IV. Financial Sector

IV.1 Credit Developments and Credit Risk

IV.1.1 Credit Growth

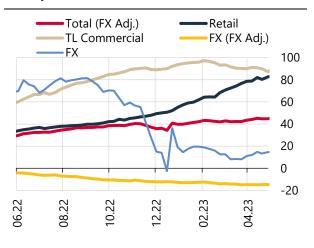
As a result of the targeted loan policy introduced as part of the integrated policy framework, the loan composition changed as intended in 2022.

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, %)

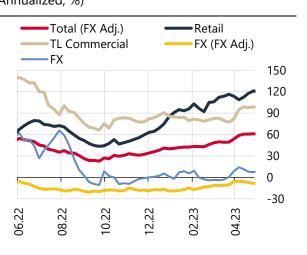


Source: CBRT

Last Observation: 28.04.23

Note: FX-indexed loans are included in FX loans. FXadjusted 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.





Source: CBRT

Last Observation: 28.04.23

Note: FX-indexed loans are included in FX loans. FXadjusted 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).

	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 Observa	tion [.] 04

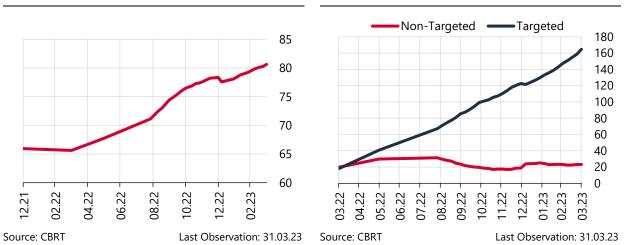
Table IV.1.1: Net Corporate Loans (Monthly Average, TL Billion, USD Billion, %)

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.I.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, %)

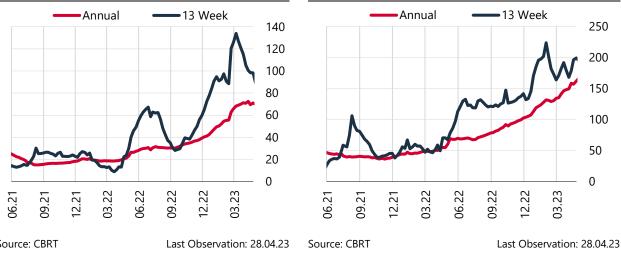




Note: Targeted loans are defined as loans extended to SMEs, tradesmen loans, export and investment loans, loans extended to the institutions and organizations listed in the tables (I), (II), (III) and (IV) annexed to the Public Financial Management and Control Law No. 5018, state economic enterprises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





Source: CBRT

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 Kahramanmaras province and generalpurpose 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.

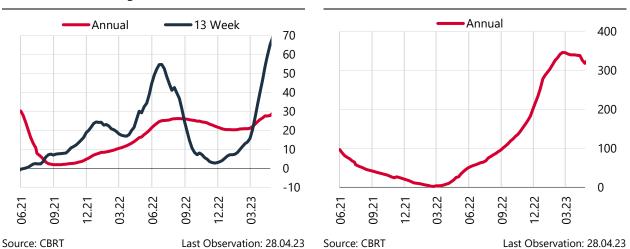


Chart IV.1.7: Housing Loan Growth (%)

Chart IV.1.8: Vehicle Loan Growth (%)

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).

	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

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

Source: CBRT

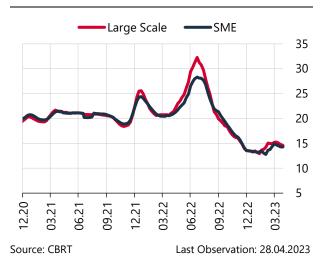
Last Observation: 04.23

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, %)



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, %)



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

IV.1.2 Credit Risk

for the 2012-2019 period.

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

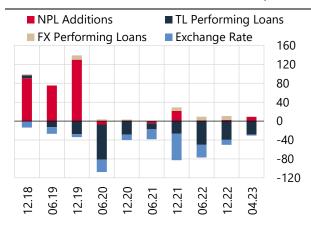
The banking sector's total NPL ratio further trended downwards in the current Report period and the NPL ratio dropped to 1.9% (Chart IV.1.11). The improvement in the NPL ratio is seen across all subtypes of loans. An analysis of the contributors of the change in the total NPL ratio reveals that the fall 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

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).

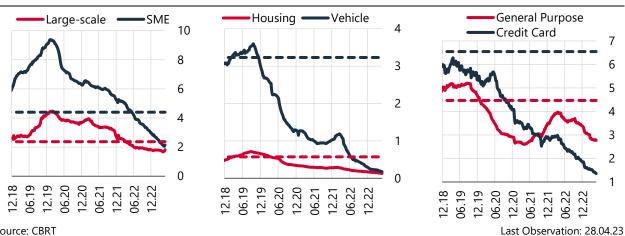


Chart IV.1.13: NPL Ratios in the Breakdown of Credit Types (%)

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).



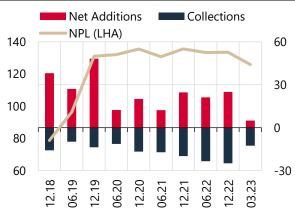
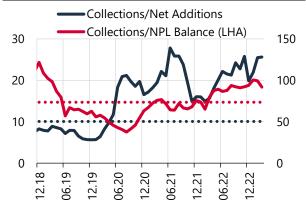


Chart IV.1.15: Corporate NPL Collection Rates (%)



Source: CBRT

Last Observation: 03.23

Note: Series for collections and net additions are based on sixmonth 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.

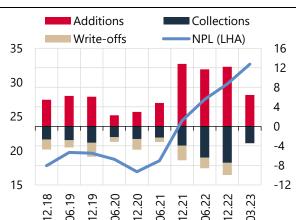
Source: CBRT

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.

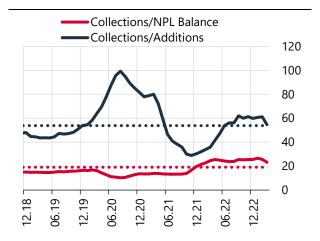
Having increased more than corporate NPL additions amid the removal of flexibilities of loan classification in the last quarter of 2021, retail NPL additions hovered at similar levels in 2022 and 2023 (Chart IV.1.16). Higher NPL collections in tandem with asset price hikes and wage updates as well as 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).





Source: CBRT Last Observation: 03.23 Note: Series for collections and net additions are based on sixmonth 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 writeoffs from NPL additions.





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.

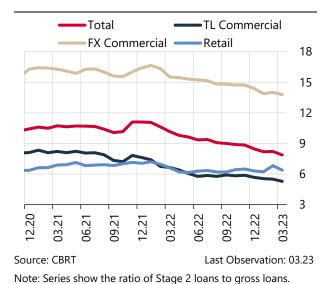
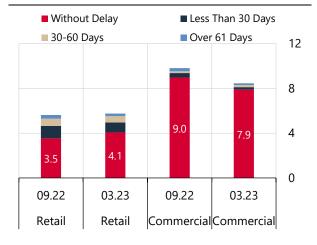


Chart IV.1.18: Ratio of Stage 2 Loans (%)

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



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

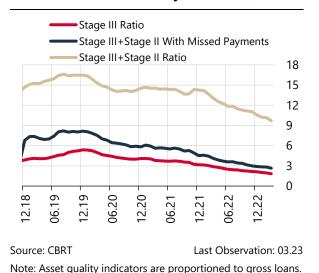
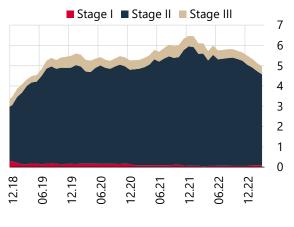


Chart IV.1.20: Asset Quality Outlook (%)





Source: CBRT

Last Observation: 03.23

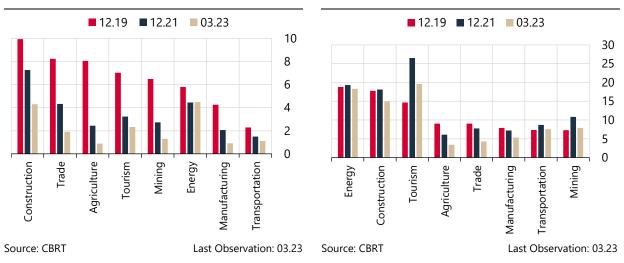
Note: Series show the ratio of restructured loans to gross loans. Stage 1: Ratio of restructured loans monitored under standard loans. Stage 2: Ratio of restructured loans under close monitoring loans.

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).



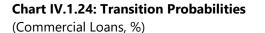
Chart IV.1.23: Stage 2 Loan Ratios by Sectors (%)



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 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%).



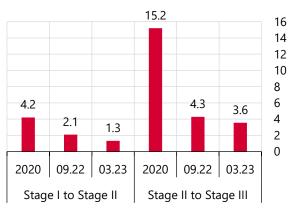
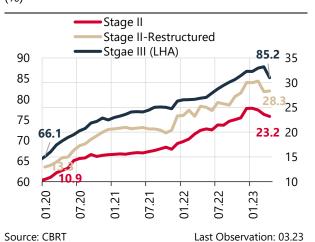


Chart IV.1.25: Expected Loss Provisioning Ratio (%)



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. 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.



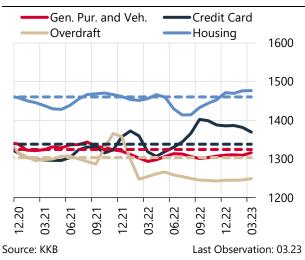
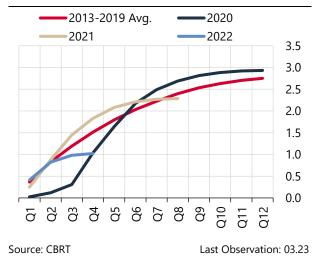


Chart IV.1.27: General-Purpose Loan Aging Analysis (%)



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. 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).

	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	-

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

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 mediumsized 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.l.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.l.5). Thus, a likely deterioration in the asset quality of the disaster zone, where the NPL ratio is slightly above the sector, was avoided.

	Balance				Share			
	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	
OSMANİYE	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	

Table IV.1.I.2: Commercial Loans in Earthquake Region and Share in Banking Sector (TL
Billion, %)	

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.I.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.I.3: Credit Balance, Credit Share and NPL Ratios in Selected Provinces of Earthquake Zone (TL Billion, %)

	Performing L	.oan	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 Adıyaman, 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.

	Performing Loan Amount								Non- Performing Loans		
	Vehi	cle	Hous	Housing		Purpose	PC	PCCs		I	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
DİYARBAKIR	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
GAZİANTEP	960	1.8	6,826	1.9	12,720	1.8	9,730	2.0	30,236	1.9	2.2
НАТАҮ	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
KILIS	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
OSMANİYE	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

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

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.

Institution	Effective Date	Measure/Regulation							
		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							
	6.02.2023	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.							
CBRT	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.							
	6.04.2023	o make effectively available the emergency support funds to be provided by international DIBs or the nds to be obtained from abroad for this purpose in the earthquake zone, the banks that would termediate the disbursement of funds were granted longer maturities in transactions in the TL Swap arket, 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 wa 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.							
	10.02.2023	In case the average income level cannot be determined, the total limit of credit cards that real persons car obtain would be increased to TL 5,000.							
BRSA		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.							
		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.							
	14.02.2023	High risk weighting would not be applied to the loans extended to earthquake affected clients.							
MTF	7.02.2023	Tax obligations that should be fulfilled by taxpayers between 6 February and 31 July 2023 were postponed							
residency	17.02.2023	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).							
	6.02.2023	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.							
BAT		No fees would be charged on transactions through common ATMs located in the earthquake zone.							
		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							
	15.02.2023	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 effec Loan debts/installments and non-cash loan commissions of individuals and sole proprietorship were postponed for one month without charging interest (interest/default interest)							

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

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.

	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	

Table IV.1.I.6: Loans in Earthquake Zone Provinces (TL billion, %)

Source: CBR1

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).

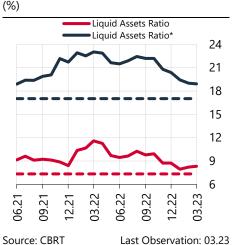


Chart IV.2.1: Share of Liquid Assets

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

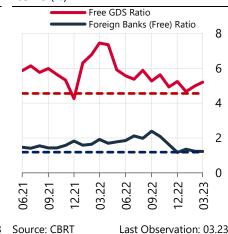
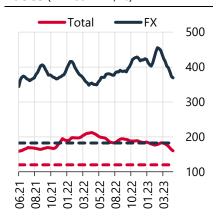


Chart IV.2.3: Liquidity Coverage Ratios (4-Week MA, %)

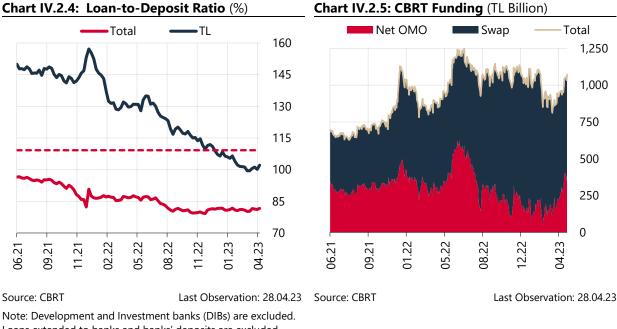


Last Observation: 03.23 Source: CBRT Last Observation: 28.04.23

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. 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. Note: Development and investment banks (DIBs) are excluded. Based on nonconsolidated 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).



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.

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.

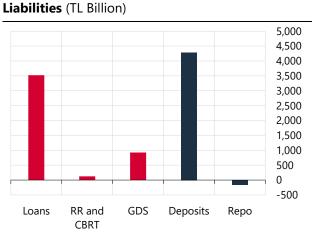
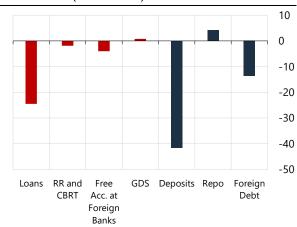


Chart IV.2.6: Changes in Banks' Assets and Chart IV.2.7: Changes in Banks' FX Assets and Liabilities (TL Billion) Liabilities (USD Billion)



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.

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.

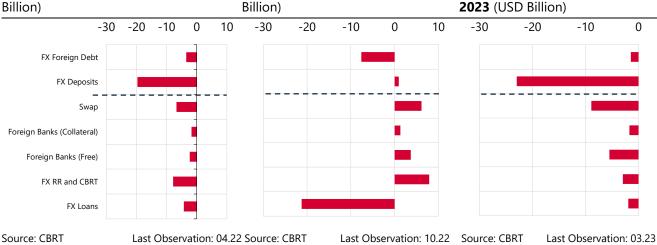
Last Observation: 28.04.23

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

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

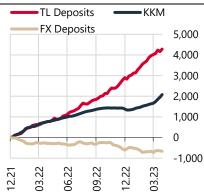
Chart II.2.10: Changes in **Selected FX Balance Sheet Items** between October 2022- March 2023 (USD Billion)



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.

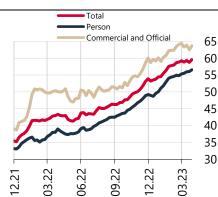
In December 2021, TL deposits, supported by the KKM scheme introduced in the same month, maintained their strong upward trend in line with the gradually increased TL deposit ratio targets. Starting from the second half of 2022, the contribution of TL deposit accounts other than KKM to TL deposit growth 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).

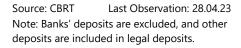
Chart IV.2.11: Changes in Deposits Chart IV.2.12: TL Deposit Ratio (%) (TL Billion)

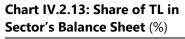


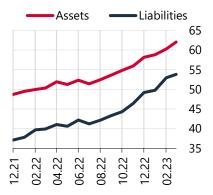
Source: CBRT Last Observation: 28.04.23 Note: Values show changes since the end of 2021. FX deposit series is the

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







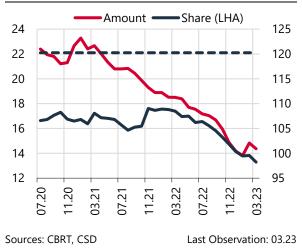


Source: CBRT Last Observation: 03.23 Note: Assets denote the ratio of TL assets to total assets, while liabilities are the ratio of TL liabilities (excluding equity capital) to total liabilities.

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.

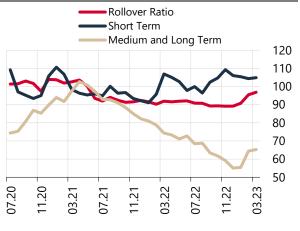
The sector's recent trend of external debt reduction was sustained in 2022, and the banking sector paid off USD 14 billion worth of external debt in 2022 (Chart IV.2.14). This is attributed to the surge in TL deposits due to the liraization of bank liabilities amid the sluggish course of FX loan demand 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 longterm external debt increased.

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



of share series.

Chart IV.2.15: External Debt Rollover Ratio (%)



Sources: CBRT, CSD

Last Observation: 03.23

Note: Parity-adjusted amount. The USD equivalent of euro-Note: External debt rollover ratios are calculated based on 6denominated external debts is recalculated by the parity month (for total), 3-month (for short-term) and 12- month (for value of June 2018. The dashed line is the 2014-2019 average 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.

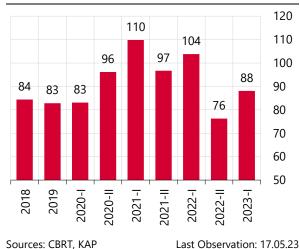


Chart IV.2.17: Rollover Ratio of Syndicated Loans (%)

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.

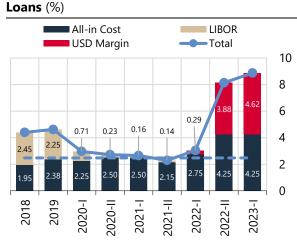


Chart IV.2.18: Cost Margins of Syndicated

Source: KAP

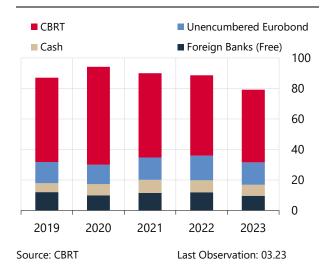
Last Observation: 17.05.23

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.



Note: FX liquid assets include FX assets and cash reserves

and unencumbered Eurobonds, and are calculated at the

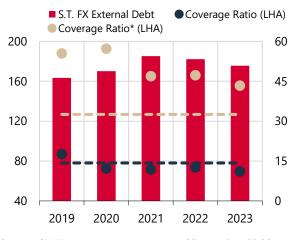
month-end exchange rates. The average of the last three

months has been reported for each year.

excluding RR held at the CBRT, free accounts at foreign banks,

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

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)

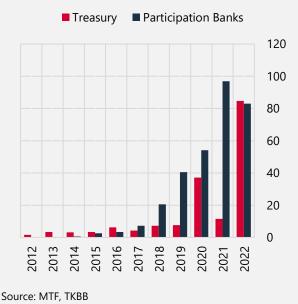
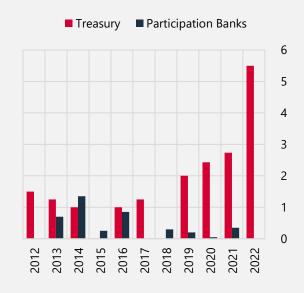


Chart IV.2.I.2: US Dollar-Denominated Lease Certificate Issuances (Billion USD)



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 (HMVK\$) 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.I.1). In addition, a total of 16 billion US dollars of financing has been obtained through lease certificates issued abroad by the HMVK\$ since 2012 (Chart IV.2.I.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.

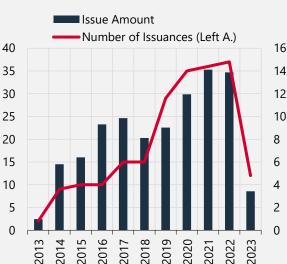
The aim of the IILM's sukuk issuances is to enable participation of non-interest financial institutions in the financial system by facilitating their liquidity management, to build a risk-free indicator for effective pricing of other non-interest-bearing financial products, and to increase the depth 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.

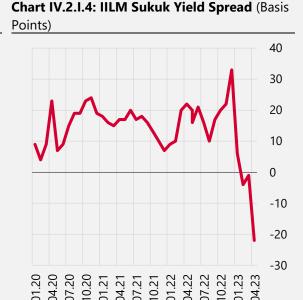
Under the IILM sukuk issuance mechanism, first of all, suitable (physical or financial) underlying assets for sukuk issuances are determined, these assets are transferred to the IILM by the central bank or the sovereign treasury, and the IILM issues sukuk backed by these assets. Primary dealers buy these 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.I.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.





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.

Chart IV.2.I.3: Annual Issuances of the IILM since Its Establishment (Billion TL, Flow)

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

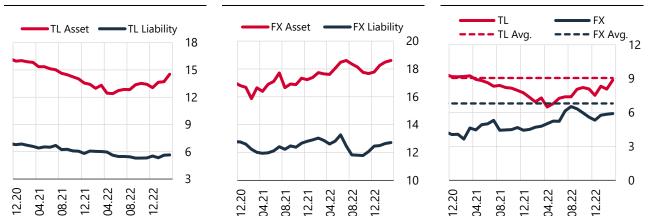
IV.3 Interest Rate and Exchange Rate Risk

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 maturity is 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)





Source: CBRT

Last Observation: 03.23

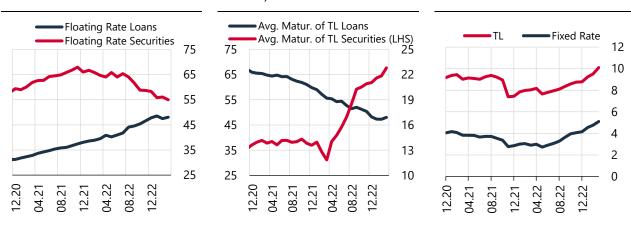
Note: Maturities show the repricing period. Mid-points of maturity brackets have been considered for weighted average maturities. Dashed lines represent average of each series in 2013-2020 period. Participation banks are excluded.

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)

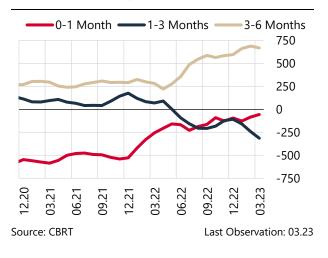
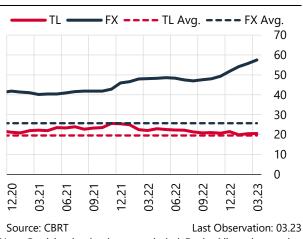


Chart IV.3.8: Change in Demand Deposit Share (%)



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)

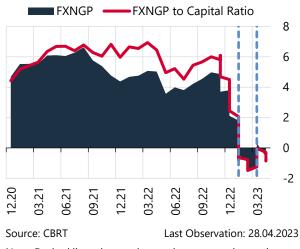
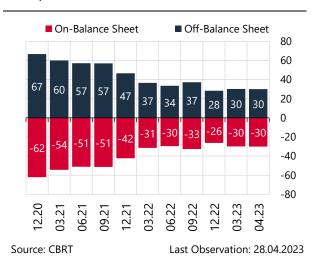


Chart IV.3.10: Banking Sector's FX Position (USD Billion)

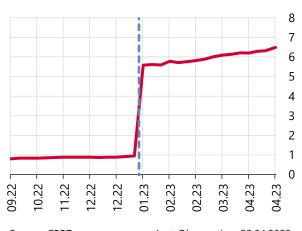


Note: Dashed lines denote the regulatory amendment dates.

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).

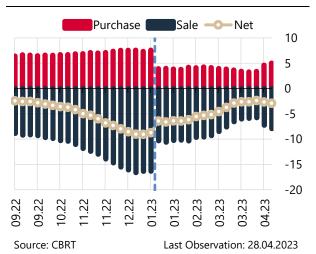


(USD Billion)



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)

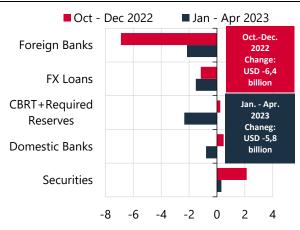


Note: The dashed line denotes the date of the first regulatory amendment.

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,

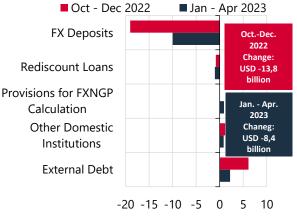
the on-balance sheet FX liabilities dropped by USD 13.8 billion in the October-December 2022 period, and by USD 8.4 billion in the January-April 2023 period (Chart IV.3.14). These developments are attributed to the significant decline in FX deposits due to the ongoing shift to the KKM scheme.

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



Balance Sheet FX Liabilities (USD Billion)

Chart IV.3.14: Change in Banking Sector's On-



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.



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).

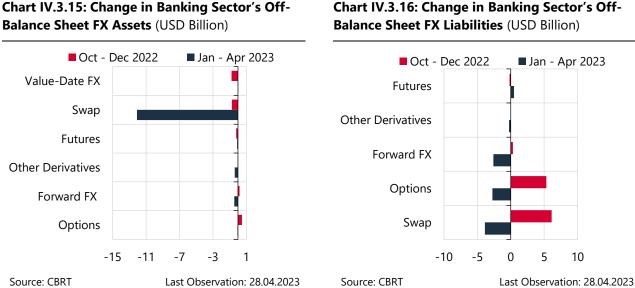


Chart IV.3.15: Change in Banking Sector's Off-

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.

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 guarter 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%.

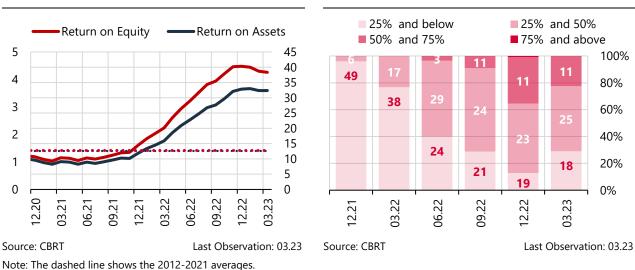
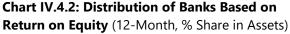


Chart IV.4.1: Profitability Ratios (12-Month, %)

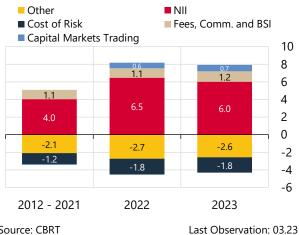


Net interest income made the largest contribution to the increase in return on assets.

In 2022, the contribution of net interest income to return on assets was strong, while it relatively weakened in the first guarter 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).

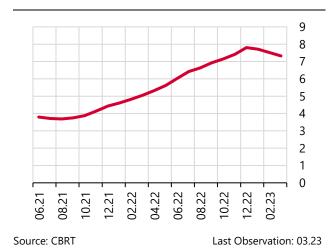
Chart IV.4.3: Components of Return on Assets

(12-Month, % Points)



Source: CBRT

Chart IV.4.4: Net Interest Margin (%)



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

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).

Volume Effect

NII Annual Change

600

400

100

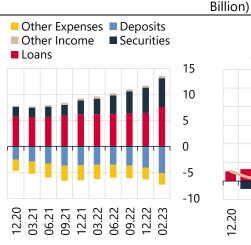
0

12.22

NIM Effect

Chart IV.4.5: Components of Net Chart IV.4.6: Annual Change in Interest Margin (Annualized, %) Net Interest Income and Contributions (Annualized, TL

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



Source: CBRT

Last Observation: 03.23 Source: CBRT

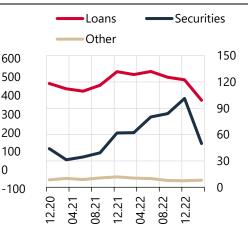
2.20

Note: The hypothetical effect that a change Note: Ratio of interest income from loans in the interest margin will bear through the and liquid assets to total interest 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.

06.22

12.21

06.21



Last Observation: 03.23 Source: CBRT Last Observation: 03.23 expenditures.

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

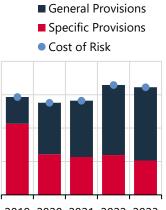
The effects of the credit risk-driven losses on profitability performance are assessed to be limited thanks to the positive outlook for the NPL ratio (Chart IV.4.8). The ratio of credit card-related fees and commissions, which have the largest share in banking services income, to assets was up in 2022 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, %)



2019 2020 2021 2022 2023

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 (%) Money Transfer Insurance Other Credit Card 1.5 1.2 0.9 0.6 0.3 0.0 2019 2020 2021 2022 2023

Source: CBRT

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

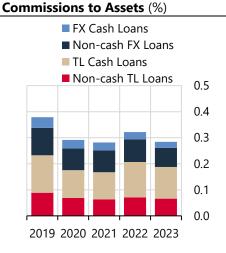


Chart IV.4.10: Ratio of Fees and

Source: CBRT

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

Chart IV.4.11: Capital Adequacy Ratio (%)

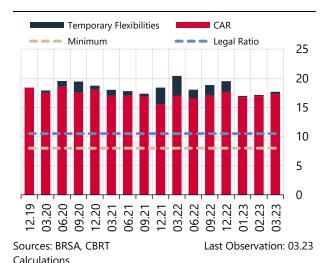
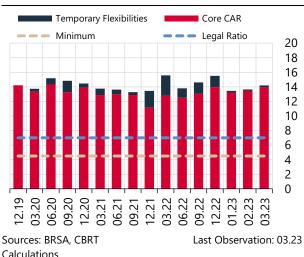


Chart IV.4.12: Core Capital Adequacy Ratio (%)



* 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).

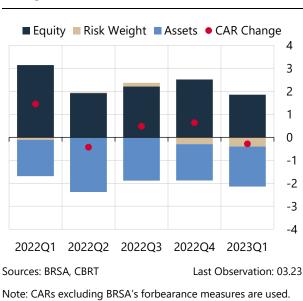


Chart IV.4.13: Contributions to Quarterly Change in CAR (% Points)

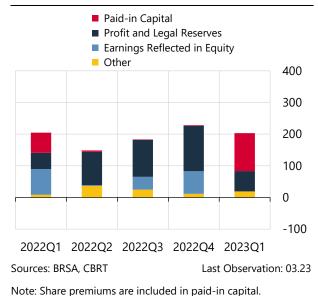
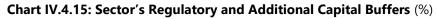
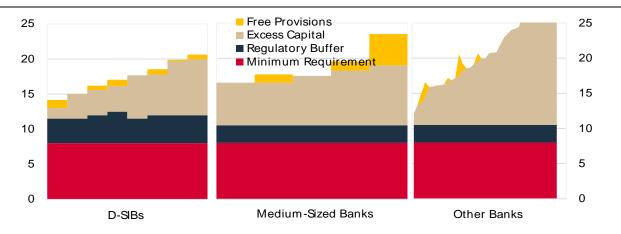


Chart IV.4.14: Quarterly Change in Regulatory Capital (TL Billion)

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).





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.