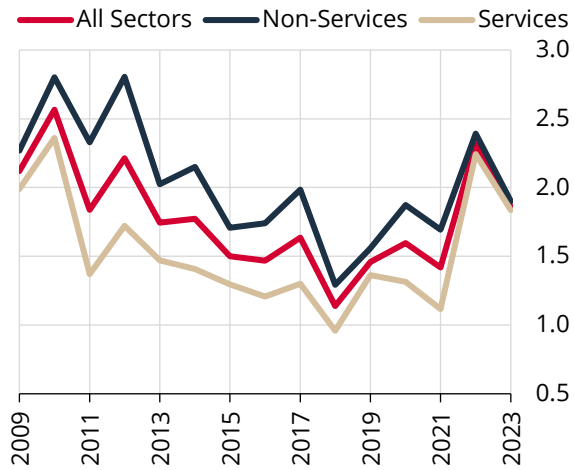
Source: CBRT-Company Accounts Last Observation: 2023

Note: Shows the ratio of firms with an EBITDA/Total Debt ratio above 25% to the total number of firms. Micro-scale firms are not included.

The corporate sector has the profitability outlook sufficient to cover its financial expenses.

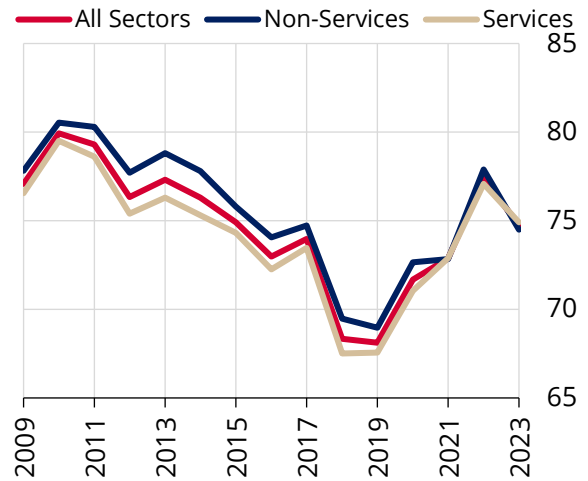
The capacity of the corporate sector to cover its financial expenses improved considerably due to the high inflation realizations and declining financial expenses amid the low interest rate environment during the 2021-2023 period. Despite the somewhat limited financial expenses coverage ratio after June 2023, due in part to monetary tightening, the sector's high profitability and robust liquid assets maintained the ratio at a high level (Chart III.2.15). Similarly, the share of firms with a financial expenses coverage ratio above 1.5 is quite close to the historical average and reflects the sector's strong debt service capacity (Chart III.2.16).

Chart III.2.15: Corporate Sector Firms' Financial Expenses Coverage Ratio (Ratio)



Source: CBRT-Company Accounts Last Observation: 2023
 Note: FECR = EBITDA/Financial Expenses. Micro-scale firms are not included.

Chart III.2.16: Share of Firms with Financial Expenses Coverage Ratio Above 1.5 (%)



Source: CBRT-Company Accounts Last Observation: 2023
 Note: Shows the ratio of firms with an FECR ratio above 1.5 to the total number of firms. Micro-scale firms are not included.

Box III.2.I: Firm Assets, Credit Utilization and Price Expectations

Firms' expectations about the prices of the goods and services they produce and their pricing strategies are a significant supply-driven factor affecting the inflation outlook and price stability. In fact, firms aiming to hedge against inflation uncertainty during periods of strong upward price pressures prefer to operate with high levels of cash equivalents and inventories (stocks), taking into account the possible high input costs in the following period¹. Coibion et al. (2020) study on the Italy case shows the positive correlation between firms' inflation expectations and their inventory holding preferences. In this context, the financing preferences of real sector firms when they implement short-term asset holding strategies during inflationary periods are also significant in terms of the interaction of financial stability with price stability. The literature on inflation expectations suggests that deterioration in inflation expectations may have an impact on the amount, maturity, and cost of loan financing (Coibion et al, 2020; Ropele et al., 2022; Akgündüz et al., 2024).

Using the case of Türkiye, this study analyzes the correlation between firms' balance sheet composition and their pricing expectations in periods when inflationary pressures gain strength and different monetary policy strategies (easing and tightening) were implemented. From a theoretical perspective, firms that have high levels of inventories are expected to be less likely to change their prices when demand conditions weaken (such as during monetary tightening) due to their relatively lower need to maintain production. On the other hand, if firms with large inventories also utilize a high amount of credit, the upside deterioration in price expectations is expected to increase amid shrinking demand conditions. In this case, increased financing costs due to monetary tightening and the effort to maintain production against contracting demand may play a role. The results of this analysis suggest that firms operating with high levels of inventory and liquid assets have much higher price expectations during periods of monetary easing. Moreover, it takes time for heightened price expectations of these firms to return to historical averages during periods of monetary tightening. Additional analysis reveals that the high course of price expectations is more pronounced for firms with high loan debt during periods of monetary expansion.

Data and Methodology

The study utilizes various micro data sources. In the first stage, real sector firms' expectations regarding price changes are collected from the Business Tendency Survey (BTS) data (Ayanoğlu et al., 2024). To elaborate, the answers to the question "How do you expect your selling prices to change over the next 3 months?" in the BTS are used in the firm panel format. The expectations of BTS participants regarding pricing policies are measured by the distribution of categorical answers to the question (increase/ remain unchanged/decrease). The sampling excluded those firms that did not respond to the question measuring expectations for price changes. In the second stage, financial statement data of firms were obtained from the administrative records of the Revenue Administration (RA) and matched with price expectations. In the third and final stage, the micro-level credit data provided by the BRSA were aggregated both at the firm and time dimensions and merged with other databases. At the end of this sampling process, those analyses included in the study cover 3,200 firms operating in the manufacturing industry during the sampling period January 2018-August 2024.

The basic empirical specification is constructed as follows:

$$Price\ Expectation_{it} = \beta(Policy\ Stance_t \times Inventory\ Ratio_i) + \delta_i + \theta_t + \varepsilon_{it} \quad (1)$$

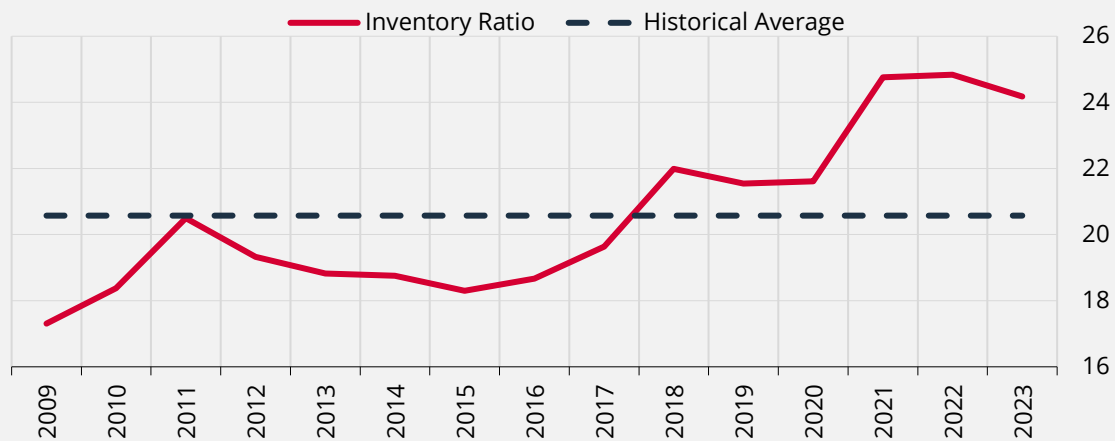
In Equation (1) the *Price Expectation* variable, which tracks the trend of firms' product and service prices (at the near-term forecast horizon), takes the value 1 for firms expecting an increase in sales prices in the next three months and 0 for other firms. The *Policy Stance* variable captures the cyclical variation in the monetary policy stance, and is represented by the *Expansion* and *Tightening* series in different analyses. The *Expansion* indicator, based on the course of the CBRT's weighted average funding rate, which is deflated by actual inflation, takes the value of 1 for the September 2021-May

¹ Throughout the note, inventory refers to stocks under liquid items in the balance sheet, and inventory ratio refers to the stocks to total assets ratio.

2023 period and 0 for the January 2018-August 2021 period. The *Tightening* variable, which tracks the period when the CBRT initiates monetary tightening, is assigned a value of 1 for the June 2023-August 2024 period and 0 for the January 2018-August 2021 period.²

The differentiation among the strategies adopted by firms against price uncertainties in an inflationary environment is monitored through the behavior of holding short-term inventories. In fact, for the analyzed sample, in the recent period when pressures on price stability were elevated, firms' inventories have also gone above historical trends (Chart III.2.I.1). In this context, the *Inventory Ratio* variable (as of 2021), which is constructed in the cross-sectional dimension, takes the value of 1 for firms with a ratio of inventories to total assets above the sampling average and 0 for other firms. The model also includes firm (δ_i) and time (θ_t) fixed effects. Standard errors are clustered at the firm-month level.

Chart III.2.I.1: Firm Inventories (BTS Sampling, %)



In the following stage of the analysis, we examine how the firm inventory ratio-price expectation relationship differs according to firms' credit utilization behavior in an inflationary environment (and under different monetary policy practices). The specification in Equation (2) is used for the relevant analysis.

$$\begin{aligned}
 \text{Price Expectation}_{it} & & (2) \\
 &= \beta_1(\text{Policy Stance}_t \times \text{Inventory Ratio}_i) \\
 &+ \beta_2(\text{Policy Stance}_t \times \text{Inventory Ratio}_i \times \text{Credit}_i) \\
 &+ \beta_3(\text{Inventory Ratio}_i \times \text{Credit}_i) + \delta_i + \theta_t + \varepsilon_{it}
 \end{aligned}$$

In Equation (2), price expectations, monetary policy periods and variable definitions for balance sheet composition tendency and fixed effects are constructed as in Equation (1). In addition, the *Credit* variable included in the model indicates the tendency of real sector firms to obtain financing through bank loans. This variable takes the value 1 for firms whose total loan utilization in the September 2021-August 2024 period is above the sampling average and 0 for other firms.

Results

Within the scope of the descriptive analysis, the historical course of price expectations of firms with different inventory levels are analyzed. To this end, we first calculated the average *Price Expectation* series for firms (treatment group) and other firms (control group) that went through the period of accelerating inflationary pressures (2022-2023) with high stock levels (as of end-2021). In the following step, the difference of the average expectation values (and the medium-term trend of this difference) is taken. As illustrated in Chart III.2.I.2, the deterioration in price expectations has been higher in the

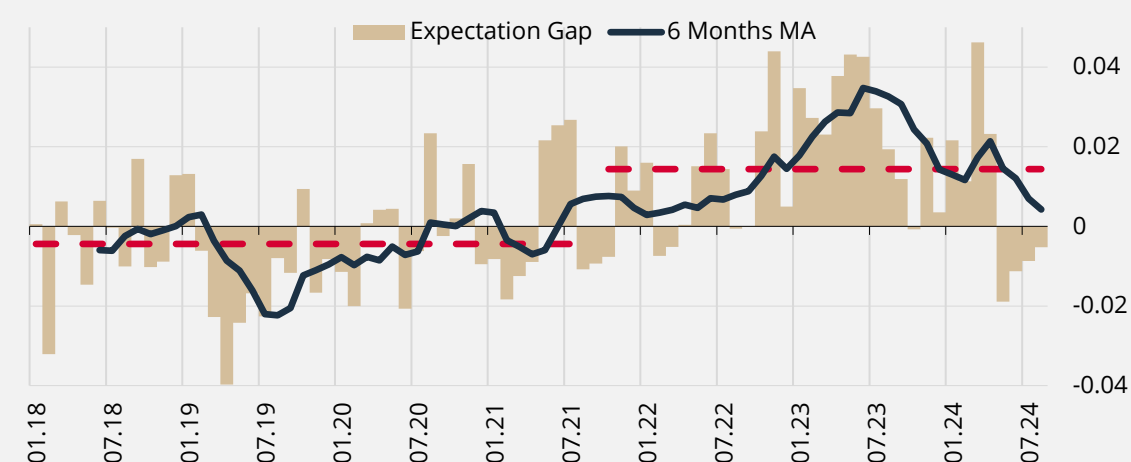
² June 2023-August 2024 observations are excluded in the analyses employing the *Expansion* variable and September 2021-May 2023 observations are excluded in the analyses using the *Tightening* variable.

group with a higher ratio of inventories in the balance sheet composition, since the launch of the expansionary policy mix. Although the trend of the expectations gap between the two groups declined in the tightening monetary policy period, it hovered above historical averages. On the other hand, the recent improvement in general inflation expectations has spilled over into the pricing policies of firms with high inventories.

Econometric results based on equations (1) and (2) are reported in Table III.2.I.1. The estimation results in column (1) quantify the effect of the inventory level on price expectations following expansionary policies in a scenario where other factors are controlled. The coefficient of the *Expansion x Inventory Ratio* interaction term is statistically significant and positive. This suggests that firms with higher inventories on their balance sheets are more likely to revise their pricing policies upwards when inflationary pressures gain strength.³

Chart III.2.I.2: Average Price Increase Expectation Ratio Spread

(Comparison of Treatment and Control Group, %)



Note: The dashed lines in red indicate the averages of expectation differences for the periods of January 2018-September 2021 and October 2021-August 2024.

Table III.2.I.1: Estimation Results

	(1) Price Expectation (Increase = 1, Other = 0)	(2) Price Expectation (Increase = 1, Other = 0)	(3) Price Expectation (Increase = 1, Other = 0)	(4) Price Expectation (Increase = 1, Other = 0)
Expansion x Inventory Ratio	0.0199*** (0.0063)	0.0010 (0.0071)		
Expansion x Inventory Ratio x Credit		0.0423*** (0.0151)		
Tightening x Inventory Ratio			0.0268*** (0.0072)	0.0079 (0.0082)
Tightening x Inventory Ratio x Credit				0.0811*** (0.0170)
Price Expectation (Average)	0.3833	0.3833	0.3644	0.3644
Number of Observations	99,589	99,589	91,671	91,671
Corrected R ²	0.348	0.348	0.342	0.342
Firm Fixed Effects	Yes	Yes	Yes	Yes
Time Fixed Effects	Yes	Yes	Yes	Yes

³ When the absolute magnitude of the coefficient (0.019) is compared to the average sample value of price expectations (0.383), the level of economic significance is relatively high.

Note: Standard errors clustered at the firm-month level are shown in parentheses. In columns (2) and (4), *Expansion x Credit* and *Tightening x Credit* variables, respectively are added to the model but are not indicated in the table since they are completely controlled by firm fixed effects. ***, ** and * denote statistical significance at the 1%, 5% and 10% levels.

Column (2) of Table III.2.I.1 investigates the role of firms' propensity to utilize credit in the expansionary period (through the firm's balance sheet structure) on price expectations. The estimation results based on equation (2) reveal that the triple interaction variable (*Expansion x Inventory Ratio x Credit*) has a statistically significant positive coefficient. This emphasizes that if firms operating with a high inventory ratio also opt to utilize a high amount of credit, the deterioration in price expectations of these firms proves higher than that of other firms.

Columns (3) and (4) encompass and repeat similar analyses for the period of monetary policy tightening. In these analyses, the *Policy Stance* variable is represented by the *Tightening* indicator. The results show that firms that go through the tightening period with high inventories continue to have significantly higher price expectations than other firms despite the tightening. Moreover, according to the findings in column (4), firms with high inventories have higher price expectation tendencies (compared to other firms) in the tightening period when they rely more on credit financing. The findings for the tightening period imply that firms with liquid assets on their balance sheets owing to high inventories and strong access to credit have higher expectations for price increases despite the tightening policies.

In the robustness analyses not included in the box, revisions were made based on the model in column (1). Accordingly, a control variable representing firm size is included in the regressions at first. Secondly, the decision was made on the categorization of firms into groups according to their propensity to hold high and low levels of inventory based on the median (rather than the mean) value of the inventories/total assets ratio (as of 2021). Thirdly, we repeated the treatment and control group separation by measuring the degree of benefiting from the inflationary environment using an alternative indicator.⁴ In the fourth robustness analysis, the propensity score matching method was used to simulate other characteristics of firms with high and low inventory ratios (firm size, capital ratio, sales volume, profitability and liquidity). All these analyses indicate that the liquid asset composition of the balance sheet leads to pricing rigidity during the expansionary policy period. In the fifth and final robustness analysis, instead of *Price Expectation* as the target variable, the *Unit Cost Expectation* variable, which can also be traced from the BTS sub-questions, is taken as the target variable. The estimation results of the revised model suggest that the cost expectations of firms with high levels of short-term assets were also strong during the expansionary period.

Concluding Remarks

Anchoring real sector firms' inflation expectations in line with policy targets is an important prerequisite to achieving price stability. However, firms' price expectations may also be related to their balance sheet structure and financing behavior. One of the strategies that firms can adopt to avoid the impacts of an inflationary environment is to increase the level and weight of asset items with inventory characteristics. This study analyzes the correlation between firms' inventories and price expectations in the recent period of elevated inflationary pressures by handling the Turkish case as a case study and analyzing the correlation between firms' inventories and price expectations across different monetary policy stance periods. The course of firms' price expectations is monitored through the data collected by the BTS. The results of the analysis show that the deterioration in price expectations of firms that entered the monetary easing period with a higher inventory ratio is more notable than the historical averages. Moreover, subsequent to the monetary tightening steps, the trend of price expectations of these firms remains above historical averages compared to other firms. Additional analyses imply that the effects on price expectations are stronger when firms operating with high inventory ratios rely more on credit utilization. In sum, while the impact of tight monetary policy on pricing behavior is heterogeneous across firms, the rigidity in the pricing behavior of firms with more liquid assets and high access to credit (during monetary tightening) is worth noting.

⁴ In this robustness analysis, instead of "Stocks (Inventories)/Total Assets" ratio, "(Financial Tangible Assets + Real Assets + Depreciable Assets + Other Tangible Assets)/Total Assets" ratio is used.

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IV. Financial Sector

IV.1 Credit Developments and Credit Risk

IV.1.1 Credit Developments

The level of loan rates indicates that financial conditions remain tight.

Turkish lira commercial and general-purpose loan rates, which peaked in April due to the policy rate hike in March and the introduction of the reserve requirement practice based on loan growth, have fallen since May to a level consistent with the policy rate. Turkish lira loan rates rose well above the policy rate hike in the March-April period. Starting from May, banks gradually lowered loan rates in tandem with the rebalancing in loan demand. The decline in headline inflation and inflation expectations also contributed to falling loan rates. In this period, Turkish lira loan rates receded, aligning more closely with the policy rate. While loan rates were on the decline, lower headline inflation and improving inflation expectations also helped to maintain the tightness in loan rates. Headline inflation and one-year-ahead inflation expectations fell by 27 and 6 percentage points, respectively, between May and October. The decrease in long-term Turkish lira loan rates in particular amid improving expectations is among the drivers of the fall in loan rates. Banks' reduced external borrowing costs and excess FX liquidity on the back of falling global interest rates and improving country risk premium also led to a decline in FX loan rates. This trend is expected to continue as global central banks begin their easing cycles and the risk premium further improves (Charts IV.1.1 and IV.1.2).

In March, the maximum interest rates applicable to ODA and credit card cash advances were raised. On November 1, 2024, interest rates for PCCs (for purchase) were differentiated based on the debt balance. This step is expected to have a strong tightening effect for borrowing through credit cards and contribute to the rebalancing in domestic demand. On the other hand, the interest rate differential between ODA and the general-purpose loans excluding ODA subject to growth limit widened again (Chart IV.1.3).

Chart IV.1.1: Commercial Loan Rates (Flow, 4-Week MA, %)

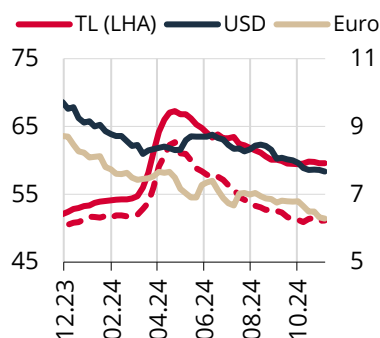


Chart IV.1.2: General-Purpose Loan Rate (Flow, 4-Week MA, %)

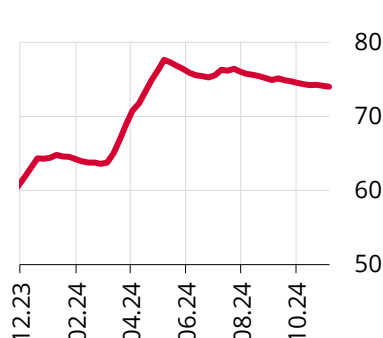
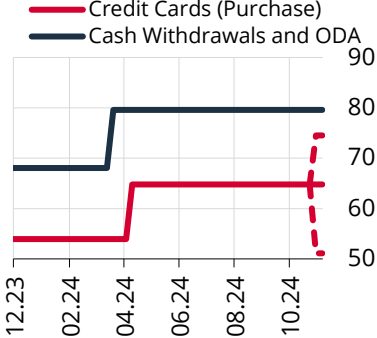


Chart IV.1.3: PCC Interest Rates (%)



Source: CBRT

Last Observation: 08.11.24

Note: Commercial loan rates exclude corporate credit cards, legal person ODAs, and zero-interest loans. Loan rates exclude costs other than interest. The dashed line in commercial loans represents the interest rate on Turkish lira commercial loans with maturities longer than one year. General-purpose loan rates exclude real person ODA. PCC interest rates refer to the contractual interest rate applicable to purchase transactions. The dashed line in Chart IV.1.3 displays the differentiation of the contractual interest rate applicable to credit cards based on the debt balance after November 1, 2024.

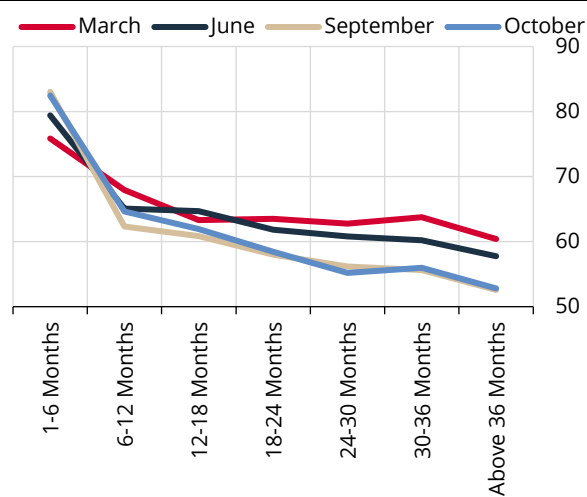
Long-term interest rates have been declining amid improving inflation expectations.

As expectations continue to improve, loan pricing behavior aligns with the disinflation path. In recent months, long-term Turkish lira commercial loan rates, in particular, have begun to fall amid strengthening expectations of disinflation (Chart IV.1.4). The downtrend in commercial loan rates with maturities longer than one year is particularly evident. It is anticipated that this trend may continue to increase in the coming period as the improvement in expectations continues.

Banks' tendency to extend long-term and fixed-rate loans remains strong due to the strengthening of disinflation expectations during the monetary tightening process. Improved inflation expectations and the

prospect of a drop in medium- and long-term funding rates boost banks' appetite for long-term lending, which in turn increases their capacity to earn interest income. This, on the other hand, causes firms to postpone their loan applications or to demand loans with floating interest rates and shorter maturities. Thus, the maturity of fixed-rate Turkish lira commercial loans, which was previously extended, has remained almost flat in the recent period (Chart IV.1.5).

Chart IV.1.4: Interest Rates on Turkish Lira Commercial Loans with Installments
(Flow, %)

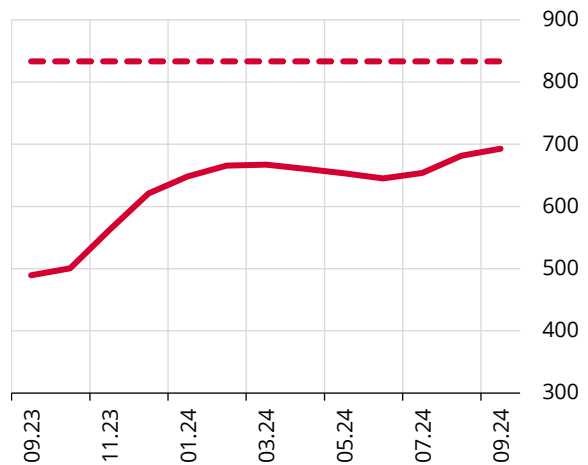


Source: CBRT

Last Observation: 25.10.24

Note: Loan yield curve is calculated as the weighted average of daily loan amounts/rates for the relevant month. Comprises only fixed-rate Turkish lira commercial loans with installments. Participation banks are included. Calculated from daily provisional data. Corporate credit cards and loans extended to public institutions and organizations are excluded. Erroneous data and outliers are removed.

Chart IV.1.5: Average Maturity of Fixed-Rate TL Commercial Loans with Installments (Flow, 3-Month MA, Original Maturity)



Source: CBRT

Last Observation: 09.24

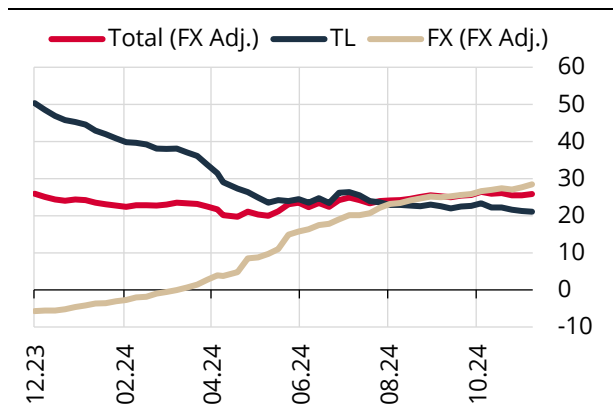
Note: Calculation excludes disbursements with zero maturity, zero interest, and non-reported interest rate structure. The dashed line shows the average of the series for the January 2020 – September 2024 period.

Commercial loan growth remains on a moderate path.

The tight monetary policy stance and the supportive macroprudential framework have begun to influence commercial loan growth. While annual total commercial loan growth is around 25%, the currency composition may vary periodically. As a matter of fact, improving expectations for exchange rates and the widening of the expected cost gap between Turkish lira loans and FX loans in the last reporting period strengthened FX loan demand upwards. To balance this trend, the CBRT introduced a 2% monthly growth limit for FX loans in May and lowered it to 1.5% in July. Accordingly, the 13-week annualized growth in commercial loans lost pace. Following the introduction of growth limits on FX loans, the annual growth momentum of commercial loans fell below 25% (Charts IV.1.6 and IV.1.7).

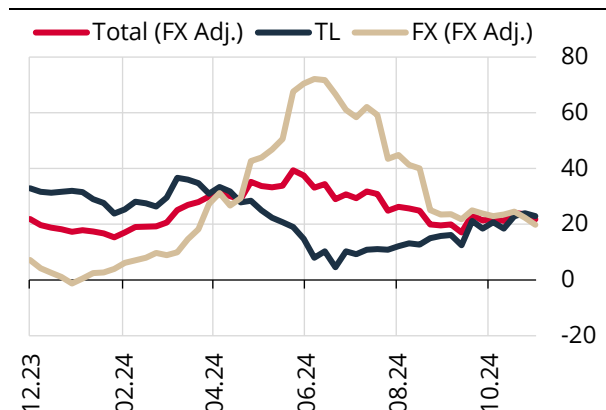
In addition to growing demand for FX loans amid improved exchange rate expectations and elevated Turkish lira loan rates, favorable supply conditions brought about by banks' strong FX liquidity rendered the growth limit more stringent for FX loans. The lowering of this limit in the post-July period, which made it more binding for FX loans, and the downtrend in Turkish lira loan rates caused Turkish lira commercial loan growth to pick up slightly in September. Thus, the growth momentum of Turkish lira commercial loans and FX loans converged. The dollarization trend in loans was moderated, and the currency composition of loans was brought on a more balanced path, both safeguarding price stability and financial stability.

Chart IV.1.6: Annual Growth of Commercial Loans (%)



Source: CBRT Last Observation: 08.11.24

Chart IV.1.7: 13-Week Growth of Commercial Loans (Annualized, %)



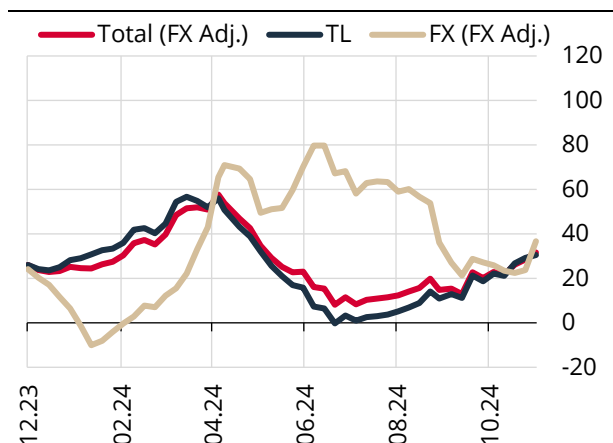
Source: CBRT Last Observation: 01.11.24

Note: FX-indexed loans are included in FX loans. FX-adjusted FX loan growth is the ratio of the sum of the Turkish lira equivalent of change in FX loans, measured by multiplying one-year FX (basket) loan change with the one-year average basket exchange rate, to the total loan balance a year (13 weeks for the right chart) ago.

SME and corporate loans have recently displayed similar growth trends.

Loan access and demand of SMEs and large firms may diverge during periods of monetary tightening. Due to their relatively stronger liquidity position, large firms may postpone their loan demand during periods of rising interest rates. However, SMEs may continue to demand loans for their working capital financing needs given their relatively low liquidity buffers. Therefore, the growth rate of commercial loans extended to SMEs and large firms may diverge periodically. As large firms were the main recipients of FX loan disbursements, which grew stronger between March and July, the 13-week total commercial loan growth for large firms surpassed 50% in July, while the loan growth rate for SMEs fell below 10% (Charts IV.1.8 and IV.1.9). Loan growth for SMEs and large firms converged due to tightened growth limit on FX loans in July and SMEs' increased use of Turkish lira loans driven by declining Turkish lira loan rates.

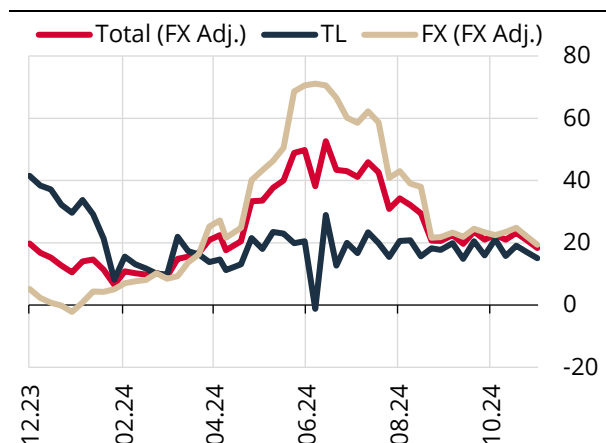
Chart IV.1.8: 13-Week Growth of Commercial Loans Extended to SMEs (Annualized, %)



Source: CBRT

Note: FX-indexed loans are included in FX loans. FX-adjusted FX loan growth is the ratio of the sum of the Turkish lira equivalent of change in FX loans, measured by multiplying one-year FX (basket) loan change with the one-year average basket exchange rate, to the total loan balance 13 weeks ago.

Chart IV.1.9: 13-Week Growth of Commercial Loans Extended to Large Firms (Annualized, %)



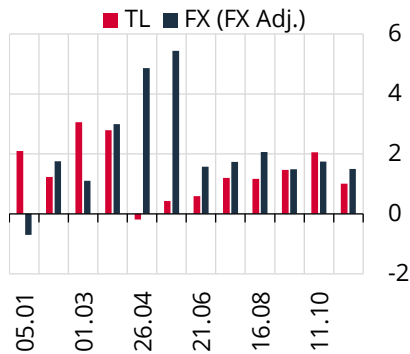
Last Observation: 01.11.24

Loan growth by currencies and bank groups reveals a more balanced picture.

The effects of limits on commercial loan growth can be seen through monthly growth realizations. Although some loan segments are exempted from the regulations on loan growth, it is clear that this practice has been effective, as monthly growth rates of Turkish lira and FX loans have recently moved in line with the

growth limits. This rebalancing was also seen across private and state-owned banks. Loan growth, which was previously dominated by state-owned banks, has recently become more evenly distributed (Charts IV.1.10, IV.1.11, and IV.1.12).

Chart IV.1.10: Commercial Loan Growth (4-Week, FX-Adjusted, %)



Source: CBRT

Chart IV.1.11: Turkish Lira Commercial Loan Growth (4-Week, %)

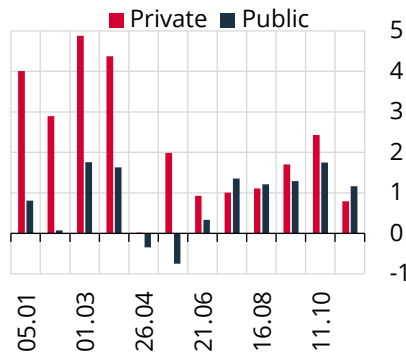
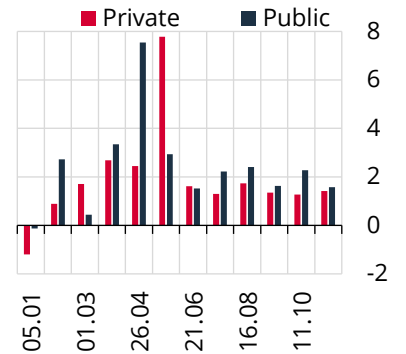


Chart IV.1.12: FX Commercial Loan Growth (4-Week, FX-Adjusted, %)



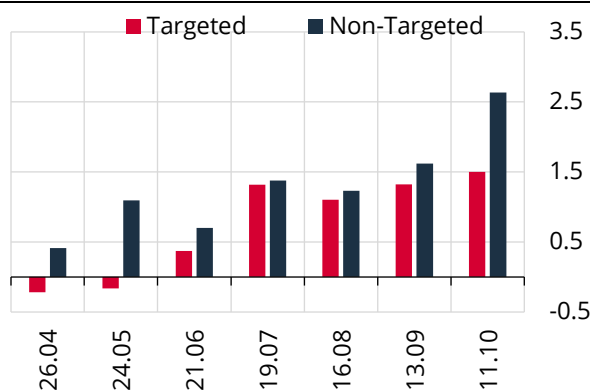
Last Observation: 08.11.24

Note: FX-indexed loans are included in FX loans. FX-adjusted FX loan growth is the ratio of the sum of the Turkish lira equivalent of change in FX loans, measured by multiplying four-week FX (basket) loan change with the four-week average basket exchange rate, to the total loan balance four weeks ago. Based on the four-week RR liability period for the calculation of growth rates as per the regulation.

While Turkish lira commercial loans subject to regulation and exempted loans remained below the growth limit, exempted loan types in FX commercial loans continued to grow strongly.

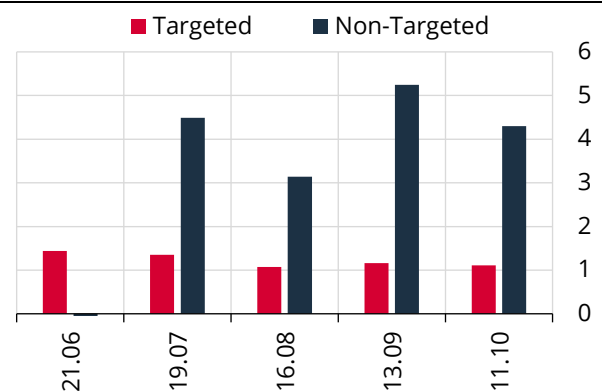
Loans not subject to growth restrictions had a higher growth rate, which was more pronounced in FX loans (Charts IV.1.13 and IV.1.14). This indicates that the recent limit on FX loans has been binding to a large degree. FX loans have a significant cost advantage over Turkish lira loans, which drives the robust loan demand in this segment. However, due to the higher share of loan segments subject to growth limits in FX loans, total FX loan growth remains close to the growth limit. The share of loans subject to growth restrictions in total commercial loans is 56.7%, with 51.5% in Turkish lira commercial loans and 62.4% in FX commercial loans.

Chart IV.1.13: Turkish Lira Commercial Loan Growth (4-Week, %)



Source: CBRT

Chart IV.1.14: FX Commercial Loan Growth (4-Week, FX-Adjusted, %)



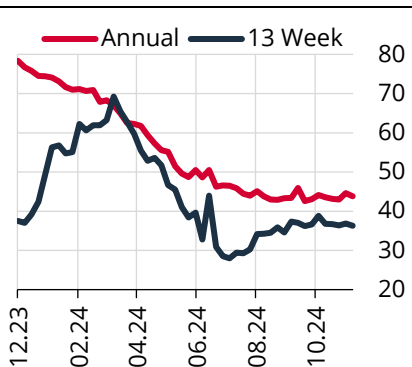
Last Observation: 11.10.24

Note: Turkish lira loans not subject to growth restrictions include investment, export, agriculture, and tradesmen loans, and loans extended to the earthquake zone, public institutions and organizations and firms operating in the defense industry. FX loans not subject to growth restrictions include investment loans, and loans extended to the earthquake zone, domestic banks, public institutions and organizations, and firms operating in the defense industry. Based on the four-week RR liability period for the calculation of growth rates as per the regulation.

Retail loan growth is led by PCCs and general-purpose loans, while housing loans have recently rebounded.

It is important that retail loan growth to continue at a rate that will restore rebalancing in domestic demand. In the first quarter of 2024, the accelerated loan demand led to an increase in retail loan growth driven by credit cards and general-purpose loans. In the second quarter of 2024, retail loan growth weakened on the back of macroprudential measures and the tighter monetary policy stance. In the third quarter, the growth in PCC balance picked up slightly (Charts IV.1.15, IV.1.16, and IV.1.17).

Chart IV.1.15: Retail Loan Growth (%)



Source: CBRT

Note: Annual series indicate 12-month loan growth, while 13-week series show annualized 13-week growth.

Chart IV.1.16: General-Purpose Loan Growth (%)

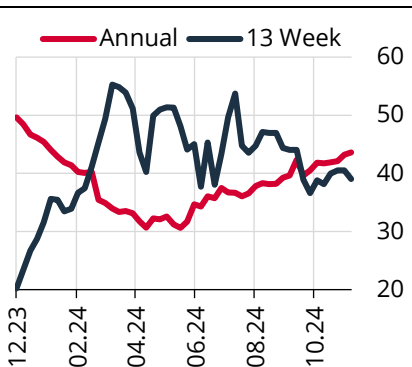
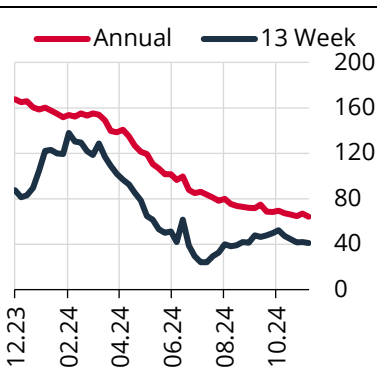


Chart IV.1.17: PCC Growth (%)

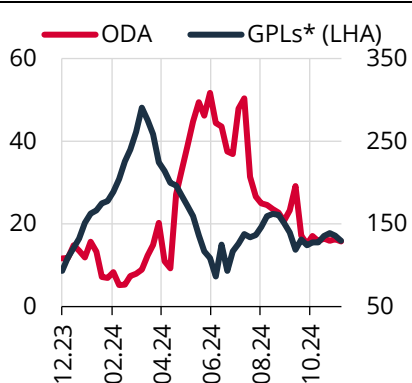


Last Observation: 08.11.24

The 13-week growth rate dropped sharply below 10% in March following the lowering of the monthly growth limit for general-purpose loans excluding ODA to 2% and the introduction of a reserve requirement obligation for the excess amount and followed a moderate course thereafter. In the period when the growth rate of general-purpose loans excluding ODA slowed, ODA growth which has not subject to limit gained momentum (Chart IV.1.18).

On the other hand, the moderation in PCC growth was driven by cash advances and payment in installments. The use of cash advances weakened due to banks' restrictions on the amount of cash advances and the number of installments, as well as cash withdrawal interest rates remaining above the general-purpose loan rates. The 13-week growth of the installment-based PCC balance, which is more related to expectations and borrowing needs than the non-installment-based PCC, which is mainly used for payment purposes, hovered in negative territory for a while before edging up in the following period (Charts IV.1.19 and IV.1.20).

Chart IV.1.18: General-Purpose Loan Growth (13-Week, Annualized, %)



Source: CBRT

Note: ODAs are excluded.

Chart IV.1.19: Growth in PCC Balance (3-Month, Annualized, %)

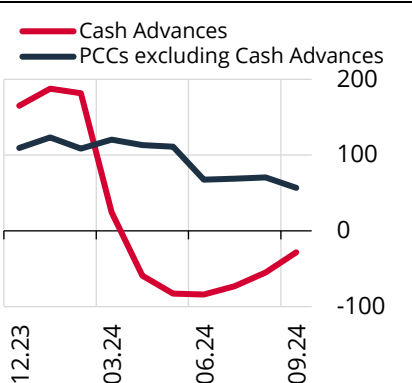
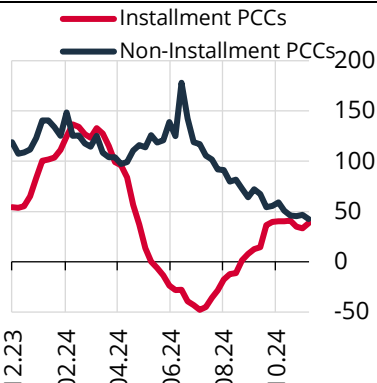


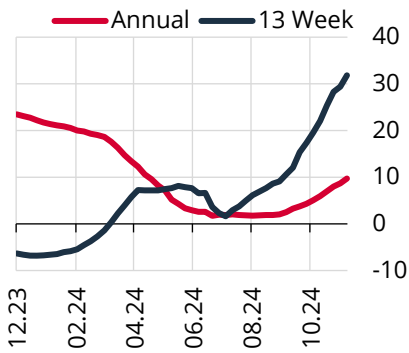
Chart IV.1.20: Growth in PCC Balance (13-Week, Annualized, %)



Last Observation: 08.11.24

Recently, there has been an increase in both housing sales and the use of housing loans (Chart IV.1.21). The 13-week annualized growth rate of vehicle loans moved into negative territory amid ongoing tightening in macroprudential measures in addition to the 2% growth limit for vehicle loans. This trend was more pronounced in the last reporting period (Chart IV.1.22). Moreover, the growth in vehicle loans extended by financing companies has slowed in recent months after accelerating at the start of the summer period (Chart IV.1.23).

Chart IV.1.21: Housing Loan Growth (%)



Source: CBRT

Chart IV.1.22: Banking Sector Vehicle Loan Growth (%)

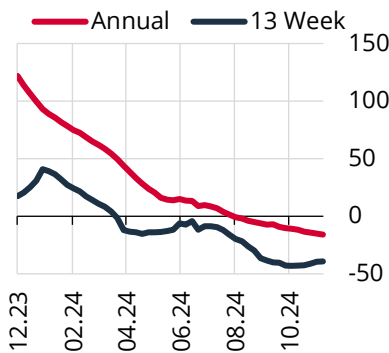
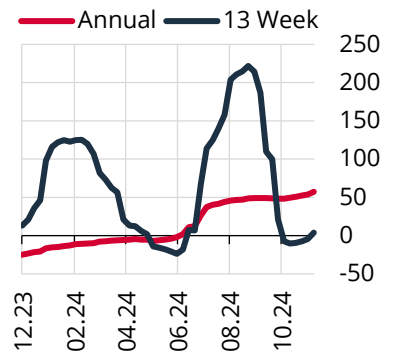


Chart IV.1.23: Financing Firms Vehicle Loan Growth (%)



Last Observation: 08.11.24

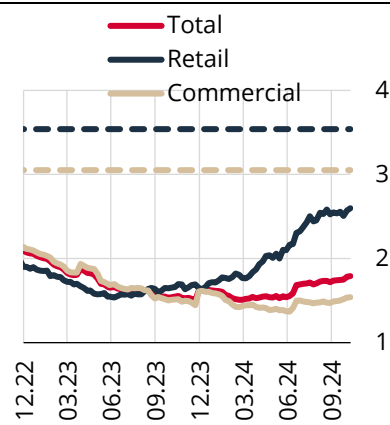
Note: Annual series indicate 12-month loan growth, while 13-week series show annualized 13-week growth. Vehicle loans are retail vehicle loans extended by the banking sector and financing companies.

IV.1.2 Credit Risk

The tightening in financial conditions had a limited impact on asset quality indicators.

The banking sector's total NPL ratio recorded a slight increase driven by the retail NPL ratio and reached 1.8%. Despite the uptrend in the retail NPL ratio, the NPL ratio remained below the historical average across all loan segments (Chart IV.1.24). When overdue Stage 2 loans are included in the NPL ratio, there is only a slight rise. Stage 2 loans follow a similar pattern to the NPL ratio, with retail loans mostly driving this increase. The increase in the ratio of Stage 2 retail loans was offset by the decline in the ratio of Stage 2 FX corporate loans. The Stage 2 loan ratio for FX corporate loans remained higher than that of other loan types until the second half of 2024. Following the 2018 exchange rate developments, difficult-to-repay and restructured FX loans were gradually withdrawn from close monitoring, which contributed to the decline in the related ratio. On the other hand, the ratio of Stage 2 retail loans has been rising since the second half of 2023 (Chart IV.1.25). The share of the sum of Stage 2 loans and NPLs in gross loans, a measure of total credit risk, remained flat throughout 2023 and edged up slightly to 9.4% as of the third quarter of 2024. The share of NPLs and overdue Stage 2 loans, another measure of credit risk, displays a similar trend (Chart IV.1.26).

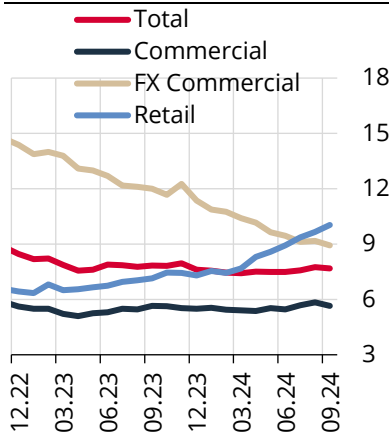
Chart IV.1.24: NPL Ratios (%)



Source: CBRT Last Observation: 08.11.24

Note: Dashed lines indicate the average of the relevant series for the 2012-2019 period.

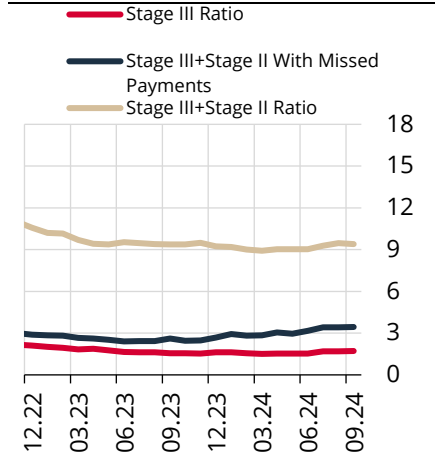
Chart IV.1.25: Ratio of Stage 2 Loans (%)



Source: CBRT Last Observation: 09.24

Note: Series show the ratio of Stage 2 loans to gross loans.

Chart IV.1.26: Asset Quality Outlook (%)

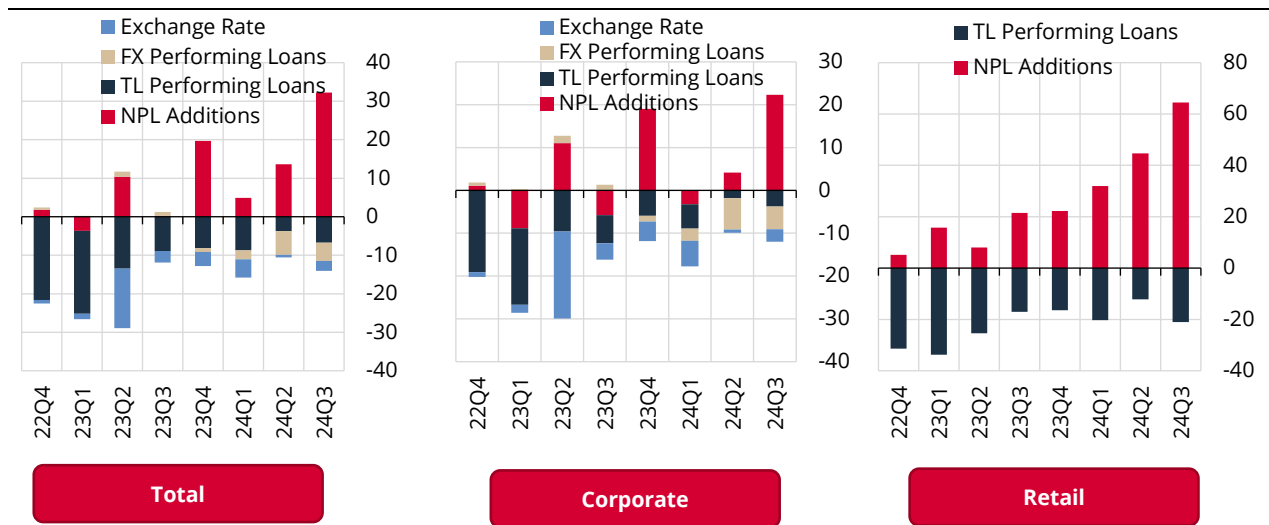


Source: CBRT Last Observation: 09.24

Note: Asset quality indicators are proportioned to gross loans.

An analysis of the factors contributing to the change in the total NPL ratio reveals that since the last quarter of 2023, the downward impact of loan growth and exchange rate hikes on the NPL ratio has diminished, while the upward impact of NPL additions has risen significantly. An analysis of the factors contributing to the change in the corporate NPL ratio indicates that in the first half of 2024, the increase in items making a downward contribution to the NPL ratio pushed the NPL ratio downwards, whereas by the third quarter, NPL additions started to have an upward impact on the NPL ratio. As for the change in the retail NPL ratio, the upward impact of NPL additions exceeded the denominator effect, driven by loan growth (Chart IV.1.27).

Chart IV.1.27: Contributions to the Change in NPL Ratios (3-Month Total Contributions, bps)



Source: CBRT

Last Observation: 30.09.24

Note: Contributions show the total contribution amount in the relevant three months. For technical details on the methodology, see Financial Stability Report of November 2018, Box IV.1.I.

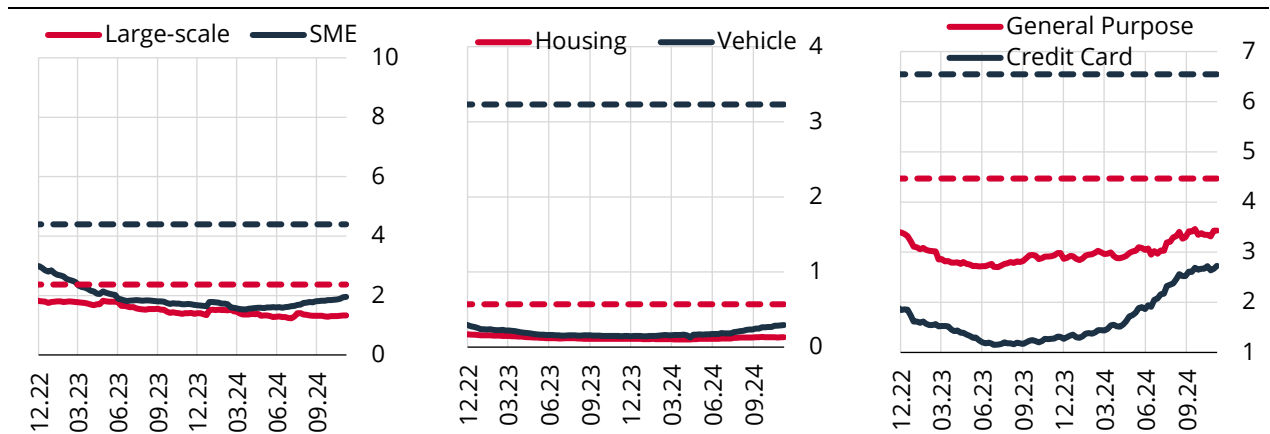
An analysis by loan segments reveals that while the increase in the retail NPL ratio was driven by credit cards, the regulation enabling the restructuring of credit card debts is expected to have a positive impact on the asset quality outlook.

Despite the rise in NPL additions, corporate and retail loan NPL ratios were still below their historical average. Having rather low NPL ratios due to their collateralized structures and regulations limiting credit risks such as loan-to-value ratio, the NPL ratios of housing and vehicle loans remained well below their historical average at 0.1% and 0.3%, respectively. The NPL ratios of general-purpose loans and PCCs, which were more quickly impacted by the financial tightening due to their shorter maturity structure than other retail loan types and their uncollateralized nature, increased to 3.4% and 2.7%, respectively, albeit staying below their historical average (Chart IV.1.28).

Using the PCC as a credit tool by delaying due payments appears to be more common among individuals with high debt balances. On the other hand, delaying due payments is less common for users with low debt balances who make up the majority of card users.¹ The CBRT encourages the reduction of credit card indebtedness by differentiating the maximum contractual interest rate for personal credit cards based on the debt balance. This practice may reduce the motivation of users with high debt balances to delay repayment. During the same period, the BRSA introduced a debt restructuring facility of up to 60 months for credit card debts with missed minimum payments and general-purpose loans with at least 30-day overdue payments. This regulation intends to minimize the impact of tightening policies on individuals who are already behind on their payments. These regulations aim to slow credit card debt accumulation and ease the cash flow of individuals having difficulties in repayment and are expected to curb the increase in the retail NPL ratio.

¹ [CBRT Blog: Differentiation of Maximum Contractual Interest Rates for Personal Credit Cards Based on Balances](#)

Chart IV.1.28: NPL Ratios in the Breakdown of Loan Types (%)



Source: CBRT

Last Observation: 08.11.24

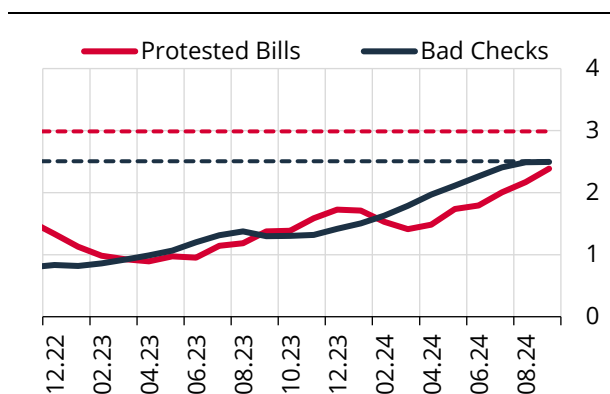
Note: Dashed lines indicate the average of the relevant series for the 2012-2019 period.

Overdue payments in checks and bills has a limited impact on the asset quality of the banking sector.

The ratio of bad checks to total checks submitted to banks increased from 1.3% in September 2023 to 2.4% in September 2024, while that of protested bills to commercial bills received for collection increased from 1.2% to 2.4% for the same period. Meanwhile, both of these ratios remained below their historical average (Chart IV.1.29). Even if firms delay on their commercial payments, their low indebtedness and strong liquidity enable them to pay off their loans to banks within the legal period and without turning into NPLs. This resulted in a limited reflection of the deterioration in leading indicators on the commercial NPL ratio.

This is also evident from the favorable trend in transitions between loan classifications for corporate loans. An analysis of the transition probabilities from Stage 1 to Stage 2 and from Stage 2 to NPL reveals that as of September 2024, the probability of a loan migrating from Stage 1 to Stage 2 and from Stage 2 to NPL has fallen significantly compared to the 2019 average. The probability of transition from Stage 1 to Stage 2 and from Stage 2 to NPL has edged up for commercial loans compared to the 2023 average (Chart IV.1.30). Accordingly, there remains a limited risk of deterioration in commercial loan quality.

Chart IV.1.29: Ratios of Protested Bills and Bad Checks (3-Month MA, %)

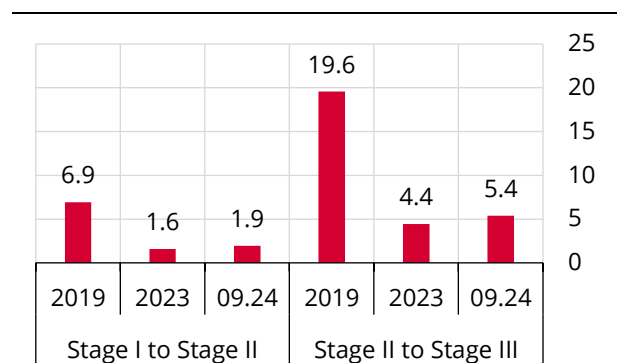


Source: CBRT

Last Observation: 09.24

Note: Denotes the ratio of bad checks to total checks submitted to banks and the ratio of protested bills to commercial bills collected. Dashed lines indicate the average of the 2014-2022 period.

Chart IV.1.30: Transition Probabilities (Commercial Loans, %)



Source: CBRT

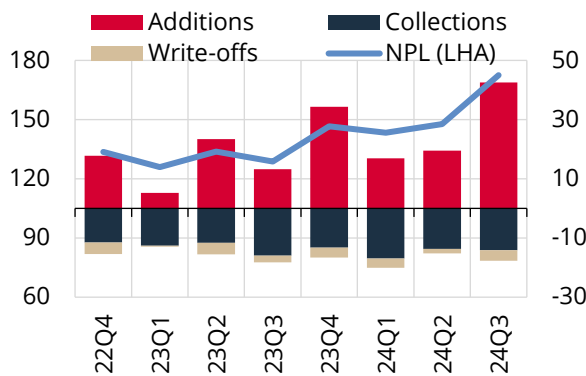
Last Observation: 09.24

Note: The transition probability from Stage 1 to Stage 2 is estimated as the ratio of the loan amount migrating from Stage 1 to Stage 2 a year ago to the Stage 1 loan balance a year ago. The transition probability from Stage 2 to NPL is estimated as the ratio of the loan amount migrating from Stage 2 to NPL a year ago to the Stage 2 loan balance a year ago.

The ratio of NPL collections to additions remained on a downward trend.

Collections from corporate NPLs remained flat, while NPL additions picked up slightly in the third quarter of 2024. This uptick pushed the NPL balance in corporate loans up to TRY 172 billion. In the third quarter of 2024, additions slightly outpaced collections, and the collections-to-additions ratio fell but stayed slightly below the long-term average (Chart IV.1.31-32). The mild increase in corporate NPL additions is consistent with tight financial conditions and the rebalancing in demand conditions.

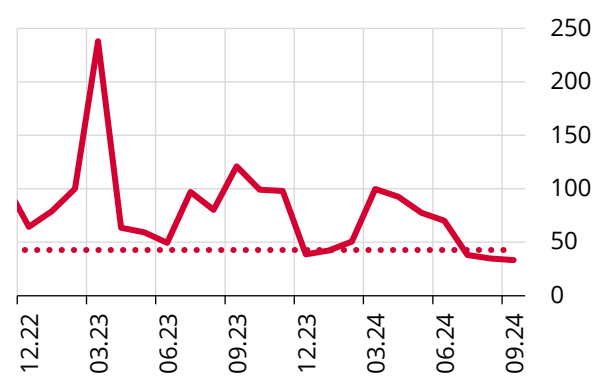
Chart IV.1.31: Components of Corporate NPL Balance (Billion TRY)



Source: CBRT Last Observation: 09.24

Note: Series for collections and additions are based on three-month totals. An outlier was excluded from the data for 2022. Additions are calculated by subtracting the migrations to performing loans from new NPL additions.

Chart IV.1.32: Corporate Collections/Additions Ratio (%)

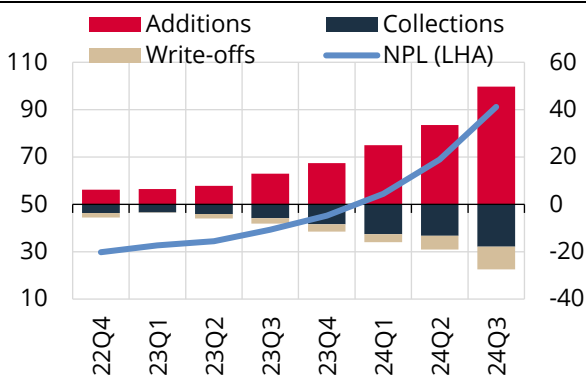


Source: CBRT Last Observation: 09.24

Note: The Collections/Additions ratio is calculated as the ratio of three-month total NPL collections to three-month total net NPL additions. The dashed line indicates the average of the relevant series for the 2014-2019 period. An outlier was excluded from the data for 2022. Additions are calculated by subtracting the migrations to performing loans from new NPL additions

In retail loans, new NPL additions remained significantly above NPL collections and asset write-offs. As of the second quarter of 2024, additions grew at a faster pace, and the retail NPL balance soared (Chart IV.1.33). The ratio of retail NPL collections to additions dropped below the long-term average amid increased additions (Chart IV.1.34). While this points to continued net NPL formation in the retail segment, the BRSA's restructuring program for overdue PCC debts is expected to somewhat slow this trend.

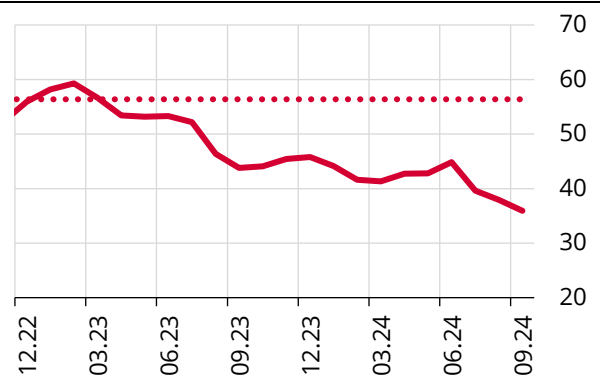
Chart IV.1.33: Components of Retail NPL Balance (Billion TRY)



Source: CBRT Last Observation: 09.24

Note: Series for collections and net additions are based on three-month totals. Additions are calculated by subtracting the migrations to performing loans from new NPL additions.

Chart IV.1.34: Retail Collection/Addition Ratio (%)



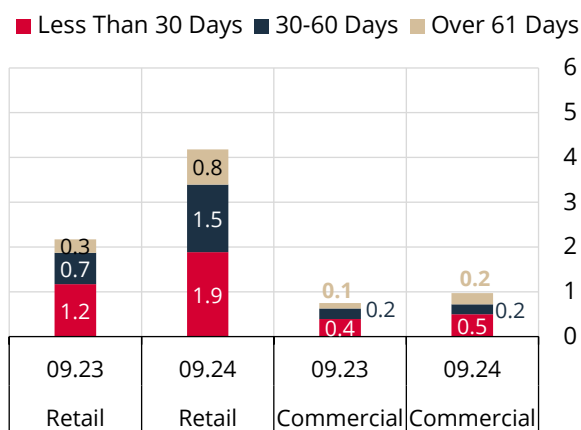
Source: CBRT Last Observation: 09.24

Note: The Collections/Additions ratio is calculated as the ratio of three-month total NPL collections to three-month total NPL additions. Dashed line indicates the average of the relevant series for the 2014-2019 period. Additions are calculated by subtracting the migrations to performing loans from new NPL additions.

The ratio of overdue retail loans further increased, while that of commercial loans remained relatively flat.

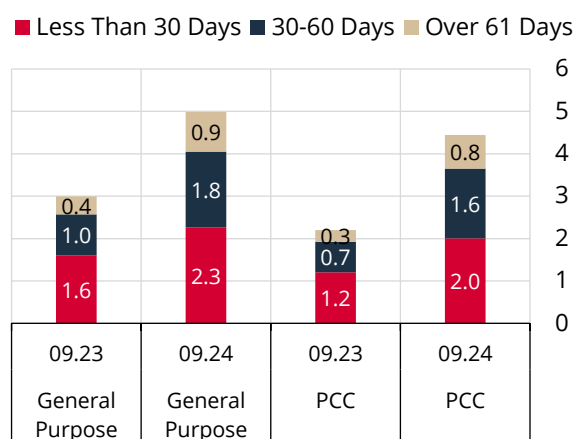
Banks have been using the TFRS-9 standard for loan classification since 2018, and even if the loans are not past due, they monitor them under Stage 2 if their models suggest a significant increase in credit risk. Accordingly, 78% of Stage 2 loans are not overdue but classified under Stage 2 loans due to a significant increase in credit risk based on banks' TFRS-9 models. As of September 2024, the ratio of overdue loans in the commercial segment went up by 0.2 percentage points year-on-year to 1%. Meanwhile, the ratio of overdue retail loans rose by 2 percentage points year-on-year to 4.2%. The ratio of overdue loans increased across all delinquencies in retail loans (Chart IV.1.35). A breakdown of retail loans reveals that the default rate went up for general-purpose loans and credit cards (Chart IV.1.36). The restructuring facility provided for overdue general-purpose loans and PCC debts is expected to slow the increase of overdue loans.

Chart IV.1.35: Ratio of Overdue Loans (%)



Source: CBRT Last Observation: 09.24
 Note: The chart shows the ratio of overdue Stage 2 loans to gross loans.

Chart IV.1.36: Ratio of Overdue Loans (%)

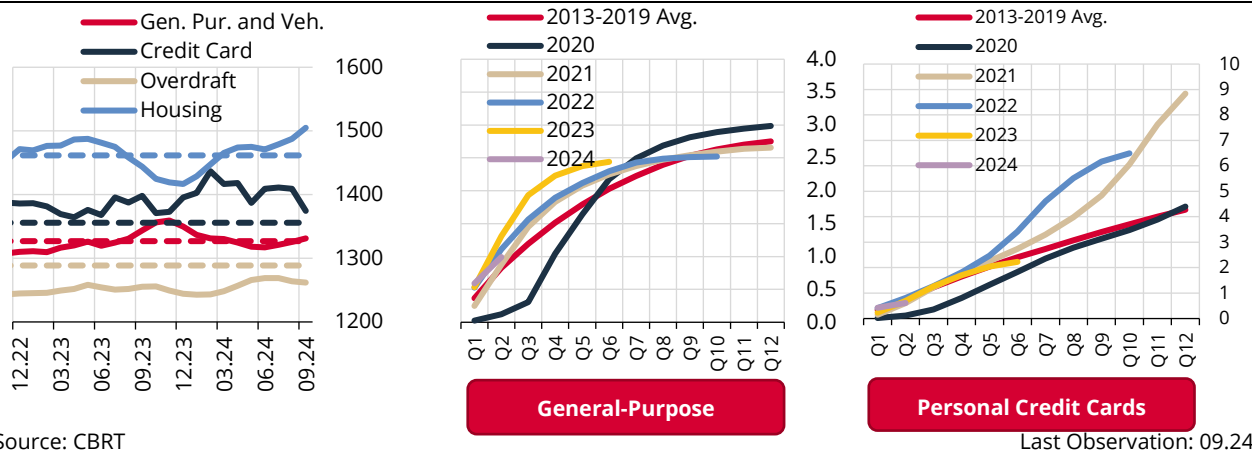


Source: CBRT Last Observation: 09.24
 Note: The chart shows the ratio of overdue Stage 2 loans to gross loans.

Credit ratings for retail loan applications have improved.

As of 2024, the weight of customers with high credit ratings increased in applications for housing loans, ODAs and PCCs, and the average credit rating of customers applying for PCCs and housing loans surpassed the historical average (Chart IV.1.37). The conversion performance of general-purpose loans and PCCs to NPL starting from the year of disbursement can be monitored by aging analysis. Accordingly, the NPL performance of general-purpose loans extended in 2020, during the pandemic, negatively diverged, starting from the fifth quarter. The conversion ratio of loans extended to NPLs has been improving since 2023, while 2021 and 2022 show a negative divergence from other years for personal credit cards.

Chart IV.1.37: Personal Credit Rating and Aging Analysis



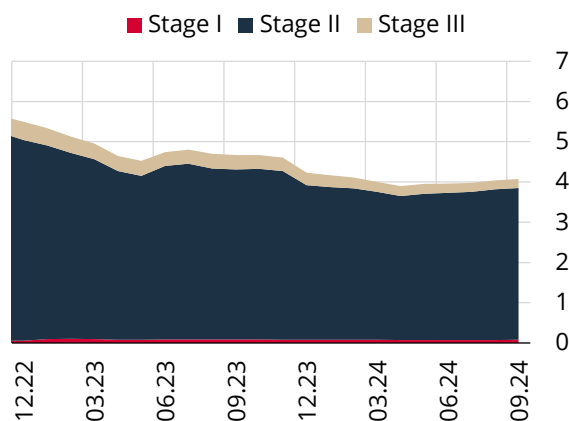
Source: CBRT

Note: Personal credit rating indicates the average credit rating of applicants in the respective period. Based on a 3-month moving average. Dashed lines show the average of January 2020-September 2024 period. Aging analysis shows the cumulative development of NPL ratios for loans extended in the respective year across quarters. The figures are expressed as percentages.

The restructured loan ratio remains flat, while banks preserve their policy of high provisioning against potential loan losses.

Loans were restructured to provide flexibility in cash management for firms with increased credit riskiness in 2019 and throughout the pandemic. As the need for restructuring reduced, and firms' liquidity strengthened after the pandemic, the restructured loan ratio took a downtrend and remained flat at 4.1% in the recent period (Chart IV.1.38). Among the restructured loans, 93% are monitored under Stage 2, 5% under NPL, and only a very limited portion under Stage 1. The banking sector prudently allocates high provisions for restructured loans. Provision ratios for Stage 1 and Stage 2 loans and NPLs are 0.6%, 18.5%, and 75.4%, respectively (Chart IV.1.39). The provision ratio for restructured Stage 2 loans is 25.8%, which is higher than that of other Stage 2 loans (11.5%). The high provisioning by banks in a period of strong loan repayments may limit the impact of potential loan collection issues on banks' balance sheets and profitability in the upcoming period.

Chart IV.1.38: Restructured Loans (%)

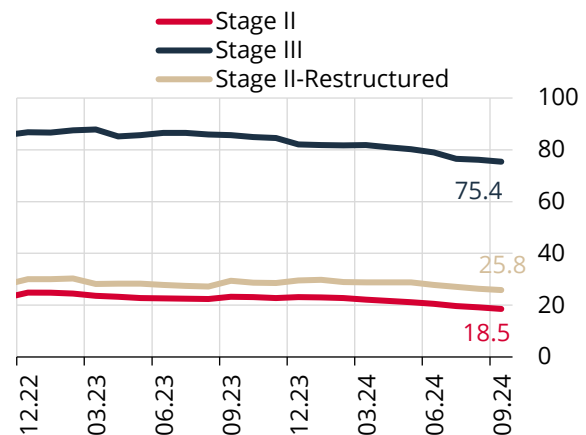


Source: CBRT

Last Observation: 09.24

Note: Series show the ratio of restructured loans to gross loans. Stage 1: Ratio of restructured loans monitored under standard loans. Stage 2: Ratio of restructured loans under closely-monitored loans.

Chart IV.1.39: Expected Loss Provisioning Ratio (%)



Source: CBRT

Last Observation: 09.24

Note: Expected loss provisioning ratio is the ratio of the expected loss provision of the loan in the related category to the loan amount in that category.

Box IV.1.I: Impact of the Regulation on TL Commercial Loan Growth on Loan Interest Rates

The monetary tightening process initiated with the rate hike in June 2023 was supported by loan growth limits and quantitative tightening steps to strengthen the monetary transmission mechanism. In the first quarter of 2024, Turkish lira (TL) commercial loan growth accelerated due to the deterioration in expectations. In order to stabilize the acceleration in loan growth and support monetary tightening, additional tightening was implemented in March, and the TL commercial loan growth limit was lowered from 2.5% to 2%. Moreover, for cases where banks exceeded the relevant loan growth limit, a reserve requirement obligation was introduced as a more effective deterrent, instead of the securities maintenance obligation.¹ This box analyzes the tightening effect of the regulation introduced in March on TL commercial loan rates in a breakdown by banks and loan types. In addition, the sensitivity of this effect to loan demand is empirically tested. The findings suggest that the regulation may have a tightening effect for banks with a high loan appetite and this effect becomes more pronounced during the months when loan demand is brisk, with the growth limits acting as an insurance against excessive loan demand.

Change in Interest Rates at Bank and Loan Type Level

This study takes into account the growth rates of TL commercial loans subject to the growth restriction over the eight-month period (March-October 2024) following the introduction of the regulation. Banks with monthly loan growth rates between 1.5% and 2% for the majority of this period (at least five out of eight months) are classified as **banks with a loan growth close to the limit** imposed by the regulation, while banks with monthly loan growth rates below 1.5% are classified as **other banks**.² In addition, state-owned banks, participation banks and development-investment banks are excluded from the analysis to minimize the differences that may arise due to banks' capital structures, scales and business models. Accordingly, a total of 10 banks that meet these criteria, composed of five "close-to-the-limit banks" "banks close to the limit" and five "other banks", have been identified and included in the sample. These banks have similar characteristics in terms of bank ownership, scale and business model. The monthly growth behavior of the banks in the sample is shown in Table IV.1.I.1.

Table IV.1.I.1: Classification of Banks According to Loan Growth Subject to the Limit

Bank Class	Banks	03.24	04.24	05.24	06.24	07.24	08.24	09.24	10.24	Avg. Monthly Growth
Banks Close to the Limit	L1	Red	Red	Red	Red	Beige	Blue	Red	Blue	1.7
	L2	Red	Beige	Red	Beige	Red	Red	Red	Red	1.6
	L3	Red	Red	Red	Red	Red	Beige	Red	Red	1.8
	L4	Red	Red	Red	Beige	Red	Beige	Red	Red	1.7
	L5	Beige	Red	Red	Red	Red	Beige	Blue	Red	1.7
Other Banks	O1	Beige	Beige	Beige	Beige	Beige	Beige	Blue	Red	0.9
	O2	Beige	Blue	Blue	Beige	Beige	Beige	Beige	Blue	0.2
	O3	Beige	Beige	Red	Beige	Beige	Beige	Beige	Red	0.7
	O4	Beige	Beige	Beige	Beige	Red	Beige	Red	Beige	-0.5
	O5	Beige	Beige	Beige	Red	Beige	Beige	Red	Beige	0.9

Source: CBRT

Last Observation: 11.10.24

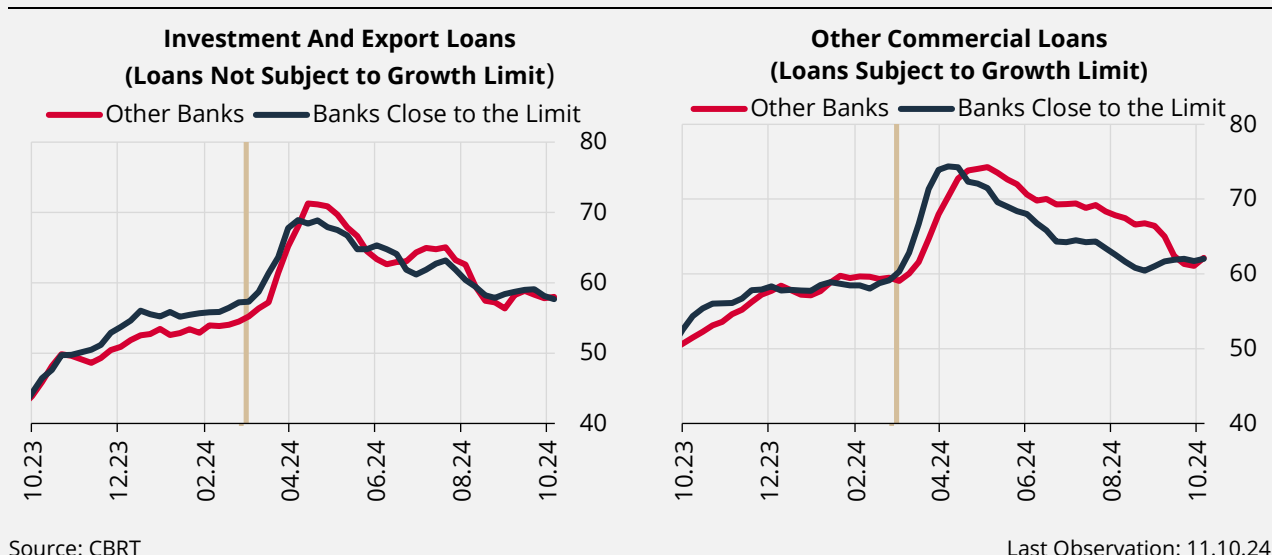
Note: The red coloring in the table indicates that the relevant bank's monthly loan growth ranges between 1.5% and 2%, the beige coloring indicates that the relevant bank's monthly loan growth is below 1.5%, and the blue coloring indicates that the monthly loan growth of the relevant bank is above 2%. The classification of sample banks as "close-to-the-limit" or "other" is based on their weighted loan growth over at least five months out of the eight months between March and October. This approach is called the "static approach" since it treats bank behavior as weighted period behavior. The "Avg. Monthly Growth" column shows each bank's eight-month average loan growth rate.

¹ TL commercial loans that are not subject to the growth limit under this regulation include investment, export, agricultural and tradesmen loans as well as loans extended to the earthquake zone, public institutions and organizations, and companies operating in the defense industry. When the four-week growth rate of loans subject to the limit exceeds 2%, the excess amount is held at the CBRT as TL required reserves in blocked accounts for one year.

Table IV.1.I.1 demonstrates that banks in the close-to-the-limit group had a higher loan appetite than other banks in the eight-month period between March and October, and their average monthly loan growth in the 1.5%-2% band (shown in red in the table) was close to the regulatory limit. In fact, the last column in the table shows that the eight-month average loan growth of these banks was in the 1.6%-1.8% range. These banks are assessed to have a motivation for higher loan growth compared to other banks but have kept their loan growth below 2% due to the growth limit regulation, and thus have been directly affected by the regulation.

In the first stage of the analysis, the change in TL commercial loan rates of the banks in the sample over the period from October 2023 to October 2024 is analyzed in a breakdown by loans not subject to the growth limit (investment and export loans) and loans subject to the growth limit (other commercial loans) (Chart IV.1.I.1).³ Accordingly, the interest rates on investment and export loans of the two bank groups in the sample have not diverged after the regulation and have generally stood at similar levels. On the other hand, interest rates on TL commercial loans subject to the growth limit have diverged after the regulation. In fact, interest rates on loans subject to the growth limit in the two banking groups, which were at similar levels before the introduction of the regulation in March, started to diverge after the regulation, and this divergence continued until September 2024. This divergence can be attributed to the interest rate reductions by banks to achieve relatively higher loan growth.⁴

Chart IV.1.I.1: TL Commercial Loan Rates by Bank Groups and Loan Types (% , 4-Week MA)



Source: CBRT

Last Observation: 11.10.24

Note: Calculations exclude corporate ODA, corporate credit cards, and zero-interest loans. The vertical line marks the month of March when the reserve requirement obligation based on loan growth was introduced.

In the second stage of the analysis, we analyze the change in the spread between the interest rates applied to loans subject to the growth limit and the interest rates applied to loans not subject to the growth limit by banks with a loan growth close to the limit that we assess to be affected by the regulation (Chart IV.1.I.2). Our analysis of the interest rate spread indicates that loan demand conditions are also influential in the strengthened effect of the regulation and that banks limit their monthly loan growth to 2% by applying higher interest rates to other TL commercial loans subject to the limit, particularly in periods of high loan demand. In this context, the interest rate spread for banks with a close-to-the-limit loan growth increased in March and April when demand for TL commercial loans was strong, decreased in the summer months when loan demand declined, and slightly widened again in September and October when loan demand revived.⁵ Thus, the regulation on loan growth limits is assessed to have led the banks

² Banks with a loan/paid-in capital ratio below 3, which are exempt from the regulation, and small and medium-sized banks that benefit from quantitative reductions are not included in the sample.

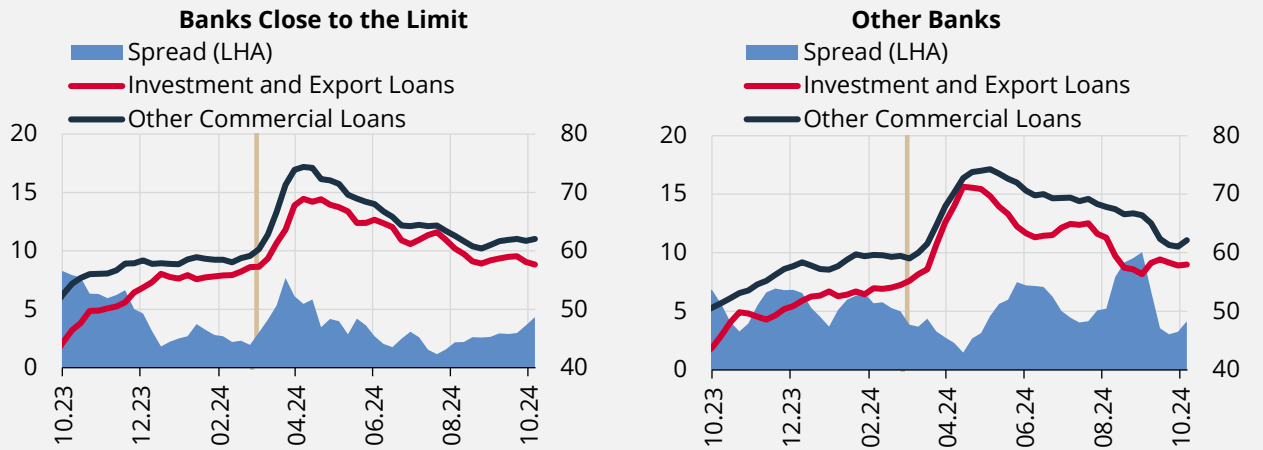
³ Since it is not healthy to access interest rate data for all loans that are not subject to growth limit, investment and export loans with reliable access to interest rate data were examined within this group.

⁴ The closing of the gap between the affected group and the control group in loans subject to the growth limit in September and afterwards is attributed to the fact that the risk appetite of the banks in the control group also started to increase in September and that these banks achieved high TL loan growth.

⁵ The average monthly TL commercial loan growth was 2.1% in March-April, 0.8% in May-August, and 2% in September-October. Total TL commercial loan growth rates, bank representatives' opinions, and survey findings imply that TL commercial loan demand was quite buoyant in the March-April and September-October periods.

with high loan growth motivation to widen the interest rate spread of loans subject to the limit to keep their monthly TL loan growth below 2% during periods of high loan demand. However, in the “other banks” group, the interest rate spread is generally wide and follows a volatile course regardless of demand conditions. This may be related to the fact that these banks have lower motivation for growth in loans subject to the limit, independent of demand conditions.

Chart IV.1.1.2: Interest Rate Spread Between TL Commercial Loans Subject to and Not Subject to the Growth Limit (% Points, 4-Week MA)



Source: CBRT

Last Observation: 11.10.24

Note: Interest Rate Spread=Interest Rate on Loans Subject to Growth Limit – Interest Rate on Loans Not Subject to Growth Limit. Calculations exclude corporate ODA, corporate credit cards, and zero-interest loans. The vertical line marks the month of March when the reserve requirement obligation based on loan growth was introduced.

Empirical Findings

Lastly, a regression analysis is conducted to test the direction of the post-regulation change in the interest rate spread between the two loan types in banks with a loan growth close to the limit and other banks. In the regression analysis, data at the bank-time level is used for the eight-month period between March and October 2024, and the interest rate spread (*Interest Rate Spread_{it}*) between loans subject to and not subject to the growth limit across 10 banks is included as the dependent variable in the regression:

$$Interest\ Rate\ Spread_{it} = \beta_0(Affected_i) + \beta_1(Demand_t \times Affected_i) + \delta_i + \varepsilon_{it}$$

The variable (*Affected_i*), which indicates the existence of the regulation’s effect on banks, is defined as a dummy variable at 1 for banks with a loan growth close to the limit and at 0 for other banks. The dummy variable *Demand_t* is added to the model with a value of 1 for March, April, September and October, when loan demand was high after the regulation. Lastly, bank fixed effects (*δ_i*) are also included in the model to control for bank-specific effects. Thus, the parameter *β₁* attached to the term (*Demand_t x Affected_i*) indicates how the interest rate spread in banks with a close-to-the-limit loan growth changed compared to the interest rate spread of other banks during periods of high demand after the regulation took effect. In the regressions, we use both the static approach, where we treat bank behavior as weighted period behavior (based on the situation in at least five of the eight months), and the dynamic approach, where we reclassify banks according to their loan growth for each month and where banks in the close-to-the-limit growth/other groups can change for each month.

Table IV.1.I.2: Regression Results

	Static Approach	Dynamic Approach	
	Model 1	Model 2	Model 3
Demand * Affected	2.494*** (0.844)	1.861** (0.821)	2.933*** (0.959)
Affected	-	-	-2.147*** (0.952)
Bank Fixed Effect	Yes	Yes	Yes
Sample Period	03.24 - 10.24	03.24 - 10.24	03.24 - 10.24
Sample Bank Coverage	Close to the Limit, Other	Close to the Limit, Other	Close to the Limit, Other

Source: Author's calculations

Note: Standard deviations clustered at the bank level are shown in parentheses. *** p<0.01, ** p<0.05, * p<0.1. In the dynamic approach, the behavior of banks in each month is specifically analyzed regardless of their average behavior between March and October. In other words, based on their behavior in each period, banks may be included in the group of "banks with a loan growth close to the limit" in a month, and in the "other banks" group in the following month.

The results of Model 1 show that banks with a loan growth close to the limit increased the interest rate spread by 2.49 points during the months of high demand after the growth limit regulation, compared to other banks and the months of low demand (Table IV.1.I.2). In the dynamic approach, the same case is analyzed in Model 2, finding that banks with a loan growth close to the limit increased the interest rate spread by 1.86 points, similar to the static approach. In Model 3, with 1% significance, it is found that banks with a loan growth close to the limit reduced the interest rate spread by 2.15 points in months of low demand and increased it by 2.93 points in months of high demand, compared to other banks.⁶

To conclude, loan growth motivation of banks and loan demand conditions may also determine how the 2% growth limit imposed on TL loan growth in March 2024 as part of the tightening steps affects loan interest rates. The impact of the regulation was particularly evident during the months of strong demand, and loan growth was kept within limits by widening the affected banks' interest rate spread between loans subject to the limit and loans not subject to the limit. As a matter of fact, the interest rate spread widened in March, April, September and October when loan demand was relatively strong, while it narrowed in the May-August period when loan demand was low. In sum, the findings of the study suggest that the regulation has had a tightening effect on interest rates during periods of high loan demand and acted as an insurance against excessive loan demand.

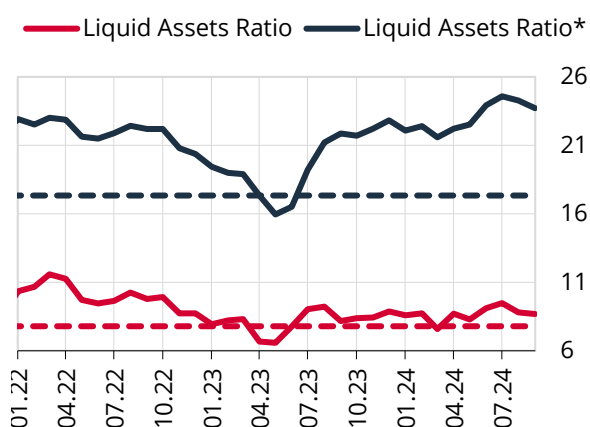
⁶ To provide a more accurate interpretation of the regression coefficients, estimated average interest rate spreads (margins) by demand and bank type are obtained. Accordingly, for example, in Model 2, the average interest rate spread is 3.18 points for control group banks, whereas it falls to 1.59 points for affected banks during the months when loan demand is weak. On the other hand, during the months of strong demand, the interest rate spread increases to 4.58 points for the control group banks, while it remains slightly lower (at 4.47 points) for the affected banks.

IV.2 Liquidity Risk

The share of liquid assets in banking sector assets hovers above its historical average.

Having declined somewhat in the first quarter of 2024, the liquid assets ratio (excluding RRs) picked up both in the second and third quarters and hovered above its historical average. Meanwhile, the liquid assets indicator including RRs was well above its historical average (Chart IV.2.1). Following the CBRT's adjustments to the RR ratios as part of the active management of excess liquidity in the system, the liquidity ratio reached an elevated level along with the increased RR balance. In the relevant period, the free account balance at foreign correspondent banks and the unencumbered GDS portfolio had an upward effect on the liquid assets ratio excluding RRs (Chart IV.2.2). In this period marked by excess liquidity, the unencumbered GDS balance expanded amid banks' reduced need for funding from the CBRT. On the other hand, swap transactions with the CBRT declined while banks' FX placements abroad went up, driven by the search for return on FX assets. Banks' FX account balances at foreign correspondent banks climbed by USD 4 billion from the end of May to the end of September and reached USD 18.5 billion, as a result, the foreign banks (free) ratio rose above its historical average.

Chart IV.2.1: Share of Liquid Assets (%)

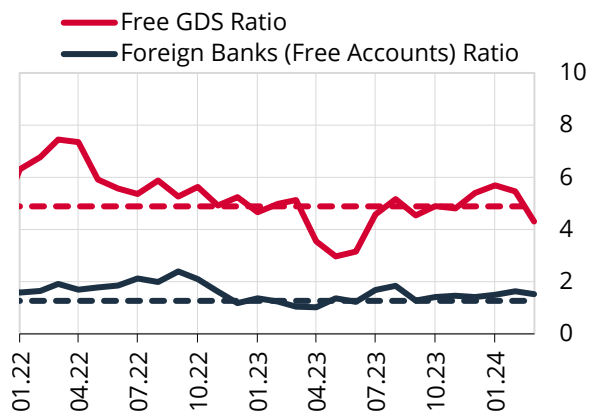


Source: CBRT

Last Observation: 09.24

Note: Liquid Assets Ratio = (Cash Reserves + Free Accounts at Foreign Banks + Unencumbered GDS + Reverse Repo Receivables + Takasbank and BIST Interbank Market) / Assets. Liquid Assets Ratio* = (Cash Reserves + Free Accounts at Foreign Banks + Unencumbered GDS + Required and Free Reserves) / Assets. Dashed lines represent the average of each series between 2014 and 2021.

Chart IV.2.2: Share of Selected Liquid Items (%)



Source: CBRT

Last Observation: 09.24

Note: Unencumbered GDS Ratio = Government Debt Securities Not Subject to Collateral / Assets. Foreign Banks (Free) Ratio = Free accounts at Foreign Banks / Assets. Dashed lines represent the average of each series between 2014 and 2021.

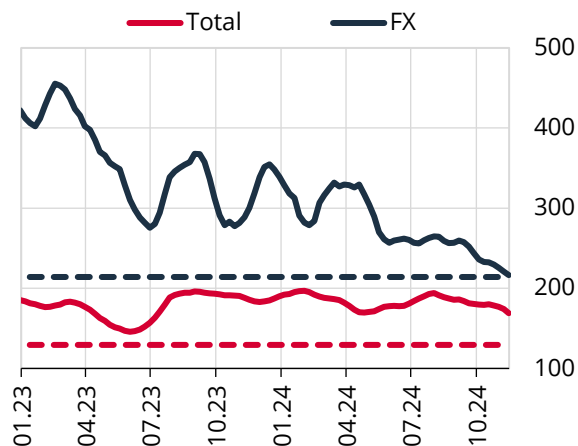
Alternative indicators confirm the positive outlook in banks' liquidity structure.

Liquidity coverage ratios (LCR), which are indicators of banks' ability to meet net cash outflows within 30 days with high-quality liquid assets, remain above legal limits and their historical average (Chart IV.2.3). The banking sector's liquid assets are capable of meeting possible short-term cash outflows in both TL and FX. The increase in TL liquidity in the system due to the rising demand for TL assets since April 2024 has reduced the banks' need for swap transactions with the CBRT. Net cash inflows from swap transactions in the short-term window and FX LCR declined as a result of using liquidity in swap transactions to fund FX loans. Nevertheless, this indicator is still above both the legal limit and its historical average.

The TL loan-to-deposit ratio (LDR), one of the key liquidity indicators of the banking sector, remained flat at low levels (Chart IV.2.4). The flat course was attributable to strong TL deposit growth and moderate loan growth on the back of the tight monetary policy stance as well as macroprudential measures. After hitting a historic low in 2023, the total LDR ratio rose slightly to 80% in 2024. The increase in FX loan growth in this period was the main driver of the uptick in the LDR ratio, which halted with the introduction of macroprudential measures to

restrain FX loan growth. Liquidity indicators suggest that deposits, a stable funding source, have grown in importance in banks' funding composition and that banks have strong liquidity buffers against possible shocks.

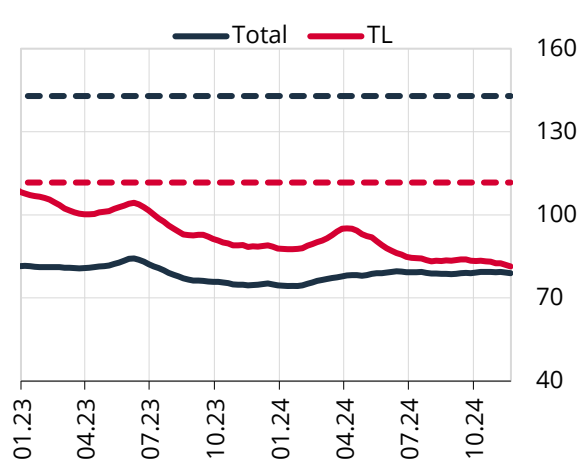
Chart IV.2.3: Liquidity Coverage Ratios
(4-Week MA, %)



Source: CBRT Last Observation: 08.11.24

Note: Development and investment banks (DIBs) are excluded. Based on unconsolidated reports of banks. Minimum legal limits for total and FX LCR are 100% and 80%, respectively. Dashed lines represent the average of each series between 2014 and 2021.

Chart IV.2.4: Loan/Deposit Ratio
(4-Week MA, %)



Source: CBRT Last Observation: 08.11.24

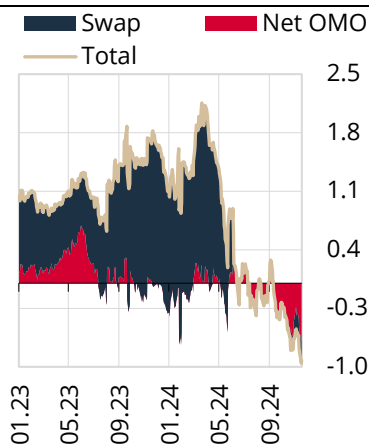
Note: DIBs are excluded. Loans extended to banks and bank deposits are not included. Dashed lines represent the average of respective ratio between 2014 and 2021.

The CBRT effectively manages excess TL liquidity, primarily through reserve requirements and deposit buying transactions.

Capital inflows, falling RRs as a result of the reduction in KKM, the continued transition to TL deposits, FX transactions by the CBRT, and TL-denominated transactions by the Treasury all led to excess liquidity in the system (Chart IV.2.5). The RR ratio to be maintained in TL was raised for TL deposits and KKM accounts in May and for TL deposits in September in order to sterilize excess liquidity in the system and to ensure that overnight money market rates materialize around the policy rate (Chart IV.2.6). When managing excess liquidity in the system, the CBRT also takes into account the distribution of liquidity within the system as well as the concentration of money market funds driven by investment preferences. The CBRT's overnight transactions at the BIST Repo-Reverse Repo Market and the Interbank Money Market and TL deposit buying auctions as part of the additional liquidity sterilization measures announced at the May MPC meeting, as well as the shrinking CBRT swap stock, all helped to manage market liquidity. Moreover, the CBRT's depo transactions at Takasbank Money Market curbed the downward impact of excess liquidity on market rates.

The high level of TL liquidity in the market, the rising demand for TL savings, and the improving expectations may occasionally exert downward pressure on TL deposit rates. Meanwhile, the CBRT's liquidity measures, amendments to the remuneration and commission rates applied to RRs, and adjustments to the TL deposit share targets strengthen the monetary transmission by maintaining the level of the TL deposit rate in line with the policy rate. While short-term interest rates in the market fluctuate within the interest rate corridor depending on liquidity conditions in the market, the compound interest rate on a flow basis on time deposits with a maturity of 1-3 months, which is a determinant of TL deposit preference, has remained flat at around 60% in the recent period. In addition to the policy rate, liquidity in the market, and macroprudential policies, inflation and exchange rate expectations also influence the course of TL deposit rates (Chart IV.2.7).

Chart IV.2.5: CBRT Funding (Trillion TL)



Source: CBRT

Chart IV.2.6: Turkish Lira RRs (14-Day MA, Trillion TL)

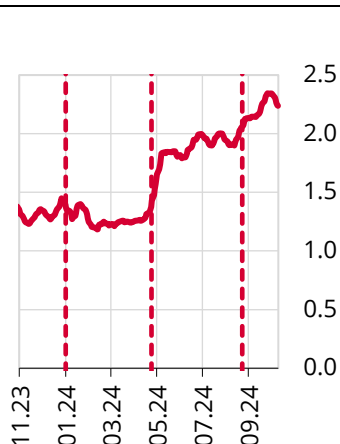
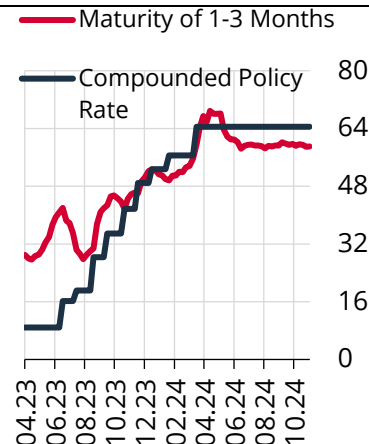


Chart IV.2.7: TL Deposit and Policy Rates (%)



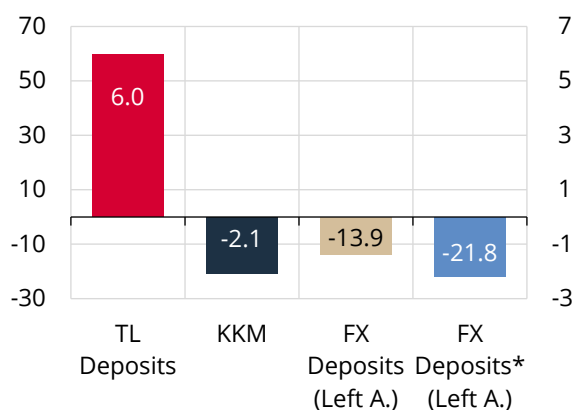
Last Observation: 08.11.24

Note: Dashed lines represent the RR decisions taken on January 30, 2024, May 23, 2024, and September 21, 2024, regarding the TL deposit and KKM accounts. TL deposit and policy interest rates are annual compounded rates.

While the share of TL deposits in total deposits rose steadily, that of the KKM accounts declined to 7%.

The current tight monetary policy and the regulations that encourage the transition from KKM to TL deposits and aim to increase the share of TL deposits continue to support the preference for TL. Meanwhile, the improvement in inflation and exchange rate expectations further contributed to the sustained increase in the TL deposit share. Some depositors opted for FX as the transition from the KKM accelerated and the price of gold rose on international markets, both of which had an upward effect on FX deposit balances, but there was still a significant decline in FX deposits (Chart IV.2.8). Compared to August 2023, exchange rate and parity-adjusted FX deposits and KKM accounts decreased by USD 21.8 billion and TL 2.1 trillion, respectively. In the same period, TL deposits increased by TL 6 trillion, while the TL deposit ratio rose by 24 percentage points from August 2023 and 8 percentage points from May 2024 to 56%. Currently, the TL deposit share stands at its highest level since the last quarter of 2017. When we also consider the significant amount accumulated in money market funds' balances, the TL preference becomes clearer. Due to the guiding role of macroprudential regulations on the preferences for TL deposits, FX deposits, and KKM accounts, as well as the improvement in the expectations of legal entities and households, KKM accounts are expected to further decline and the share of TL deposits is expected to increase in the coming period (Chart IV.2.9).

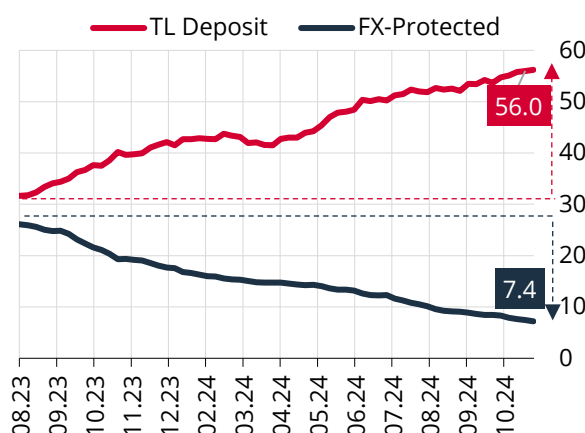
Chart IV.2.8: Change in Deposits (Trillion TL, Billion USD)



Source: CBRT

Note: TL deposits do not include the KKM balance. The change in deposits chart represents the change between August 25, 2023, and November 8, 2024. FX Deposit* balance is adjusted for exchange rate, parity, and gold price effects.

Chart IV.2.9: Distribution of Deposits (Share, %)



Last Observation: 08.11.24

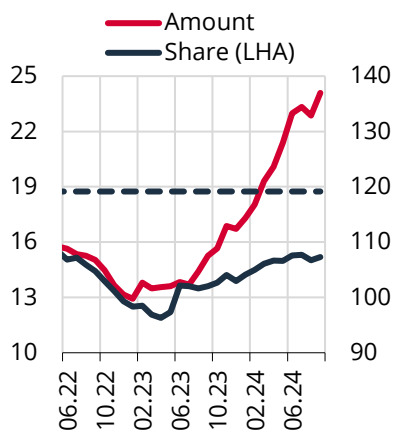
The decline in the country risk premium and upgrades by credit rating agencies support the improvement in external financing conditions.

Despite the recent conjuncture of high global volatility and geopolitical risks, foreign investors have continued to show strong interest in debt instruments of Turkish banks. The gradual upgrade of Türkiye's credit rating in 2024 also accompanied this positive picture.

The banking sector's external debt stock reached USD 137 billion, while the share of external debt in the funding composition increased to 15% (Chart IV.2.10). External debt rollover ratios of banks, which have increased their borrowing with the help of lower funding costs stemming from the decline in the country risk premium, have been on the rise due to long term borrowing. Rollover ratios of medium-long term external debts, which are subject to lower reserve requirements, hover above 150%, implying that the average maturity of external debts has been extending and the quality of external funding has been improving (Chart IV.2.11).

The strong foreign investor appetite for Eurobond and subordinated bond issuances, which are unsecured FX funding types, enabled banks to diversify their external debt composition. In the current Report period, the Eurobond balance increased further to USD 24.9 billion, reaching the levels of 2020. Banks continue to strengthen their capital base by increasing their subordinated debts (Chart IV.2.12). It is expected that the favorable outlook in long-term borrowing will continue to strengthen in the upcoming period thanks to the improvement in the country risk premium and the decline in interest rates of advanced economies.

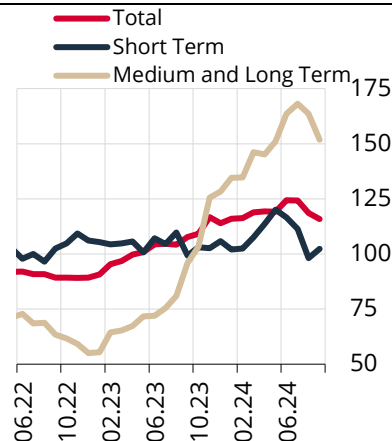
Chart IV.2.10: External Debt and Share (USD Billion, %)



Sources: CBRT, MKK

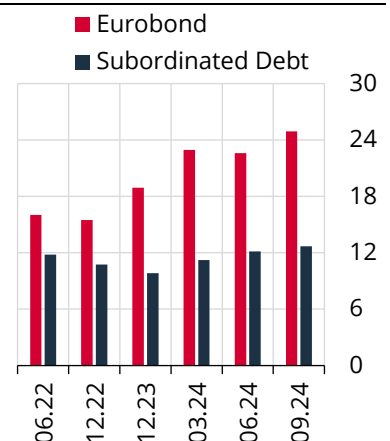
Note: Parity-adjusted amount. The USD equivalent of euro-denominated external debts is recalculated with the parity value of June 2018. The dashed line is the 2014-2021 average of share series.

Chart IV.2.11: External Debt Rollover Ratio (%)



Note: External debt rollover ratios are calculated based on 6-month (for total), 3-month (for short-term) and 12-month (for long-term) moving totals of banks' total borrowings and repayments of external liabilities including securities issued abroad.

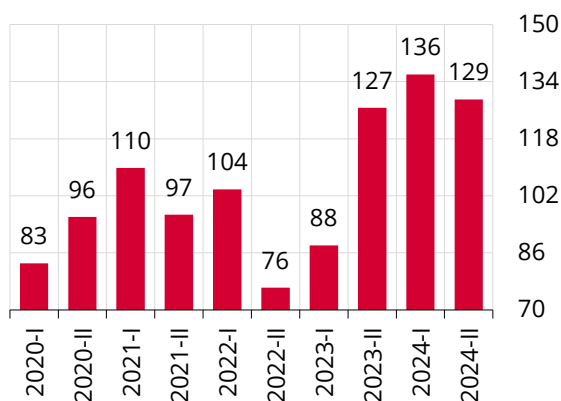
Chart IV.2.12: Eurobond and Subordinated Debt (USD Billion)



Last Observation: 09.24

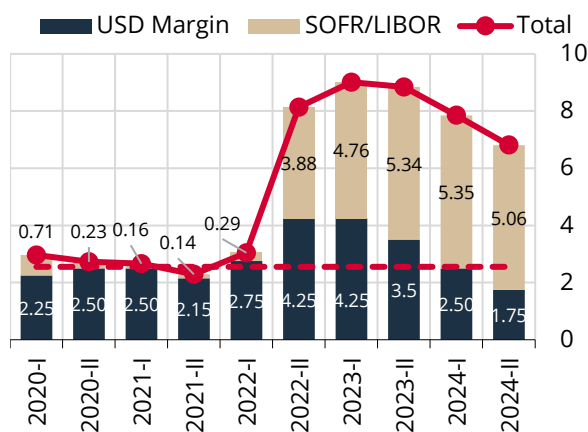
The positive picture in syndication costs and high renewal rates continued into the second half of the year. Syndicated loans that matured in the first half of 2024 were renewed by 136% (Chart IV.2.13). The remaining syndicated loan transactions in the last quarter of the year are also expected to be renewed at a rate above 100%. While the average Secured Overnight Financing Rate (SOFR) declined slightly compared to the previous period, the additional fall in margins pulled the total cost of syndicated loans down to around 6.8% for a term of one year. The fact that part of the transactions in the second half of the year were carried out using syndicated loans with two-year maturities supports the maturity structure of external borrowing. In syndication transactions, the risk premium for the USD-denominated 367-day maturity tranche declined by 175 bps year-on-year and by 75 bps compared to the transactions conducted in the last quarter of the previous year (Chart IV.2.14). Given the resilience of Turkish banks against risks and the favorable course of the sovereign credit rating, banks' access to external funding is expected to expand in the upcoming period. FX loan extensions and banks' FX funding needs for liquidity management will be crucial in terms of external borrowing demand.

Chart IV.2.13: Rollover Ratio of Syndicated Loans (%)



Sources: CBRT, KAP Last Observation: 11.24

Chart IV.2.14: Costs of Syndicated Loans (%)



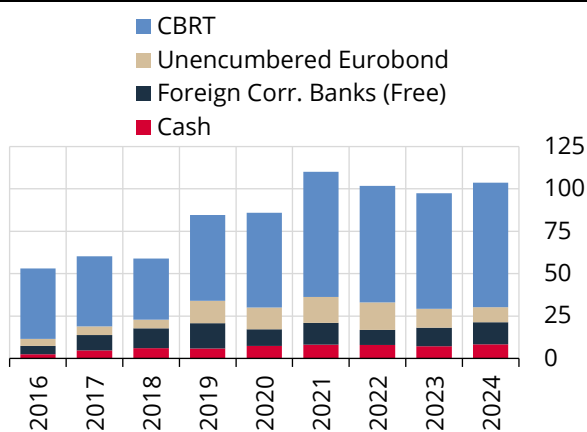
Sources: KAP, Bloomberg Last Observation: 11.24

Note: Calculated for ten large-scale banks excluding DIBs. I and II represent April-June and October-December syndication periods of the respective year. The external debt rollover ratio is calculated as the ratio of total borrowing and repayments in the specified periods. For the second half of 2024, transactions realized as of the third week of November are taken into account. The USD margin shows the risk premium applied in addition to the SOFR/LIBOR rate. The dashed line is the average of the total cost for 2014-2021 period.

The sector's FX liquidity buffers against possible FX liquidity shocks remain strong.

As of September 2024, banks held FX liquid assets including RR worth USD 104 billion on average in the last three months (Chart IV.2.15). As the sector's FX-denominated external debt stock that is due within one year stood at USD 63 billion, the capacity of FX liquid assets to cover short-term FX-denominated external debt is at 164% (Chart IV.2.16).

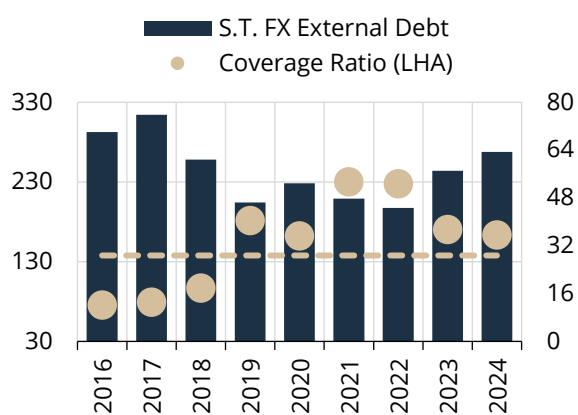
Chart IV.2.15: FX Liquid Assets (Billion USD)



Source: CBRT Last Observation: 09.24

Note: The average of the last three months has been reported for each year. The CBRT item covers total FX required reserves and FX excess reserves.

Chart IV.2.16: Short-Term FX External Debt and Coverage Ratio (Billion USD, %)



Source: KAP, Bloomberg Last Observation: 09.24

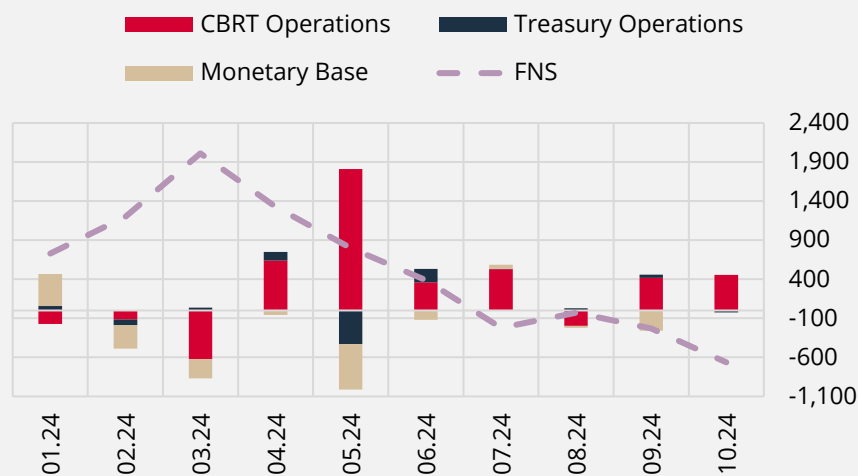
Note: External debt represents FX-denominated external debt that will fall due within one year and is calculated by excluding non-residents' FX deposit accounts. The most recent data pertaining to external debt is from September. Dashed lines show the average of coverage rates for the 2014-2021 period.

Box IV.2.I: The Effect of Sterilization Toolkit on Money Market Interest Rates

Within the framework of liquidity management, the CBRT aims to ensure the effective implementation of monetary policy, its primary objective, as well as the smooth functioning of payment systems. The CBRT closely monitors developments in liquidity conditions and reviews the adequacy of the toolkit used for the effective management of liquidity and the healthy functioning of the transmission mechanism. This box examines the impact of additional liquidity management instruments introduced after August 2, 2024 on the level of money market interest rates and intraday volatility.

While the funding need of the banking system (FNS), which indicates the liquidity shortage at the beginning of 2024, was TRY 729 billion, the excess liquidity, which became permanent since September reached TRY 664 billion by the end of October 2024. While the changes in the monetary base resulted in liquidity leakage from the system throughout that period, increased reverse currency substitution (reverse dollarization) and capital inflows, mostly as of the second quarter of the year, led to an improvement in the CBRT's net FX position, and resulted as injection of TL liquidity into the system. Accordingly, the cyclical excess liquidity in the first quarter became permanent as of the second half of the year, especially as a result of the CBRT's FX operations (Chart IV.2.I.1). Therefore, a series of new sterilization tools were put into effect to sterilize this excess liquidity by considering the heterogeneous distribution of liquidity among market participants. In this context, the CBRT started to conduct TL deposit buying auctions with varying maturities between 11.00-11.30 a.m. and 1:45-2:15 p.m. on the same day. In addition, sell-side currency/gold-TL swap (reverse swap) auctions were introduced and the sterilization toolkit was diversified through the deposit buying transactions in the Takasbank Money Market (TMM).¹

Chart IV.2.I.1: FNS in 2024 (TRY Billion)



Source: CBRT

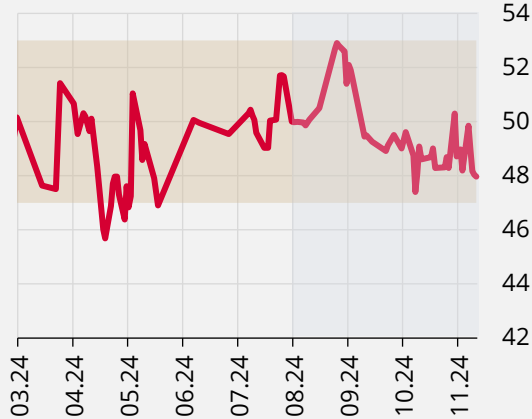
Last Observation: 31.10.24

Note: Upside movements indicate liquidity injection to the system, while downside movements indicate liquidity leakage from the system.

¹ TL deposit purchase auctions with same day value date, different auction hours, different maturities and sell-side Turkish lira swap auctions were launched as of 2 August 2024. For details, please refer to Inflation Report 2024 – Box III 1.1.

Since August 2, 2024, sell-side TL-currency swap auctions against FX and since October 31, 2024, sell-side TL-gold swap auctions have been gradually used in view of market requirements.² In this context, the interest rates of swap transactions formed in the BIST Swap Market at the weekly maturity remain within the interest rate corridor despite the excess liquidity in the system (Chart IV.2.1.2). Together with other sterilization tools, sell-side swap transactions diversify sterilization facilities and strengthen monetary transmission.

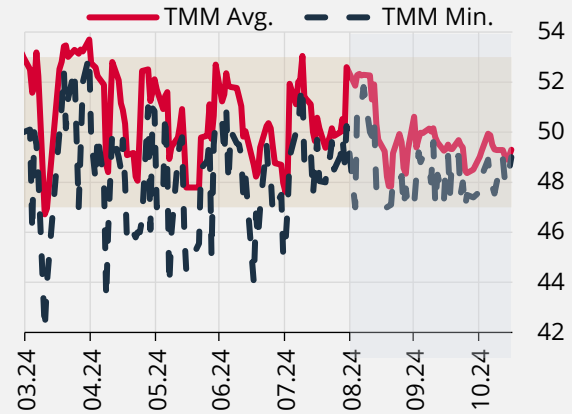
Chart IV.2.1.2: Implied BIST Swap Rates (%)



Sources: CBRT, BIST Last Observation: 15.11.24

Note: The interest rate is constructed by taking the weighted average of transactions with 1-week maturities. The blue shaded area indicates the period of CBRT sell-side swap auctions and the beige shaded area indicates the interest rate corridor.

Chart IV.2.1.3: Takasbank Money Market Rates (%)



Sources: CBRT, BIST Last Observation: 15.11.24

Note: The weighted average interest rate and the minimum (min) interest rate for overnight transactions in the TMM are indicated. The blue shaded area indicates the period of CBRT quotation in the TMM and the beige shaded area indicates the interest rate corridor.

The sterilization toolset, used prior to August 2024, allowed the sterilization of excess liquidity via quotations with banks in the Interbank Money Market, with banks and non-bank financial institutions in the BIST Repo-Reverse Repo Market and the Committed Transactions Market (CTM).³ In this context, sterilization transactions were initiated in August in the Takasbank Money Market (TMM) through deposit buying quotations to extend the diversity of instruments.⁴ Thus, sterilization of excess liquidity was facilitated through transactions with banks and non-bank financial institutions in various markets. Additionally, the extended toolset helped to achieve the operational flexibility while supporting the diversity in terms of the counterparties and sterilization capacity. Analyzing the interest rate movements in the TMM, after the CBRT participated into the market via the deposit buying quotations, reveals that the spread between the weighted average interest rate and the lowest intraday interest rate was limited (Chart IV.2.1.3).

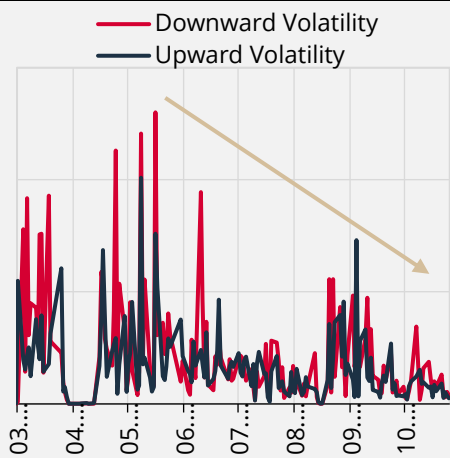
² Sterilization, via sell-side swap auctions, is made by withdrawing TL against gold and currency on the value date.

³ Transactions conducted in the Money Markets within the CBRT.

⁴ As of August 14, 2024, the CBRT started to deposit buying quotations at the overnight CBRT borrowing rate in the Takasbank Money Market.

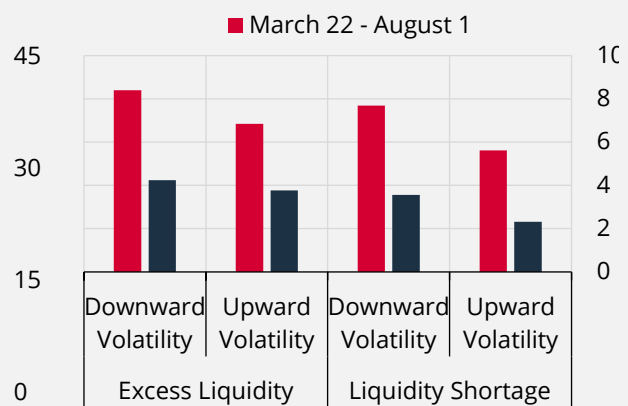
In addition to the level of interest rates, interest rate volatility is also significant for the monetary policy transmission channel in the financial markets (Özbekler et al., 2021). Accordingly, an analysis of intraday volatilities of overnight maturity transactions in the BIST Repo/Reverse Repo Market has been carried out. The transactions are analyzed by utilizing 5-minute intraday intervals that upward volatility is computed by using the interest rate changes when the interest rates increase compared to the previous window, and downward volatility is computed by using the rate changes when the interest rates fall.⁵ The results show that after March, interest rate volatilities generally fluctuate due to cyclical liquidity conditions, while downward volatilities are more pronounced (Chart IV.2.I.4). After 2 August 2024, downward and upward volatilities were contained with the contribution of additional sterilization instruments. Moreover, regardless of liquidity conditions, interest rate volatilities in the repo market were contained, while the decline in downside volatilities was more pronounced (Chart IV.2.I.5).

Chart IV.2.I.4: BIST Repo/Reverse Repo Market Intraday Rate Volatilities (%)



Source: BIST, Authors Calculations
18.11.24

Chart IV.2.I.5: BIST Repo/ Reverse Repo Market Intraday Rate Volatilities (%)



Last Observation:

This box examines the factors affecting liquidity conditions in the market in 2024 and the effects of the extended sterilization framework on the level of interest rates and volatilities in the money markets. As a result, with the help of the extended sterilization toolkit, interest rates in money markets have become more aligned with the CBRT interest rate corridor, while interest rate volatility, which is important for the monetary transmission channel, has been considerably limited.

References

Barndorff-Nielsen, O. E., Kinnebrock, S., & Shephard, N. (2008). Measuring downside risk-realised semivariance. CREATES Research Paper, (2008-42).

Özbekler, A. G., Kontonikas, A., & Triantafyllou, A. (2021). Volatility forecasting in European government bond markets. *International Journal of Forecasting*, 37(4), 1691-1709.

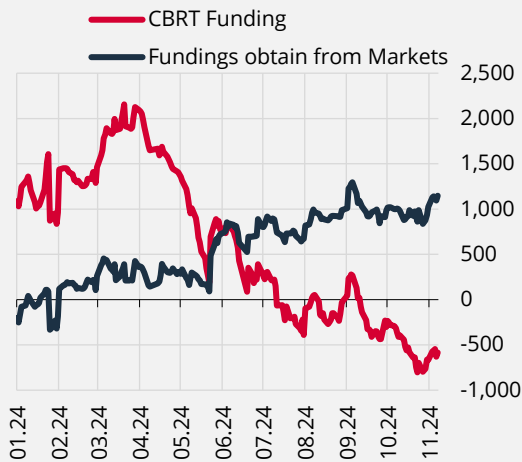
⁵ Intraday volatilities are constructed using realized volatilities. Downside volatility refers to realized negative semi-variance, while upside volatility refers to realized positive semi-variance. For details (Barndorff-Nielsen et al., 2008).

Box IV.2.II: TL Liquidity Conditions and Recent Trends in Deposit Rates

The policy rate is the main determinant of the level of deposit rates, although the liquidity in the market, the CBRT's liquidity management, the regulations introduced to encourage TL deposits, and expectations may also have an impact on the level of interest rates. With the help of its recently diversified liquidity management tools and macroprudential measures to encourage TL deposits, the CBRT has been supporting formation of short-term interest rates and deposit rates consistent with the policy rate in the market and strengthening the transmission channel. This box summarizes the implications of recent policies aiming to strengthen monetary transmission, and liquidity conditions on the outlook and cross-bank distribution of TL deposit rates.

Until the first quarter of 2024, the banking system's funding need remained high and the funding was largely met by swap transactions. Since the second quarter of the year, the system's liquidity shortage has been covered rapidly thanks to increased capital inflows, strong demand for TL-denominated assets and the CBRT's FX transactions, paving the way for excess liquidity in the system as of the third quarter. Although the excess liquidity climbed above TRY 600 billion in November, banks' TL funding continued to increase, as a significant portion of it concentrated in money market funds. As a result, net funding provided by banks through money market operations and repurchase transactions rose to TRY 1.1 trillion (Charts IV.2.II.1 and Chart IV.2.II.2).

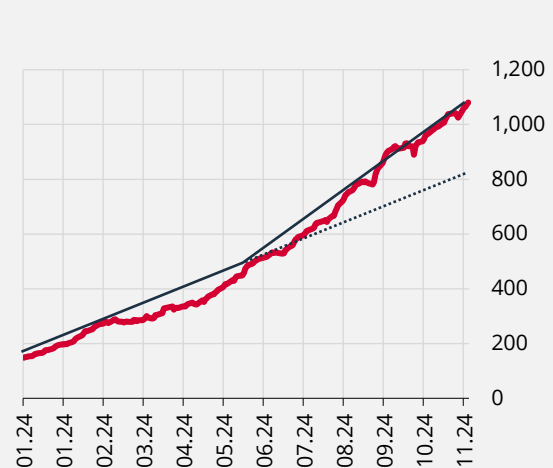
Chart IV.2.II.1: TL Funding
(TRY Billion)



Source: CBRT Last Observation: 08.11.24

Note: The "Funding Need of the System" is the sum of CBRT net swap and net OMO balances. "Funds from Markets" denotes the net balance of banks' money market and repurchase transactions.

Chart IV.2.II.2: Money Market Funds
(TRY Billion)



Source: CBRT Last Observation: 08.11.24

Note: Dark-colored lines show the trend between January 2 – May 31 and June 3 – November 8. The dashed line is the continuation of the January 2 – May 31 trend line.

To manage the excess liquidity in the system, the CBRT has enhanced the effectiveness of the available sterilization tools on the one hand, and has gradually introduced new instruments, on the other. Accordingly, the Bank initiated additional TL deposit buying auctions and also launched TL swap auctions against gold and FX on the sell-side. Then, other money markets also started to receive money purchase orders. These inflows at the lower band level supported the formation of an effective lower bound in money markets. The additional intraday TL deposit buying auctions held between 1.45 p.m. and 2.15 p.m. were another important factor that restrained the downtrend in interest rates, particularly in the BIST repo/reverse repo market. Thanks to the sterilization framework enriched with additional tools, the downward volatility in deposit rates diminished (Table IV.2.II.1).¹

¹ The table contains references to the regulations regarding the actions mentioned in the box. For details, see:
(i) Financial Stability Report November 2024, Box II.2.II: Steps for Effective Functioning of Financial Markets
(ii) Inflation Report August 2024, Box 1.1: Developments on Turkish Lira Liquidity and Sterilization Tools

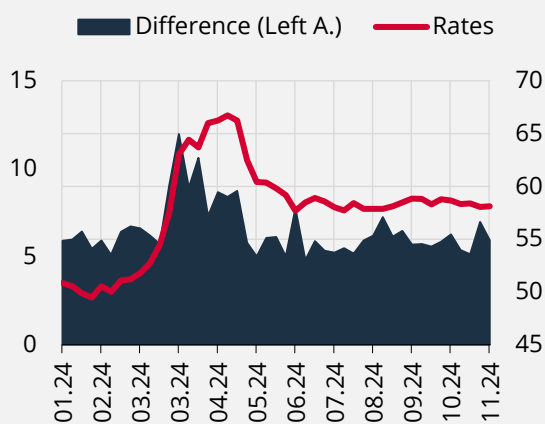
Table IV.2.II.1: Regulations Affecting Transmission Channel

Tools Introduced for TL Liquidity Management	
	Initiation of TL deposit auctions
	Termination of TL currency swaps
	Launch of sell-side gold and FX swap auctions
	Additional intraday TL deposit buying auctions
	Buy-side orders received by other money markets
	Revision of reserve requirement ratios
Macroprudential Measures for TL Deposits	
	Revision of TL share, KKM renewal and transition-to-TL targets
	Target-based remuneration of required reserves
	Commission on required reserves charged to banks failing to meet targets

In the face of possible volatilities in deposit rates, the CBRT actively made use of reserve requirements to permanently sterilize excess liquidity in the system and thus to support the transmission channel. Accordingly, the Bank raised the reserve requirement ratios for TL deposits and KKM accounts, as well as the ratio for maintaining TL required reserves in blocked accounts. To reduce the cost of RR increases on banks' balance sheets and to prevent banks from reflecting this cost in deposit rates, the CBRT started to remunerate RRs. While strengthening the transmission mechanism with these steps, the CBRT has regularly revised the targets to increase the share of TL deposits and support the transition from KKM accounts to TL deposits in a way that would also safeguard financial stability.

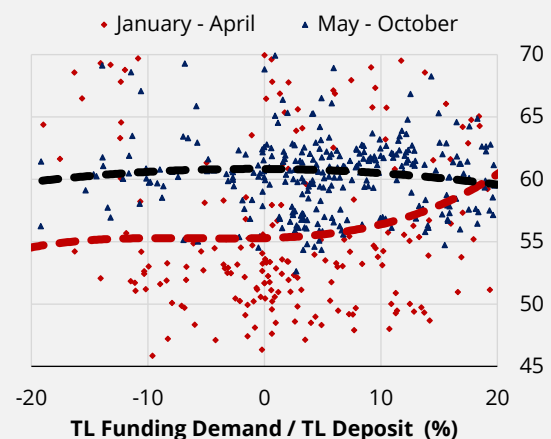
The sterilization steps and regulations in the macroprudential framework inhibited the downward impact of excess liquidity in the system on deposit rates, and enhanced the effectiveness of the monetary policy. In the period until May 2024, the interest rate pass-through of liquidity conditions remained high, and significant divergence was observed among banks in deposit rates that rose after the policy rate hike. In this period, banks diverged as demanding and supplying banks in terms of their TL funding position. This divergence led to differing interest rates applied by banks with liquidity shortage and excess liquidity, and also affected the relationship between liquidity and deposit rates. As a result, the demand for TL funds had an upward effect on deposit rates at banks with liquidity shortage. In the following period of May-October, the divergence in the TL funding position decreased broadly and excess liquidity in the system did not have a significant effect on deposit rates (Charts IV.2.II.3 and Chart IV.2.II.4).

Chart IV.2.II.3: TL Deposit Rates (%)



Source: CBRT Last Observation: 08.11.24
 Note: Shows the difference between the highest and lowest interest rates for savings deposits with 1-3 month maturity, after excluding the bottom and top 10%-portion of banks. Participation banks are excluded.

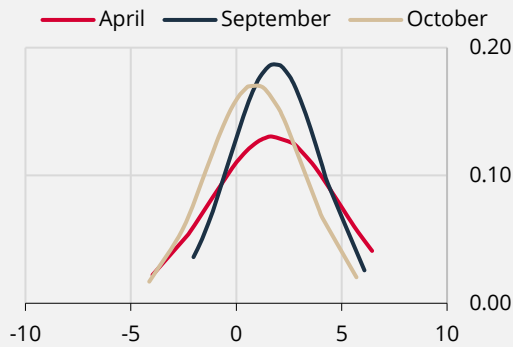
Chart IV.2.II.4: Liquidity and TL Deposit Rates (%)



Source: CBRT Last Observation: 08.11.24
 Note: The horizontal axis is the ratio of (banks' assets - liabilities from money market and repurchase transactions) to TL deposits excluding banks' deposits. The vertical axis represents interest rates on savings deposits with maturities of 1-3 months. Dashed lines are multinomial estimates of the series.

Looking at extreme rates, it is safe to say that the divergence in banking TL deposit rates has diminished significantly since June compared to the first half of the year, and rates have been formed close to the policy rate across the sector. The distribution of spreads between bank deposit rates and sector rates also confirms that interest rates have started to concentrate around the average in recent months compared to the first half of the year (Chart IV.2.II.5). Additionally, the volatility in interest rates has decreased considerably compared to the first half due to the decline in extreme interest rates charged by banks on deposits (Chart IV.2.II.6).

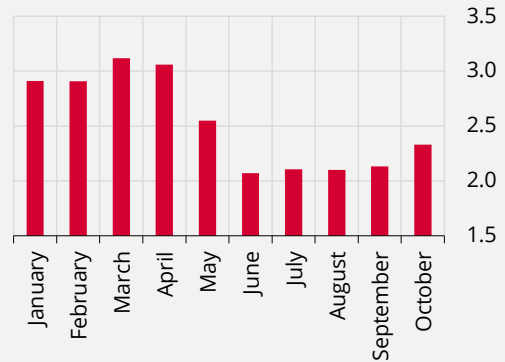
Chart IV.2.II.5: Distribution of TL Deposit Rates



Source: CBRT, Authors' Calculations

Note: Probability density functions of the spreads of the monthly weighted bank-based savings deposit rates with 1-3 month maturities from the weighted average sector rate for the relevant month. Calculated by subtracting the average of that month from each observation in the relevant month and dividing the result by its standard deviation. Participation banks are excluded.

Chart IV.2.II.6: Distribution of TL Deposit Rates



Source: CBRT, Authors' Calculations

Note: Standard deviation of the spread between the weighted average of bank-based 1-3 month savings deposit rates and the sector average. Participation banks are excluded.

In sum, the CBRT's effective TL liquidity management limited the potential downward impact of excess liquidity on deposit rates and supported the pass-through from the policy rate to deposit rates. As the monetary transmission mechanism strengthened, the deviation from the sector average on banking deposits was seen less, and deposit rates converged to the sector average.

IV.3 Interest Rate and Exchange Rate Risk

Following the last policy rate increase, the upward repricing of stock loan rates continued, while stock deposit rates remained almost flat and the loan-deposit rate spread widened slightly.

Changes in interest rates have an impact on bank balance sheets through the loan-deposit rate spread and revaluation due to the maturity mismatches. Since the second half of 2023, TL loan and deposit rates have trended upwards under the tight monetary policy stance, and the last policy rate hike was delivered in March 2024. In this period, the upward repricing of banks' TL-denominated stock loans and deposits on their balance sheets continued. Deposits, for which the interest rate is renewed faster than loans due to their shorter maturities, have largely been repriced. On the other hand, loan rates, for which stock rate adjustments take place more slowly, have increased further in the recent period. Having declined due to the last interest rate hike, the stock interest margin improved slightly following these developments and has remained above its historical average since June. When demand deposits are excluded, the stock interest margin remains in negative territory. (Charts IV.3.1 and IV.3.2).

Chart IV.3.1: TL Loan and Deposit Rates
(Stock, %)

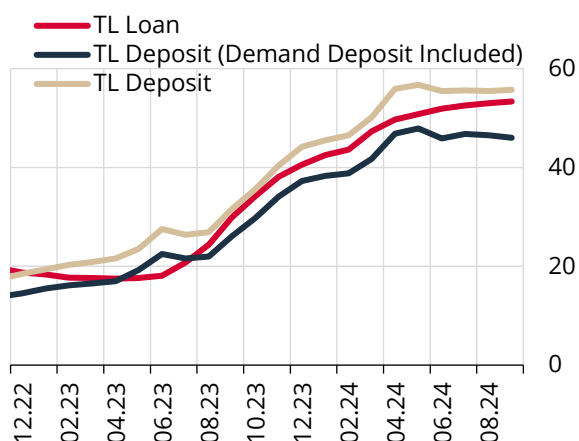
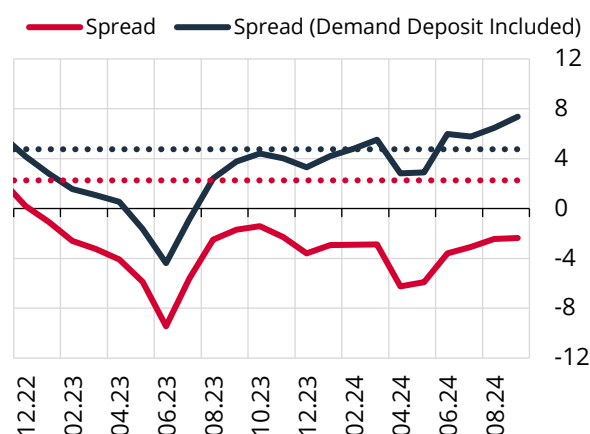


Chart IV.3.2: TL Loan-Deposit Rate Spread
(Stock, %)



Source: CBRT

Last Observation: 09.24

Note: Participation banks are excluded. Banks' deposits are not included in deposits rates. Loan rates include credit cards and overdraft accounts. Dashed lines show the 2013-2021 average.

The maturity mismatch between interest rate-sensitive assets and liabilities is below historical averages.

The weighted average maturity of banks' interest rate-sensitive TL assets decreased by 0.9 months to 13.5 months compared to end-March, while the average maturity of their interest rate-sensitive TL liabilities remained flat at around 5 months (Chart IV.3.3). Meanwhile, the average maturity of FX assets rose to 18.4 months and that of FX liabilities to 14.2 months (Chart IV.3.4). Improved access to long-term FX financing by banks thanks to the decline in the country risk premium amid the tight monetary policy stance was influential in extension of the maturity of liabilities, while the FX credit expansion that prevailed till end-May was effective in lengthening of the weighted average maturities of FX assets. Since June, however, these maturities have shortened again. Thus, while the weighted average maturity spread for TL assets and liabilities hovered slightly below its historical average at 8.4 months, the maturity mismatch on the FX side declined to 4.2 months (Chart IV.3.5).

Chart IV.3.3: Weighted Average Maturity of TL Assets and Liabilities (Month)

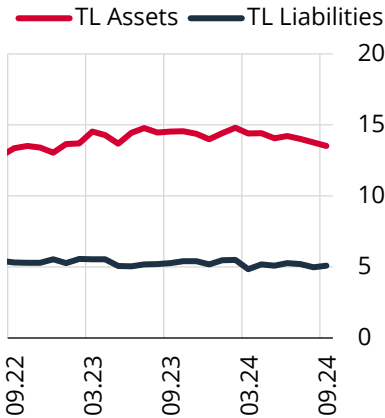


Chart IV.3.4: Weighted Average Maturity of FX Assets and Liabilities (Month)

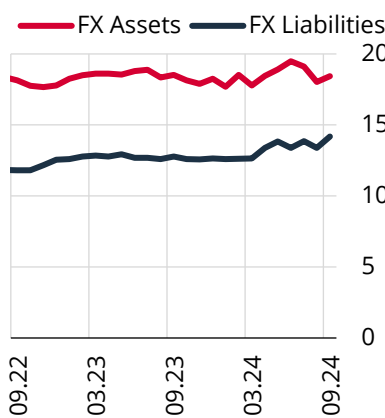
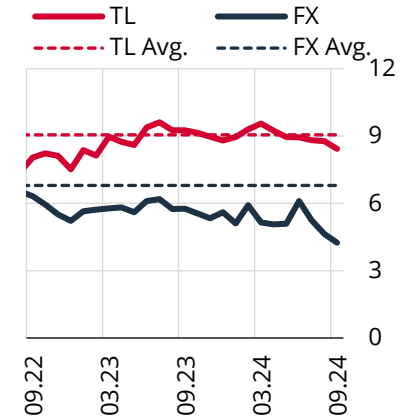


Chart IV.3.5: Weighted Average Maturity Mismatch Between Assets and Liabilities (Month)



Source: CBRT

Last Observation: 09.24

Note: Maturities show the repricing period. Weighted average maturities are calculated based on the mid-points of maturity brackets and the cash flows of related financial assets and liabilities. Dashed lines show the 2013-2020 averages. Participation banks are not included. Banks can allocate core deposits, calculated based on demand deposits, across maturity brackets up to three years.

The share of fixed-rate TL loans and securities in banking assets remains flat, while fixed-rate TL assets' average maturity has declined.

Having risen to 55% in the first quarter of 2024, the share of fixed-rate TL loans remained almost flat in the subsequent period, while the share of TL securities did not post a significant change in that period (Chart IV.3.6). Average maturities of fixed rate TL securities and loans, on the other hand, shortened (Chart IV.3.7). This can be attributed to the propensity of loan customers to borrow at relatively shorter maturities in this period of tighter credit conditions.

Chart IV.3.6: Interest Rate Structure of TL Securities and TL Loans (%)

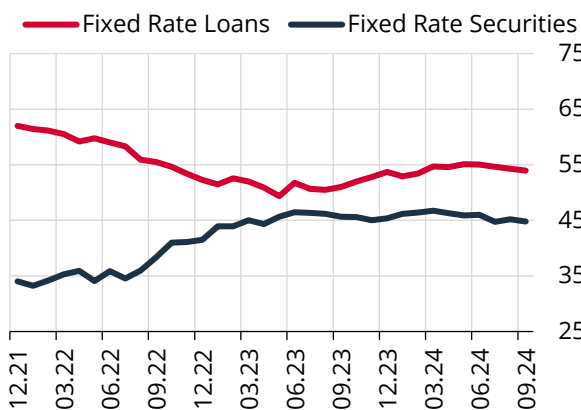
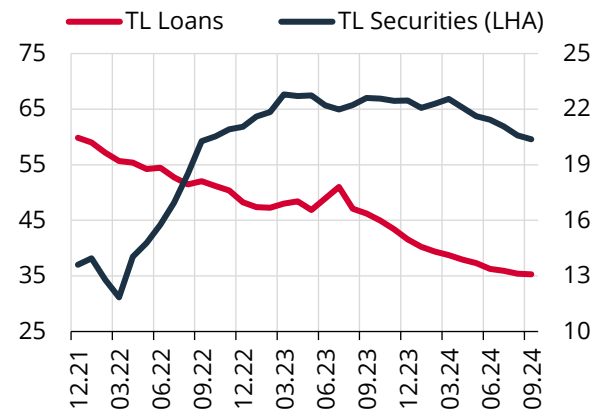


Chart IV.3.7: Maturity of Fixed-Rate TL Securities and TL Loans (Remaining Maturity, Month)



Source: CBRT

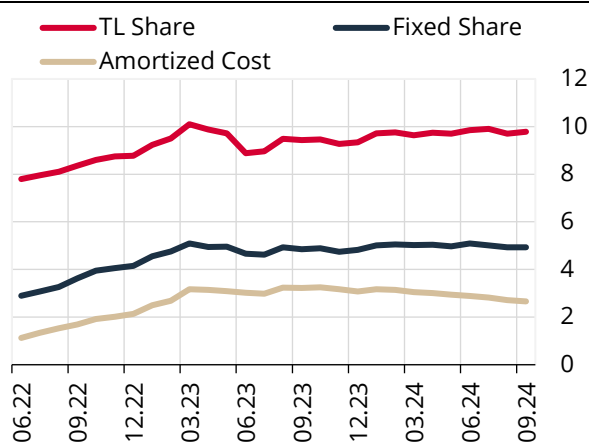
Last Observation: 09.24

Note: Weighted average maturities are shown. Weighted average maturities are calculated based on the mid-points of maturity brackets and cash flows of fixed-rate TL loans. The maturity for TL securities is calculated based on total fixed-income securities held by banks. Participation banks are excluded.

While the share of TL securities in assets preserve its flat course, banks classify these securities largely at amortized cost.

The share of TL securities in assets that banks have on their balance sheets is 9.8%, while the share of fixed-rate TL securities is 4.9% (Chart IV.3.8). Banks recognize long-term and fixed-income TL securities at amortized cost on their balance sheets to limit the adverse impact of impairment on profitability and equity. The share of those valued at amortized cost in fixed-rate TL securities stands at 53.9% (Chart IV.3.9).

Chart IV.3.8: The Share of TL Securities in Assets (%)

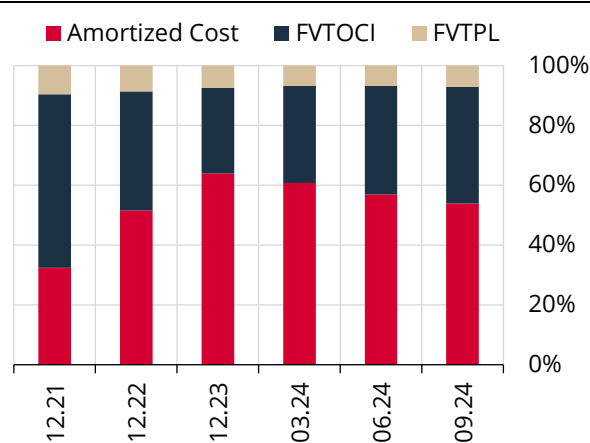


Source: CBRT

Note: FVTPL: Securities at fair value through profit or loss. Amortized Cost: Securities valued at amortized cost. FVTOCI: Securities at fair value through other comprehensive income.

Non-interest bearing securities are included in fixed interest bearing securities

Chart IV.3.9: Fixed-Rate TL Securities (% Share in Total)

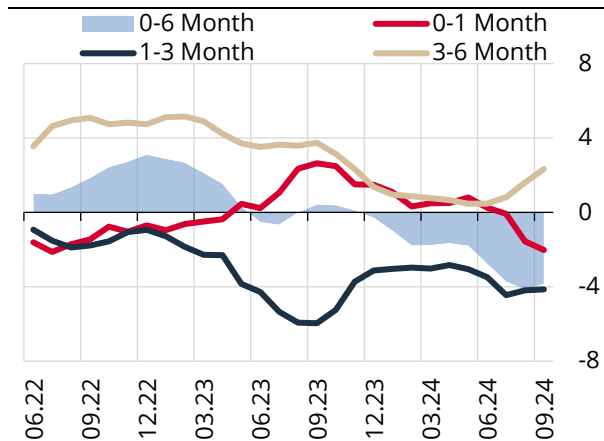


Last Observation: 30.09.24

While the spread between TL assets and liabilities at maturities shorter than six months remains in negative territory, on the FX side, the sector has long position in the short term.

Amid the ongoing tight monetary policy stance and improving expectations, depositors' shift from FX-protected and FX deposits to TL deposits has become more apparent. The shift from FX-protected deposit accounts, which are opened at relatively longer maturities, to TL deposits increased the excess spread between TL assets and liabilities in the 3-6-month maturity. On the other hand, depositors' tendency towards alternative investment instruments such as money market funds increased the share of short-term funding in banks' funding composition, and the TL asset-liability spread between 0-1 month shifted from positive into negative territory. Between 1-3 months, the ratio of the TL asset-liability spread to total assets remained flat in the third quarter of 2024 (Chart IV.3.10). Banks' access to long-term FX financing, the decline in FX deposits and FX loan growth supported the widening of the short-term excess asset-liability spread on the FX side (Chart IV.3.11).

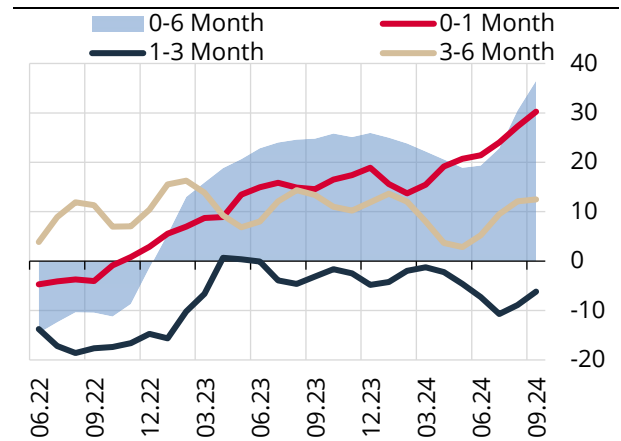
Chart IV.3.10: TL Asset-Liability Gap Analysis
(%, 3-Month MA)



Source: CBRT

Note: Participation banks are excluded. Accounts without a maturity are excluded.

Chart IV.3.11: FX Asset-Liability Gap Analysis
(Billion USD, 3-Month MA)

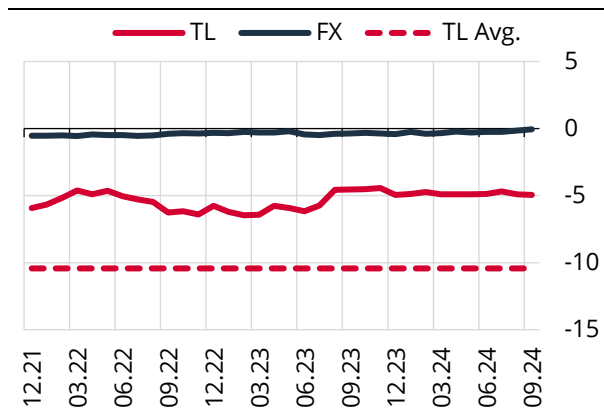


Last Observation: 09.24

The sensitivity of banking books to TL and FX interest rate shocks is limited and below historical averages.

According to the standard interest rate risk measurement approach, in the event of an upward shock of 500 basis points in TL interest rates and 200 basis points in FX interest rates, the likely loss arising from banking books remains quite limited for FX. The sector's sensitivity to TL interest rate shocks, on the other hand, stands at 4.9% of the regulatory capital, well below the historical average (Chart IV.3.12).¹ Since March 2021, no bank has incurred a loss of 15% or more of its regulatory capital under TL interest rate shock scenario, while the interest rate shock sensitivity of banks that have 90% of the sector's assets is below 10% (Chart IV.3.13). Accordingly, the sector appears to have an interest rate risk outlook and balance sheet structure aligned with regulatory limits.

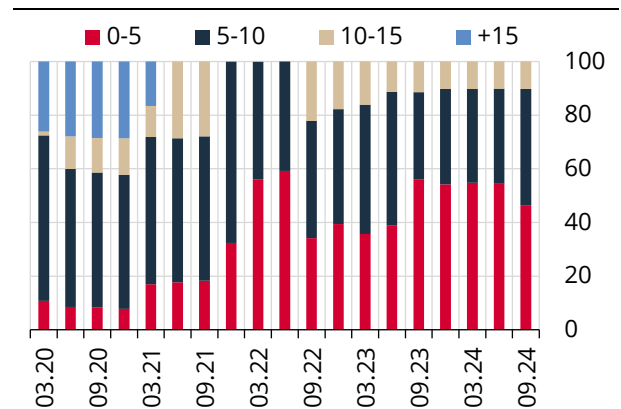
Chart IV.3.12: Loss-to-Capital Ratio After Positive Interest Rate Shock (Banking Books, %)



Source: CBRT

Note: The economic value approach takes account of the change in the present value of interest rate-sensitive assets and liabilities in the face of a change in the interest rate. The yield curve is assumed to display a parallel upward movement of 500 bps in a TL interest rate shock and 200 basis points in an FX interest rate shock. Losses under the interest rate shock scenario are divided into brackets. The total assets of banks in each bracket are proportional to the total assets of the sector. Participation banks are excluded. Historical average is the average of 2013-2020 period.

Chart IV.3.13: TL Asset Shares of Banks by Loss-to-Capital Ratio Intervals After TL Interest Rate Shock (%)



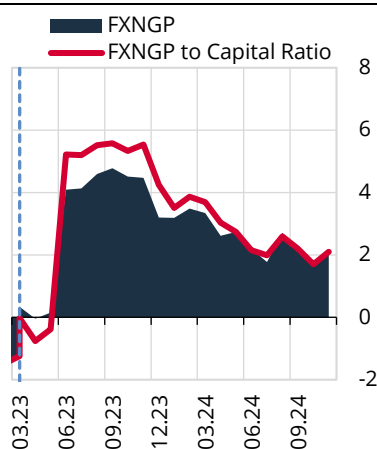
Last Observation: 09.24

¹Under the BRSA's Regulation on the Measurement and Assessment of the Interest Rate Risk in the Banking Book via the Standard Shock Method, the interest rate risk-driven loss to regulatory capital ratio cannot exceed 20%.

Since the last quarter of 2023, the sector's FX long position has been on the decline, while the foreign exchange net general position / capital ratio has remained within legal limits.

The FX net general position (FXNGP) has declined by USD 2.7 billion since September 2023, and by approximately USD 1.3 billion since March 2024, but the FXNGP/capital ratio remains at 2.1%, within the legal limit² (Chart IV.3.14). Although the number of banks with an FX short position has increased since end-2023, those with an FX position in positive territory still account for approximately 75% of the sector (Chart IV.3.15). Since March, banks' on- and off-balance sheet FX items have shown significant changes. The sector's on-balance sheet short position decreased from USD 52 billion to USD 16 billion, while off-balance sheet long position declined from USD 56 billion to USD 18 billion (Chart IV.3.16). FX loans, FX deposits and external debt developments were the on-balance sheet drivers, while currency swap transactions were the off-balance sheet drivers of this change.

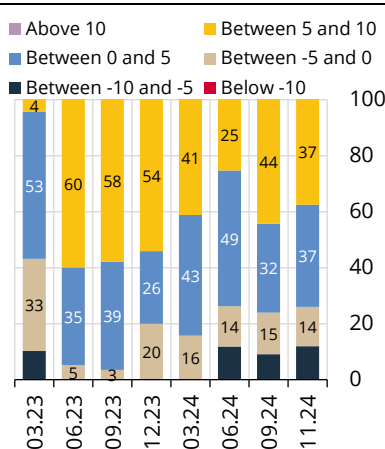
Chart IV.3.14: FXNGP/Capital Ratio and FXNGP (% Billion USD)



Source: CBRT

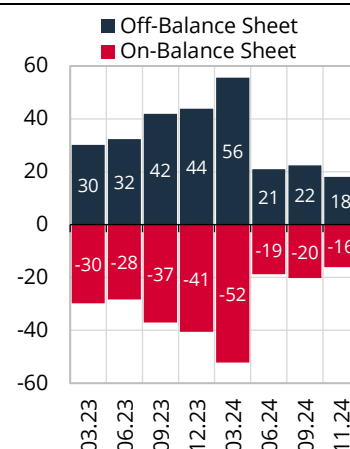
Note: Weekly simple arithmetic mean of FXNGP/Capital ratio has been calculated. Dashed lines denote the dates of the regulatory amendments enacted by the BRSA.

Chart IV.3.15: Total Asset Shares of Banks by FXNGP Ratio (%)



Note: Asset aggregates of September were used in November calculations.

Chart IV.3.16: Banking Sector's FX Position (Billion USD)



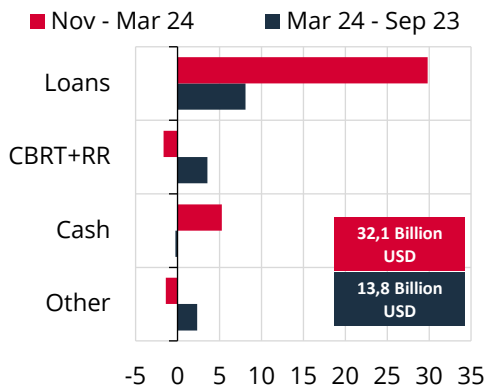
Last Observation: 08.11.24

The decline in the on-balance sheet short position was driven by the growth of FX loans.

Since the first quarter of 2024, the strong demand for FX loans has become more pronounced due to the rise in the cost of borrowing in Turkish lira and improving expectations regarding the exchange rate. In this period, FX loans on the banking balance sheet increased by USD 30 billion (Chart IV.3.17). Amid the tight monetary policy that kicked off in the second half of 2023, the country risk premium declined, leading to an improvement in external borrowing conditions. In this period, banks increased their external eurobond issuances, syndicated loan renewals and subordinated debts. Through the external debt and subordinated issues channel, FX liabilities increased by approximately USD 17 billion in the September 2023-March 2024 period and by USD 16 billion in the March 2024-November 2024 period, totaling approximately USD 33 billion. Meanwhile, depositors' switch from FX deposits to TL deposits has accelerated since the first quarter of 2024, due to the favorable effect of the tight monetary policy stance on expectations. In the September 2023-March 2024 period, FX liabilities increased by USD 8.2 billion through FX deposits, but decreased by USD 15.2 billion through the same channel from March to November (Chart IV.3.18). Due also to the changes in other items, FX assets increased by approximately USD 32.1 billion in the March 2024-November 2024 period, while FX liabilities decreased by USD 4.1 billion.

² The regulatory limit for the FXNGP/capital ratio, which was formerly 20%, was decreased to 5% with an amendment that was published in the Official Gazette of December 10, 2022, and took effect on January 9, 2023, but was raised to 10% on March 9, 2023.

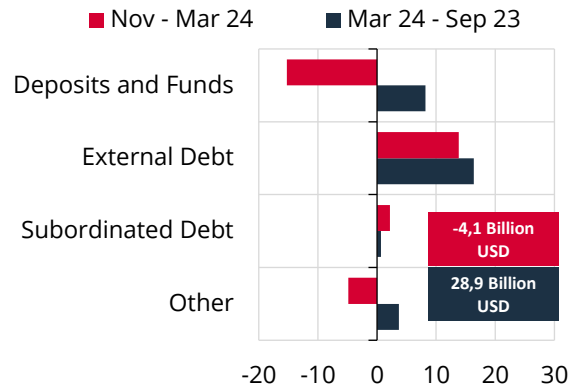
Chart IV.3.17: Change in Banking Sector's On-Balance Sheet FX Assets (Billion USD)



Source: CBRT

Note: Cash also includes receivables from domestic and foreign banks, reverse repo transactions and money markets. Loans are gross loans.

Chart IV.3.18: Change in Banking Sector's On-Balance Sheet FX Liabilities (Billion USD)



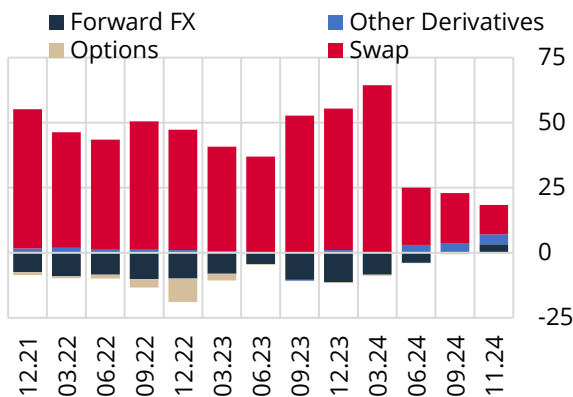
Last Observation: 08.11.24

Note: Excludes banks' deposits. External debt includes loans from abroad, securities issued and funds from repo transactions.

The decrease in the off-balance sheet long position was driven by the decline in currency swap transactions.

While banks have on-balance sheet short positions, they offset their FXNGPs with their off-balance sheet long positions. A significant portion of off-balance sheet transactions is composed of currency swaps (Chart IV.3.19). Between September 2023 and March 2024, banks made use of some of the FX liquidity they obtained through the external borrowing channel in credit expansion, while the rest was used in currency swap transactions. After March, currency swaps against TL decreased substantially due to depositors' shift from FX deposits to TL deposits and FX loan growth. Recently, excess liquidity in the system has been sterilized through the CBRT's reverse currency swap arrangements, and this led to an increase in banks' FX swaps at maturity. The uptrend in currency swap transactions with non-residents, which increased amid the inflow in the same period, limited the decline in the total currency swap position to some extent. Meanwhile, it seems that banks have recently been positioned to buy FX at maturity in their forward transactions. Against this background, banks' off-balance sheet net assets have decreased by approximately USD 37.5 billion since late March 2024 (Chart IV.3.20).

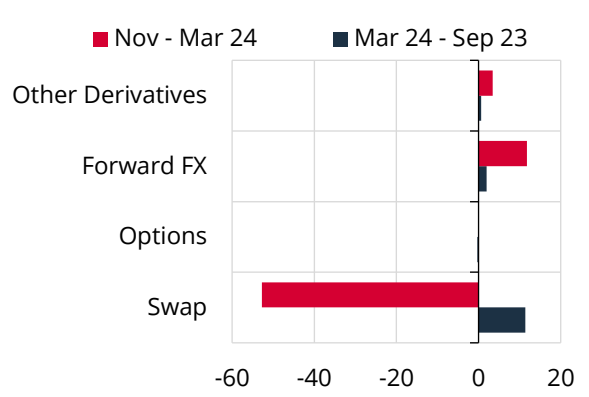
Chart IV.3.19: Banks' Off-Balance Sheet Net FX Assets (Billion USD)



Source: CBRT

Note: Shows banks' FX buying/selling positions at maturity. Currency options refer to the delta equivalent of currency options for this period. Forward FX position also includes FX position with a value date up to two days.

Chart IV.3.20: Change in Banks' Off-Balance Sheet Net FX Position (Billion USD)



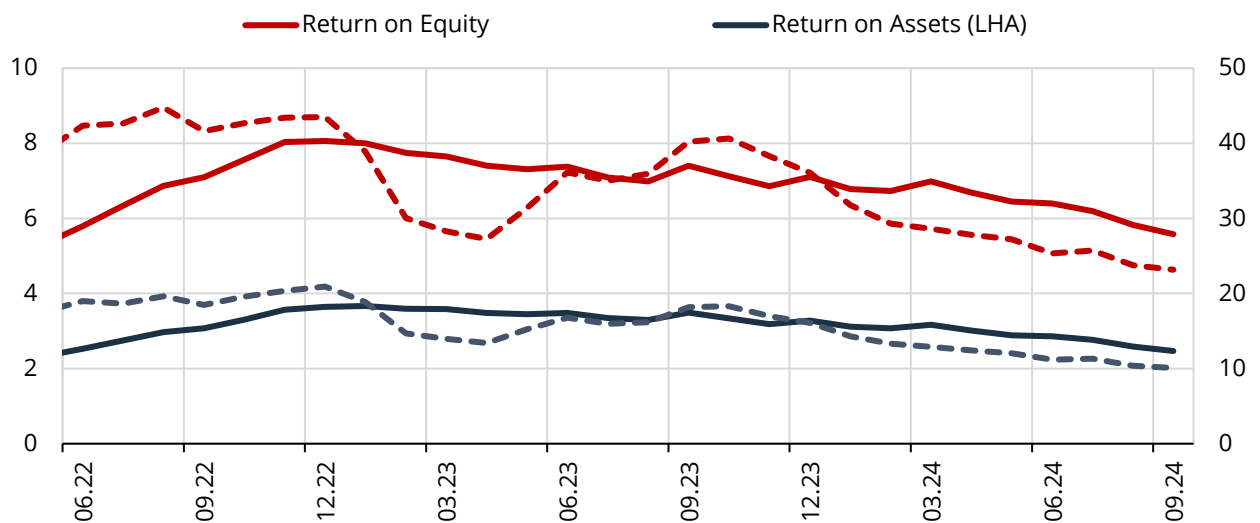
Last Observation: 08.11.24

IV.4 Profitability and Capital Adequacy

Despite a slight decline in profitability, the banking sector's internal capital generation continues, and its strong capital position is maintained.

Since the second quarter of 2024, the drop in net interest income due to the limited decline in flow TL loan rates and the relatively flat course of TL deposit rates has driven profitability performance down, while fees, commissions and banking services income, along with remuneration of required reserves, have driven the sector's profitability up. The tight monetary policy and loan growth restrictions slowed banks' income generation on the asset side, but the increase in TL deposits suppressed net interest income, leading to a continued decline in the banking sector's return on equity and return on assets. As of September 2024, the sector's return on equity and assets were 27.9% and 2.5%, respectively, while the downtrend in the annualized profitability for the last three months, which reflects recent trends, has been on a noticeable downtrend (Chart IV.4.1).

Chart IV.4.1: Return on Equity and Assets (12-Month, %)



Source: CBRT

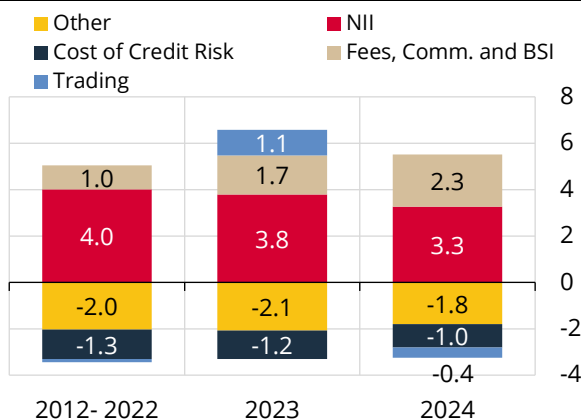
Last Observation: 09.24

Note: Dashed lines show annualized three-month rates of the relevant series.

Although the decline in net interest income was partially offset by the relatively strong fees, commissions and banking services income, the rise in other expense items in the third quarter was effective in the decline of profitability.

The sector's profitability components suggest that the partial offsetting of the significant decline in net interest income by fees, commissions and banking services income was instrumental in annualized profitability outturn. In this period, the annual decline in the cost of credit risk and other expense items had a positive impact on profitability, while the shift of trading profit from 2023's positive trend to negative in 2024 played a role in the decline of profitability (Chart IV.4.2). The sector's quarterly return on assets has been on the decline since the last quarter of 2023. In the third quarter of 2024, the contribution of net interest income to return on assets remained below the previous quarters, while the contribution of net fees, commissions and services income increased slightly. Although the trading profit/loss effect, which was negative in the first half of the year, turned to zero in the third quarter, thereby somewhat limiting the quarterly decline in profitability, the increase in other expenses and the cost of credit risk were effective in the decrease of profitability in the third quarter of 2024 (Chart IV.4.3).

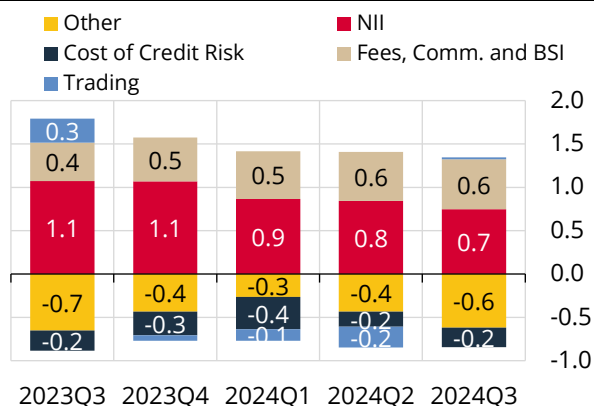
Chart IV.4.2: Components of Return on Assets
(Annualized, % Points)



Source: CBRT

Last Observation: 09.24

Chart IV.4.3: Components of Return on Assets
(3-Month, % Points)



Source: CBRT

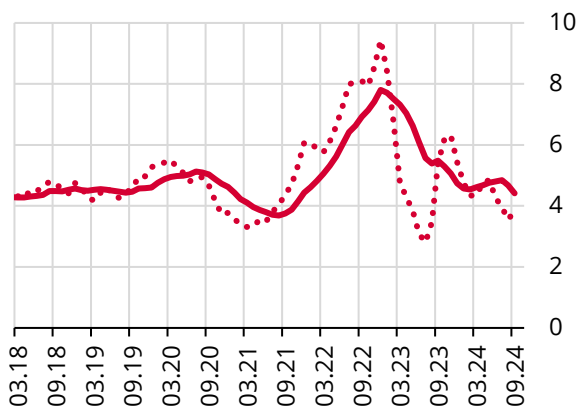
Last Observation: 09.24

Note: Profits from capital market and foreign exchange transactions are defined as trading profit. Cost of credit risk is the sum of general and specific loan provisions.

The net interest margin continues to decline due to the loan-deposit rate spread.

Having ended the first quarter of 2024 at 4.6%, the net interest margin inched down to 4.4% in the third quarter and has recently been on a relatively weak trend (Chart IV.4.4). The components of the net interest margin indicate that the loan-deposit rate spread remained in negative territory in the last two quarters (Chart IV.4.5).

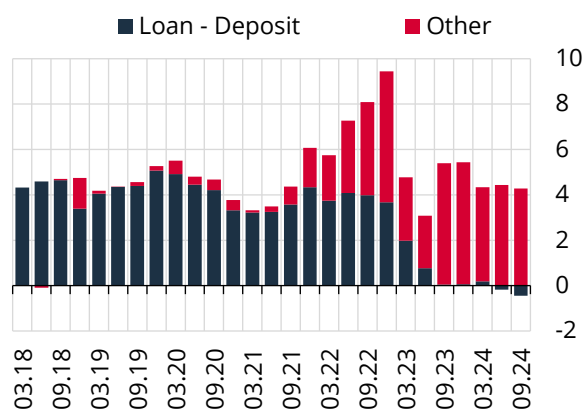
Chart IV.4.4: Net Interest Margin
(Annualized, %)



Source: CBRT

Last Observation: 09.24

Chart IV.4.5: Components of Net Interest Margin
(3-Month, Annualized, %)



Source: CBRT

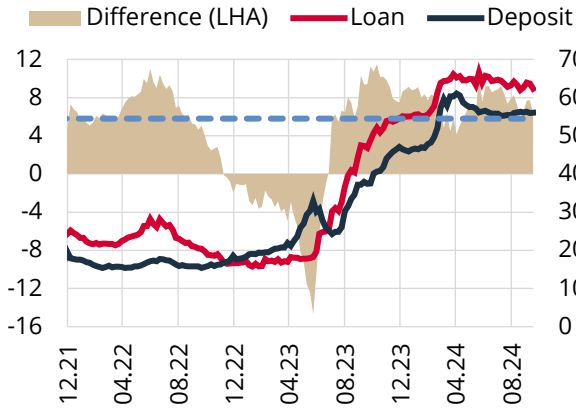
Last Observation: 09.24

Note: Change in annualized three-month net interest margin is shown in dashed line. Note: Other interest margin is the sum of securities, other income and expenses items.

Since the second half of 2023, the tight monetary stance affected loan rates, and TL loan rates increased due also to macroprudential policies, led by the implementation of reserve requirements based on loan growth. Loan rates decreased slightly in the second and third quarters of 2024. The flow data reveal that the spread between TL loan and time deposit rates moved into positive territory in the third quarter of 2023 and reached its highest level in the last quarter of the same year, before converging to the long-term average as of October 2024. Meanwhile, the spread between stock TL loan and time deposit rates, which had been negative since the end of 2022, increased as of the second quarter of 2024 and stood at minus

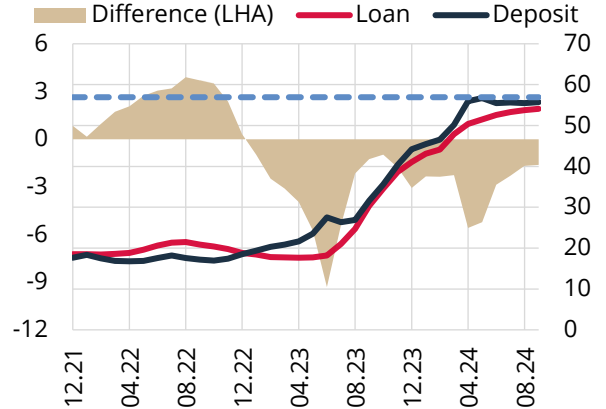
1.6% in September. The flow interest rate spread between TL loans and time deposits is slightly above its average of the 2012-2021 period (Charts IV.4.6 and IV.4.7).

Chart IV.4.6: TL Loan – Time Deposit Rate Spread (Flow, %)



Source: CBRT Last Observation: 18.10.24
Note: Dashed lines show historical averages of 2012-2021.

Chart IV.4.7: TL Loan – Time Deposit Spread (Stock, %)

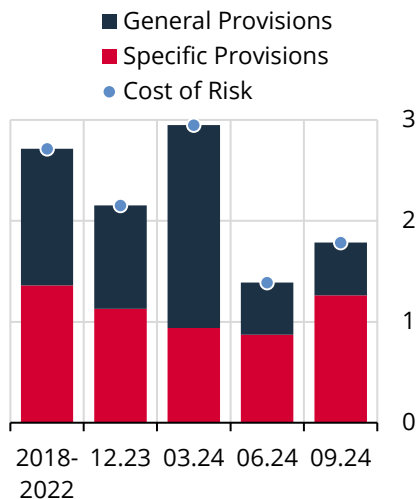


Source: CBRT Last Observation: 09.24

Banks' credit risk costs have been diminishing, while financial services incomes continue to support the sector's profitability.

Banks' credit risk cost increased slightly in the first quarter of 2024, but declined in the second and third quarters due to relatively lower general provisions (Chart IV.4.8). The ratio of net fees, commissions and banking services income to assets continued to increase in 2024 (Chart IV.4.9). Credit cards, which grew more strongly than other loans in the second half of 2023 and the first quarter of 2024, made the most significant contribution to this increase (Chart IV.4.10).

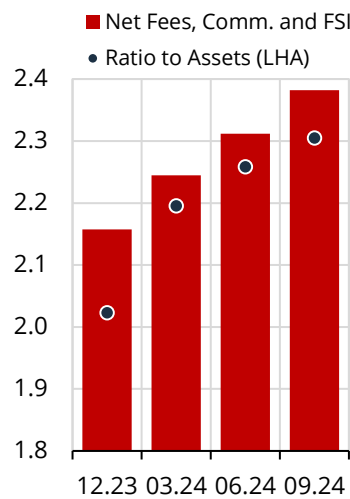
Chart IV.4.8: Cost of Credit Risk (3-Month, Annualized, %)



Source: CBRT Last Observation: 09.24

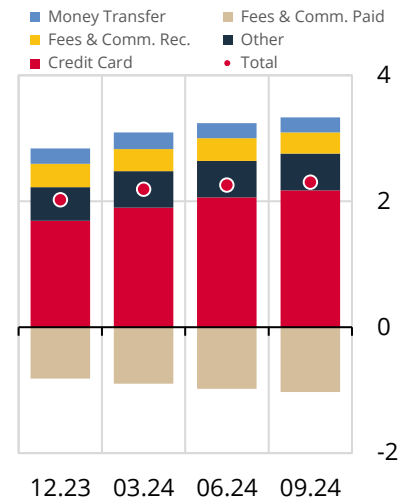
Note: The cost of risk is calculated by dividing the annualized three-month sum of specific and general provisions by the average gross loan amount for the respective period.

Chart IV.4.9: Ratio of Net Fees, Commissions and Services Income to Assets (3-Month, Annualized, TRY Billion, %)



Source: CBRT Last Observation: 09.24

Chart IV.4.10: Distribution of Ratio of Net Fees, Commissions and Services Income to Assets (3-Month, Annualized, %)



Source: CBRT Last Observation: 09.24

Capital ratios remain above regulatory thresholds and the banking sector's resilience is supported by its strong capital outlook.

Capital adequacy ratios increased compared to the previous Report period. As of September 2024, the banking sector's capital adequacy ratio (CAR) and core CAR stood at 18.2% and 14.3%, respectively. The BRSA's forbearance measures for calculation of capital ratios are still in effect¹. Excluding these forbearance measures, the sector's CAR is 16.2% and core CAR is 12.6%. Capital adequacy ratios of all banks are above the regulatory thresholds and close to their long-term average (Charts IV.4.11 and IV.4.12)².

Chart IV.4.11: Capital Adequacy Ratio (%)

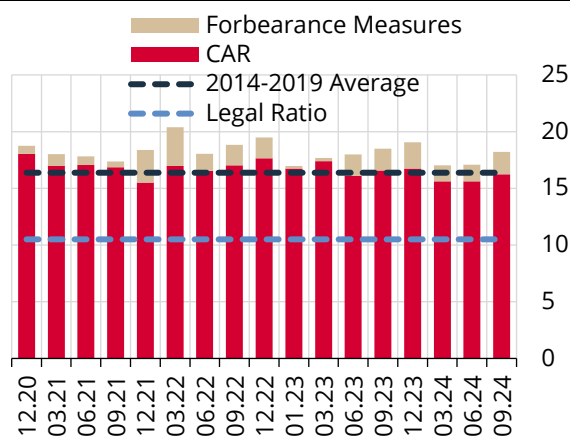
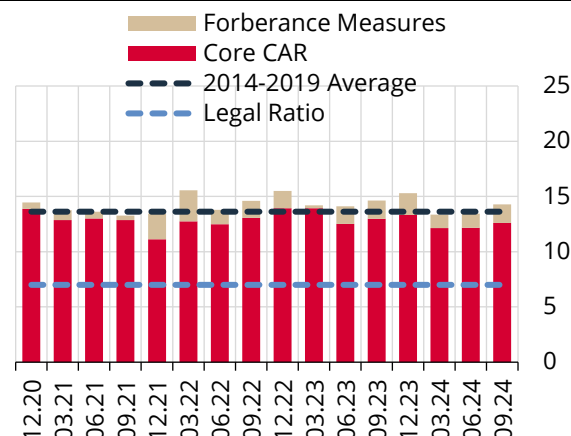


Chart IV.4.12: Core Capital Adequacy Ratio (%)



Sources: BRSA, CBRT Calculations

Last Observation: 09.24

Note: Red bars indicate CAR and core CAR excluding BRSA forbearance measures.

Retail loan risk weights, which are applied more prudently in Türkiye, have been aligned with international standards.

While 35% and 75% risk weights for housing loans and retail loans, respectively, are implemented in Basel standard for calculation of risk weighted assets for credit risk, the BRSA had increased risk weights on July 31, 2023, to 150% for retail loans other than the first-time home purchases in Türkiye. That said, in its announcement of September 2024, the BRSA changed these risk weights to 35% for all housing loan types and to 75% for general-purpose loans, vehicle loans and credit cards (Table IV.4.1). As the change in risk weights is applied to the outstanding balance, the share of items with a 75% risk weight in the distribution of risk weighted items increased (Chart IV.4.13). The return to Basel standards in retail loan risk weights drove the sector's capital adequacy ratio up by approximately 90 bps.

¹ According to the Regulation on Measurement and Assessment of Capital Adequacy Ratios of Banks, the June 2023 exchange rate can be used instead of the current rate for FX items in calculating the amount subject to credit risk. The Regulation also enabled exclusion from equity the negative net revaluation difference of securities under the portfolio of securities at fair value through other comprehensive income as of January 1, 2024.

² Legal ratios are the sum of bank-specific countercyclical capital buffer, capital conservation buffer, and systemically important bank buffer ratio in addition to the minimum ratio of 8% as per Basel III regulations. In Türkiye, the countercyclical capital buffer ratio is 0%, the capital conservation buffer is 2.5%, and the systemically important bank buffer ratios are between 1-2%. Thus, the minimum consolidated ratios that banks are required to meet for CAR vary between 10.5% and 12.5% depending on the systemic importance of the bank. On the other hand, these ratios may be slightly higher than the countercyclical capital buffer calculated according to banks' exposures in other jurisdictions.

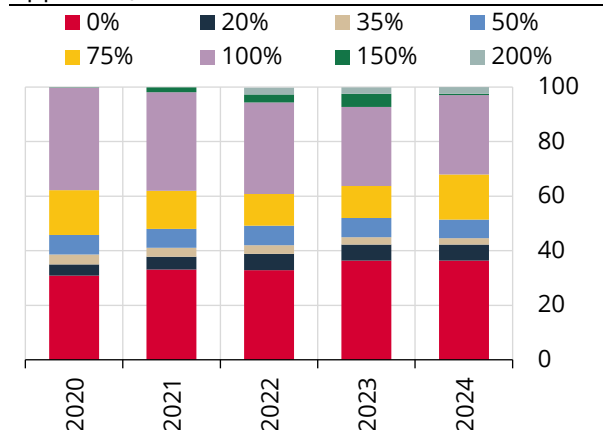
Table IV.4.1: Retail Loan Risk Weights (%)

	Basel Practice	Pre-Regulation	Post-Regulation
		Flow	Stock
Credit Cards			
1-6 month (inc.) maturity	75	150	75
> 6-month maturity	75	150	75
Vehicle Loans			
All maturities	75	150	75
General Purpose Loans			
1-12 month (inc.) maturity	75	150	75
>1-year maturity	75	150	75
Housing Loans			
First house	35	35	35
Other houses	35	150	35

Source: BRSA

Note: Post-regulation period refers to September 2024 and onwards.

Chart IV.4.13: Distribution of Risk Weighted Items for Credit Risk (% Standardized Approach)



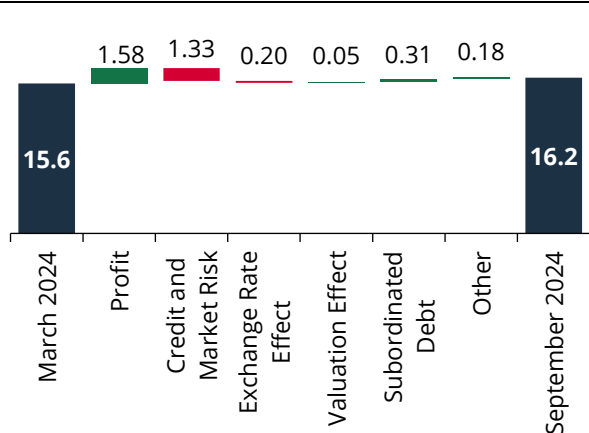
Sources: CBRT, BRSA

Last Observation: 09.24

Banks continue to support capital ratios through internal capital generation.

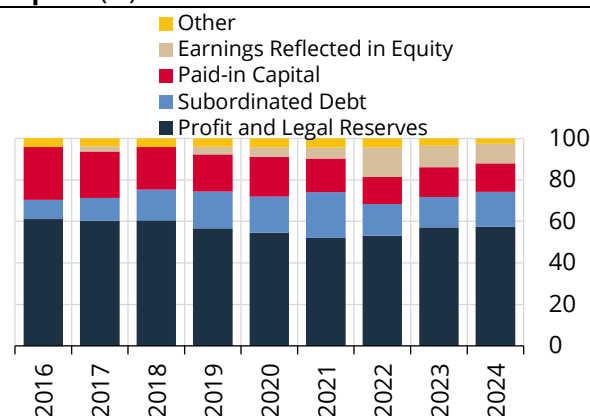
Since the last Report period, profit accumulation has remained the major factor supporting capital adequacy. New subordinated debts in 2024 also reflected positively on capital ratios. The implementation of Basel standards in retail loan risk weights curbed the negative impact of the higher risk weighted assets for credit risk on capital adequacy. Thus, the increase in regulatory capital compensated for the increase in risk-weighted assets and capital ratios rose (Chart IV.4.14). It is essential for banks to increase their capital ratios with their own resources for a well-founded and sustainable capital position. As a matter of fact, the regulatory capital of the banking sector is predominantly composed of core capital. Accordingly, approximately 78% of regulatory capital is composed of core capital, while profit and legal reserves have historically stood out with a share of more than 50% in the composition of regulatory capital. On the other hand, FX-denominated subordinated debts provide banks with a diversity of instruments as well as protection from exchange rate increases through the valuation effect. With improved financing conditions abroad and increased interest from foreign investors, banks issued additional Tier 1 and Tier 2 subordinated debt instruments in 2024. Thus, the share of subordinated debt in equity reached 16.8% (Chart IV.4.15).

Chart IV.4.14: Change in CAR (%) (Excluding BRSB Forbearance Measures)



Sources: BRSB, CBRT

Chart IV.4.15: Composition of Regulatory Capital (%)



Sources: BRSB, CBRT

Last Observation: 09.24

Note: Share premiums are included in paid-in capital. "Other" covers other equity items, with general provisions having a larger weight.

Banks continue to maintain their above-threshold capital buffers at prudent levels.

Recently, despite the nominal increase in banks' excess capital, the ratio of excess capital to risk-weighted assets has declined. This is attributed to banks' appetite for lending, exchange rate developments, the implementation of risk weights higher than international standards and more prudent provisioning. Banks' available excess capital buffer increased in September due to the reduction in retail loan risk weights (Charts IV.4.16 and IV.4.17). Excess capital increases banks' capacity to absorb unexpected risks and shocks in the short and medium term. It also helps banks finance the real economy and reduces concerns about banks' solvency during economic booms and busts. Banks' loss absorbency capacity is bolstered by discretionary free provisions amounting to TRY 52.5 billion, as well as capital buffers.

Chart IV.4.16: Banks' Excess Capital Buffer (%)

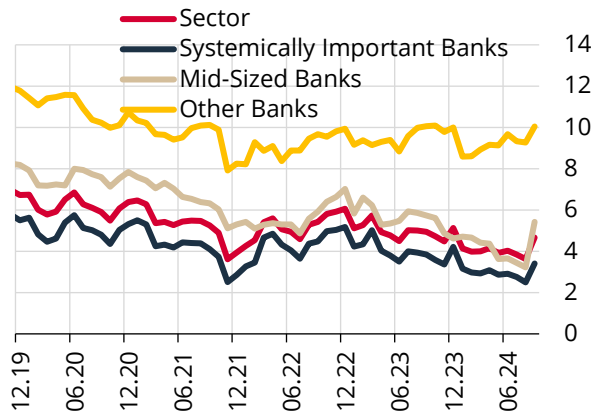
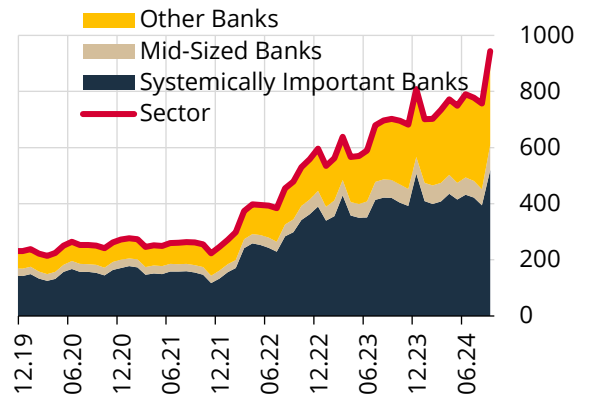


Chart IV.4.17: Banks' Nominal Excess Capital Buffer (TRY Billion)



Sources: BRSA, CBRT

Last Observation: 09.24

Note: CARs excluding BRSA forbearance measures are used. The calculation of excess capital buffers includes the systemically important bank buffer, capital conservation buffer, and bank-specific countercyclical capital buffer in addition to the 8% regulatory limit.

Abbreviations

USA	United States of America	WMA	Weekly Moving Average
OMO	Open Market Operations	MTF	Ministry of Treasury and Finance
BRSA	Banking Regulation and Supervision Agency	IIF	Institute of International Finance
NBFI	Non-Bank Financial Institutions	CCI	Construction Cost Index
IPS	Individual Pension System	IMF	International Monetary Fund
BIS	Bank for International Settlements	ICI	Istanbul Chamber of Industry
BIST	Borsa Istanbul	BTS	Business Tendency Survey
PCC	Personal Credit Card	LDR	Loan-to-Deposit Ratio
BoE	Bank of England	PDP	Public Disclosure Platform
Bps	Basis Points	HPI	House Price Index
CIF	Cost, Insurance, and Freight	KKM	FX-Protected Deposit
GDS	Government Debt Securities	ODA	Overdraft Account
DDM	FX-Converted Deposit	SME	Small and Medium-Sized Enterprises
ECB	European Central Bank	DIB	Development and Investment Banks
PMC	Pension Monitoring Center	ST	Short-Term
FAO	Food and Agriculture Organization	LIBOR	London Interbank Offered Rate
EBITDA	Earnings Before Interest, Taxes, Depreciation and Amortization	LCR	Liquidity Coverage Ratio
FED	Federal Reserve System	MKK	Central Securities Depository of Türkiye
FGKO	Financial Expenses Coverage Ratio	MUSIAD	Independent Industrialists and Businessmen's Association
FOB	Free on Board	NEO	Net Errors and Omissions
FRED	Federal Reserve Economic Data	ODD	Automotive Distributors' and Mobility Association
RA	Revenue Administration	OECD	Organisation for Economic Co-operation and Development
EMEs	Emerging Market Economies	AES	Auto Enrollment System
GDP	Gross Domestic Product	Avg.	Average
FV	Fair Value	MPC	Monetary Policy Committee
FVTOCI	Securities at fair value through other comprehensive income	PMI	Purchasing Managers' Index
FVTPL	Securities at fair value through profit or loss	PUMAX	Purchasing Managers' Index (MUSIAD)
AEs	Advanced Economies	SFR	System's Funding Requirement
MA	Moving Average		

SOFR	Secured Overnight Financing Rate
LHA	Left-Hand Axis
S&P	Standard & Poor's
CAR	Capital Adequacy Ratio
CBRT	Central Bank of the Republic of Türkiye
TFRS	Turkish Financial Reporting Standards
CTM	Committed Transactions Market
NPL	Non-Performing Loan
TRY/TL	Turkish Lira
SDIF	Savings Deposit Insurance Fund
TOKI	Housing Development Administration
TMM	Takasbank Money Market
TUBITAK	Scientific and Technological Research Council of Türkiye
CPI	Consumer Price Index
TURKSTAT	Turkish Statistical Institute
AMC	Asset Management Companies
WB	World Bank
FX	Foreign Exchange
FXNGP	Foreign Exchange Net General Position
YUVAM	Deposit and Participation Scheme for Non-Resident Turkish Citizens
RR	Reserve Requirement