

FINANCIAL STABILITY REPORT

2023-I

May 18, 2023



CENTRAL BANK OF THE REPUBLIC OF TÜRKİYE

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This report, aimed at informing the public, is based mainly on March 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

Within the framework of our Liraization Strategy, all the measures we have taken since the beginning of 2022 are formulated with a perspective that ensures permanent price stability in tandem with financial stability. In this context, policies are being implemented to permanently increase the share of the Turkish lira in the financial system and to ensure that the Turkish lira is the currency of payment for all domestic investment and commercial transactions. The steps we have taken began to yield results.

In addition to the fact that the foreign exchange position of corporate sector has improved with the liraization of their balance sheets, the share of the Turkish lira in households' financial balance has also increased significantly. In this way, financial resilience indicators of firms and households remain strong. Thanks to the targeted loan policies, the loan composition has changed in the intended direction and the share of loans extended to export companies and SMEs in total loans has increased. Through policy measures to bring TL loan rates close to monetary policy rates, firms' access to finance was supported and the effectiveness of monetary transmission through firms' financing costs was strengthened.

The improvement in the asset quality of the banking sector is apparent across all loan types and credit risk indicators. In addition to the predominance of deposits in funding composition, the strong liquidity buffers of the sector boost its resilience against potential liquidity shocks. Banks maintain capital adequacy ratios above regulatory thresholds.

The CBRT will continue to implement the Liraization Strategy in order to create an institutional basis for permanent and sustainable price stability. The policy rate, along with the targeted loan and liquidity policies will support the overall development of production and current account surplus capacity. With the help of financial conditions that will increase the supply capacity, the current account balance will be brought into a state that is compatible with permanent price stability. The liraization steps and diversified reserve management will continue to contribute to the achievement of financial stability with a focus on the Turkish lira.

The contribution of the Liraization Strategy to financial stability by increasing the resilience of our economy became even more evident during the period in which the wounds of the Kahramanmaraş-centered earthquake of February 6, the Disaster of the Century, were rapidly recovered. On this occasion, we remember once again with compassion those citizens who lost their lives in the earthquake disaster. I wish that cooperation and solidarity we showed as a nation after the earthquake will grow further.

I hope that the 36th volume of the Financial Stability Report, which includes the current state and outlook for financial stability as well as external and domestic macroeconomic developments, will be of benefit to all readers.

Prof. Şahap KAVCIOĞLU
Governor

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I. Overview

The downward trend in household indebtedness, which is quite low in Türkiye compared to peer countries, continues. The fact that the majority of household financial debts belong to wage earners with low income volatility reduces households-driven credit risk in the banking system. While the share of TL-denominated assets and non-deposit financial instruments in the households' financial assets continues to increase, the deposit liraization rate also tends to rise. The motivation of banks to reach their liraization target in deposits indicates that this trend may continue. Households diversify their savings by increasing their investments in non-deposit financial assets such as equity securities, mutual funds, and pension systems.

While the financial debt/financial asset ratio of the corporate sector has declined to the lowest level of the last 10 years, the positive trend in the liquidity, profitability and debt service indicators of firms continues. While the share of TL in the sector's liabilities has increased, firms are mainly borrowing in TL. The share of TL-denominated assets in the asset composition of firms is also increasing, and the improvement trend in the total and short-term FX positions are preserved.

While the downward trend in the number of firms using FX loans continues, the firms' capacity to meet their FX debt through export revenues is increasing. These factors, which reduce the FX risk of firms, also limit the exchange rate risk of the corporate sector. In this period, TL loan utilization among net exporting companies and SMEs is on the rise due to targeted loan policies. Corporate balance sheets, with their strong liquidity base, keep their resilience against possible shocks. While the profitability indicators of the firms listed on the BIST are above their historical averages, amid the decline in their financing costs, their repayment capacity has also strengthened significantly.

As a result of the targeted loan policy implemented to support potential growth and the current account balance at sustainable levels, the loan composition has changed as intended. The share of targeted loans such as SME, trade, agriculture, export and investment loans within TRY commercial loans rises further. This contributes to the increase in the share of sustainable components in the growth composition and decline in the structural current account deficit. While it is of great importance that loans feed into economic activity in a way to support investment, exports and potential growth, the effects of the measures taken are closely monitored. Following the inclusion of general-purpose loans in the securities maintenance regulation, the growth in general-purpose loans has started to slow down.

The banking sector's asset quality indicators are improving further. Owing to the flat course of the NPL balance coupled with the TRY loan growth, the NPL ratio is declining further, which is apparent across all subcategories of loans and sectors. In addition to the NPL ratio, the ratio of loans under close monitoring (Stage 2) and restructured loans also declined in the current Report period. A significant portion of Stage 2 loans consists of loans that are not in default. Having increased during the pandemic due to the prudence of banks, loan provision ratios are still on the rise, limiting the impact of asset quality risks on profitability and capital adequacy ratios.

The banking sector has strong FX liquidity buffers. While the share of external debt in the funding composition of banks has declined to historically low levels, the share of deposits in funding continues to increase. In addition to the deposit-dominated funding structure, the increase in the share of TL in the balance sheets supports the liquidity outlook of the sector. As a matter of fact, the positive outlook in short-term liquidity indicators such as the liquidity coverage ratio, and the loan/deposit ratio, which is an indicator of stable funding, is preserved.

Banks have resilient balance sheet structures. While the share of fixed-rate loans in banks' balance sheets decreased, the appetite towards long-term fixed-rate securities continued. On the other hand, banks' TL asset-liability maturity difference has not shown a significant change compared to the previous reporting period. With the strengthening of depositors' tendency towards TL deposits, the decrease in banks' on-balance sheet short positions continues. Banks keep their FX positions well below the legal ratios.

Banking sector profitability continues to support capital. Throughout 2022, the returns of CPI-indexed securities and moderate funding costs supported the profitability of the sector through the net interest margin channel. The net interest margin has flattened due to the rise in TL deposit rates in the recent period. However, banks have strengthened their capital positions and maintained their capital ratios above legal thresholds. The excess capital held above the legal ratios and free reserves ensure that the banking sector is in a strong position against possible risks.

II. Macroeconomic Outlook

II.1 International Developments

The monetary policy actions taken by central banks of advanced economies and the uncertain environment that emerged following the banking failures in the US and Europe have been the main factors affecting global liquidity and economic activity.

Economic growth in advanced and emerging economies (AEs and EMEs), which displayed a rapid growth after the lifting of pandemic restrictions, lost their momentum (Chart II.1.1). Monetary policies implemented in advanced economies had tightened financial conditions, thereby resulted in a negative impact on economic growth. While the bankruptcies in the banking sector adversely affected global liquidity, the liquidity support provided by central banks of advanced economies to troubled banks and their forward guidance that interest rate hikes were about to come to an end stood out as factors alleviating potential permanent financing problems in global markets. Leading indicators for growth suggest that in the USA and EMEs, the manufacturing PMI values have surpassed the reference value of 50 indicating growth, and that economic activities have started to recover in these countries. Meanwhile, manufacturing PMI values in the Euro area indicate that recovery has not started yet (Chart II.1.2). Improving global supply conditions and declining risks to energy supply are expected to support the recovery in global economic activity. In the next three-year period, the world economy is expected to grow led by India and China (Chart II.1.3).

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

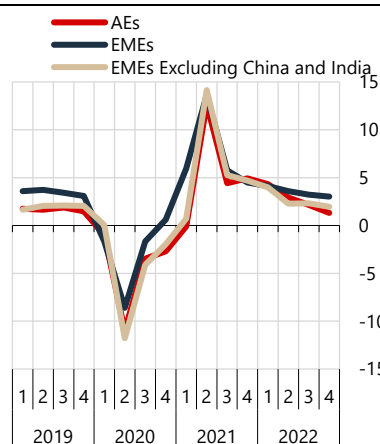


Chart II.1.2: Manufacturing PMI (Index)

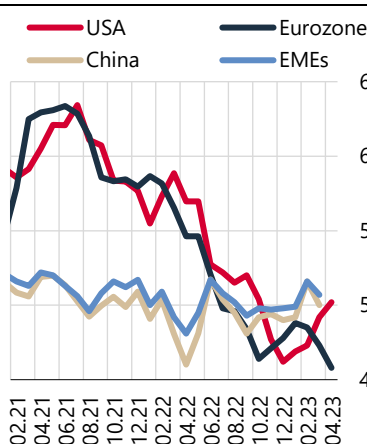
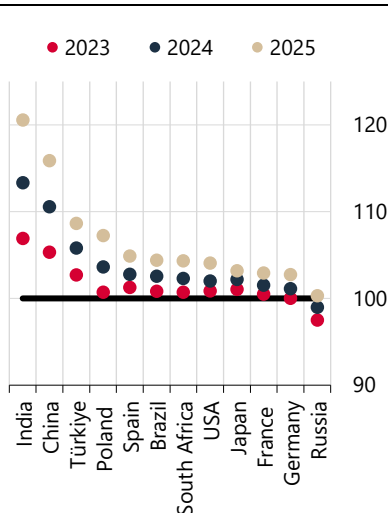


Chart II.1.3: Real GDP and Projections (Annual, 2022=100)



Source: Bloomberg Last Observation: 2022Q4 Source: Bloomberg Last Observation: 04.23 Source: Bloomberg Last Observation: 2023Q1

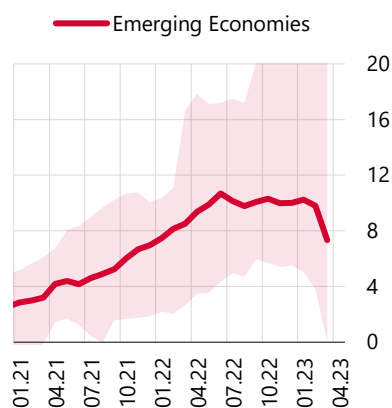
Note: AEs include the USA, the Euro area, Japan, the United Kingdom, Canada, Korea, Switzerland, Sweden, Norway, Denmark and Israel, while EMEs include China, Brazil, India, Mexico, Russia, Turkey, Poland, Indonesia, South Africa, Argentina, Thailand, Malaysia, Czechia, Colombia, Hungary, Romania, the 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,

Inflation rates in advanced and emerging economies, which have been flat since the end of last year, decreased in April but are still high.

Global inflation increased due to the resurfacing of demand that was deferred during the pandemic and by disruptions in the supply chain. Although global inflation rates partially declined as of the last quarter of 2022 on the back of the fall in energy prices, they remain high (Chart II.1.4, Chart II.1.5). Commodity prices, which accelerated in the previous period due to the impact of the pandemic and the Russia-Ukraine conflict on production and supply chains, slightly declined due to the weakening in global economic activity, particularly in China, and the expectation of a recession (Chart II.1.6). The weakened demand, amid tighter global financial conditions, is believed to have an effect on the decline in commodity prices. On the other hand, Brent oil prices, which declined significantly due to the bankruptcies in the banking sector, recovered in the following period. In addition, oil prices increased significantly in early April due to oil-exporting countries' announcements that oil

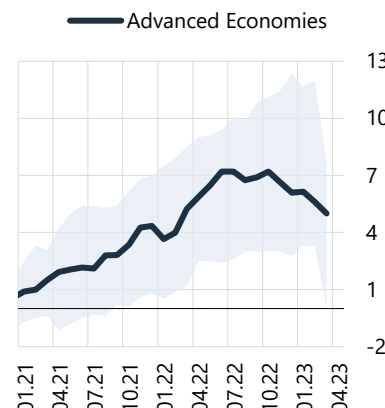
production would be cut as of May, but this increase was followed by a slight decline towards the end of the month.

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



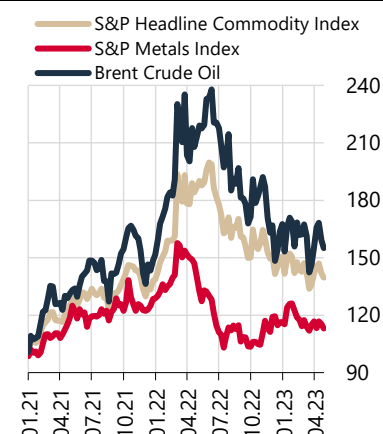
Source: Bloomberg Last Observation: 04.23

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



Source: Bloomberg Last Observation: 04.23

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



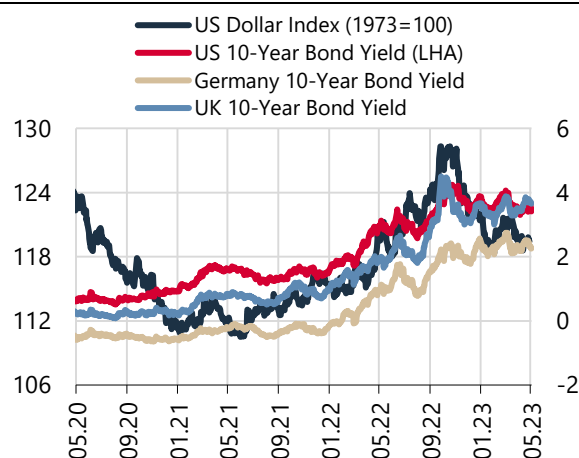
Source: Bloomberg Last Observation: 28.04.23

Note: Inflation rates refer to the annual change in CPI in the respective countries. The continuous line in Chart II.1.4 and Chart II.1.5 shows the median value across country groups. EMEs include Brazil, Mexico, Russia, Poland, Indonesia, South Africa, Czechia, Colombia, Hungary, Romania and the Philippines. AEs include the USA, the Euro area, Japan, the UK, Canada, Korea, Switzerland, Sweden, Norway, and Israel. Shaded areas indicate the highest and lowest values observed in the respective country groups.

The uptrend in long-term bond yields of advanced economies was replaced by a flat course, while the recent ongoing rise in the US dollar index was also reversed.

The uptrend in bond yields of AEs observed after the policy steps taken by their central banks turned flat in this period, while the US dollar index started to decline after marking the highest value since 2001 (Chart II.1.7). Due to expectations for a slowdown in the tightening in global financial conditions, EMEs received portfolio inflows both into equity securities and bonds and bills in the first quarter (Chart II.1.8). Portfolio flows to these countries remained seasonal as was the case in previous years and there have been portfolio outflows from EMEs as of March. Nevertheless, as of early April, EMEs started to receive portfolio flows both into bonds and equity securities. In this period, it was noteworthy that portfolio flows to equity securities to China continued.

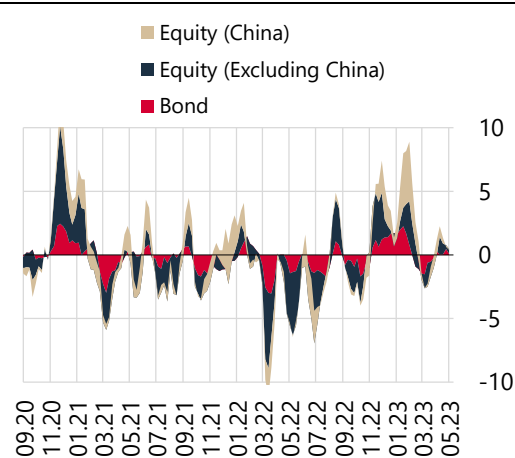
Chart II.1.7: US Dollar Index and 10-Year Bond Yields in Advanced Economies (Index, %)



Source: FRED

Last Observation: 28.04.23

Chart II.1.8: Weekly Capital Flows to EMEs (4-Week Cumulative, USD Billion)



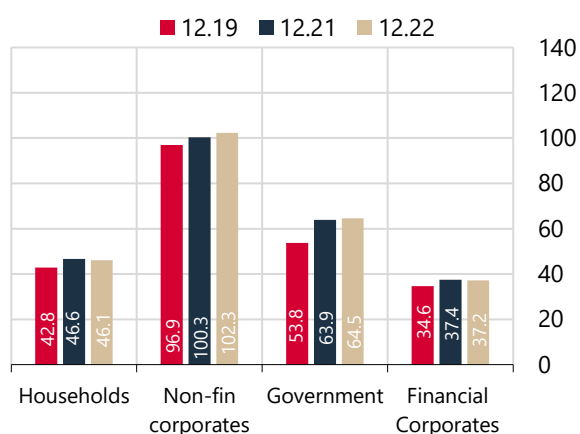
Source: IIF

Last Observation: 05.05.23

While there has been no significant change in indebtedness ratios of emerging economies, those of advanced economies have decreased.

In advanced economies, the rise in the financial indebtedness ratio, particularly of the public sector, displayed a significant decrease last year. Meanwhile, the discrepancy in the compositions of financial indebtedness ratios of AEs and EMEs was maintained in this period as well. Accordingly, in EMEs, compared to 2021, real sector firms continued to stand out as the main borrowers from financial markets and institutions, while the indebtedness ratio of the financial sector particularly, was considerably lower than in AEs. On the other hand, it is noteworthy that the public sector and the financial sector are the most indebted sectors in advanced economies (Chart II.1.9 and Chart II.1.10).

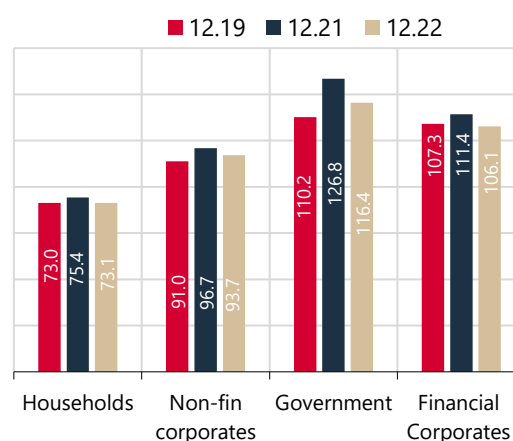
Chart II.1.9: Financial Indebtedness in EMEs
(Debt/GDP, %)



Source: IIF

Last Observation: 2022Q4

Chart II.1.10: Financial Indebtedness Level of AEs
(Debt/GDP, %)



Source: IIF

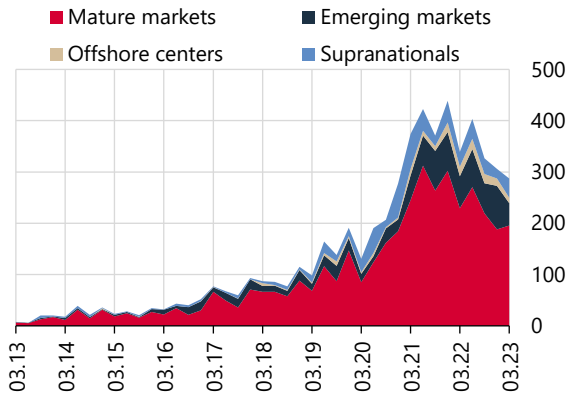
Last Observation: 2022Q4

Note: The average is calculated based on GDP weights of countries. Data for the third and fourth quarters are estimations of the IFF.

In 2023, environmental, social and governance themed borrowing declined compared to the previous period. This development is also attributed to the tightening in credit conditions following the bank failures in the USA and Europe.

Sustainable financing activities accelerated as a reflection of the climate change issue that became a top global financial agenda item after the pandemic. Sustainability-themed bond issues and bank loans, which increased rapidly in the post-pandemic period led by AEs, posted a significant growth (Chart II.1.11). However, due to rising financing costs as a result of tightening monetary policies and the energy problems for Europe caused by the Russia-Ukraine conflict, sustainability-themed borrowing activities lost momentum as of the second half of last year. The tightening in credit conditions as a result of bank failures in the USA and Europe is also believed to have played a role in this development. Actually, as of the first quarter of 2023, sustainability-themed borrowing in both AEs and EMEs was mostly carried out via bond issues, whereas bank loans with the same theme decreased significantly (Chart II.1.12). In the first quarter of 2023, the amount of sustainability-themed bonds and loans reached approximately USD 5.1 trillion, and this corresponds to approximately 5.5% of total financing on a global basis.

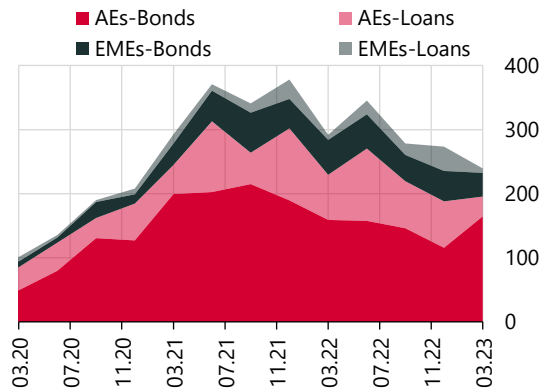
Chart II.1.11: Environmental, Social and Governance-Themed Borrowing (USD Billion)



Source: IIF

Last Observation: 2023Q1

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



Source: IIF

Last Observation: 2023Q1

Notes: Emerging Economies (EMEs), Advanced Economies (AEs), and offshore banking centers are composed of 141, 35, and 24 countries, respectively. Detailed information on country lists can be obtained from the sustainable debt screen on the IIF corporate website. Environmental, Social and Governance themed borrowing can be provided in the form of both bonds and bank loans, and Chart II.1.14 shows this breakdown in detail for AEs and EMEs.

Box II.1.I: Recent Developments in the Global Banking Sector

The failures of two US banks based in California and New York, whose depositors overwhelmingly composed of large technology firms, followed by the takeover of a globally systemically important bank, the second largest bank in Switzerland, and then the failure of another California-based bank in the US have fueled concerns over the resilience of the global financial system against shocks and the potential for these developments to create a systemic risk.

Silicon Valley Bank (SVB), which served nearly half of technology and science companies, which were funded by venture capital in the USA, as well as more than 2,500 venture capital firms, announced failure on 10 March 2023. It was announced that SVB's depositors with insured deposit accounts would be able to access their accounts within the same week and depositors with uninsured deposit accounts would be able to access their accounts the following week, nevertheless this announcement fell short of calming down the market. Some similar medium-sized banks experienced deposit runs and another US-based bank, Signature Bank, announced failure on 12 March 2023.

After the SVB's failure, the largest bank failure in the US since the Global Financial Crisis, the US Treasury Department, the Fed and the Federal Deposit Insurance Corporation (FDIC) took steps to protect the depositors.¹ On 12 March 2023, the Fed launched a new program (Bank Term Funding Program) to provide additional funding to eligible depository institutions, and the aim of the program was to offer loans to banks at the face value of their collateral and make them more resilient against deposit runs. The FDIC compensated the losses of depositors by making a systemic risk exception in the Deposit Insurance Fund and covered not only the insured deposit accounts but also the uninsured deposits of the two banks, which were acquired by other banks later on.²

In March, the shares of another bank, First Republic Bank, started to fall due to concerns felt by depositors at regional banks during the failures of SVB and Signature Bank. First Republic Bank's financial report for the first quarter of 2023 published on 24 April 2023 showed a 41% outflow in deposits during the first quarter of 2023.³ The bank had provided cheap mortgages to qualified customers, and as a result of rising interest rates, was faced with large losses on its mortgage portfolio. On 1 May 2023, the bank was announced failure and most of its assets were sold to JP Morgan Chase, the largest bank in the USA by asset size. First Republic Bank became the second largest bank to fail in the USA, after the failure of Washington Mutual Inc. in 2008. In terms of bank asset size, bank failures in the USA converged levels seen during the Global Financial Crisis (Chart II.1.I.1). Despite the measures taken by authorities, banks' CDS spreads increased and their market value decreased (Chart II.1.I.2).

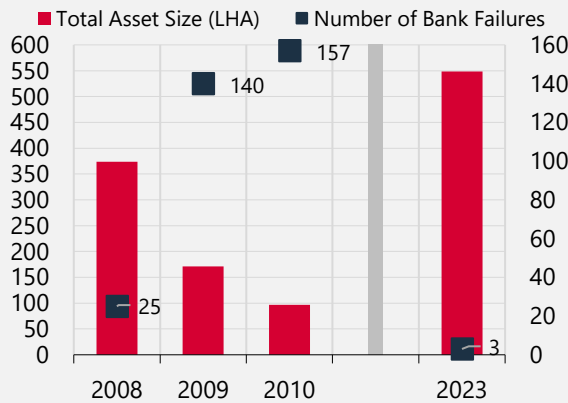
The bank failures and deposit runs in the US revealed that banks, which had been operating in a low interest rate environment for a long time, had failed to properly address the interest rate risk in their risk management practices and had taken on additional risks by investing in long-term securities. In this context, an analysis of the SVB' balance sheet reveals some remarkable features on the assets and liabilities sides. The liabilities side is dominated by deposits and there is a sectoral concentration of venture capital firms in terms of bank customers. The asset side is dominated by securities purchased by using customer deposits when interest rates were low, investments were not diversified and the bank was exposed to risks that exceeded its loss-absorbing capacity.

Commercial customers, whose funding needs increased due to rising interest rates, started to withdraw deposits to meet their liquidity needs. In order to meet the increasing demands of its customers, SVB had to sell its assets, including those to be kept until maturity, and incurred losses.

¹ <https://www.fdic.gov/news/press-releases/2023/pr23029.html>

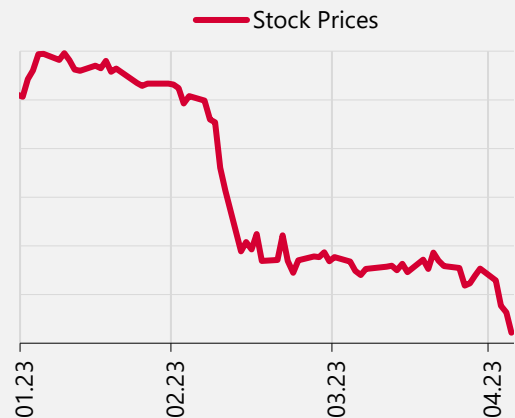
² <https://www.fdic.gov/news/press-releases/2023/pr23022.html>
<https://www.fdic.gov/news/press-releases/2023/pr23026.html>

³ <https://ir.firstrepublic.com/static-files/013f57fb-b980-4353-bbb3-0e7a3b27f20a>

Chart II.1.1.1: Bank Failures in the USA with Respect to Asset Size (Billion US dollars, Annual)

Source: FDIC

Last Observation: 04.23

Chart II.1.1.2: Market Value of Regional Banks in the USA (US dollars)

Source: Bloomberg

Last Observation: 05.05.23

Note: Based on shares of the SPDR S&P Regional Banking ETF.

On 28 April 2023, the Fed published a report on the failure of SVB and regulatory and supervisory conditions, and the FDIC published a report on the failure of Signature Bank and both stated that mismanagement was the main cause of bank failures.⁴ Meanwhile, in accordance with the Economic Growth, Regulatory Relief and Consumer Protection Act approved on 24 May 2018 in the USA, the Fed differentiated banks' regulatory and reporting obligations pertaining to liquidity and capital based on banks' asset size. Accordingly, the three failed banks were included in groups where regulatory and reporting requirements were less strict than larger banks. The Fed and the FDIC mentioned this issue in their reports, and stated that the authorities were not fast enough to identify and respond to risks and that there was room for improvement in regulation and supervision.

Following the bank failures in the USA in March, the CDS of Credit Suisse, a Swiss-based global systemically important bank, increased by approximately a thousand basis points and the bank's shares were transferred to UBS. The Swiss Financial Market Supervisory Authority (FINMA) approved this share transfer with an announcement dated 19 March 2023.⁵ Moreover, the nominal value of all capital instruments issued to raise core equity base (AT1) of Credit Suisse in the amount of around CHF 16 billion was written down and the core capital was increased. FINMA issued an announcement regarding the write-down of AT1s, which was criticized in international markets for not complying with the creditor hierarchy and caused concerns in financial markets, emphasizing that the actions taken relied on the applicable bond prospectuses and the Federal Council's Emergency Ordinance, that the hierarchy of investors was not changed, and that the authorities had not made any changes in this regard.⁶ European Union (EU) regulatory authorities also issued a joint statement to allay concerns in the bond markets, stating that there was a creditor hierarchy in the EU in accordance with the Financial Stability Board (FSB) resolution framework, and that common equity instruments are the first ones to absorb losses, and only after their full use would Additional Tier 1 be required to be written down.⁷

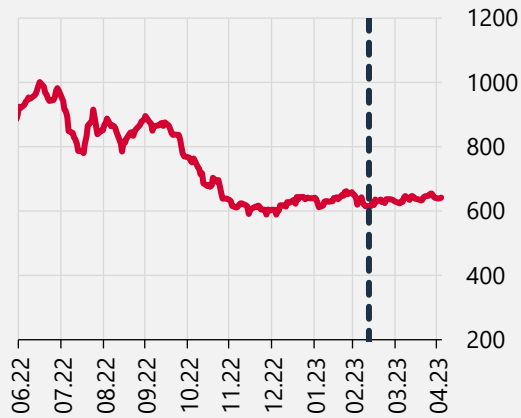
The uncertain environment induced by developments in the US and Swiss banking sectors did not have any negative impacts on the Turkish banking sector. Banks' 5-year CDS spreads remained flat (Chart II.1.1.3). Moreover, the fact that the Turkish banks have adopted an active risk management approach and hold the required liquidity and capital buffers against risks reduces the likelihood of systemic problems. Banks in Türkiye are considered to have sufficient loss-absorbing capacity for times of stress. Deposit and participation banks operating in Türkiye have been subject to liquidity coverage ratios since 2016. Banks' total and FX liquidity coverage ratios hover above the standard ratios and the share of FX liquid assets on their balance sheets has been on an uptrend since mid-2020 (Chart II.1.1.4).

⁴ <https://www.federalreserve.gov/publications/files/svb-review-20230428.pdf>

⁵ <https://www.finma.ch/en/news/2023/03/20230319-mm-cs-ubs/>

⁶ <https://www.finma.ch/en/news/2023/03/20230323-mm-at1-kapitalinstrumente/>

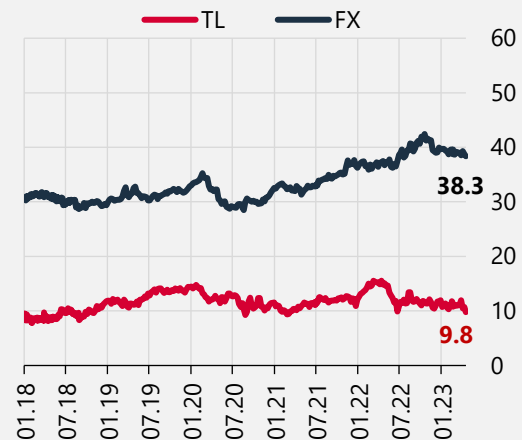
⁷ <https://www.bankingsupervision.europa.eu/press/pr/date/2023/html/ssm.pr230320~9f0ae34dc5.en.html>

Chart II.1.I.3: 5-Year CDS Premiums of Selected Banks* (Average)

Source: Bloomberg

Last Observation: 03.05.23

Note: Dashed line indicates the date on which SVB was taken over by the Federal Deposit Insurance Corporation (FDIC).

Chart II.1.I.4: Ratio of Liquid Assets to Total Assets (%)

Source: TCMB, BRSA

Last Observation: 20.04.23

Note: Liquid assets are the sum of cash, CBRT, RR, foreign banks (Free), free DBS and other liquid assets.

Due to developments in international markets, the global financial agenda was dominated by issues related to the soundness of financial institutions and the "too-big-to-fail" problem framed by the Basel III standards, which are important parts of the post-Global Financial Crisis reform efforts, as well as the concepts of spillover effects and systemic risk. Systemic risk is defined as a risk that causes serious adverse consequences for the real economy and leads to widespread disruption in the provision of financial services and it is a key element of the macroprudential policy framework.⁸ Systemically important financial institutions are those institutions that can create significant disruption in the financial system and economic activity due to their weaknesses or disorderly insolvencies, size, complexity and interconnectedness. From the banking sector standpoint, the Global Financial Crisis clearly revealed that rescuing systemically important banks with government interventions is very costly, and that the expectation that these banks will be rescued by the government causes banks to take more risks, and provides implicit support to banks with funding advantages and creates the risk of moral hazard.

In this context, within the framework of the methodology determined by the Basel Committee on Banking Supervision (BCBS) and in consultation with the BCBS and national authorities, the Financial Stability Board (FSB) announces the global systemically important banks each year and these banks become subjected to different regulations than other banks. Some of these regulations include increasing the loss-absorbing capacity of these banks in order to reduce the risk of failures, imposing additional obligations, subjecting them to stricter supervision, establishing resolution frameworks on a global scale in order to mitigate the effects in case of their failure, and making cross-border cooperation agreements. In addition, the Basel III framework has introduced additional capital and leverage requirements.

Recent developments in the banking sector have provided an opportunity to test the G20 financial reforms prepared in the aftermath of the Global Financial Crisis. It is crucial to accurately assess the impact of these developments. The global financial system has been exposed to significant shocks over the last three years. The pandemic and the conflict between Russia and Ukraine, which were exogenous shocks, had a significant impact on the global economy. Unlike these two exogenous shocks, the recent international developments in the banking sector have originated from within the financial system and have had a limited impact on the global economy. These developments have once again emphasized the importance of effective corporate governance and risk management in banking, the effects of technological advancements on the speed of bank failures, non-bank financial institutions' interconnectedness to banks, banking regulations and resolution framework for the

⁸ https://www.fsb.org/2011/10/r_111027b/

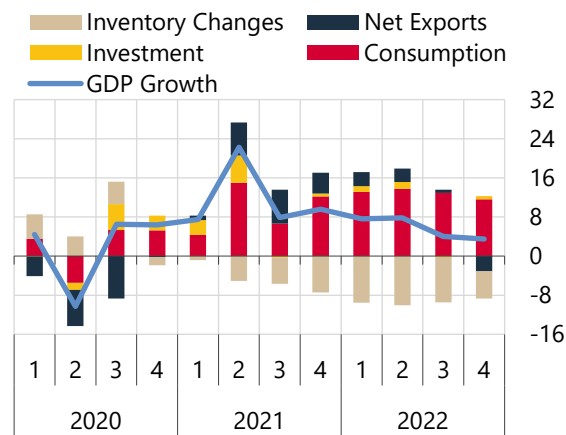
resilience of the global banking system against shocks. Although post-Global Financial Crisis reforms have increased the resilience of the global financial system to shocks, it has been observed that banks with weaker business models and inadequate risk management practices may fail in the face of tightening financial conditions and liquidity challenges. Against this backdrop, international financial institutions and standard-setting bodies closely monitor the issues that cause significant vulnerabilities to financial stability together with regulatory and supervisory authorities in order to preserve the gains from reforms and work on possible measures based on the lessons learned from experiences.

II.2 Main Domestic Macroeconomic Developments

Economic activity decelerated somewhat on an annual basis in the last quarter of 2022 due to weakening external demand, but domestic demand remained brisk.

In the last quarter of 2022, GDP grew annually by 3.5%, and quarterly by 0.9% in seasonally and calendar adjusted terms. In this period, final domestic demand, led by private consumption, was the main driver of growth in terms of expenditures, while the positive contribution of machinery-equipment investments to growth continued (Chart II.2.1). Annual growth was recorded as 5.6% throughout 2022. The industrial production index, which contracted in February due to the earthquake, grew slightly in quarterly terms thanks to strong performances in January and March. Leading indicators for April point to an increase in production in the industrial and services sectors (Chart II.2.2).

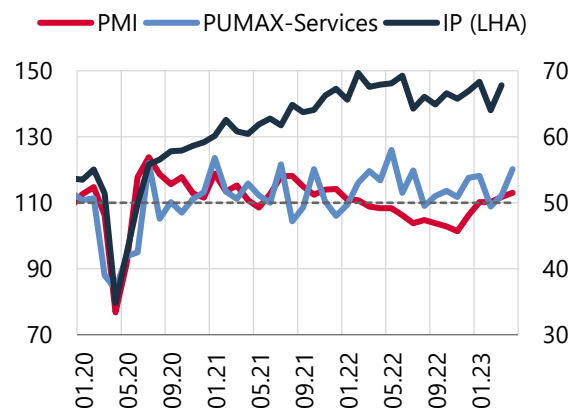
Chart II.2.1: Annual GDP Growth and Contribution of Expenditures (% Points)



Source: TURKSTAT

Last Observation: 2022 Q4

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

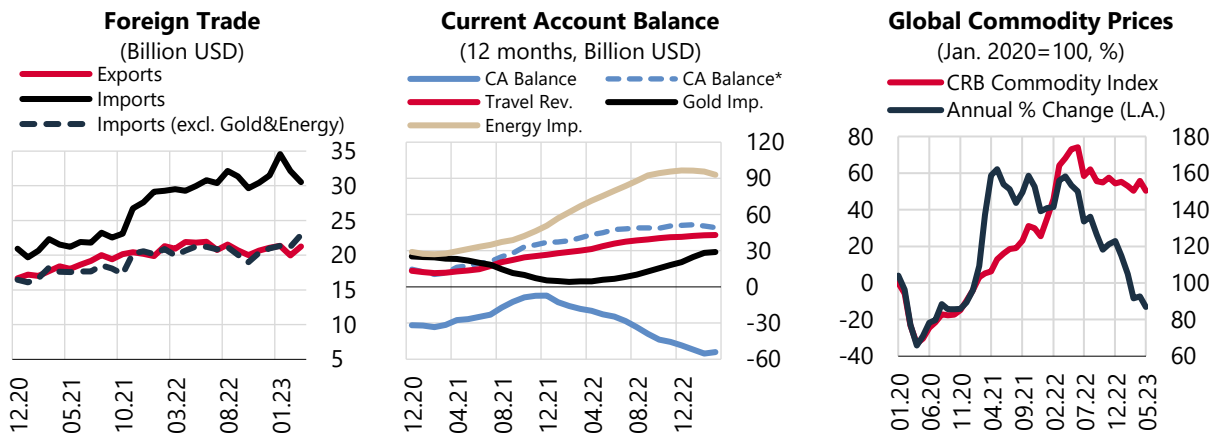


Sources: TURKSTAT, ICI, MUSIAD Last Observation: 04.23 (IPI 03.23)

Source: 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.

Exports have trended up despite disaster-related effects, while the foreign trade deficit has widened due to the acceleration in gold imports and the increase in imports of consumption goods. Meanwhile, strong services revenues continue to support the current account balance.

The ongoing increase in services revenues backed by strong contribution from tourism continue to support the current account balance. Excluding gold and energy, imports exhibit a trend similar to exports. As of March 2023, the annual current account deficit was USD 54.2 billion, while the current account excluding energy and gold remained favorable and posted a surplus of USD 49.3 billion in the same period. (Chart II.2.3).

Chart II.2.3: Current Account Developments


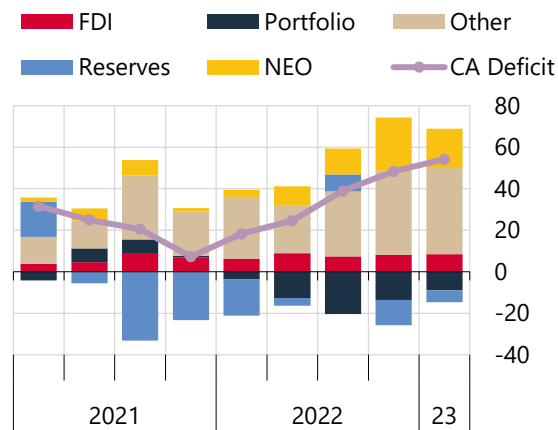
Sources: CBRT, TURKSTAT, Ministry of Trade, Refinitiv

Last Observation: 03.23 (Commodity prices 10.05.2023)

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. 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 non-residents' deposits in domestic banks, and partly by loans and direct investments.

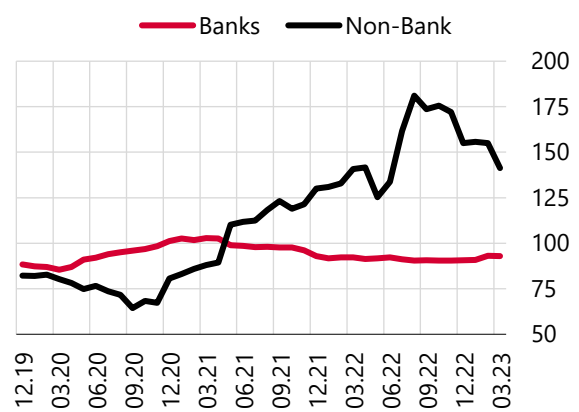
In the last quarter of 2022, the financing need driven by the current account deficit was predominantly covered by non-residents' deposits at banks and direct investments, which are monitored under other investments, whereas in the first quarter of 2023, the contribution of reserves to the current account deficit financing increased (Chart II.2.4). In March, banks remained net payers of external debt, which had been the case in the last couple of years, and thus, have continued to lower indebtedness. In the meantime, the non-bank private sector has renewed its external debt at a high rate despite a slight decline in recent months, and continued to contribute to the financing of the current account deficit (Chart II.2.5).

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


Source: CBRT

Last Observation: 03.23

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: 03.23

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

Public finance remains robust on the back of tax revenues.

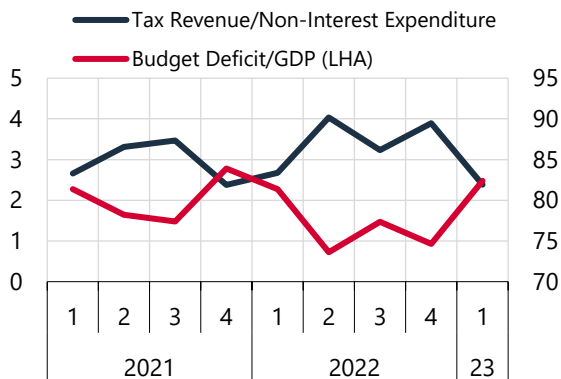
The proportion of primary expenditures covered by tax revenues, which fell in the third quarter of 2022, had an upward trend in the last quarter of the year, but decreased somewhat in the first quarter of 2023 due to the rise in expenditures driven by the disaster. The periodic rate of increase in budget revenues remained lower in the first quarter of the year, due to the shifting of the temporary corporate tax collection from February to May. Thus, the

ratio of budget deficit to national income, which had been 0.9% at end-2022, increased to 2.5% in March (Chart II.2.6).

The favorable effects of the policy mix implemented as part of the Liraization Strategy initiated an improvement in the level and trend of inflation.

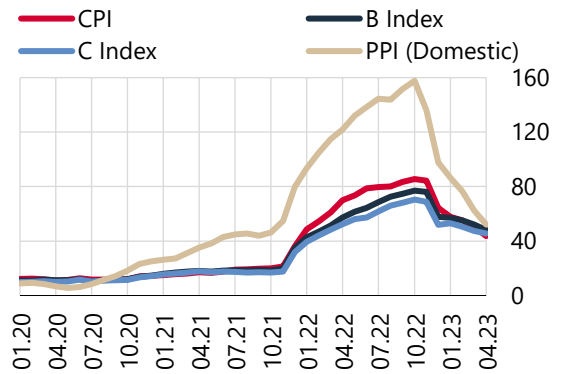
Consumer price inflation declined to 43.7% in April from 64.3% at end-2022. Annual inflation fell compared to the previous year across all groups, more visibly in energy. However, annual price increases remained relatively high in food and non-alcoholic beverages and to some extent in services. In April, producer prices continued to decline on an annual basis amid falling energy prices. Against this background, annual rates of change in core CPI indices decreased in both B and C indices (Chart II.2.7).

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



Sources: CBRT, MTF Last Observation: 03.23
 Note: Estimated value for 2023Q1 GDP.

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



Sources: CBRT, TURKSTAT Last Observation: 04.23
 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.

III. Non-Financial Sector

III.1 Household Developments

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

The downtrend in household indebtedness continues. Although the amount of household debts in Türkiye increased after 2021, GDP increased at a higher rate amid buoyant economic activity and the debt/GDP ratio declined significantly. Macroprudential measures taken towards retail loans played a pivotal role in the decline in indebtedness (Chart III.1.1). In September 2022, the household financial debt/GDP ratio in Türkiye was 11.3%, while this ratio was 40% on average in peer countries (Chart III.1.2). The fact that individual indebtedness is quite low compared to other countries suggests that risks stemming from household debt are manageable.

Chart III.1.1: Change in Household Indebtedness (Percentage Points)

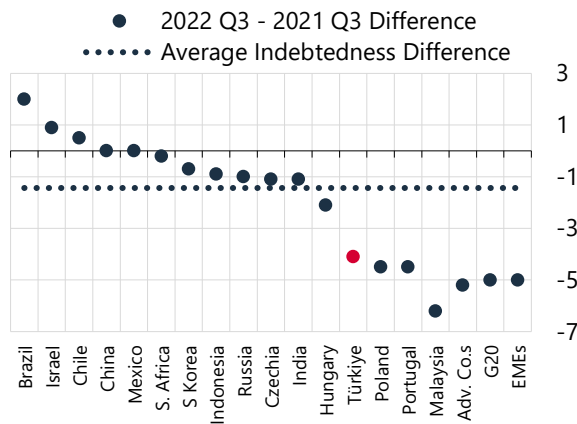
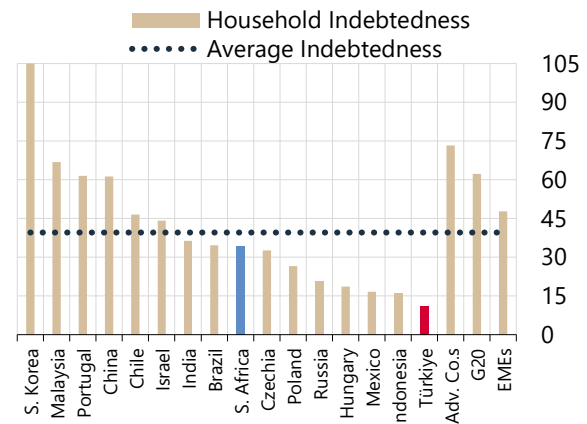


Chart III.1.2: Household Indebtedness (Debt/GDP, %)

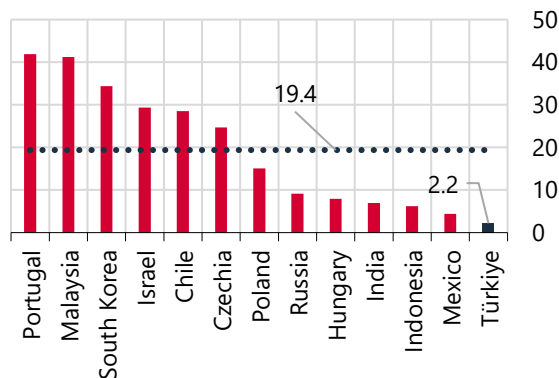


Source: BIS

Last Observation: 2022Q3

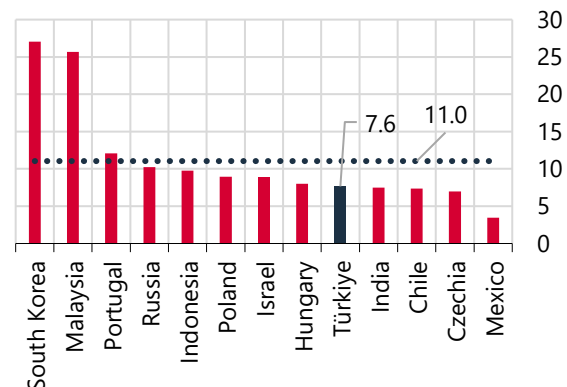
Note: Household indebtedness is calculated as the ratio of the total of debt securities and loans of households and nonprofit institutions serving households to GDP. Difference values denote the one-year change in indebtedness ratio. The country marked in blue has median indebtedness in the sample. The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

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



Source: IMF, Global Economy

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



Last Observation: 12.22

Note: The ratio is calculated as the current total housing loan and retail loans excluding housing loans balance in 2022 divided by the end-2022 (actual or projected) 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, student loans) except housing loans.

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 also below the averages of peer countries. The fact that maturity of housing loans in Türkiye are shorter and that housing purchases are mostly made without mortgages are considered to be the reasons for this ratio to remain below the averages of other

countries (Chart III.1.3). Credit cards are widely used as a means of payment in shopping in Türkiye, and this is considered to be a factor in keeping the ratio of retail loans excluding housing loans to GDP slightly higher (Chart III.1.4).

Table III.1.1: Household Financial Liabilities

	03.22		09.22		03.23		6-Month Growth (Annualized)
	TL Billion	Ratio to GDP	TL Billion	Ratio to GDP	TL Billion	Ratio to GDP	
Total Liabilities	1,154.5	13.8	1,440.5	11.5	1,987.9	12.1	90.4
Housing Loans	355.0	4.2	404.2	3.2	447.4	2.7	22.5
Vehicle Loans	25.4	0.3	41.9	0.3	74.4	0.5	215.1
General-Purpose Loans	500.5	6.0	602.9	4.8	844.2	5.1	96.0
Personal Credit Cards	240.7	2.9	355.4	2.8	585.4	3.6	171.3
AMC Receivables	32.9	0.4	36.0	0.3	36.6	0.2	3.2

Source: CBRT, BRSA, TOKİ

Note: Liabilities also include NPL. Estimated values for 2023Q1 GDP.

Compared to the previous report period, vehicle loans and personal credit cards recorded the fastest increase in household financial liabilities (Table III.1.1).

The rise in the prices of consumer goods and services as well as revisions in wages played an important role in the rapid increase in the PCC, meanwhile advancing future demand and end-of-season campaigns were other factors that boosted the share of vehicle loans in GDP. Due to the macroprudential measures introduced for housing and general-purpose loans in June 2022, the ratio of these loans to GDP tends to decline.

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

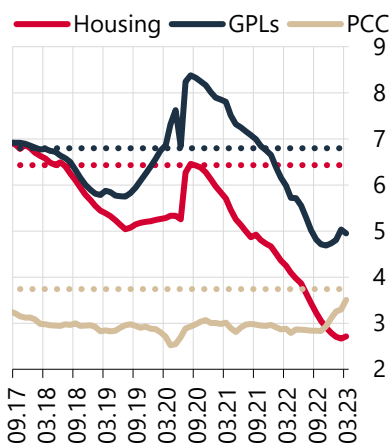


Chart III.1.6: Breakdown of Households' Financial Liabilities (%)

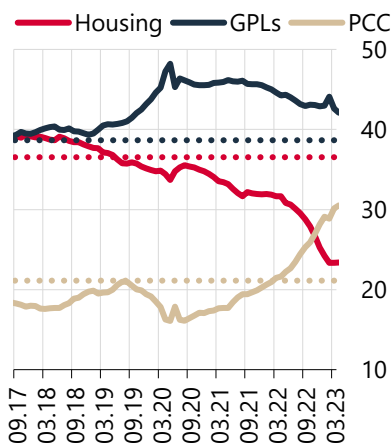
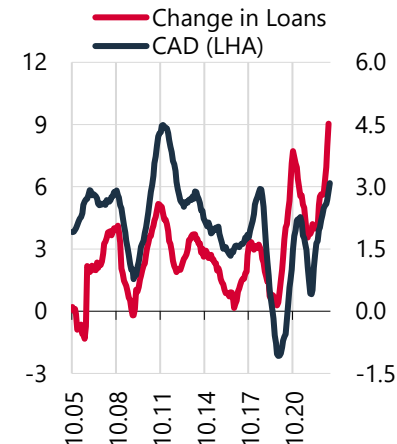


Chart III.1.7: Retail Loans and CAD Relationship (% of GDP)



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

Last Observation: 03.23

Note: Liabilities include NPLs. GDP forecasts for 2023Q1 are estimated values. Dashed lines are the average values of the related series for 2012-2019. Change in loans refers to the ratio of the annual balance differences of consumer loans excluding housing and vehicles to annual GDP, and the credited portion of personal credit cards is included in the calculation.

While general-purpose loans have the largest share in household financial liabilities, the share of personal credit cards increased significantly after the pandemic.

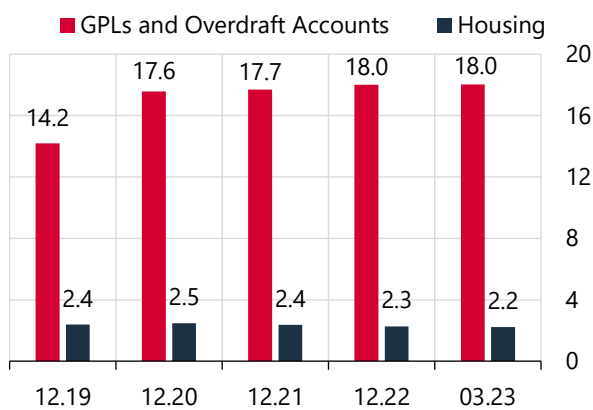
In the period following the loan campaigns during the pandemic, the increase in general-purpose and housing loans lagged behind the increase in economic activity and the share of these loan types in GDP decreased (Chart III.1.5). An analysis of the historical distribution of household liabilities shows that general-purpose and housing loans had the highest share in GDP and followed a close trend until 2018 (Chart III.1.6). The share of housing loans in retail loans has been declining since 2018. Nevertheless, the share of general-purpose loans reached a historically high level at the onset of the pandemic, and declined slightly in the following period. During the pandemic, digital shopping platforms and contactless payments became widespread, and moreover, due to the

determining effect of the recent increase in wages and card limits, the share of the PCC balance in total liabilities significantly increased. The share of housing loans in retail loans, which was 38% on average in the 2012-2019 period, decreased to 24%; while the share of general-purpose loans and PCC increased by 4 percentage points and 9 percentage points over the same period, reaching 44% and 31%, respectively. Meanwhile, retail loans have a close relationship with the current account balance due to their impact on household demand for goods and services (Chart III.1.7). In this context, the impact of general-purpose loans and PCC utilization on the current account balance is closely monitored.

While the number of people with consumer loan debt remains flat, the share of fixed-income earners in consumer loan utilization has been increasing.

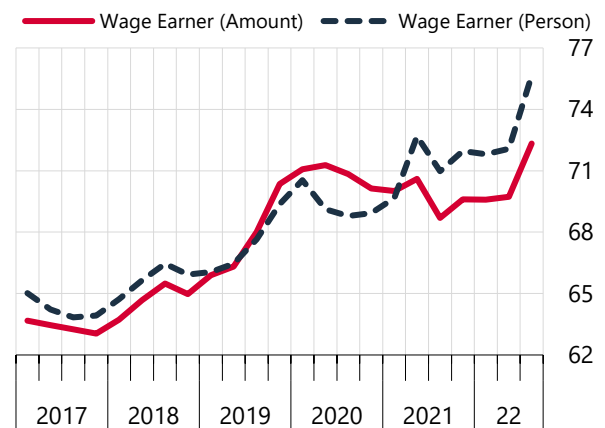
The number of people with housing and general-purpose loans (including ODA) remained flat compared to end-2022 (Chart III.1.8). This is mainly attributed to the maturity restriction in general-purpose loans, which varies based on the loan amount, and the developments in interest rates. As the impact of programs introduced for housing loans will be reflected on loan disbursements starting from March, the housing loan balance and the number of borrowers in the system are likely to increase. Moreover, the revision made in the amount brackets used in loan-to-value ratios in February 2023 is also expected to affect loan developments and the number of borrowers. The rise in the share of wage earners in consumer loan utilization continues (Chart III.1.9). This is attributed to the revisions in wages and banks' gravitation towards this segment of the society. While this ratio has reached a historically high level, the fact that the majority of consumer loan borrowers are wage earners with low income volatility stands out as a factor that reduces the household credit risk on the banking system.

Chart III.1.8: Number of People with Consumer Loan Balance (Million People)



Source: Risk Center, CBRT Last Observation: 03.23
Note: Reports the number of individual general-purpose and housing loan borrowers in the banking sector. General-purpose loans include overdraft accounts. Zero-balance overdraft accounts are excluded.

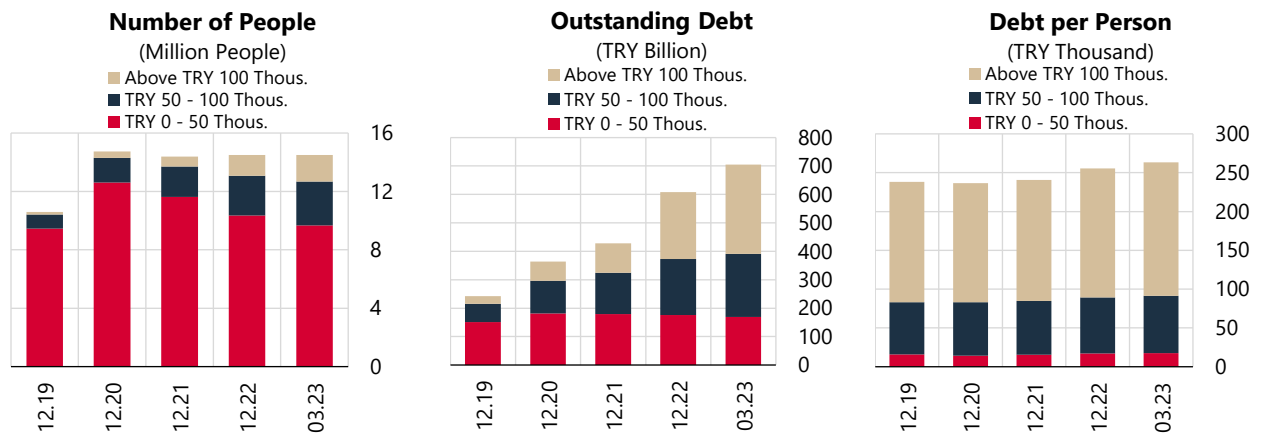
Chart III.1.9: Income Profile of Consumer Loan Borrowers (% Share)



Source: TBB Last Observation: 2022Q3
Note: Loan borrowers have been categorized into two groups as wage-earners and others. The chart shows the share of wage-earners in total. Wage-earner amount-person shares show the quarterly flow developments. Consumer loan is the total of retail loans excluding PCC. The data is obtained from 32 banks that are members of the Banks Association of Türkiye (BAT).

Throughout 2022 and in the first quarter of 2023, general-purpose loan balances increased, while the number of borrowers remained flat. In this period, per capita indebtedness slightly increased.

In 2022, the general-purpose loan balance increased compared to 2021, but this increase remained below the inflation rate (Chart III.1.10). While the total number of people with general-purpose loan debt remained flat, differences in terms of amount breakdown draw attention. The number of people with general-purpose loan debts over TRY 50 thousand increased, while the number of people with general-purpose loans below TRY 50 thousand decreased. A similar trend is observed in general-purpose loan balances. Debt per capita continued to rise due to the significant increase in loans of TRY 50 thousand and above. In the first quarter of 2023, the increase in general-purpose loans was driven by the group of people with loans of over TRY 100 thousand. Another important development was that, in March, general-purpose loans above TRY 70 thousand were included in the scope of securities maintenance obligation based on interest rates. This regulation may limit high-volume loan disbursements.

Chart III.1.10: Number of General-Purpose Loan Borrowers, Outstanding Debt Distribution, and Per Capita Debt by Amount


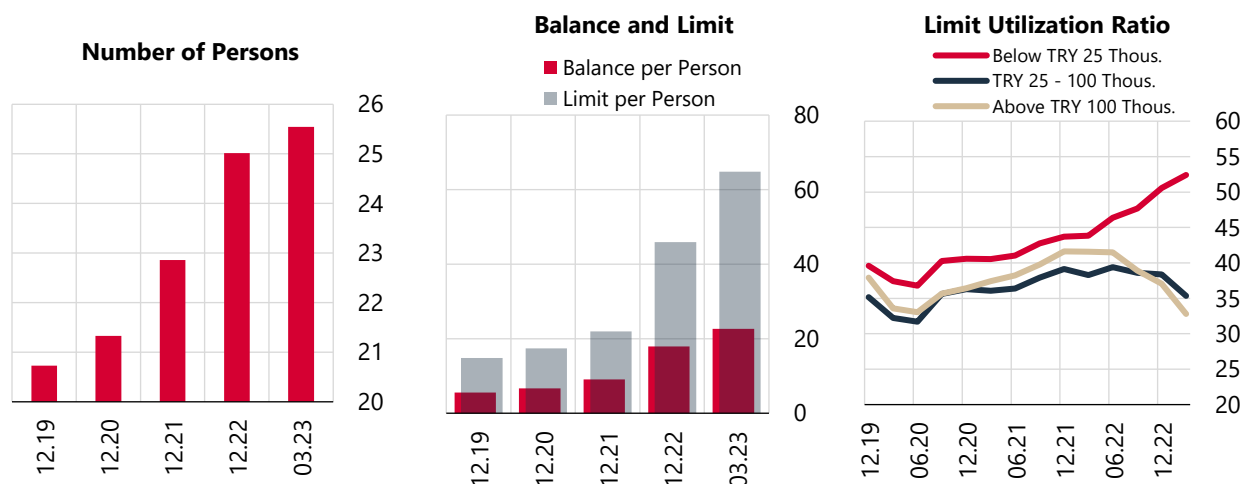
Source: Risk Center, CBRT

Last Observation: 03.23

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. Overdraft accounts and general-purpose loans classified as NPLs are excluded.

While personal credit card debt per capita increased, limit utilization rates generally decreased due to limit revisions.

In the first quarter of 2023, it is observed that there has been an increasing trend in both the number of active credit card users and credit card debt per capita (Chart III.1.11). Inflation developments, interest rates and spending motivations of individuals are considered to support this trend. Meanwhile, individuals' credit card limits were revised in line with increases in the minimum wage and other wages. Accordingly, credit card limits per capita increased significantly in 2022 and the first quarter of 2023. The limit utilization rate of credit cards with credit limits of TRY 25,000 and below reached 52.4% in March 2023, showing a rise compared to the previous Report period, while the rate declined significantly in cards with limits of TRY 25,000 and above, particularly in cards with limits of TRY 100,000 and above. This trend started in June 2022 and continued through the current period.

Chart III.1.11: Number of Persons Actively Using PCC, Card Balance and Limit Per Customer, Card Limit Utilization Rate (Million People, TRY Thousand, %)


Source: Risk Center, CBRT

Last Observation: 03.23

Note: Chart excludes people with zero credit card balance.

Individuals' performance in credit card repayment on time is improving.

In the last Report period, while the increase in PCC balances continued to be the driver of retail credit growth, the ratio of unpaid debts on PCCs declined in the same period. The ratio of unpaid debts to total card balances

decreased to 11.5% in credit cards for which the minimum payment amount or a payment more than the minimum payment amount is paid; and the same ratio decreased to 6.5% in credit cards for which less than the minimum payment amount is paid (Chart III.1.12 and Chart III.1.13). These developments support the favorable outlook in retail loan indebtedness.

Chart III.1.12: Personal Credit Cards with Unpaid Balance (TRY Billion, %, 3-Month MA)

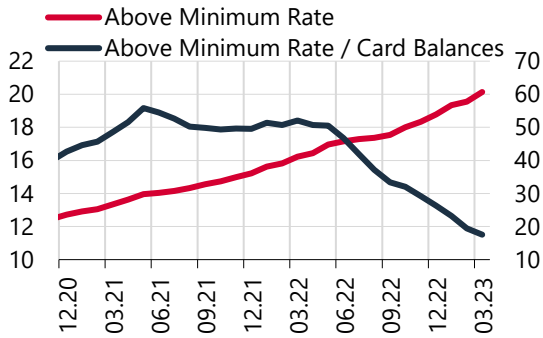
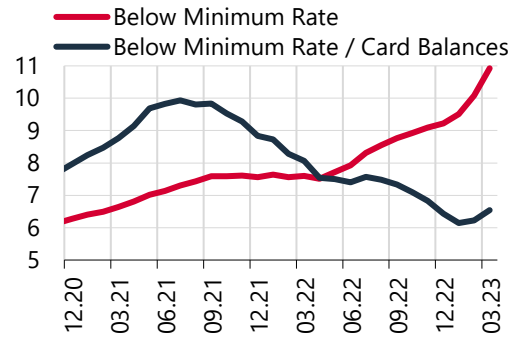


Chart III.1.13: Personal Credit Cards with Unpaid Balances (TRY Billion, %, 3-Month MA)



Source: BRSA

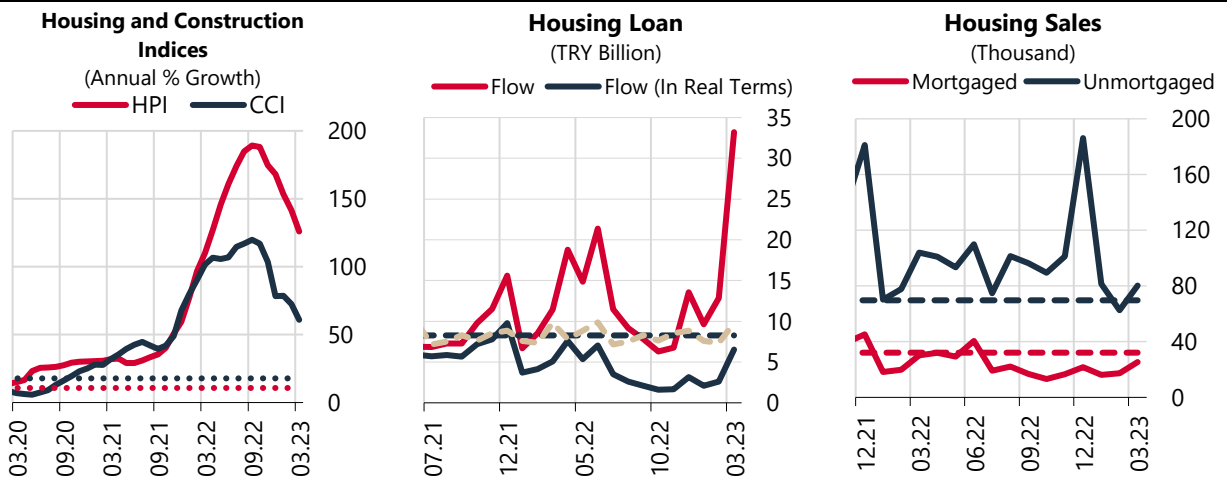
Last Observation: 03.23

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.

Housing loan utilization is 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 state banks and the macroprudential measures introduced in June 2022, housing loan utilization remained quite slow, but picked up slightly in March due to credit campaigns. Accordingly, although mortgaged house sales increased slightly on the back of loans utilized in March, they have been weak since the second half of 2022 hovering below the seasonal average (Chart III.1.14).

Chart III.1.14: Housing Loans, House Sales and House Prices



Source: CBRT

Last Observation: 03.23

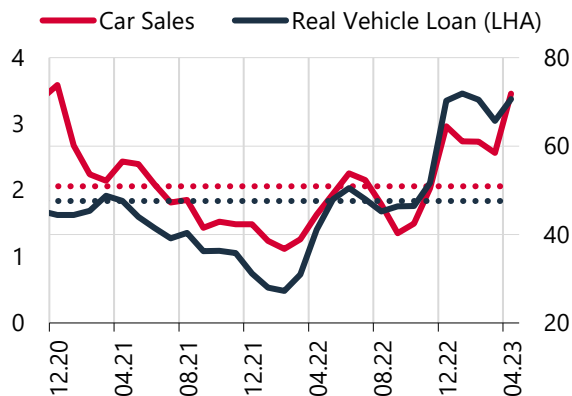
Note: Housing loans are shown in terms of monthly flow disbursements. Dashed straight lines show the average annual index changes (2016-2019 period for CCI), real housing loans extended and related housing sales; the dashed and moving line shows the average housing loans in the relevant months of the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

After a weak outlook in 2021, vehicle loan utilization and car sales have been rising since the last quarter of 2022.

Vehicle loan utilization and new car sales are well above their historical averages (Chart III.1.15) This is attributed to the fact that the negative impact of the pandemic on supply chains and the global chip problem have been mostly eliminated. Meanwhile, the high demand for new cars stands out as another determinant of the buoyant loan utilization and sales. Moreover, domestic automobile production that started in 2023 is expected to provide

additional impetus to new car sales in the coming years. The number of used car vehicles indicate that the used vehicle market is more active compared to the seasonal average (Chart III.1.16).

Chart III.1.15: Vehicle Loans and New Car Sales
(Thousand Units, TRY Billion, 3-Month MA)

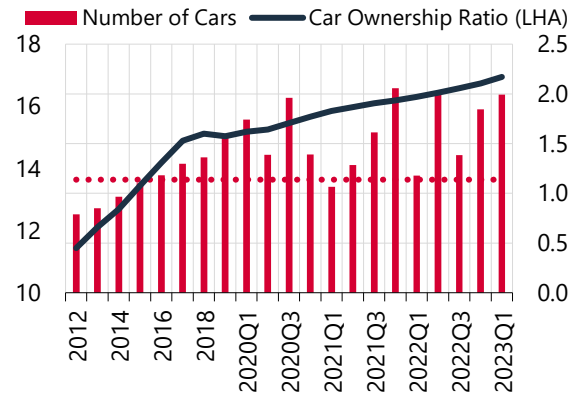


Source: ODD, BRSA

Last Observation: 04.23

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.

Chart III.1.16: Number of Used Car Sales and Car Ownership Ratio
(Million Units, %)



Source: TURKSTAT

Last Observation: 2023Q1

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 total population.

The rise in the weight of TRY-denominated assets and non-deposit financial instruments in households' financial asset composition continues.

The rise in household financial assets was driven by the growth in TRY-denominated assets. Accordingly, the share of TRY assets in household financial assets continues to increase (Table III.1.2). In this period, the ratio of TRY savings deposit balances, stocks and fund investments to GDP increased. Banks' motivation to achieve the liraization target in deposits, attractive TRY deposit yields and demand for KKM products led to a rise in TRY savings deposits and a decrease in FX savings deposits.

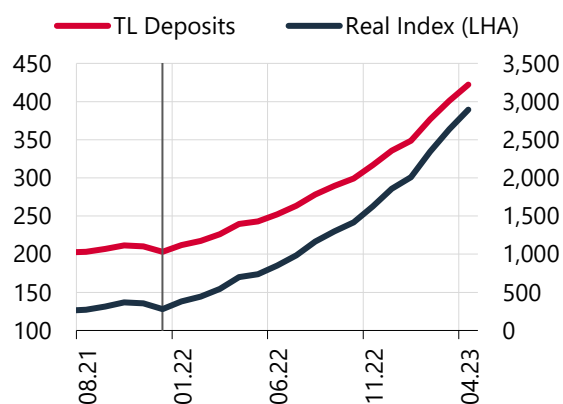
In this Report period, the significant rise in household TRY deposit balances continued (Chart III.1.17). Households' reallocation of their savings from FX deposits to KKM is considered to have played an important role in this development. In fact, the downtrend in households' FX deposits continued in this period (Chart III.1.18). As the improvement in inflation and inflation expectations continues, households' portfolio preferences are expected to continue to grow in favor of TRY deposits and liraization in household assets is expected to strengthen.

Table III.1.2: Household Financial Assets

	03.22		09.22		03.23		6-Month Growth (Annualized)
	TRY Billion	GDP Share	TRY Billion	GDP Share	TRY Billion	GDP Share	
Total Assets	4,332.3	51.8	5,635.9	45.0	7,134.2	43.3	60.2
TL Savings Deposits	1,248.6	14.9	1,894.9	15.1	3,010.0	18.3	152.3
FX Savings Deposits	1,615.9	19.3	1,889.6	15.1	1,554.0	9.4	-32.4
- (Billion USD)	110.3		102.1		81.1		
Precious Metal Deposits	441.2	5.3	475.1	3.8	572.2	3.5	45.1
- (Billion USD)	30.1		25.7		29.9		
Bonds and Bills	107.3	1.3	151.5	1.2	189.9	1.2	57.2
Mutual Funds	479.6	5.7	602.4	4.8	886.8	5.4	116.7
Pension Mutual Funds	250.6	3.0	308.6	2.5	401.7	2.4	69.5
Other Mutual Funds	229.0	2.7	293.8	2.3	485.0	2.9	172.6
Equity Securities	344.3	4.1	537.4	4.3	857.7	5.2	154.7
Repo	7.0	0.1	9.1	0.1	11.8	0.1	70.6
Currency in Circulation	88.4	1.1	76.0	0.6	51.8	0.3	-53.5

Source: CBRT, MKK, PMC

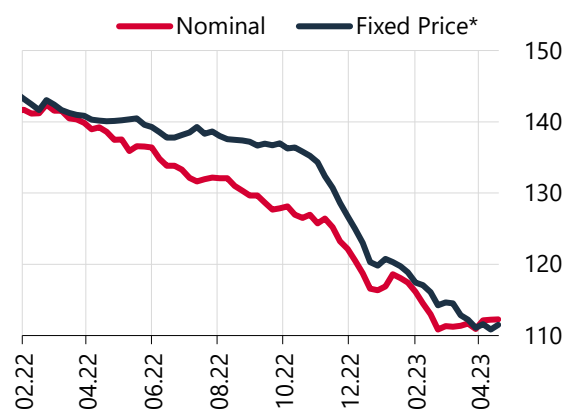
Note: Month-end exchange rates have been used. Pension mutual funds show the total funds of participants in the Private Pension System (PPS) and the Auto Enrollment System (AES), minus the state contribution. Deposits refer to resident real persons' deposits. Estimated value for 2023Q1 GDP data.

Chart III.1.17: TRY Deposits (Billion TRY, Index 12.2020=100)

Source: CBRT

Last Observation: 04.23

Note: TRY deposits of resident real persons. Real index is obtained by adjusting the monthly change in deposits by the CPI. The vertical line marks the FX volatility in December 2021.

Chart III.1.18: FX Deposits (Billion USD)

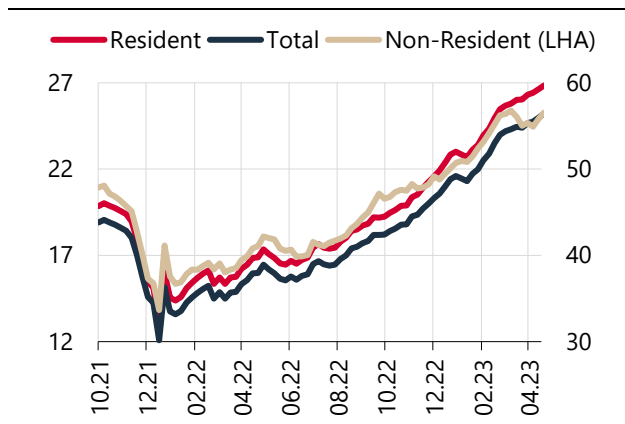
Source: CBRT

Last Observation: 04.23

Note: FX deposits refer to resident real persons' deposits, including precious metal accounts. In parity-adjusted series, it was assumed that the parity between exchange rates was constant.

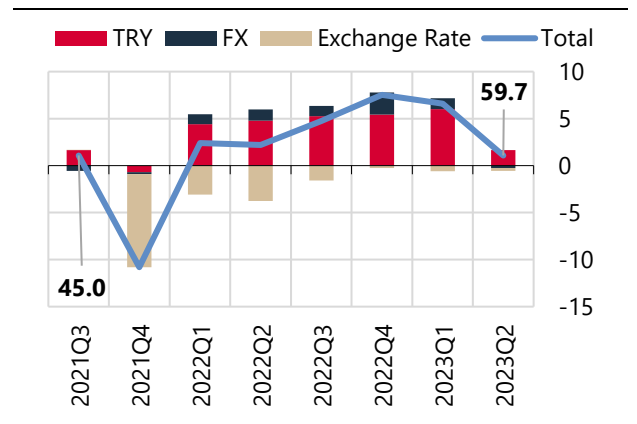
As a result of the developments in households' TRY and FX deposit preferences, the liraization rate continues to increase (Chart III.1.19). While the liraization rate of deposits of resident real persons rose to 59.7%, banks' increasing motivation to achieve the liraization target in deposits indicates that the uptrend may continue. The rise in the liraization ratio was driven by the increase in TRY deposits, which was also supported by KKM accounts, while the decline in FX deposits and the stable course of exchange rates are also considered to be important (Chart III.1.20). After the 3rd quarter of 2022, the liraization rate in savings deposits increased by 20 points. To this rise, the increase in TRY deposits contributed by 18.4 points and the decrease in FX deposits by 4.3 points. Meanwhile, the depreciation in exchange rates in this period led to a relatively limited decline of 2.7 points in the liraization rate. Throughout 2022, the main driver of the increase in the liraization rate after the introduction of the KKM product was the preference for TRY deposits, while the upward effect of the exchange rate-driven increase in FX deposit balances was quite limited.

Chart III.1.19: Household Liraization Ratio (%)



Source: CBRT Last Observation: 04.23
 Note: Shows the share of real persons' TRY deposits/ total deposits.

Chart III.1.20: Sources of Change in Liraization (Points)

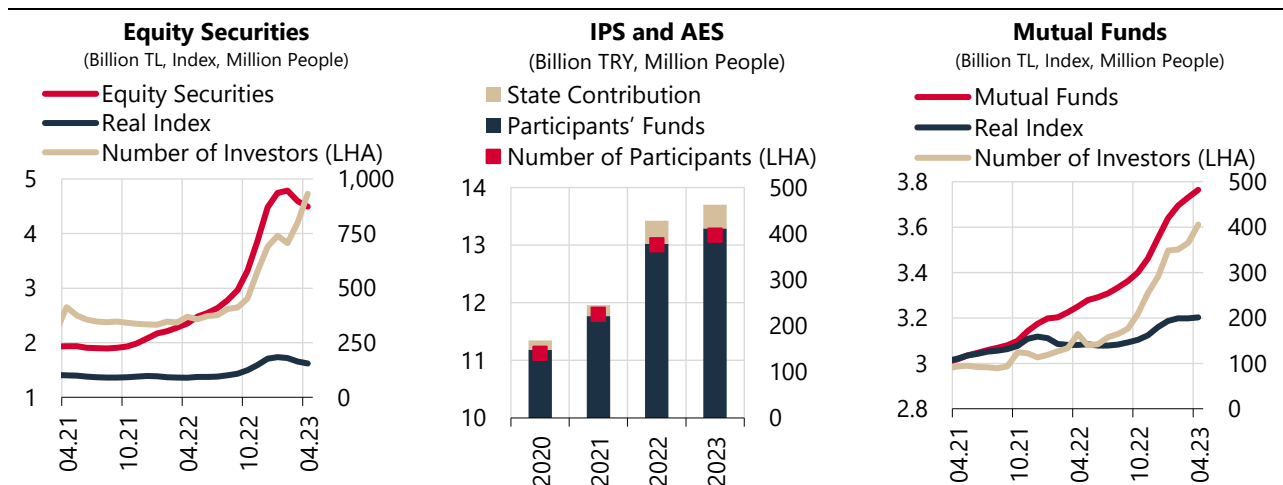


Source: CBRT Last Observation: 2023Q2
 Note: The Chart shows the "Total" effect of the change in "FX" and "TRY" deposits and "Exchange Rate" movements on liraization. The values on the chart are the liraization rate for resident real persons in the respective periods. 2023Q2 covers only April data.

Households have been diversifying their savings by increasing their investments in non-deposit financial assets such as equities and mutual funds.

Households' preference for the stock market remained strong throughout 2022, with the number of stock investors reaching 4.7 million at the beginning of April 2023 and the portfolio size reaching approximately TRY 900 billion. In this Report period, price-adjusted equity securities index values show that the stock portfolio increased in value in real terms, albeit with a slight decline in recent months. Funds in the Private Pension System (PPS) and Automatic Enrollment System (OES), which are among the major asset items of households, have been on a moderate rise. Similarly, the number of participants in the pension system exceeded 13 million in this Report period. With a regulation to take effect in the second half of 2023, individuals will have access to lower-cost loans by pledging their savings in the pension system as collateral. On the back of this regulation, individuals' participation in the pension system is expected to increase in the medium and long term. Households' developing a habit of accumulating savings in long-term instruments is expected to contribute to financial stability. While the number of mutual funds held by households continued to increase, the number of investors reached 3.6 million as of April 2023. Similar to the stock market, the price-adjusted real index of mutual funds is also on an uptrend (Chart III.1.21).

Chart III.1.21: Household Non-Deposit Asset Development



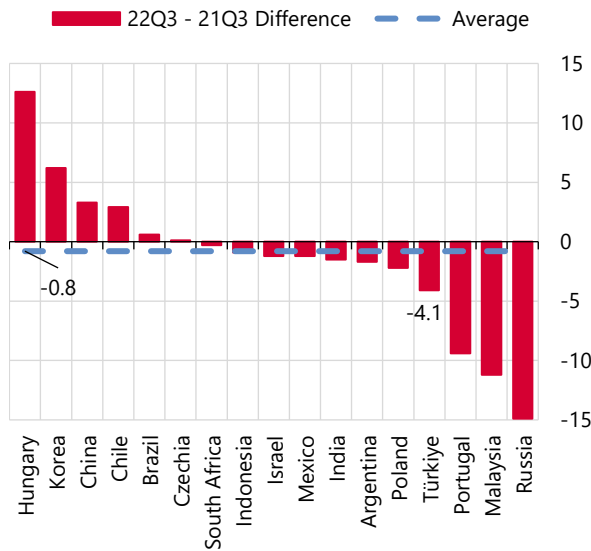
Source: MKK, BIST, PMC Last Observation: 04.23
 Note: The real index for equities and mutual funds is CPI-adjusted and indexed to 100 in January 2021. PPS and AES data are in aggregated terms, and the number of participants has been singled out. Stocks and mutual funds are 3-month MA.

III.2 Corporate Sector Developments

Financial indebtedness of corporate sector firms is decreasing as in peer countries.

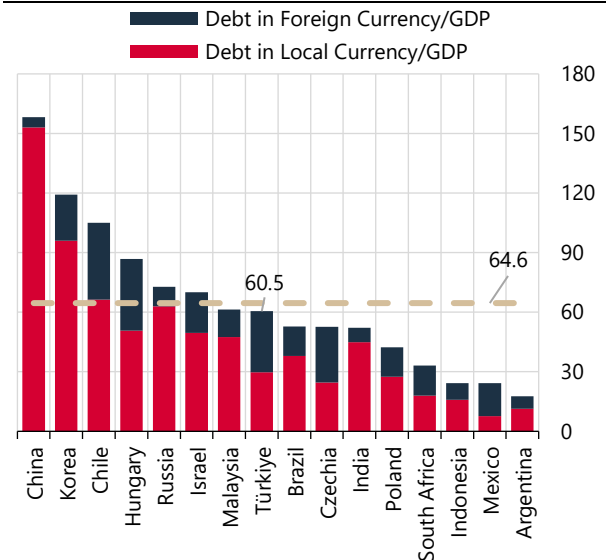
On the back of the economic activity that has revived following the easing of pandemic measures in 2021, corporate sector indebtedness (Financial Debt/GDP) is decreasing on a global scale. The downward trend in corporate sector indebtedness continued throughout 2022. In this period, the financial indebtedness ratio of the corporate sector in Türkiye declined by 4.1 percentage points, exceeding the average of the fall in peer countries (Chart III.2.1). The Financial Debt/GDP ratio stood at 60.5% after this decline. The ratio of the corporate sector's FX debt to GDP continues to decrease in Türkiye (Chart III.2.2).

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



Source: BIS
Last Observation: 09.22
Note: The total financial debt definition includes domestic and external loans utilized by firms, their bond issues, performing and non-performing loans, and credit interest rediscounts. The countries in the chart are ranked from larger to smaller according to the difference between 2022Q3 and 2021Q3. The blue dashed line is the average of 2022Q3-2021Q3 differences.

Chart III.2.2: Debt/GDP Ratio of the Corporate Sector (%)



Source: BIS, IIF
Last Observation: 09.22
Note: Calculated 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 2022Q3. The dashed line shows the average of peer countries' indebtedness in 2022Q3. As Portugal is accepted as an advanced economy according to IIF data, it is not included in the set of peer countries.

While the corporate sector continues to borrow predominantly in TL, the share of FX in its debt composition decreases.

There is a significant downward trend in the GDP share of domestic and external loans as well as the bonds issued abroad (Table III.2.1). The share of loans extended by domestic banks in GDP dropped from 22.2% at end-2021 to 20.7% in the January 2023 period. In the same period, the share of loans extended by foreign banks in GDP decreased by 6.9%. In the current Report period, the share of financing through domestic banks, non-bank financial institutions and issuances in GDP was 35.1% while the share of loans extended by foreign banks remained limited at 12.2%. The amount of FX loans extended by domestic banks decreased in FX-denominated terms whereas FX loans extended by foreign banks increased moderately.

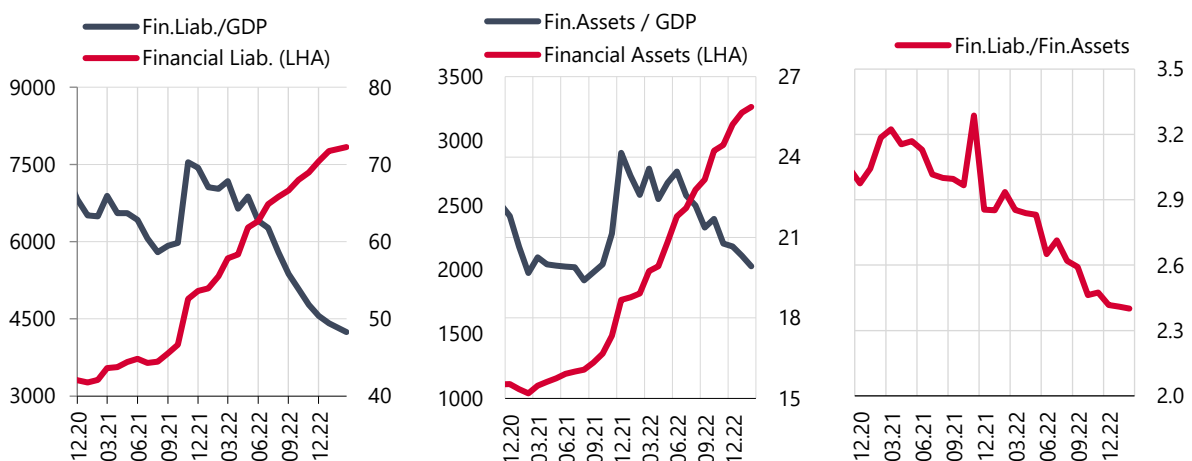
Table III.2.1: Corporate Sector's Financial Liabilities (TL Billion)

	12.21		09.22		02.23		Growth (Annualized)
	TL Billion	Ratio to GDP	TL Billion	Ratio to GDP	TL Billion	Ratio to GDP	
I. Domestic Loans (i+ii)	3549.2	49.0	4941.2	39.4	5689.4	35.1	32.6
i. TL	1715.2	23.7	2847.5	22.7	3608.9	22.3	60.6
A. Bank	1606.8	22.2	2687.2	21.4	3352.0	20.7	55.6
B. NBFİ	89.0	1.2	126.7	1.0	190.8	1.2	127.0
C. Bonds Issued	19.4	0.3	33.6	0.3	66.1	0.4	286.4
ii. FX (FX-indexed loans included)	1834.0	25.3	2093.7	16.7	2080.4	12.8	-1.3
<i>USD Terms (A+B+C)</i>	<i>137.6</i>	<i>1.9</i>	<i>113.1</i>	<i>0.9</i>	<i>110.3</i>	<i>0.7</i>	<i>-4.8</i>
A. Bank	131.5	1.8	112.0	0.9	104.9	0.6	-12.3
B. NBFİ	5.4	0.1	4.5	0.0	4.7	0.0	10.9
C. Past-Due Loans Taken Over by SDİF	0.7	0.0	0.7	0.0	0.7	0.0	0.0
II. External Loans	1370.3	18.9	1876.1	15.0	1973.7	12.2	10.7
<i>USD Terms</i>	<i>102.8</i>	<i>1.4</i>	<i>101.3</i>	<i>0.8</i>	<i>104.6</i>	<i>0.6</i>	<i>6.7</i>
III. Bonds Issued Abroad	123.8	1.7	179.3	1.4	174.4	1.1	-5.3
<i>USD Terms</i>	<i>9.3</i>	<i>.</i>	<i>9.7</i>	<i>.</i>	<i>9.2</i>	<i>.</i>	<i>-9.0</i>
Total Financial Debt (I+II+III)	5043.3	.	6996.6	.	7837.5	.	25.5
<i>For info: Total FX Loans (USD Billion)</i>	<i>1521.3</i>	<i>.</i>	<i>226.2</i>	<i>.</i>	<i>228.4</i>	<i>.</i>	<i>1.9</i>
Financial Debt/GDP (%)	69.6	.	55.8	.	48.3	.	-7.5

Source: CBRT, BRSA

Last Observation: 02.23

Note: The "ratio" column shows the ratio of the relevant item to GDP. The last column reflects annualized six-month change between 09.22 and 02.23 using the compound calculation method. Financial Debt/GDP in this column is the difference between the two ratios in the current Report period.

Chart III.2.3: Corporate Sector's Financial Debt and Assets (Ratio, TL Billion)

Source: CBRT

Last Observation: 02.23

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 corporate sector's financial debt/asset ratio is at the lowest level of the last 10 years.

Despite the powerful TL loan growth in 2022, the corporate sector's debt-to-GDP ratio dropped on the back of the slowdown in FX loans and the strong economic activity. Due to the strong economic activity, the ratio of the corporate sector's financial assets to GDP remained almost flat despite the increase in profitability and value of firms' assets. As the growth in corporate sector assets was stronger than the growth in its financial debt, the corporate sector's financial debt/financial asset ratio continued to decrease (Chart III.2.3).

While the corporate sector's tendency to pay off its domestic FX loans continued, the favorable course of its net FX position and other FX debt indicators was maintained.

Although the improvement in the corporate sector's net FX short position lost some pace, its net FX position decreased by USD 33 billion from end-2021 to USD 86.8 billion in February 2023 (Chart III.2.4). In this period, the ratio of net FX short position to annual total export revenues also continued to remain below 40%. While the domestic FX debt of corporate sector firms has declined by USD 27 billion since the beginning of 2022, their external FX debt registered a mild increase after the second quarter of 2022 (Chart III.2.5).

While the external debt rollover ratio of firms assumed a downward trend after August 2022, it still remains above the 135% level (Chart III.2.5). This indicates that the corporate sector's conditions to access external financing are strong at a time of intensified global uncertainties and tightened liquidity conditions.

Chart III.2.4: Indicators of Corporate Sector's FX Indebtedness (USD Billion, %)

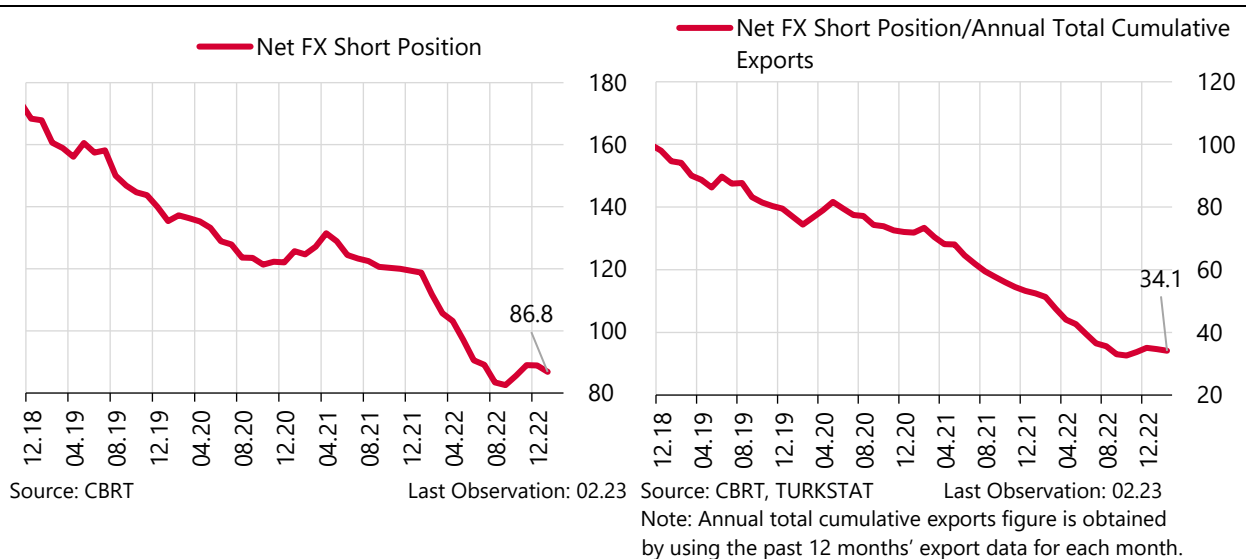
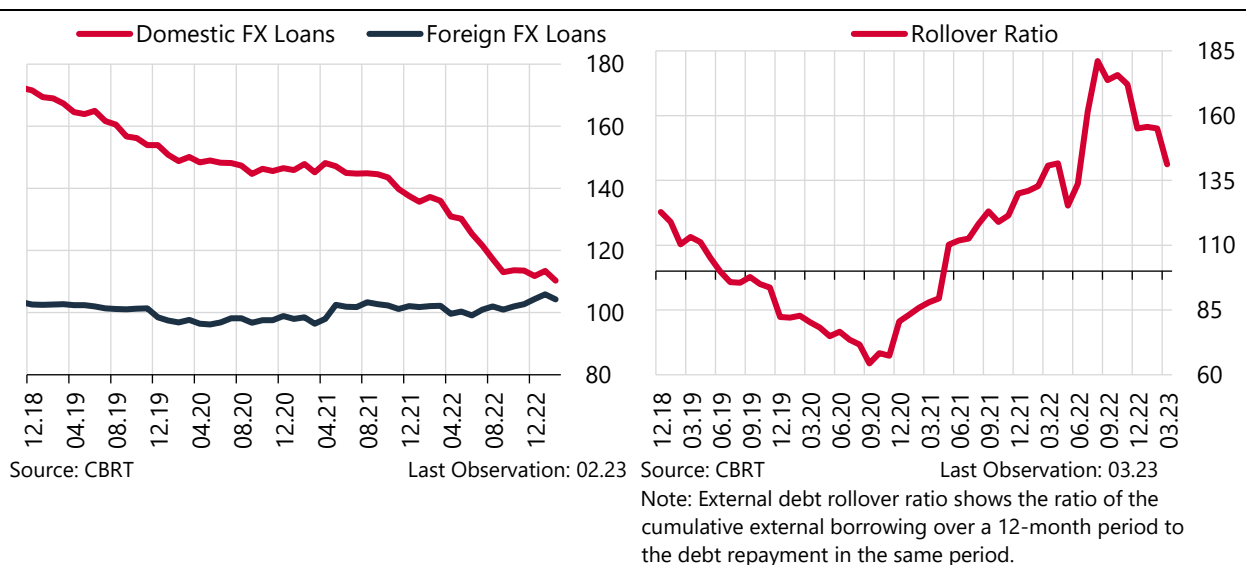


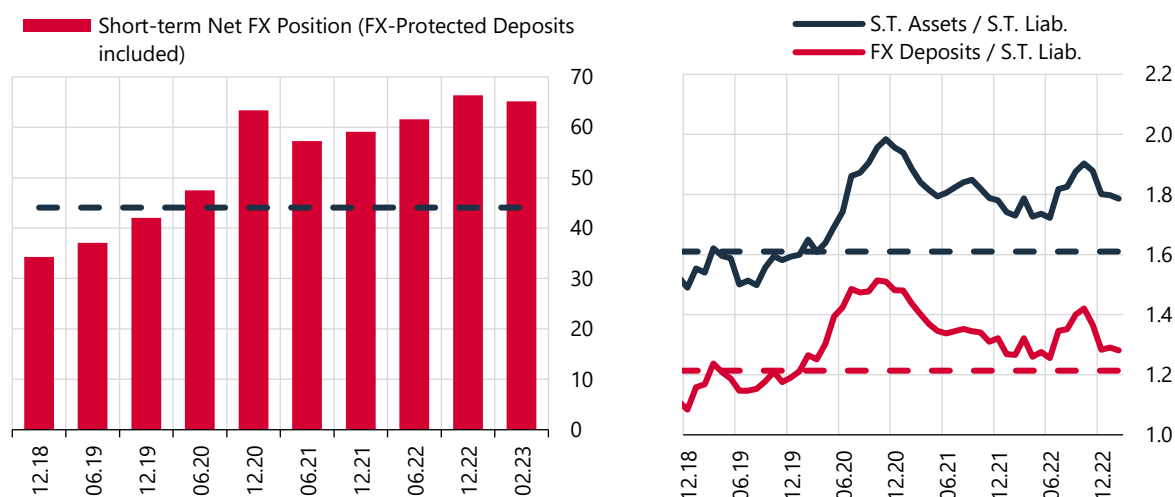
Chart III.2.5: Indicators of Corporate Sector's FX Loans and Debt Rollover (USD Billion, %)



In addition to the improvement in the general FX position of the corporate sector, the positive outlook in its short-term FX position continues.

The short-term FX long position, which started to increase after 2019, reached approximately USD 70 billion in the second half of 2022. Despite the corporate sector firms' tendency to pay off their FX debts since 2018, their FX liquidity buffers have remained strong. The ratio of firms' short-term debts covered by short-term assets is well above its historical average (Chart III.2.6).

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



Source: CBRT

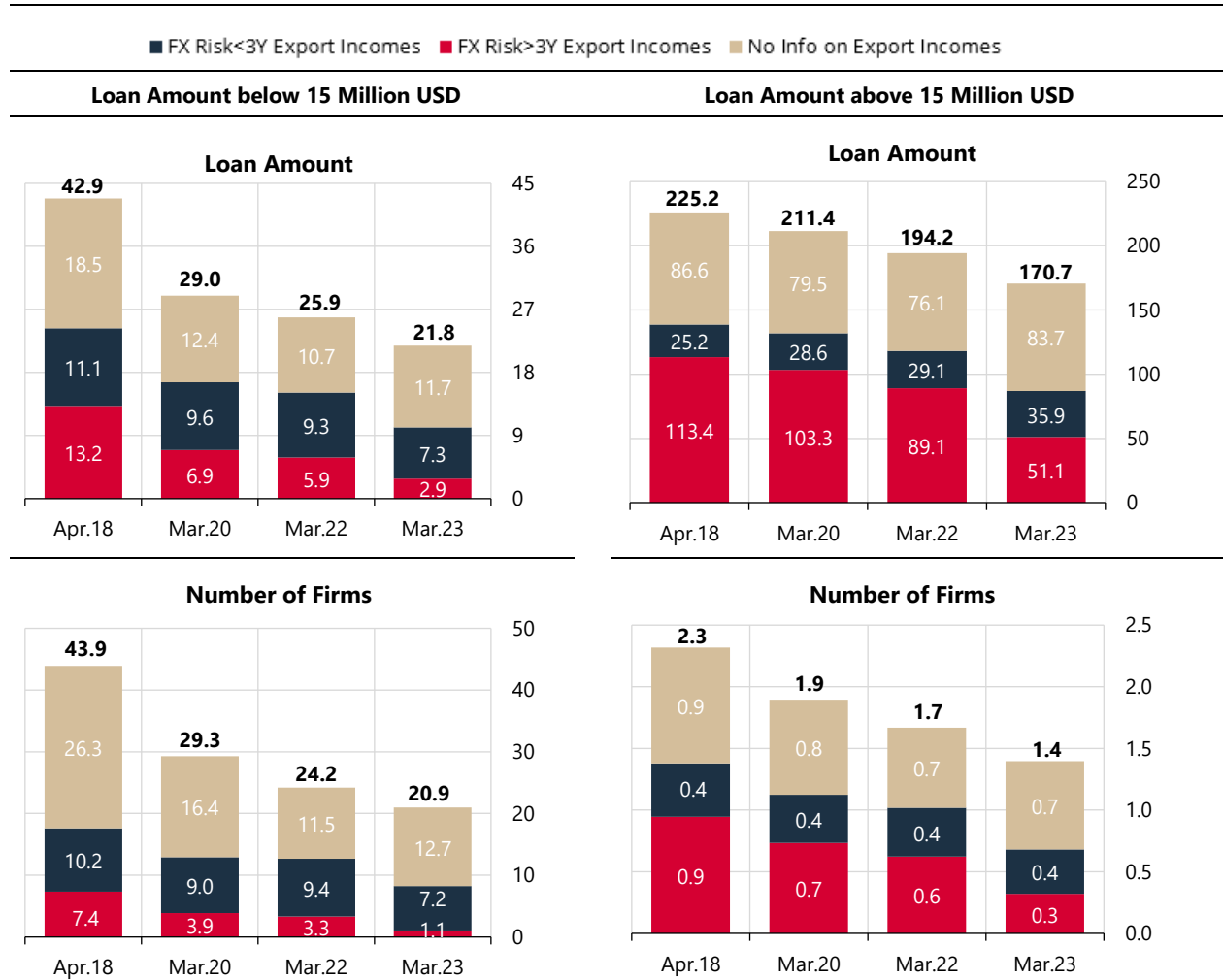
Last Observation: 02.23

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. The S.T. abbreviation in the charts stands for "short-term".

While the downward trend in the number of firms with FX loans continues, the ratio of FX debts covered by export revenues is increasing.

The arrangement that related FX loan utilization of firms with an FX risk below USD 15 million to their FX income within the last three years continues to have positive effects on firms' FX indebtedness in the current Report period (Chart III.2.7). The loan balance of firms with FX loan debts subject to this arrangement dropped by 49% from USD 43 billion in April 2018 to USD 21.8 billion in March 2023, while the number of firms decreased by 52%. The loan balance of firms with FX loan debt above USD 15 million, for which the arrangement did not impose any restrictions, declined by 24% from USD 225 billion to USD 170.7 billion during the same period, while the number of firms went down by 40% to 1,397. For firms with FX loans, the improvement in the ratio of export revenues to FX debt continues. Moreover, among the firms whose export information could be accessed, the share of firms with FX debt exceeding their three-year export revenues in the total decreased. The improvement in the FX debt-export revenue coverage profile of firms not subject to the arrangement curbs the FX risk of the corporate sector.

Chart III.2.7: Firms' FX Loan Balance Compared to Three-Year Export Revenues and Number of Firms (USD Billion, Thousand Firms)



Source: Risk Center, CBRT, TURKSTAT

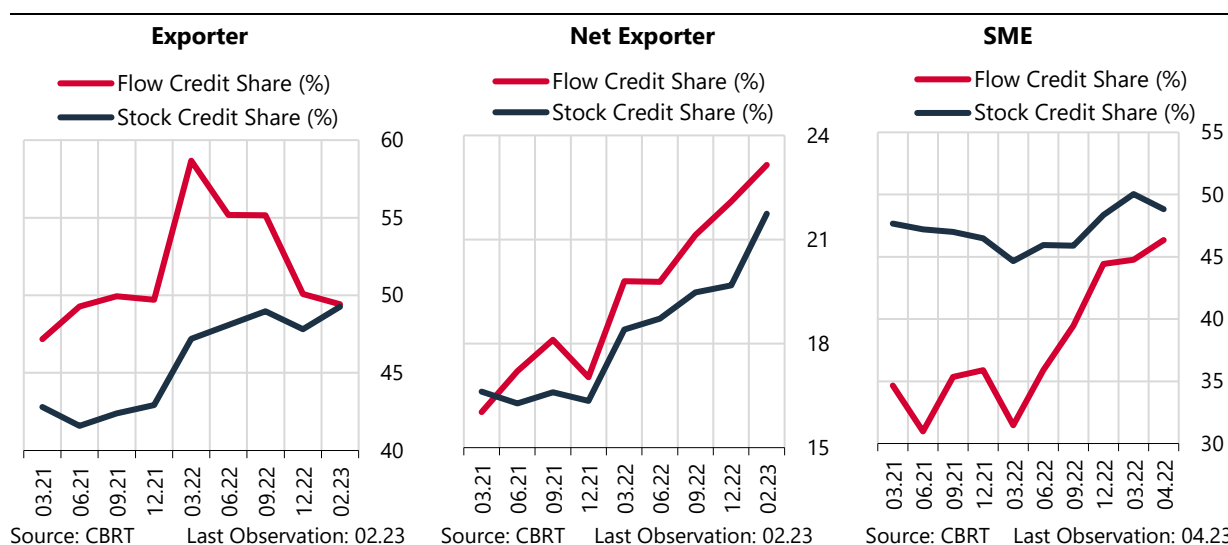
Last Observation: 03.23

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, and 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.

Due to targeted loan policies, the TL loan utilization of net exporter firms and SMEs is increasing.

Targeted loan policies, fitting their purpose, have contributed significantly to net exporter firms' and SMEs' access to financing. On the back of targeted loan policies, the loan flow to exporter firms increased gradually, and the share that exporter firms received from TL flow loans reached an all-time high in 2022 (Chart III.2.8). Following the arrangement in October 2022 stipulating that firms should be net exporters to obtain export credits under the targeted loan practice, the share of exporter firms started to decline.¹ Nevertheless, across exporter firms, the acceleration in loan utilization of net exporters having an export/import ratio above 110% continues. The share that net exporter firms receive from new loan utilization and stock loans is on the rise. In addition to these firms, flow and stock loan shares of SMEs are also increasing.

¹ In September 2022, the "net exporter firm" definition was introduced for export credits to be taken into account in targeted loan practices. Accordingly, effective from 28 September 2022, credits extended to firms having a minimum 110% ratio of total exports to total imports in the last three fiscal years or in the last fiscal year with a maximum maturity of two years (export credits extended to net exporter firms) are accepted as export credits in terms of the securities maintenance practice.

Chart III.2.8: TL Flow and Stock Loan Shares of Firms Based on Their Exports and Scales (%)

Note: Calculations are based on TL loans. The chart on the left shows the flow and stock loan shares of firms with exports in the previous three fiscal years before the period of loan utilization, and the chart in the middle shows the flow and stock loan shares of net exporter firms with an export/import ratio above 110% in the previous three fiscal years before the period of loan utilization. The flow loan share denotes the ratio of three-month total flow loans to total TL loans, and stock loans denote the stock loan share of relevant firms in total stock commercial loans as of the relevant period.

The share of TL is increasing in the corporate sector's financial asset composition.

The strong growth in the corporate sector's TL deposits continues. Business incomes that have increased as a result of buoyant economic activity following the shift from FX deposits to TL deposits support the assets of firms (Table III.2.2).

Table III.2.2: Corporate Sector's Financial Assets (TL Billion)

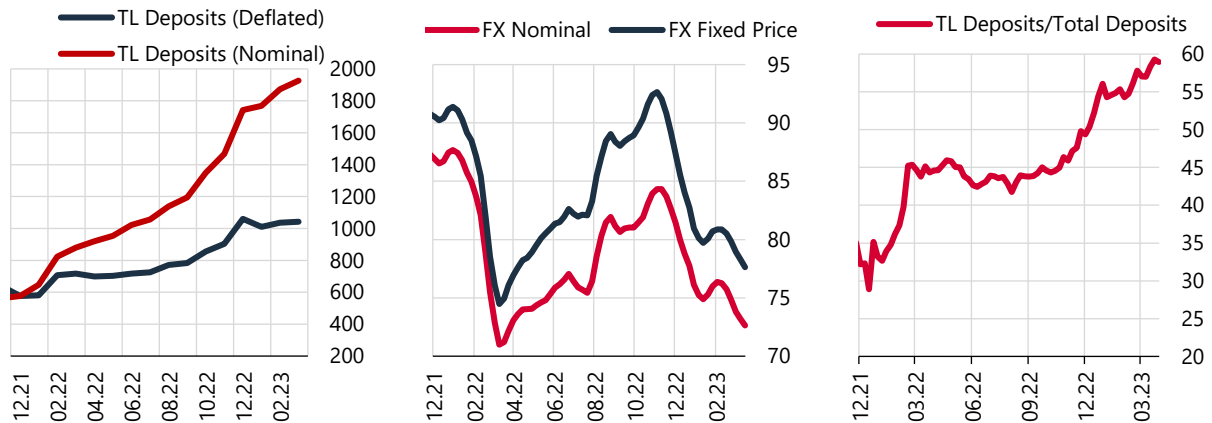
	12.21		10.22		03.23		6-Month Growth (Annualized)
	TL Billion	Share of GDP	TL Billion	Share of GDP	TL Billion	Share of GDP	
Total Assets	1,802	25	2,983	22	3,344	20	25.6
TL Commercial Deposit	576	8	1,349	10	1,926	11	104.0
FX Commercial Deposit	1,157	16	1,551	12	1,320	8	-27.6
-(USD Billion)	87		84		70		-29.9
Public Debt Instruments	17.6	0.2	26.5	0.2	35.7	0.2	81.5
Private Sector Debt Instruments	51.5	0.7	56.4	0.4	61.4	0.4	18.4
Total Assets / GDP	24.9		22.3		19.8		-2.5

Source: CBRT

Last Observation: 03.23

Note: The share column shows the ratio of the relevant item to GDP. The last column reflects the annualized value of the six-month change between 10.22 and 03.23 calculated using the compound calculation method. Total Assets/GDP in this column is the difference between the two ratios for the current Report period.

While TL deposits of the corporate sector continue to increase in nominal and real terms, they follow a moderately flat path on a real basis in the current Report period (Chart III.2.9). The growth in nominal TL deposits was driven by the conversion of foreign currency deposits to TL deposits following the introduction of the KKM product in early 2022, the increasing TL commercial loan volume and the brisk economic activity. The improvement in the TL deposit rate of the corporate sector continues.

Chart III.2.9: Commercial Deposits (TL Billion, USD Billion)


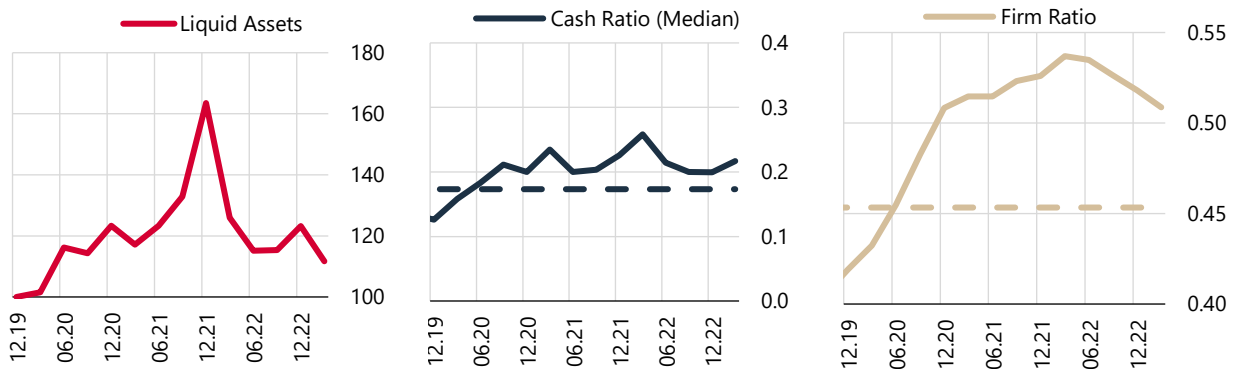
Source: CBRT

Last Observation: 03.23

Note: TL deposits (deflated) are obtained by deflating nominal deposits by inflation according to the CPI. Assuming a fixed price for FX deposits; EUR/USD parity and gold oz values are fixed at the exchange rate recorded on 30.07.2020, and the values on the chart are four-week moving average values.

Balance sheets of firms are resilient to possible shocks with their strong liquid assets.

Liquid assets of corporate sector firms are at a historic high in real terms. The liquid assets item, which hit the highest level at end-2021 due to the rise in the exchange rate, remained moderate starting from the second half of 2022. The median cash ratio, calculated as the ratio of liquid assets and securities to short-term liabilities, maintains its course above the historical average. The ratio of firms with a cash ratio higher than the threshold value of 20% to the total number of firms recorded its highest level as of the first quarter of 2022. This ratio continued to hover above 50% despite some decline in the current Report period. The level of the cash ratio, showing the capacity of firms to cover their short-term debts with their existing liquid assets, indicates that firms have a strong liquidity structure against shocks that may come from various channels (Chart III.2.10).

Chart III.2.10: Activity and Liquidity Indicators of Firms (Inflation-adjusted TL Billion, Ratio)


Source: FINNET

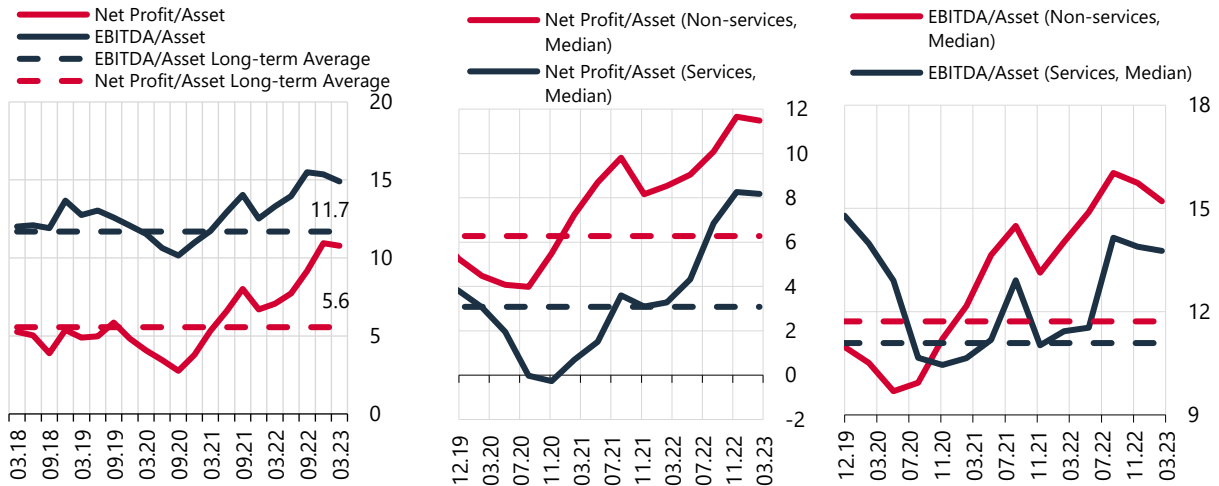
Last Observation: 03.23

Note: As of the latest data, 300 corporate sector firms were included in the analysis. The cash ratio is the ratio of the sum of liquid assets and securities to the short-term debt. Average cash ratio is the average of the cash ratio calculated separately for each firm. Median cash ratio 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 2019 year-end. Dashed lines show the historical average of the relevant data.

The profitability indicators of firms listed on BIST hover above the historical average.

In the current Report period, the upward trend in firms' profitability was maintained due to the positive effect of the normalization in commodity prices, the decline in exchange rate-driven uncertainties, brisk domestic demand, and the rise in the value of existing inventories. In a breakdown by services and non-services (industrial) sectors, profit margins increased significantly in both segments (Chart III.2.11). The Net Profit/Asset ratio of non-services firms is relatively higher than that of services firms. While this ratio reached 11% in non-services firms in the first quarter of 2023, it was recorded at 8% in services firms. In the first quarter of 2023, the EBITDA/Asset ratio of non-services firms stood at 15% and that of services firms at 14%.

Chart III.2.11: Profitability Indicators and Profitability Distribution of BIST Firms (Ratio, %)



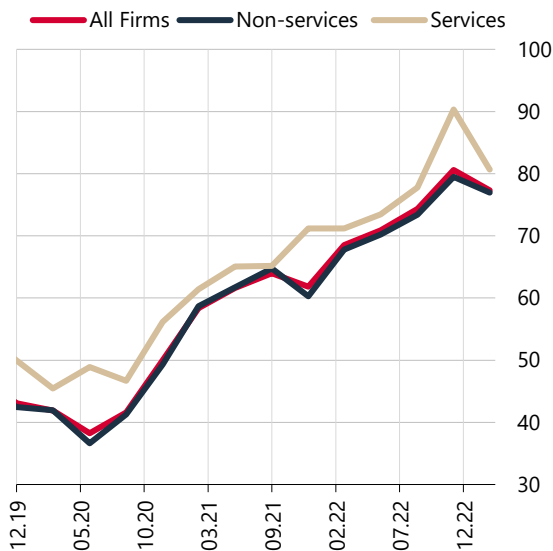
Source: FINNET

Last Observation: 03.23

Note: The analysis includes 300 corporate sector firms. EBITDA: Net Profit + Financial Expenses + Tax Expenses + Depreciation and Amortization Costs. The firm ratio shows the ratio of firms with EBITDA/Asset and Net Profit Margin/Asset values above 5% (0.05) to the total number of firms. Long-term EBITDA/Asset and Net Profit Margin/Asset averages are shown in dashed lines. Long-term EBITDA/Asset and Net Profit Margin/Asset average values are calculated for the 2011Q4 – 2023Q1 period.

Among the firms listed on BIST, the share of those with a Net Profit/Asset ratio above 5% rose to 77.3% and the share of firms with an EBITDA/Asset ratio above 5% increased to 81.3%, indicating that strong profitability spread across all firms (Chart III.2.12). While the share of non-services firms with a Net Profit/Asset ratio above 5% approached 80%, this share was above 90% for services sector firms. Likewise, the share of non-services firms with an EBITDA/Asset ratio above 5% was 80%, and the same share was 94% for services firms (Chart III.2.13). In the first quarter of 2023, the share of services firms with profitability above 5% registered a stronger increase than the share of non-services firms with profitability above 5%.

Chart III.2.12: Share of Firms with a Net Profit/Asset Ratio Above 5% (%)

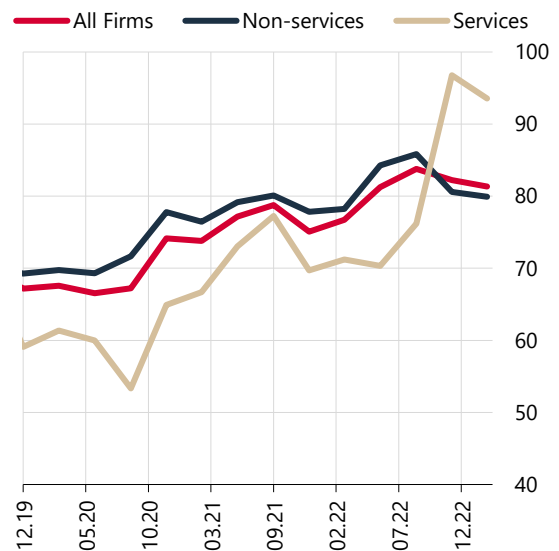


Source: FINNET

Last Observation: 03.23

Note: The analysis includes 300 corporate sector firms. The shares of services and non-services firms are calculated using the number of firms in these sectors.

Chart III.2.13: Share of Firms with an EBITDA/Asset Ratio Above 5% (%)



Source: FINNET

Last Observation: 03.23

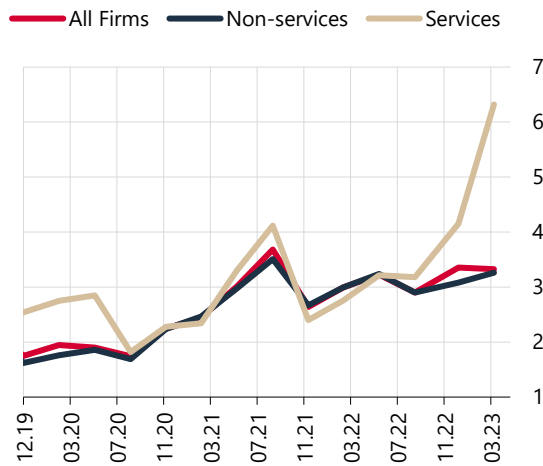
Note: The analysis includes 300 corporate sector firms. The shares of services and non-services firms are calculated using the number of firms in these sectors.

On the back of the decline in financial expenses, indicators of firms’ debt payment capability improved significantly.

BIST firms’ financial expenses coverage ratio (FECR) dropped somewhat due to exchange rate developments at the end of 2021, while indicators measuring the debt payment capability of firms improved powerfully on the back of the increase in profitability throughout 2022 (Chart III.2.14). Data for the first quarter of 2023 suggest that firms’ operating profits can cover their financial expenses for the next 3.3 years. Operating profits of services firms cover longer-term financial expenses than those of non-services firms. Operating profits of services and non-services firms equal financial expenses for the next 6.3 and 3.3 years, respectively. While the median FECR of services sectors increased strongly throughout 2022, that of non-services sectors remained flat.

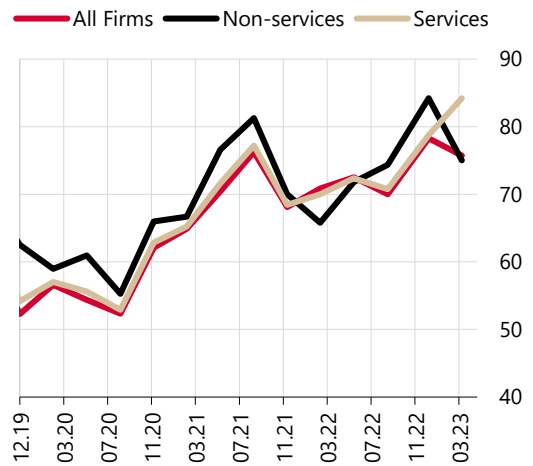
In the current Report period, 76% of firms have a FECR above the threshold value of 1.5. While 75% of non-services firms have a FECR above 1.5, the ratio of services firms with a FECR above 1.5 is 84% (Chart III.2.15). The upward trend in the FECR and the increase in the share of firms with a FECR above the threshold value indicate that services and non-services firms have a low probability to experience financial distress in the face of an external shock and that they are financially liquid and strong.

Chart III.2.14: BIST Firms’ Financial Expenses Coverage Ratio (Median, Ratio)



Source: FINNET Last Observation: 03.23
 Note: Financial Expenses Coverage Ratio (FECR)= EBITDA/Financial Expenses. The analysis includes 300 corporate sector firms.

Chart III.2.15: Share of Firms with Financial Expenses Coverage Ratio Above 1.5 (%)

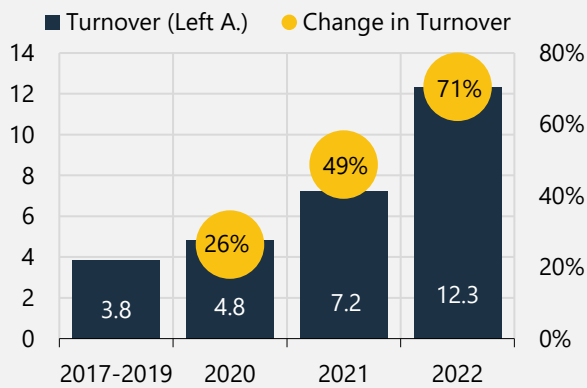


Source: FINNET Last Observation: 03.23
 Note: The firm ratio shows the ratio of firms with a financial expenses coverage ratio above 1.5 to the total number of firms. The analysis includes 300 corporate sector firms.

Box III.2.I: Financial Indicators of Corporate Sector Firms in the Post-Pandemic Period

The change in consumer habits and market structure triggered by the factors that emerged in the Turkish economy during and after the pandemic affected balance sheet performance indicators on a sectoral and firm basis. This box presents a sectoral analysis of the change in financial indicators of corporate sector firms in the period following the Covid-19 pandemic that led to economic and structural changes in Türkiye and across the world. The study includes a comparison of the pre-pandemic (2017-2019 period) and post-pandemic (2020-2022 period) revenues of approximately 400,000 corporate taxpayer firms.¹

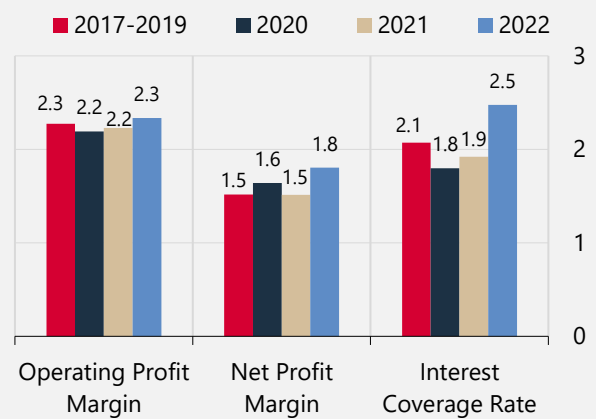
Chart III.2.I.1: Average Turnover of Firms
(Million TL)



Source: Presidency of Revenue Administration (PRA) Last Observation: 09.22

Note: Calculations do not include E-Water supply, sewerage, K-Financial and insurance activities, O-Public administration and defense, T- Activities of households as employers, U-Activities of extraterritorial organizations and bodies, and V-Activities regarding income from movable capital on one's own account. Outturns for the first three quarters of 2022 have been annualized. Turnovers show the average net amount of sales per firm as a share of the number of firms. Yellow circles show the growth in turnover compared to the previous year.

Chart III.2.I.2: Profitability and Interest Coverage Ratio of Firms (% , Ratio)



Source: PRA Last Observation: 09.22

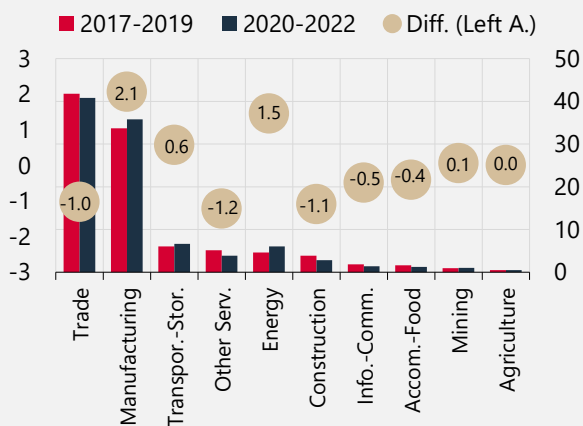
Note: Calculations do not include E-Water supply, sewerage, K-Financial and insurance activities, O-Public administration and defense, T- Activities of households as employers, U- Activities of extraterritorial organizations and bodies, and V- Activities regarding income from movable capital on one's own account. The interest coverage ratio denotes the ratio of operating profit to financial expense. 2022 values are annualized values. Median values.

The average turnover (net sales) of corporate sector firms grew by 26% from the 2017-2019 period to 2020, by 49% from 2020 to 2021, and by 71% from 2021 to 2022 (Chart III.2.I.1). While some portion of this growth was driven by inflation, there were also other factors such as the liquidity facility offered due to the pandemic, domestic and external demand that strengthened after the pandemic, channeling of additional demand to Türkiye as a result of the pandemic's impact on supply chains, and Turkish firms' orientation towards exports and/or boost of their existing export revenues. The turnover growth maintained an upward trend over the years in the periods analyzed whereas the average profitability and interest coverage ratio per firm were more variable (Chart III.2.I.2). While operating profit margins of firms recovered their pre-pandemic level in 2022, net profit margins increased somewhat throughout 2020 on the back of operating costs that decreased due to low commodity prices and financing costs as well as supportive measures such as the short-time work allowance. Net profit margins declined in 2021 amid growing input costs and inflationary pressures but exceeded previous years' levels in 2022 due to brisk domestic demand and the fall in financing costs. Meanwhile, in 2022, the interest coverage ratio stood above the averages of all periods analyzed on the back of the low financing environment.

¹ The relevant data sets cover nearly one million corporate taxpayers for the 2017-2022 period. The analyses include firms that had submitted full datasets for those years, while firms with missing data for each period and firms with outliers are excluded. The 2017-2021 period reflects the year-end values, and the 2022 period reflects the annualized values as of September 2022.

To observe the sectoral differentiation in economic activity, we analyzed the distribution of and the change in shares that sectors received from the total turnover (Chart III.2.I.3). Accordingly, trade and manufacturing sectors continue to dominate the shares in turnover, with the manufacturing sector registering the largest increase in its share with 2.1 percentage points in the 2020-2022 period. This increase is attributed to the strong domestic demand as well as the rise in Türkiye’s export sales driven by the post-pandemic changes in the global supply market, and particularly the targeted loan policies implemented effectively in 2022. The energy sector, which was favorably affected by global energy prices and growing interest in renewable energy, and the transportation-storage sector, which boosted its sales on the back of strengthened exports, were the other sectors that increased their turnover shares the most compared to the 2017-2019 average. Other services and construction sectors stood out as the sectors with the largest decline in their shares.

Chart III.2.I.3: Distribution of Sectoral Shares in Net Sales (% , % Change)

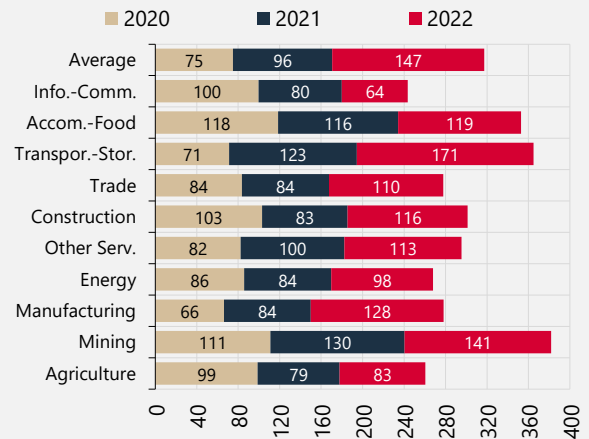


Source: PRA Last Observation: 09.22

Note: The chart shows the share of sectoral net sales in total net sales and the change in this share. The columns are ranked from the largest to the smallest based on the 2020-2022 value. The Other Services sector in the chart covers L- Real estate activities, M- Professional, scientific and technical activities, N- Administrative and support service activities, P- Education, Q- Health, R- Arts, sports and recreation, and S- Other service activities in the NACE classification.

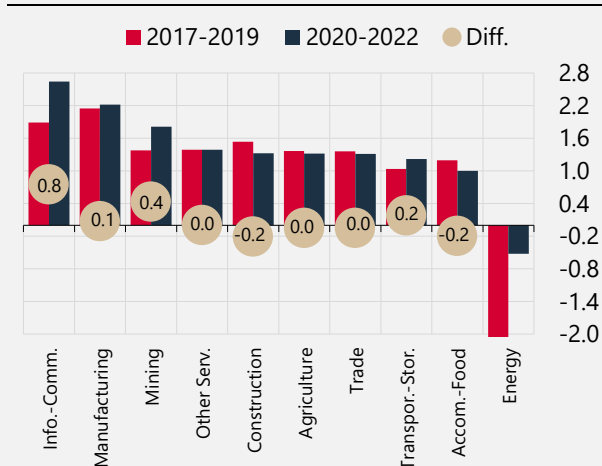
The HH (Herfindahl-Hirschman) index has been calculated to measure whether the increase in net sales in 2020, 2021 and 2022 was broad-based (Chart III.2.I.4). To this end, defining the year 2019 as the base year, values for this year have been taken as 100 basis points, and a comparison has been made regarding the broad-basedness of trade activities considering the country-wide and sectoral shares of firm sales in total sales in the following years. As a general rule, a rise in the index denotes a concentration of net sales in certain firms and a fall in the index points to more broad-based increases in turnover. Accordingly, the average increase in turnover in 2020 and 2021 was more broad-based than in 2019, whereas turnover increases were relatively less broad-based in 2022. While net sales increases were more broad-based in the information-communication, agriculture-livestock, and manufacturing sectors, turnover increases were less broad-based across the sector in the mining, transportation-storage, accommodation-food service, and construction sectors.

Chart III.2.I.4: Firm Concentration in Net Sales by Sectors (HH Index, 2019=100)



Source: PRA Last Observation: 09.22

Note: The HH (Herfindahl-Hirschman) index is used in calculations, and the year 2019 is indexed to 100 on a sectoral basis. The HH index is calculated as the sum of the squares of the turnover share of each firm in the sector.

Chart III.2.I.5: Change in Net Profit Margin by Sectors (Median firm, % Ratio)


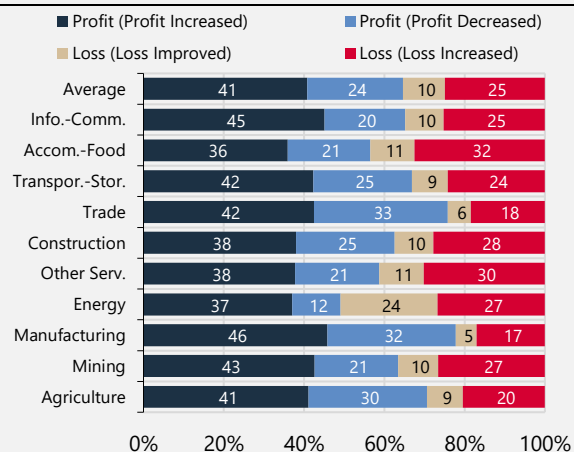
Source: PRA

Last Observation: 09.22

Note: Median values are used in the calculations. Values in the chart show the net profit/net sales ratio of firms and the change in this ratio. The columns are ranked from the largest to the smallest based on the 2020-2022 value. Values for the energy sector are calculated as -5.50 and the change as 5 for the 2017-2019 period but cannot be precisely displayed on the chart due to visual integrity concerns.

In the 2020-2022 period, the median net profit margin of firms declined somewhat in the construction and accommodation-food service sectors compared to the pre-pandemic period while the largest increase was recorded in the energy, information-communication, mining, and transportation-storage sectors (Chart III.2.I.5). The rise in commodity and energy prices in the post-pandemic period affected input costs of firms negatively, which exerted downward pressure on firms' profitability. Nevertheless, sectoral profitability increased in general. The energy sector recorded the largest change in net profit margin between the pre- and post-pandemic periods despite its negative net profit margin, which corresponded to 5 percentage points of change between the two periods. The increase in Renewable Energy Sources Support Mechanism (YEKDEM) revenues due to exchange rate developments, the rise in electricity prices, and the Russian-Ukrainian conflict positively affected the profitability of the energy sector. Meanwhile, the profitability growth in the information-communication sector was driven by the pandemic-induced change in consumer behavior and increased digitalization. An analysis of the distribution of the number of firms based on the average net profit change by sectors reveals that 65% of firms were in profit (with 41% of them having an improvement in their net profitability and 24% of them registering a decline in their net profitability), while the remaining 35% were in loss in the 2020-2022 period (Chart III.2.I.6). Manufacturing and trade sectors were the leading sectors whose profitability was broad-based, whereas losses were broad-based in energy, accommodation-food service and other services sectors. In general, firms have increased their profitability in the post-pandemic period.

The interest coverage ratio has improved across almost all sectors in the post-pandemic period (Chart III.2.I.7). On a sectoral basis, the largest change in the interest coverage ratio was registered in the energy sector, followed by mining, information-communication, manufacturing, and transportation-storage sectors. This change is attributed largely to the increase in EBITDA for reasons cited above and to financial expenses falling behind firms' profitability due to favorable financing conditions. In the two periods analyzed, on average, the interest coverage ratio of a large portion of firms (75%) remained positive whereas a smaller portion of firms had a negative interest coverage ratio (Chart III.2.I.8). While energy, manufacturing, and trade sectors diverged positively in terms of a broad-based change in their interest coverage ratio, other services, transportation-storage, and accommodation-food service sectors were among those with a relatively larger number of firms with a negative interest coverage ratio.

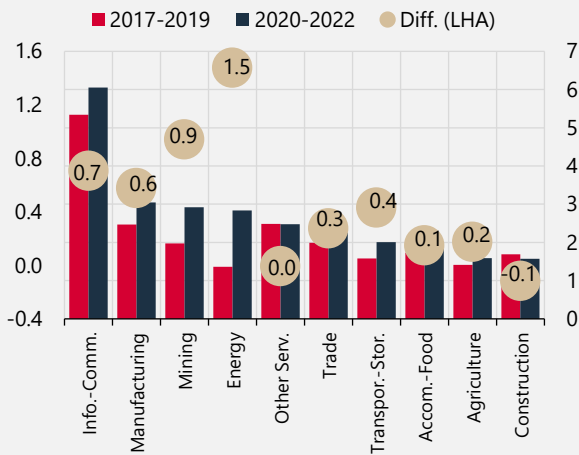
Chart III.2.I.6: Share of Firms Based on the Change in Net Profit Margin by Sectors (%)


Source: PRA

Last Observation: 09.22

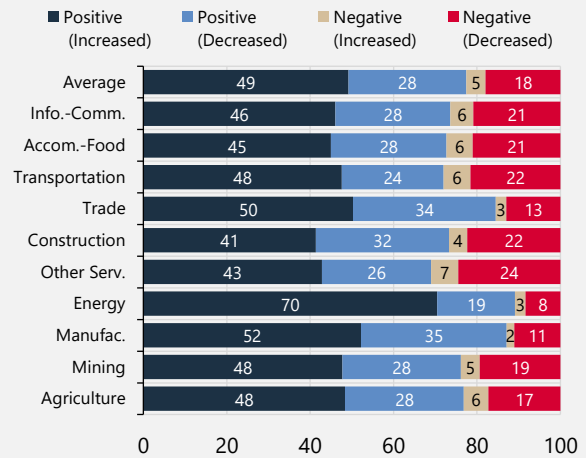
Note: Values in the column chart are the percentages of the number of firms corresponding to the profit margin change in the relevant sector between the 2017-2019 and 2020-2022 periods.

Chart III.2.I.7: Interest Coverage Ratio by Sectors (%)



Source: PRA Last Observation: 09.22

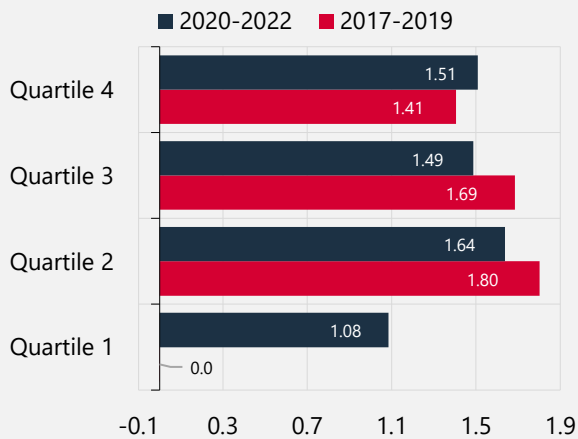
Chart III.2.I.8: Share of Firms Based on the Change in Interest Coverage Ratio by Sectors (%)



Source: PRA Last Observation: 09.22

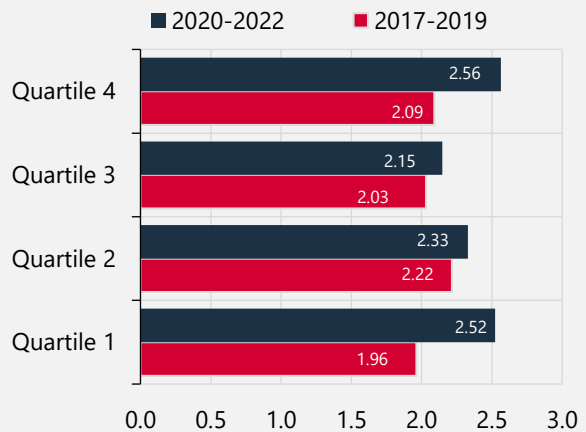
Analyzing the change in net profit margin of firms based on turnover size, profit margins of the relatively largest (quartile 4) and the smallest (quartile 1) firms rose in the 2020-2022 period whereas profit margins of medium-sized firms in the middle quartiles decreased somewhat (Chart III.2.I.9). An analysis of the change in the interest coverage ratio of corporate sector firms based on turnover size reveals that the interest coverage ratio of firms in all quartiles improved. This improvement was more visible particularly in the largest (quartile 4) and the smallest (quartile 1) firms (Chart III.2.I.10). The interest coverage ratio hovered above the threshold value of 2 in both periods and all scale groups, which indicates that firms have a robust financial structure in terms of debt payment capacity.

Chart III.2.I.9: Net Profit Margin Based on Turnover Size (%)



Source: PRA Last Observation: 09.22

Chart III.2.I.10: Change in the Interest Coverage Ratio by Sectors (Ratio, Difference)



Source: PRA Last Observation: 09.22

Note: Quartile 1, Quartile 2, Quartile 3 and Quartile 4 show the firms in the sample that are in the first 25% bracket (the smallest firms), the 25%-50% bracket, the 50%-75% bracket, and the 75%-100% bracket (the largest firms), respectively, according to their turnover size.

Findings of this study suggest that the turnover, profitability, and interest coverage indicators of firms have improved in general in the post-pandemic period compared to the pre-pandemic period. The turnover volume in the corporate sector displayed an upward trend in the periods analyzed, and the net profit margin and interest coverage ratios of firms increased. On the other hand, having varied across sectors and firms, the improvement in these indicators was broad-based. Findings of this study also confirm that the post-pandemic structural transformation in the global economy and the measures taken have had positive implications for economic activity and sectors' balance sheet performance in Türkiye.

IV. Financial Sector

IV.1 Credit Developments and Credit Risk

IV.1.1 Credit Growth

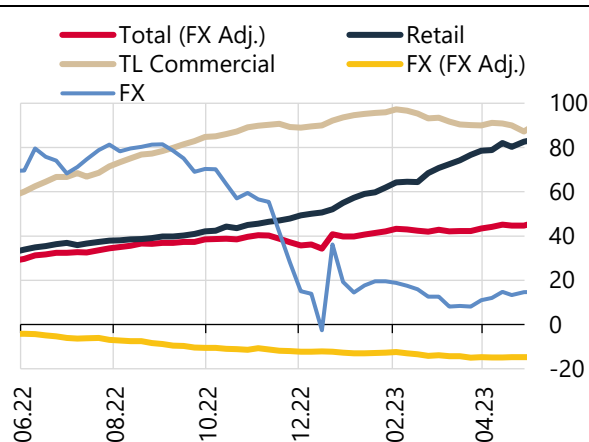
As a result of the targeted loan policy introduced as part of the integrated policy framework, the loan composition changed as intended in 2022.

Annual loan growth adjusted for exchange rate followed a relatively flat course in the current Report period. Annual growth in TL commercial loans peaked in February 2023 before starting to fall, while annual growth in retail loans accelerated as of the last quarter of 2022. FX loans adjusted for exchange rate, on the other hand, contracted by 15% in a one-year period (Chart IV.1.1).

Annualized 13-week growth indicators, which reflect recent credit trends better, suggest that the acceleration in total and commercial loan growth has been somewhat contained on account of the macroprudential measures launched in the second half of 2022. In the second quarter of 2022, the momentum of commercial loan growth lost pace amid macroprudential policies. Thirteen-week annualized TL commercial loan growth rose to 140% prior to the launch of macroprudential measures, declined following the measures, hovered around 70-80% in a horizontal path, and picked up slightly after the earthquake disaster to 90-100%. Retail loan growth lost momentum following the introduction of macroprudential measures on the loan-to-value ratio of housing loans and general-purpose loan maturities in June 2022. However, since the end of 2022, retail loan growth has been on an upward trend, led by general purpose loans and PCC. In March 2023, the impact of the inclusion of general-purpose loans in the regulation of securities maintenance on retail loans is closely monitored (Chart IV.1.2).

Chart IV.1.1: Annual Loan Growth

(FX-adjusted, %)



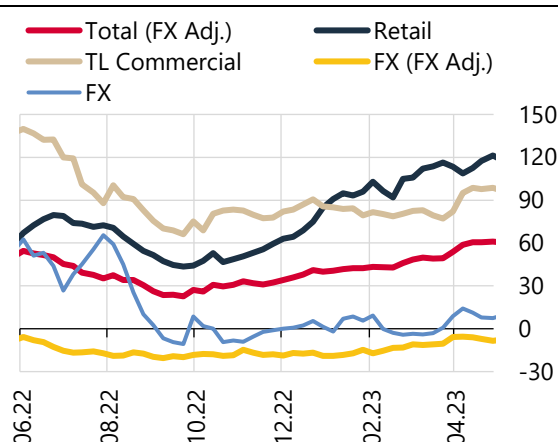
Source: CBRT

Last Observation: 28.04.23

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: 28.04.23

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.

Along with the macroprudential measures introduced in May 2022 and afterwards, loan growth for SMEs and large firms diverged.

Average monthly disbursements of TL SME loans amounted to TL 62.2 billion in the first half of 2022, while this figure accelerated in the second half of the year and reached TL 85.3 billion. The robust disbursement trend in SME loans continued in 2023. On the other hand, monthly net disbursements of TL large corporate loans amounted to TL 74.5 billion in the first half of 2022, while the monthly average stood at TL 65.6 billion in the second half. In 2023, the moderate course in corporate loans for large firms continued. The trend for closing FX commercial loans, which accelerated in the second half of 2022, followed a moderate course in the first four months of 2023 (Table IV.1.1).

Table IV.1.1: Net Corporate Loans (Monthly Average, TL Billion, USD Billion, %)

	2021		2022 1H		2022 2H		2023	
	Amount	%	Amount	%	Amount	%	Amount	%
TL Corporate	26.3	1.6	136.7	6.3	150.9	5.0	203.6	5.3
TL SME	10.6	1.4	62.2	6.3	85.3	6.0	130.3	6.8
TL Large-Scale Firms	15.7	1.8	74.5	6.4	65.6	4.1	73.3	3.8
FX Corporate	-0.1	-0.1	-0.8	-0.5	-2.4	-1.8	-0.7	-0.5

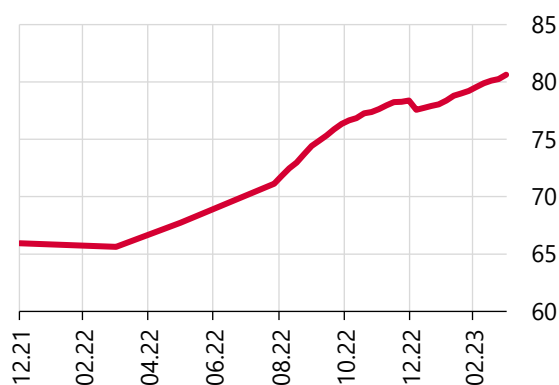
Source: CBRT

Last Observation: 04.23

Note: The table shows the average monthly changes of the corporate loan stock in the amount column. USD equivalents of FX changes are computed by multiplying the monthly FX loan change calculated in basket terms by the average basket rate of the respective month.

The share of targeted loans within TRY commercial loans rose notably following the introduction of macroprudential measures on loan disbursements outside targeted areas such as SME, trade, agriculture, export and investment. This share, which was 66% in the first quarter of 2022, hit 81% in March 2023 (Chart IV.1.3). While growth rates of targeted loans and other loans have followed a similar course until April 2022, they diverged after this period amid the launch of macroprudential measures. In fact, as of March 2023, targeted loans grew by 165%, while other loans grew by 23.1% compared to end-2021 (Chart IV.1.4).

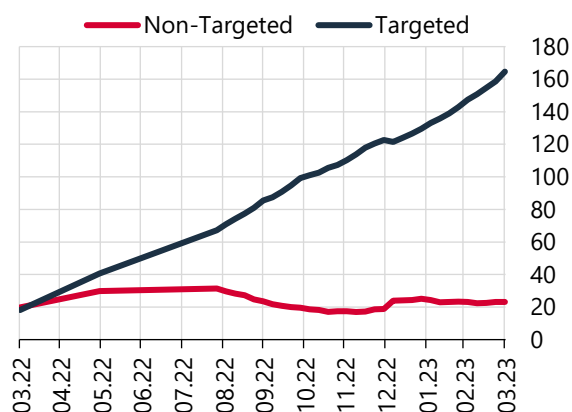
Chart IV.1.3: Targeted Loans / TL Commercial Loans (Stock, %)



Source: CBRT

Last Observation: 31.03.23

Chart IV.1.4: Commercial Loan Growth (Compared to end-2021, %)



Source: CBRT

Last Observation: 31.03.23

Note: Targeted loans are defined as loans extended to SMEs, tradesmen loans, export and investment loans, loans extended to the institutions and organizations listed in the tables (I), (II), (III) and (IV) annexed to the Public Financial Management and Control Law No. 5018, state economic enterprises and their establishments, subsidiaries and affiliates, corporate credit cards, and loans extended to financial institutions.

The acceleration in retail loan growth was driven by general purpose loans and PCC.

Following the BRSA's June 2022 decision to reduce the general maturity limit for general-purpose loans over TL 100,000 from 24 months to 12 months, growth in general-purpose loans declined significantly in the third quarter of 2022. However, in the last quarter of the year, rising consumption demand and the expected increase in salary payments with the new year, as well as the appetite of private banks to extend retail loans, accelerated the growth in general-purpose loans. In fact, the annualized 13-week growth in general-purpose loans, which was 30% in September 2022, reached 120% in March (Chart IV.1.5). In March, general-purpose loan growth started to lose pace as general-purpose loans extended above TL 70,000 were included in the securities maintenance practice based on interest rates.¹ The brisk course in the annual growth of retail credit card balances continues due to the inflation-driven demand brought forward, ease of use facilitated by digitalization and upward revisions in limits. In February, when the earthquake disaster struck, the 13-week growth rate declined, but the growth rate of PCCs started to rise again in March (Chart IV.1.6).

Chart IV.1.5: General-Purpose Loan Growth (%)

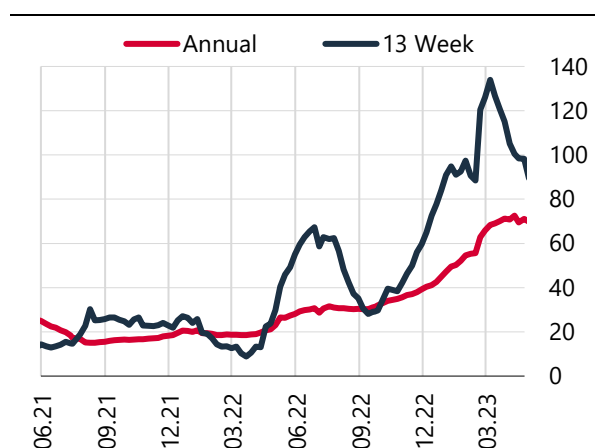
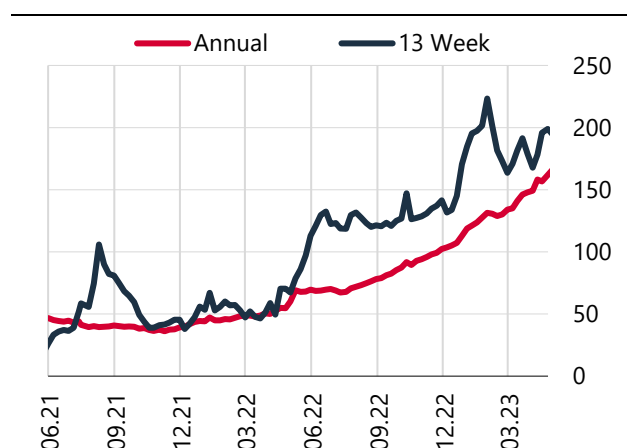


Chart IV.1.6: Credit Card Growth (%)



Source: CBRT

Last Observation: 28.04.23

Source: CBRT

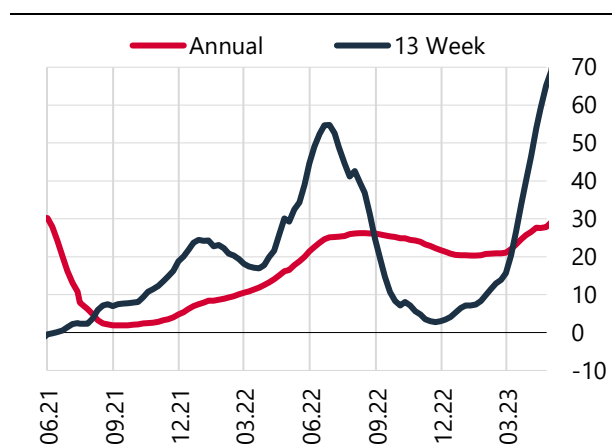
Last Observation: 28.04.23

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

Having been buoyant in the first half of 2022, housing loan growth decelerated significantly after the BRSA differentiated the maximum loan-to-value ratios according to house prices in June. In January 2023, state-owned banks launched the state-subsidized "My First Home" housing loan campaign and at the end of February, the BRSA revised the maximum loan amount to be extended for house purchases. Prior to the revision, loans could not be used for new homes valued at above TL 10 million. However, the new regulation introduced the facility to utilize loans with a loan-to-value ratio of 50-70% for new homes valued at above TL 10 million, depending on the energy class and house value. Following these developments, housing loan growth assumed an uptrend in 2023 (Chart IV.1.7). The strong course in vehicle loan growth continues (Chart IV.1.8).

¹ General-purpose loans to be extended to consumers residing on or after 6 February 2023 in places that have been/will be declared as "Disaster Areas with a General Impact on Life" due to the earthquakes in Kahramanmaraş province and general-purpose loans to be extended to consumers who have SSI premium debts and who meet the conditions for retirement arrangements are exempted from the obligation of securities maintenance according to the loan interest/profit share ratio.

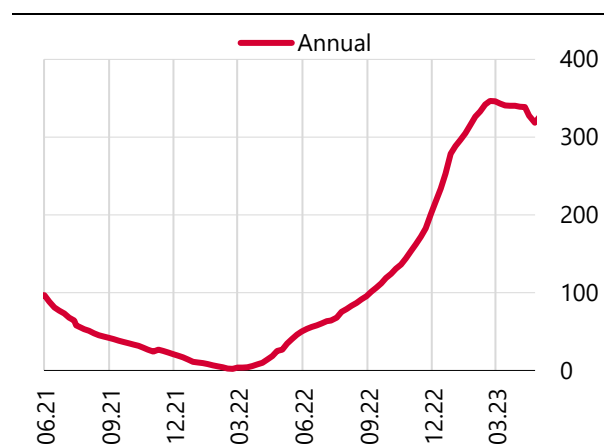
Chart IV.1.7: Housing Loan Growth (%)



Source: CBRT

Last Observation: 28.04.23

Chart IV.1.8: Vehicle Loan Growth (%)



Source: CBRT

Last Observation: 28.04.23

Note: Annual series show 12-month loan growth while 13-week series show annualized 13-week growth. Since vehicle loan volumes are low and volatile, 13-week growth is not included in the chart.

In the first half of 2022, retail loans rose by TL 35.4 billion monthly on average, while monthly average net disbursement of retail loans climbed to TL 55.3 billion in the second half. As in the first half of 2022, credit card and personal loans stood out among retail loans. In the last quarter of 2022 and 2023, the average monthly increase in general-purpose and personal credit card disbursements remained well above the previous periods due to the increased demand driven by fee updates and the growing appetite of private banks. The impact of the securitization of general-purpose loans on the general-purpose loan rates as well as balance developments in the upcoming period are being closely monitored. (Table IV.1.2).

Table IV.1.2: Net Retail Credit Utilization (TL Billion)

	2021		2022 1H		2022 2H		2023	
	Amount	%	Amount	%	Amount	%	Amount	%
Retail	13.9	1.6	35.4	3.3	55.3	4.2	105.1	6.3
General-Purpose	6.6	1.6	13.0	2.7	21.8	3.7	40.6	5.6
Housing	1.7	0.6	8.0	2.5	2.2	0.6	12.6	3.4
Vehicle	0.1	1.0	1.8	10.9	4.3	13.1	5.9	10.3
Personal Credit Card	5.4	3.2	12.5	5.3	26.9	7.8	46.0	9.0

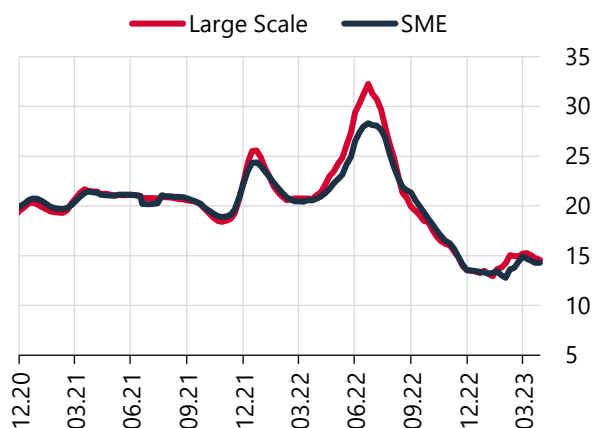
Source: CBRT

Last Observation: 04.23

Note: The Amount column in the table shows the average of monthly changes in the retail loan stock, and the % column shows that of monthly percentage changes.

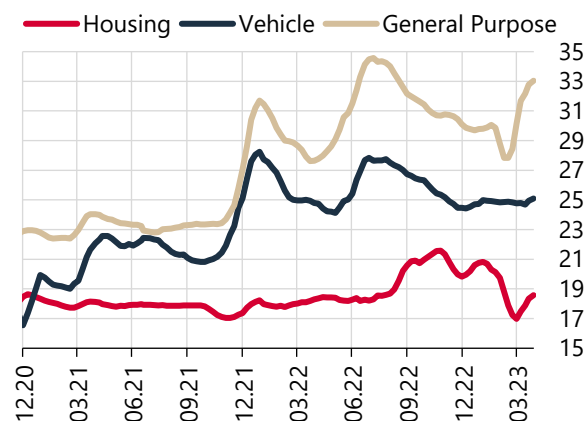
TL commercial loan rates dropped significantly amid the decline in the policy rate as well as the securities maintenance regulation based on loan rates.

The reference interest rate announced by the CBRT to determine credit card rates has been used as a reference for macroprudential measures for commercial loans since August 2022. Due to the implementation of the securities maintenance practice for commercial loan rates in August, TL commercial loan rates plummeted (Chart IV.1.9). While general-purpose loan rates crept up, vehicle loan rates remained flat (Chart IV.1.10).

Chart IV.1.9: TL Commercial Loan Rates
 (4 WMA, %)


Source: CBRT Last Observation: 28.04.2023

Note: TL commercial loan rates do not include corporate credit cards and legal persons' overdraft accounts. Loan rates for large firms do not include zero-interest loans.

Chart IV.1.10: Retail Loan Rates (4 WMA, %)


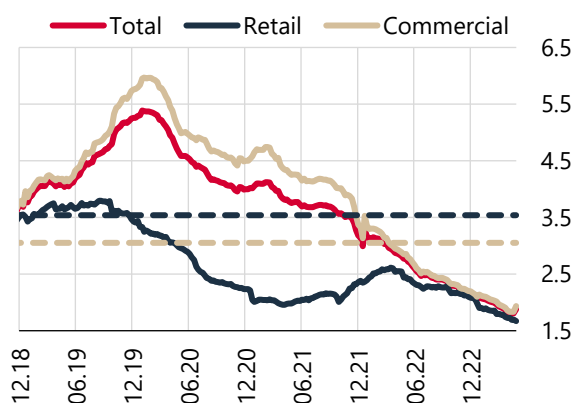
Source: CBRT Last Observation: 28.04.2023

Note: General-purpose loan rates do not include real persons' overdraft accounts.

IV.1.2 Credit Risk

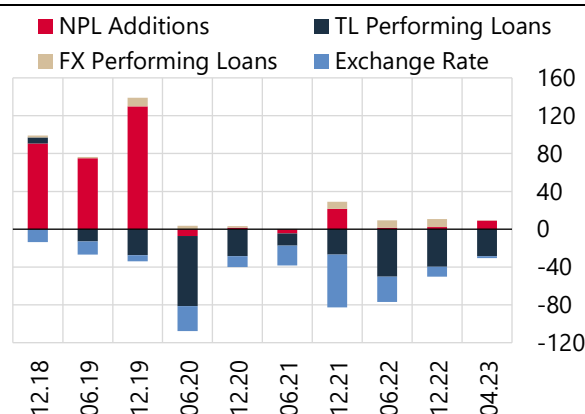
The favorable course of the banking sector's asset quality continues.

The banking sector's total NPL ratio further trended downwards in the current Report period and the NPL ratio dropped to 1.9% (Chart IV.1.11). The improvement in the NPL ratio is seen across all subtypes of loans. An analysis of the contributors of the change in the total NPL ratio reveals that the fall in this ratio was led by TL loan growth. In this period, the almost flat course of the NPL balance also contributed to the positive course in the outlook for NPL (Chart IV.1.12).

Chart IV.1.11: NPL Ratios (%)


Source: CBRT Last Observation: 28.04.23

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

Chart IV.1.12: Contributions to the Change in NPL Ratios (6-month Total Contributions, bp)


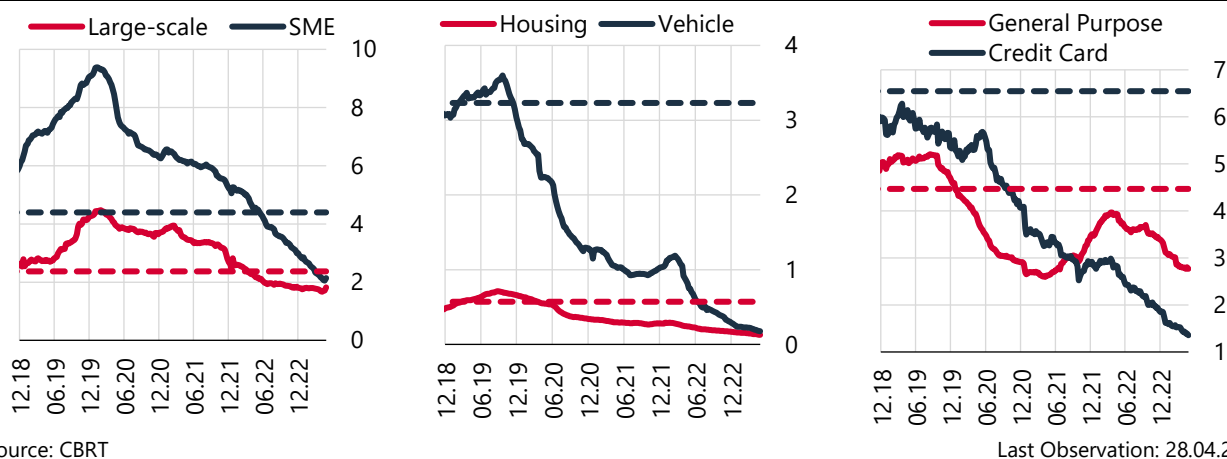
Source: CBRT Last Observation: 28.04.23

Note: Contributions show the total contribution amount in the relevant six months, and the last column includes the contribution total from 1 January to 24 March. For technical details on the method, see Financial Stability Report of November 2018, Box IV.1.

The decline in the corporate NPL ratio was driven by the falling SME NPL ratio, while other corporate and SME NPL ratios stood at 1.8% and 2.1%, respectively. Thus, other corporate and SME NPL ratios fell notably below their historical averages. The decline in the SME NPL ratio was mainly driven by the drop in the SME NPL balance coupled with the uptick in the loan balance since April 2022 with the contribution of targeted loan policies

supporting SME loan growth. Meanwhile, the NPL ratio for large corporates remained unchanged due to the nominal loan balance that grew at a similar pace to the rise in the NPL balance. The decline in retail loan NPL ratios was seen across all sub-categories and retail loan NPL ratios fell below the averages of previous periods. The improvement in NPL ratios of retail loans was more pronounced in general-purpose and credit card loans as retail loan growth was mainly attributed to general-purpose and credit card loans. Having rather low NPL ratios due to their collateralized structures and regulations limiting credit riskiness such as loan-to-value ratios, NPL ratios of housing and vehicle loans dropped to 0.1 and 0.2%, respectively (Chart IV.1.13).

Chart IV.1.13: NPL Ratios in the Breakdown of Credit Types (%)



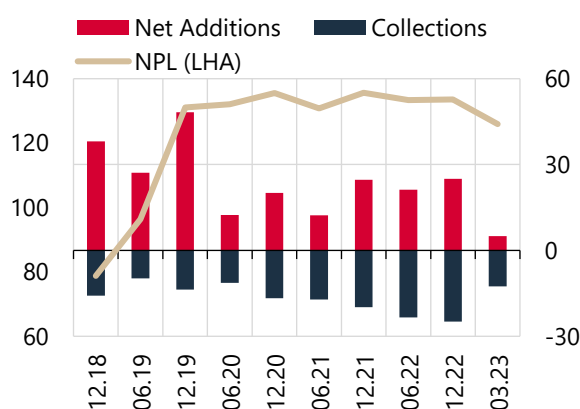
Source: CBRT

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

Retail and corporate NPL additions continue to moderate, while the robust outlook is sustained for NPL collections.

After edging up in the second half of 2021 and 2022, net additions to corporate NPLs decelerated again in 2023. Following the second half of 2022, corporate NPL collections rose due to elevated asset prices and the buoyant economic activity, which contributed to the fall in the NPL balance in the current Report period (Chart IV.1.14). The ratio of corporate NPL collections to net NPL additions is far above the long-term average. The ratio of corporate NPL collections to NPL balance, on the other hand, increased due to the strong course of collections and asset write-offs, and stood above the long-term average again (Chart IV.1.15).

Chart IV.1.14: Components of Corporate NPL Balance (TL Billion)

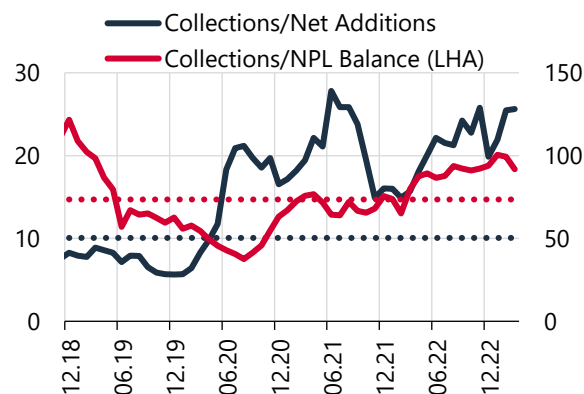


Source: CBRT

Last Observation: 03.23

Note: Series for collections and net additions are based on six-month totals. The last column shows net additions and collections in the January-March period. Net additions are calculated by subtracting the migrations to performing loans and write-offs from new NPL additions.

Chart IV.1.15: Corporate NPL Collection Rates (%)



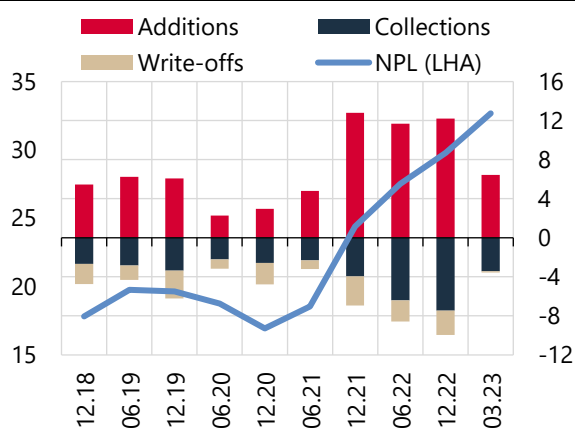
Source: CBRT

Last Observation: 03.23

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

Having increased more than corporate NPL additions amid the removal of flexibilities of loan classification in the last quarter of 2021, retail NPL additions hovered at similar levels in 2022 and 2023 (Chart IV.1.16). Higher NPL collections in tandem with asset price hikes and wage updates as well as asset write-offs limit the rise in individual NPL balances. The ratio of retail NPL collections to NPL balance and the ratio of NPL collections to NPL additions remain flat above their long-term averages (Chart IV.1.17).

Chart IV.1.16: Components of Retail NPL Balance (TL Billion)

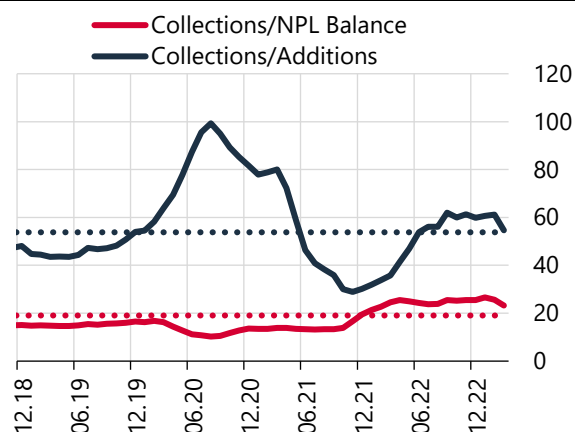


Source: CBRT

Last Observation: 03.23

Note: Series for collections and net additions are based on six-month totals. The last column shows collections, additions and write-offs in the January-March period. Additions are calculated by subtracting the migrations to performing loans and write-offs from NPL additions.

Chart IV.1.17: Retail NPL Collection Rates (%)



Source: CBRT

Last Observation: 03.23

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

While the ratio of Stage 2 loans and restructured loans continues to improve, a notable portion of Stage 2 loans consists of non-overdue loans.

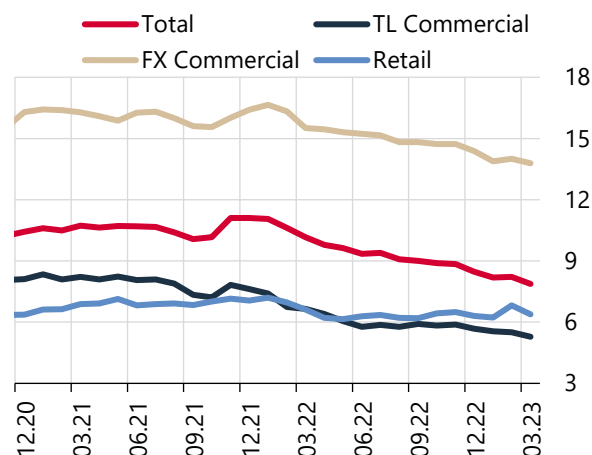
The share of Stage 2 loans in total loans has trended downwards since 2022 (Chart IV.1.18). This fall was led by the brisk loan growth coupled with the decline in the rate of transition from standard loans to Stage 2 loans. Ratios of Stage 2 for TL corporate and retail loans move in tandem, while those of FX corporate loans have been hovering above other loan types for a long time. This stems from firms with low FX income that faced difficulties in payment due to the exchange rate developments in 2018 leading to their FX loans being restructured. In addition, 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 loans classification since 2018 and even if the loans are not in arrears, they classify them as Stage 2 if their models suggest a significant increase in credit risk. Looking at loan delinquency, 84% of total loans are not overdue but classified under Stage 2 loans due to a significant increase in credit riskiness based on banks' IFRS-9 models. This ratio is 93% for Stage 2 corporate loans, while it stands at 71% for retail loans. In the current Report period, the ratio of Stage 2 corporate loans declined, while the ratio of retail loans edged up. The rise in the ratio of Stage 2 retail loans was mainly driven by non-overdue loans due to banks' forbearance measures. The decline in the Stage 2 ratio of corporate loans is attributed to the fall in the share of non-overdue loans (Chart IV.1.19). Firms' strong profitability and improved financial indicators are believed to cause the decline in the share of loans that banks classified under Stage 2 loans although they were not in arrears according to IFRS-9 models (III.2. Real Sector Developments Charts III.2.12 and III.2.13).

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 457 bps to 9.7% since the end of 2021 (Chart IV.1.20). This improvement was driven not only by loan growth but also by the flat course of NPL balances and firms' improving financial position. The ratio of Stage 2 loans with arrears and NPLs to gross loans decreased by 187 bp compared to end-2021 and stood at 2.6% as of March. Loan restructurings contribute to the improvement in the payment performance of customers whose cash flows have temporarily deteriorated and who are experiencing difficulty in payments. In the current Report period, the ratio of restructured loans to gross loans dropped to 5.0% due to loan growth (Chart IV.1.21). Out of

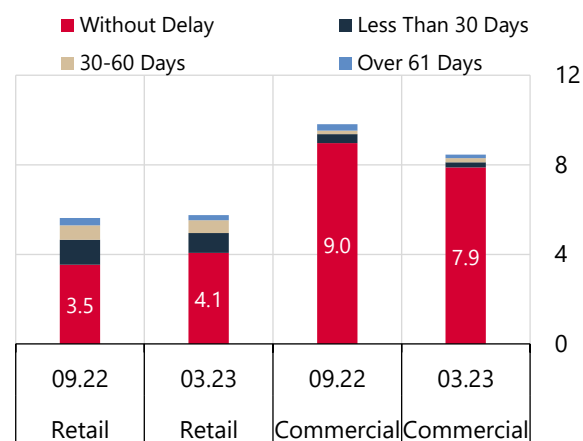
restructured loans, 87% are monitored in the Stage 2 category, 8% in the NPL category and a very limited portion in Stage 1. Therefore, it is assessed that the banking sector prudently monitors restructured loans under Stage 2 and NPL categories.

Chart IV.1.18: Ratio of Stage 2 Loans (%)



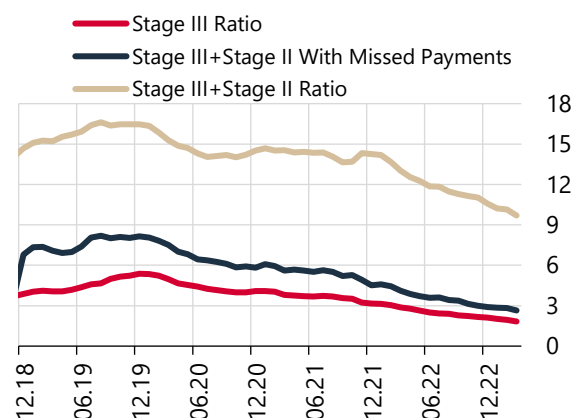
Source: CBRT Last Observation: 03.23
 Note: Series show the ratio of Stage 2 loans to gross loans.

Chart IV.1.19: Ratio of Stage 2 Loans by Number of Days in Arrears (%)



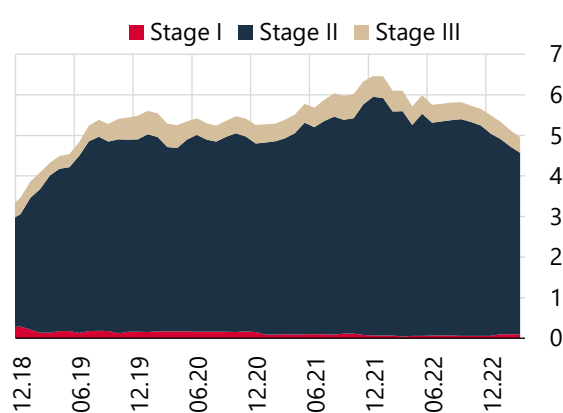
Source: CBRT Last Observation: 03.23
 Note: Series show the ratio of Stage 2 loans to gross loans by number of days in arrears.

Chart IV.1.20: Asset Quality Outlook (%)



Source: CBRT Last Observation: 03.23
 Note: Asset quality indicators are proportioned to gross loans.

Chart IV.1.21: Restructured Loans (%)

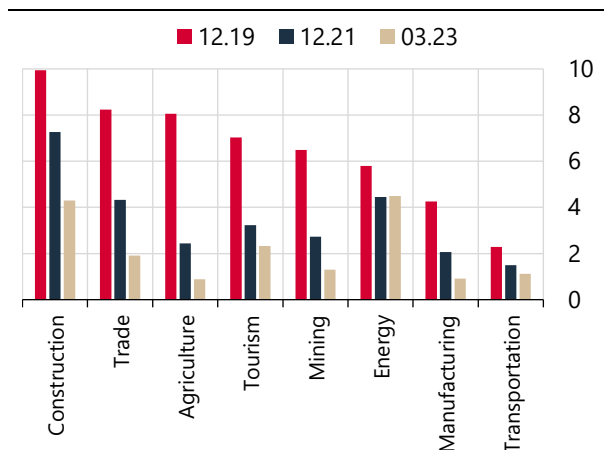


Source: CBRT Last Observation: 03.23
 Note: Series show the ratio of restructured loans to gross loans. Stage 1: Ratio of restructured loans monitored under standard loans. Stage 2: Ratio of restructured loans under close monitoring loans.

The improvement in commercial loan NPL and Stage 2 ratios is broad-based across all sub-sectors.

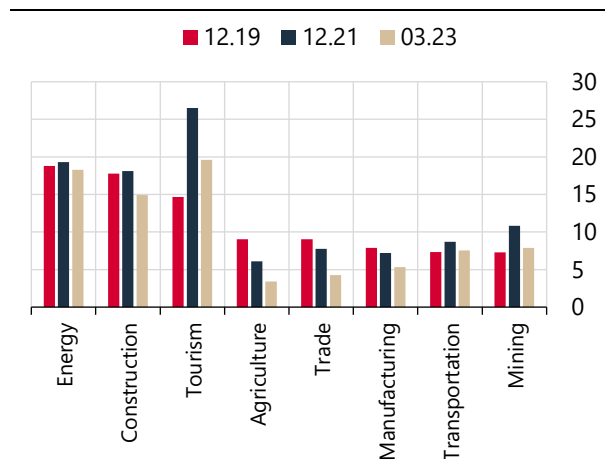
Compared to end-2019 and 2021, the NPL ratios of almost all sectors improved, with the largest improvement in the construction, trade and agriculture sectors (Chart IV.1.22). Similar to the NPL ratio, the Stage 2 loan ratios in the tourism, energy and construction sectors in March 2023 stood above their sectoral averages. Compared to end-2019, the Stage 2 loan ratios in the tourism, transportation and mining sectors increased, while they fell in all sectors compared to end-2021. Having been adversely affected by the measures taken during the pandemic, the tourism sector is likely to register further improvements in the Stage 2 loan ratios in the upcoming period as the tourism sector's revenues exceeded their pre-pandemic levels in 2022 (Chart IV.1.23).

Chart IV.1.22: NPL Ratios by Sectors (%)



Source: CBRT Last Observation: 03.23

Chart IV.1.23: Stage 2 Loan Ratios by Sectors (%)



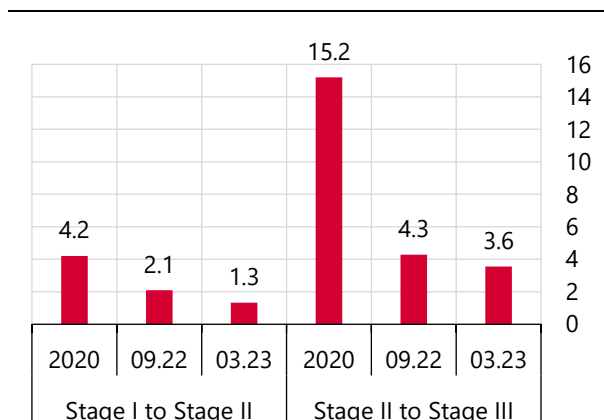
Source: CBRT Last Observation: 03.23

Note: Sectors are listed in a descending order based on their NPL and Stage 2 loan ratios at the end of 2019.

Probabilities of loans being classified under Stage 2 and NPL decline further, while banks continue with the prudent provisioning policies they introduced during the pandemic.

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. As of December 2022, these ratios for commercial loans are 1.3% and 3.6%, respectively (Chart IV.1.24). These rates are below both the 2020 average as well as the levels of the last Report period. The decline in transition probabilities contributed to the flat course of the NPL balance and the decline in the ratio of Stage 2 loans without arrears in the current Report period. It is considered that the supportive credit policies implemented during and after the pandemic and the buoyant domestic economic activity improved the cash flows of firms and households, affecting banks' asset quality performance favorably. The upward trend 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 rose to 1%, 23.7% and 87.9%, respectively (Chart IV.1.25). The provision ratio for Stage 2 loans and restructured loans is 28.2%, which is above the provision ratio for other Stage 2 loans (17.7%).

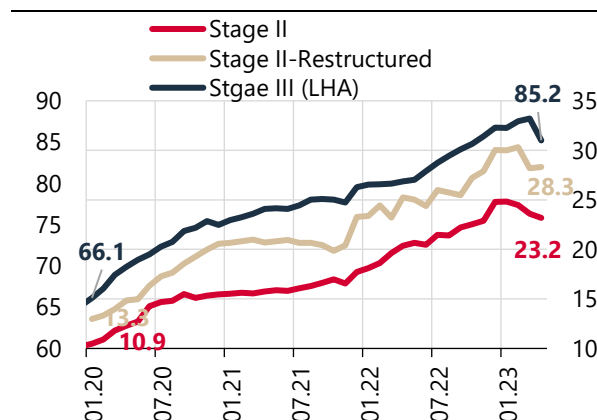
Chart IV.1.24: Transition Probabilities (Commercial Loans, %)



Source: CBRT Last Observation: 03.23

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.1.25: Expected Loss Provisioning Ratio (%)



Source: CBRT Last Observation: 03.23

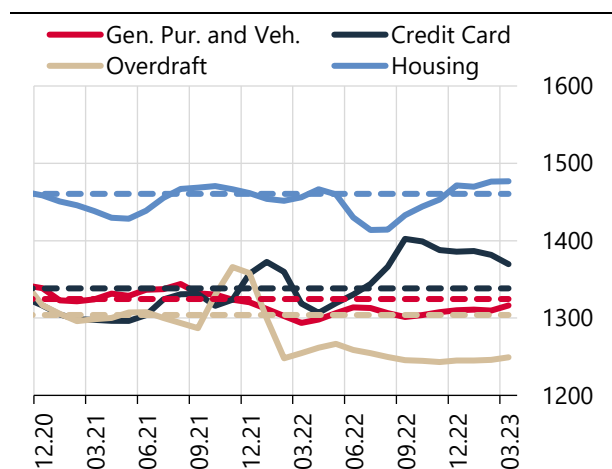
Note: Expected loss provisioning ratio is the ratio of the expected loss provision of the loan in the related category to the loan amount in that category.

The riskiness profile of customers' retail personal loan applications is improving.

An analysis of the individual credit ratings of customers applying for loans reveals that the credit ratings of housing loans and personal credit card customers are trending upwards and above the average of the previous period. This is attributed to the BRSA's reduction of housing loan-to-value ratios in June 2022, which caused customers with higher liquidity and better repayment performance, in turn, to apply for loans. The upper limit for the monthly contractual interest rate applied to PCC is associated to the increased use of the PCC by customers with better financial risk status. The average credit rating of customers applying for general-purpose and vehicle loans hovers close to the average of the previous period (Chart IV.1.26).

The conversion performance of general-purpose loans to NPL starting from the year of disbursement can be monitored by aging analysis. Accordingly, the NPL performance of general-purpose loans extended in 2022 is better than the average of the previous year and 2021 (Chart IV.1.27). 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.

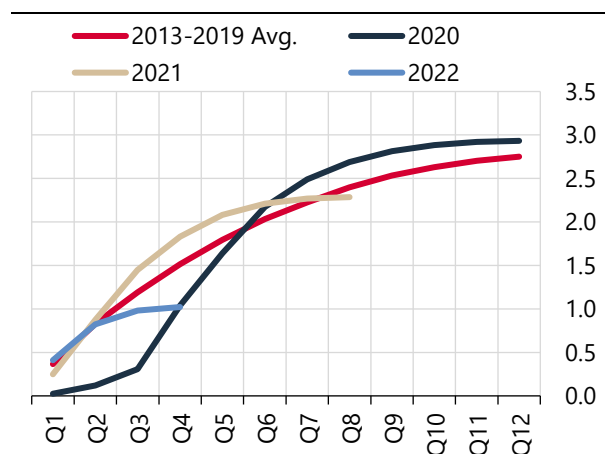
Chart IV.1.26: Personal Credit Rating (3-month MA)



Source: KKB Last Observation: 03.23

Note: The chart shows the average credit rating of credit applicants in the respective period. Dashed lines show the average of the January 2020-February 2022 period.

Chart IV.1.27: General-Purpose Loan Aging Analysis (%)



Source: CBRT Last Observation: 03.23

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

Box IV.1.I: Credit Developments in the Earthquake Zone

The Kahramanmaraş-centered earthquake of 6 February affecting 11 provinces, leading to uncertainties over the continuity of economic activity and financial services. As the production infrastructure industrial firms based in the earthquake zone were affected to a more limited extent, production could be sustained without interruption. The post-quake measures taken by authorities enabled the continuity of financial services in the earthquake region and loan repayments of affected individuals and firms were either postponed or cancelled. Furthermore, banks introduced credit packages with affordable conditions for clients that are resident or operating in the quake zone. This study explores the service channels and the volume of operation of banks in the region, as well as the share of the region in the entire financial system. After giving an account of the measures taken to minimize the impact of the earthquake on individuals, companies and the financial system, the study examines the development of loans made available for the quake region.

The earthquake damaged branches and ATMs of many banks in the region, yet temporary service points and mobile branches were set up to avoid any interruption in the financial system. The number of mobile branches that began to operate in the region in the week of the disaster was 27, but rose to 63 by the end of April. The proportion of operating ATMs in the quake zone increased from 67% to 91%, and the number of operational branches reached from 236 to 668 in the same period (Table IV.1.I.1).

Table IV.1.I.1: Service Channels in Quake Zone (2023)

	Branches in Total	Branches Operating On-site	ATMs in Total	Operating ATMs	Operating ATMs (%)	Mobile Branches	Operating Containers	Operating Temporary Service Points
10 February	863	236	4,133	2,768	67.0	27	0	0
16 February	870	448	4,131	2,977	72.1	41	4	16
17 February ¹	916	509	4,345	3,258	75.0	43	6	16
30 March	908	639	4,132	3,589	86.9	67	78	3
6 April	908	646	4,041	3,529	87.3	60	92	2
13 April	905	657	4,011	3,581	89.3	58	88	1
19 April ²	902	662	4,007	3,502	87.4	61	88	-
27 April	901	668	3,988	3,628	91.0	63	88	-

Source: BAT

Note: Deposit, development and investment banks are included. Differences in the number of total branches are due to reporting from banks.

(1) Data on Elazığ province is available as of 17 February 2023.

(2) The fall in the number of operating ATMs in the week of 19 April stems from two banks and was temporary.

Commercial Loans

As of January 2023, the total TL commercial loan balance of the 11 quake-stricken provinces was TL 397 billion, and the TL equivalent of FX loans was TL 167 billion. Thus, the total commercial loan balance adds up to TL 564 billion. Loan shares of 11 provinces are 10.7% in TL loans and 6.9% in FX loans.

The total commercial loan share in the disaster zone is 9.2%. The SME loan share of the region in the country is 4 points higher than the share of corporate loans, which indicates the more intense structure of small and medium-sized commercial enterprises in the region. The commercial NPL ratio of the region is above 0.2 points the sector's ratio of 2.3% (Table IV.1.I.2). The BRSA's decision of 10 February 2023 enabled the postponement of principal and interest repayments of loans extended to quake-stricken clients with repayment difficulties for a minimum of six months (Table IV.1.I.5). Thus, a likely deterioration in the asset quality of the disaster zone, where the NPL ratio is slightly above the sector, was avoided.

Table IV.1.1.2: Commercial Loans in Earthquake Region and Share in Banking Sector (TL Billion, %)

	Balance			Share			NPL Ratio
	SME	Corporate	Total	SME	Corporate	Total	Total
ADANA	68	40	108	2.4	1.2	1.8	2.7
ADIYAMAN	10	3.1	13.3	0.4	0.1	0.2	1.4
DİYARBAKIR	29	2.7	31.8	1.0	0.1	0.5	3.1
ELAZIĞ	11	11.1	22.0	0.4	0.3	0.4	1.3
GAZİANTEP	72	117.0	188.9	2.6	3.5	3.1	2.3
HATAY	39	43.6	83.1	1.4	1.3	1.4	2.4
KAHRAMANMARAŞ	29	22.7	51.3	1.0	0.7	0.8	1.8
KİLİS	1	0.1	1.5	0.0	0.0	0.0	1.8
MALATYA	12	3.1	15.3	0.4	0.1	0.2	1.9
OSMANIYE	10	5.9	15.8	0.4	0.2	0.3	1.5
ŞANLIURFA	31	2.7	33.5	1.1	0.1	0.5	1.7
Earthquake Zone	312	252	564	11.1	7.6	9.2	2.3

Source: CBRT

Last Observation: 01.23

Note: SME implies the total of tradesmen, SME and other clients (lawyers, doctors, etc.).

A sector-based analysis of commercial loans extended in the disaster region indicates that the share of textile, ready-made clothing and leather industry is 38.5%, followed by the metal industry (18.7%), agriculture and animal husbandry (16.6%), and food and beverages (13.4%) (Table IV.1.1.3). Industrial provinces such as Gaziantep and Adana were relatively less affected by the earthquake, which enabled the continuity of production. However, production was disrupted in Kahramanmaraş, a major center of yarn and steel cookware production, due to the migrating population, but it is expected that production will regain its past levels in the coming months as the labor force recovers. Moreover, it is estimated that the loss of large and small livestock and machinery, in addition to the migration, in the livestock and agriculture sectors, affected activity negatively, but agriculture saw no major loss of harvest as the earthquake occurred in February.

Table IV.1.1.3: Credit Balance, Credit Share and NPL Ratios in Selected Provinces of Earthquake Zone (TL Billion, %)

	Performing Loan		NPL
	Balance	Share	Ratio
Textile, Ready-Made Clothing and Leather Industry	103	38.5	1.7
Metal Industry	56	18.7	1.0
Agriculture and Livestock	59	16.6	0.9
Food and Beverage	32	13.4	2.8
Wholesale and Retail Trade	82	9.4	2.8
Electricity, Gas and Water Resources	30	6.2	4.3
Transport and Storage	18	4.1	1.0
Construction	16	2.8	10.9

Source: CBRT, Author's Calculations

Last Observation: 01.23

Note: The total loan amount excludes loans extended to banks, retail loans and credits cards. Sectors are classified according to the activity line codes.

Retail Loans

As of January 2023, retail loans in earthquake zone provinces amounted to TL 175.2 billion, accounting for 10.8% of banks' total retail loans. Retail loans in Adiyaman, Hatay, Kahramanmaraş, Malatya and Osmaniye, which were more severely affected by the earthquake, have a more limited share with 3.7% of total retail loans in the banking sector. Among these provinces, Hatay has the highest retail loan balance.

As of January 2023, retail loans of TL 5.5 billion have become NPLs in the 11 provinces hit by the earthquake. As proportion, the retail NPL ratio at 3% is slightly above the sector-wide ratio of 1.9%. It is assessed that banks' loan portfolio in the region will have a limited impact on the risk outlook thanks to the deferral of loan payments of individuals affected by the earthquake or the implementation of measures to relieve debt service. Housing and vehicle loans are already insured at a certain ratio, which not only enables individuals to get on with their lives with less financing need, but also reduces banks' credit risks.

Table IV.1.I.4: Retail Loans Extended in Earthquake Zone Provinces (2023 January, TL Million, %)

	Performing Loan Amount										Non-Performing Loans
	Vehicle		Housing		General-Purpose		PCCs		Total		Total
Province	Amount	Share	Amount	Share	Amount	Share	Amount	Share	Amount	Share	Non-Performing Loan Ratio
ADANA	1,359	2.5	7,758	2.1	17,938	2.5	13,472	2.7	40,527	2.5	3.5
ADIYAMAN	157	0.3	1,303	0.4	2,711	0.4	2,005	0.4	6,175	0.4	2.2
DIYARBAKIR	618	1.1	3,979	1.1	8,193	1.1	6,594	1.3	19,384	1.2	5.6
ELAZIĞ	173	0.3	1,427	0.4	3,042	0.4	2,289	0.5	6,930	0.4	2.0
GAZIANTEP	960	1.8	6,826	1.9	12,720	1.8	9,730	2.0	30,236	1.9	2.2
HATAY	669	1.2	4,028	1.1	11,013	1.5	7,473	1.5	23,183	1.4	2.3
KAHRAMAN MARAŞ	364	0.7	2,646	0.7	6,714	0.9	4,379	0.9	14,103	0.9	2.2
KİLİS	31	0.1	389	0.1	835	0.1	568	0.1	1,823	0.1	2.0
MALATYA	284	0.5	2,212	0.6	4,511	0.6	3,272	0.7	10,278	0.6	1.9
OSMANIYE	185	0.3	1,198	0.3	3,528	0.5	2,190	0.4	7,101	0.4	2.4
ŞANLIURFA	595	1.1	2,621	0.7	6,601	0.9	5,649	1.1	15,465	1.0	3.9
EARTHQUAKE ZONE	5,393	10.0	34,387	9.4	77,805	10.9	57,620	11.7	175,205	10.8	3.0
TÜRKİYE	53,918	100.0	365,360	100.0	715,617	100.0	492,465	100.0	1,627,360	100.0	1.9

In the aftermath of the earthquake, regulatory authorities and associations, led by the BRSA and the CBRT, rapidly announced measures to revive economic activity in the region and to minimize the effects of the earthquake on individuals, companies and the financial system. The flexibility granted to banking in the region and banks' introduction of region-specific measures under their credit policies helped contain the economic and financial impact of the disaster.

Table IV.1.I.5: Key Measures and Regulations Taken for Financial Markets in the Disaster Zone

Institution	Effective Date	Measure/Regulation
CBRT	6.02.2023	An interest-free maturity extension up to 180 days was granted for repayment of rediscount credits and advance loans against investment commitment.
		An additional export and FX-earning services commitment fulfillment duration of six months was granted for rediscount credits for export and FX-earning services.
		Related entities were instructed not to charge fees for money transfers made to earthquake donation accounts.
	13.02.2023	For loans which were granted a maturity extension, banks were advised to: (i) not apply the practice of maintaining securities based on the loan type and loan growth rate, (ii) not to apply the condition of document-against-expenditure for lending, but to sustain the securities maintenance practice based on the loan interest rate/profit share (provisional article 7), and (iii) to exempt financing companies from maintenance of reserve requirements.
	13.03.2023	General-purpose loans were exempted from the securities maintenance practice.
	28.03.2023	The condition of lending against invoice/expenditure was terminated for loans to be extended to persons who had commercial relations with those residing in the earthquake zone and who certified that they suffered damage due to the earthquake, and to persons who certified that they would engage in action to meet the shelter needs of those affected by the earthquake or to reconstruct the infrastructure and superstructure in the earthquake zone.
BRSA	10.02.2023	To make effectively available the emergency support funds to be provided by international DIBs or the funds to be obtained from abroad for this purpose in the earthquake zone, the banks that would intermediate the disbursement of funds were granted longer maturities in transactions in the TL Swap Market, which are normally carried out via the quotation method with one-week maturity.
		The minimum payment amount for credit cards was set at 20% of the term debt.
		Regarding monthly average net income, taken into account in determining the total credit card limit, it was decided that the limitation could be doubled.
		The principal and interest payments of loans disbursed were deferred for a minimum period of six months as of 06.02.2023, at the requests of clients.
		In case the average income level cannot be determined, the total limit of credit cards that real persons can obtain would be increased to TL 5,000.
		In case the principal and interest payments of consumer and vehicle loans are deferred at the request of the clients, the period of deferral would not be taken into account within the maturity limits specified in the relevant legislation.
14.02.2023	The provision of credit ratings as well as mandatory documents to be obtained from borrowers was left to the discretion of banks.	
	The deadlines for submission of the information and documents to banks by companies subject to independent audit in relation to loan disbursements were extended for companies in the earthquake/disaster zone provinces.	
	Credit card issuers may consider not applying the provisions regarding the closure and cancellation of credit cards for which the minimum payment amount had not been paid.	
MTF	7.02.2023	High risk weighting would not be applied to the loans extended to earthquake affected clients.
Presidency	17.02.2023	Tax obligations that should be fulfilled by taxpayers between 6 February and 31 July 2023 were postponed.
BAT	6.02.2023	Banks were exempted from the condition of "aid and donations should not exceed four per thousand of their equity" in their aid and donations to the Disaster and Emergency Management Authority (AFAD).
		The Risk Center advised to be flexible when deciding whether to apply force majeure provisions while notifying of the credit risk, loan repayments, promissory note and check transactions of their clients who have accounts in the earthquake zone.
	15.02.2023	No fees would be charged on transactions through common ATMs located in the earthquake zone.
BAT	15.02.2023	Banking service commissions and fees would not be charged for use of POS and credit cards throughout 2023, as well as for lost POS devices.
		The loan debts of the clients who died in the earthquake would be set off against the loan debt of the insurance payments subject to the loan, and the remaining debts would be written off.
		Necessary flexibility regarding administrative practices such as seizure, execution, follow-up, etc. took effect. Loan debts/installments and non-cash loan commissions of individuals and sole proprietorship were postponed for one month without charging interest (interest/default interest)

The effects of the earthquake on production, consumption, employment and expectations are being evaluated extensively. Firms' access to credit was expanded to minimize the toll of the earthquake on economic activity and to prevent a lasting impact on the performance of the Turkish economy. In February, the TL commercial loan growth in the disaster zone was TL 12.5 billion, while it rose to TL 29.8 billion in March. This increase was driven by SME loans, also corporate loans drew attention. This is attributed to the exemption of corporate loans in the quake zone from the securities maintenance practice. In retail loans, the loan growth of TL 10.3 billion in February accelerated in March, reaching TL 35.2 billion. Almost the entirety of this increase stemmed from personal credit cards and general-purpose loans.

Table IV.1.1.6: Loans in Earthquake Zone Provinces (TL billion, %)

	Stock Balance			Monthly Change		Monthly Growth Rate	
	Jan.23	Feb.23	Mar.23	Feb.23	Mar.23	Feb.23	Mar.23
TL Commercial	397	410	440	12.5	29.8	3.1	7.3
SME	275	285	303	9.6	17.4	3.5	6.1
Corporate	122	125	137	2.8	12.4	2.3	10.0
Retail Loans	175	186	221	10.3	35.2	5.9	19.0
General-Purpose	78	82	97	4.4	14.6	5.7	17.8
PCCs	58	63	84	5.7	20.1	9.9	31.9
Housing	34	34	35	0.0	0.1	0.0	0.3
Vehicle	5	6	6	0.2	0.3	3.7	5.4

Source: CBRT

Last Observation 03.23

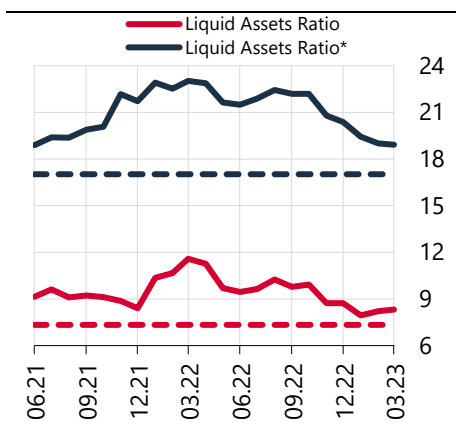
Note: SME implies the total of tradesmen, SME and other clients (lawyers, doctors, etc.).

IV.2 Liquidity Risk

The banking sector is resilient against possible liquidity shocks with its strong TL and FX liquid assets.

Throughout 2023, the banking sector's liquidity outlook hovered above its historical average. Liquid asset ratio indicators have edged down since the last reporting period (Chart IV.2.1). This was mainly driven by the decline in the ratio of free securities to total assets due to the securities held by banks at the CBRT within the scope of the liquidity requirement and the partial coverage of the drop in FX liabilities mostly from FX deposits by foreign correspondent accounts. Nevertheless, the ratio of the sector's free securities and foreign correspondent account balances to total assets hovers above historical averages (Chart IV.2.2). Total and FX liquidity coverage ratios (LCR), which are indicators of banks' capability to meet short-term net cash outflows, remain well above legal limits and historical averages (Chart IV.2.3).

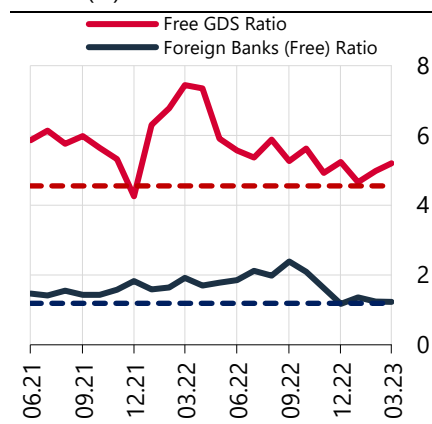
Chart IV.2.1: Share of Liquid Assets (%)



Source: CBRT Last Observation: 03.23

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.

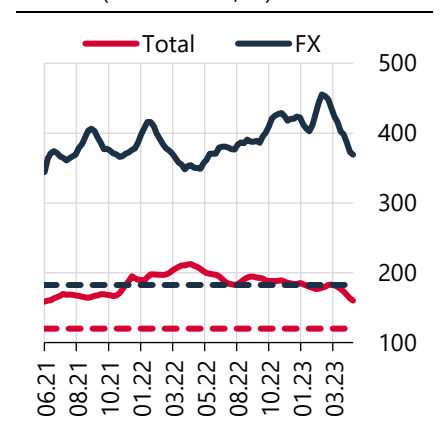
Chart IV.2.2: Share of Free Liquid Items (%)



Source: CBRT Last Observation: 03.23

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.

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



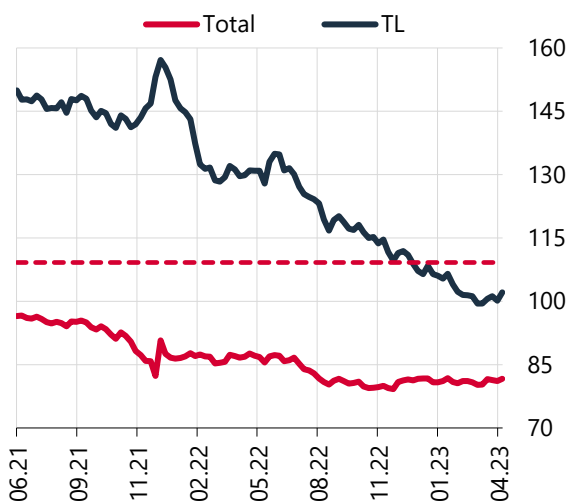
Source: CBRT Last Observation: 28.04.23

Note: Development and investment banks (DIBs) are excluded. Based on non-consolidated reports. Minimum legal limits for FX and total LCR is 100% and 80%, respectively. Dashed lines represent the average of each series between 2014 and 2019.

Being a stable funding source, deposits remain the leading funding source for loans across the sector, contributing to the prospects for liquidity.

The sector's loan-deposit ratio (LDR) remains flat at 80%. Due to the downward trend in the TL loan-deposit ratio, this ratio has converged to 100%. However, due to the recent rapid drop in FX deposit preference, the FX LDR rose by 5 percentage points (Chart IV.2.4). The path of the TL loan-deposit ratio supports the sector's liquidity management and reduces the need for currency swap due to currency mismatch (Chart IV.2.5).

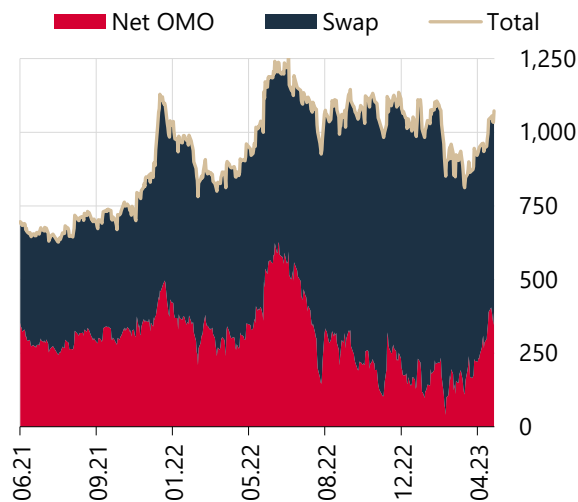
Chart IV.2.4: Loan-to-Deposit Ratio (%)



Source: CBRT Last Observation: 28.04.23

Note: Development and Investment banks (DIBs) are excluded. Loans extended to banks and banks' deposits are excluded. Non-performing loans are included in loans. Dashed line represents the average of LDR for 2011- 2018 period.

Chart IV.2.5: CBRT Funding (TL Billion)



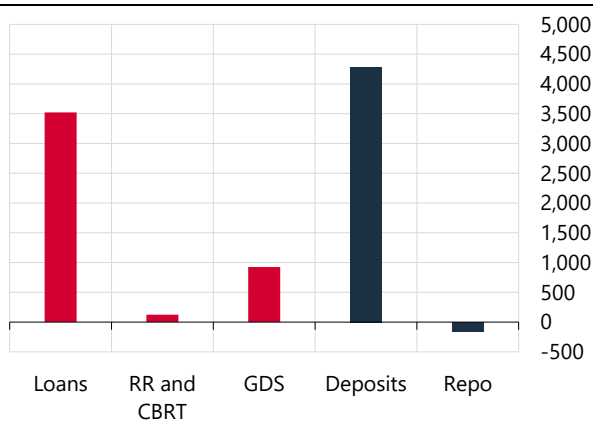
Source: CBRT

Last Observation: 28.04.23

In contrast to the strengthening in TL-denominated items in the balance sheets, FX-denominated items decline further.

With the introduction of the KKM and then the policies prioritizing the Turkish lira, there has been a robust increase in TL assets and liabilities in the banking sector balance sheet (Charts IV.2.6 and IV.2.7). While TL-denominated loans and deposits recorded significant increases, the securities facility arrangement led to an uptick in GDS. Regarding FX balance sheet items, falling figures in loans and deposits have been evident since the end of 2021.

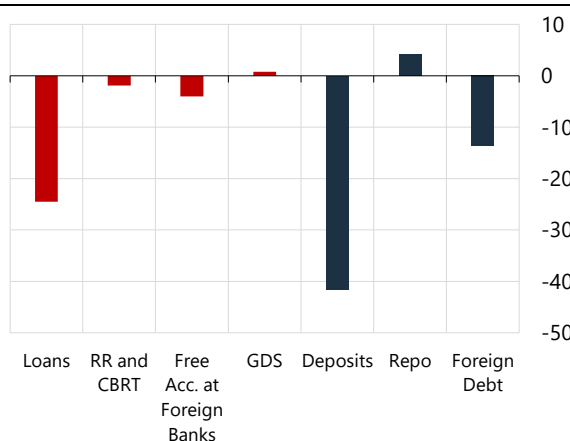
Chart IV.2.6: Changes in Banks' Assets and Liabilities (TL Billion)



Source: CBRT

Note: Assets and liabilities are shown in different colors. GDS represents free government debt securities and securities pledged as collateral or securities subject to repo transactions. Change in amounts between 31 December 2021 – 28 April 2023 of related items are shown. RR and CBRT items include RR and free accounts held at the CBRT.

Chart IV.2.7: Changes in Banks' FX Assets and Liabilities (USD Billion)

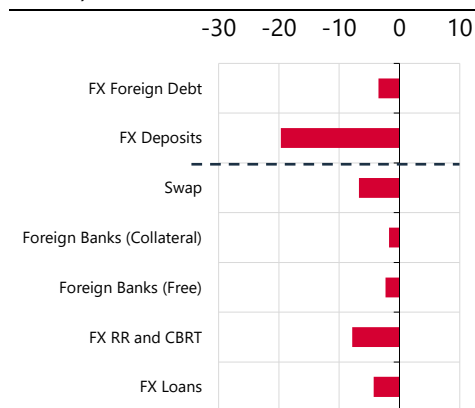


Last Observation: 28.04.23

Note: Assets and liabilities are shown in different colors. GDS represents free government debt securities and securities pledged as collateral or securities subject to repo transactions. Change in amounts between 31 December 2021 – 28 April 2023 of related items are shown. RR and CBRT items include RR and free accounts held at the CBRT. The last data on which the change in external debt is based, is March 2023 data.

In the first four months of 2022, after the launch of the KKM, FX deposits were rapidly converted to KKM, and the required FX liquidity was met by FX RRs, the CBRT's currency swap transactions as well as free accounts at correspondent banks abroad. In the April-October 2022 period, FX loan closures were the determining factor in the source of FX liquidity for banks. After October 2022, there was a significant decline in FX deposits, and the required FX liquidity in this period was met by all FX asset items in a balanced way, mostly by foreign free accounts (Chart II.2.10).

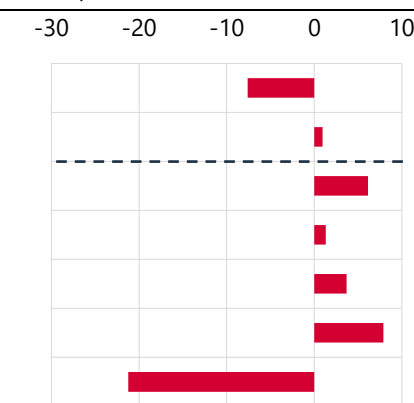
Chart II.2.8: Changes in Selected FX Balance Sheet Items between December 2021 - April 2022 (USD Billion)



Source: CBRT

Last Observation: 04.22

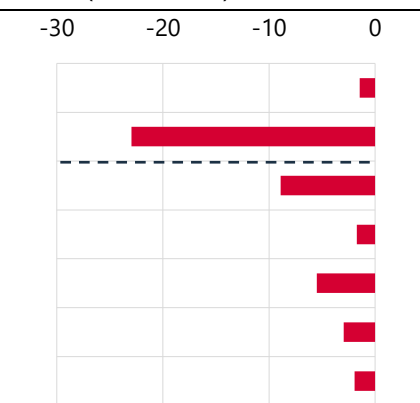
Chart II.2.9: Changes in Selected FX Balance Sheet Items between April 2022 - October 2022 (USD Billion)



Source: CBRT

Last Observation: 10.22

Chart II.2.10: Changes in Selected FX Balance Sheet Items between October 2022- March 2023 (USD Billion)



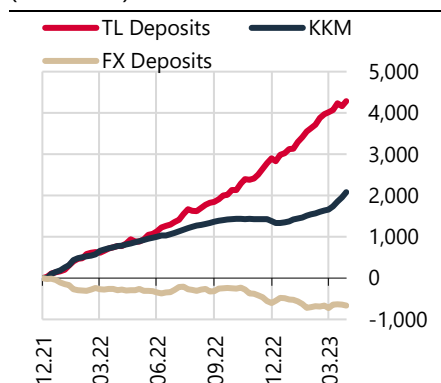
Source: CBRT

Last Observation: 03.23

KKM supported TL deposits, and the share of TL in banks' balance sheets posted a sharp rise thanks to the practices introduced as part of liraization.

In December 2021, TL deposits, supported by the KKM scheme introduced in the same month, maintained their strong upward trend in line with the gradually increased TL deposit ratio targets. Starting from the second half of 2022, the contribution of TL deposit accounts other than KKM to TL deposit growth accelerated (Chart IV.2.11). Due to the robust increase in TL deposits and the sustained decline in FX deposit accounts, the share of TL deposits converged to 60% (Chart IV.2.12). Thanks to the policies adopted, the share of TL items in the sector's balance sheet has recently surged, exceeding 60% of assets and approaching 55% of liabilities (Chart IV.2.13).

Chart IV.2.11: Changes in Deposits (TL Billion)



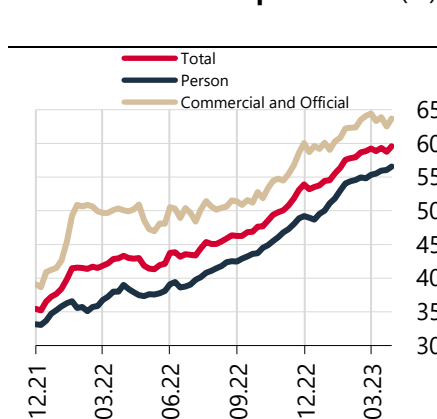
Source: CBRT

Last Observation: 28.04.23

Note: Values show changes since the end of 2021. FX deposit series is the

TL equivalent of the weekly change in USD equivalent of FX deposits in the respective week obtained through the USD exchange rate.

Chart IV.2.12: TL Deposit Ratio (%)

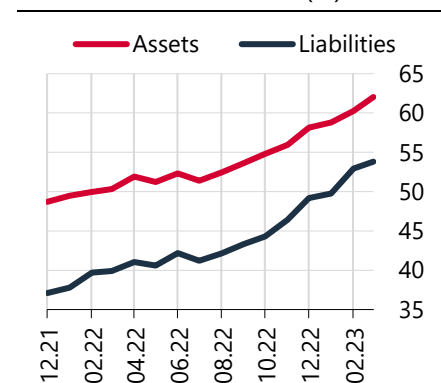


Source: CBRT

Last Observation: 28.04.23

Note: Banks' deposits are excluded, and other deposits are included in legal deposits.

Chart IV.2.13: Share of TL in Sector's Balance Sheet (%)



Source: CBRT

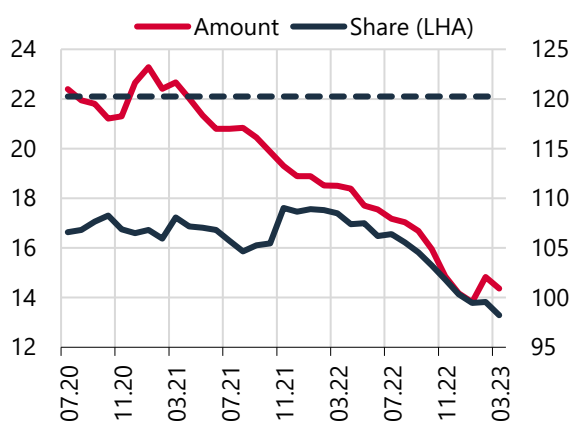
Last Observation: 03.23

Note: Assets denote the ratio of TL assets to total assets, while liabilities are the ratio of TL liabilities (excluding equity capital) to total liabilities.

In view of elevated financing costs amid global economic developments, banks opted for tapering their external debt in 2022, while external debt rollover ratios edged up in the first quarter of 2023.

The sector's recent trend of external debt reduction was sustained in 2022, and the banking sector paid off USD 14 billion worth of external debt in 2022 (Chart IV.2.14). This is attributed to the surge in TL deposits due to the liraization of bank liabilities amid the sluggish course of FX loan demand and the strong TL loan demand. The share of external debt in total liabilities dropped to 13%, notably below the historical average. On the other hand, following the CBRT's measure to support external borrowing with maturities longer than six months, the external debt balance displayed a limited uptick in the first quarter of 2023. The sector's external debt rollover ratio, which had been flat at 90% for a long time, climbed to 97% in March 2023. The maturity-based divergence in banks' external debt rollover trend persists. Due to cost developments as well as the weak demand for long-term FX loans, banks still tend to close their medium and long-term external debts, while short-term external debts are renewed by more than 100% (Chart IV.2.15). In the first quarter of 2023, with the help of supportive measures, the roll-over ratio of medium and long-term external debt increased.

Chart IV.2.14: External Debt and Share in Liabilities (USD Billion, %)

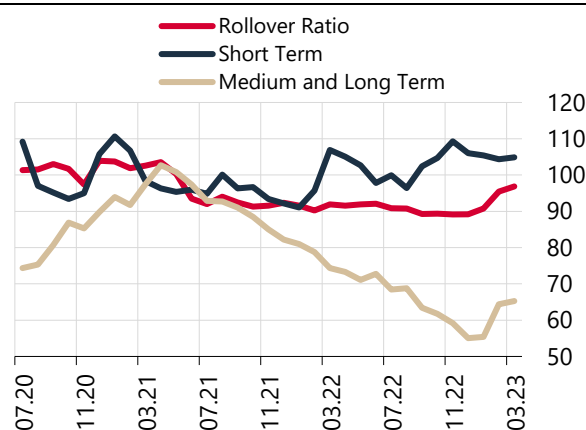


Sources: CBRT, CSD

Last Observation: 03.23

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.2.15: External Debt Rollover Ratio (%)

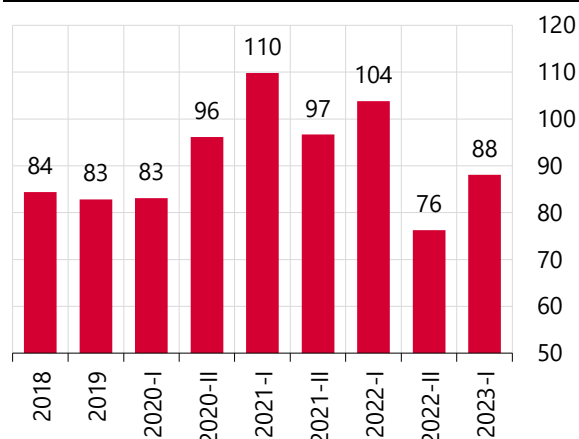


Sources: CBRT, CSD

Last Observation: 03.23

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.

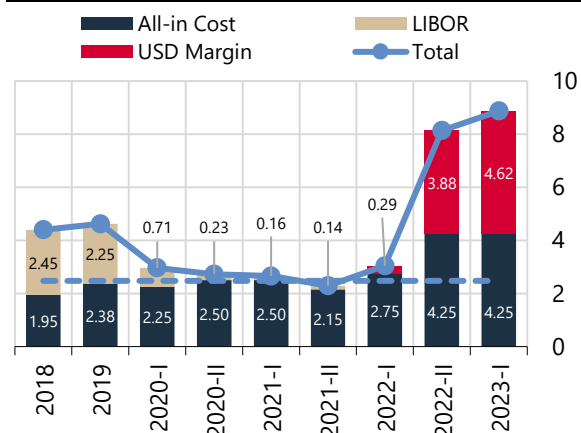
Banks continue to renew their syndicated loans in consideration of FX loan demand and financing costs. In 2023, the average renewal rate for the first syndicated loan transactions was 88% (Chart IV.2.17). Following an increase of 150 basis points in the second half of 2022, margins remained flat in 2023, while reference rates rose further amid global economic developments (Chart IV.2.18). The banking sector's ability to roll over its external debt in proportion to its needs during a period of intense global uncertainties and tighter liquidity conditions indicates that the sector's access to external financing is strong.

Chart IV.2.17: Rollover Ratio of Syndicated Loans (%)

Sources: CBRT, KAP

Last Observation: 17.05.23

Note: 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.

Chart IV.2.18: Cost Margins of Syndicated Loans (%)

Source: KAP

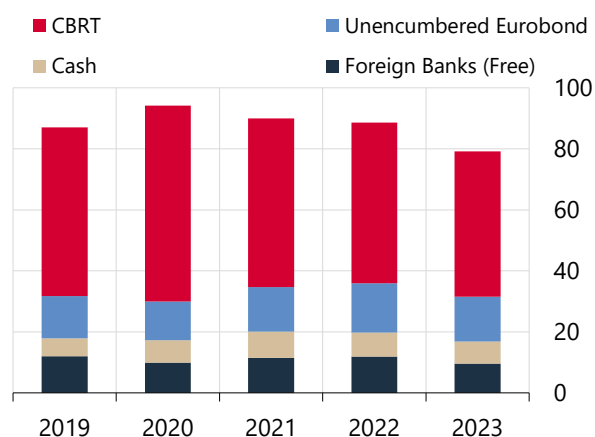
Last Observation: 17.05.23

Note: Calculated for ten large-scale banks excluding DIBs. USD margin shows the interest rate applied in addition to the Libor rate for syndicated loans obtained in USD. 3-month average SOFR is given for the SOFR to be used for 2022 and the succeeding period. I and II represents April-June and October-December syndication periods of the respective year. The dashed line is the average of the total cost for 2014-2019 period.

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

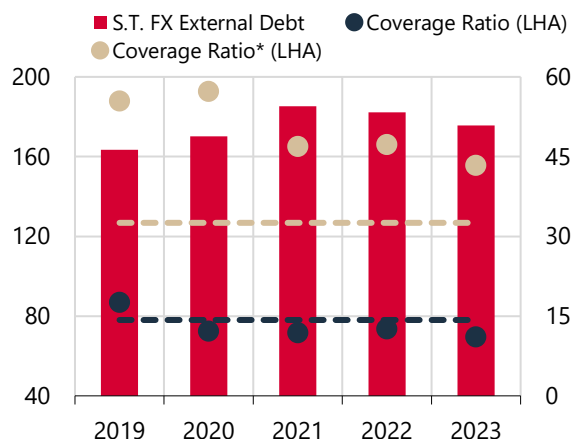
As of March 2023, banks held USD 74 billion worth of FX liquid assets (Chart IV.2.19). The sector's FX external debt maturing within one year is USD 51 billion. Therefore, the capacity of current FX liquid assets to cover short-term FX-denominated external debt is 146%, which is above the historical average (Chart IV.2.20).

Table IV.2.1 summarizes the development of selected liquidity indicators of the sector in comparison with the previous stress period. During stress periods, the balance between banks' short-term FX liabilities and standing facilities is important against possible liquidity shocks. In fact, global liquidity developments may have an impact on banks' balance sheets and hence on economic activity, especially through foreign debts maturing in the near term. Accordingly, while the share of deposits in bank liabilities has increased in recent years, the share of external debt has declined to 13%, which supports the sector's resilience against global liquidity developments. The sector's FX-denominated total and short-term external debt dropped significantly compared to previous periods. Accordingly, the sector's capacity to cover short-term FX external debt reached 146%. Moreover, the sector's FX-denominated reserve requirements maintained in FX amounting to USD 69 billion provide an additional FX liquidity facility that can support banks' liquid asset portfolios.

Chart IV.2.19: FX Liquid Assets (USD Billion)

Source: CBRT Last Observation: 03.23

Note: FX liquid assets include FX assets and cash reserves excluding RR held at the CBRT, free accounts at foreign banks, and unencumbered Eurobonds, and are calculated at the month-end exchange rates. The average of the last three months has been reported for each year.

Chart IV.2.20: Short-Term FX External Debt and Coverage Ratio (USD Billion, %)

Source: CBRT Last Observation: 03.23

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. Coverage ratio is the ratio of FX liquid assets specified in Chart IV.2.18 to external debt. The average of the last three months is reported for each year. The dashed lines show the average of coverage rates for the 2014-2019 period.

Table IV.2.1: Developments in Selected Liquidity Indicators

	June 2018	March 2023
FX External Debt (USD Billion)	164	97
Short Term FX External Debt (USD Billion)	70	51
FX Liquid Assets (USD Billion)	88	74
ST Debt Coverage Ratio (%)	126	146
Average Remaining Maturity of External Debt (Month)	37	35
FX Required Reserves (USD Billion)	42	69

Source: CBRT

Box IV.2.I: International Islamic Liquidity Management Corporation

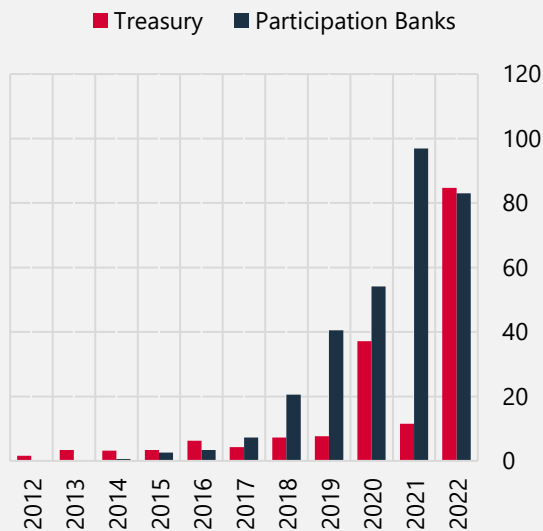
Financial regulations prepared by the Basel Committee and enforced by national authorities after the Global Financial Crisis in 2008 have contributed positively to financial stability by increasing the robustness and effectiveness of the financial sector, banking in particular. These regulations set the legal ratios to be monitored for banks' liquidity management and defined a specific set of rules to be used in regulations which stipulate that banks should hold high-quality liquid assets on their balance sheets against possible shocks.

Having a financial intermediation role similar to conventional banks, participation banks are also required to hold high-quality liquid assets to ensure an effective and sound liquidity risk management in compliance with Basel liquidity coverage regulations. However, as the securities in the liquid asset pools of conventional banks may not be suitable for the business models of participations banks, access to high-quality liquid assets compatible with participation banking principles is crucial. To meet this need, participation banks use lease certificates issued by public authorities and global institutions as a liquidity instrument. This box firstly elaborates on the functioning of lease certificates (sukuk) in financial markets and the practice in Türkiye. The second part of the box focuses on the role in sukuk issuance of the International Islamic Liquidity Management Corporation (IILM), which was established to issue sukuk on a global scale and is chaired by the CBRT in 2023.

Sukuk Issuances

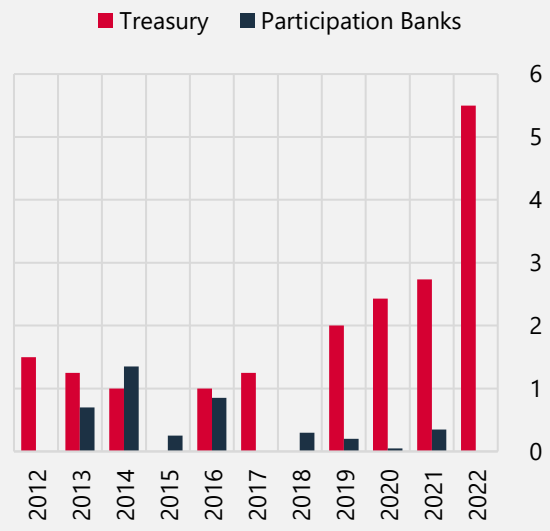
Over the last decade, the relevant public authorities have started to issue sukuk on a global scale to increase the diversity of capital market products based on the principles of the participation finance sector and meet the need for high-quality liquid assets in local currencies. Referred to as "Lease Certificates" by the Capital Markets Board (CMB) in Türkiye, sukuk are defined as "Securities issued by an asset leasing company to finance any kind of asset and property, which provide their holders earnings from these assets or properties pro rata their shares".¹ The "property" cited in the definition denotes any property underlying the issuance of lease certificates, and "asset" refers to any asset underlying the issuance of lease certificates. While a conventional bond is a debt-backed security, sukuk are commercial papers representing an asset or a property.

Chart IV.2.I.1: Turkish Lira-Denominated Lease Certificate Issuances (Billion TL)



Source: MTF, TKBB

Chart IV.2.I.2: US Dollar-Denominated Lease Certificate Issuances (Billion USD)



¹ The Capital Market Board's "Lease Certificates Communiqué" No. III-61.1 published in the Official Gazette No. 28670 dated 07.06.2013.

In the public sector, the Undersecretariat of Treasury Asset Leasing Company (HMVKŞ) issues lease certificates in domestic and foreign markets through the leasing of acquired state-owned immovable properties to the Ministry of Treasury and Finance (MTF). Private sector companies can also obtain funds from capital markets through issuance of lease certificates as permitted by the CMB. In this scope, lease certificates have been issued in Türkiye by the private sector since 2010 and by the public sector since 2012, and issuances continue in increasing amounts. The chart above shows the year-by-year change in Turkish lira-denominated lease certificates issued by the MTF and participation banks (Chart IV.2.1.1). In addition, a total of 16 billion US dollars of financing has been obtained through lease certificates issued abroad by the HMVKŞ since 2012 (Chart IV.2.1.2). On the other hand, due to their very small amount, issuances by the private sector excluding participation banks were not added to the chart.

The Structure and Issuance Mechanism of the IILM

Central banks have taken various steps to provide high-quality liquid assets that the participation banks need to ensure compliance with international financial regulations and meet the demand in the sector. Accordingly, the IILM was established in Malaysia in 2010 to issue short-term sukuk to facilitate the liquidity management of participation banks. The shareholders of the Corporation include the CBRT as well as the central banks of Malaysia, Indonesia, Nigeria, the United Arab Emirates, Kuwait, Qatar and Mauritius.² The IILM term presidency for 2023 is carried out by the CBRT Governor Şahap Kavcıoğlu.

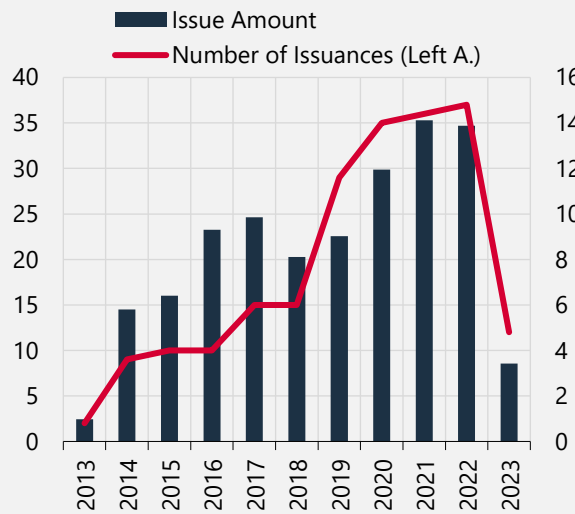
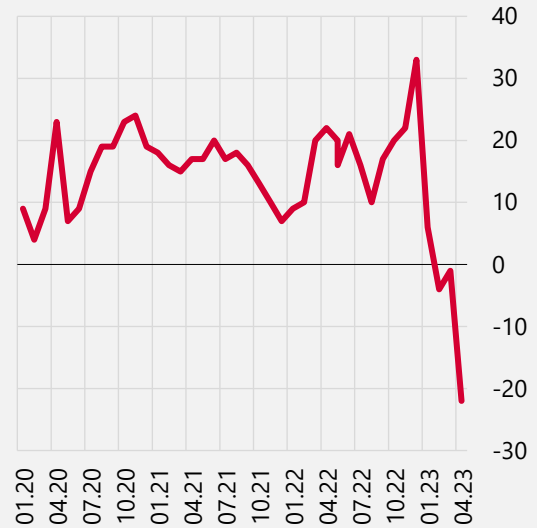
The aim of the IILM's sukuk issuances is to enable participation of non-interest financial institutions in the financial system by facilitating their liquidity management, to build a risk-free indicator for effective pricing of other non-interest-bearing financial products, and to increase the depth of financial markets. In this respect, instruments that the IILM has been issuing constantly as part of the sukuk issuance program are accepted as collateral in the interbank borrowing transactions, traded on secondary markets by financial institutions, used as collateral in open market operations of central banks, and considered to be among the investable instruments within the reserve management of central banks.

Under the IILM sukuk issuance mechanism, first of all, suitable (physical or financial) underlying assets for sukuk issuances are determined, these assets are transferred to the IILM by the central bank or the sovereign treasury, and the IILM issues sukuk backed by these assets. Primary dealers buy these sukuk from the primary market and intermediate their selling. The sukuk issued are distributed to investors, and the payment is made to the IILM. The IILM simultaneously directs this payment to the seller of the asset, and leases the asset (if physical). Primary dealers fulfill some functions such as purchasing a certain portion of IILM instruments, selling these instruments on the secondary market, and informing the IILM about the transactions as well as the products and processes on this market.

The IILM includes non-interest-bearing assets in the global asset pool it creates to issue instruments. These assets are accumulated in the global asset pool that ensures regular and sufficient volume of IILM issuances. To attain its specified objectives, the IILM issues various instruments which are backed by both financial and non-financial assets complying with participation finance principles. The assets should have a minimum credit rating of A or there should be a third-party guarantee in asset sales from countries with a credit rating below A (credit enhancement).

As of 2023, the total sukuk issuance backed by the current IILM asset pool amounts to USD 3.51 billion. The IILM sukuk should be short-term (1, 3, 6 or 12 months), be based on the wakala investment (wakala agreement) issuance program, and have a high credit rating, while a minimum 51% of the asset pool should be backed by a physical asset. The IILM's sukuk issuance structure is similar to the asset-backed commercial paper (ABCP) issuance mechanism. However, the IILM sukuk are generally issued backed by public sector assets or public sector-guaranteed assets. Having conducted its first sukuk issuance at USD 490 million with 3-month tenor in August 2013, the IILM executed a total of 207 sukuk issuances amounting to USD 92.21 billion across different tenors before April 2023. The volume and number of the IILM's annual sukuk issuances over the years are shown below (Chart IV.2.1.3).

² The Saudi Central Bank and the Central Bank of Luxembourg sold their shares to other shareholders and left the corporation in 2013 and 2021, respectively.

Chart IV.2.1.3: Annual Issuances of the IILM since Its Establishment (Billion TL, Flow)

Chart IV.2.1.4: IILM Sukuk Yield Spread (Basis Points)


Source: IILM and author's calculations

Note: Data for 2023 shows the amount of issuances as of April.

The Profit Rate of IILM Sukuk Issuances

An analysis of the IILM sukuk yield spread³ reveals that the IILM sukuk yield spread has not changed significantly over the last three years despite the pandemic, the increase in geopolitical risks, and the recent tightening in global financial conditions. Additionally, the negative yield spread emerging in the recent issuances of the IILM indicates that the demand for IILM issuances remains strong (Chart IV.2.1.4).

The sustainability of the business model in line with the objectives laid down in the IILM's articles of agreement is among the issues to be addressed in the upcoming period. Given the large share (approximately 30%) of IILM sukuk issuances in total issuances of global public banks and multilateral development banks as of the first quarter of 2023, it is important to consider strategic issues such as the benefits of the IILM, expectations, challenges, and issuance potential as a whole. Accordingly, it is projected that issues such as increasing the volume of the IILM's issuance program, and issuing sukuk in different currencies across different tenors may be on the agenda in the upcoming period.

³ IILM sukuk yield spread=(3-month IILM sukuk profit rate) – (3-month USD LIBOR rate)

IV.3 Interest Rate and Exchange Rate Risk

The maturity mismatch between interest rate-sensitive assets and liabilities remained almost unchanged from the previous Report period, hovering below its historical average. The weighted average maturity of banks' TL assets sensitive to interest rate has risen since the second quarter of 2022. The increase in the share of long-term fixed-income securities in banks' TL asset composition was partly balanced by floating rate loans, while the average maturity of TL assets posted a limited increase. The average maturity of interest rate-sensitive TL liabilities has been flat at five to six months for some time (Chart IV.3.1). Average maturities of interest rate-sensitive FX assets and liabilities did not show a significant change. The average maturity has been hovering around 18 months for FX assets and around 12 months for FX liabilities (Chart IV.3.2). Compared to the last Report period, the maturity difference between assets and liabilities converges to historical averages for TL, while it is almost unchanged for FX (Chart IV.3.3).

Chart IV.3.1: Weighted Average Maturity of TL Assets and Liabilities (Month)

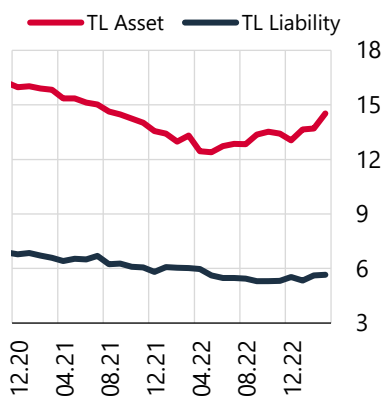


Chart IV.3.2: Weighted Average Maturity of FX Assets and Liabilities (Month)

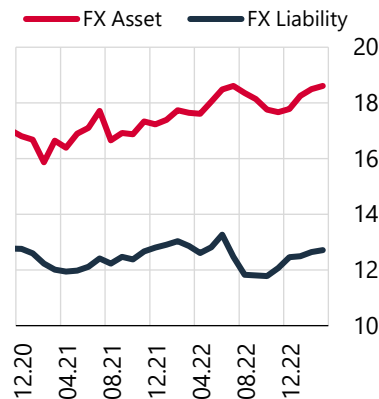
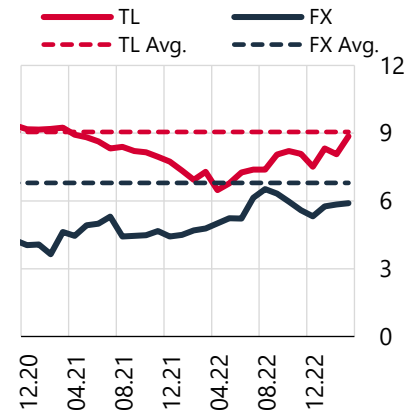


Chart IV.3.3: Weighted Average Maturity Difference Between Assets and Liabilities (Month)



Source: CBRT

Last Observation: 03.23

Note: Maturities show the repricing period. Mid-points of maturity brackets have been considered for weighted average maturities. Dashed lines represent average of each series in 2013-2020 period. Participation banks are excluded.

Banks' demand for fixed-income and long-term securities increase, while short-term and floating rate lending tendency continues. Banks manage the maturity mismatch between interest rate-sensitive assets and liabilities by increasing the share of floating rate products in their asset composition and by shortening the maturities of fixed rate loans. As of the second half of 2022, in response to macroprudential regulations implemented as part of the Liraization Strategy, the need for TL fixed-income securities has increased in the banking portfolio, while the share of TL floating rate securities started to decrease in turn. The tendency towards floating rate loans since 2020 has largely remained intact (Chart IV.3.4). While the average maturity of fixed-rate securities in banking assets has lengthened, the decline in maturities of fixed-rate loans has largely offset the increase in the average maturity of assets (Chart IV.3.5). The ratio of TL securities and fixed-rate TL securities to the sector's assets is limited (Chart IV.3.6).

Banks' total interest rate-sensitive open position closed for maturities up to three months, while the interest rate-sensitive long position increased for maturities up to six months. The negative position of banks with maturities up to one month decreased significantly particularly after end-2021 due to the effect of the KKM product, which is opened at longer maturities than standard deposit products. As a result, banks' long positions between one to three months also shifted to negative territory. Their positive positions at three to six months continued to increase (Chart IV.3.7). Moreover, the share of FX demand deposits, which hovers at 57.5%, well above its historical average, and the share of TL demand deposits, which remains at around 20%, limit the repricing risk to some extent (Chart IV.3.8).

Chart IV.3.4: TL Securities and Interest Structure of TL Loans (%)

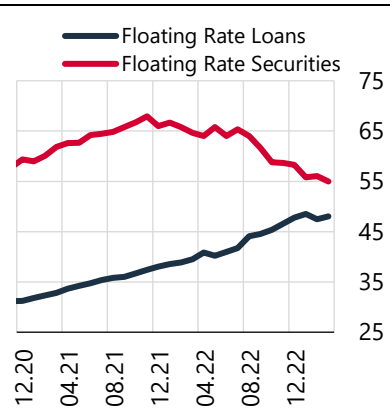


Chart IV.3.5: Maturity of Fixed-Rate TL Securities and TL Loans (Remaining Maturity, Month)

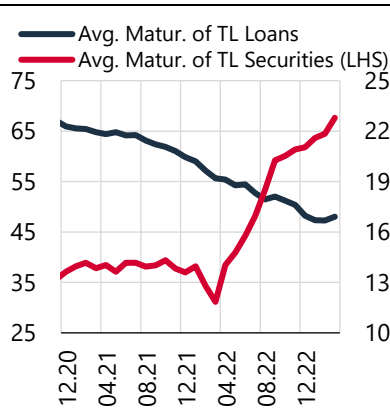
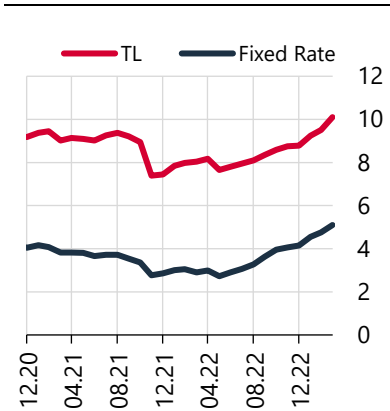


Chart IV.3.6: Asset Share of TL Securities (%)

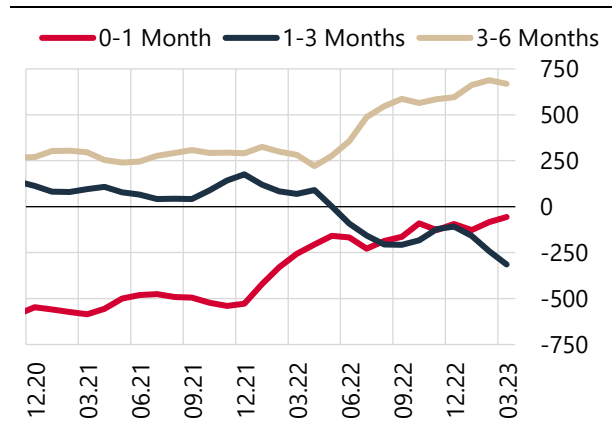


Source: CBRT

Last Observation: 03.23

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

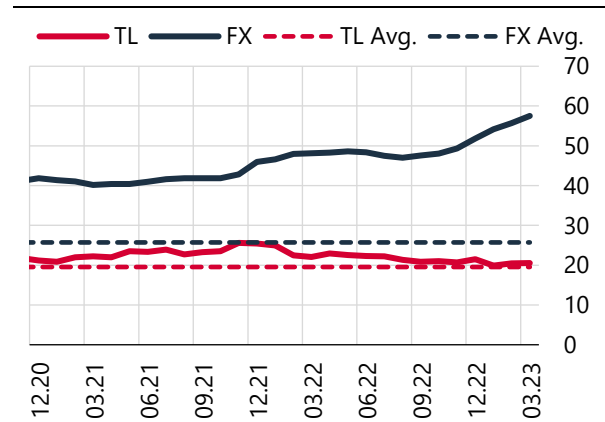
Chart IV.3.7: TL Asset-Liability Gap Analysis (TL Billion, 3-Month MA)



Source: CBRT

Last Observation: 03.23

Chart IV.3.8: Change in Demand Deposit Share (%)

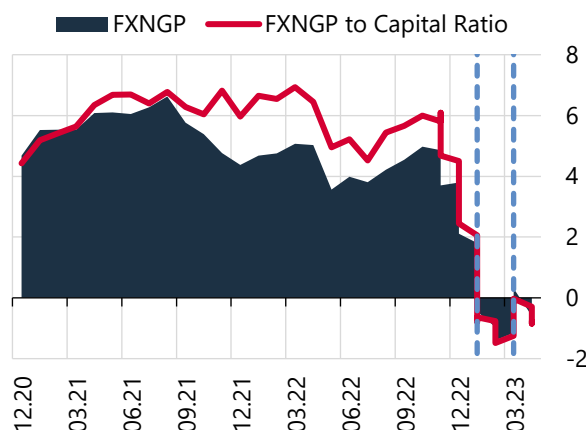


Source: CBRT

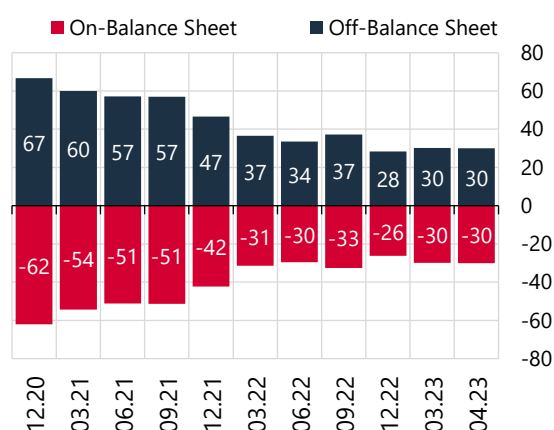
Last Observation: 03.23

Note: Participation banks are excluded. Dashed lines denote the average of each series in the 2013-2020 period.

Banks continue to hold FX positions well below legal limits and at a limited level. With the BRSA’s regulatory amendment effective as of January 9, 2023, FX general provisions are included in the calculation of the FX position, and the delta value of options is started to be taken into account. Additionally, the BRSA has been authorized to make changes in standard ratios, the Board reduced the legal threshold for the FX net general position (FXNGP)/capital ratio from 20% to 5% on January 9, 2023, and increased it to 10% on March 9, 2023. Before the amendment to the FXNGP calculation, banks were holding a long position of USD 1.8 billion; after the amendment, FXNGP receded to USD -0.7 billion (Chart IV.3.9). The FXNGP/capital ratio, on the other hand, fell by 2.8 percentage points to -0.8% compared to the pre-amendment period. Following the significant drop in banks’ FX debts, the on-balance sheet FX open position declined to USD 30 billion as of April 2023, from USD 42 billion at end-2021 (Chart IV.3.10).

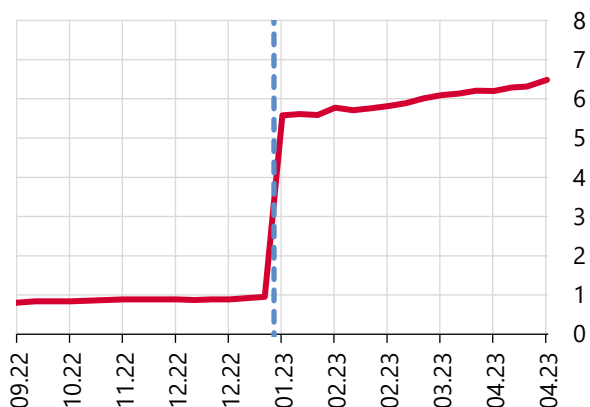
Chart IV.3.9: FXNGP to Capital Ratio and FXNGP
 (% , USD Billion)


Source: CBRT Last Observation: 28.04.2023
 Note: Dashed lines denote the regulatory amendment dates.

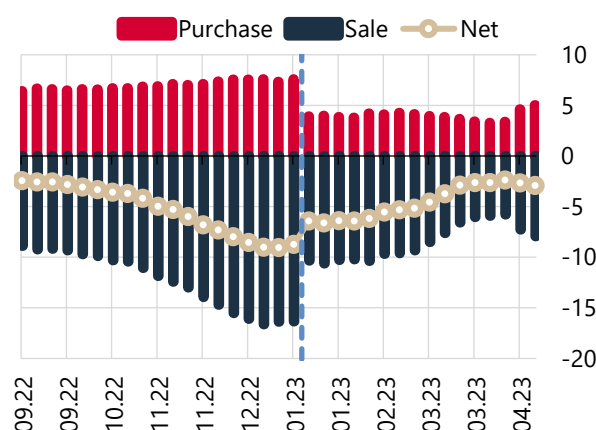
Chart IV.3.10: Banking Sector's FX Position (USD Billion)


Source: CBRT Last Observation: 28.04.2023

The inclusion of the entirety of FX general and specific provisions and the consideration of the delta equivalent of currency options in the calculation of the FXNGP standard ratio through a regulatory action, had a net downward effect of USD 2.3 billion on the FXNGP. The amount of provisions used for the calculation of the FXNGP standard ratio, which had been USD 950 million in the first week of 2023, increased to USD 5.6 billion after the regulatory amendment (Chart IV.3.11). Thus, the change in FX provisions had a downward effect of USD 4.6 billion on the FXNGP. On the other hand, according to the calculation based on the delta equivalent, currency option purchases (on the FX asset side) decreased by around USD 3.6 billion, while currency option sales (on the FX liability side) declined by USD 6 billion. Therefore, the calculation based on the delta value of options drove the FXNGP up by USD 2.3 billion on net (Chart IV.3.12).

Chart IV.3.11: FX Provisions for Calculation of FXNGP/Capital Standard Ratio
 (USD Billion)


Source: CBRT Last Observation: 28.04.2023
 Note: The dashed line denotes the date of the first regulatory amendment.

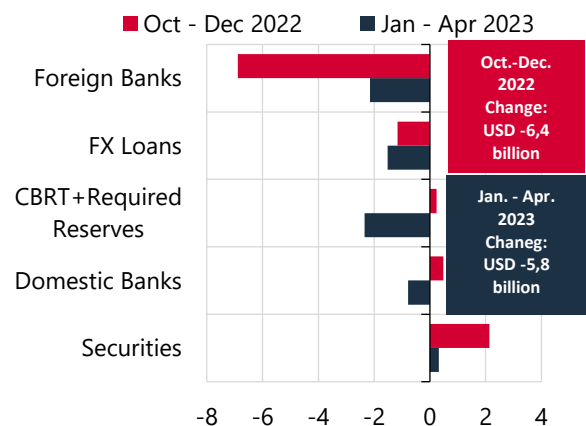
Chart IV.3.12: Currency Option Amounts
 (USD Billion)


Source: CBRT Last Observation: 28.04.2023
 Note: The dashed line denotes the date of the first regulatory amendment.

The decrease in the sector's receivables from foreign banks was determinant in the decline in on-balance sheet FX assets, while the drop in FX deposits due to the KKM facility was influential in the reduction of FX liabilities. The on-balance sheet FX assets were down by USD 6.4 billion in the October-December 2022 period, and by USD 5.8 billion in the January-April 2023 period (Chart IV.3.13). It is noteworthy that the securities item increased, whereas receivables from foreign banks and FX loans decreased in this period. Banks appear to have covered a portion of the FX liquidity required for FX deposit conversion out of their holdings abroad. Meanwhile,

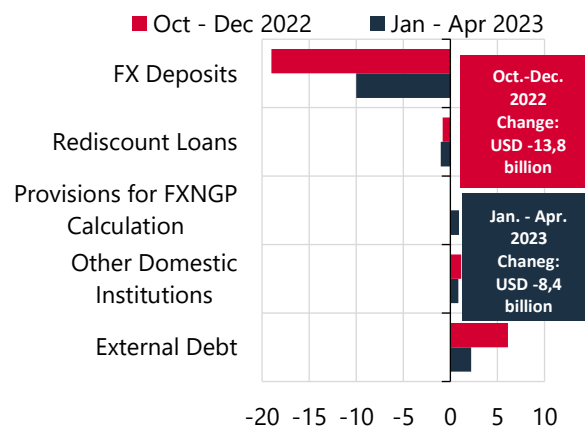
the on-balance sheet FX liabilities dropped by USD 13.8 billion in the October-December 2022 period, and by USD 8.4 billion in the January-April 2023 period (Chart IV.3.14). These developments are attributed to the significant decline in FX deposits due to the ongoing shift to the KKM scheme.

Chart IV.3.13: Change in Banking Sector's On-Balance Sheet FX Assets (USD Billion)



Source: CBRT Last Observation: 28.04.2023
 Note: For January-April 2023 period, change over 13 January 2023 is calculated. Foreign banks also include receivables from reverse repo transactions.

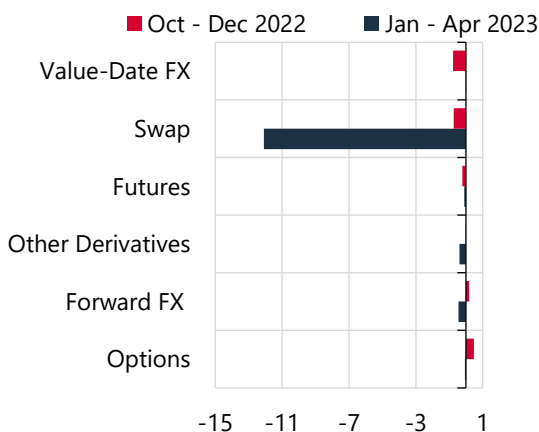
Chart IV.3.14: Change in Banking Sector's On-Balance Sheet FX Liabilities (USD Billion)



Source: CBRT Last Observation: 28.04.2023
 Note: For January-April 2023 period, change over 13 January 2023 is calculated. 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.

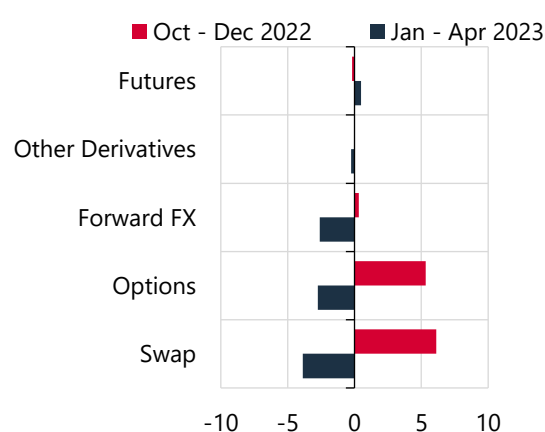
The decrease in on-balance sheet short position was largely offset by the decrease in off-balance sheet swap balances. Off-balance sheet FX assets declined by USD 5.5 billion in the January-April 2023 period, which was largely driven by swap purchases (Chart IV.3.15). Having increased by USD 9.2 billion in the October-December 2022 period, off-balance sheet liabilities fell by USD 3 billion in the January-April 2023 period. One of the drivers of this fall was the decrease in currency options. The main source of this fall was banks' shift to the calculation based on the delta equivalence of currency options due to the FXNGP regulation (Chart IV.3.16).

Chart IV.3.15: Change in Banking Sector's Off-Balance Sheet FX Assets (USD Billion)



Source: CBRT Last Observation: 28.04.2023
 Note: For January-April 2023 period, change over 13 January 2023 is calculated. Currency options refer to the delta equivalent of currency options for this period.

Chart IV.3.16: Change in Banking Sector's Off-Balance Sheet FX Liabilities (USD Billion)



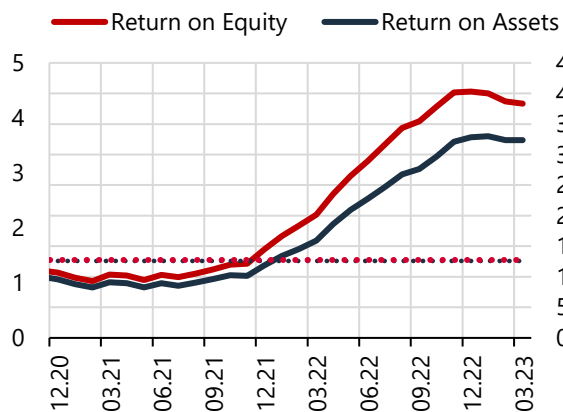
Source: CBRT Last Observation: 28.04.2023

IV.4 Profitability and Capital Adequacy

The profitability of the banking sector continues to support capital.

The banking sector's return on equity was at 40.2% in 2022. In the first quarter of 2023, the return on equity was slightly below the previous quarter's level at 38.3%. Return on assets followed a similar trend. Having moved upwards in 2022, it remained flat in the first quarter of 2023 (Chart IV.4.1). The strong performance in the sector's return on equity was broad-based across banks (Chart IV.4.2). Meanwhile, if banks' free provisions of TL 60.8 billion as of March 2023 are included, return on equity is calculated as 43.2%.

Chart IV.4.1: Profitability Ratios (12-Month, %)

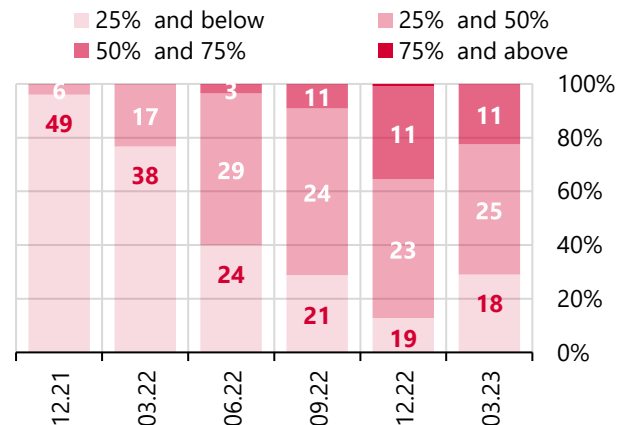


Source: CBRT

Last Observation: 03.23

Note: The dashed line shows the 2012-2021 averages.

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



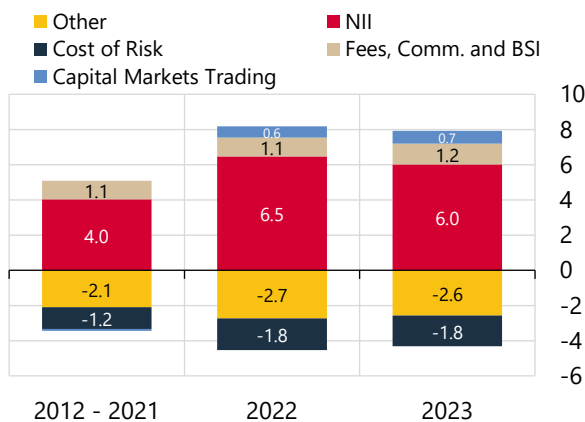
Source: CBRT

Last Observation: 03.23

Net interest income made the largest contribution to the increase in return on assets.

In 2022, the contribution of net interest income to return on assets was strong, while it relatively weakened in the first quarter of 2023. Throughout 2022, fees and commission income, as well as income from capital markets and foreign exchange transactions continued to make positive contributions to return on assets. Meanwhile, although the cost of credit risk was a factor pulling profitability down in 2022, the increase in provision expenses remained limited (Chart IV.4.3).

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

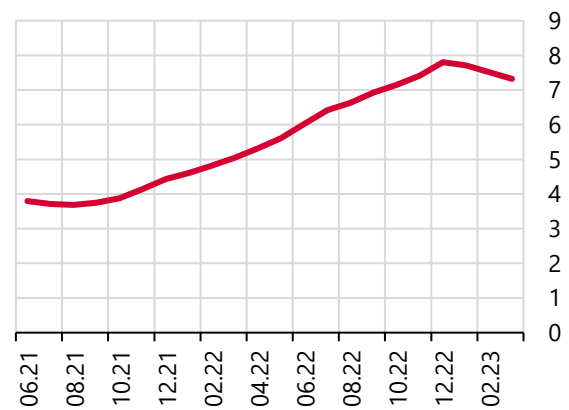


Source: CBRT

Last Observation: 03.23

Note: The sum of general and specific loan provisions is used for the cost of credit risk.

Chart IV.4.4: Net Interest Margin (%)



Source: CBRT

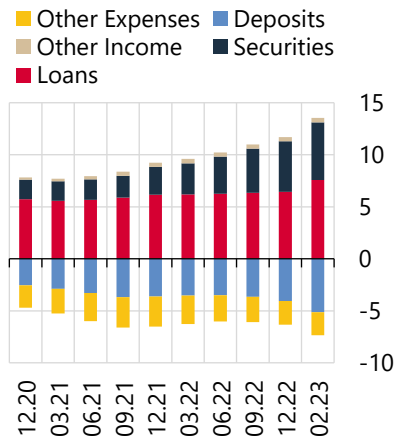
Last Observation: 03.23

The contribution of income from securities determined the development in net interest margin.

Having risen in 2022, net interest margin stood above its historical average at 7.3% at the end of the year (Chart IV.4.4). Looking at its components, TL funding costs hovered at moderate levels in 2022 and continued to support net interest margin. The significant contribution of interest income from loans remained in place, and that of income from securities continued to increase in 2022 (Chart IV.4.5). Banks' CPI-indexed securities income in particular registered an increase due to valuation gains.

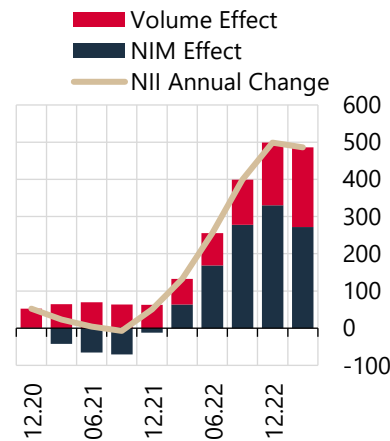
Although the contribution of interest margin played a dominant role in net interest income in 2022, the volume effect also strengthened in the recent quarter. In the first quarter of 2023, the relative contribution of the interest margin decreased due to the fall in inflation and macroprudential regulations regarding loan rates, while the contribution of the volume effect continued to increase (Chart IV.4.6). The ratio of interest income from loans to total interest expenses has declined since the second half of 2022. The ratio of interest income from securities to total interest expenses also peaked at the end of 2022 and declined in the following period (Chart IV.4.7).

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



Source: CBRT Last Observation: 03.23

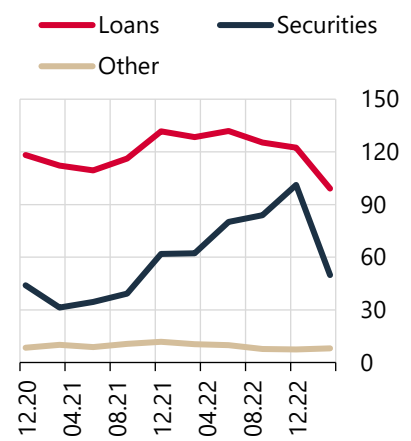
Chart IV.4.6: Annual Change in Net Interest Income and Contributions (Annualized, TL Billion)



Source: CBRT Last Observation: 03.23

Note: The hypothetical effect that a change in the interest margin will bear through the interest-earning asset balance in the relevant period is defined as the interest margin effect, and the remainder of the change in the net interest income of the same period is defined as the volume effect.

Chart IV.4.7: Breakdown of Interest Income/ Total Interest Expenditures (Quarterly, %)



Source: CBRT Last Observation: 03.23

Note: Ratio of interest income from loans and liquid assets to total interest expenditures.

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

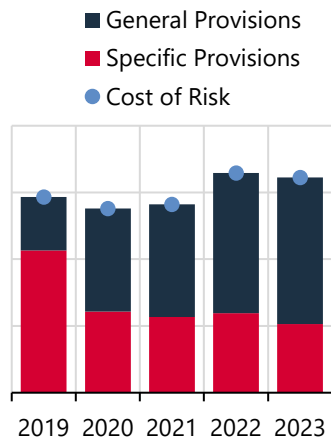
The effects of the credit risk-driven losses on profitability performance are assessed to be limited thanks to the positive outlook for the NPL ratio (Chart IV.4.8). The ratio of credit card-related fees and commissions, which have the largest share in banking services income, to assets was up in 2022 to 0.6%. In the first quarter of 2023, this ratio stayed stable (Chart IV.4.9). The share of fees and commission income from loans in assets has been on a mild but steady rise in recent years (Chart IV.4.10).

Throughout 2022, banks strengthened their capital positions, and maintained their capital ratios above legal limits. The excess capital above legal limits keeps banks strong against likely risks.

As of March 2023, the banking sector CAR was 17.7%, and core CAR was 14.2%. Capital ratios declined over the previous Report period as the BRSA amended its forbearance measures regarding capital adequacy calculations. Since January 2023, the end-2022 instead of the end-2021 exchange rate has been in use for calculation of credit risk. Thus, the USD/TL valuation rate for FX assets used in calculating the value at credit risk increased to 18.7 from 13.3. This change considerably limited the effect of forbearance measures on capital ratios. Excluding

forbearance measures, the CAR of the sector is 17.4% and the core CAR is 13.9%, well above regulatory thresholds (Chart IV.4.11, Chart IV.4.12).

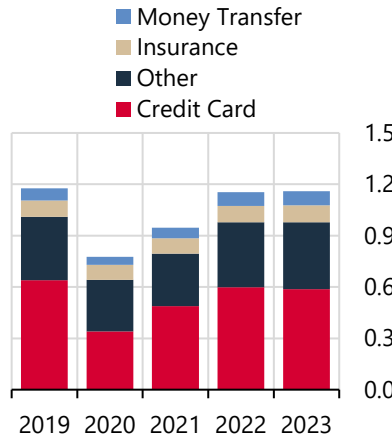
Chart IV.4.8: Cost of Credit Risk (Annualized, %)



Source: CBRT

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

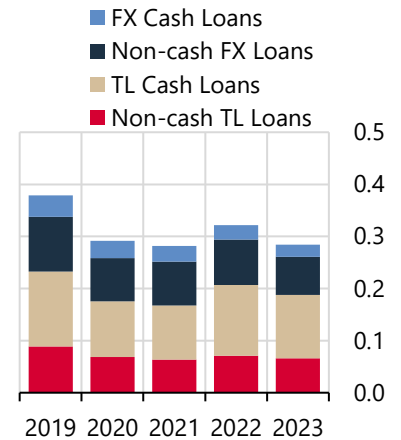
Chart IV.4.9: Ratio of Banking Services Income to Assets (%)



Source: CBRT

Note: For 2023, 12-month cumulative amount as of March 2023 is used.

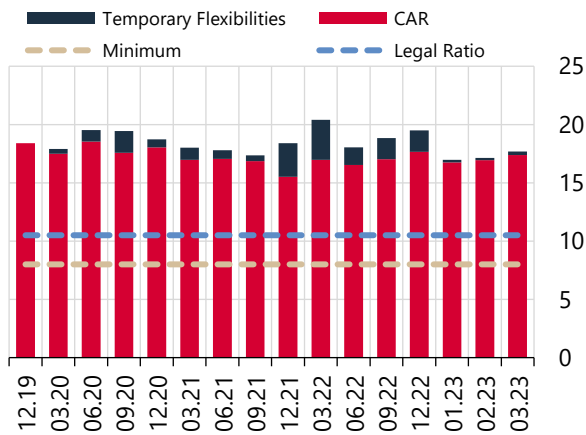
Chart IV.4.10: Ratio of Fees and Commissions to Assets (%)



Source: CBRT

Note: For 2023, 12-month cumulative amount as of March 2023 is used.

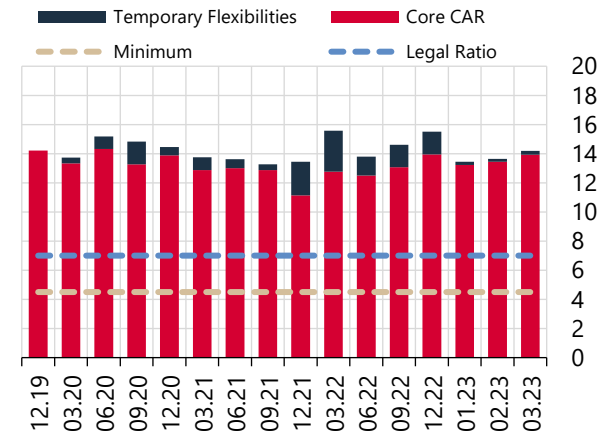
Chart IV.4.11: Capital Adequacy Ratio (%)



Sources: BRSA, CBRT Calculations

Last Observation: 03.23

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



Sources: BRSA, CBRT Calculations

Last Observation: 03.23

* Refers to CAR and core CAR adjusted for exchange rates and valuation flexibility.

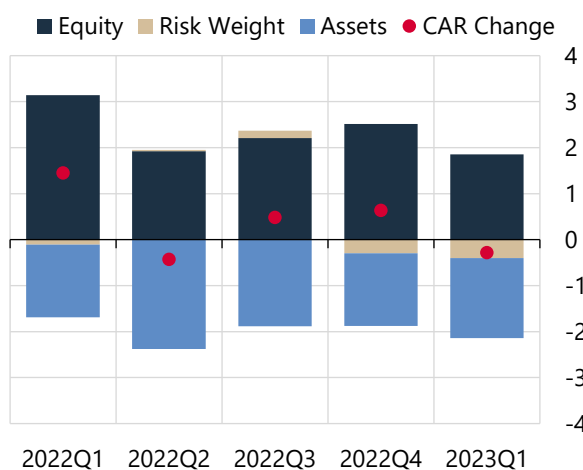
Note: Minimum ratios are those applied to the overall sector as of March 2023 and are higher for systemically important banks. Legal ratios are the sum of bank-specific countercyclical capital buffer, capital conservation buffer and systemically important bank buffer ratio in addition to the minimum ratio as per Basel III regulations

The strong profitability performance throughout 2022 significantly strengthened banks' capital positions.

In 2022, the CAR calculated excluding forbearance measures rose by approximately 2.1 percentage points, and the core CAR by 2.8 percentage points. The rise in the banking CAR was driven by the increase in regulatory capital, and the positive contribution of regulatory capital outweighed the negative impact of balance sheet expansion. The largest contribution to the increase in equity came from profitability. In addition to profitability, banks' earnings reflected in equity stood out as another major item that fed capital adequacy. Banks' securities valuation spread increased on account of the contribution of CPI-indexed securities placed in the portfolio of securities at fair value through other comprehensive income and the decline in bond rates. Moreover, the capital

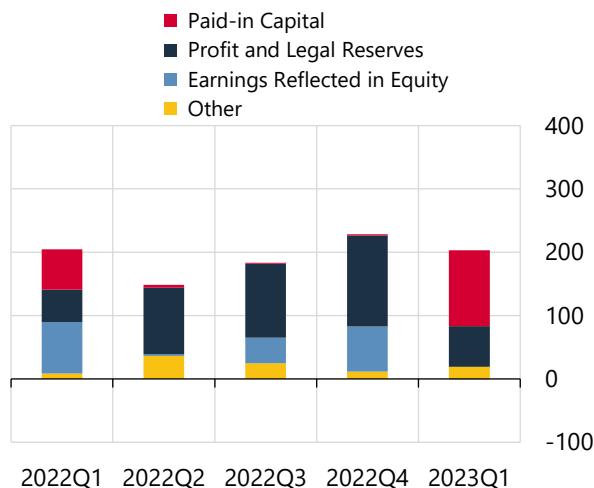
support provided for public banks in 2022 and the rise in paid-in capital of some banks contributed to the increase in capital ratios. Due to the application of a risk weight of up to 150% to general-purpose loans and credit cards, and the increase in the risk weight applied to certain TL commercial loans excluding SME loans to 200%, a higher risk weight effect was observed in the CAR. In the first quarter of 2023, the CAR was down by 0.3 percentage points. In this period, the contribution to capital ratios of profitability and securities valuation gains reflected in equity decreased compared to previous quarters, while the capital injection to public deposit banks and the increase in paid-in capital came to the fore. The downward effect of the risk weight became more pronounced due to the annual revision made in operational risk exposure (Chart IV.4.13 and Chart IV.4.14).

Chart IV.4.13: Contributions to Quarterly Change in CAR (% Points)



Sources: BRSA, CBRT Last Observation: 03.23
 Note: CARs excluding BRSA's forbearance measures are used.

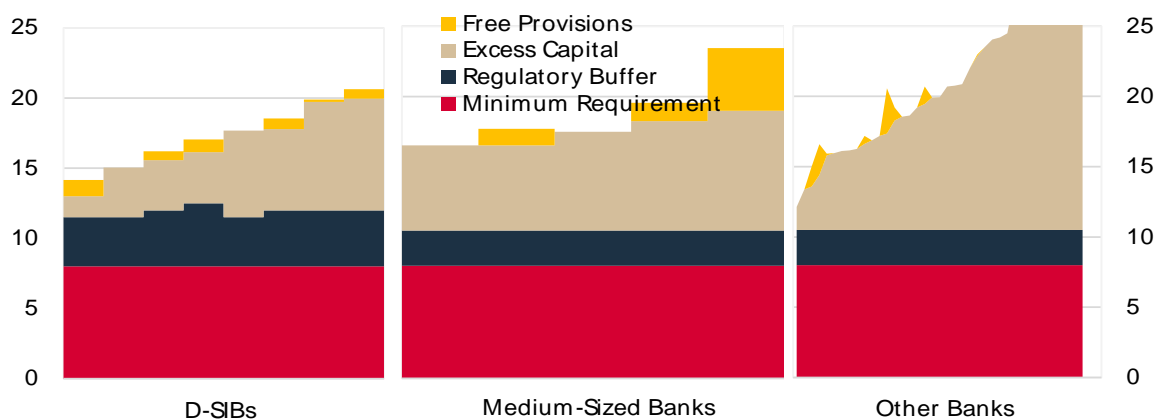
Chart IV.4.14: Quarterly Change in Regulatory Capital (TL Billion)



Sources: BRSA, CBRT Last Observation: 03.23
 Note: Share premiums are included in paid-in capital.

High capital buffers provide banks with a large room for maneuver. Systemically important banks, in particular, have a higher stock of excess capital. High capital buffers along with the contribution of quality factors such as paid-in capital and profits to capital indicate that banks have the capacity to absorb unexpected losses and manage systemic risk. Free provisions earmarked in addition to capital buffers keep banks to be more prepared against likely risks. (Chart IV.4.15).

Chart IV.4.15: Sector's Regulatory and Additional Capital Buffers (%)



Sources: BRSA, CBRT Last Observation: 03.23
 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	IIF	Institute of International Finance
USA	United States of America	IILM	International Islamic Liquidity Management
BCBS	Basel Committee on Banking Supervision	CCI	Construction Cost Index
BRSA	Banking Regulation and Supervision Agency	ICI	Istanbul Chamber of Industry
NBFI	Non-Bank Financial Institutions	LDR	Loan-to-Deposit Ratio
PPS	Private Pension System	KKB	Credit Register Bureau
BSI	Banking Service Income	ODA	Overdraft Account
BIS	Bank for International Settlements	KKM	FX-Protected Deposit
BIST	Borsa Istanbul	SMEs	Small and Medium-Sized Enterprises
PCC	Personal Credit Card	DIB	Development and Investment Banks
Bps	Basis Points	ST	Short-Term
GPL	General-Purpose Loans	LIBOR	London Interbank Offered Rate
CAD	Current Account Deficit	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
PMC	Pension Monitoring Center	NEO	Net Errors and Omissions
EBITDA	Earnings Before Interest, Taxes, Depreciation and Amortization	ODD	Automotive Distributors Association
FDIC	Federal Deposit Insurance Corporation	AES	Auto Enrollment System
FECR	Financial Expenses Coverage Ratio	PMI	Purchasing Managers Index
Fed	Federal Reserve System	PUMAX	Purchasing Managers Index (MUSIAD)
FINMA	Swiss Financial Market Supervisory Authority	SOFR	Secured Overnight Financing Rate
FSB	Financial Stability Board	LHA	Left-Hand Axis
G20	Group of Twenty	CMB	Capital Markets Board of Türkiye
PRA	Presidency of Revenue Administration	IPI	Industrial Production Index
EMEs	Emerging Market Economies	SVB	Silicon Valley Bridge Bank
GDP	Gross Domestic Product	CAR	Capital Adequacy Ratio
AE	Advanced Economies	BAT	Banks Association of Türkiye
MA	Moving Average	CBRT	Central Bank of the Republic of Türkiye
WMA	Weekly Moving Average	NPL	Non-Performing Loan
MTF	Ministry of Treasury and Finance		

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
YEKDEM	Renewable Energy Sources Support Mechanism
FX	Foreign Exchange
FXNGP	Foreign Exchange Net General Position
RR	Reserve Requirement

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