

# FINANCIAL STABILITY REPORT

2023-II

November 16, 2023



CENTRAL BANK OF THE REPUBLIC OF TÜRKİYE

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This report, aimed at informing the public, is based mainly on September 2023 data. Nevertheless, the Report includes developments and evaluations up to its date of publication in Turkish. The full text is available on the CBRT website. The CBRT cannot be held accountable for any decisions taken based on the information and data provided therein.

## Foreword

We at the Central Bank of the Republic of Türkiye (CBRT) are aware that the greatest contribution we can make to social welfare is by achieving price stability, our primary objective and *raison d'être*. We continue our decisive fight against inflation through the strong monetary tightening that we initiated in June. While bolstering this process with policy measures that safeguard macro financial stability, we are simultaneously simplifying the macroprudential regulatory framework for financial system. This volume of the Financial Stability Report offers a summary of the regulations we have introduced and the policies we have implemented so far as well as their implications, and includes pertinent analyses.

Price stability is essential for achieving lasting financial stability. Maintaining financial stability, on the other hand, is paramount to establishing price stability in a way that makes the highest contribution to social welfare as well as for sustainable, high-quality and stable economic growth. Due to global and domestic developments, fighting inflation to achieve these goals is now more vital than ever. The shared awareness of this issue among all stakeholders and the decisive fight against inflation significantly contribute to building a common understanding and expectation across all segments of society. We regard this public and social consensus as the most important anchor in the CBRT's price stability and financial stability efforts.

We have started to observe the impact of the steps we have taken towards monetary tightening and simplification of the macroprudential framework as mirrored in an increase in the functionality of market mechanisms and a strengthening of the signaling role of asset prices. During this process, the fact that the share of Turkish lira deposits in the financial system has increased while that of FX-protected deposits and FX deposits has decreased strengthens not only financial stability but also monetary transmission. The ability of the banking system to fulfill its intermediation function with utmost efficiency is a prerequisite for achieving the disinflation process in line with the targets. In this context, practices that disrupt financial intermediation and adversely affect financial stability by distorting credit distribution are being removed within a predictable framework. The normalization of the flow of commercial loans, the increase in the share of export and investment loans, and the slowdown in retail loan growth are taking place concurrently, on the back of the simplification steps that the CBRT continues to take in communication and coordination with the banking system as well as the policy instruments it has introduced.

To maintain the soundness of the financial system, it is crucial that banks, as the most important intermediaries within the financial system, are able to respond and adapt appropriately to macro policy decisions and ensure uninterrupted flow of funds through proper risk management against possible external shocks.

An analysis of the financial outlook of the corporate sector, which is another important underlying condition influencing the effectiveness and success of the monetary policy, reveals that thanks to their liquid balance sheet structures, high profitability and low indebtedness ratios, corporate sector firms are capable of managing risks stemming from rising financing costs. As detailed in the Report, the banking sector, which has a resilient balance sheet structure, is managing the interest rate risk successfully during the monetary tightening process. The sector maintains a strong outlook in asset quality and conducts liability management in line with the CBRT's disinflation target. Capital adequacy ratios hover above regulatory thresholds, and banks maintain liquidity buffers above

adequate levels. The decline in the country risk premium results in an improvement in external financing conditions of banks and an increase in debt rollover ratios. To sum up, the strength of the banking system stands out as one of the most important factors supporting the effectiveness of the CBRT's monetary policy.

This volume of the Financial Stability Report covers the latest developments in financial stability, and also elaborates on the macroprudential policy framework that prioritizes the shift to Turkish lira deposits as well as on the resilience of corporate and financial sectors against possible shocks. Composed of four sections, the report presents an overview and the macroeconomic outlook in the first two sections. The third section includes assessments on the position of the non-financial sector, households and corporates with respect to financial risks. The final section offers a detailed analysis of the outlook and the risks in the financial sector.

During the process of establishing financial stability under free market conditions, and price stability, which is the primary and pivotal condition of financial stability, we have observed that all economic actors and decision-makers have the resources and measures that they will need during this transition period and there is a genuine awareness of and consensus on the common objective. Acknowledging that these are the prerequisites for our policy set to deliver the desired results, we will proceed with determination and without compromising our price and financial stability objectives. During this process, we will continue to conduct effective communication in line with our principles of transparency and accountability. I hope that the 37th issue of our Financial Stability Report, which aims to assess the current situation and present the initial impact of the price and financial stability measures we have introduced, will be of benefit to all readers.

Hafize Gaye ERKAN, Ph.D.

Governor

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## I. Overview

**Following monetary tightening as well as the supportive measures of selective credit and quantitative tightening, loan growth has begun to be rebalanced.** In response to the simplification steps taken in macroprudential policies, commercial loans have shown a steady growth, and the commercial loan composition has been improving on the back of the increase in the share of export and investment loans. The retail loan growth has markedly slowed down.

**The financial debt ratio of the corporate sector continues to decline, while the positive outlook for financial indicators of firms is maintained.** The financial leverage ratio of corporate sector firms has improved significantly thanks to the decline in financial liabilities in proportion to GDP. The publicly traded companies' profitability and debt payment performances are strong and above historical averages, which limits the risks stemming from the rise in financing costs.

**Net FX short position of corporate sector continues to fall due to the decrease in their FX cash loans.** While FX indebtedness continues to fall, the number of firms with FX debt is also declining. Firms have strong balance sheets that can cover their short-term FX liabilities thanks to their abundant FX liquidity. Despite tight global financial conditions, companies' financing from abroad has been increasing and the external debt rollover ratio remains robust.

**Household indebtedness is quite low in Türkiye compared to peer countries.** Indicators such as per capita debt and debt-to-income ratio continue to decrease. Weakening retail loan growth stemming from rising interest rates and the tightening in macroprudential regulations has contributed to the sustainability of lower level of household indebtedness.

**The resilient outlook of banking sector's asset quality has been preserved.** The NPL ratio continued to fall until late June and flattened due to the slowdown in credit growth after the monetary policy tightening process. The NPL ratio remained below historical averages across all credit segments. The closely-monitored (Stage 2) loan ratio of companies continued to improve, while that of retail loans increased slightly. A significant portion of Stage 2 loans are not due. Out of prudence, banks have sustained their high provisioning policy.

**After the simplifications steps taken in macroprudential policies, the decline in the KKM balance has accelerated, while the increased TL liquidity in the system has been sterilized through required reserves.** Despite the tightening in global financial conditions and heightened geopolitical risks, the significant improvement in the country risk premium is having a positive impact on banks' external funding opportunities. The syndicated loan renewals undertaken during the last quarter of this year were at high levels, whilst Eurobond issuances are also reviving.

**The downward trend in the banking sector's profitability has been halted thanks to the rebound in net interest margin during the third quarter of this year.** In the aftermath of simplification steps taken in macroprudential regulations, net interest margin has improved. Although the asset quality-related risks against profitability performance remained present, fees and commissions income as well as income from capital markets and foreign exchange transactions has supported profitability.

**Capital ratios remain above regulatory thresholds.** The banking sector's strong capital position is capable of absorbing unexpected losses. In addition to capital buffers, free provisions held by banks ensure that banks are better prepared against potential risks. Moreover, prudently determined credit risk weights stand as an additional buffer against unexpected losses.

**Banks have a strong balance sheet structure to manage interest rate and maturity risk.** The sector's TL loan-deposit interest rate spread has shifted to the positive territory following the simplification in regulations. This development has contributed positively to banks' interest rate risk management. Although the FX net general position to capital ratio is within the legal limits, the number of banks carrying a long FX position has increased across the sector.

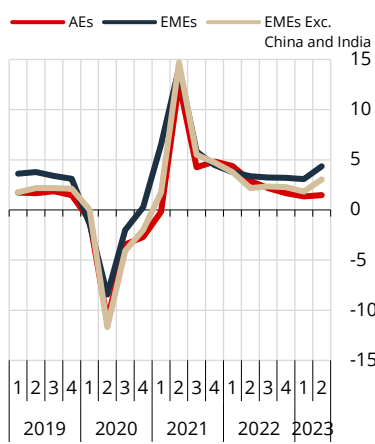
## II. Macroeconomic Outlook

### II.1 International Developments

**The increase in bond yields following the monetary policy actions of advanced economies, and the volatility in oil prices have been the main factors affecting global liquidity and economic activity.**

The global growth outlook remains flat (Chart II.1.1). The expectation that the monetary policies of major central banks will remain tight for a protracted period has tightened financial conditions, and thus has a downward impact on growth in advanced economies. Manufacturing PMI values in the US and the euro area indicate that the stagnant course in economic activity persists (Chart II.1.2). On the other hand, the manufacturing PMI values in EMEs have surpassed the reference value of 50 indicating growth, and economic activity has started to recover. Indicators for the euro area, one of Türkiye's major trading partners, imply that the slowdown in economic activity will continue in the second half of the year (Chart II.1.3).

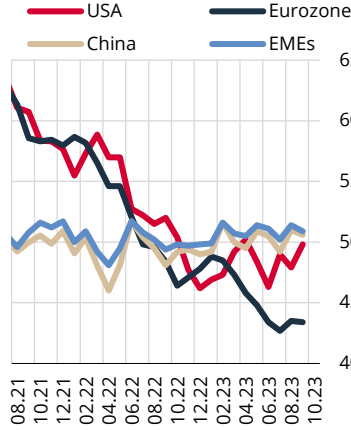
**Chart II.1.1: Countries' Growth Rates (Annual, %)**



Source: Bloomberg

Last Observation: 2023Q2

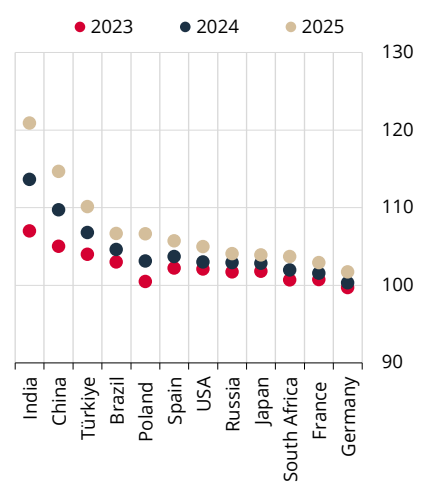
**Chart II.1.2: Manufacturing PMI (Index)**



Source: Bloomberg

Last Observation: 10.23

**Chart II.1.3: Real GDP and Projections (Annual, 2022=100)**



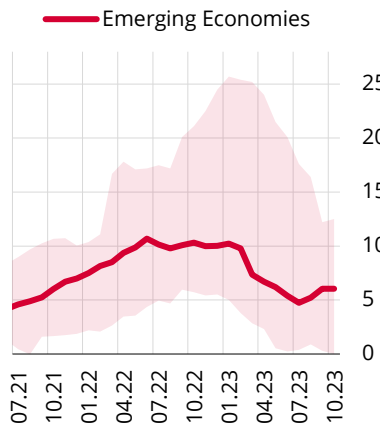
Source: Bloomberg

Last Observation: 2023Q3

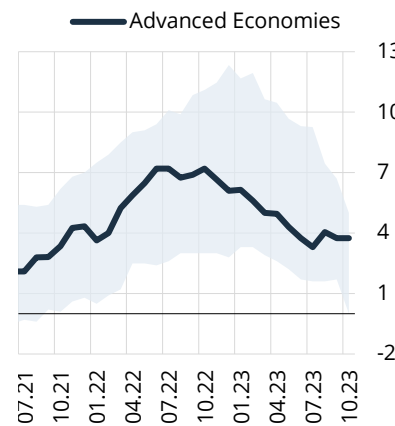
Note: AEs include the USA, the euro area, Japan, the United Kingdom, Canada, Korea, Switzerland, Sweden, Norway, Denmark, and Israel, while EMEs include China, Brazil, India, Mexico, Russia, Türkiye, Poland, Indonesia, South Africa, Argentina, Thailand, Malaysia, Czechia, Colombia, Hungary, Romania, 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 declining trend in the inflation rates of advanced and emerging economies in the first half of the year was replaced by a flat course in the rest of the year.**

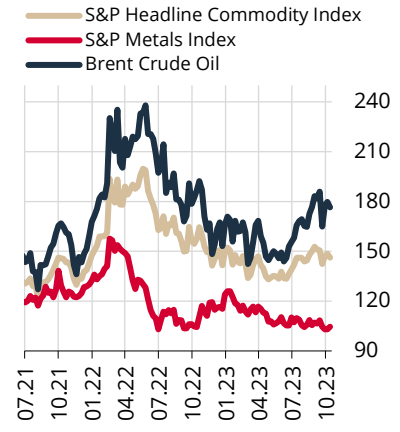
Global inflation still hovers above long-term averages and monetary policy targets (Charts II.1.4 and II.1.5). Inflation levels have been significantly above the target of 2% in advanced economies and the average target level of 3.5% in emerging economies. The recent hikes in commodity prices, particularly in energy led by oil prices, have marked as a risk factor in global inflation realizations (Chart II.1.6).

**Chart II.1.4: Global Inflation- Emerging Economies (%)**


Source: Bloomberg Last Observation: 10.23

**Chart II.1.5: Global Inflation- Advanced Economies (%)**


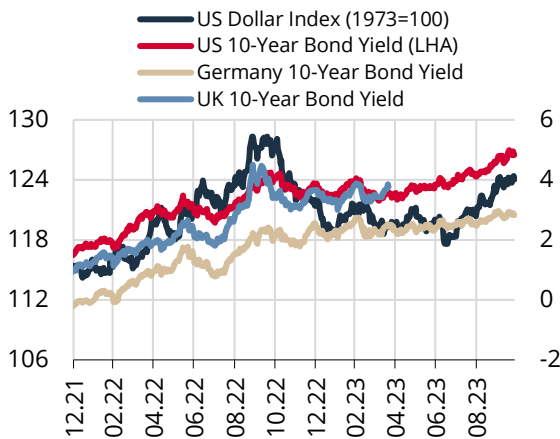
Source: Bloomberg Last Observation: 10.23

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


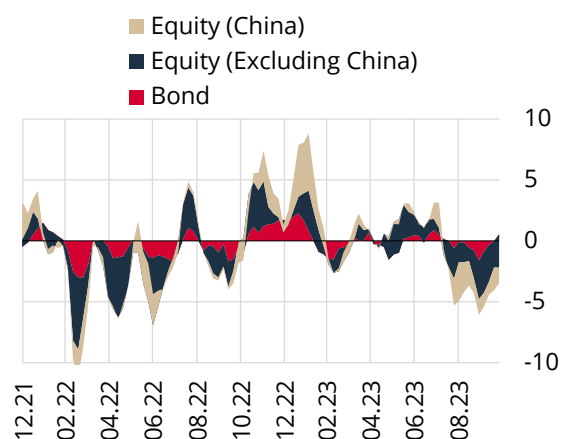
Source: Bloomberg Last Observation: 27.10.23

**While the US dollar index resumed its upward trend, long-term bond yields in advanced economies also increased amid tightening monetary policy steps.**

The US dollar index, which started to decline in the previous reporting period after climbing to its highest value since 2001, picked up again in this period (Chart II.1.7). On the other hand, bond yields in advanced economies posted a slight uptick following the policy actions of central banks (Chart II.1.7). Declining global risk appetite amid rising geopolitical risks led to fund outflows from EMEs (Chart II.1.8).

**Chart II.1.7: US Dollar Index and 10-Year Bond Yields in Advanced Economies (Index, %)**


Source: FRED Last Observation: 28.10.23

**Chart II.1.8: Weekly Portfolio Flows to EMEs (4-Week Moving Average, Billion USD)**


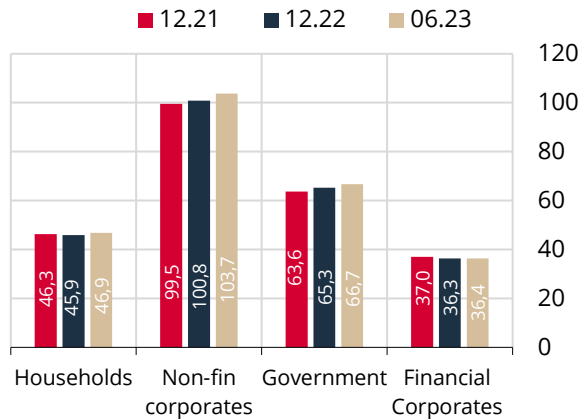
Source: IIF Last Observation: 28.10.23

**While indebtedness ratios in emerging economies increased across all sectors, changes in indebtedness ratios in advanced economies displayed sectoral differences.**

In advanced economies, the financial indebtedness ratio of the public sector posted an upward trend in the first half of the year after displaying a notable decline the previous year. Meanwhile, the discrepancy in the composition of the financial indebtedness ratios of AEs and EMEs was maintained in this period as well. Accordingly, compared to 2022, corporate sector firms continued to stand out as the main borrowers from financial markets and institutions in EMEs, and the indebtedness ratio of the financial sector, in particular, was considerably lower than in AEs. On the other hand, it is noteworthy that in AEs, the public and financial sectors are the most indebted (Charts II.1.9 and II.1.10). The financial indebtedness ratios of households and the corporate sector continued to decline in AEs.

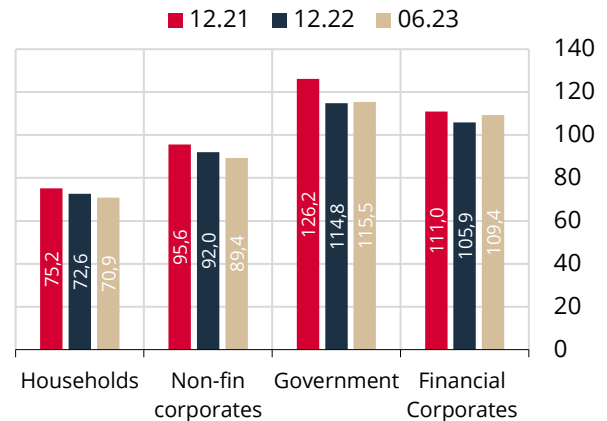


**Chart II.1.9: Financial Indebtedness Levels in EMEs (Debt/GDP, %)**



Source: IIF Last Observation: 2023Q2

**Chart II.1.10: Financial Indebtedness Levels in AEs (Debt/GDP, %)**

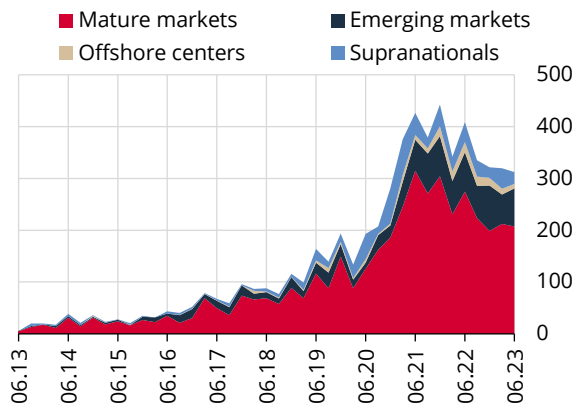


Source: IIF Last Observation: 2023Q2

**Sustainability-themed borrowing, which had soared in the post-pandemic period led by advanced economies, first declined and then flattened in 2023.**

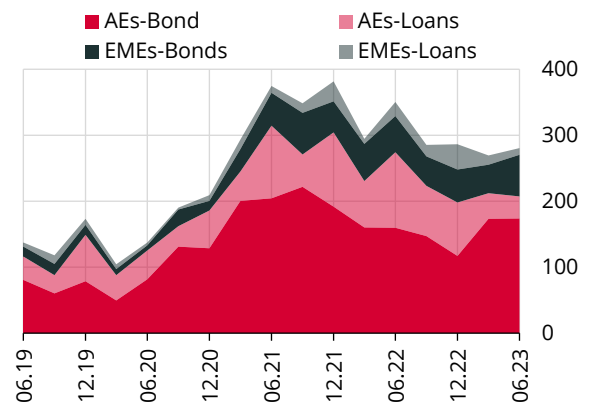
Sustainability-themed borrowing activities have remained flat since the previous reporting period (Chart II.1.11). Rising financing costs as a result of tightening monetary policy actions and the energy problems for Europe caused by the Russia-Ukraine conflict are believed to have played a role in this development. While the bond market has further increased its weight in sustainability-themed borrowing facilities in emerging and advanced economies, the share of sustainability-themed bank loans continues to decline (Chart II.1.12).

**Chart II.1.11: Environmental, Social, and Governance-Themed Borrowing (Billion USD)**



Source: IIF Last Observation: 2023Q2

**Chart II.1.12: Breakdown of Bond Issues and Bank Loans for Environmental, Social, and Governance Purposes (Billion USD)**



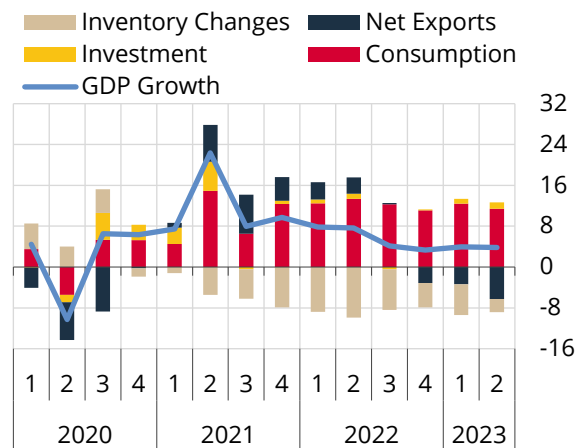
Source: IIF Last Observation: 2023Q2

## II.2 Main Domestic Macroeconomic Developments

### Economic activity remained brisk in the first half of 2023 on the back of strong domestic demand.

In the second quarter of 2023, GDP grew annually by 3.8% and quarterly by 3.5% in seasonally and calendar-adjusted terms. While machinery and equipment investments continued to contribute positively to growth in this quarter, the main driver of growth in terms of expenditures was final domestic demand stemming from private consumption (Chart II.2.1). The industrial production index showed high annual growth rates in the third quarter. The leading indicators suggest a continued buoyancy in the services sector and a quarterly slowdown in the industrial sector (Chart II.2.2).

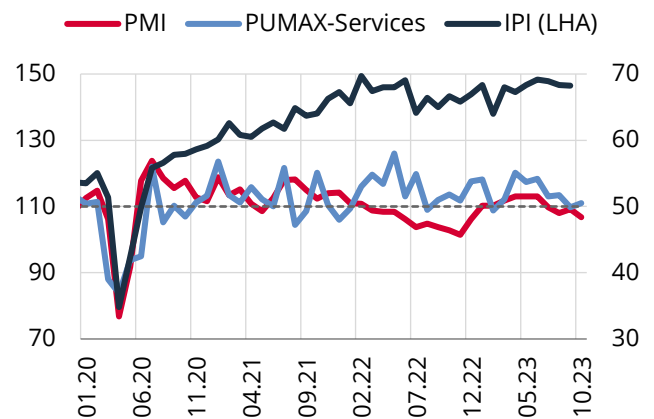
**Chart II.2.1: Annual GDP Growth and Contribution of Expenditures (% Points)**



Source: TURKSTAT

Last Observation: 2023Q2

**Chart II.2.2: Selected Leading Indicators of Economic Activity (Index)**



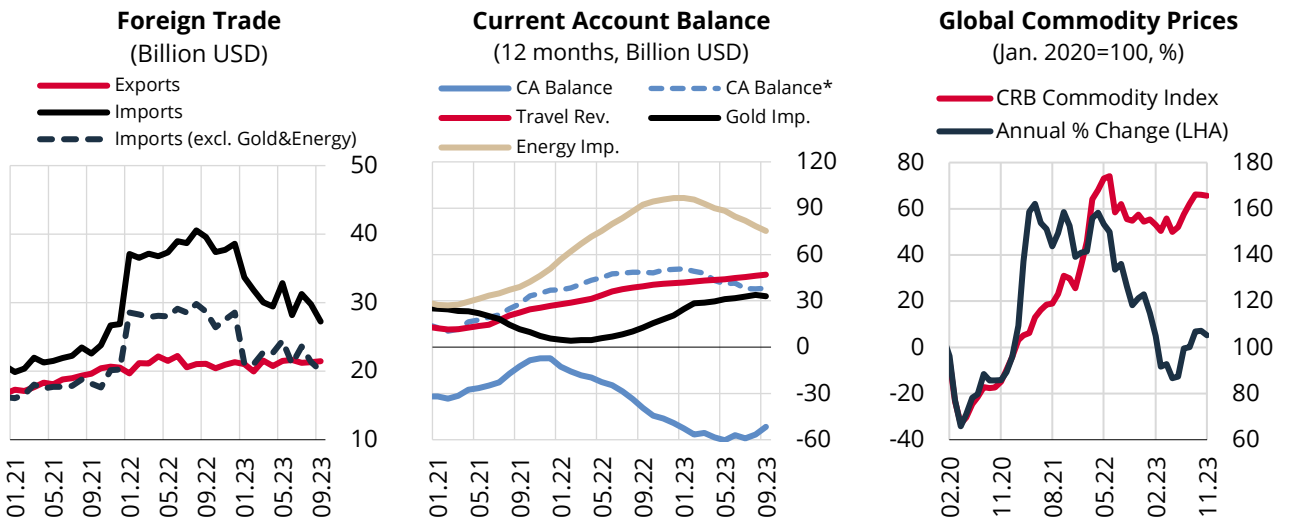
Sources: TURKSTAT, ICI, MUSIAD Last Observation: 10.23 (IPI 09.23)

Note: The Industrial Production Index (IPI, 2015=100) and the Services Sector Purchasing Managers' Index (PUMAX-Services) are adjusted for seasonal and calendar effects. The dashed line shows the stable state compared to the previous month in the Manufacturing Industry Purchasing Managers' Index (PMI) and PUMAX.

### The annualized current account deficit is narrowing on the back of the declining foreign trade deficit amid the strong course of services revenues and the decrease in energy imports.

Imports have lost momentum in the recent period amid a slight decline in energy imports. Tourism continued its positive contribution to the current account, while imports excluding gold and energy contributed to the decrease in the annualized current account deficit. The annual current account excluding energy and gold maintained its positive outlook by posting a surplus of 38 billion USD as of September (Chart II.2.3). In the upcoming period, global commodity prices, recently on an upward trend amid rising geopolitical risks, and weak external demand will be the potential risk factors to the current account deficit.

**Chart II.2.3: Current Account Developments**



Sources: CBRT, TURKSTAT, Ministry of Trade, Refinitiv

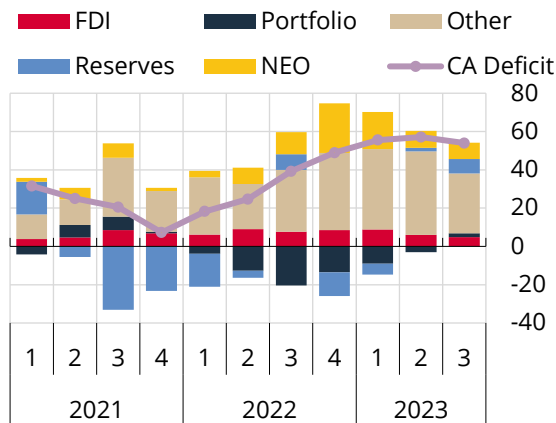
Last Observation: 09.23 (Commodity prices 07.11.2023)

Note: For foreign trade, seasonally/calendar adjusted monthly exports (fob) and imports (cif) data according to the general trade system have been used. (\*) refers to the current account balance excluding energy and gold. The Commodity Index (Refinitiv/CoreCommodity CRB Index) shows the arithmetic average of futures prices of 19 commodities, such as crude oil, gold, copper, livestock, and sugar.

**The current account deficit was predominantly financed by domestic deposits of non-residents and loans provided by banks.**

The 12-month current account deficit-induced financing requirement amounted to 51.7 billion USD as of September, albeit with a slight drop in recent months. In addition to direct investments, and the net errors and omissions item, portfolio investments positively contributed to the current account deficit financing for the first time in seven quarters (Chart II.2.4). Banks have substantially rolled over their external debt in recent months and their 12-month debt rollover ratio is above 100% as of September (Chart II.2.5). The non-bank sector external debt rollover ratio, albeit declining slightly, is 107%. The contribution of the non-bank private sector to the financing of the annualized current account deficit has continued in the current reporting period.

**Chart II.2.4: Financing of Current Account Deficit (12-Month Cumulative, Billion USD)**

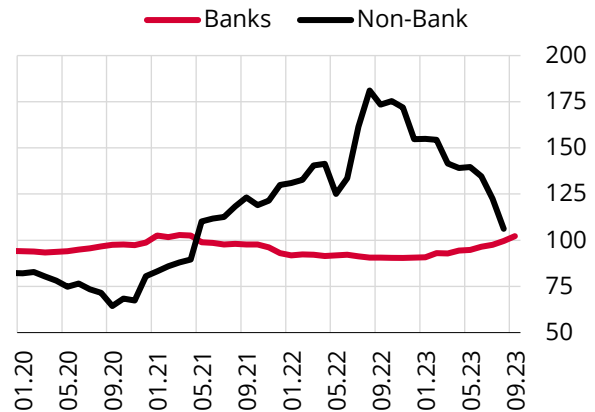


Source: CBRT

Last Observation: 09.23

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

**Chart II.2.5: External Debt Rollover Ratio (12-Month, %)**



Source: CBRT

Last Observation: 09.23

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

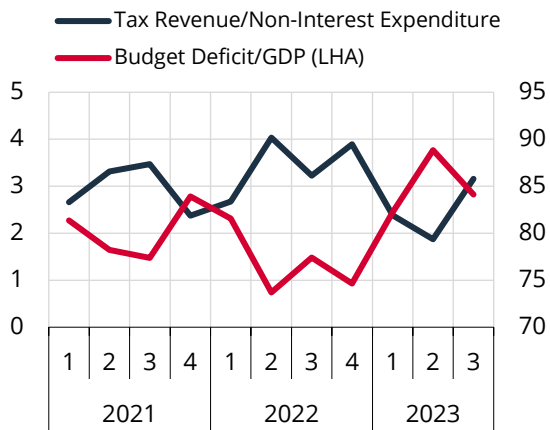
**Despite the negative impact of earthquake-related expenditures and wage growth on the budget balance, recent measures to increase budget revenues have limited this impact on public finance.**

Impacts of the earthquake disaster and wage growth on public finance became pronounced and the ratio of budget deficit to GDP rose to 3.8% in the second quarter of 2023. This rise was driven by personnel expenditures and current transfers, with limited impact from other items. However, the significant increase in tax revenues due to tax adjustments resulted in a budget surplus in June and July, triggering a decrease to 2.8% in the ratio of budget deficit to GDP in the third quarter (Chart II.2.6).

**The inflation rate rose sharply in the third quarter of 2023 due to the impact of exchange rate developments and tax adjustments.**

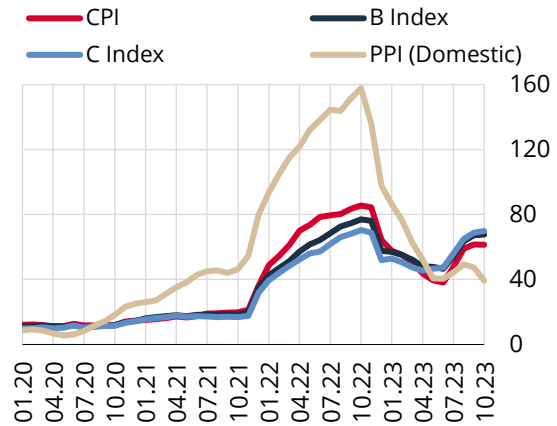
The overlapping shocks of the hikes in the exchange rate, wages, taxes and fuel prices had a significant impact on the rise in inflation. Pricing behavior notably deteriorated in July and August, whereas the underlying trend of inflation eased back from its high levels in the ensuing months (Chart II.2.7). In October, consumer price inflation (CPI) stood at 3.43% on a monthly basis and 61.4% on an annual basis. While clothing and footwear expenditures posted the highest increase in monthly inflation with 13.7%, restaurants and hotels had the highest increase in annual inflation with 94.1%.

**Chart II.2.6: Central Government Budget Indicators (12-Month Cumulative, %)**



Sources: CBRT, MTF Last Observation: 09.23  
 Note: Estimated value for 2023Q3 GDP.

**Chart II.2.7: Inflation Developments (Annual % Change)**



Sources: CBRT, TURKSTAT Last Observation: 10.23  
 Note: The B index is obtained by subtracting unprocessed food products, energy, alcoholic beverages, tobacco and gold items from the CPI, and the C index is obtained by subtracting food and non-alcoholic beverages from the B index.

## Box II.2.I: The New Macroprudential Policy Framework Prioritizing TL Deposits

Following the Monetary Policy Committee's decision on 22 June 2023, it has been emphasized on many platforms that the micro and macroprudential framework will be simplified in a gradual manner based on impact analyses. The simplification policy aims to increase the functionality of market mechanisms and strengthen macrofinancial stability. The most important element of the simplification process is the prioritization of Turkish lira deposit accounts. This box explains objectives and effects of the recently implemented regulations prioritizing Turkish lira deposits.

### Diagram II.2.I.1: Targets of the Macroprudential Policy Framework



After the June 2023 MPC meeting, it was decided that the micro- and macroprudential framework would be strengthened to support financial stability and simplified to enhance the functionality of the market mechanism. In order to minimize the adverse effects of the transition process, it was decided that the simplification policy would be gradual and the pace and sequence of the transformation would be determined based on impact analyses.

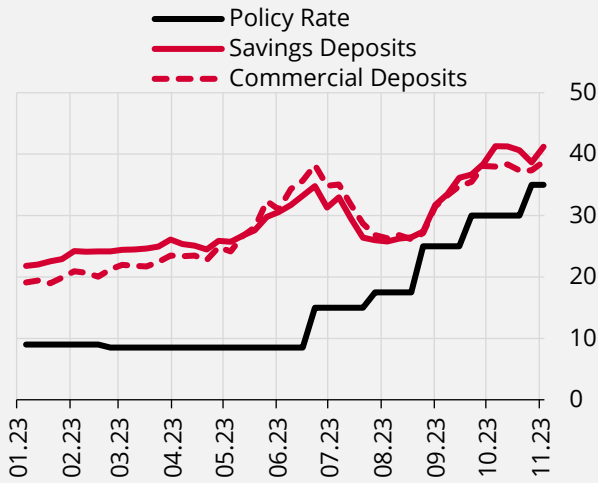
The simplified macroprudential framework aims to reduce FX deposits and FX-protected deposit accounts (KKM) and achieve gradual conversion to TL accounts. The CBRT's redefined target for TL share basically stipulates increasing the ratio of Turkish lira deposit accounts to total deposits by at least a certain ratio within a given period. In the framework of the new regulation, the KKM amount is no longer included in the TL deposit amount in the calculations.

In order to achieve these targets, conversion targets were defined for conversion to TL time deposit/participation funds, accordingly, a conversion target of 50% was defined for those accounts that were previously provided with an exchange rate protection support by the Ministry of Treasury and Finance and 10% for those accounts that were provided with an exchange rate/price protection support by the Central Bank (conversion accounts). There are also renewal targets for maturing conversion accounts.

In the last week of October, the securities maintenance regulation for TL share and renewal and transition of conversion accounts to TL was abolished and it was decided that these targets would be set within the framework of the commissions on reserve requirements for FX deposits/participation funds. With the transition from securities maintenance to commissions regulation and in line with the objective of enhancing the functionality of the market mechanism, pricing in the yield curve is expected to take place in a healthy manner under market conditions and to fully reflect the expectations of market participants.

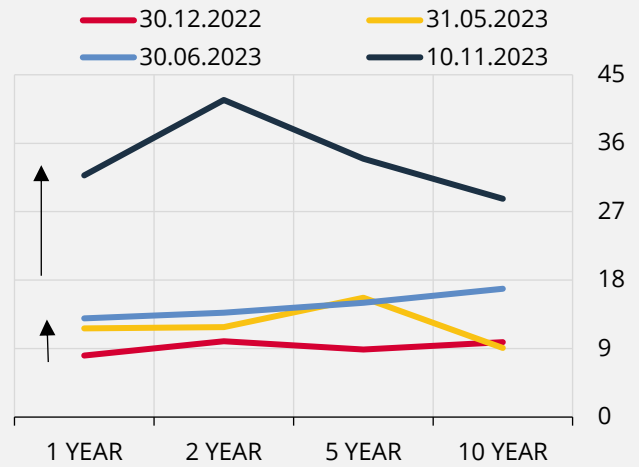
In response to the tightening steps in monetary policy and simplified macroprudential framework prioritizing TL deposits, TL deposit rates began to move on a path consistent with the policy rates (Chart II.2.I.1). Similarly, as a result of these steps, pricing on the government securities yield curve started to normalize in line with market conditions. At the short end of the yield curve, interest rates rose to levels consistent with the policy rate and the transmission channel strengthened (Chart II.2.I.2). Meanwhile, longer-term interest rates moved below short-term rates, reflecting the improvement in inflation expectations.

**Chart II.2.I.1: TL Deposit Rates (%)**



Source: CBRT Last Observation: 03.11.2023  
 Note: Participation banks are not included.

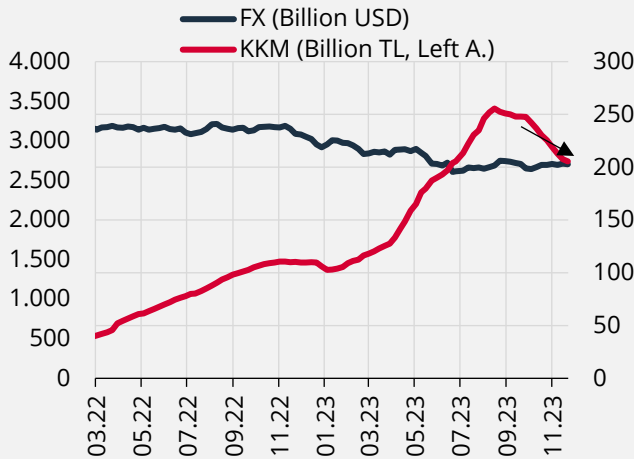
**Chart II.2.I.2: TL Government Domestic Debt Securities Yield Curve (%)**



Source: Bloomberg Last Observation: 10.11.2023

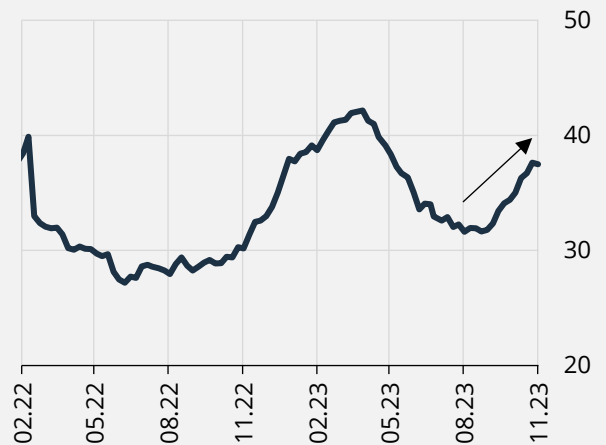
As a result of the new policy framework that encouraged conversion from the KKM accounts to TL deposit accounts and the rise in interest rates, the total KKM balance took up a rapid downtrend (Chart II.2.I.3). The decrease in the KKM balance was directly replaced by the increase in TL deposits and there was no shift towards FX deposits. The share of TL deposits in total deposits assumed an uptrend due to TL deposits, which are not affected by exchange rate/price developments and strengthen the core funding structure of the banking system (Chart II.2.I.4). Thus, the steps taken in the simplification process contribute positively to banks' balance sheets as well as to the transmission channel.

**Chart II.2.I.3: Amounts of KKM and FX Deposits (Billion TL, Billion USD)**



Source: BRSA Last Observation: 03.11.2023

**Chart II.2.I.4: TL Deposits/ Total Deposits Development (%)**



Source: BRSA Last Observation: 03.11.2023

With the new regulatory structure, it is envisaged that the transition to the Turkish lira will further strengthen, FX deposit accounts will not increase, the decrease in KKM accounts will be in a gradual and healthy manner, and the shape of the yield curve will continue to normalize. The results of the steps regarding the simplification process, which was implemented with a holistic approach based on impact analyses, are closely monitored.

## Box II.2.II: 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.II.1: Major Measures and Regulations for Financial Markets**

### 1. Policy Rate and the CBRT's Liquidity Management

Effective Date	Measure / Regulation
22.06.2023	The one-week repo auction rate was raised from 8.5% to 15%.
20.07.2023	The one-week repo auction rate was raised from 15% to 17.5%.
24.08.2023	The one-week repo auction rate was raised from 17.5% to 25%.
21.09.2023	The one-week repo auction rate was raised from 25% to 30%.
26.10.2023	The one-week repo auction rate was raised from 30% to 35%.

### 2. Reserve Requirements and Securities Maintenance

Effective Date	Measure / Regulation
23.06.2023	The facility of maintaining gold-denominated required reserves for TL liabilities was terminated.
25.06.2023	The securities maintenance ratio was reduced from 10% to 5%. The lower limit was reduced from 60% to 57% in the practice of maintaining additional or reduced securities based on the share of TL deposits/participation funds, including FX-protected deposits (KKM) as TL deposits, in total deposits/participation funds (TL share including KKM). The provisional practice regarding the change of FX deposits/participation funds and funds from repo transactions in consideration of FX loans was terminated. Provisional practices of maintaining securities based on the conversion ratio and additional conversion ratio for real persons were simplified.
08.07.2023	The target of 60% for charging commission on maintaining additional FX required reserves based on the KKM-included TL share, and on required reserves maintained for FX deposits/participation funds was changed to 57%.
21.07.2023	KKM accounts were subjected to a reserve requirement of 15%.
29.07.2023	The monthly growth limit of 3% for TL commercial loans under the practice of securities maintenance based on loan growth was set at 2.5% excluding export, investment, agriculture and tradesmen loans <sup>1</sup> . The growth limit of 3% for vehicle loans was set at 2%. Under the securities maintenance based on interest rate/profit rate, the first tier for TL commercial loans excluding export and investment loans and general-purpose loans was removed and the interest rate cap was applied as a single tier.
20.08.2023	The reserve requirement ratio for FX-denominated demand deposits and deposits/participation funds with maturities up to one month was raised from 25% to 29%. The practice of maintaining additional FX required reserves based on the KKM-included TL share was terminated. The practice of maintaining additional/reduced securities based on the KKM-included TL share was terminated. The practice of maintaining securities based on the conversion rate was terminated.
26.08.2023	It was decided to apply securities maintenance based on the ratios of transition from maturing KKM accounts to standard TL accounts and the renewal ratios of KKM accounts converted from FX/gold (conversion KKM accounts). Accordingly, securities would be maintained in blocked accounts in an amount equal to, - the shortfall amount if the ratio of transition from TL deposits-converted KKM accounts to TL time deposits/participation accounts remained below 50%, - the shortfall amount if the ratio of transition from conversion KKM accounts of real persons to TL time deposits/participation accounts remained below 10%, - the shortfall amount if the renewal ratio of conversion KKM accounts remained below 75%, and

<sup>1</sup> With an amendment on 28.08.2023, the scope of exemptions was expanded to include public institutions and organizations.

	<p>- the shortfall amount if the renewal ratio of conversion KKM accounts and the ratio of transition to TL deposits for such accounts remained below 95%.</p> <p>Additionally, with the enforcement of TL share (TL share excluding KKM), which does not consider KKM accounts as TL deposits, it was regulated that if the TL share for real persons remains below the increase of 2 percentage points, and for legal entities, below the share calculated as of 18.08.2023, securities equal to the shortfall amount would be maintained in blocked accounts.</p>
26.08.2023	The practice of securities maintenance based on loan interest rate/profit rate share was simplified to be applied in a single tier instead of two tiers.
14.09.2023	<p>The TL reserve requirement ratio of 15% applied to KKM accounts was differentiated by maturity and set at:</p> <ul style="list-style-type: none"> <li>- 25% for accounts with maturities up to six months (including the sixth month), and</li> <li>- 5% for accounts with maturities up to one year, and those with maturities of one year or longer.</li> </ul>
18.09.2023	<p>The monthly target rise for the real person TL share under the securities maintenance practice based on KKM-excluded TL share was raised from 2 percentage points to 2.5 percentage points.</p> <p>The commission of 8% per annum differentiated according to the KKM-included TL share was terminated and replaced by a commission of 8% per annum in USD, differentiated according to the transition from conversion KKM accounts to TL accounts and renewal ratios.</p>
18.09.2023	Under the securities maintenance practice, the limit of TL 50,000 required for lending against expenditure in export, investment and SME loans was raised to TL 250,000.
05.10.2023	The definition of being a net exporter in the context of the securities maintenance practice was amended to exclude expenditures on investment goods from the calculation of net exports.
27.10.2023	<p>The practice of maintaining securities in transitions from conversion KKM accounts of real persons to TL time deposit accounts was terminated.</p> <p>The practice of maintaining securities based on renewal ratios of conversion KKM accounts was ended.</p> <p>The securities maintenance based on the KKM-excluded TL share was terminated.</p>
27.10.2023	<p>The securities maintenance practice applied to banks at a rate of 30% based on the TL-denominated cash loans extended by banks, and the practice of lending-against-expenditure were terminated.</p> <p>The securities maintenance practice applied at a rate of 30% on securities issued by the real sector and purchased by banks was terminated.</p> <p>The securities maintenance practice that banks are subject to for TL commercial loans excluding export and investment loans based on the interest rate/profit rate that banks apply above 1.8 times the reference rate, and the securities maintenance practice that factoring companies are subject to for factoring receivables based on the interest rate that these companies apply above 2.7 times the reference rate were abolished.</p>
30.10.2023	The commission of 8%, differentiated based on the renewal of conversion KKM accounts and the target of conversion to TL, was revised to 3%, to vary according to the KKM-excluded TL share. As part of charging commissions based on the KKM-excluded TL share, the monthly target rise for the share of real persons' TL deposits was raised from 2.5% to 3.5%.
02.11.2023	<p>Reserve requirement ratios for KKM accounts were raised by 500 basis points across all maturities.</p> <p>Reserve requirement ratios for FX deposits/participation fund accounts were increased by 100 basis points across all maturities.</p> <p>FX deposits/participation fund accounts were entitled to an additional reserve requirement of 400 basis points, to be maintained in TL.</p> <p>The reserve requirement of 20% on TL cash loans extended by financing companies was terminated.</p> <p>The duration of the regulation to expire at end-2023 on the application of reserve requirement ratios at zero for the increase in FX liabilities with maturities longer than six months directly obtained from abroad was extended until the end of 2024.</p>



**3. Rediscount Credits and Advance Loans**

Effective Date	Measure / Regulation
24.07.2023	Concerning rediscount credits to be extended under Annex Article 1 of the Implementation Instructions, provided that sales are made to a value that is at least as much as the credit amount during the credit period, - The rule of selling to the Central Bank 30% of foreign currency in addition to the sale of at least 40% of export proceeds from goods or services was abolished, and - Firms were subjected to a commitment not to purchase foreign currency during the credit period, except for FX purchases for import payments.
21.07.2023	The daily limit for rediscount credits was raised from TL 300 million to TL 1.5 billion. The increase in the share of SMEs, and export growth performance started to be taken into account in disbursements.
14.08.2023	Within the scope of the sustainable, strategic and green transformation, allocation of a credit/financing limit of up to TL 2.5 billion was regulated to be used in investments with a total fixed investment amount of TL 1.5 billion or more, provided that the allocation amount does not exceed the total fixed investment amount. The regulation aimed at investments with renewable energy or high-tech production outputs, which are able to reduce the carbon footprint and make a significant contribution to diminishing imports.
05.09.2023	The interest rate applied to Turkish lira rediscount credits started to be calculated using the formula "(Policy interest rate)/(1+Policy interest rate)". This calculation was also decided to be used for loans utilized since 22 September 2023, with the difference between the interest amount collected from the firms that took out the loans and the interest amount to be calculated based on the new rate to be refunded to the firms. Firm-based credit limits of SMEs were aligned with the amounts in the current SME regulation. Firms' expenditures for investment goods were excluded from the calculation of net exports.
12.09.2023	The daily limit for rediscount credits was raised from TL 1.5 billion to TL 3 billion.

**4. Deposit/ Participation Funds and Payment Systems**

Effective Date	Measure / Regulation
03.07.2023	Regarding the tax exemption for the conversion of resident legal persons' FX deposit and participation fund accounts at banks to Turkish lira, the date specified for the time during which the relevant account should be held at the bank was extended to 31 December 2023.
03.07.2023	The deadline for the 0% withholding tax application on the interest income from TL deposit accounts converted from FX-protected time deposit accounts or FX or gold deposit accounts at the conversion rate/price was extended to 31 December 2023.
03.07.2023	The deadline for the withholding tax reduction on income and earnings from investment funds was extended to 31 December 2023.
25.09.2023	The minimum interest rate obligation for Turkish lira-converted KKM accounts was terminated.

**5. Regulations Regarding Credit Extension, Installments and Debt Repayments**

Effective Date	Measure / Regulation
23.06.2023	A decision was taken to apply monthly maximum contractual and overdue interest rates on credit card transactions with effect from the first day of the month following the announcement day of the reference interest rate, without prejudice to the provisions of the Law on Bank Cards and Credit Cards.
25.07.2023	The monthly maximum contractual interest rate for TL cash withdrawals or utilization through credit cards was set at 131 basis points above the monthly reference interest rate.
27.04.2023	The BRSA changed the loan-to-value ratio for the vehicle loan amount. Accordingly, the loan maturity cap was set at - 48 months for loans extended for purchases of vehicles with a final invoice value of 900,000 Turkish lira or below, - 36 months for purchases of vehicles with a final invoice value below 1,800,000 Turkish lira, - 24 months for purchases of vehicles with a final invoice value below 2,200,000 Turkish lira,

	- 12 months for purchases of vehicles with a final invoice value below 2,800,000 Turkish lira.
27.04.2023	<p>The BRSA changed the loan-to-value ratio for the vehicle loan amount.</p> <p>Accordingly, the ratio of loan-to-value ratio for vehicles was set at</p> <ul style="list-style-type: none"> <li>- maximum 70% for vehicles with a final invoice value of 900,000 Turkish lira or below,</li> <li>- maximum 50% for vehicles with a final invoice value above 900,000 Turkish lira and below 1,800,000 (inclusive) Turkish lira,</li> <li>- maximum 30% for vehicles with a final invoice value above 1,800,000 Turkish lira and below 2,200,000 (inclusive) Turkish lira,</li> <li>- maximum 20% for vehicles with a final invoice value above 2,200,000 Turkish lira and below 2,800,000 (inclusive) Turkish lira, and 0% for vehicles with a final invoice value above 2,800,000 Turkish lira.</li> </ul>
31.07.2023	A decision was taken to exclude overseas-related spending on airlines, travel agencies and accommodation from the scope of credit card installments determined as per the BRSA's amendment, with no installments on such spending.
24.08.2023	In line with the amendment by the BRSA, within the scope of Article 12/A titled "Limitations on housing, vehicle and consumer loans" of the Regulation on Banks' Credit Transactions (Regulation), a decision was taken stipulating that the ratio of the maximum loan amount to the value of the house taken as collateral for loans to be extended to consumers for the purpose of house acquisition and for house-collateralized loans excluding vehicle loans should be reduced by 75% if the consumers had at least one house owned by themselves, their spouse or children under the age of 18.
28.09.2023	As per the amendment by the Insurance and Private Pension Regulation and Supervision Agency (IPRSA), PPS participants were allowed to transfer all or part of their receivables, excluding the state contribution arising from private pension contracts (excluding contracts subject to all kinds of administrative and judicial claims such as injunction, confiscation, bankruptcy, pledge, etc. regarding fund shares), to banks through a transfer of receivables agreement.

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

Effective Date	Measure / Regulation
31.07.2023	<p>As per the amendment made by the BRSA, in the calculation of capital adequacy standard ratios in accordance with the Regulation on Measurement and Assessment of Capital Adequacy Ratios of Banks, it was decided that the risk weights for general purpose loans (including overdraft accounts), personal credit cards (including credit card expenditures and cash withdrawals), vehicle loans for the acquisition of passenger cars and vehicle-collateralized loans to be extended to consumers, and financial leasing transactions with consumers would be</p> <ul style="list-style-type: none"> <li>- applied at 150% if the Standard Approach is used,</li> <li>- increased by applying the rates of increase, which will be calculated by comparing the risk weights to be applied to the receivables in question in case the Standard Approach is used with the 150% risk weight, to the risk weights calculated in accordance with the Internal Ratings Based (IRB) Approaches, if the IRB Approaches are used.</li> </ul> <p>In the calculation of the amount subject to credit risk for these loans, it was decided to apply credit risk mitigation techniques and the aforementioned high risk weights to new loans granted after the decision date.</p>
24.08.2023	<p>As per the amendment made by the BRSA, in the calculation of capital adequacy standard ratios in accordance with the Regulation on Measurement and Assessment of Capital Adequacy Ratios of Banks, it was decided that the risk weights for housing loans collateralized with a residential property mortgage that will be extended to consumers who already have at least one house owned by themselves, their spouse or children under the age of 18 would be</p> <ul style="list-style-type: none"> <li>- applied at 150% if the Standard Approach is used,</li> <li>- increased by applying the rates of increase, which will be calculated by comparing the risk weights to be applied to these loans in case the Standard Approach is used with the 150% risk weight, to the risk weights calculated in accordance with the IRB Approaches, if the IRB Approaches are used.</li> </ul> <p>In the calculation of the amount subject to credit risk for these loans, it was decided</p>

- not to apply credit risk mitigation techniques, and
- to apply the aforementioned high-risk weights to new loans granted after the decision date.

## 7. Other Regulations

Effective Date	Measure / Regulation
07.07.2023	The banking and insurance transactions tax rate was increased from 10% to 15%.
10.07.2023	The value added tax was set at 20% for goods and services specified in Article 1, Paragraph (a) of the Decision on the Determination of Value Added Tax Rates on Goods and Services, and at 10% for goods and services specified in Paragraph (c) of the same article of the decision.
	The foreign exchange position reporting practice, in which the firms are required to submit information to the Central Bank regarding their foreign currency assets and liabilities, was simplified and its scope was changed.
	In the scope of this regulation, the practice of receiving Summary FX Position Reporting from firms with a total cash and non-cash loan balance of TL 10 million or above, which was introduced in March 2023, was abolished.
01.01.2024	In addition, the scope of firms for the FX position reporting under the Systemic Risk Data Monitoring System implemented since 2018 was revised to increase the level of representation of firms in the national economy. Accordingly, the scope of firms subject to the reporting requirement, which used to cover firms with an FX loan liability of USD 15 million or above, was changed to cover firms with a total cash loan balance of TL 100 million or above on the last business day of the relevant monthly accounting period, or firms with a net sales revenue or asset size of TL 500 million or above in the last one-year accounting period.

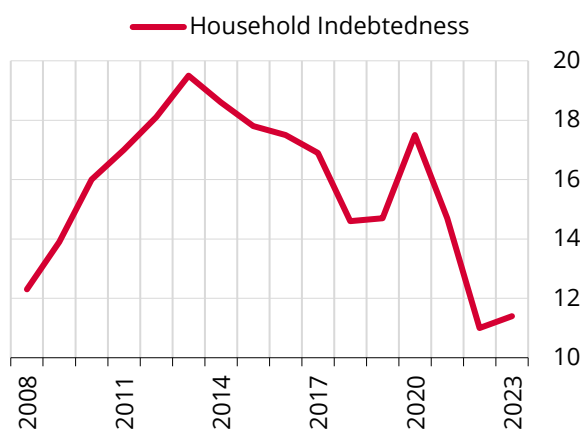
### III. Non-Financial Sector

#### III.1 Household Developments

**Household indebtedness in Türkiye remains below the averages of advanced and emerging economies.**

Standing at 11.4% in the first quarter of 2023, the household financial debt/GDP ratio in Türkiye is well below that of peer countries (Chart III.1.1 and Chart III.1.2). The decline in indebtedness in recent years is attributed to the rapid growth in nominal GDP driven by buoyant economic activity and high inflation, as well as macroprudential measures on retail loans. This decline indicates that the risks stemming from household debt are systemically limited.

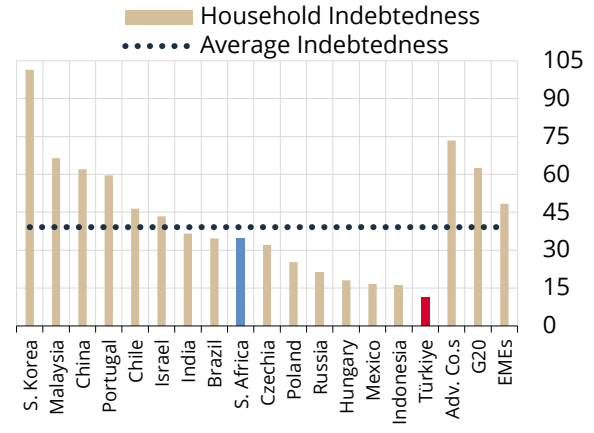
**Chart III.1.1: Household Indebtedness in Türkiye by Year (Debt/GDP, %)**



Source: BIS

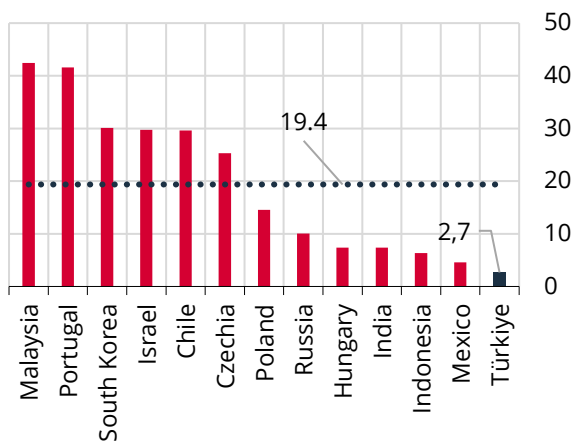
Note: Household indebtedness is calculated as the ratio of the total of debt securities and loans of households and nonprofit institutions serving households to GDP. The country marked in blue has median indebtedness in the sample. The horizontal line shows the average values of selected countries.

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



Last Observation: 2023 Q1

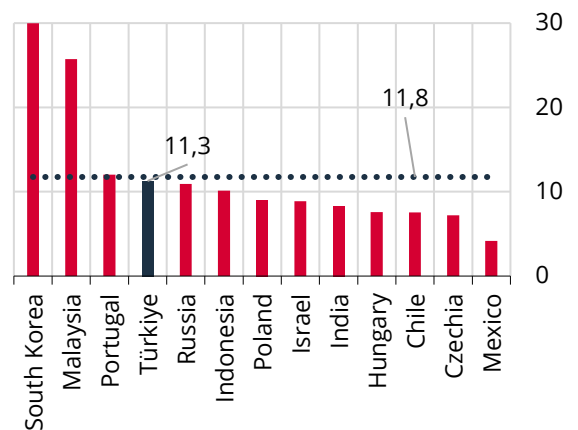
**Chart III.1.3: Ratio of Housing Loans to GDP (%)**



Sources: IMF, Global Economy

Note: The ratio is calculated as the current total housing loan and retail loans excluding housing loans balance divided by end-2022 GDP. Horizontal lines are 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.

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



Last Observation: 06.23

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 close to the average of peer countries. High housing prices in recent years, tighter macroprudential policies on housing loans, and

current levels of interest rates enabling an increase in debt servicing due to long-term maturities in housing loans have decelerated the housing loan growth in Türkiye. Moreover, the fact that housing loans in Türkiye are extended with shorter maturities compared to advanced economies and that principal debt gradually reduces due to the fixed interest rate structure of the debt has led the housing loan/GDP ratio to remain below the averages of other countries (Chart III.1.3). The widespread use of credit cards and the preference for general-purpose loans for the purchase of durable/semi-durable goods and services contribute to the slightly higher ratio of retail loans excluding housing loans to GDP in Türkiye (Chart III.1.4).

**Table III.1.1: Household Financial Liabilities**

	12.22		06.23		09.23		3-Month Growth (Annualized))
	Billion TL	Ratio to GDP	Billion TL	Ratio to GDP	Billion TL	Ratio to GDP	
<b>Total Liabilities</b>	<b>1,670</b>	<b>11.1</b>	<b>2,324</b>	<b>12.1</b>	<b>2,512</b>	<b>11.3</b>	<b>36.5</b>
Housing Loans	413	2.7	497	2.6	508	2.3	9.0
Vehicle Loans	60	0.4	91	0.5	94	0.4	15.4
General-Purpose Loans	701	4.7	894	4.7	929	4.2	16.4
Personal Credit Cards	460	3.1	803	4.2	940	4.2	87.7
AMC Receivables	36	0.2	39	0.2	41	0.2	25.1

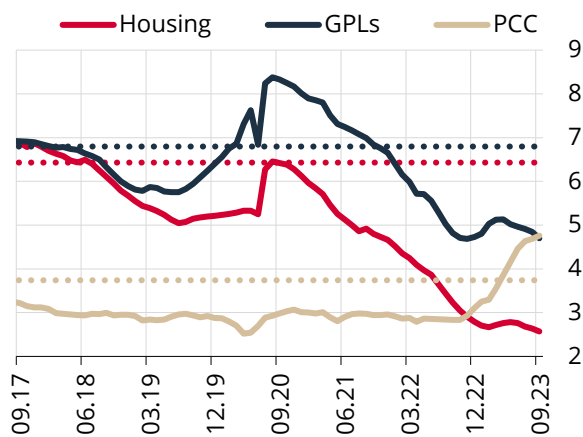
Sources: CBRT, BRSA, TOKİ

Note: Liabilities also include NPLs. Estimated values for 2023Q3 GDP. AMC: Asset Management Companies.

**The rise in household financial liabilities is driven by card expenditures.**

The recent rapid increase in PCC debt is attributed to increases in consumer prices of core goods and services, ease of use owing to digitalization, and the fact that contractual interest rates were lower compared to other types of retail loans until the first half of 2023 (Table III.1.1). On the other hand, housing and general-purpose loans continue to contract relative to GDP at rates below their historical averages (Chart III.1.5). The share of housing loans in retail loans, which was approximately 37% in the 2012-2019 period, fell below 21%. While the share of general-purpose loans remained close to the period average, the share of PCC climbed to 38% (Chart III.1.6).

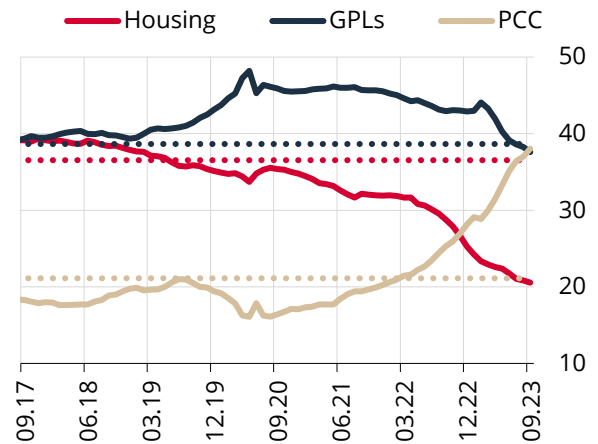
**Chart III.1.5: Ratio of Households' Financial Liabilities to GDP (%)**



Sources: CBRT, BRSA, TURKSTAT, Author's Calculations

Note: Liabilities also include NPLs. GDP forecasts for 2023Q3 are estimated values. Dashed lines are the average values of the related series for 2012-2019.

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



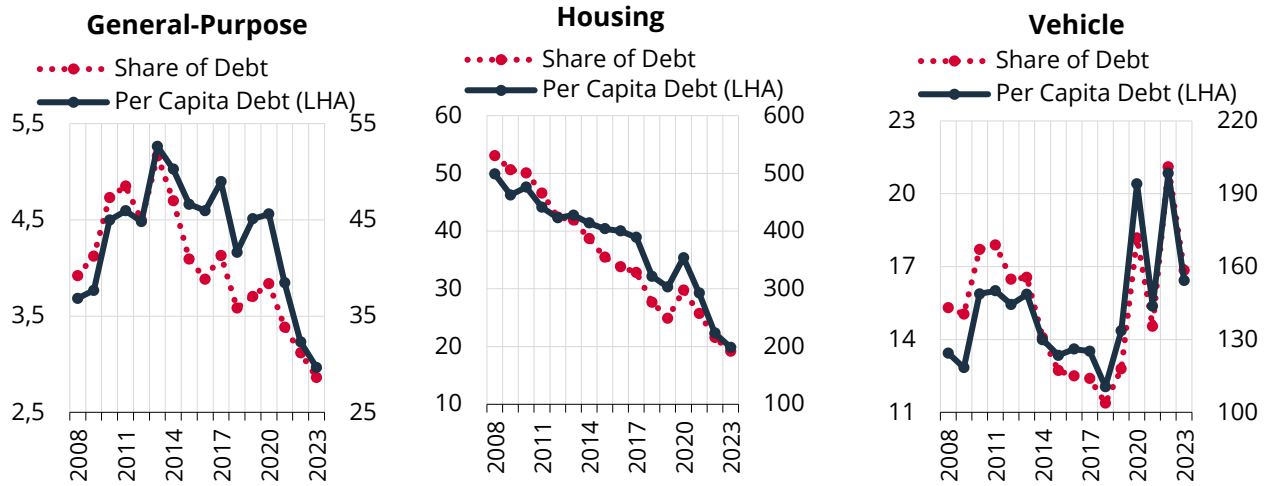
Last Observation: 09.23

**Per capita household debt and indebtedness relative to income are receding.**

Per capita indebtedness in general-purpose and housing loans, which account for a significant portion of household indebtedness, has been on a downward trend in real terms since 2013, with the trend remaining in place in 2023 (Chart III.1.7). Per capita housing loan debt relative to per capita disposable income obtained from the Household Consumer Tendency Survey is also on a declining trend. Per capita indebtedness in vehicle loans has been fluctuating since 2018 due to vehicle price developments. However,

vehicle loans have a limited share in household liabilities. The fact that individuals have a borrowing tendency that is proportionate to their income is a factor that limits the risks to household solvency. Yet, it should be noted that this assessment based on average income may vary depending on the income profile and distribution of borrowers.

**Chart III.1.7: Per Capita Debt Balance in Consumer Loans and Its Share in Per Capita Disposable Income (%)** (TL Thousand in real terms)



Sources: BRSA, TURKSTAT

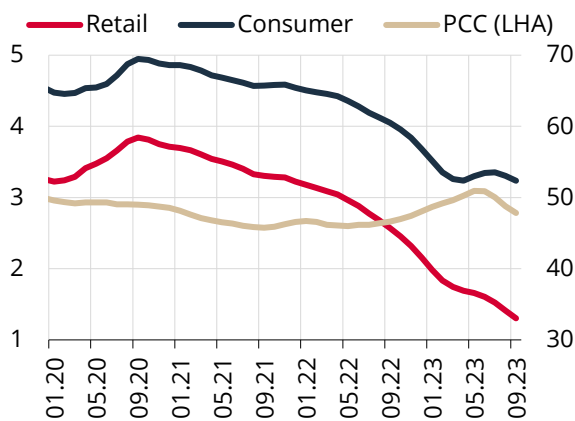
Note: Dashed lines show the share of debt in per capita disposable income. Per capita debt is calculated by dividing the total loan balance in the relevant item by the number of borrowers on a bank basis. Per capita debt is deflated by the CPI. Real income is assumed to have remained unchanged in 2023. Per capita disposable income is calculated by subtracting inter-household transfers (including alimony/child support) and tax payments from income items such as salaries, wages, rents, etc.

Last observation: 09.23

**Average maturities of retail loans have been declining due to general-purpose loans, which are subject to macroprudential restrictions.**

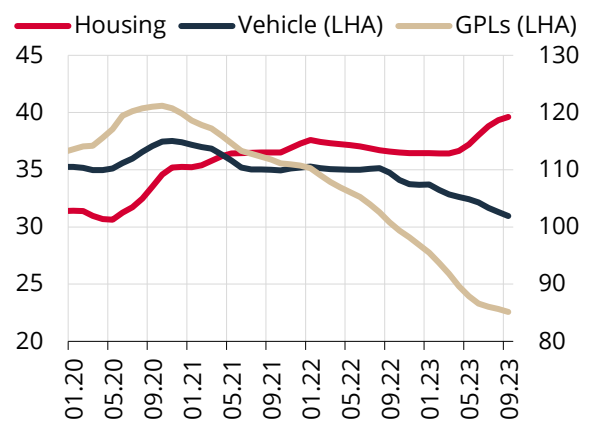
In the current reporting period, the maturities of total retail loans have been declining due to the amount-maturity restrictions on general-purpose loans and the increased share of personal credit cards (PCCs), which are characterized by short maturities (Chart III.1.8). The average maturity of retail loans, which approached 60 months during the pandemic period due to the long-term general-purpose and housing loans extended to support individuals adversely affected by the pandemic, fell to 33 months in the following period. On the other hand, macroprudential measures in vehicle and general-purpose loans were also effective in the shortened maturities (Chart III.1.9).

**Chart III.1.8: Average Maturity of Retail Loans** (Month)



Sources: CBRT, BRSA, TURKSTAT, Author's Calculations

**Chart III.1.9: Average Maturity of Consumer Loan Subcategories** (Month)



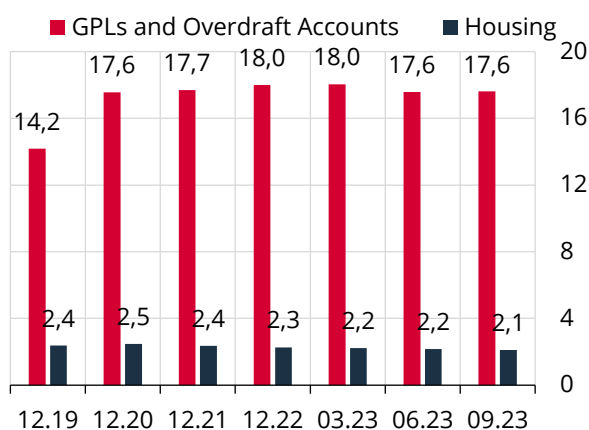
Last Observation: 09.23

**While the number of people with consumer loan debt has decreased, fixed-income earners account for a significant share in retail loan utilization.**

Loan growth slowed down, and the number of people with loan debts declined amid the rise in general-purpose loan interest rates (Chart III.1.10). The interest rate threshold, which is applied at double the reference interest rate for loan disbursements above TR 70,000 as part of the securities maintenance practice, led to a concentration of disbursements in smaller loans and limited loan growth in the first half of the year. Increasing the risk weights in general-purpose loans also pushed up the cost of equity for these loans. On the other hand, in addition to the interest rate hike, the BRSA's decision to reduce the loan-to-value ratio by 75% for second-time home buyers and to increase the risk weight for these loans from 35% to 150% resulted in a decline in the number of people with housing loan debt.

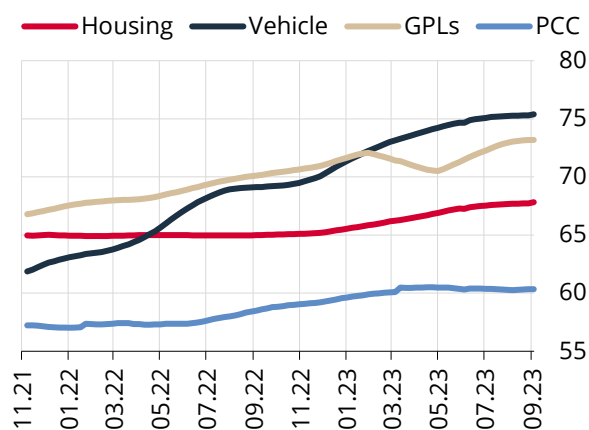
In recent years, wage earners' share in retail loan utilization has increased, and this increase continues in the current reporting period (Chart III.1.11). This development was driven by the revisions made in wages of wage earners, the low income volatility among this segment of society, and banks' gravitation towards this segment from a credit risk management perspective.

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



Sources: Risk Center, CBRT Last Observation: 09.23  
Note: Reports the number of individual general-purpose and housing loan borrowers in the banking sector. General-purpose loans include overdraft accounts (ODA).

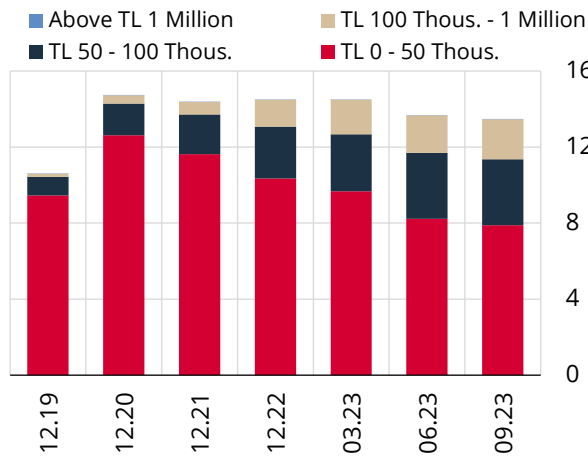
**Chart III.1.11: Share of Wage Earners in Retail Loan Utilization (%)**



Source: BRSA Last Observation: 09.23  
Note: Borrowers are divided into wage earners and others. Shows the share of wage earners in stock loans.

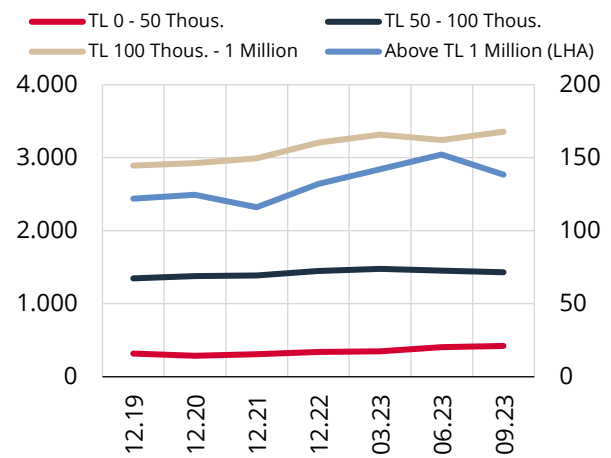
**Throughout 2023, the number of general-purpose loan borrowers significantly dropped, while per capita indebtedness remained flat.**

Due to the regulations introducing maturity caps and a security maintenance obligation for general-purpose loans, general-purpose loan indebtedness remained on a controlled track prior to the interest rate hikes. Compared to end-2022, the number of general-purpose loan borrowers fell by approximately 400 thousand (Chart III.1.12). In 2023, the increase in the per capita amount of general-purpose loan debt mostly stemmed from borrowings over TR 100,000, yet these borrowings include a limited number of borrowers (Chart III.1.13).

**Chart III.1.12: Number of General-Purpose Loan Borrowers by Amount (Million People)**


Sources: Risk Center, CBRT

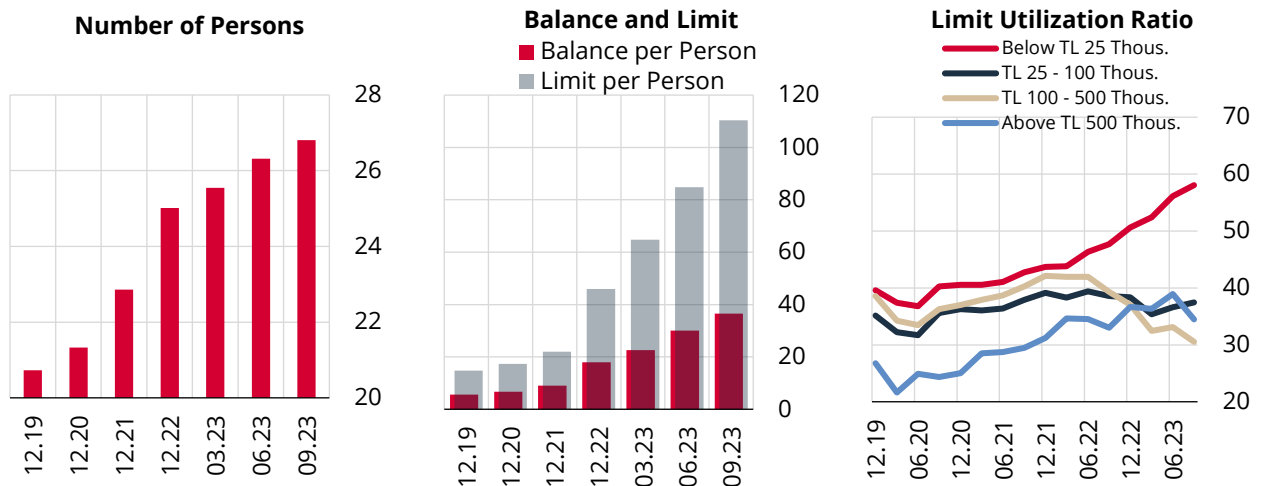
Note: Amount brackets show the outstanding general-purpose loan debt amounts per person at all banks. The number of people is the total number of people in the relevant bracket. ODA and general-purpose loans classified as NPLs are excluded.

**Chart III.1.13: General-Purpose Loan Per Capita Debt by Amount (TL Thousand)**


Last Observation: 09.23

**Despite the ongoing increase in personal credit card debt per capita, the pace of the increase slowed down after June. Limit utilization rates have been rising for low-limit cards.**

The number of active users of personal credit cards and debt per capita continue to increase. Households have tended to use credit cards following the rise in interest rates of general-purpose loans. However, limit revisions made after increases in incomes affect credit card utilization levels. While high-limit cards recorded a decline in limit utilization, there was a slight increase in the credit utilization ratio of credit cards with limits between TL 25,000 and 100,000. The limit utilization ratio for credit cards with limits of TL 25,000 and below continues to rise (Chart III.1.14).

**Chart III.1.14: Number of Persons Actively Using PCC, Card Balance and Limit Per Customer, Card Limit Utilization Ratio (Million People, TL Thousand, %)**


Sources: Risk Center, CBRT

Note: Chart excludes people with zero credit card balance.

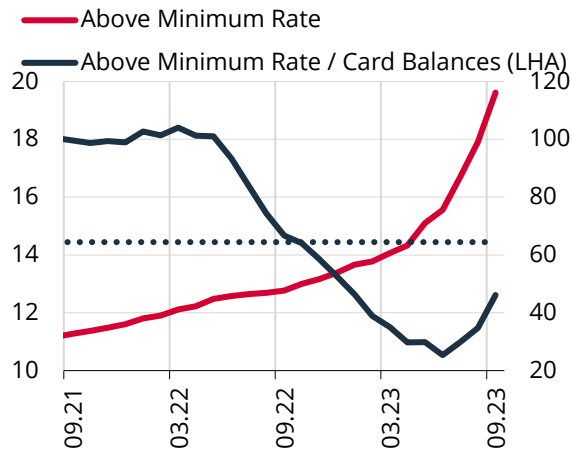
Last Observation: 09.23

**Despite the increase in the unpaid debt on credit cards, the ratio of unpaid debts to total card balances remains below historical averages.**

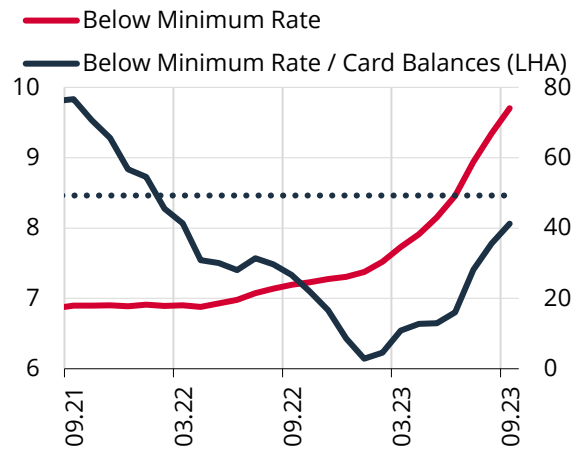
The ratio of unpaid debt to total card balance is 12.6% on credit cards for which a payment of the minimum payment amount or more has been made, and the same ratio is 8.1% on credit cards for which less than the minimum payment amount is paid (Charts III.1.15 and III.1.16). Despite the increase in recent months, the ratio of unpaid debts to total PCC balance hovers around 20%, and remains below its historical average.



**Chart III.1.15: Personal Credit Cards with Unpaid Balances** (Billion TL, %, 3-Month MA)



**Chart III.1.16: Personal Credit Cards with Unpaid Balances** (Billion TL, %, 3-Month MA)



Source: BRSA

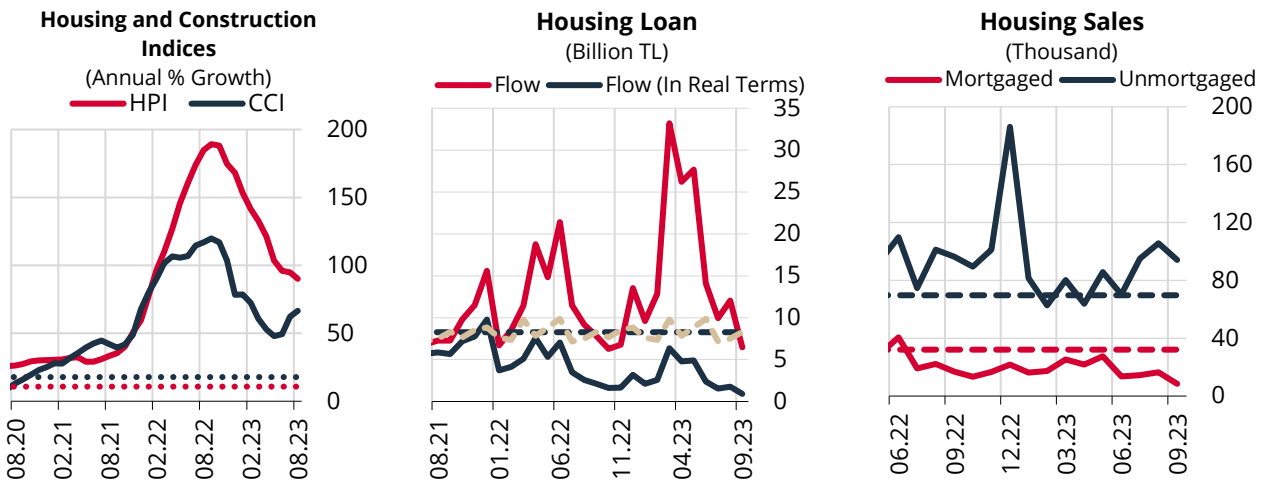
Last Observation: 09.23

Note: "Above Minimum Rate" refers to the total outstanding debt for PCCs paid at or above the minimum payment rate; "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 2016-2023 seasonal averages of the relevant ratios.

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

House prices and construction costs started to diverge in 2022, and as of the last quarter of 2022, they started to converge as the increase in house prices lost momentum. Due to the current level of house prices, the decline in long-term and low-cost loans extended by banks, and the macroprudential measures introduced in June 2022, housing loan utilization remains quite slow. Accordingly, mortgaged house sales have been weak since the second half of 2022 (Chart III.1.17).

**Chart III.1.17: Housing Loans, House Sales and House Prices**



Source: CBRT

Last Observation: 09.23

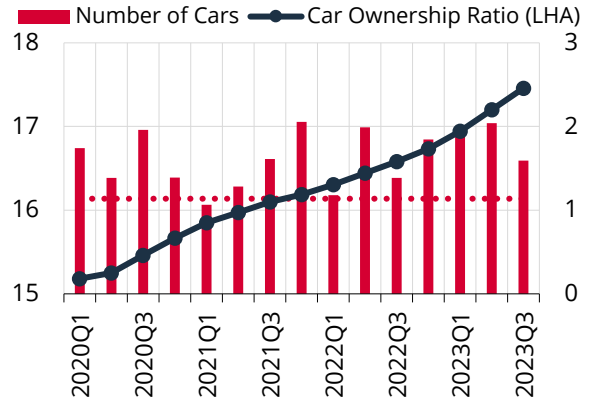
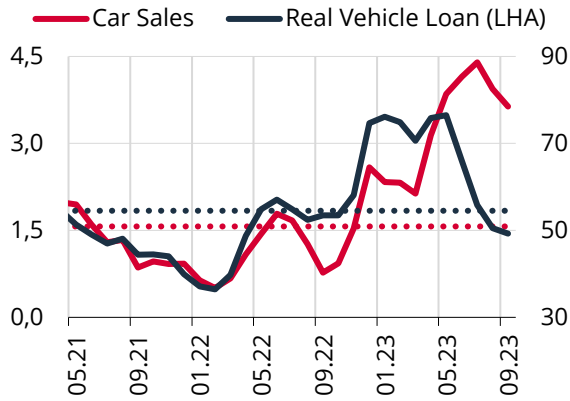
Note: Housing loans are shown in terms of monthly flow disbursements. Dashed straight lines show the average annual index changes in the 2012-2019 period (2016-2019 period for the CCI), real housing loans extended and related housing sales; the dashed and moving line shows the average housing loans in the relevant months of the 2012-2019 period. Data have been deflated by the HPI, and July data for real loans and the indices have been estimated with the CPI.

**Vehicle loan utilization and car sales declined in the third quarter of the year.**

While new car sales are well above their historical average, credit utilization has slowed down (Chart III.1.18). The high demand for new cars stands out as a determinant of the buoyant sales. In contrast, macroprudential measures to restrain the growth in vehicle loans have been effective in the credit utilization slowdown. In the third quarter of 2023, the number of used car sales started to decline, while car ownership continues to increase (Chart III.1.19).

**Chart III.1.18: Vehicle Loans and New Car Sales** (Thousand Units, Billion TL, 3-Month MA)

**Chart III.1.19: Number of Used Car Sales and Car Ownership Ratio** (Million Units, %)



Sources: ODD, BRSA Last Observation: 09.23  
 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.

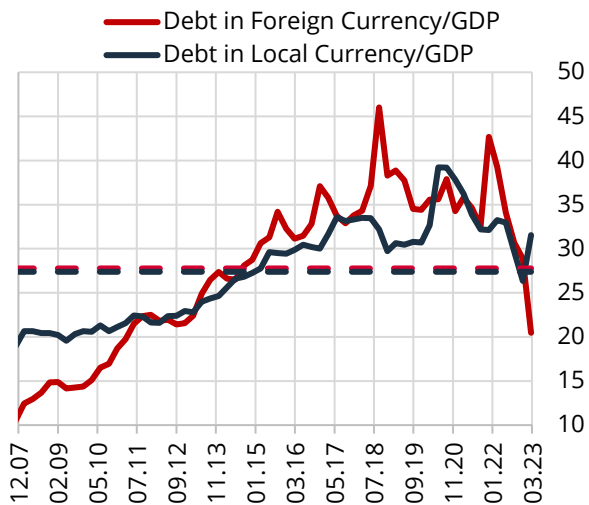
Source: TURKSTAT Last Observation: 2023Q3  
 Note: Used car sales refer to vehicles whose ownership has changed hands once or more through public notaries. Shows the quarterly sums of the number of vehicles changing hands. Dashed line shows the average number of used car sales amounting to 1.1 million between 2012 and 2019 in quarterly periods. Car ownership ratio is the ratio of cars registered in the traffic to the total population.

## III.2 Corporate Sector Developments

### Financial indebtedness of corporate sector firms continues to decline on the back of the fall in the FX debt ratio.

The ratio of firms' TL and FX debts to GDP declined further, and indebtedness ratios converged to their historical averages in the first quarter of 2023. Across 2022, the increase in nominal GDP outpaced that in financial debt due to strong economic activity supported by buoyant domestic demand and high inflation, while low financing costs led to a decline in firms' debt burden (Chart III.2.1). Compared to peer countries, Türkiye's corporate sector debt in local and foreign currency has a balanced composition. The ratio of corporate sector indebtedness to GDP hovers below the average of peer countries (Chart III.2.2).

**Chart III.2.1: Debt/GDP Ratio of the Corporate Sector (%)**

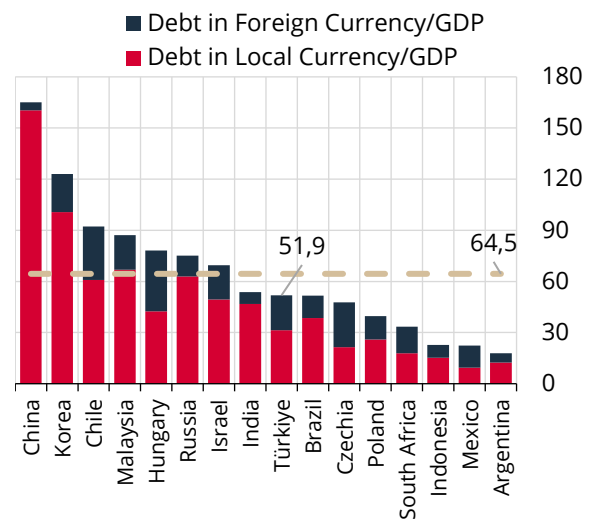


Source: BIS

Last Observation: 03.23

Note: Dashed lines denote the historical average of the relevant ratio between 2007Q4 and 2023Q1.

**Chart III.2.2: Debt/GDP Ratio of Peer Economies (%)**



Source: BIS, IIF

Last Observation: 03.23

Note: Calculation is based on distribution of debts in local and foreign currencies. The countries in the chart are ranked from larger to smaller according to Total Debt/GDP ratios for 2023Q1. The dashed line shows the average of peer countries' indebtedness in 2023Q1.

Recently, the share of total financial debt in GDP edged up in the third quarter amid the exchange rate increase. In August, the share of financing provided through domestic financial institutions and issuances in GDP was 35.9%, while the share of FX loans extended by foreign banks within GDP was 13.6%, and the share of financing provided through bond issued abroad in GDP remained limited to 1% (Table III.2.1).

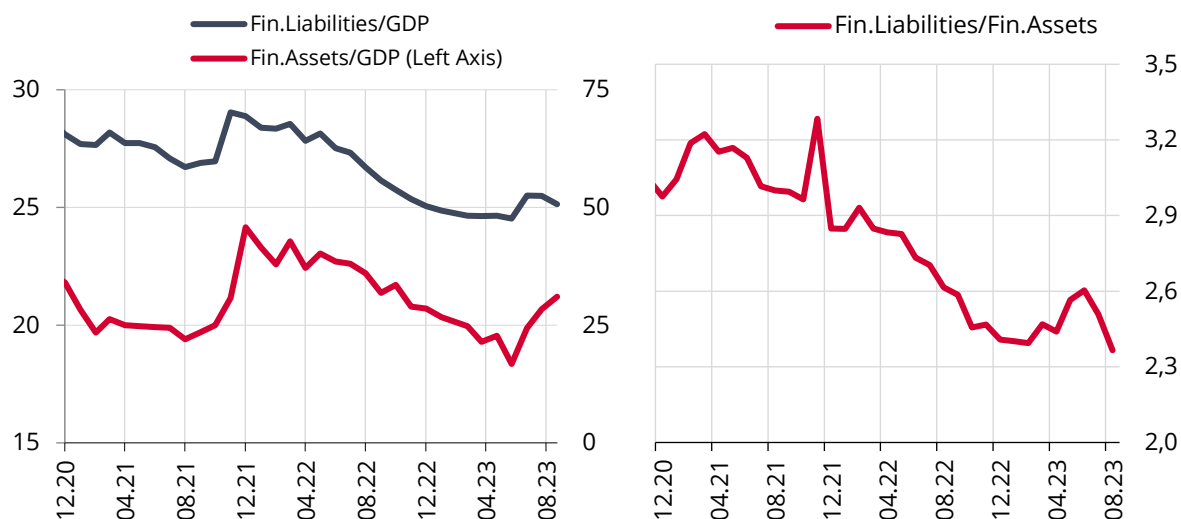
**Table III.2.1: Financial Liabilities of the Corporate Sector (Billion TL)**

	12.21		06.23		08.23		Growth (Percent)
	Billion TL	Ratio to GDP	Billion TL	Ratio to GDP	Billion TL	Ratio to GDP	
<b>I. Domestic Loans (i+ii)</b>	<b>3549.2</b>	<b>49.0</b>	<b>6.938.0</b>	<b>37.2</b>	<b>7.200.5</b>	<b>35.9</b>	<b>25.0</b>
i. TL	1715.2	23.7	4.125.5	22.1	4.336.2	21.6	34.8
A. Bank	1606.8	22.2	3.828.9	20.5	4.023.7	20.1	34.7
B. NBFİ	89.0	1.2	227.8	1.2	239.4	1.2	34.8
C. Bonds issued	19.4	0.3	68.8	0.4	73.2	0.4	45.0
ii. FX (FX-indexed loans included)	1834.0	25.3	2.812.5	15.1	2.864.3	14.3	11.6
<i>USD Equivalent (A+B+C)</i>	<i>137.6</i>		<i>108.9</i>		<i>107.4</i>		<i>-8.1</i>
A. Bank	131.5	1.8	103.6	0.6	102.2	0.5	-8.1
B. NBFİ	5.4	0.1	4.7	0.0	4.6	0.0	-17.4
C. Past-Due Loans Taken Over by SDİF	0.7	0.0	0.5	0.0	0.5	0.0	-33.4
<b>II. External Loans</b>	<b>1348.3</b>	<b>18.6</b>	<b>2.642.1</b>	<b>14.2</b>	<b>2.721.3</b>	<b>13.6</b>	<b>19.4</b>
<i>USD Equivalent</i>	<i>101.2</i>		<i>102.3</i>		<i>102.0</i>		<i>-1.9</i>
<b>III. Bonds Issued Abroad</b>	<b>123.8</b>	<b>1.7</b>	<b>203.5</b>	<b>1.1</b>	<b>210.2</b>	<b>1.0</b>	<b>21.4</b>
<i>USD Equivalent</i>	<i>9.3</i>		<i>7.9</i>		<i>7.9</i>		<i>1.3</i>
<b>Total Financial Debt (I+II+III)</b>	<b>5021.3</b>	<b>69.3</b>	<b>9.783.7</b>	<b>52.4</b>	<b>10.132.0</b>	<b>50.6</b>	<b>23.4</b>
<i>For information: Total FX Loans (Billion USD)</i>	<i>248.0</i>		<i>219.1</i>		<i>216.3</i>		<i>-7.5</i>

Source: CBRT, BRSA

Last Observation: 08.23

Note: The "ratio" columns show the ratio of the relevant item to GDP. The growth column reflects annualized change between 06.23 and 08.23 using the compound calculation method.

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

Source: CBRT

Last Observation: 08.23

Note: Financial liabilities include the corporate sector's domestic and external loans, leasing, factoring debts and bond issuances. Financial assets include TL and FX deposits and securities, but direct capital investments abroad and export receivables are not included. Annual GDP values in monthly frequency are calculated by the CBRT. The latest GDP data is the CBRT's estimate. End-month foreign exchange buying rate is used in calculations.

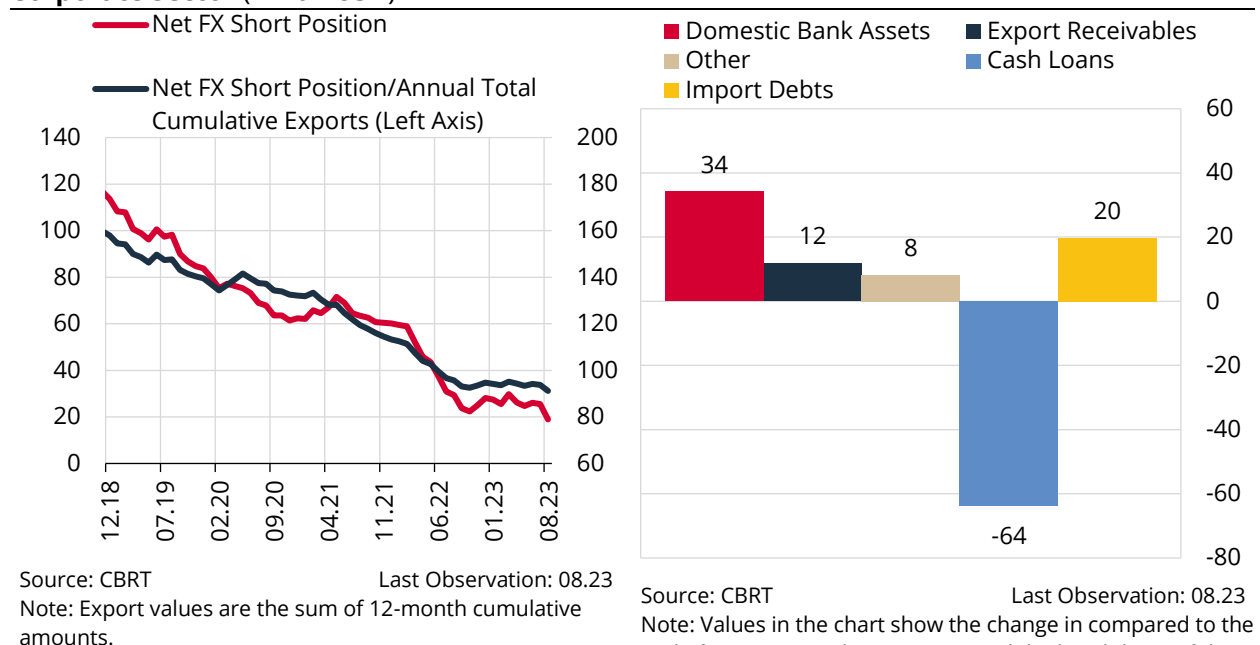
### The ratio of corporate sector financial debt to assets hovers at historically low levels.

Recently, the ratio of corporate sector debt to GDP has decreased, while the ratio of assets to GDP has slightly increased. Thus, the financial leverage ratios of firms have remained low, fostering their resilience against tighter financial conditions (Chart III.2.3).

### The corporate sector's FX short position maintains the downtrend.

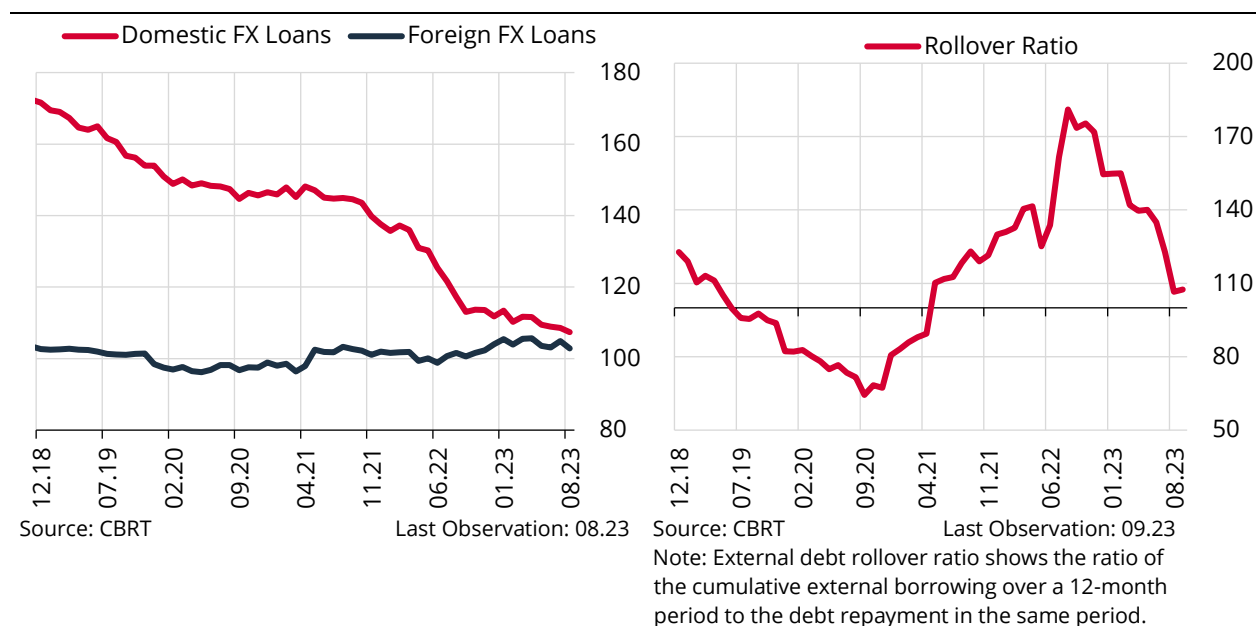
The corporate sector's net FX short position decreased by 99 billion USD compared to end-2018 and by 45 billion USD compared to end-2021. This trend continued in 2023 and the FX short position dropped to 74 billion USD in August. This decline, which started in end-2018, was mainly driven by the strong increase in domestic bank assets and the decline in FX cash loans (Chart III.2.4). While the ratio of the net FX short position to 12-month exports fell to 30%, the corporate sector's capacity to cover the current short position is strengthening (Chart III.2.4).

**Chart III.2.4: Net FX Position and the Decomposition of Change in the Net FX Position of the Corporate Sector (Billion USD)**

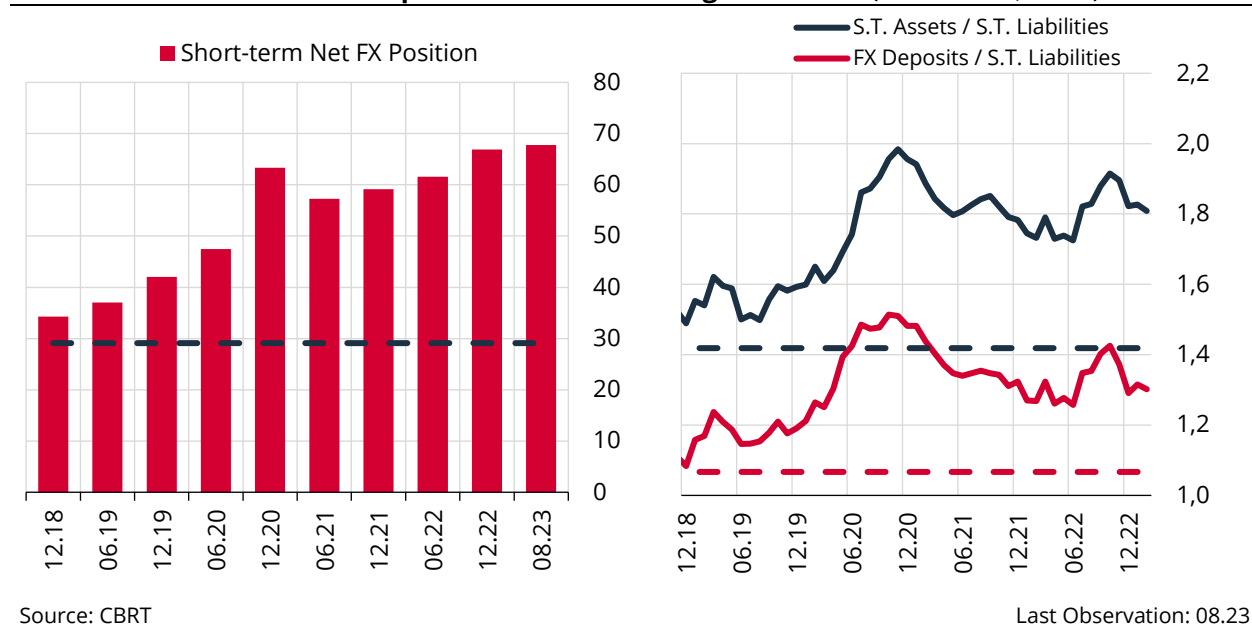


### While corporate sector firms still utilize external financing facilities, the closing trend in domestic FX loans is losing pace.

Corporate sector firms are able to roll over their external debt by more than 100% (Chart III.2.5). This picture implies that despite tighter global financial conditions, firms still have access to external financing and are able to manage their debts steadily.

**Chart III.2.5: Indicators of Corporate Sector's FX Loans and Debt Rollover** (Billion USD, %)**Firms have strong FX liquidity and have the capacity to meet short-term FX liabilities.**

The short-term net FX position, which had been on an upward trend since 2021, increased further in 2023 and stood at 68 billion USD as of August. The ratio of firms' FX deposits and short-term assets to short-term liabilities, which remains above historical averages, indicates that firms have strong liquidity against exchange rate or external financing shocks (Chart III.2.6).

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

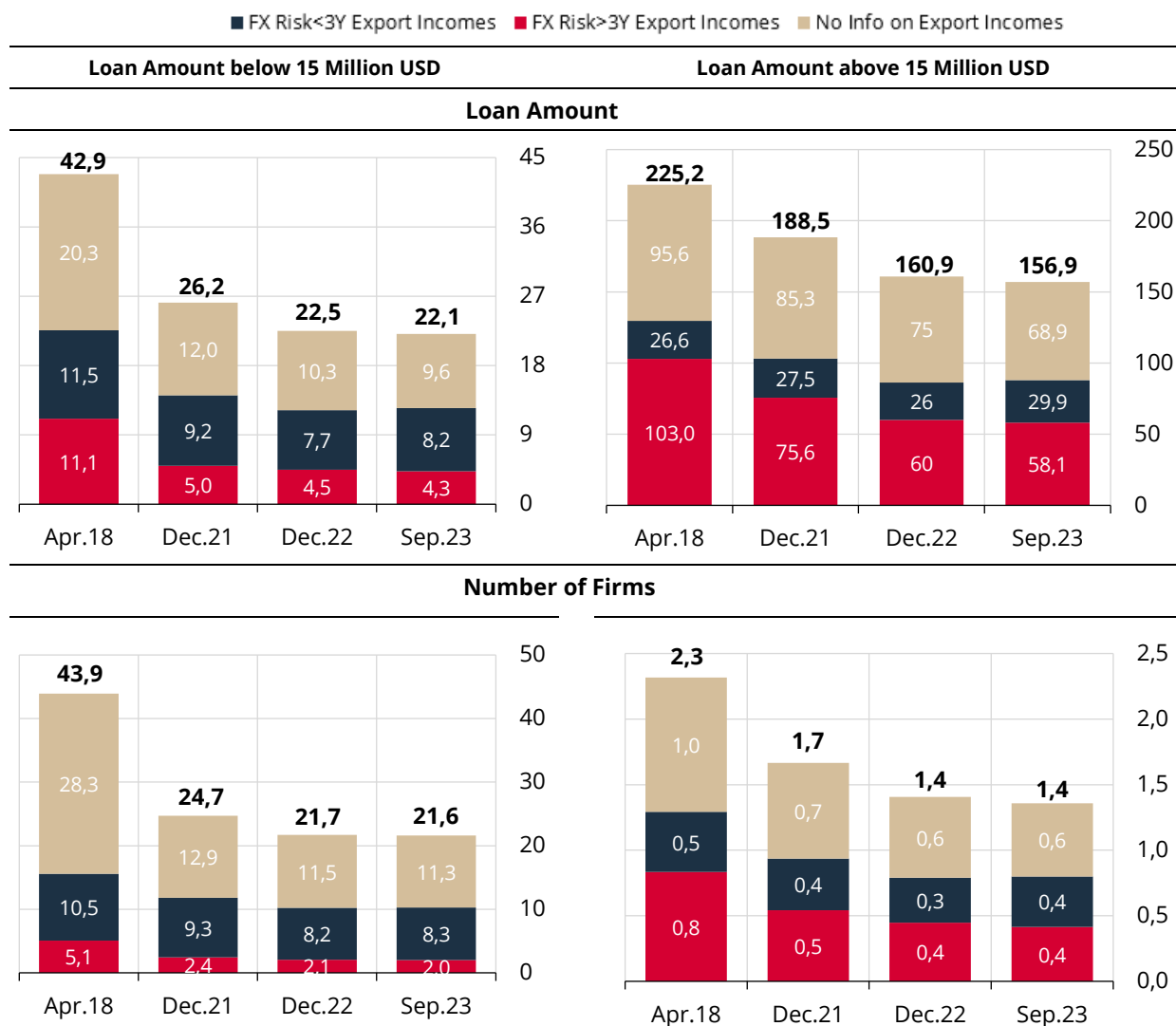
Note: FX deposits are the total amount of FX deposits held by resident corporate sector firms in domestic and foreign financial institutions. Net FX position calculations include FX-protected deposits. Dashed lines show the historical average of the relevant data between 01.12 and 12.21. The abbreviation ST stands for "short-term".

**In addition to the decline in FX loan balances, the number of firms with FX debt has also decreased.**

The regulation linking FX credit utilization of firms with an FX risk of less than 15 million USD to their export revenues for the last three years contributed to making firms' FX indebtedness manageable. In September 2023, the credit balance of firms with an FX risk below 15 million USD fell to 22.1 billion USD, while the credit balance of firms with an FX risk of above 15 million USD decreased to 156.9 billion USD. Among firms

with accessible export data, the share of those with FX debt exceeding three years of export revenues continued to decline. Firms with no restrictions imposed by the regulation recorded stronger coverage of FX debts by export revenues (Chart III.2.7).

**Chart III.2.7: FX Loan Balances of Firms Based on Their Exports and the Number of Firms** (Billion USD, Thousand)



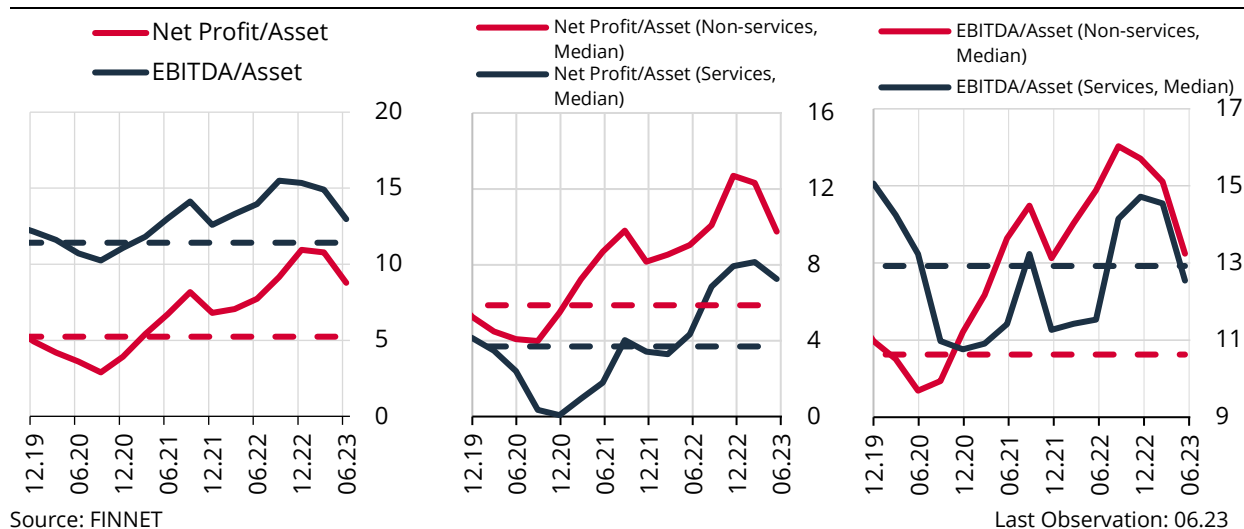
Source: Risk Center, CBRT, TURKSTAT

Last Observation: 09.23

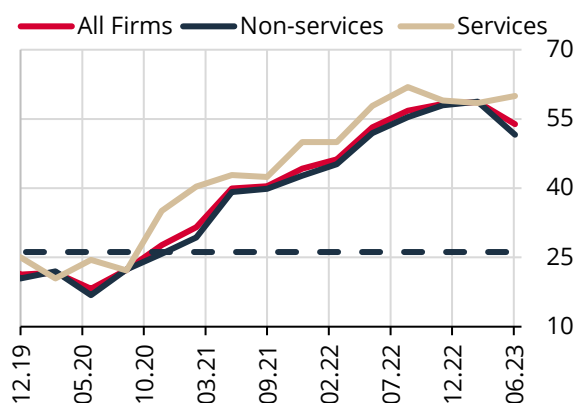
Note: Export revenues are the sum of the firm's year-end revenues from exports of goods over the last three years as of the relevant date. Firms with no export revenue data show firms that do not have export revenue records in the database, although these firms are likely to have revenues from exports of goods or FX-indexed income. FX loan debt includes loans extended from abroad via domestic banks. Direct loans used from abroad are not included.

**Although profitability indicators of publicly traded firms edged down in the second quarter, the strong outlook for profitability still hovers above historical averages.**

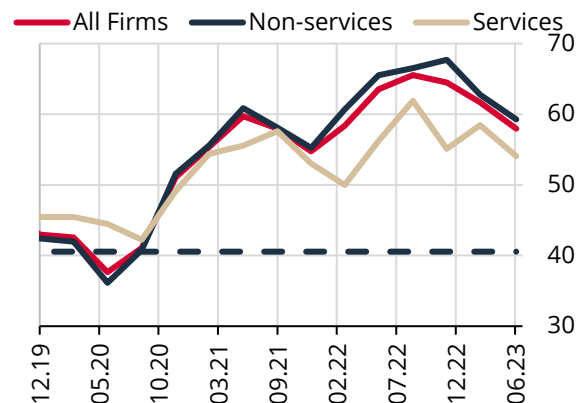
Firms' profit margins edged down in the first half of the year due to the base effect. On the other hand, profitability indicators display a quite strong outlook compared to past data. Firms operating in non-service sectors have a higher profit performance compared to firms in the services sector. In the second quarter of 2023, the net profit/asset ratios of the non-services and services sectors reached 9.7% and 7.3%, respectively. In the same period, the EBITDA/assets ratios of the non-services and services sectors were approximately 13% and 12.5%, respectively (Chart III.2.8).

**Chart III.2.8: Profitability Indicators and Profitability Spread of BIST Firms (%)**


The share of publicly traded firms with Net Profit/Asset and EBITDA/Asset ratios above 10%, which hovers above 50%, indicates that strong profitability is seen across all firms (Charts III.2.9 and III.2.10). While the share of non-services firms with an EBITDA/Asset ratio above 10% stands at around 60%, the share of services firms meeting this criterion remains at around 54%. This indicates that firms operating in services and non-services sectors maintain their high profitability in general (Chart III.2.10).

**Chart III.2.9: Share of Firms with a Net Profit/Asset Ratio Above 10% (%)**


Note: The analysis includes 296 corporate sector firms. The shares of services and non-services firms are calculated using the number of firms in these sectors. The dashed line indicates the historical ratio average of firms. Historical averages are calculated considering the 2012 Q1-2021 Q4 period.

**Chart III.2.10: Share of Firms with an EBITDA/Asset Ratio Above 10% (%)**


Note: The analysis includes 296 corporate sector firms. The shares of services and non-services firms are calculated using the number of firms in these sectors. The dashed line indicates the historical ratio average of firms. Historical averages are calculated considering the 2012 Q1-2021 Q4 period.

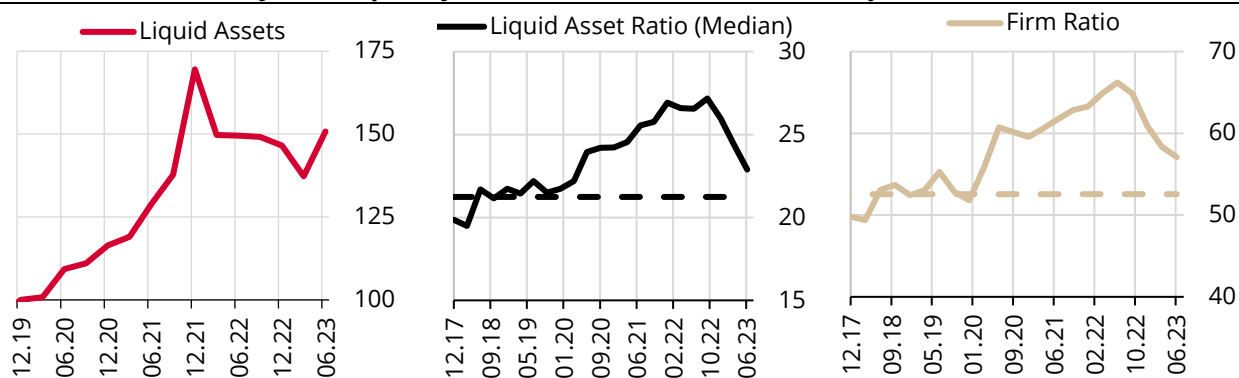
### Corporate sector balance sheets exhibit resilience against possible shocks thanks to their strong liquidity structure.

Liquid assets increased briefly due to the exchange rate-driven appreciation of FX assets at the end of 2021, but followed a flat course in real terms in 2022 and the first half of 2023. The median liquid asset ratio still hovers above the historical average and the high shares of cash and inventories in assets indicate that firms have strong liquidity and can meet the short-term debts and working capital needs of the corporate sector. Although the ratio of firms with a liquid asset ratio above 20% to the total number of firms has been



trending downwards since the second quarter of 2022, this ratio remained above the historical average in the current Report period. The overall strong liquidity position across firms indicates that firms remain prepared for a tightening in financial conditions (Chart III.2.11).

**Chart III.2.11: Activity and Liquidity Indicators of Firms** (Inflation-adjusted, Billion TL, %)



Source: FINNET

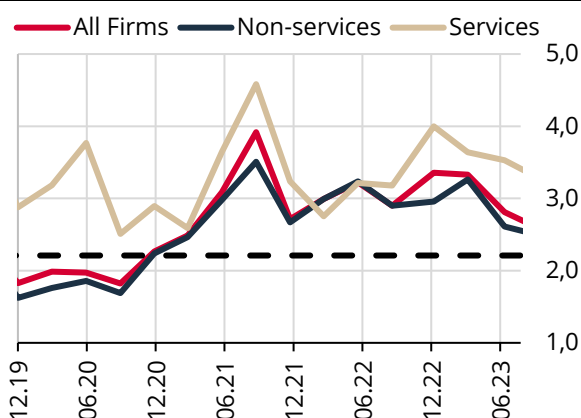
Last Observation: 06.23

Note: Based on the latest data, 296 corporate sector firms were included in the analysis. Cash is the sum of liquid assets and stocks for all firms. The cash ratio is calculated as the ratio of the sum of liquid assets and stocks to assets for all firms. Median is the median value of the cash ratios calculated for all firms. The firm ratio gives the ratio of firms with a cash ratio above 20% to the total number of firms. Liquid assets are indexed to 100 for end-2019. Dashed lines show the historical average of the relevant data. Historical averages are calculated for the 2012Q1-2021Q4 period.

### Prospects for firms' debt repayment ability remain strong.

Due to the stable exchange rate and low financing costs, the financing expenses coverage ratio (FECR) of firms quoted on the BIST remained quite strong throughout 2022 and this trend was maintained in the first half of the year (Chart III.2.12). In the current Report period, firms' operating profits can meet financing costs for 2.8 years. In the second quarter of 2023, operating profits of firms operating in services and non-services sectors were equal to 3.5 and 2.6 years of financing costs, respectively. In the current Report period, firms with an FECR above the threshold level of 1.5 have a share of 66% among all firms. A majority of firms in the industrial and services sectors have an FECR above the threshold level of 1.5, implying that risks are limited in terms of firms' debt repayment ability and banks' asset quality (Chart III.2.13).

**Chart III.2.12: BIST Firms' Financial Expenses Coverage Ratio** (Median, Ratio)

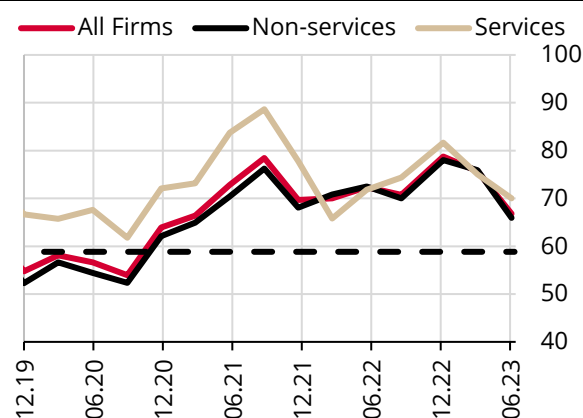


Source: FINNET

Last Observation: 06.23

Note: Financial Expenses Coverage Ratio (FECR) = EBITDA/Financial Expenses. The analysis includes 296 corporate sector firms. The dashed line shows the historical average of the financial expenses coverage ratio of all firms. Historical averages are calculated for the 2012Q1-2021Q4 period.

**Chart III.2.13: Share of Firms with Financial Expenses Coverage Ratio above 1.5 (%)**



Source: FINNET

Last Observation: 06.23

Note: The firm ratio shows the ratio of firms with a financial expenses coverage ratio above 1.5 to the total number of firms. The analysis includes 296 corporate sector firms. The dashed line shows the historical average of the firm ratio of all firms for the 2012Q1-2021Q4 period.

## IV. Financial Sector

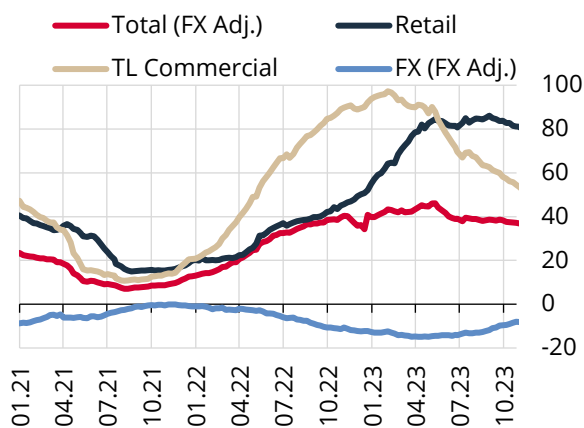
### IV.1 Credit Developments and Credit Risk

#### IV.1.1 Credit Growth

**The tightening process initiated in June, along with supportive steps such as selective credit tightening and quantitative tightening, led to a moderation in credit growth.**

Having peaked in February 2023, annual TL commercial loan growth decelerated to 55% following the rise in loan rates and the growth limit set at 2.5%. Annual retail loan growth, which gathered strong momentum in the first half of 2023, has been on the decline amid the measures introduced (Chart IV.1.1). Annualized 13-week growth indicators, which reflect recent credit trends better, imply that commercial and retail loan growth rates have converged to the growth limits set under the selective credit measures (Chart IV.1.2).

**Chart IV.1.1: Annual Loan Growth (FX-Adjusted, %)**

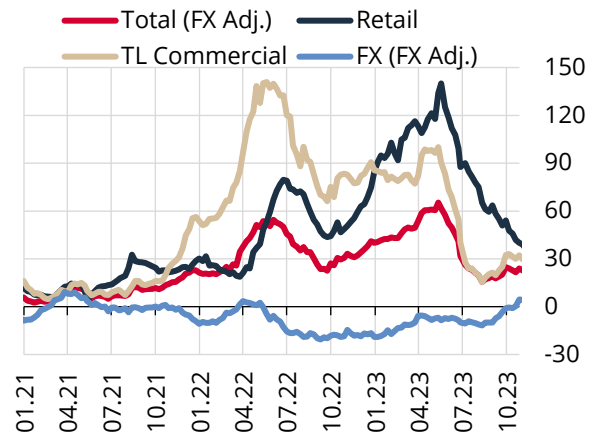


Source: CBRT

Last Observation: 27.10.2023

Note: FX-indexed loans are included in FX loans. FX-adjusted loan growth is the ratio of the sum of the yearly change in TL loans and TL 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 credit balance a year ago.

**Chart IV.1.2: 13-Week Loan Growth (Annualized, %)**



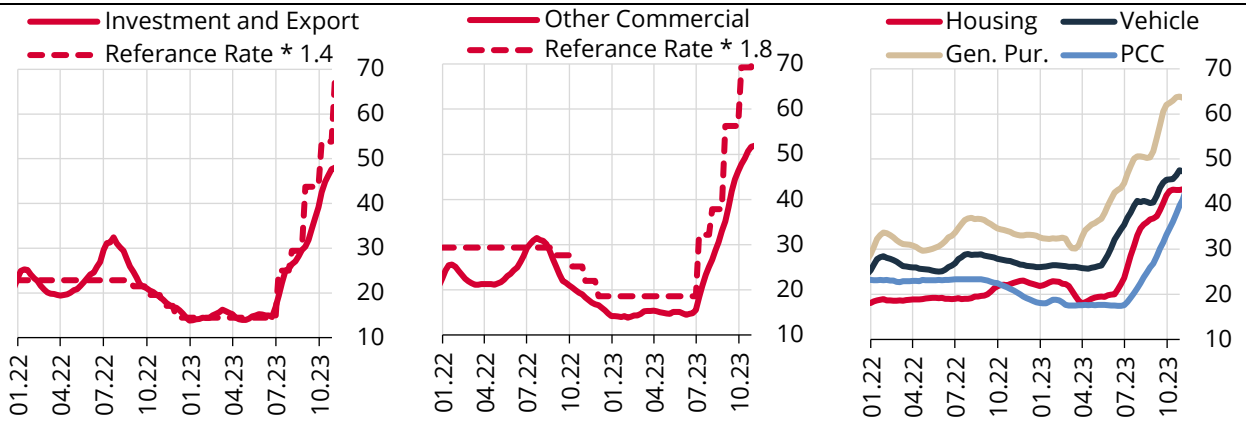
Source: CBRT

Last Observation: 27.10.2023

Note: FX-indexed loans are included in FX loans. FX-adjusted loan growth is the annualized ratio of the sum of the 13-week change in TL loans and TL equivalent of change in FX loans, measured by multiplying 13-week FX (basket) loan change with the 13-week average basket exchange rate, to the total credit balance 13 weeks previously.

**As monetary tightening has been implemented, loan rates have risen significantly, while interest rates materialize below the thresholds introduced in macroprudential regulations.**

The regulation in July set the interest rate thresholds for TL investment and export loans, other TL commercial loans and general-purpose loans at 1.4 times, 1.8 times and 2 times the annualized reference rate. In September, the application of the reference rate for other TL commercial loans was abolished. With the monetary tightening process that started in June, loan rates trended upwards, while interest rates remained below upper limits (Chart IV.1.3).

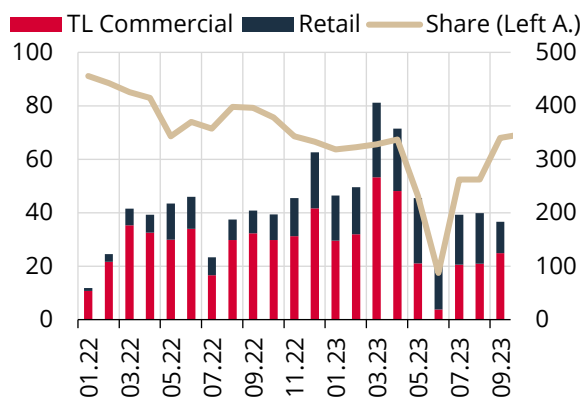
**Chart IV.1.3: TL Loan Rates (Flow, 4 WMA, %)**


Source: CBRT

Last Observation: 27.10.2023

Note: TL investment and export loan rates exclude zero-interest loans, and are calculated excluding Türk Eximbank. TL other commercial loan rates exclude corporate credit cards, legal entity overdraft accounts and zero-interest loans, and are calculated including Türk Eximbank. To reflect the cost of the loan other than interest (excluding banking and insurance transactions taxes and resource utilization support fund taxes), the costs of all items including all kinds of fees, expenses and commissions other than interest (including fees and commissions that are not reflected as income to the bank such as appraisal, mortgage and insurance services) are also taken into account in retail loan rates. Real person overdraft account interest is excluded from general purpose loan interest.

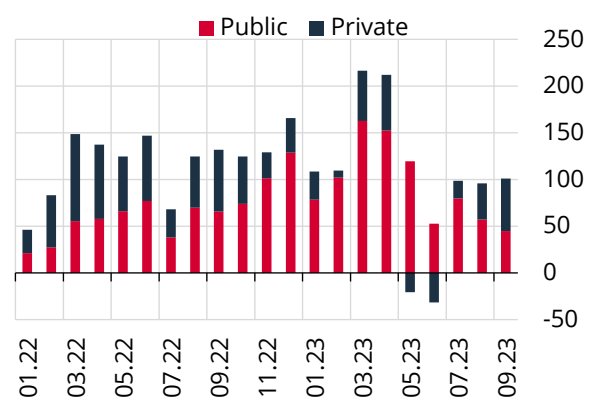
In addition to the slowdown in loan growth indicators, there has also been a rebalancing between the composition of TL commercial loans and retail loans (Chart IV.1.4). Having significantly decelerated in May and June compared to retail loans, commercial loans converged to their performance in the previous period in the following months (Chart IV.1.4). A similar rebalancing was also observed in the TL commercial loan segment between public and private banks (Chart IV.1.5). TL commercial loan balances at private banks, which contracted in May and June, recovered in the subsequent period on the back of the improvement in net interest margins.

**Chart IV.1.4: Net Credit Utilization (Billion TL, %)**


Source: CBRT

Last Observation: 09.23

Note: The share series in the left panel denote the percentage change in the TL loan balance in a given month that stemmed from TL commercial loans.

**Chart IV.1.5: TL Commercial Loans - Net Borrowing from State and Private Banks (Billion TL)**


Source: CBRT

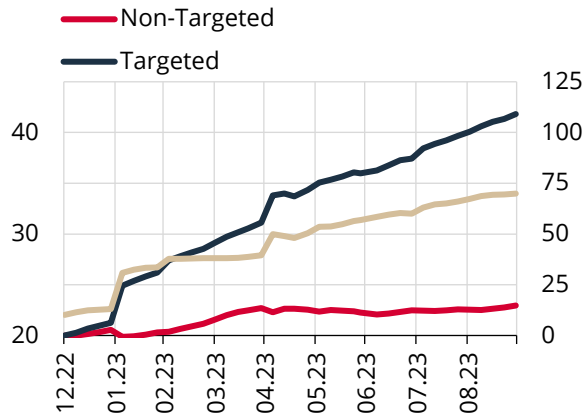
Last Observation: 09.23

### The share of export and investment loans in commercial credit utilization continues to strengthen.

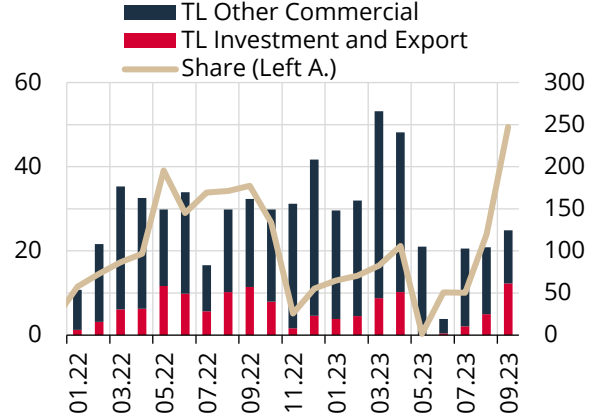
As of September 2023, the growth of commercial loans that are not subject to the growth restriction (TL-denominated investment, export, agricultural, tradesmen, loans extended to public institutions and organizations and exempted commercial loans in the earthquake zone) approached 110%, while growth of loans that fall under the restriction was 15% compared to end-2022. Accordingly, the share of non-restricted commercial loans in TL commercial loans increased by 12 bps to 34% (Chart IV.1.6). Meanwhile,

utilization of export and investment loans, which come to the fore in selective credit practices, diverged positively compared to other commercial loans and lending behavior in the sector was consistent with selective credit targets (Chart IV.1.7).

**Chart IV.1.6: TL Commercial Loan Growth**  
(Compared to end-2022, %)



**Chart IV.1.7: Net Loan Utilization in TL Commercial Loans** (Billion TL, %)

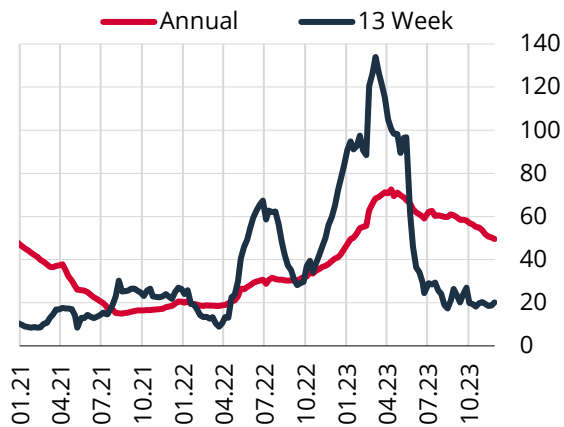


Source: CBRT Last Observation: 29.09.2023 Source: CBRT Last Observation: 09.23  
 Note: Commercial loans subject to growth restriction are calculated by subtracting investment, export, agricultural and tradesmen loans, loans extended to public institutions and organizations and exempted commercial loans in the scope of earthquake zone from TL commercial loans. While calculating the share of loans not subject to restrictions, the share in the relevant loan segment is taken into account. Growth rates are for 2022 year-end. The share series in the right panel denote the percentage of the change in TL commercial loan balances in a given month that stemmed from TL investment and export loans.

**There is a noticeable slowdown in the growth of general-purpose loans and PCCs.**

Having climbed to 130% in March 2023, the annualized 13-week growth in general-purpose loans declined to 20% in October due to the increase in general-purpose loan rates, the rise in monthly maximum interest rates on overdraft accounts and higher risk weights imposed by the BRSA in the following period (Chart IV.1.8). Annual growth in personal credit cards was strong until July, due to installments and cash advances, with credit card rates remaining below inflation and general-purpose loan rates. In the following period, the revision in interest rates for credit cards significantly curbed installment spending (Chart IV.1.9 and 10). Moreover, although the use of PCCs without installments, deemed more as a payment instrument due to increased digitalization and rising prices of goods and services, has also slowed down, it remains relatively high. (Chart IV.1.11).

**Chart IV.1.8: General-Purpose Loan Growth** (%)

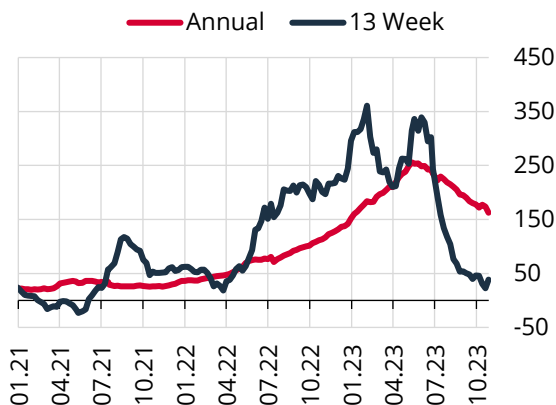


**Chart IV.1.9: Credit Card Growth** (%)



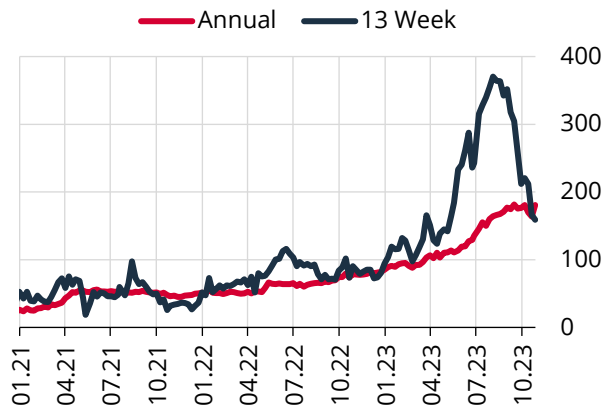
Source: CBRT Last Observation: 27.10.2023 Source: CBRT Last Observation: 27.10.2023  
 Note: The annual series show 12-month loan growth, while the 13-week series show annualized 13-week growth.

**Chart IV.1.10: Installment Loan Growth in PCCs (%)**



Source: CBRT Last Observation: 27.10.2023

**Chart IV.1.11: Non-installment Loan Growth in PCCs (%)**

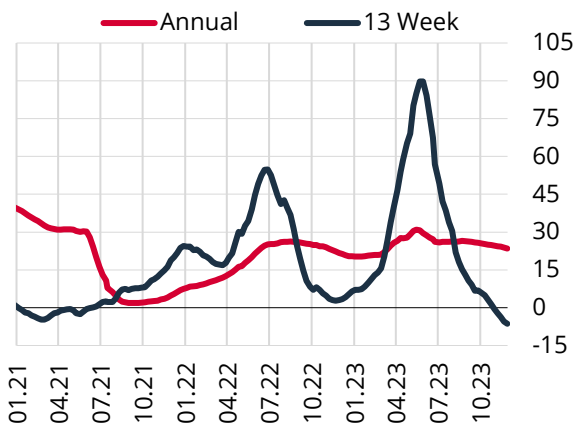


Source: CBRT Last Observation: 27.10.2023

Note: The annual series shows 12-month loan growth, while the 13-week series shows annualized 13-week growth.

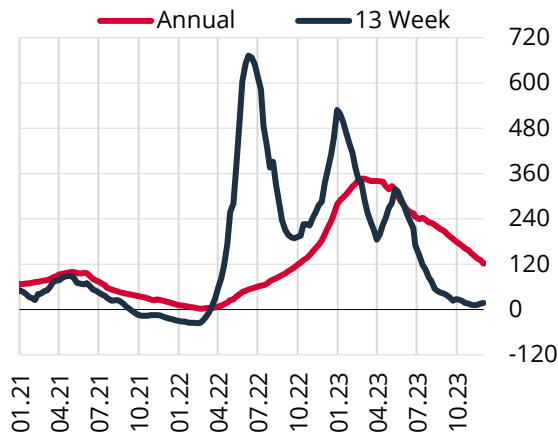
Following the "My First Home" mortgage campaign announced by state-owned banks in January 2023 and the BRSA's revision of the maximum loan amount for house purchases in February, housing loans gained momentum in the second quarter. However, the BRSA's reduction of loan-to-value ratios for second-hand house purchases in August and rising loan rates pulled the 13-week annualized housing loan growth down below 10% (Chart IV.1.12). After showing buoyancy in the first half of 2023, the growth trend in vehicle loans decelerated significantly once they became subject to the 2% monthly growth restriction under the securities maintenance regulation (Chart IV.1.13).

**Chart IV.1.12: Housing Loan Growth (%)**



Source: CBRT Last Observation: 27.10.2023

**Chart IV.1.13: Vehicle Loan Growth (%)**



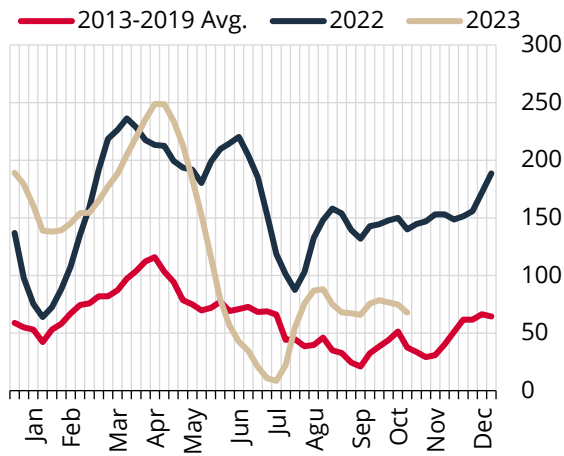
Source: CBRT Last Observation: 27.10.2023

Note: The annual series show 12-month loan growth, while the 13-week series show annualized 13-week growth.

**While the change in the inflation-adjusted commercial loan stock balances was close its historical average, the change in the inflation-adjusted consumer loan stock balances has receded below its historical average.**

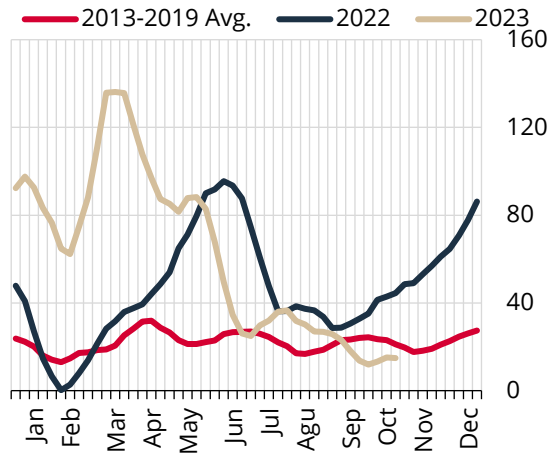
While inflation-adjusted net utilizations in TL commercial loans were well above their historical averages and 2022 realizations in the first five months of 2023, they converged to their long-term historical averages amid growth caps specified under the monetary tightening and selective credit steps. (Chart IV.1.14). After hovering well above its historical average from the last quarter of 2022 to May 2023, the change in inflation-adjusted consumer loan stock has recently fallen below its historical average in the following months due to monetary tightening, loan growth caps and higher risk weights (Chart IV.1.15).

**Chart IV.1.14: TL Commercial Loan Stock (4-Week Average Stock Change, In Real Terms, Million TL)**



Source: CBRT Last Observation: 27.10.2023

**Chart IV.1.15: Consumer Loan Stock (4-Week Average Stock Change, In Real Terms, Million TL)**

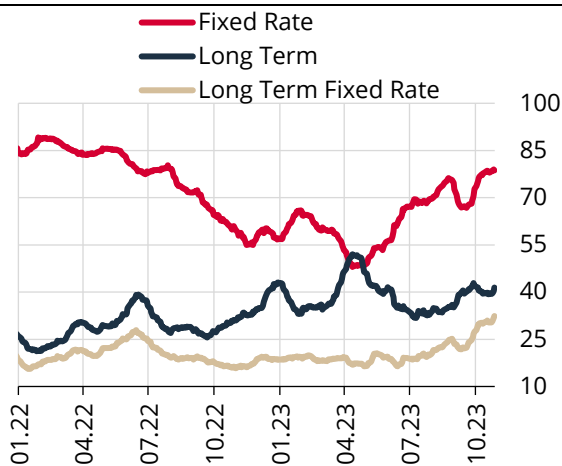


Source: CBRT Last Observation: 27.10.2023

Note: The four-week average change in stock loan balances is deflated by 4-week average PPI. Consumer loans are CPI-deflated. The PPI and CPI for January 2013 are indexed at 100.

Having declined to 48% in April, the share of fixed-rate loans in total TL commercial loan utilizations rose to 79% as of October. The share of long-term utilizations in total TL commercial loans, which was down to 25% in the third quarter of 2022, rose to 42% as of October 2023 (Chart IV.1.16). Moreover, the average maturity in TL commercial loan utilizations resumed its uptrend as of July. The average maturity of fixed-rate loan utilizations, which fell below 240 days in July, increased to almost 350 days in October (Chart IV.1.17). Banks' net interest margins having moved into positive territory is considered to have a favorable impact on long-term loan supply.

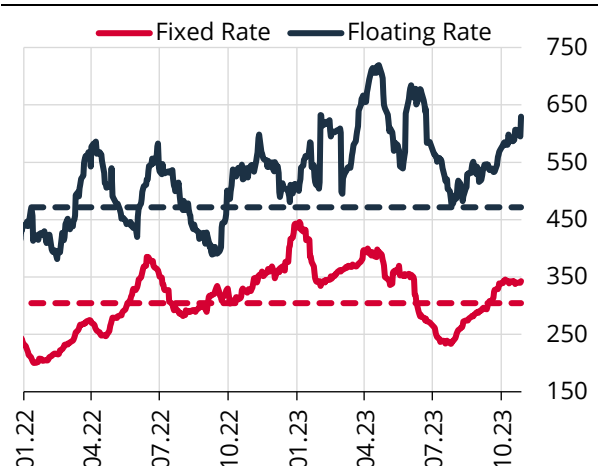
**Chart IV.1.16: TL Commercial Loan Shares by Interest Rate and Maturity (Flow, 20 DMA, %)**



Source: CBRT Last Observation: 27.10.23

Note: Long-term denotes loan disbursements over 365-day maturity. Calculation excludes disbursements with zero maturity, zero-interest and non-reported interest rate structure. Shares by interest rate and maturity in total utilizations are calculated.

**Chart IV.1.17: TL Commercial Loans Average Maturity by Interest Rate (Flow, 20 DMA, Days, Original Maturity)**



Source: CBRT Last Observation: 27.10.2023

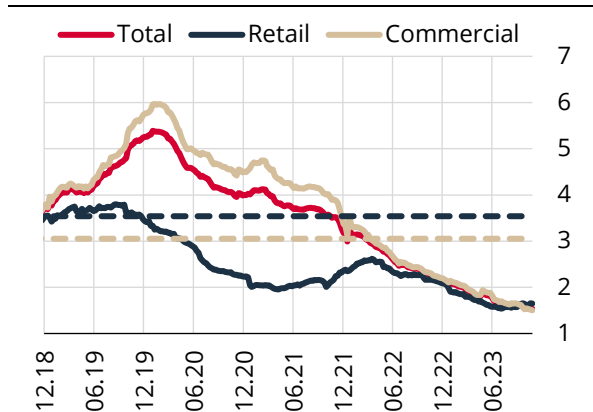
Note: Calculation excludes disbursements with zero maturity, zero-interest and non-reported interest rate structure. Dashed lines show the average of the series in the relevant color for the May 2020 - October 2023 period.

### IV.1.2 Credit Risk

#### The resilient outlook of the banking sector’s asset quality has been preserved.

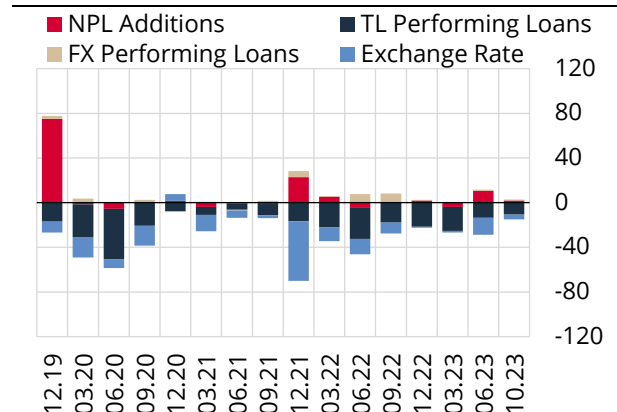
The banking sector’s NPL ratio continued to fall until late June. Having settled on a flat course at 1.5% due to the slowdown in credit growth after the monetary policy tightening process, the NPL ratio remained below historical averages across all credit segments (Chart IV.1.18). An analysis of the factors contributing to the change in the total NPL ratio reveals that TL loan growth and the appreciation of the exchange rate supported the favorable course in the NPL ratio, the post-June NPL balance remained unchanged and new NPL additions were limited (Chart IV.1.19).

**Chart IV.1.18: NPL Ratios (%)**



Source: CBRT  
Last Observation: 27.10.23  
Note: Dashed lines indicate the average of the relevant series for the 2012-2019 period.

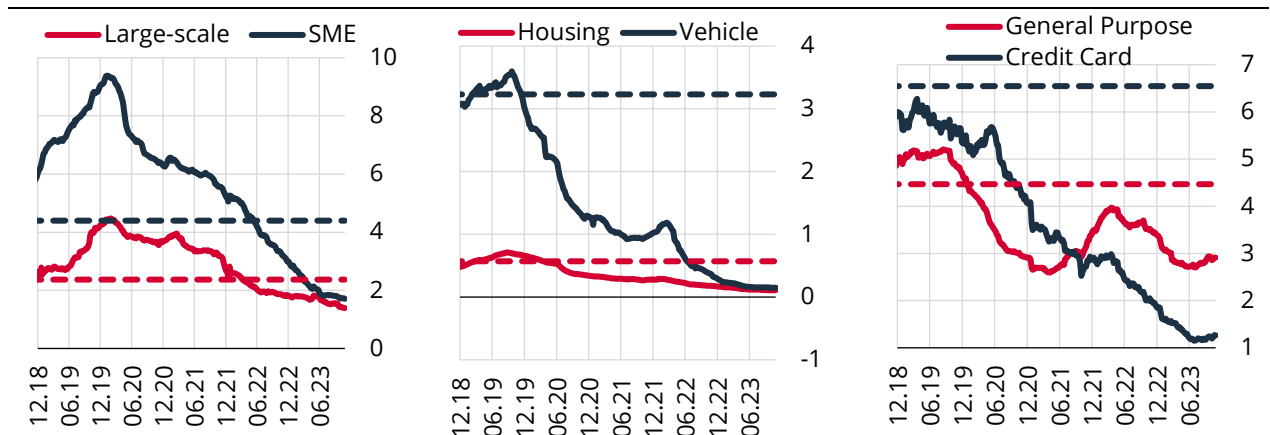
**Chart IV.1.19: Contributions to the Change in NPL Ratios (3-Month Total Contributions, bps)**



Source: CBRT  
Last Observation: 10.23  
Note: Contributions show the total contribution amount in the relevant three months, and the last column includes the contribution total from 1 July to 27 October. For technical details on the method, see Financial Stability Report of November 2018, Box IV.1

The decline in the corporate NPL ratio was also observed in SMEs and non-SME firms, with the related NPL ratios receding significantly below the previous period averages at 1.7% and 1.4%, respectively. Retail loan NPL ratios also remained below their historical averages. As retail loan growth was mostly driven by credit cards, the improvement in retail loan NPL ratios is mainly attributed to credit cards. In 2023Q2, general-purpose loans were subjected to the securities maintenance regulation and a growth cap, which resulted in a slowdown in general-purpose loan growth. Therefore, the NPL ratio of general-purpose loans increased to a limited extent in the current Report period. Having rather low NPL ratios due to their collateralized structures and regulations limiting credit risk such as loan-to-value ratios, NPL ratios of housing and vehicle loans remained below the historical average at 0.1 (Chart IV.1.20).

**Chart IV.1.20: NPL Ratios in the Breakdown of Credit Types (%)**

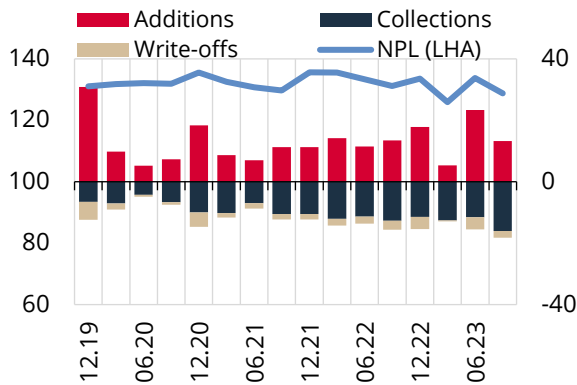


Source: CBRT  
Last Observation: 27.10.23  
Note: Dashed lines indicate the average of the relevant series for the 2012-2019 period.

**Corporate NPL additions and collections were on a balanced course, while retail NPL additions exceeded retail NPL collections.**

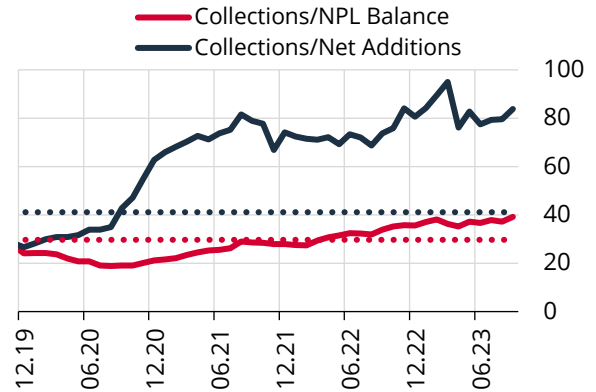
Robust economic activity, rising asset prices and easing liquidity conditions led to a significant increase in NPL collections after the second half of 2022 (Chart IV.1.21). In the third quarter of 2023, the ratio of corporate NPL collections to net NPL additions was far above its long-term average. Meanwhile, the share of collections from the NPL balance remains above its long-term average due to strong collections and asset write-offs (Chart IV.1.22).

**Chart IV.1.21: Components of Corporate NPL Balance** (Billion TL)



Source: CBRT Last Observation: 09.23  
 Note: Series for collections and net additions are based on three-month totals. The last column shows additional collections and write-offs in the July-September period. Additions are calculated by subtracting the migrations to performing loans from new NPL additions. An outlier was excluded from the data for 2022.

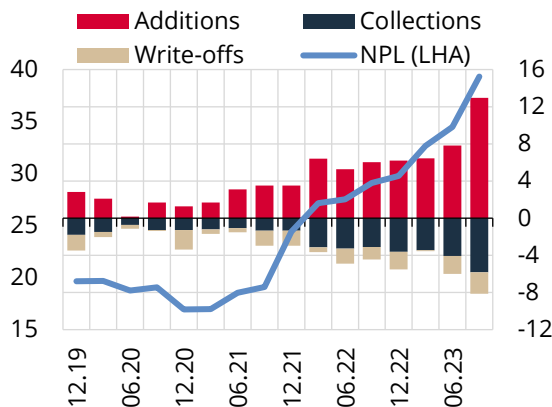
**Chart IV.1.22: Corporate NPL Collection Rates** (%)



Source: CBRT Last Observation: 09.23  
 Note: The Collections/NPL Balance ratio is calculated as the ratio of 12-month total NPL collections to 12-month average NPL balance. The Collections/Net Additions ratio shows the ratio of 12-month total NPL collections to 12-month total net NPL additions. Dashed lines indicate the average of the relevant series for the 2014-2019 period. An outlier was excluded from the data for 2022.

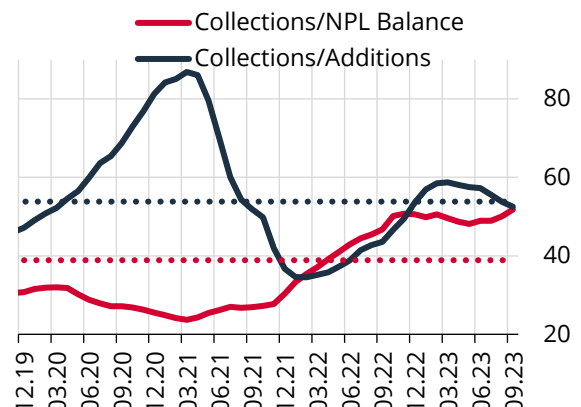
As new NPL additions exceeded NPL collections and asset write-offs, the retail NPL balance is partially rising (Chart IV.1.23). The ratio of retail NPL collections to the NPL balance is hovering above its long-term average, and the ratio of collections to additions is materializing close to the average (Chart IV.1.24).

**Chart IV.1.23: Components of Retail NPL Balance** (Billion TL)



Source: CBRT Last Observation: 09.23  
 Note: Series for collections and net additions are based on three-month totals. The last column shows collections, additions and write-offs in the July-September period. Additions are calculated by subtracting the migrations to performing loans from new NPL additions.

**Chart IV.1.24: Retail NPL Collection Rates** (%)



Source: CBRT Last Observation: 09.23  
 Note: The Collections/NPL Balance ratio is calculated as the ratio of 12-month total NPL collections to 12-month average NPL balance. The Collections/Net Additions ratio shows the ratio of 12-month total NPL collections to 12-month total net NPL additions. Dashed lines indicate the average of the relevant series for the 2014-2019 period.

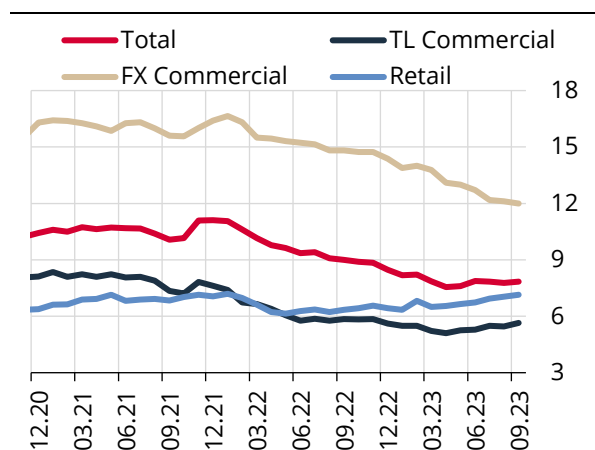


**While Stage 2 loan ratios for corporate loans continue to improve, those of retail loans have increased slightly. A notable portion of Stage 2 corporate and retail loans consists of non-overdue loans.**

The share of Stage 2 loans in total loans declined from 2022 to the second half of 2023. That said, this downtrend has flattened since the second half of 2023 on the back of retail loans (Chart IV.1.25). The Stage 2 ratios of FX corporate loans have been hovering above other loan types for a long time. This is attributed to the classification in Stage 2 of firms with low FX income that faced difficulties in payment following the exchange rate developments in 2018 and whose FX loans were restructured. Additionally, the growth of loans predominantly in TL currency also kept ratios of Stage 2 loans in TL low.

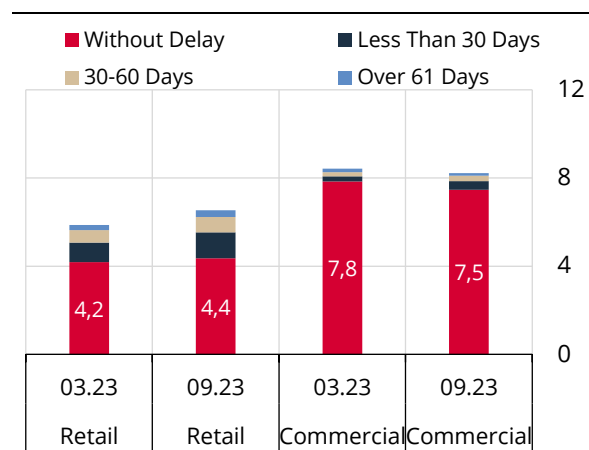
Banks have been using the IFRS-9 standard for loan classification since 2018 and even if the loans are not past due, they monitor them under Stage 2 if their models suggest a significant increase in credit risk. Accordingly, 80% of Stage 2 loans are not overdue but classified under Stage 2 loans due to a significant increase in credit risk based on banks' IFRS-9 models. This ratio stands at 91% for corporate loans and 67% for retail loans. The decline in the Stage 2 ratio of corporate loans in the current Report period is associated with the decrease in the share of overdue loans. The rise in the Stage 2 ratio of retail loans was mainly driven by the increase in overdue loans (Chart IV.1.26).

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



Source: CBRT Last Observation: 09.23  
 Note: Series show the ratio of Stage 2 loans to gross loans.

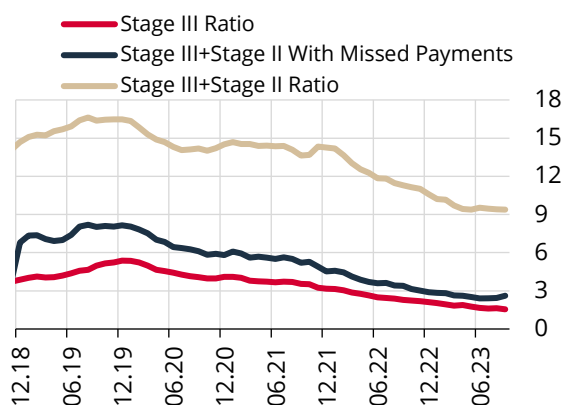
**Chart IV.1.26: Ratio of Stage 2 Loans by Number of Days in Arrears (%)**



Source: CBRT Last Observation: 09.23  
 Note: Series show the ratio of Stage 2 loans to gross loans by number of days in arrears.

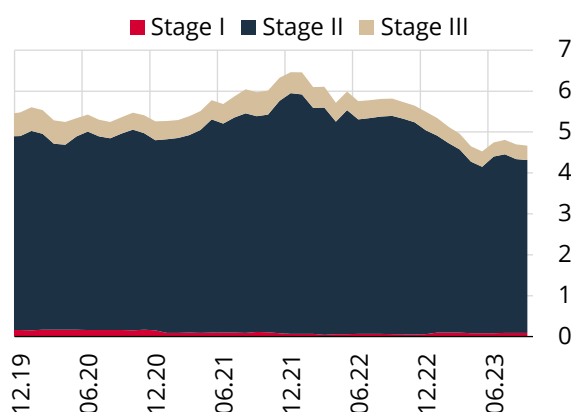
The share of the sum of Stage 2 and NPLs in gross loans as a measure of total credit risk reveals that this ratio has decreased by 500 bps to 9.4% since the end of 2021 (Chart IV.1.27). The share of the sum of NPLs and overdue Stage 2 loans in gross loans, monitored as a narrower measure of credit risk, fell by 200 bps compared to end-2021 and stood at 2.6% in September. The improvement seen in all credit risk indicators in the relevant period was mainly determined by improved balance sheets and strong liquidity for corporates, and by wage adjustments and the robust employment outlook for individuals.

The share of restructured loans to gross loans declined to 4.7% (Chart IV.1.28). Of restructured loans, 91% are monitored under Stage 2, 8% are monitored under NPL and a limited portion under the Stage 1 group. Therefore, it is assessed that the banking sector prudently monitors restructured loans under the Stage 2 category, has already earmarked high provisions for such loans and that banking balance sheets are resilient to risks arising from these loans.

**Chart IV.1.27: Asset Quality Outlook (%)**


Source: CBRT Last Observation: 09.23

Note: Asset quality indicators are proportioned to gross loans.

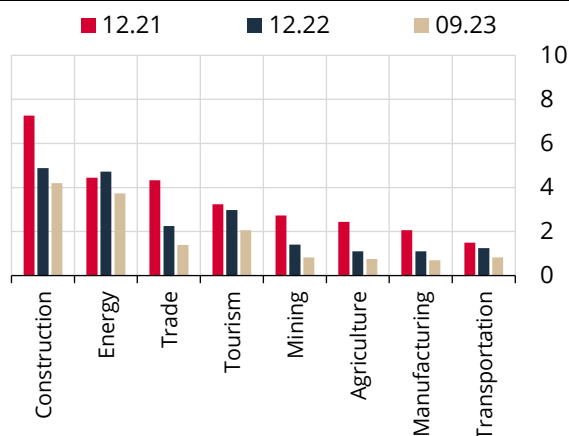
**Chart IV.1.28: Restructured Loans (%)**


Source: CBRT Last Observation: 09.23

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 close monitoring loans.

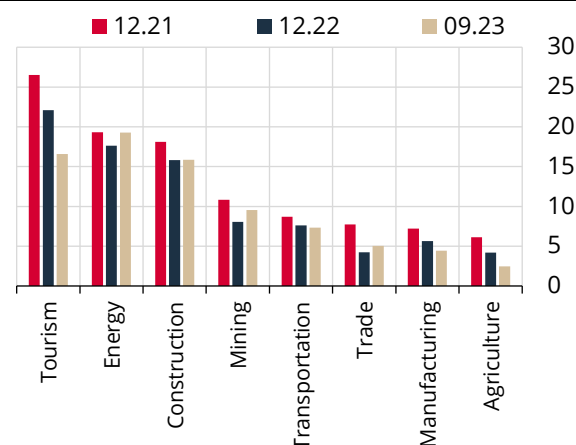
**The improvement in corporate NPL and Stage 2 ratios is broad-based across all subsectors.**

According to a sectoral breakdown of the credit risk outlook, there is no sector with a significant increase in credit risk. Compared to end-2021 and 2022, the NPL ratios of all sectors improved, with the largest improvement seen in the construction, trade and mining sectors (Chart IV.1.29). However, Stage 2 loan ratios increased in the energy and mining sectors compared to end-2022. Because of exchange rate developments, the banking sector seems to have a more cautious stance towards the energy and mining sectors, which borrow predominantly in FX (Chart IV.1.30).

**Chart IV.1.29: NPL Ratios by Sectors (%)**


Source: CBRT Last Observation: 09.23

Note: Sectors are listed in a descending order based on their NPL and Stage 2 loan ratios at the end of 2021.

**Chart IV.1.30: Stage 2 Loan Ratios by Sectors (%)**


Source: CBRT

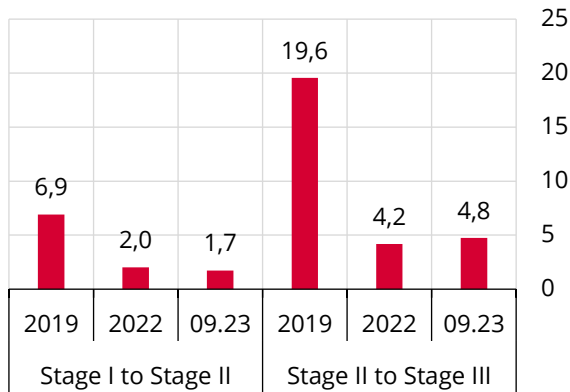
Last Observation: 09.23

**Probabilities of loans transitioning to Stage 2 or NPL categories remain weak. Banks sustain their pandemic-driven prudent provisioning policies.**

To monitor the change in credit riskiness, the probabilities of transition from Stage 1 to Stage 2 and from Stage 2 to NPL are monitored. According to the 2019 average, transition probabilities declined significantly for both from Stage 1 to Stage 2 and from Stage 2 to NPLs. However, the 2022 average indicates that the probability of transition from Stage 1 to Stage 2 for commercial loans continued to decline, while that from Stage 2 to NPL increased slightly (Chart IV.1.31).

The uptrend in provision ratios, which banks started to increase as a precautionary measure after the pandemic, has continued in the current Report period. Provision ratios for Stage 1, Stage 2 and NPL loans are 0.9%, 23.2% and 85.7%, respectively (Chart IV.1.32). The provision ratio for Stage 2 loans and restructured loans is 29.4%, which is above the provision ratio for other Stage 2 loans (15.9%). High provisioning by banks in periods of strong loan repayments implies that any impact to their balance sheets and profitability even in case of a failure to fully collect such loans will be limited in the upcoming period.

**Chart IV.1.31: Transition Probabilities**  
(Commercial Loans, %)

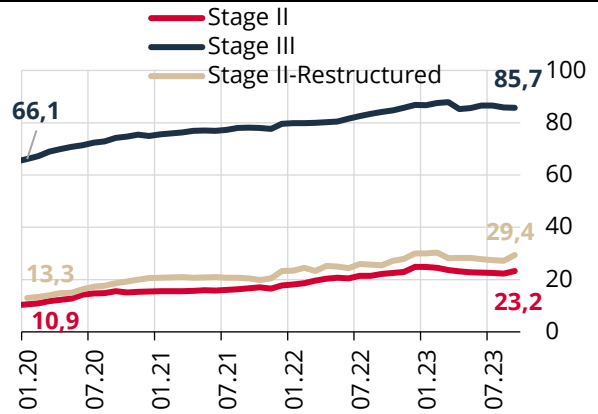


Source: CBRT

Last Observation: 09.23

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. Analysis was performed for commercial loans whose tax IDs were reported.

**Chart IV.1.32: Expected Loss Provisioning Ratio (%)**



Source: CBRT

Last Observation: 09.23

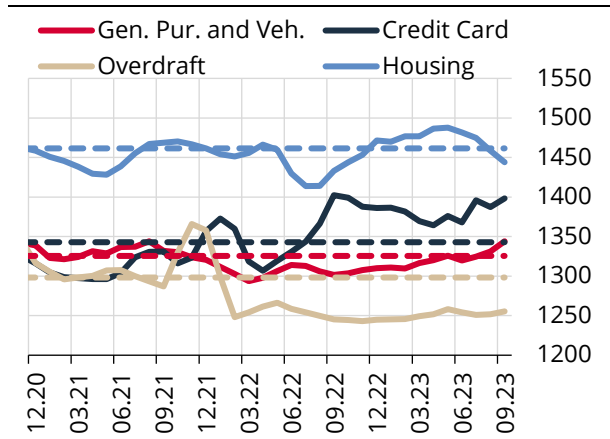
Note: Expected loss provisioning ratio is the ratio of the expected loss provision of the loan in the related category to the loan amount in that category.

### Customers' riskiness profile is improving amid macroprudential measures.

An analysis of the individual credit ratings of loan applicants reveals that the credit ratings of personal credit card, general purpose and vehicle loan customers are trending upwards and above the average of the previous period. Amid macroprudential policies, the conditions for general-purpose and vehicle loans are tightened in terms of maturity, interest rate and amount. As a result, individuals with relatively better repayment ability tend to apply for loans. On the other hand, the monthly contractual interest rate on PCCs remaining below the inflation rate in the first half of the year led customers with high financial literacy and a stronger credit risk status to increase the use of PCCs and improved the risk profile in this segment. The improvement in the risk profile for housing loans is attributed to the fact that customers with higher liquidity and thus higher repayment capacity applied for loans due to rising loan costs (Chart IV.1.33).

The conversion performance of general-purpose loans to NPL starting from the year of disbursement can be monitored by aging analysis. Accordingly, the general-purpose loans extended in 2022 and 2023 showed a better NPL performance in the quarters following their disbursements compared to the previous year average and 2021 (Chart IV.1.34). General-purpose loans extended in 2020 performed better than previous years in the first five quarters, which can be attributed to loan installment deferrals as well as loan classification flexibilities that were in effect until September 2021.

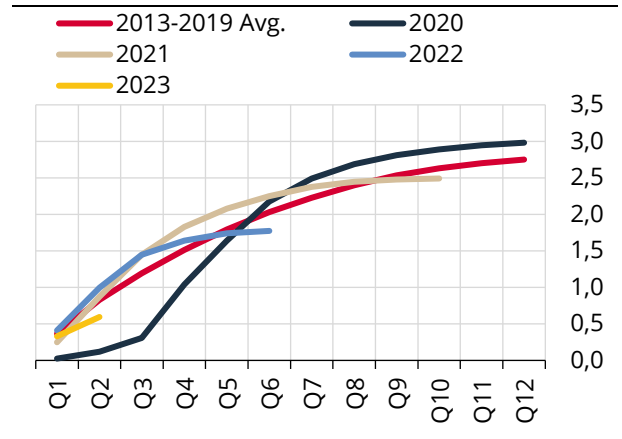
**Chart IV.1.33: Personal Credit Rating (3-Month MA)**



Source: KKB Last Observation: 09.23

Note: The chart shows the average credit rating of credit applicants in the respective period. Dashed lines show the average of the January 2020-September 2023 period.

**Chart IV.1.34: General-Purpose Loan Aging Analysis (%)**



Source: CBRT Last Observation: 09.23

Note: Aging analysis show the cumulative development of NPL ratios for loans extended in the respective year across quarters.

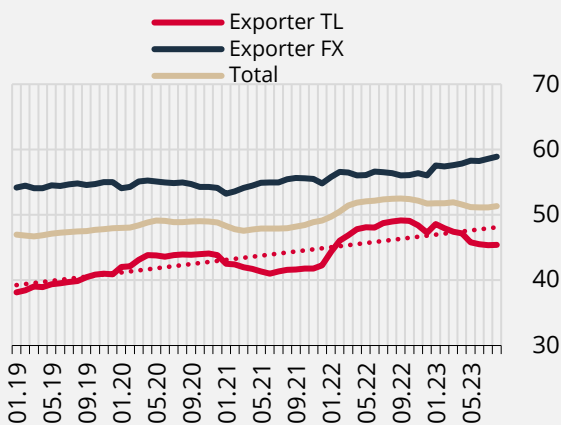
## Box IV.1.I: Exporting Firm Credits and Their Contribution to Banks' Asset Quality

Due to the critical role of exports in terms of the current account balance, their positive contribution to economic activity and employment accompanied by their productivity gains from access to global markets, exporting firms' access to financing at affordable costs has been supported by policymakers in recent years. Moreover, exporting firms have become the preferred group of firms for banks' credit allocation due to their development capacity, flexibility in market and income diversification, and relatively higher protection against financial risks. Firstly, this box analyzes the development of the volume and share of exporting firms in banks' loan portfolios with regard to targeted credit policies to support exporters. Then, the positive contribution of loans lent to exporting firms to banks' asset quality will be analyzed in terms of NPL and close monitoring indicators compared to other firms.

### Exporting Firms' Credit Utilization

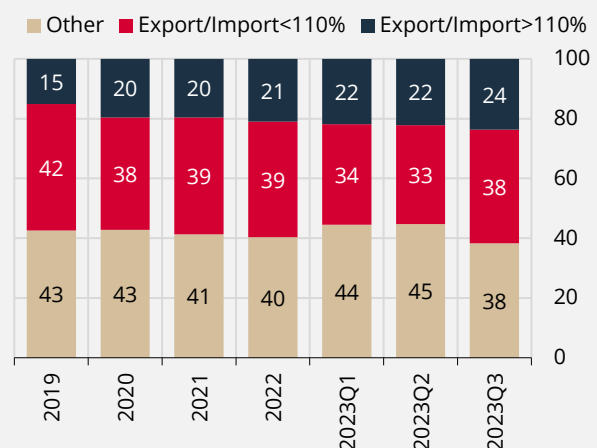
Due to the introduction of TL-denominated rediscount credits in the last quarter of 2021, the exemption of export credits and SME credits from the regulations requiring reserve requirements and then securities maintenance in the second half of 2022 accompanied by the decline in credit costs in the related periods, credit utilization of exporting firms recorded notable growth. In the second half of 2023, the exemption of export and investment credits from growth limits within the scope of selective credit policies implemented as a step to support the tight monetary policy contributed to the favorable course of export credits as banks continued to favor exporting firms in credit extensions.

**Chart IV.1.I.1: Share of Stock Credits of Exporting Firms by Currency (% , 3 MMA)**



Sources: CBRT, Ministry of Trade Last Observation: 08.23

**Chart IV.1.I.2: Firms' Share in Flow Credits (%)**



Sources: CBRT, Ministry of Trade Last Observation: 08.23

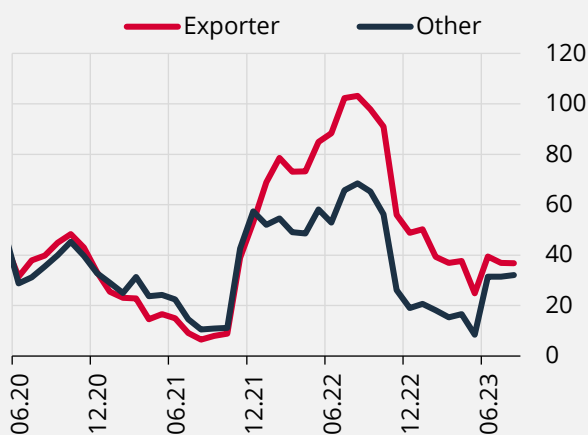
Note: Calculations are based on TL and FX cash loans. The definition of an exporting firm includes firms with goods export revenues in the three fiscal years preceding the loan period, while the definitions of export/import > 110 and export/import < 110 include firms with goods export/import ratios above and below 110%, respectively, in the previous three fiscal years. The years 2018-2022 show the distribution of average current loans disbursed within the 12 months of the relevant year. 2023 is quarterly, 2023Q3 covers July and August.

The share of exporting firms in stock loans expanded in the second quarter of 2021, exceeded the share of other firms after February 2022, and reached 51.3% in August 2023. This rise in the share of exporting firms in financing was mainly driven by TL loans (Chart IV.1.I.1). While the share of exporters in TL commercial loans was 38% in early 2019, it went up to 45% as of August 2023. Meanwhile, the share of exporting firms in FX loans increased from 54% to 59% in the same period. As for the distribution of flow credits, the share of non-exporting (other) firms in total flow credits, which was 43% in 2019, dropped to 38% in the third quarter of 2023 on the back of policy steps prioritizing exporters and banks' appetite to supply lending to exporting firms (Chart IV.1.I.2). The share of exporters (the sum of exporters and net exporters) rose by an average of one point per year between 2019 and 2022, from 57% to 60%, and to 62% by the third quarter of 2023. The recent hike in the share of exporters in credit disbursements was mainly driven by net exporters, which are important to the current account balance. The total

loan share of net exporters with an export/import ratio above 110% in the last three fiscal years has increased in recent months to 24% thanks to selective credit policies.

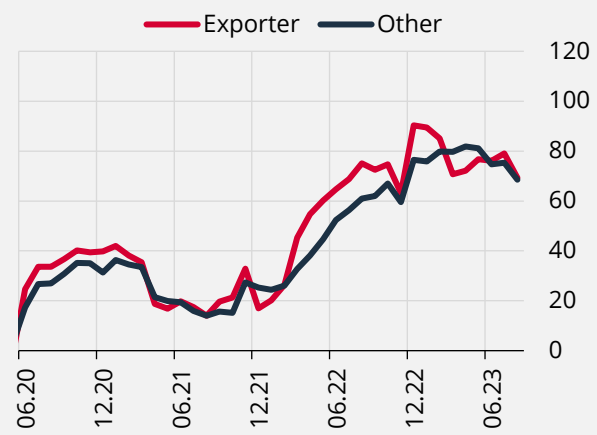
An analysis by segments reveals that in the large-scale firm segment, loan growth of exporters and other firms followed a similar course until 2022, but loan growth of exporters posted an upside divergence from other firms due to selective credit policies in the succeeding period (Chart IV.1.1.3). Therefore, the share of exporting firms' loans in large-scale firms' loans increased from 59.1% in January 2020 to 64.8% in August 2023. Similar to large-scale firms, the credit growth of exporting SMEs and other firms moved in tandem until 2022, whereas the credit growth of exporter SMEs diverged slightly in the following period (Chart IV.1.1.4). This is believed to be led by the inclusion of all exporting and non-exporting SME loans in the definition of selective credits regarding the policies implemented from April 2022 to May 2023. In September 2022, the change in the definition of selective credits from exporters to net exporters may also have had a downside contribution to the credit growth of exporting firms.

**Chart IV.1.1.3: Annual Credit Growth of Large-Scale Firms (%)**



Sources: CBRT, Ministry of Trade Last Observation: 08.23

**Chart IV.1.1.4: Annual Credit Growth of SMEs (%)**



Sources: CBRT, Ministry of Trade Last Observation: 08.23

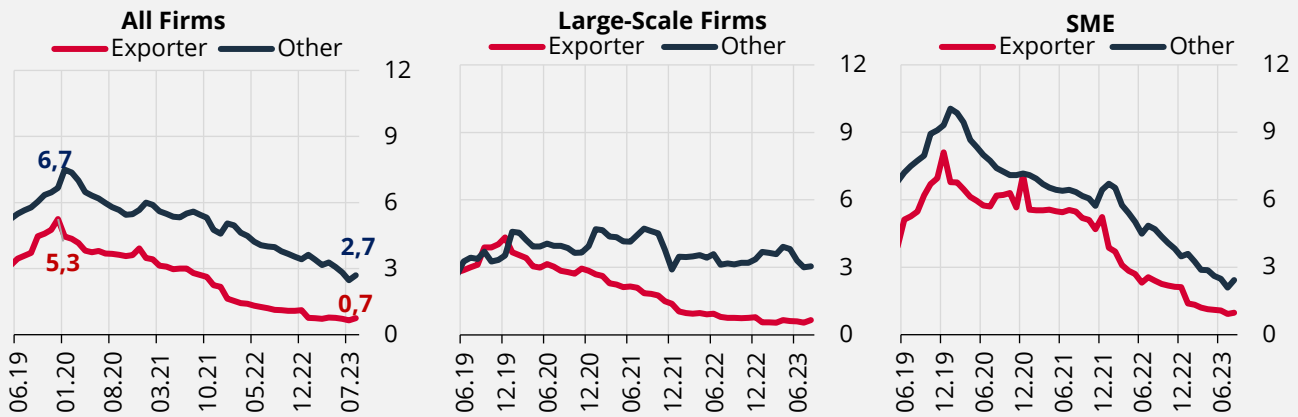
Note: Credit growth rates were calculated in consideration of performing TL and FX cash loans. The term exporting firm covers those firms with commodity export earnings within the three fiscal years preceding the period of credit extension. Clients such as tradesmen and artisans as well as lawyers, doctors and farmers are classified in the SME segment.

### Credit Risk Indicators of Exporting Firms

An analysis of corporate NPL ratios by exporters and other non-exporters reveals that exporting firms had lower NPL ratios than other firms in all months between 2019 and 2023 (Chart IV.1.1.5). NPL ratios increased in both groups amid the exchange rate developments in 2018, yet declined in the succeeding period. Compared to end-2019, the improvement in NPL ratios was more pronounced for exporting firms. In this period, the higher loan growth of exporter firms compared to other firms also contributed to the improvement in NPL ratios. As of August 2023, the NPL ratio of exporting firms was 0.7%, while that of other firms was 2.7%.

An analysis by large-scale firms and SMEs also reveals that exporter firms have lower NPL ratios and the overall outlook remains unchanged. Regarding the large-scale corporate segment, while the NPL ratios of exporters and other firms moved parallel in 2019, NPL ratios diverged more positively as large exporting firms were more favorably affected by the change in supply chains during the pandemic and their loan growth was higher compared to other firms. Regarding the SME segment, it is noteworthy that both exporting firms and non-exporters were affected by the exchange rate developments in 2018 to a greater extent compared to large firms. However, similar improvements were seen in NPL ratios of exporters and other SMEs after 2019.

**Chart IV.1.1.5: Firms' NPL Ratios (%)**



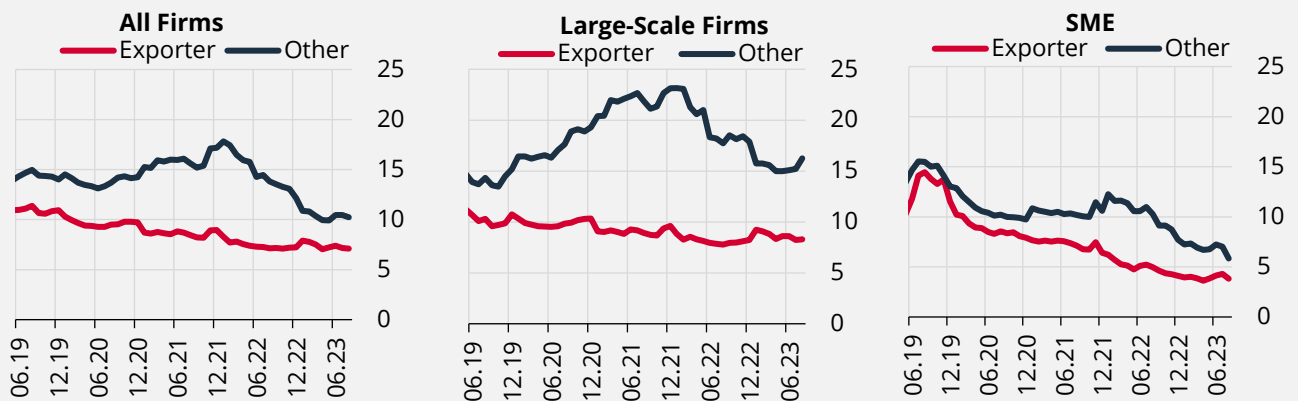
Sources: CBRT, Ministry of Trade

Last Observation: 08.23

Note: The term exporting firm covers those firms with commodity export earnings within the three fiscal years preceding the period of credit extension. Clients such as tradesmen and artisans as well as lawyers, doctors and farmers are classified in the SME segment.

Similar to NPL ratios, exporting firms outperformed other firms in ratios of loans under close monitoring (Chart IV.1.1.6). It is noteworthy that other non-exporter firms were adversely affected by the restrictions during the pandemic and their ratios of loans under close monitoring increased, while those ratios of exporting firms did not display a significant change in this period. In the case of both large-scale firms and SMEs, the ratios of loans under close monitoring of exporter firms diverged more favorably. While the ratios of loans under close monitoring of large-scale firms are relatively flat, those ratios of non-exporting firms are more volatile and more sensitive to macroeconomic developments. The higher ratios in loans under close monitoring of large-scale firms compared to SMEs may be associated with the higher share of FX in these firms' loans (Credit Developments and Credit Risk, Chart 24). On the other hand, the fact that loans of large-scale firms are restructured more often than those of SMEs is another factor that may lead to higher ratios in loans under close monitoring. In SMEs, both exporters' and other firms' loan ratios under close monitoring improved compared to 2019, which can be attributed to the financing facilities provided to SMEs after the pandemic.

**Chart IV.1.1.6: Firms' Ratios of Loans under Close Monitoring (%)**



Sources: CBRT, Ministry of Trade

Last Observation: 08.23

Note: The term exporting firm covers those firms with commodity export earnings within the three fiscal years preceding the period of credit extension. Clients such as tradesmen and artisans as well as lawyers, doctors and farmers are classified in the SME segment.

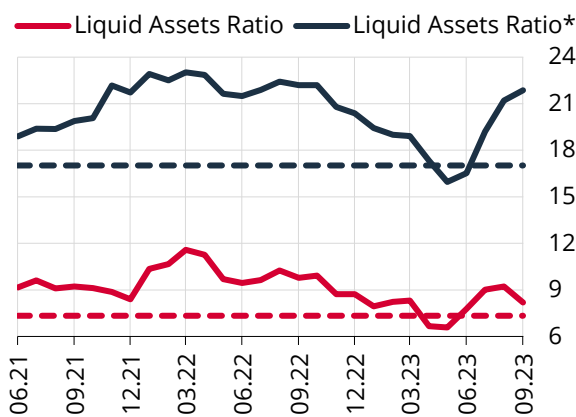
In sum, since the pandemic period, the share of exporter firms in banks' loan portfolios has increased thanks to eligible financing conditions and supportive policies. Due to exporter firms' flexibility in market/income diversification and development capacity, their asset quality outlook has diverged more favorably compared to non-exporter firms. In this context, support for exporting firms' financing conditions contributes to financial stability as well as the current account balance.

## IV.2 Liquidity Risk

**Hovering above historical averages and legal ratios, the banking sector's liquidity indicators maintain their robust outlook.**

Liquid assets, which declined slightly in the April-June period, rapidly rose above historical averages in the succeeding quarter (Chart IV.2.1). While the decline in liquid assets was mainly driven by free GDS, the ratio of free GDS returned to its previous level after June. Being a significant component of FX liquidity, banks' free account balances at foreign correspondent accounts edged up (Chart IV.2.2). Movements in liquid asset items led to a decline in liquidity coverage ratios (LCR), which are calculated weekly and are indicators of banks' ability to meet short-term potential net cash outflows with their existing stock of high-quality liquid assets. In the succeeding period, total and FX LCR increased to the level of the previous Report period and remained well above the legal limits and their historical average (Chart IV.2.3).

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

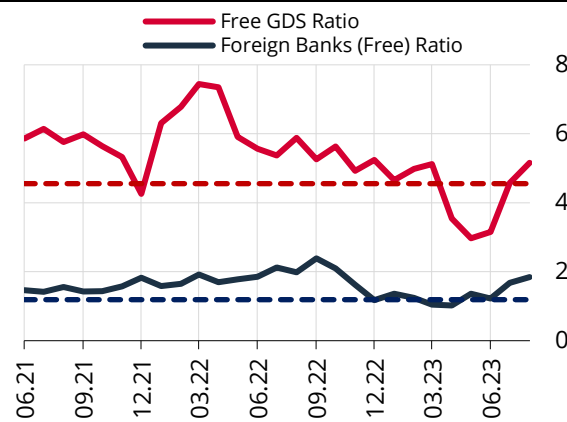


Source: CBRT

Last Observation: 09.23

Note: Liquid Assets Ratio = (Cash Reserves+ Free Accounts at Foreign Banks+ Free GDS+ Reverse Repo Receivables+ Takasbank and BIST Interbank Market) / Assets. Liquid Assets Ratio\* = (Cash Reserves+ Free Accounts at Foreign Banks+ Unencumbered GDS+ Reserve Requirements) / Assets. Dashed lines represent the average of each series between 2014 and 2019.

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



Source: CBRT

Last Observation: 09.23

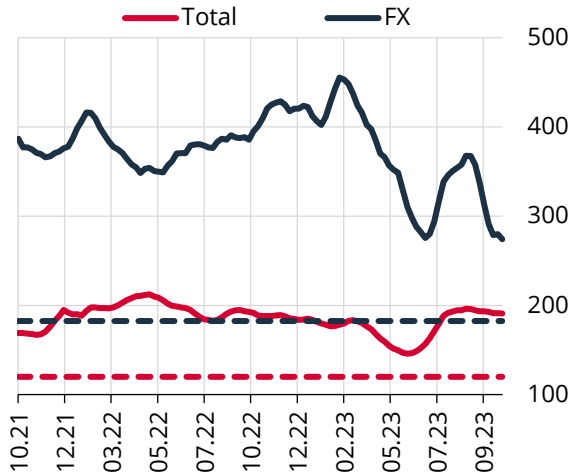
Note: Free GDS Ratio is the ratio of free government debt securities to assets. Foreign Banks (Free) Ratio = Free accounts at Foreign Banks / Assets. Dashed lines represent the average of each series between 2014 and 2019.

**The strong deposit growth in the third quarter of 2023 was the driver of the fall in loan-deposit ratios.**

The decline in loan-deposit ratios (LDR) continued in the last Report period, with the total and TL LDR converging to 76% and 90%, respectively (Chart IV.2.4). Being a stable funding source for loan funding, the deposit-weighted structure was maintained.



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

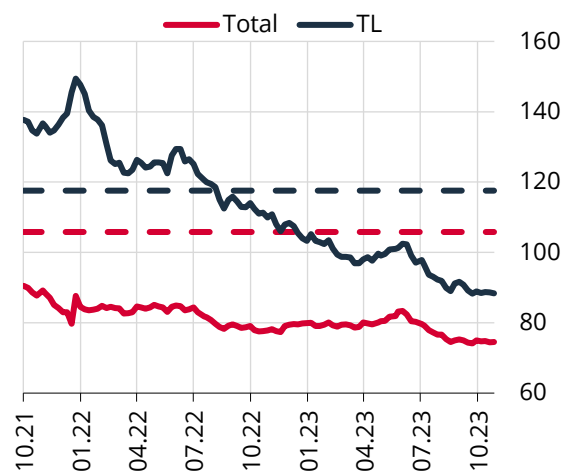


Source: CBRT

Last Observation: 27.10.23

Note: Development and investment banks (DIBs) are excluded. Based on nonconsolidated reports. Minimum legal limits for deposits are not included. Dashed lines represent the average of each series between 2014 and 2019.

**Chart IV.2.4: Loan-Deposit Ratio (%)**



Source: CBRT

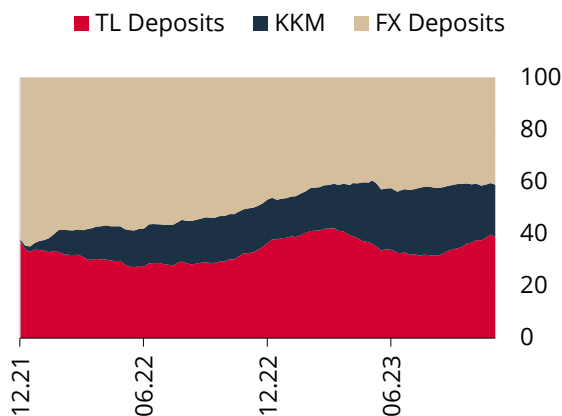
Last Observation: 27.10.23

Note: DIBs are excluded. Loans extended to banks and bank deposits are not included. Dashed lines represent the average of respective ratios between 2014 and 2019.

**Deposit growth was led by KKM accounts in the first half of 2023, while TL deposit accounts stood out in the second half following simplification steps and practices to encourage TL deposits.**

Deposit growth in the first half of 2023 was mainly driven by KKM accounts due to the KKM conversion targets adopted in the first half of 2023 and exchange rate spread payments amid exchange rate developments. Following the introduction of regulations encouraging holding TL deposits in August, the share of KKM deposits in deposit composition has decreased, while that of the TL deposits has increased (Chart IV.2.5). The steps to simplify the micro and macroprudential framework announced in the last week of June relieved the upward pressure on TL deposit rates. Since July, monetary tightening steps and regulations have pushed TL deposit rates up again, supporting the increase in TL deposit accounts (Chart IV.2.6).

**Chart IV.2.5: Distribution of Deposits (%)**

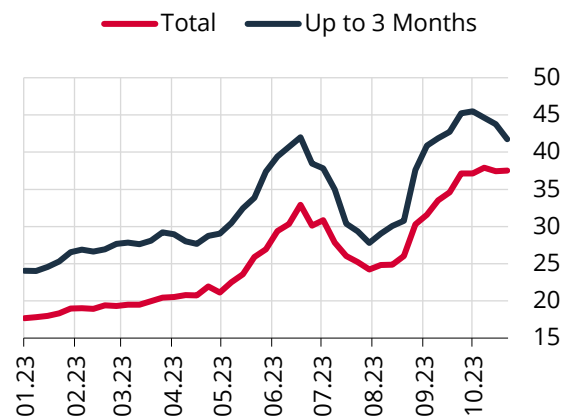


Source: CBRT

Last Observation: 27.10.23

Note: TL deposits does not include KKM balance.

**Chart IV.2.6: TL Deposit Rates (%)**



Source: CBRT

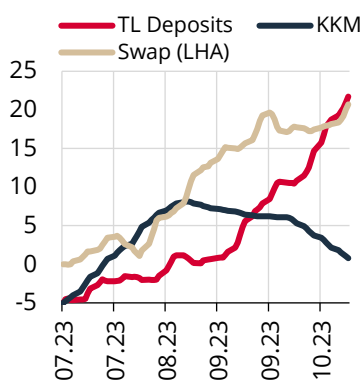
Last Observation: 27.10.23

**While banks' TL and FX liquidity surged, the CBRT's funding to the market through open market operations declined and excess TL liquidity in the system was sterilized through reserve requirement steps.**

Liquidity in the financial system increased due to strong currency inflows as of the second half of June, KKM-FX conversion realizations until the end of August and exchange rate spread payments for KKM accounts (Chart IV.2.7).

FX liquidity was mostly employed to provide TL liquidity through swap transactions due to limited FX placement facilities (Chart IV.2.8). Meanwhile, to sterilize the excess TL liquidity in the financial system, the RR rates applied to KKM accounts were raised in three steps to 30% for KKM accounts with maturities up to 6 months (including 6 months). Moreover, an additional 4% TL RR was applied to banks' FX deposit liabilities. Following the RR steps, a liquidity of approximately 1 trillion TRY was sterilized (Chart IV.2.9).

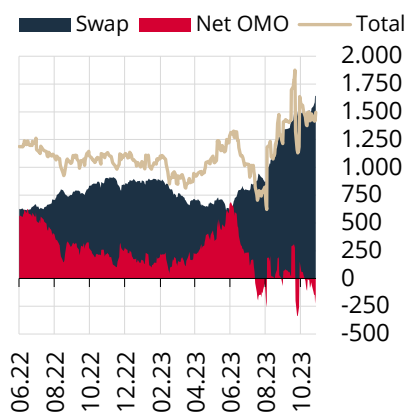
**Chart IV.2.7: Cumulative Change in Selected funding Items (Billion TL, Billion USD)**



Source: CBRT Last Observation: 27.10.23

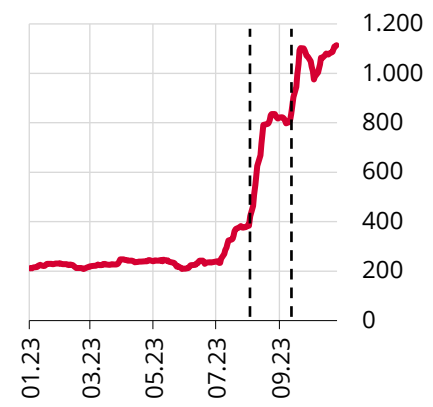
Note: Cumulative changes of the respective items from their balances dated 03.07.2023 to the last observation date is shown as 5-day moving average. TL Deposits series does not include the KKM balance.

**Chart IV.2.8: CBRT Funding (Billion TL)**



Source: CBRT Last Observation: 27.10.23

**Chart IV.2.9: TRY RR Balance (Billion TL)**



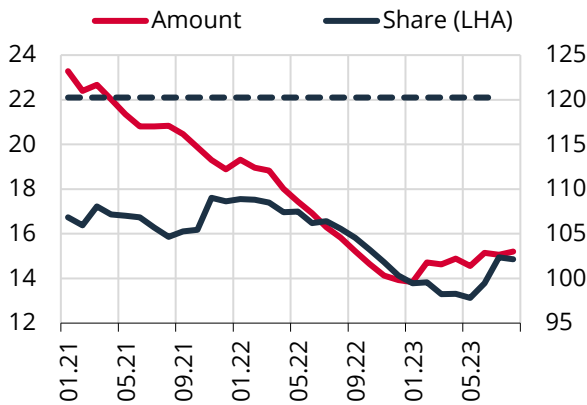
Source: CBRT Last Observation: 27.10.23

Note: 14-day moving average. Dashed lines indicate the dates of the RR decisions taken regarding the KKM accounts.

**Due to the improvement in the sovereign risk premium coupled with the decline in external financing costs, banks' external debt rollover ratios increased, and the external debt stock started to rise.**

Despite the tight outlook in global financial conditions, the improvement in the sovereign risk premium has a favorable effect on external funding costs. Accordingly, banks' external borrowing transactions were brisk and the share of external debt in total liabilities reached 15% (Chart IV.2.10). The improvement in external financing conditions spilled over into external debt maturities, and rollover of banks' medium and long-term external debt at rates exceeding 100% (Chart IV.2.11).

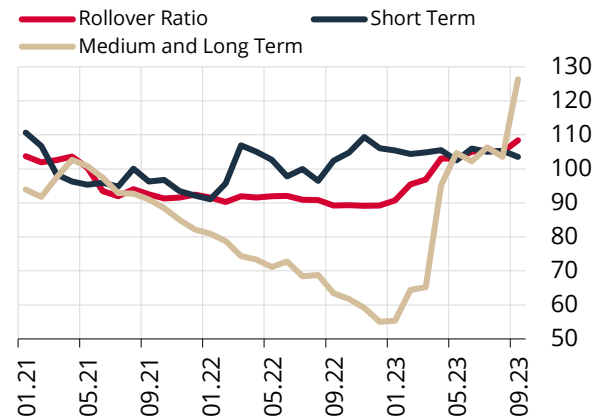
**Chart IV.2.10: External Debt and Share in Liabilities** (Billion USD, %)



Sources: CBRT, CSD Last Observation: 09.23

Note: Parity-adjusted amount. The USD equivalent of euro-denominated external debts is recalculated by the parity value of June 2018. The dashed line is the 2014-2019 average of share series.

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

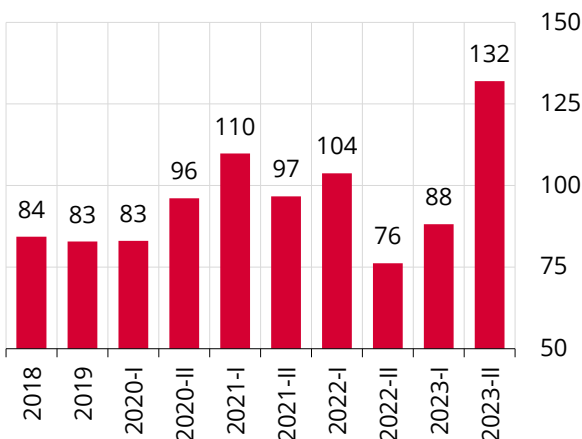


Sources: CBRT, CSD Last Observation: 09.23

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

As of the second term of 2022, the leading factor in syndicated loans for banks has been the weak course of FX loan demand and CDS-driven high financing costs, while the average renewal rate in the first syndicated loan period of 2023 was 88%. The average renewal rate for the first syndicated loan transactions in the second term of the year was 132% (Chart IV.2.12). Despite the rise in reference rates amid tighter global liquidity conditions, margins, the second factor of syndicated loan costs, posted a decline in the transactions made in the second period of 2023, pulling down the total cost (Chart IV.2.13).

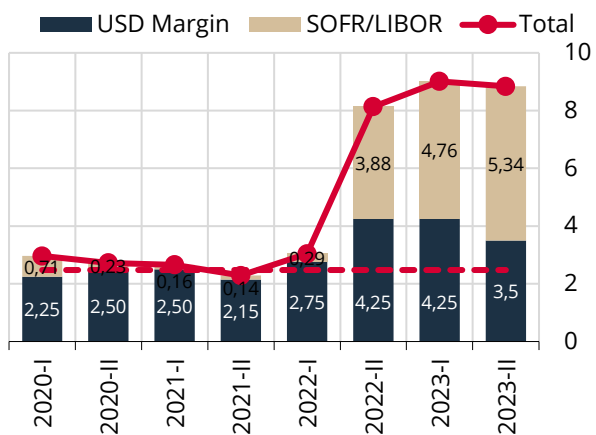
**Chart IV.2.12: Rollover Ratio of Syndicated Loans** (%)



Sources: CBRT, KAP Last Observation: 11.23

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. USD margin shows the interest rate applied in addition to the SOFR/LIBOR rate. The dashed line is the average of the total cost for 2014-2019 period.

**Chart IV.2.13: Cost Margins of Syndicated Loans** (%)

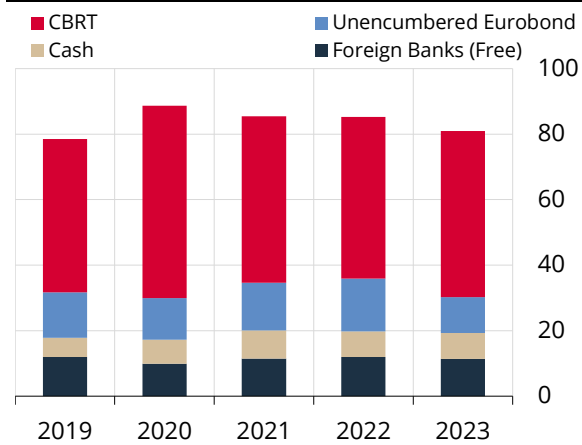


Sources: KAP, Bloomberg Last Observation: 11.23

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. USD margin shows the interest rate applied in addition to the SOFR/LIBOR rate. The dashed line is the average of the total cost for 2014-2019 period.

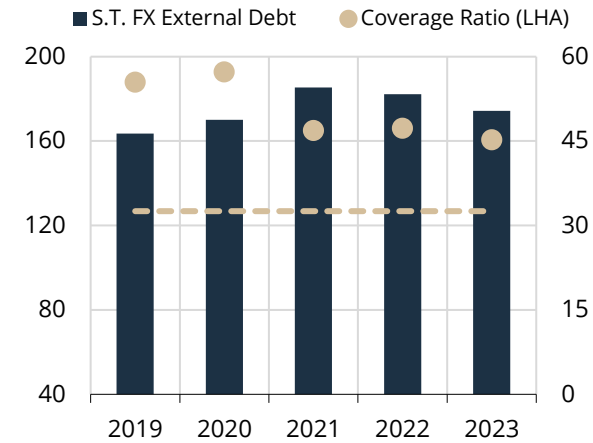
**The sector's current FX liquidity buffers against possible FX liquidity shocks remain strong.**

As of August, banks held FX liquid assets worth 77 billion USD against the short-term external debt of 47 billion USD. Therefore, the capacity of FX liquid assets to cover short-term FX-denominated external debt is 165%, which is above the historical average (Charts IV.2.14 and IV.2.15).

**Chart IV.2.14: FX Liquid Assets (Billion USD)**

Last Observation: 10.23

Note: The average of the last three months has been reported for each year. The CBRT item covers total FX balances that banks hold at the CBRT and includes swap and free accounts balances.

**Chart IV.2.15: Short Term FX External Debt and Coverage Ratio (Billion USD, %)**

Last Observation: 09.23

Note: External debt represents FX-denominated external debt that will fall due within one year and is calculated by excluding FX deposit accounts and TL deposit accounts from banks' short-term external debt stock. The last data pertaining to external debt belongs to September. The dashed lines show the average of coverage rates for the 2014-2019 period.

While total and short-term external debt balances have decreased notably compared to the previous period, the relatively flat course of FX liquid assets reveals that external debt payments are not a risk factor for banks and the sector is resilient against global liquidity developments. As an important indicator of this structure, short-term external debt coverage capacity has followed a steady course at 165% for the last three years. The FX-denominated RR of 68 billion USD is an additional facility that can support banks' liquid asset portfolios.

**Table IV.2.1: Developments in Selected Liquidity Indicators**

	May 2013	June 2018	September 2023
<b>FX External Debt (Billion USD)</b>	127	164	103
<b>Short Term FX External Debt (Billion USD)</b>	69	73	50.4
<b>FX Liquid Assets (Billion USD)</b>	68	88	81
<b>ST Debt Coverage Ratio (%)</b>	98	120	161
<b>Average Remaining Maturity of External Debt (Month)</b>	32	37	35
<b>FX Required Reserves (Billion USD)</b>	28	42	68

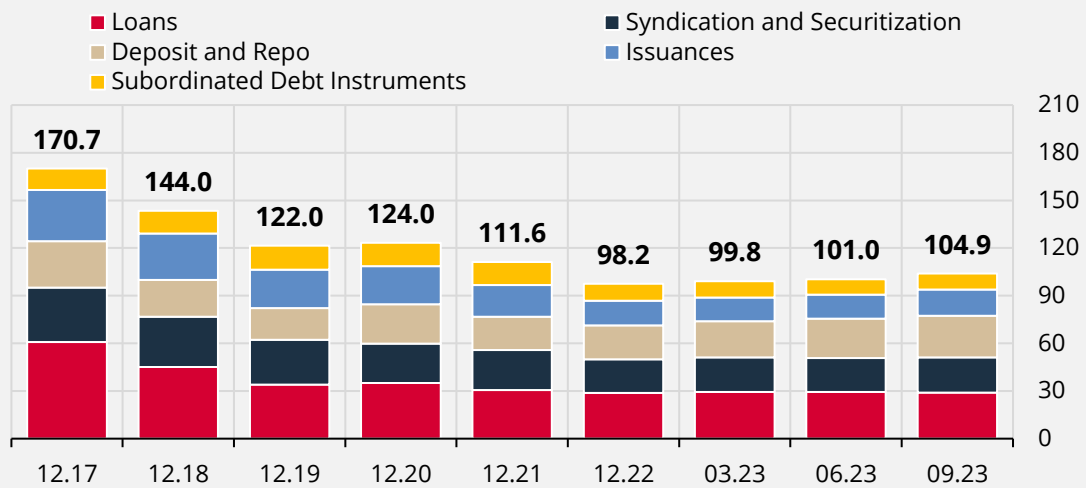
Source: CBRT

Note: FX liquid assets are the sum of items listed in Chart IV.2.16. May 2013 represents the date of the signal given by the Fed that the quantitative easing program will taper off.

## Box IV.2.I: Banks' Recent Bond Issuances Abroad

In addition to deposits or domestic market funding, banks also obtain funds from abroad in order to fund their asset placements. Banks' asset-liability growth strategies, borrowing market conditions and foreigners' interest in the Turkish banking sector are the main factors affecting the development of these borrowings. The significant decline recently observed in the country risk premium has had a favorable impact on banks' external borrowings (Chart IV.2.I.1). As foreigners' interest in the banking sector increased, the number of banks issuing debt securities and the amount of issuances increased. This box explains developments regarding banks' recent bond issuances abroad.

**Chart IV.2.I.1: Total External Debt Balance of the Banking Sector (Billion USD)**

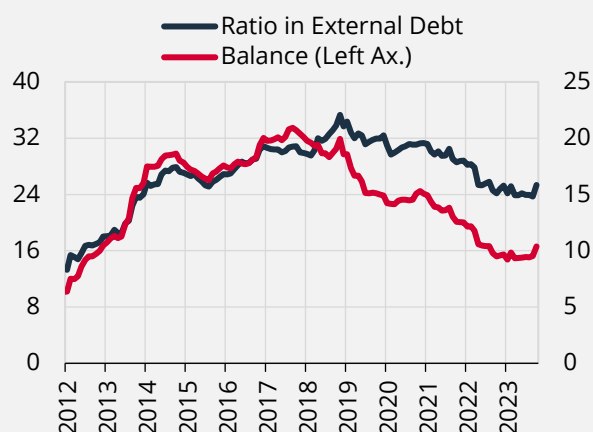


Source: CBRT, BRSA

Last Observation: 09.23

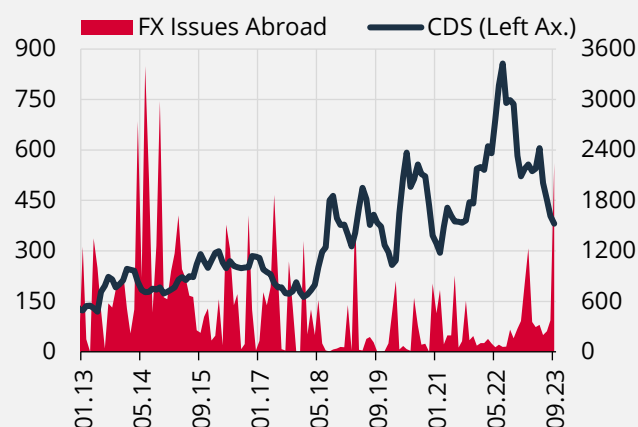
Note: Loans include: development and investment loans, bilateral commercial loans and loans for funding of foreign trade.

Banks' external borrowings include group funding based on relationship such as bilateral loan agreements or syndicated loans as well as market borrowings that are highly sensitive to cyclical developments, global liquidity conditions and country risk premiums. Bond issues abroad have become one of the important funding instruments supporting the diversity of banks' borrowing instruments and their access to international markets. Banks' bond issues abroad accelerated between 2013 and 2015, when global liquidity and investor interest were high, and banks were able to issue high-amount and long-term bonds. In early 2018, the external bond balance reached 33 billion USD, a record high. In the 2018-2019 period, the share of bond issuances in external debt exceeded 20%. Nevertheless, after 2018, amid rising country risk premium and tight global liquidity conditions, high-amount bond issues decreased due to the pandemic period and the decline in banks' FX loans. The banking sector's external bond balance decreased to 14.7 billion USD at the beginning of 2023. A revival started as of June and banks' external bond issues reached 16.6 billion USD in September 2023 accounting for 15.8% of the total external debt balance (Charts IV.2.I.2 and IV.2.I.3).

**Chart IV.2.I.2: Bond Issuances Abroad** (Stock, Billion USD, %)

Source: CBRT, CSD

Last Observation: 09.23

**Chart IV.2.I.3: FX Bond Issuances Abroad and CDS** (Flow, Million USD, bp)

Source: CBRT, CSD

Last Observation: 30.09.2023

In recent years, state-owned banks took the lead in issuing high-amount bonds, while the high cost levels have been a deterrent factor. In early 2023, Ziraat Bank and Eximbank issued bonds worth 500 million USD each with maturities of 3.5 years and 3 years at a cost of 9.75% and 9.60%, respectively. In the second half of 2023, the Eurobond market reinvigorated and bond issues started throughout the sector on the back of the tightening in monetary policy and the significant decline in the CDS (Table IV.2.I.1). Issuer banks are believed to have used favorable market conditions as they have upcoming Eurobond redemptions in 2023 and 2024. In this framework, 7.6 billion USD worth of subordinated debt instruments and Eurobonds were issued in the second half of the year, 3.2 billion USD of which was composed of high-amount transactions exceeding 300 million USD (Table IV.2.I.1).

Banks also issue additional Tier 1 and Tier 2 subordinated debt instruments under certain conditions. In general practice, while issuing debt instruments, banks have been offering early redemption option as of the fifth year since the capital contribution diminishes. It is observed that, banks started to work on fresh subordinated debt issuances in 2023.

**Table IV.2.I.1 Leading Bond Issues Abroad in 2023** (Million USD, %)

Bank	Type of Issuance	Issue date	Redemption Date	Maturity (Year)	Amount	Return
Eximbank	Eurobond	31.01.2023	31.01.2026	3	500	9.6
Ziraat Bank	Eurobond	1.02.2023	1.08.2026	3	500	9.75
Akbank	Subordinated Debt	25.07.2023	25.07.2033	10	300	9.6
Vakıfbank	Eurobond	12.09.2023	12.10.2028	5	750	9.125
TSKB	Eurobond	19.09.2023	19.10.2028	5	300	9.5
Yapı Kredi	Eurobond	13.09.2023	16.10.2028	5	500	9.375
Eximbank	Eurobond	31.10.2023	28.01.2027	3.25	500	9.125
Ziraat Katılım	Lease certificate (Sukuk)	6.11.2023	12.11.2026	3	500	
QNB Finansbank	Subordinated Debt	8.11.2023	8.11.2033	10	300	10.75
<b>Total</b>				<b>4.8</b>	<b>4,150</b>	<b>9.51</b>

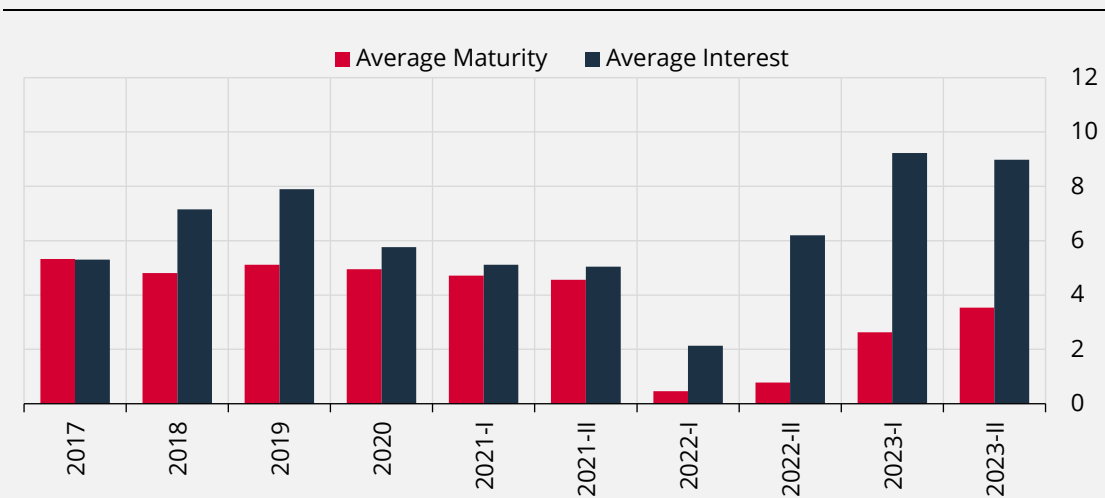
Source: KAP, Banks' declarations

Note: Table is based on issues over 300 million USD.

In the first half of 2023, the costs were higher compared to previous years (Chart IV.2.1.4). Despite the tightening in global financial conditions, interest rates on Eurobonds decreased owing to the significant decline in the country risk premium in the second half of the year. Although the SOFR has increased by 102 basis points since the end of the year and 23 bps since the end of June, banks' Eurobond rates decreased by 26 bps compared to transactions carried out in the first half. Moreover, considering that the maturity (maturity premium) in new Eurobond transactions have been longer, it can be concluded that the decline in borrowing costs was more pronounced. In response to revival of investor interest in longer term transactions, the average maturity was extended to 3.5 years. Recent long-term and high-amount issues are considered favorable as they confirm banks' credibility and borrowing capacity.

**Chart IV.2.1.4: Maturity and Interest Rates Outlook of External Bonds Denominated in USD**

(Flow, Year, %)



Source: CBRT, BRSA

Note: Note: The latest data for 2023-II is as of September. October is added with high-amount issues.

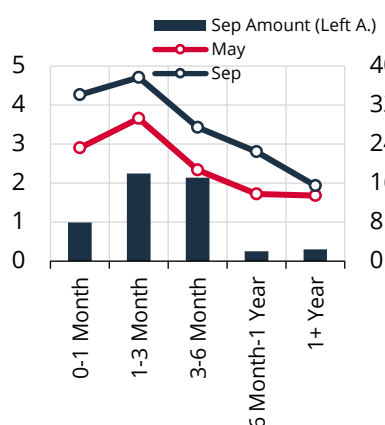
To conclude, international investor demand remains buoyant amid the decline in the country risk premium and the favorable market perception of monetary tightening and other policy steps. Banks have been conducting new transactions in debt markets to diversify their external funding instruments and to take advantage of favorable market conditions in the view of their upcoming redemptions.

### IV.3 Interest Rate and Exchange Rate Risk

**Although the policy rate has been gradually raised from 8.5% to 35% since June, the impact of rate hikes on banks' balance sheets has remained limited.**

In this period, while the policy rate increased by 26.5 percentage points, interest rates on loans, deposits and securities, which constitute a significant portion of interest rate-sensitive assets and liabilities of banks' balance sheets, moved upwards. Loan and deposit margin movements play an important role in explaining the impact of interest rate changes on bank balance sheets. During the rate hike process, the upward movement in interest rates of newly extended loans was above the policy rate due to the reference rate implementation. On the other hand, since deposit rates rose upfront due to the Securities Maintenance practice, the policy rate hikes were not proportionally reflected on deposit pricing. The sector's TL loan-deposit interest rate spread shifted into the positive territory. As a result of these developments, banks did not face any deterioration in their balance sheets through the interest rate risk channel stemming from loan and deposit transactions. In the period between May through September, the stock interest rate on TL deposits (excluding demand deposits) increased by 8.1 percentage points, while the stock interest rate on TL loans increased by 12 percentage points (Chart IV.3.1 and Chart IV.3.2). In the same period, the yield curve of TL government bonds shifted upwards by between 12 and 18 percentage points. Banks have become sensitive to interest rate risks due to the long-term and fixed-rate securities they carry on their balance sheets. The value of those securities, which are covered by the regulation and have an original maturity longer than 5 years and remaining maturity longer than 4 years, has decreased by more than 40% since May. The fact that these securities are mostly valued using the amortized cost method limited the impact on profitability.

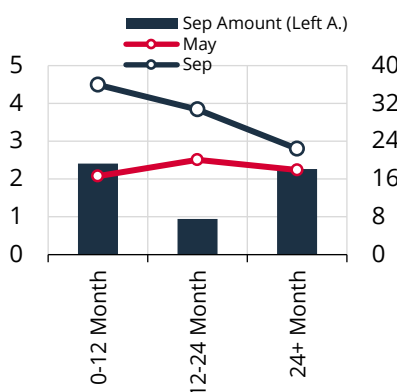
**Chart IV.3.1: Interest Rate Curve and Balance of TL Deposits (Stock, %, Trillion TL)**



Source: CBRT Last Observation: 09.23

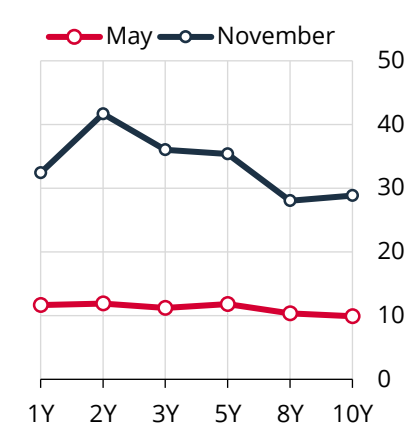
Note: Demand deposits and banks' deposits are not included for deposit interest rates. Participation banks are not included.

**Chart IV.3.2: TL Loan Yield Curve and Balance (Stock, %, Trillion TL)**



Source: CBRT Last Observation: 09.23

**Chart IV.3.3: Yield Curve of Fixed-rate TL GDSS (Compound, %)**



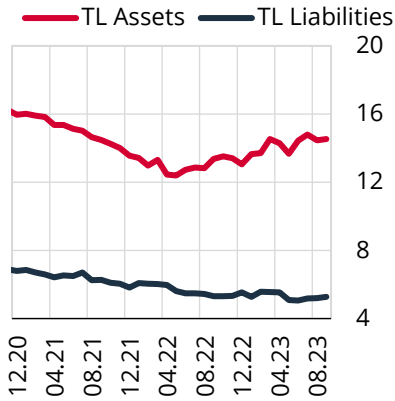
Source: Bloomberg Last Obsv.: 14.11.23

**The maturity mismatch between interest rate-sensitive assets and liabilities hovers close to the historical average.**

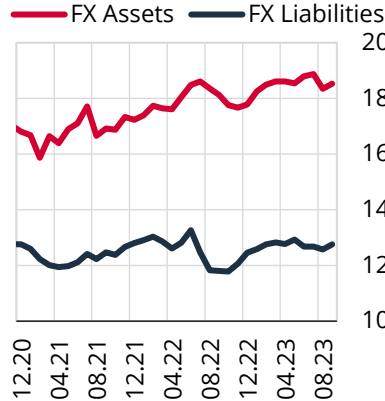
The uptrend in weighted average maturity of banks' interest rate-sensitive TL assets continues. The share of long-term fixed-income securities, which increased upon the introduction of the Securities Maintenance practice, led to an extension in the average maturity of TL assets, and the maturity has recently followed a flatter course. The average maturity of interest rate-sensitive TL liabilities remained flat at 5.3 months (Chart IV.3.4). The weighted average maturity of FX assets and liabilities has declined minimally since the last report period. The average maturity hovers around 18 months for FX assets and 12 months for FX liabilities (Chart IV.3.5). As a result of these developments, the maturity spread between TL assets and TL liabilities is 9.3 months, close to the historical average. The maturity spread between FX assets and FX liabilities remains flat at 5.8 months (Chart IV.3.6).



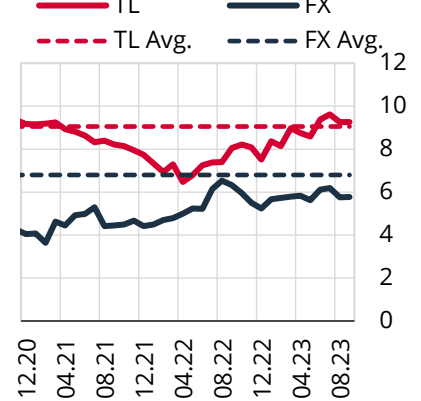
**Chart IV.3.4: Weighted Average Maturity of TL Assets and Liabilities (Month)**



**Chart IV.3.5: Weighted Average Maturity of FX Assets and Liabilities (Month)**



**Chart IV.3.6: Weighted Average Maturity Difference Between Assets and Liabilities (Month)**



Source: CBRT

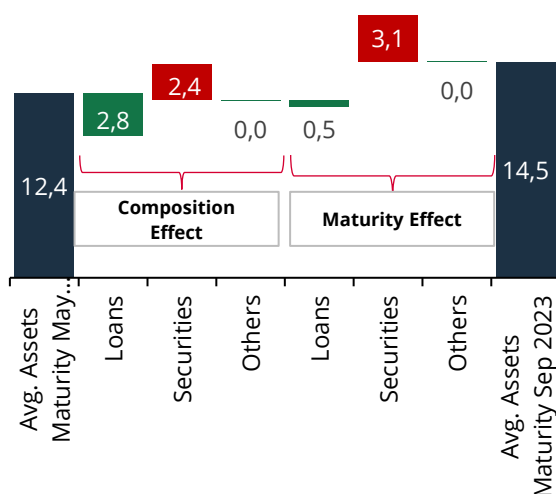
Last Observation: 09.23

Note: Maturities show the repricing period. Mid-points of maturity brackets have been considered for weighted average maturities. Average of 2013-2020 period has been calculated. Participation banks are excluded.

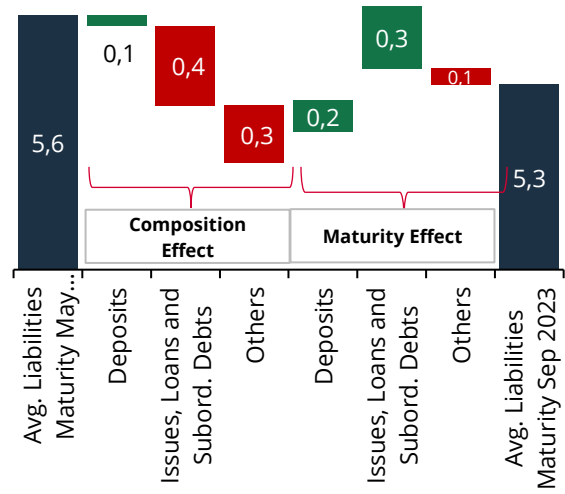
**The maturity spread of interest rate-sensitive assets and liabilities has been increasing since mid-2022 due to securities; this increase has been offset by credit developments.**

The effect of extended maturities of securities on the TL maturity spread is calculated as +3.1 months; an additional contribution is calculated as +2.4 months due to the change in share in interest rate-sensitive assets, effect of change in maturity structure of loans caused a change of -0.5 months and an additional -2.8 months due to the change in share in the asset composition (Chart IV.3.7). The maturity of liabilities slightly declined as a result of securities issued, subordinated debts and loans utilized. Although the maturity of interest rate-sensitive TL liabilities extended by 0.3 months (composition effect: 0.1 months, maturity effect: 0.2 months) due to TL deposits, it shortened by a net 0.3 months due to the -0.6-month contribution of securities issued, subordinated debts, loans utilized and other items (Chart IV.3.7).

**Chart IV.3.7: Change in Weighted Average Maturity of Interest Rate-Sensitive TL Assets (Month)**



**Chart IV.3.8: Change in Weighted Average Maturity of Interest Rate-Sensitive TL Liquidity (Month)**



Source: CBRT, BRSA

Last Observation: 09.23

Source: CBRT, BRSA

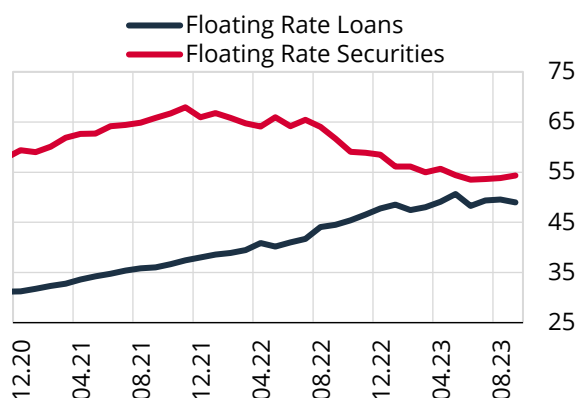
Last Observation: 09.23

Note: Maturities show the repricing period. Mid-points of maturity brackets have been considered for weighted average maturities. Participation banks are excluded.

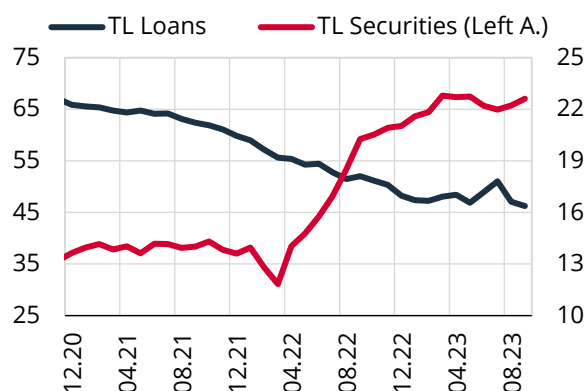
### Banks managed their interest rate risks by gravitating towards floating rate loans in their loans portfolio.

As a result of macroprudential measures that have been introduced since the second half of 2022, the share of long-term and fixed-income securities in banks' portfolios increased. On the back of the decline in floating rate securities, banks offset the repricing risk by increasing the share of floating rate loans and shortening the weighted average maturity of TL loans. Meanwhile, the maturity of TL securities has been trending downwards while the maturity of TL loans has been trending upwards since June (Chart IV.3.9- IV.3.10).

**Chart IV.3.9: Interest Structure of TL Securities and TL Loans (%)**



**Chart IV.3.10: Maturity of Fixed-Rate TL Securities and TL Loans (Remaining maturity, Month)**



Source: CBRT

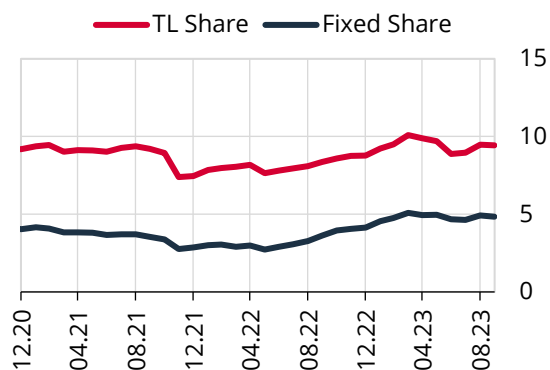
Last Observation: 09.23

Note: Maturities show weighted average maturities. The weighted average maturity calculation is based on the midpoints of maturity brackets. TL securities are calculated based on total fixed income securities held by banks. Participation banks are excluded.

### Banks offset the effects of decrease in value of securities by carrying their securities at their amortized cost on their balance sheets.

After rising until March, the shares of TL securities and fixed-rate TL securities remained almost flat at 9% and 5%, respectively (Chart IV.3.11). Thanks to banks' classification preferences, adverse effects from valuation of long-term fixed-rate securities on profitability and capital have been decreasing. It is observed that 79% of banks classified their long-term GDDSs subject to the regulation as securities valued at amortized cost. Thus, the share of fixed-rate TL securities valued at amortized cost reached 67% (Chart IV.3.12).

**Chart IV.3.11: Asset Share of TL Securities (%)**

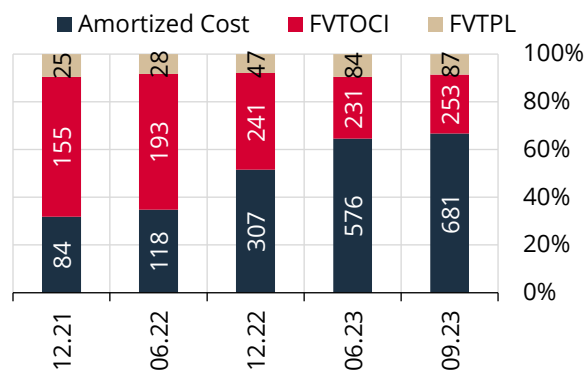


Source: CBRT

Last Observation: 30.09.23

Note: Securities that yield non-interest income are included in fixed rate securities.

**Chart IV.3.12: Fixed-rate TL Securities (Billion TL)**



Source: CBRT

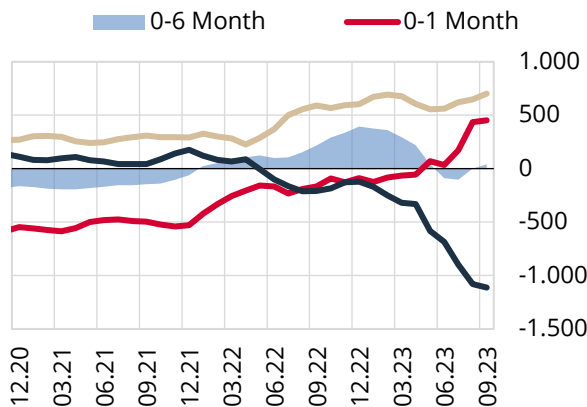
Last Observation: 30.09.23

Note: FVTPL P/L: Securities at fair value through profit or loss. Amortized Cost: Securities valued over amortized cost. FCTOCI: Securities at fair value through other comprehensive income.

**The asset-liability spread carried by banks with a maturity shorter than 6 months approaches zero for TL, while it increases for FX.**

The position gap of banks for maturities up to 1 month shifted from negative to positive territory. As a result of rising TL liquidity of banks, decreasing CBRT funding as well as sterilization of excess liquidity by inclusion of KKM/DDM accounts in the scope of reserve requirements led to a rise in TL positions with maturities up to 1 month. The rise in TL deposits in the system concentrates in the 3-month maturity, which plays a determining role in the shift of the 1-3-month position into negative territory (Chart IV.3.13). On the FX side, the increase in FX reserve requirement accounts led to a position surplus in maturities up to 1 month (Chart IV.3.14).

**Chart IV.3.13: TL Asset-Liability Gap Analysis**  
(Billion TL, 3-Month MA)

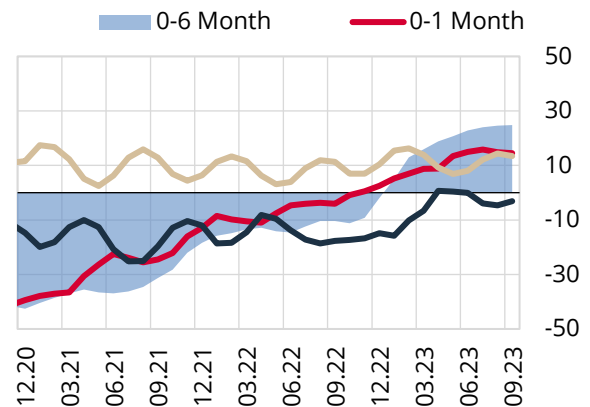


Source: CBRT

Last Observation: 09.23

Note: Participation banks are excluded. Average of 2013-2020 period has been calculated. Demand deposit items are excluded.

**Chart IV.3.14: FX Asset-Liability Gap Analysis**  
(Billion USD, 3-Month MA)



Source: CBRT

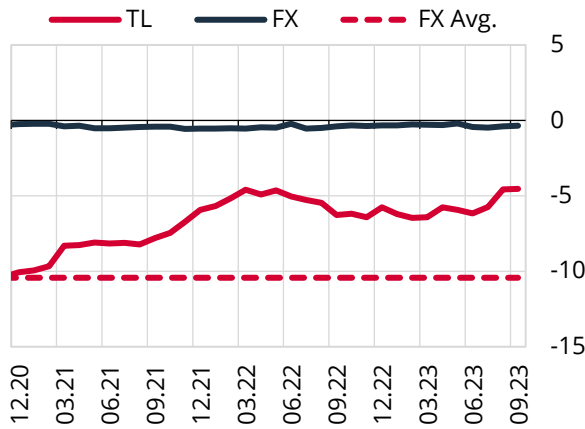
Last Observation: 09.23

**While the sensitivity of banking books to TL interest rate shocks decreases, their sensitivity to FX interest rate shocks remains flat.**

According to the standard interest rate risk measurement approach, if a 500 basis points upward interest rate shock is applied to TL interest rates and a 200 basis points upward interest rate shock is applied to FX interest rates, the loss due to banking books would be limited for FX, while for TL, the loss falls to 4.5% percent of regulatory capital, which is well below the historical average (Chart IV.3.15).<sup>1</sup> When an interest rate shock is applied, all banks experience a capital loss below the legal ratio of 20% and have a risk outlook consistent with regulatory limits. Under the shock scenario, there are no banks with a loss of 15% or more in their regulatory capital, while the interest rate shock sensitivity of banks that hold 11% of the sector's assets is between 10% and 15% (Chart IV.3.16).

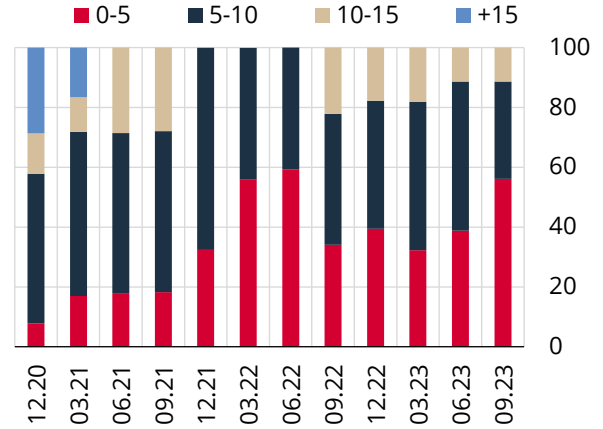
<sup>1</sup> Under the BRSA's Regulation on the Measurement and Assessment of the Interest Rate Risk in the Banking Book via the Standard Shock Method, the interest rate risk-driven loss to regulatory capital ratio cannot exceed 20 percent

**Chart IV.3.15: Loss to Capital Ratio After a Positive Interest Rate Shock (Banking Calculations, %)**



Source: CBRT Last Observation: 09.23

**Chart IV.3.16: TL Asset Shares of Banks by Loss to Capital Ratio Intervals After a TL Interest Rate Shock (%)**



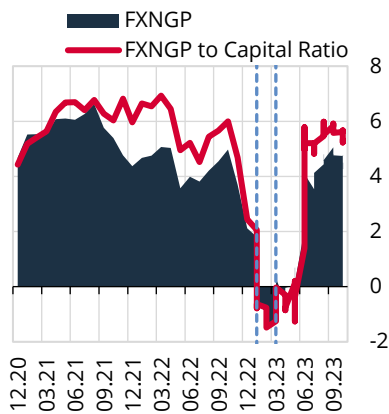
Source: CBRT Last Observation: 09.23

Note: The economic value approach takes into account 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 proportioned to the total assets of the sector. Participation banks are excluded. Historical average is the average of 2013-2020 period.

**Although within legal limits, banks' FX long position increased across the sector.**

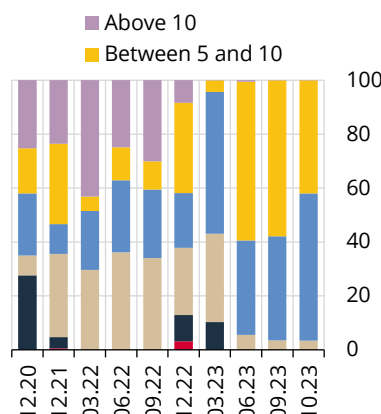
The FX net general position (FXNGP) increased after April and reached 4.5 billion USD as of 27 October 2023, while the FXNGP/capital ratio remained at 5.3%, within the legal limit<sup>2</sup> (Chart IV.3.17). Since April 2023, the number of banks with an FX long position has also increased. Moreover, the total share of asset size of banks with FX long position remained high (Chart IV.3.18). Meanwhile, the on-balance sheet FX short position increased from 28 billion USD in June to 42 billion USD in October (Chart IV.3.19).

**Chart IV.3.17: FXNGP to Capital Ratio and FXNGP (% Billion USD)**



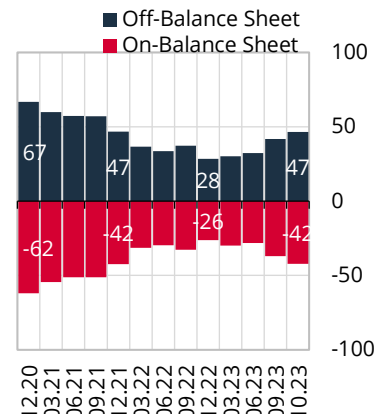
Source: CBRT  
 Note: Weekly simple arithmetic mean of FXNGP/Capital ratio has been calculated. Dashed lines denote the dates of the regulatory amendments enacted by the BRSA.

**Chart IV.3.18: Total Asset Shares of Banks by FXNGP/Capital Ratio (%)**



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

**Chart IV.3.19: Banking Sector's FX Position (Billion USD)**



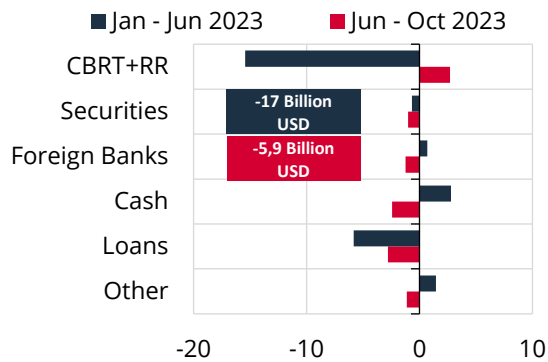
Last Observation: 27.10.2023

<sup>2</sup> The regulatory limit for the FXNGP/capital ratio, which was formerly 20%, was decreased to 5% with an amendment that took effect on 9 January 2023, but raised to 10% on 9 March 2023.

**The increase in the sector's on-balance sheet short position in the second half of the year was driven by the decline in FX loans on the asset side and the increase in FX deposits and external debts on the liability side.**

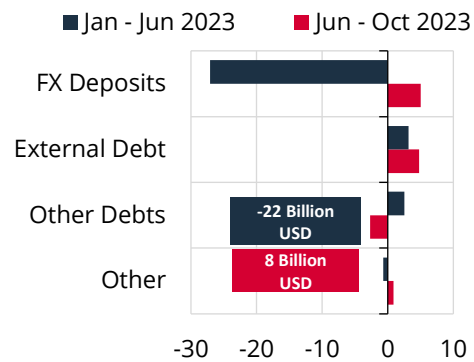
In the June-October 2023 period, on-balance sheet FX assets decreased by 5.9 billion USD (Chart IV.3.20). The continued downtrend in banks' FX loans played a key role in the decline in FX assets, while the increase in CBRT and RR items limited this decline. On the other hand, on-balance sheet FX liabilities decreased by 22 billion USD in the January-June 2023 period with the additional contribution of accounts converted into FX-protected deposit accounts, but then increased by 8 billion USD in the June-October 2023 period because the decline in FX deposits ended and banks' foreign funding rose again (Chart IV.3.21). Following the recent improvement in the country risk premium, foreign investors' interest in Türkiye has increased, and it is observed that the borrowing channel through market instruments is getting opened in addition to funding sources such as bilateral loans, repo and deposits. Banks have been able to obtain higher amounts of borrowing through Eurobond issuances. A limited increase in FX loans has been observed since September due to the rise in TL loan rates. Banks' on-balance sheet FX assets are expected to be supported through this channel if this trend continues.

**Chart IV.3.20: Change in Banking Sector's On-Balance Sheet FX Assets (Billion USD)**



Source: CBRT Last Observation: 27.10.2023  
Note: Foreign banks also include receivables from reverse repo transactions.

**Chart IV.3.21: Change in Banking Sector's On-Balance Sheet FX Liabilities (Billion USD)**

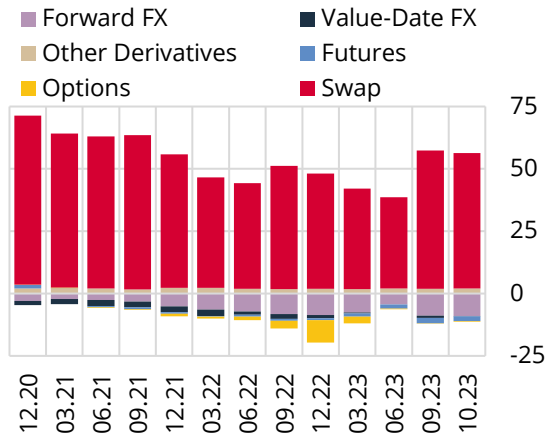


Source: CBRT Last Observation: 27.10.2023  
Note: FX deposits refer to the total of FX and precious metal deposit accounts. External debt includes loans from abroad, securities issued and funds from repo transactions. Eximbank is excluded.

**Banks have utilized their FX liquidity in swap transactions.**

While currency swaps account for a significant portion of the off-balance sheet FX position, the banking sector has a limited net position in derivative instruments other than swaps (Chart IV.3.22). While currency swaps declined in the previous reporting period, after June, banks utilized their increased FX liquidity to obtain TL funding via swap transactions. In the same period, forward FX transactions eventualized on the net sell side. The rise in currency options continued after June and banks maintained their limited net positions in currency options (Chart IV.3.23).

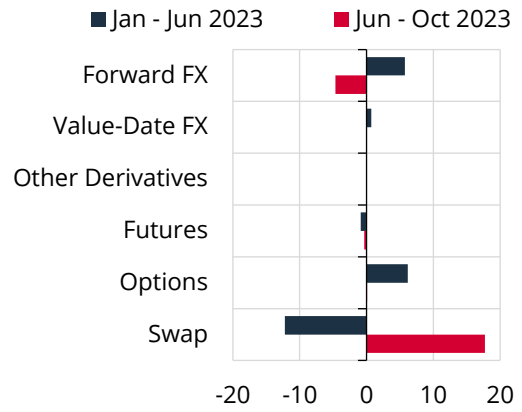
**Chart IV.3.22: Banks' Off-Balance Sheet Net FX Assets (Billion USD)**



Source: CBRT Last Observation: 27.10.2023

Note: Currency options refer to the delta equivalent of currency options for this period.

**Chart IV.3.23: Change in Banks' Off-Balance Sheet Net FX Position (Billion USD)**



Source: CBRT Last Observation: 27.10.2023

Note: Currency options refer to the delta equivalent of currency options for this period. Data on 27th of June has been taken into account for June.

## Box IV.3.I: Impact Channels of the Interest Rate Hike on the Banking Sector

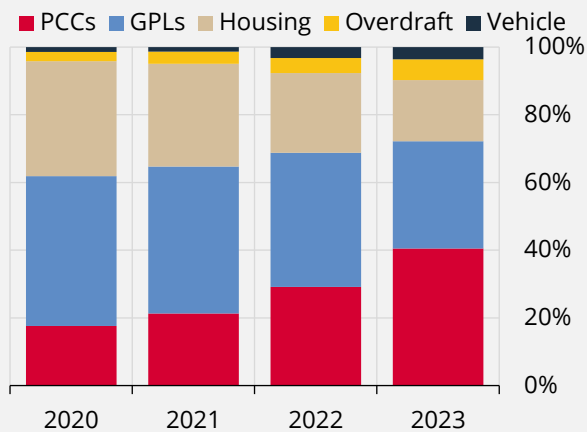
The CBRT launched a monetary tightening process in June to anchor inflation expectations and establish disinflation, and has raised the policy rate from 8.5% to 35% since then. Policy rate increases have been supported by selective credit tightening and quantitative tightening decisions, and significant steps have been taken to simplify the macroprudential policy framework. As the rate hikes will affect the financial system and the real economy through different channels, interest rate risks borne by economic agents are closely monitored for the purpose of surveillancing financial stability. This box presents an evaluation of the channels through which households, corporate sector firms and banks are affected by the interest rate risk as well as the factors that support interest rate risk management.

### Households and Corporate Sector Firms

Rising interest rates may affect households and firms through the debt service and refinancing cost channel. The impact of rate hikes on households and firms, and the channels through which this impact materializes will vary depending on the type and level of indebtedness. Sectors with high indebtedness that borrow at short maturities and floating interest rates are more sensitive to rate hikes than sectors that borrow at long maturities and fixed interest rates.

Pursuant to the Consumer Protection Law, extending consumer loans (other than housing loans) at floating interest rates are not allowed, and housing loan utilization at floating interest rates is at a negligible level. On the other hand, applicability of interest rates based on policy rate to overdraft accounts (ODA) and defaulted credit card balances as well as to credit card cash advance balances requires these balances to be considered as being subject to floating interest rates. If the interest rates for these credits are to be increased, it is obligatory to inform the consumer thirty days prior to this change. In such cases, the new interest rate cannot be applied retroactively. Accordingly, when the upper limits for interest rates applicable to ODA and credit card debts are raised, the new rate can only become applicable to consumer debts with a one-month lag.

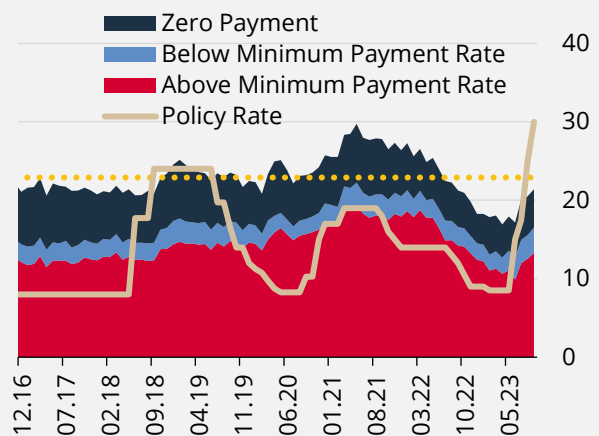
**Chart IV.3.I.1: Composition of Retail Loans (%)**



Sources: CBRT, BRSA

Last Observation: 27.10.2023

**Chart IV.3.I.2: Share of PCC Debt in Default (%)**



Source: CBRT

Last Observation: September 2023

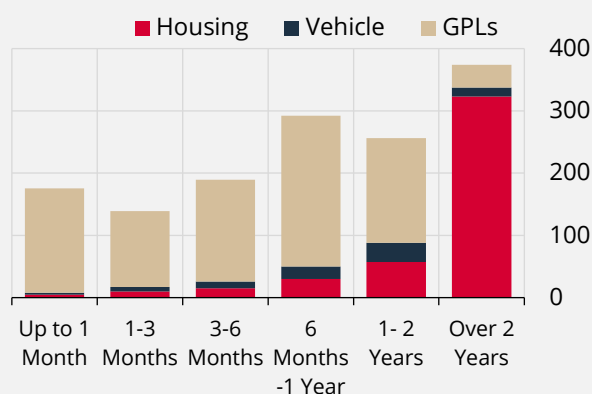
Note: The dotted line shows the period average of the share of PCC debt in default.

Over 40% of retail loans are composed of personal credit cards (PCC). The share of PCC has grown in years due to the wider use of credit cards as a payment instrument, their increased function as a credit instrument, and the course of inflation (Chart IV.3.I.1). Individuals are affected by increased interest rates if they have PCC debts that are in default. In periods of rising inflation, there may be a slight increase in the tendency of individuals to go into default and pay overdue interest on their credit card debts. In fact, the share of PCC debt in default increased somewhat in 2018 and approached its long-term average. In the recent period, this share has been below the long-term average despite some increase since June (Chart IV.3.I.2). Of the credit card balance in

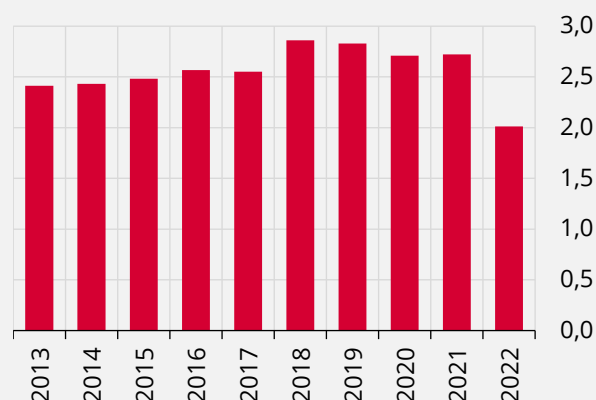
default, 62% is composed of debts on which more than the minimum payment amount has been paid but which are not paid in full. This indicates that a significant portion of individuals have the minimum debt payment discipline. As of June 2022, the minimum payment rate was applied at 40% for cards with a limit above 25,000 TL. Following the rise in incomes of individuals in 2022 and 2023, credit card limits were revised and the minimum payment rate increased, leading to a higher minimum debt payment obligation. This is a factor that has affected the change in defaulted debt balance. The income growth of individuals in 2024 can positively affect the debt service capacity.

As consumer loans excluding the PCC and ODA are fixed-rate loans, the interest rate risk of individuals taking out consumer loans will emerge with a further time lag and will be driven by the cost of renewal. The fact that loan repayment schedules are extended over time mitigates the negative effects of loan renewal on individuals (Chart IV.3.1.3). On the other hand, the current levels of interest rates have restricted demand, particularly in housing loans. The tendency of individuals to bear the long-term interest burden is on the decline. Households' loan-driven interest burden in proportion to their disposable income remains at reasonable levels. Having increased slightly in 2018 and 2019, the ratio of households' interest burden to disposable income decreased in 2022 on the back of the decline in consumer loan interest rates and the income growth (Chart IV.3.1.4). This ratio is expected to go up slightly as households' interest burden increases as a result of monetary tightening measures.

**Chart IV.3.1.3: Consumer Loans According to Remaining Maturity (Billion TL)**



**Chart IV.3.1.4: Ratio of Households' Interest Expenses to Disposable Income (%)**



Sources: CBRT, BRSA

Last Observation: 27.10.2023

Sources: CBRT, TURKSTAT

Last Observation: 2022

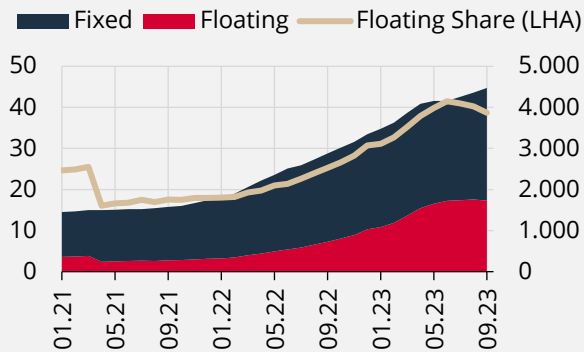
Note: Annual interest burden is the 12-month sum of the monthly interest of monthly stock retail loan balance calculated with monthly simple stock interest rate. Household disposable income covers the adjustment regarding the change in pension rights, and non-profit institutions serving households.

Firms are potentially more vulnerable to the interest rate risk than households due to their short-term and floating-rate loan utilization. The share of floating-rate loans in TL commercial loans has increased to 39% since 2021 (Chart IV.3.1.5). Therefore, in the short-term, debt service of firms will more rapidly adjust to changes in interest rates. On the other hand, 40% of floating-rate loans belong to large firms, and these firms have higher capacity to manage the interest rate risk. The average remaining maturity of fixed-rate TL commercial loans is 1.5 years. Approximately 60% of fixed-rate TL commercial loans are due in one year (Chart IV.3.1.6). Repayments of fixed-rate TL commercial loans are concentrated on short-term maturities in SMEs and relatively long-term maturities in large firms. This implies that SMEs are more vulnerable to the repricing-driven interest rate risk.

Interest-rate derivatives transactions of firms are very limited compared to the size of floating-rate loans. Although banks' interest rate swaps with legal persons have increased since the last quarter of 2022, these transactions are concentrated on a small number of large firms. The additional cost that firms incur for their transactions to hedge the interest rate risk declined starting from June (Chart IV.3.1.7). Meanwhile, firms' cost-effective access to finance in recent years and price developments have positively affected their operations. Creditworthiness indicators for firms such as corporate sector profitability ratios and interest coverage ratios have improved compared to 2018 (Chart IV.3.1.8). Increased profitability and liquidity of firms boost their resilience to interest rate shocks and enables firms that do not want to bear high costs to continue their operations by using their own resources.

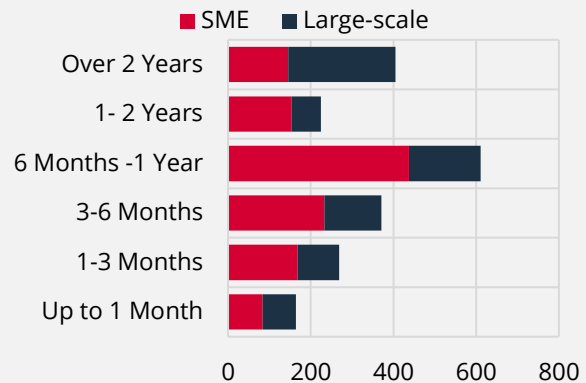


**Chart IV.3.1.5: Change in Floating-Rate TL Commercial Loans (% , Billion TL)**



Source: CBRT Last Observation: September 2023

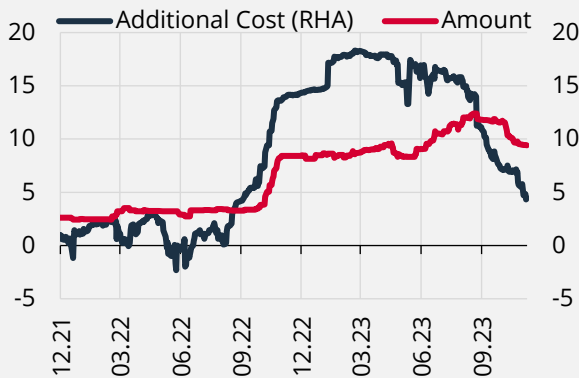
**Chart IV.3.1.6: Fixed-Rate TL Commercial Loans According to Remaining Maturity (Billion TL)**



Source: CBRT Last Observation: September 2023

Note: Balances for which the maturity is unknown are excluded.

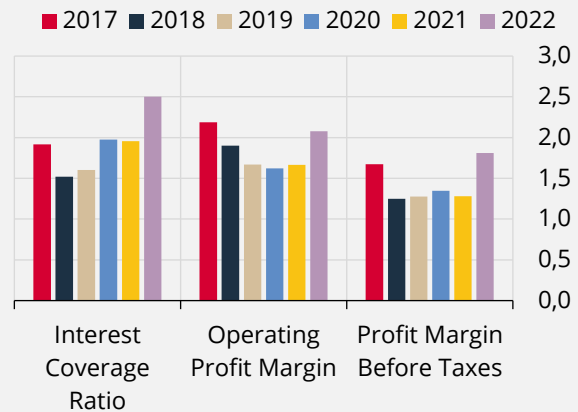
**Chart IV.3.1.7: Interest Rate Swaps of Legal Persons (Billion TL, %)**



Sources: CBRT, BRSA Last Observation: 08.11.23

Note: Shows the interest rate swap transactions of firms, in which they get floating-rates and -offer fixed rates. Additional cost refers to the spread between these two rates in the transactions.

**Chart IV.3.1.8: Profitability and Interest Coverage Ratios of Firms (%)**



Source: RA Last Observation: 2022

Note: Median values. Calculations do not include E- Water supply, sewerage, waste management and remediation activities, K-Financial and insurance activities, O-Public administration and defence, compulsory social security; T- Activities of households as employers, undifferentiated goods- and services-producing activities of households for own use, U- Activities of extraterritorial organizations and bodies.

**Banks**

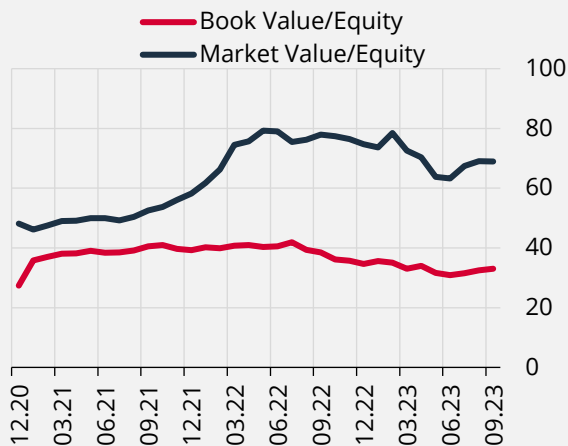
Interest rate increases can affect banks mainly through loan/deposit pricing, securities portfolio valuation, and the deterioration in the quality of loans extended to firms and individuals. In periods of rate increases, profitability of banks may decrease for a while as their funding costs arising from due maturities are more rapidly priced than loan rates. However, on the back of monetary tightening accompanied by the simplification of the macroprudential policy framework, the loan/deposit spread of banks has shifted from the negative territory to the positive territory, and net interest margins (NIM) have been affected favorably. Floating-rate loans and CPI-indexed securities are the leading balance sheet items that contribute to the interest rate risk

management of banks (Chart IV.3.I.9). On the other hand, the NIM contribution of the CPI-indexed securities portfolio will decrease once inflation, a factor that banks take into account in valuation, declines in 2024. The fact that banks monitor the fixed-rate securities portfolio predominantly at amortized cost prevents impairments due to change in interest rates from being recognized on the balance sheet.

Banks may incur loan losses in case of increased -transfer to NPL due to a rate hike. The historic lows in NPL ratios and the mild course of NPL formation ratios indicate that the asset quality risks are limited currently (Chart IV.3.I.10). On the other hand, the banking system is considered to be strong in the face of expected and unexpected losses and to have the capacity to ensure flow of loans to households and firms even in an environment of high interest rates.

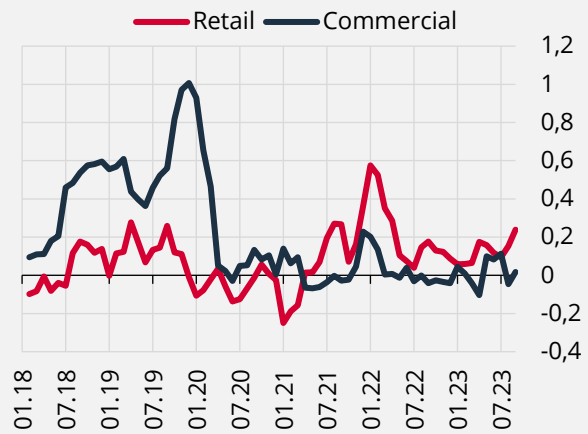
As of September 2023, provisioning ratios for Stage 2 and non-performing loans were high at 23.2% and 85.7%, respectively. Moreover, banks hold 61.7 billion TL of free reserves against possible losses. In addition, the capacity of banks to cover losses is high due to their capital ratios that exceed regulatory thresholds. Moreover, banks are hedged against the interest rate risk with precautionary regulations. The interest rate risk-driven losses of banks on banking accounts have been restricted to 20% of regulatory capital.

**Chart IV.3.I.9: Ratio of CPI-Indexed Securities to Equity (%)**



Sources: CBRT, BRSA Last Observation: September 2023

**Chart IV.3.I.10: NPL Formation Ratios (3-Month, %)**



Sources: CBRT, BRSA Last Observation: September 2023

Note: NPL formation ratio is calculated as the ratio of three-month NPL additions minus NPL collections and write-offs to the three-month average loans.

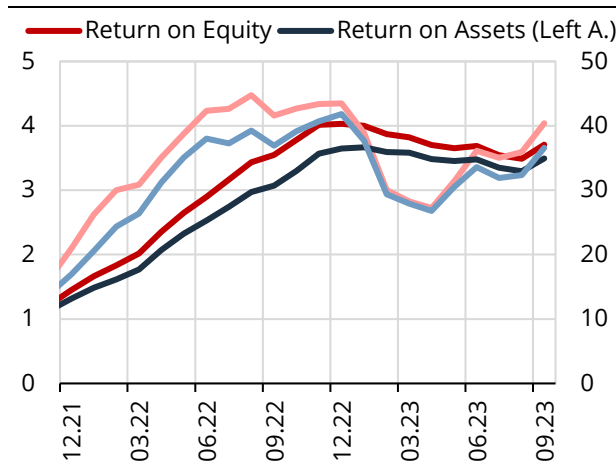
To conclude, households may incur an interest rate risk due to their new loans as they borrow predominantly at fixed rates, loan demand will decline as a result of interest rate developments, and low household indebtedness will reduce the sensitivity to interest rate risk. Firms, more evidently SMEs, are directly vulnerable to the interest rate risk due to their floating-rate loans. However, the low-cost credit expansion in recent years and prior periods profitability of firms bolster their capacity to cover the interest rate risk. On the other hand, banks may be affected by rate hikes indirectly through a possible deterioration in the credit quality of firms and households but it is deemed that banking sector balance sheets are resilient against interest rate shocks and banks have the adequate buffers to manage the rate hike-driven deterioration in asset quality.

## IV.4 Profitability and Capital Adequacy

The profitability of the banking sector decreased in the first half of the year but moved slightly upwards as of the third quarter.

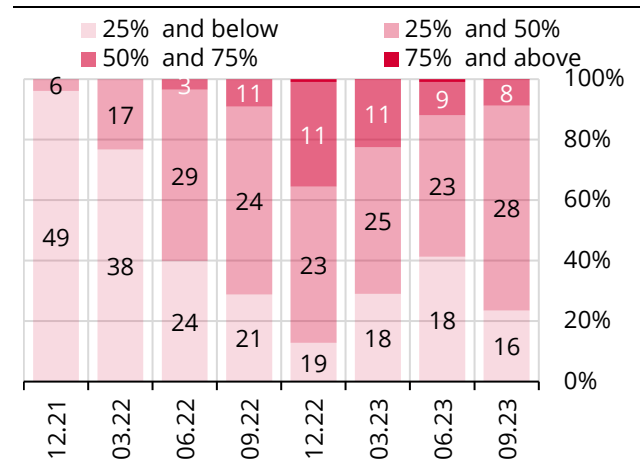
Having displayed an upward movement in 2022 on the back of the rise in the net interest margin, profitability declined somewhat in the first half of 2023. Meanwhile, when the last three-month figures showing the recent trends are considered, the downward trend in return on assets and return on equity has reversed (Chart IV.4.1). A large portion of banks in the sector have high returns on equity (Chart IV.4.2). Moreover, if banks’ free provisions of 61.7 billion TL as of September 2023 are included, the sector’s return on equity reaches 41%.

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



Source: CBRT Last Observation: 09.23

**Chart IV.4.2: Distribution of Banks Based on Return on Equity (12-Month, % Share in Assets)**



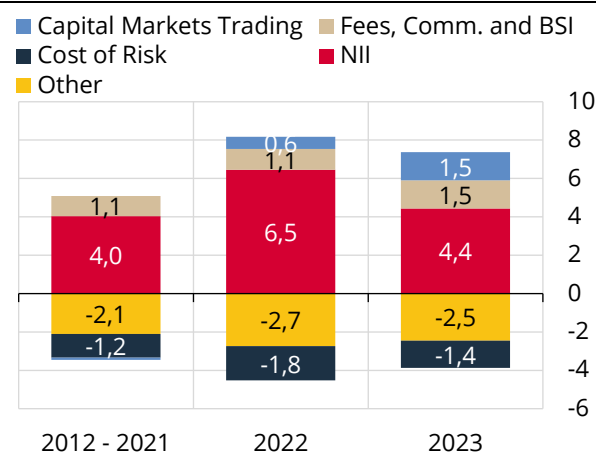
Source: CBRT Last Observation: 09.23

Note: Annualized three-month profitability levels are shown in light-colored lines.

**While the contribution of net interest income decreased, commercial profits as well as fees and commissions income helped sustain the profitability performance.**

In the first half of 2023, the contribution of net interest income to return on assets relatively declined due to the narrowing of the core net interest margin and the valuation loss in CPI-indexed bonds. On the other hand, loan growth and the buoyant course in credit cards led to an increase in fees and commissions income despite the contraction in margin. In addition, the positive contribution of income from capital market and foreign exchange transactions to the profitability performance increased (Chart IV.4.3). Profits from capital market and foreign exchange transactions rose significantly particularly in the second quarter of the year on the back of exchange rate developments and the widening forex spread, and continued to affect profitability in the third quarter (Chart IV.4.4).

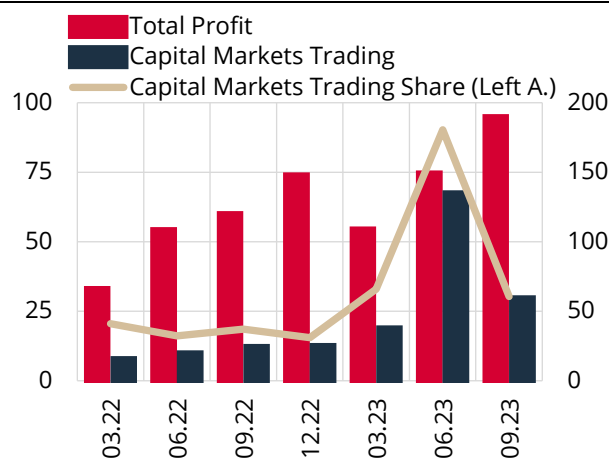
**Chart IV.4.3: Components of Return on Assets (12-Month, % Points)**



Source: CBRT

Last Observation: 09.23

**Chart IV.4.4: Components of Net Period Profit (3-Month, Billion TL, %)**



Source: CBRT

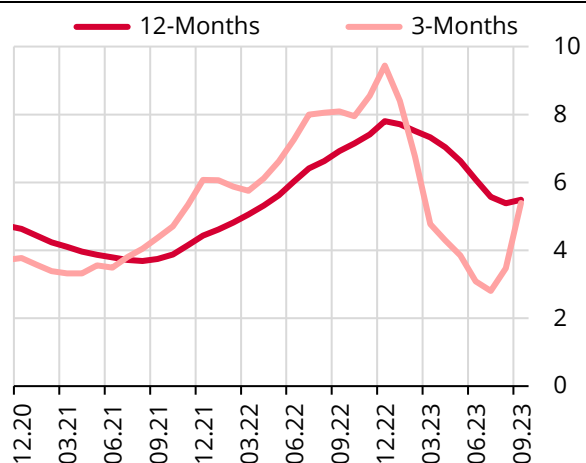
Last Observation: 09.23

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

**The net interest margin declined in the second quarter due to the narrowing core margin but improved in the third quarter on the back of the impact of the interest rate increase on loan pricing.**

The net interest margin, which had reached 7.9% in 2022, dropped to 5.5% as of September 2023. The fall in the net interest margin ended by the third quarter, and the margin started to move upwards (Chart IV.4.5). A look at the components of the net interest margin reveals that the effects of the loan-deposit spread were at the forefront. Interest income from loans and securities contributed positively to the rise in the net interest margin in the third quarter of the year (Chart IV.4.6). However, the contribution of CPI-indexed bonds to the net interest margin is expected to decrease as the year-end inflation expectation for 2024 will be used in valuations starting from the first quarter of 2024.

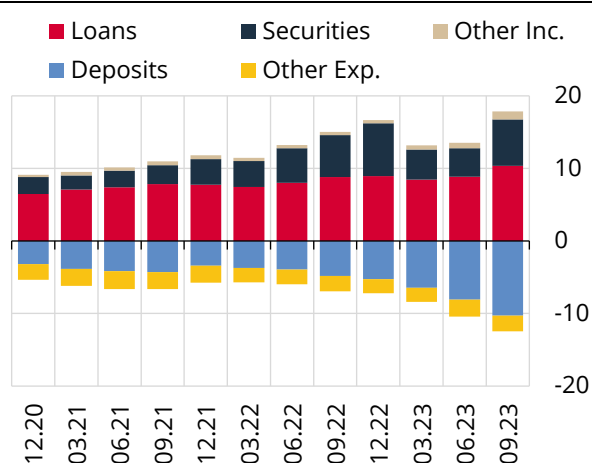
**Chart IV.4.5: Net Interest Margin (%)**



Source: CBRT

Last Observation: 09.23

**Chart IV.4.6: Components of Net Interest Margin (Annualized 3-Month, %)**



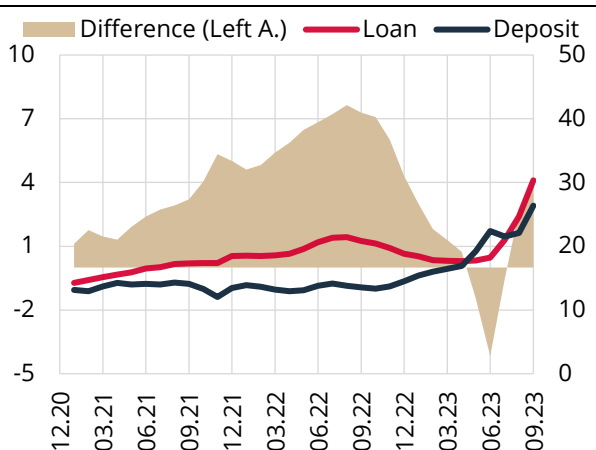
Source: CBRT

Last Observation: 09.23

Note: Change in annualized three-month net interest margin is shown in light-colored line.

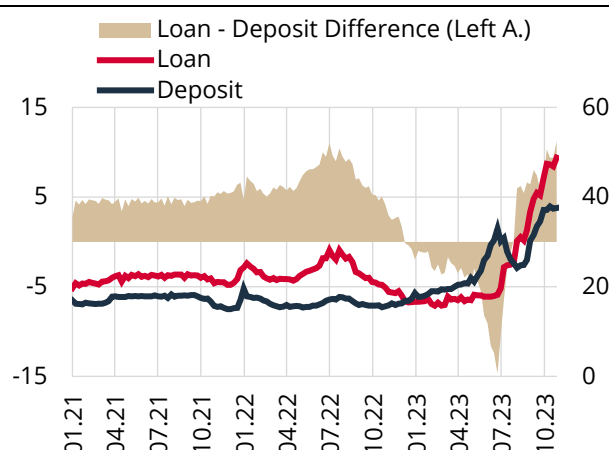
Funding costs that increased due to the rise in deposit rates in the first half of 2023 led to a decline in the net interest margin. Increases made in the policy rate since June were reflected in loan rates, which affected the net interest margin positively. While the spread between TL loan and time deposit rates moved into positive territory in flow data in the third quarter of the year, flow interest rate developments affect the stock TL loan-time deposit spread with a lag due to the duration gap (Charts IV.4.7 and IV.4.8).

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



Source: CBRT Last Observation: 09.23

**Chart IV.4.8: TL Loan – Time Deposit Spread**  
(Flow, %)

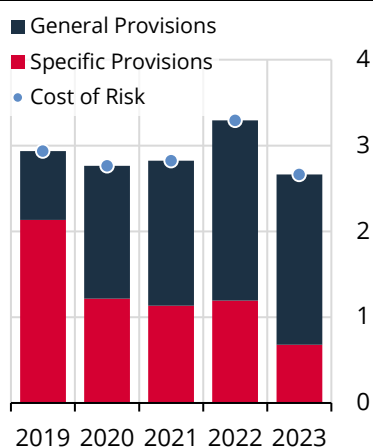


Source: CBRT Last Observation: 27.10.23

**The positive performance of banking sector asset quality and the outlook for fees, commissions and services income support the profitability performance.**

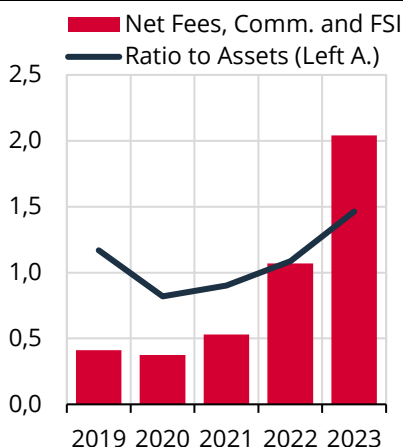
The effects of the credit risk-driven losses on profitability performance remain limited (Chart IV.4.9). Due to the mild course of migrations to NPL, provision expenses earmarked for non-performing loans have a limited impact on the risk cost. Despite the narrowing loan-deposit spread in the first half of 2023, the brisk course of loans positively affected banks’ income from fees and commissions. The ratio of net fees, commissions and banking services income to assets rose in 2023. Credit card-related fees and commissions, which have the largest share in banking services income, made a significant contribution to this rise. In particular, the high growth in personal credit cards supported the increase in services income (Charts IV.4.10 and IV.4.11).

**Chart IV.4.9: Cost of Credit Risk**  
(Annualized, %)



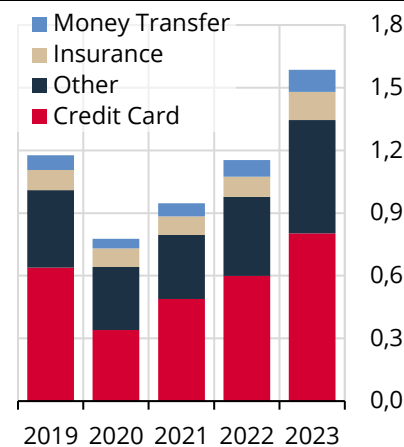
Source: CBRT Last Observation: 09.23  
Note: The cost of risk is calculated by dividing the 12-month sum of specific and general provisions as of September 2023 (for 2023) by the average gross loan amount for the respective period.

**Chart IV.4.10: Ratio of Net Fees, Commissions, and Services Income to Assets** (Billion TL, %)



Source: CBRT Last Observation: 09.23  
Note: For 2023, 12-month cumulative amounts as of September 2023 are used.

**Chart IV.4.11: Ratio of Banking Services Income to Assets (%)**

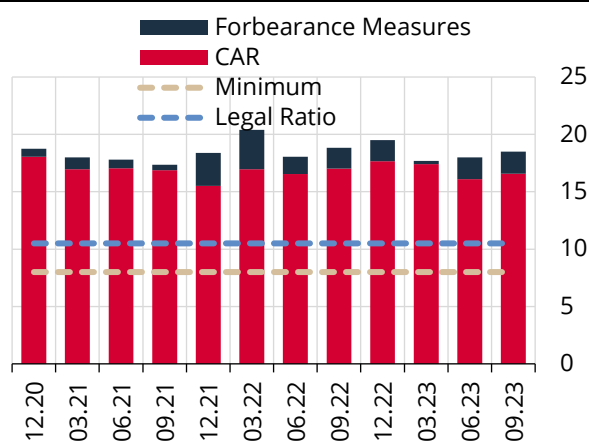


Source: CBRT Last Observation: 09.23  
Note: For 2023, 12-month cumulative amounts as of September 2023 are used.

**Capital ratios maintain their strong course above regulatory thresholds. The capital position of the banking sector is capable of covering potential losses.**

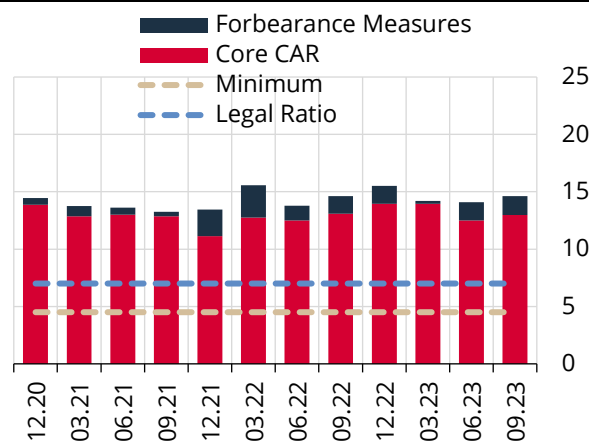
As of September 2023, the banking sector’s capital adequacy ratio (CAR) was 18.5%, and core CAR was 14.6%. The BRSA’s forbearance measures regarding capital adequacy calculations continue to be implemented. Since the previous reporting period, the impact of the BRSA’s forbearance measures on headline capital ratios has increased due to exchange rate developments. Excluding these forbearance measures, the sector’s CAR was 16.6% and core CAR was 13%. Although these capital ratios have somewhat declined compared to the previous reporting period, capital ratios of all banks are above regulatory thresholds (Charts IV.4.12 and IV.4.13).

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



Source: BRSA, CBRT’s calculations Last Observation: 09.23

**Chart IV.4.13: Core Capital Adequacy Ratio (%)**



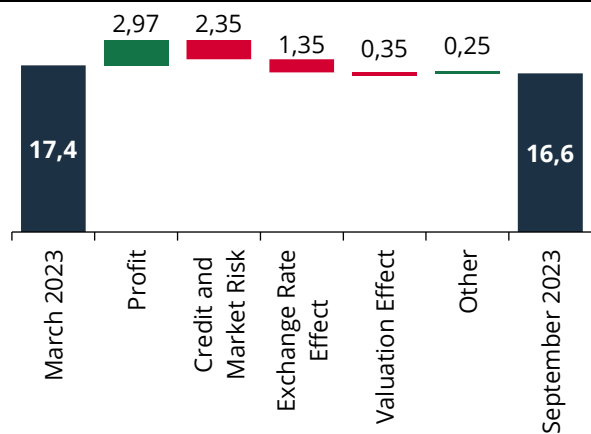
Source: BRSA, CBRT’s calculations Last Observation: 09.23

Note: Refers to CAR and core CAR adjusted for the BRSA’s forbearance measures. Minimum ratios are those applied to the overall sector as of September 2023 and are higher for systemically important banks. Regulatory 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 as per Basel III regulations.

**Banks’ internal capital generation continues to support their capital buffers.**

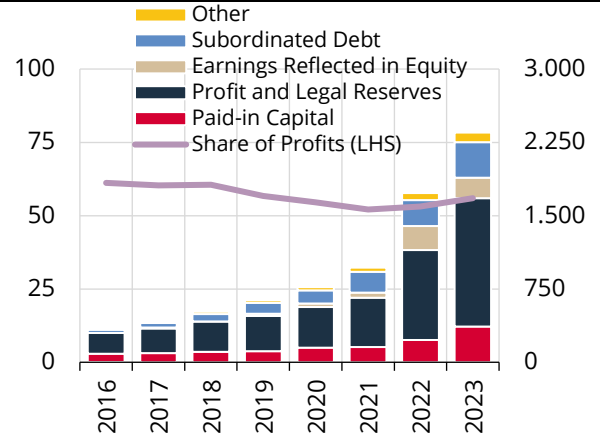
The regulatory capital of banks has continued to increase since the previous reporting period. This has significantly mitigated the negative effects of risk-weighted assets driven by asset growth and the exchange rate. In this period, profitability was the most important factor feeding into capital adequacy. On the other hand, as a result of the TL balance sheet expansion and the increase in the TL equivalent of FX assets due to the rise in the exchange rate, the growth in risk-weighted assets led to some decline in the CAR excluding the BRSA’s forbearance measures (Chart IV.4.14).

The banking sector has a regulatory capital composition dominated by core capital. While approximately 80% of regulatory capital is composed of core capital, legal reserves and profits stand out in the regulatory capital composition with their share of more than 50%. Meanwhile, FX-denominated subordinated debts provide banks with a hedge and diversity against the exchange rate increase through the valuation effect. The current equity structure is important in terms of the composition of capital buffers being made up of quality elements with high capacity to absorb losses (Chart IV.4.15).

**Chart IV.4.14: Change in CAR (%) , Excluding BRSA Forbearance Measures)**


Source: BRSA, CBRT

Last Observation: 09.23

**Chart IV.4.15: Composition of Regulatory Capital (Billion TL, %)**


Source: BRSA, CBRT

Last Observation: 09.23

Note: Share premiums are included in paid-in capital. "Profit" is composed of legal reserves, period profit and past profits. "Other" covers other equity items, with general provisions having a larger weight.

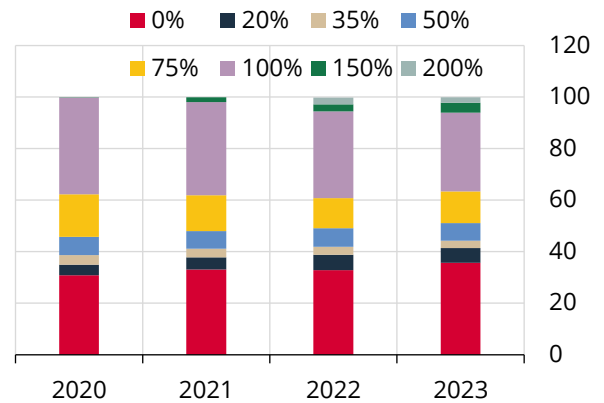
### Risk weights used in the calculation of capital adequacy are applied more prudently in Türkiye compared to international standards.

Pursuant to regulations in Türkiye, risk weights used in the calculation of amounts subject to the credit risk vary between 0% and 200% depending on the credit type. On 31 July 2023, the BRSA raised the risk weights for general-purpose loans, personal credit cards and vehicle loans. Prior to the regulation, risk weights were applied at 100% to general-purpose loans with a 12-month or shorter maturity and to personal credit card debts with a six-month or shorter maturity, at 150% for other maturities, and at 75% for vehicle loans. After the regulation, risk weights for these retail loan types started to be applied at 150% regardless of maturity. Moreover, on 24 August 2023, the BRSA decided to increase the risk weight for housing loans to owners of at least one house from 35% to 150% (Table IV.4.1). Due to higher risk weights applied to retail and commercial loans in recent years, items subject to a risk weight of 150% and 200% have increased (Chart IV.4.16). On the other hand, as the rise in risk weights is applied to new loans, their impact on capital adequacy appears gradually and over time.

**Table IV.4.1: Risk Weights for Retail Loans (%)**

	Basel Practice	Practice in Türkiye
		Flow
<b>Credit Cards</b>		
1-6 month (inc.) maturity	75	<b>150</b>
Longer than 6-month maturity	75	150
<b>Vehicle Loans</b>		
All maturities	75	<b>150</b>
<b>General-Purpose Loans</b>		
1-12 month (inc.) maturity	75	<b>150</b>
Longer than 1-year maturity	75	150
<b>Housing Loans</b>		
First house	35	35
Other houses	35	<b>150</b>

Source: BRSA

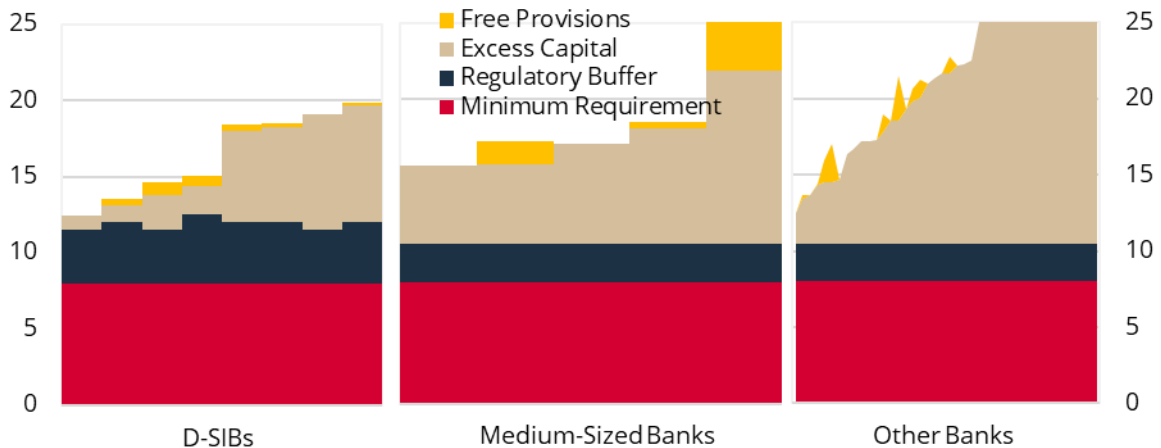
**Chart IV.4.16: Distribution of Items with Amounts Subject to Credit Risk by Risk Weights (% , Standard Approach)**


Source: CBRT, BRSA

Last Observation: 09.23

**High capital buffers continue to be among the important soundness indicators of banks.**

High capital buffers across all bank groups along with the contribution of quality elements such as paid-in capital and profits to capital indicate that banks have the capacity to absorb unexpected losses and manage systemic risk. The discretionary free provisions set aside by banks in addition to capital buffers keep banks more prepared against potential risks (Chart IV.4.17).

**Chart IV.4.17: Sector's Regulatory Capital Ratios and Excess Capital Buffers (%)**


Source: BRSA, CBRT

Last Observation: 09.23

Note: CARs excluding BRSA's forbearance measures are used. Banks with a CAR above 25% are not shown in the chart on the right.



## Abbreviations

EU	European Union	LDR	Loan-to-Deposit Ratio
USA	United States of America	KAP	Public Disclosure Platform
BRSA	Banking Regulation and Supervision Agency	KKB	Credit Register Bureau
NBFI	Non-Bank Financial Institutions	KKM	FX-Protected Deposit
PPS	Private Pension System	ODA	Overdraft Account
BIS	Bank for International Settlements	SMEs	Small and Medium-Sized Enterprises
BIST	Borsa Istanbul	DIB	Development and Investment Banks
PCC	Personal Credit Card	ST	Short-Term
Etc.	Et Cetera	LIBOR	London Interbank Offered Rate
Bps	Basis Points	LCR	Liquidity Coverage Ratio
CDS	Credit Default Swap	MKK	Central Securities Depository of Türkiye
GDS	Government Debt Securities	MUSIAD	Independent Industrialists and Businessmen's Association
DDM	FX-Protected Deposit Accounts Converted from FX	NIM	Net Interest Margin
PMC	Pension Monitoring Center	NEO	Net Errors and Omissions
EBITDA	Earnings Before Interest, Taxes, Depreciation and Amortization	ODD	Automotive Distributors Association
FECR	Financial Expenses Coverage Ratio	AES	Auto Enrollment System
Fed	Federal Reserve System	PMI	Purchasing Managers Index
FSB	Financial Stability Board	PUMAX	Purchasing Managers Index (MUSIAD)
G20	Group of Twenty	IPRSA	Insurance and Private Pension Regulation and Supervision Agency
RA	Revenue Administration	SOFR	Secured Overnight Financing Rate
EMEs	Emerging Market Economies	LHA	Left-Hand Axis
GDP	Gross Domestic Product	CMB	Capital Markets Board of Türkiye
AE	Advanced Economies	IPI	Industrial Production Index
MA	Moving Average	CAR	Capital Adequacy Ratio
WMA	Weekly Moving Average	BAT	Banks Association of Türkiye
MTF	Ministry of Treasury and Finance	CBRT	Central Bank of the Republic of Türkiye
IIF	Institute of International Finance		
CCI	Construction Cost Index		
IMF	International Monetary Fund		
ICI	Istanbul Chamber of Industry		

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IFRS	International Financial Reporting Standards
NPL	Non-Performing Loan
TL	Turkish Lira
SDIF	Savings Deposit Insurance Fund
TOKI	Housing Development Administration
CPI	Consumer Price Index
TURKSTAT	Turkish Statistical Institute
PPI	Producer Price Index
AMC	Asset Management Companies
FX	Foreign Exchange
FXNGP	Foreign Exchange Net General Position
RR	Reserve Requirement

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