5. Financial Conditions and Monetary Policy

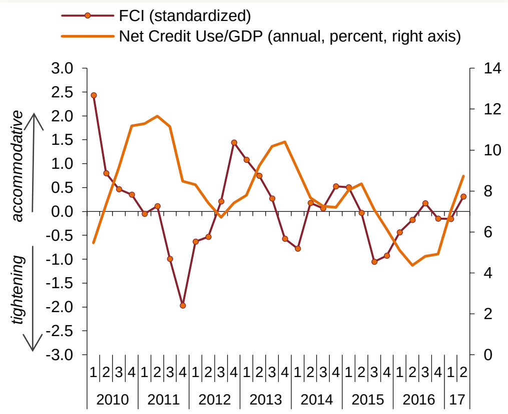
Over the recent period, subdued global volatility and increased risk appetite have continued to drive strong portfolio flows to Turkey. In January-February 2017, portfolio inflows were mostly invested in the stock market, whereas since March, both stock and bond markets have seen more robust inflows than in previous years.

Loan growth continued to recover in the first half of 2017 amid accommodative macroprudential policies as well as public measures and incentives. TL commercial loans have grown at a faster pace recently as loans backed by the Credit Guarantee Fund have been on the rise since March. However, Credit Guarantee Fund loans appear to be having less impact on loan growth as of June since a large portion of this funding has already been lent and much of the brought-forward commercial loan demand has been met. Loan growth is expected to be more stable in the upcoming period.

Thanks to the CBRT's strong monetary tightening, the yield curve has a negative slope. The CBRT's pledge to keep monetary policy tight until the inflation outlook displays a significant improvement and heavy reliance on late liquidity window facility for lending lessen the uncertainty over monetary policy. Amid tighter monetary policy, long-term inflation expectations and exchange rate fluctuations continued to taper.

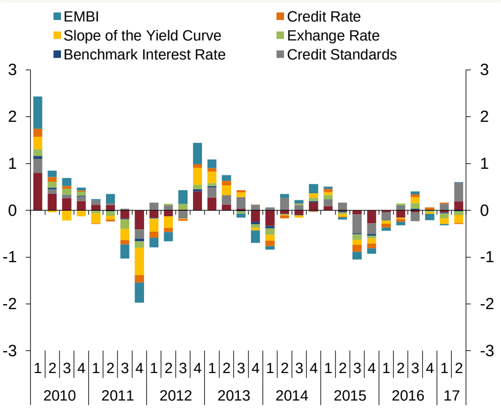
The FCI provides a concise overview of all these developments. Accordingly, the index hints at more accommodative financial conditions in the second quarter of 2017 (Chart 5.1). In the second quarter, credit standards and stock return had a positive contribution to the index while the contribution of the EMBI was hardly positive. The contribution of credit rate and the benchmark interest rate was flat, whereas the slope of the yield curve and the real exchange rate put downward pressure on the index (Chart 5.2).

Chart 5.1.
Financial Conditions and Credit Growth*



* For further details on measuring FCI, see the CRBT Working Paper No. 15/13.
Source: CBRT.

Chart 5.2.
Contributions to FCI*



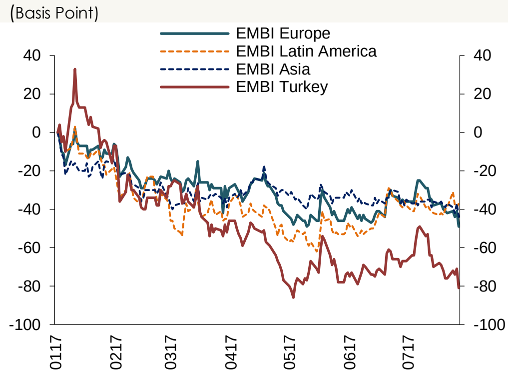
* Slope of the yield curve is measured by the spread between 10-year and 2-year bond rates.
Source: CBRT.

5.1. Relative Performance of Financial Markets

Risk Perceptions and Portfolio Flows

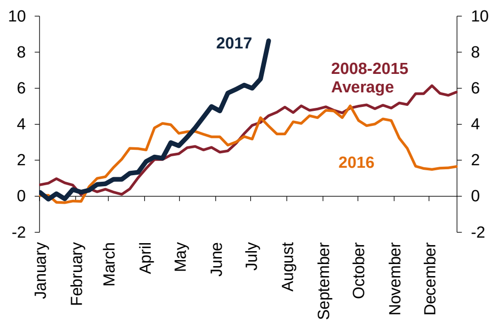
In 2017, the risk sentiment towards emerging economies turned more upbeat amid signs of an upswing in global growth and alleviated uncertainty over monetary policies of major central banks, which diverted international portfolio investments towards emerging economies. In this period, Turkey's sovereign risk premium outperformed those of other emerging economies (Chart 5.1.1). Portfolio flows to Turkey surpassed past years' averages in cumulative terms since early 2017 (Chart 5.1.2). In the January-February period, Turkey attracted mostly stock funds, while in March and April, there were also flows into the government bond market, all contributing to this positive outlook.

Chart 5.1.1.
Regional Risk Premiums*
(Basis Point)



* Denotes changes since 2 January 2017.
Source: Bloomberg.

Chart 5.1.2.
Cumulative Portfolio Flows to Turkey*
(Billion USD)

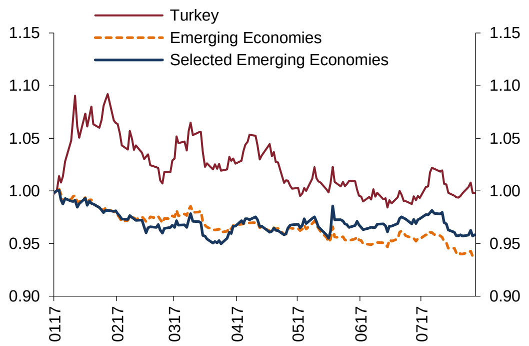


* Includes stock and domestic government bond funds as well as repo.
Source: CBRT.

Exchange Rates

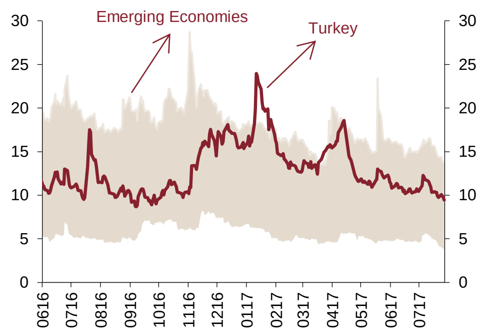
Emerging market currencies moved in line with the changing global risk appetite and appreciated against the US dollar since early 2017 (Chart 5.1.3). The Turkish lira has also appreciated owing to the CBRT's tight monetary policy since 11 January, thereby compensating for most of the past losses. In addition, the increased global risk appetite prompted a downtrend in the implied volatility of emerging market currencies (Chart 5.1.4), which has recently been more marked for the Turkish lira thanks to the tight monetary policy stance.

Chart 5.1.3.
Turkish Lira and Emerging Market Currencies against US Dollar* (2 January 2017=1)



* Emerging economies include Brazil, Chile, Colombia, Hungary, India, Indonesia Malaysia, Mexico, Philippines, Poland, Romania, South Africa and Turkey, while selected emerging economies include Brazil, India, Indonesia and South Africa.
Source: Bloomberg.

Chart 5.1.4.
Implied FX Volatility against US Dollar*
(1-Month-Ahead, Percent)

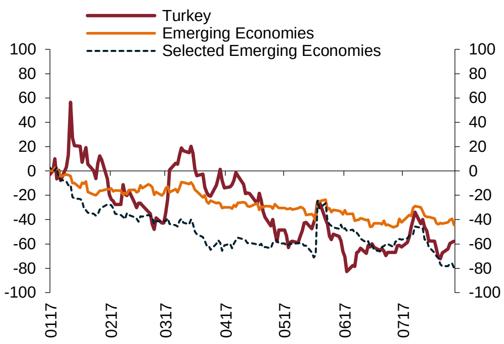


* Emerging economies include Brazil, Chile, Colombia, Hungary, India, Indonesia, Malaysia, Mexico, Philippines, Poland, Romania and South Africa.
Source: Bloomberg.

Market Rates

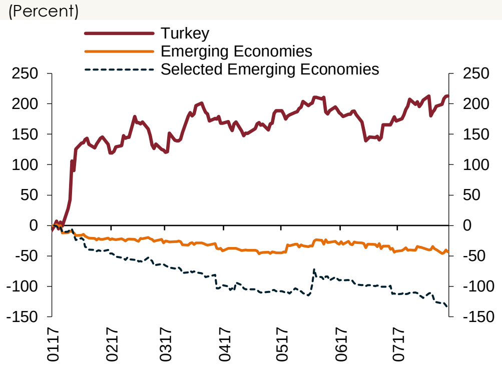
Since early 2017, market rates in emerging economies have largely been determined by expectations regarding the monetary policies of advanced economies, the US in particular, and their macroeconomic outlook. With the growing global risk appetite and declining policy rates, many economies saw both short and long-term market rates decrease (Charts 5.1.5 and 5.1.6). In Turkey, short-term market rates increased due to the CBRT's monetary tightening, and diverged upwards from other emerging economies. Meanwhile, long-term market rates declined at the same pace as in other emerging economies.

Chart 5.1.5.
5-Year Market Rates*
(Percent)



* Emerging economies include Brazil, Chile, Colombia, Hungary, India, Indonesia, Malaysia, Mexico, Philippines, Poland, Romania, South Africa and Turkey, while selected emerging economies include Brazil, India, Indonesia and South Africa. Denotes changes since 2 January 2017.
Source. Bloomberg.

Chart 5.1.6.
6-Month Market Rates*
(Percent)



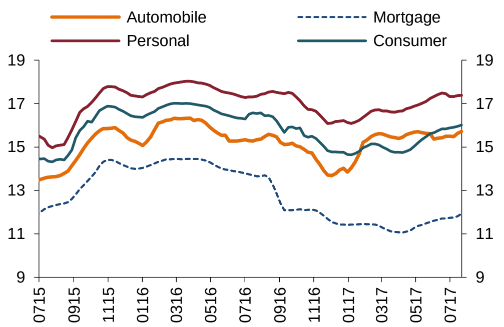
* Emerging economies include Brazil, Chile, Colombia, Hungary, India, Indonesia, Malaysia, Mexico, Philippines, Poland, Romania, South Africa and Turkey, while selected emerging economies include Brazil, India, Indonesia and South Africa. Denotes changes since 2 January 2017.
Source. Bloomberg.

5.2. Credit Conditions

Loan Rates, Funding Costs and Interest Rate Spreads

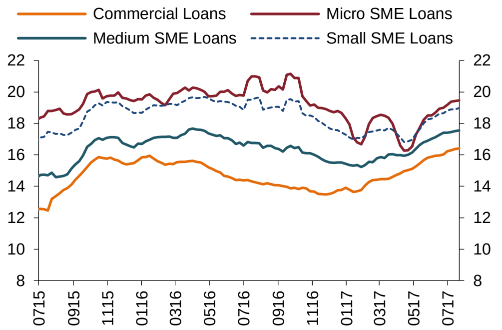
In the second quarter, the banks' appetite for lending remained robust amid buoyant economic growth and public credit guarantee schemes, with consumer and commercial loan rates remaining on a modest uptrend since early 2017 (Charts 5.2.1 and 5.2.2). Across subcategories of consumer loans, mortgage and personal loan rates have edged up since the previous reporting period, whereas automobile loan rates have been flat. As of 21 July 2017, average consumer and commercial loans were quoted at 16 and 16.4 percent, respectively.

Chart 5.2.1.
Consumer Loan Rates
(Flow, Annualized, 4-Week Moving Average, Percent)



Source: CBRT.

Chart 5.2.2.
TL Commercial Loan Rates*
(Flow, Annualized, 4-Week Moving Average, Percent)

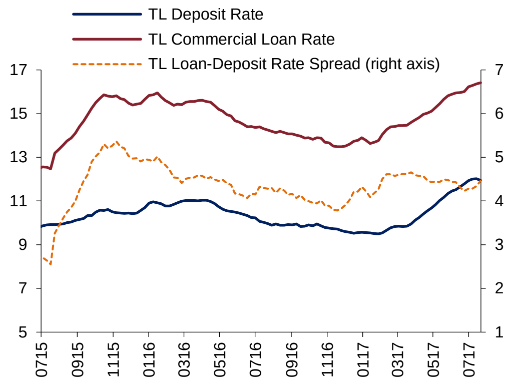


* Excluding overdraft accounts, credit cards and non-zero interest rate loans.
Source: CBRT.

Deposits, which are the primary funding source of the banking sector and mostly have maturities shorter than three months, have seen higher interest rates since the previous Report. Commercial loan rates recorded a similar uptick, causing the loan-deposit rate spread to remain elevated compared to its historical averages (Chart 5.2.3).

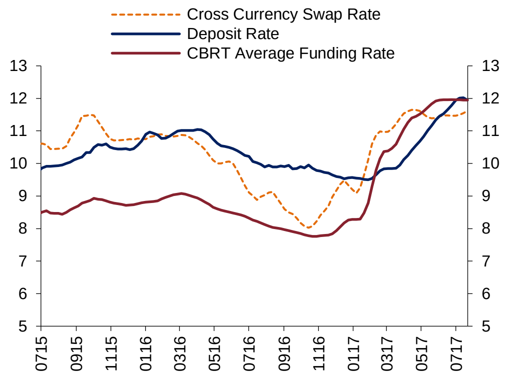
Having increased in the second quarter of 2017, deposit rates are now quoted close to banks' non-deposit TL funding costs (Chart 5.2.4). In the inter-reporting period, deposit rates increased by 127 basis points while the CBRT's average weighted funding cost rose by 15 basis points. Swap rates were roughly flat. Deposit rates seem to no longer be on the rise for the past few weeks.

Chart 5.2.3.
TL Commercial Loan Rate and TL Deposit Rate*
(Flow, Annualized, 4-Week Moving Average, Percent)



* Excluding overdraft accounts, credit cards and non-zero interest rate loans.
Source: CBRT.

Chart 5.2.4.
Indicators on Banks' Funding Costs
(4-Week Moving Average, Percent)

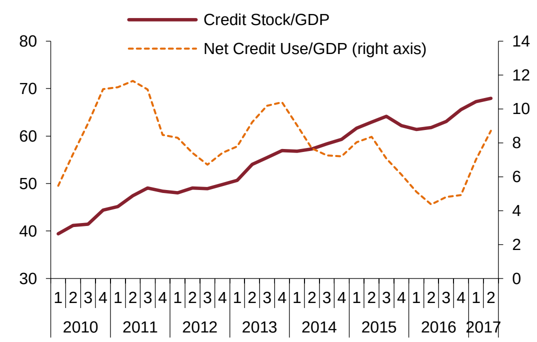


Source: CBRT, BIST.

Credit Volume

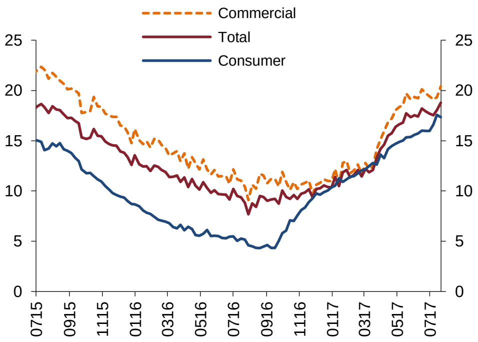
In the first half of 2017, recovery of loan growth continued further amid accommodative macroprudential policies as well as fiscal measures and incentives. The net credit use to GDP ratio, which is a critical measure of financial stability that summarizes the linkages of credit growth with economic activity and aggregate demand, rose further to 8.7 percent in the second quarter (Chart 5.2.5).

Chart 5.2.5.
Domestic Credit Stock and Domestic Net Credit Use*
(Percent)



* Domestic credits are comprised of total banking sector credits including participation banks, foreign branches and credit cards not adjusted for exchange rate. Net credit use is measured as the annual change in nominal credit stock adjusted for exchange rate. The second-quarter data for 2017 is forecast.
Source: CBRT.

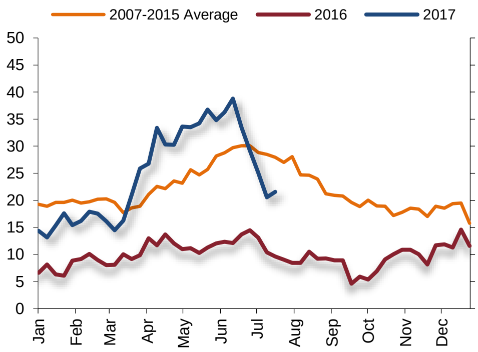
Chart 5.2.6.
Annual Loan Growth
(Adjusted for Exchange Rate, Percent)



Source: CBRT.

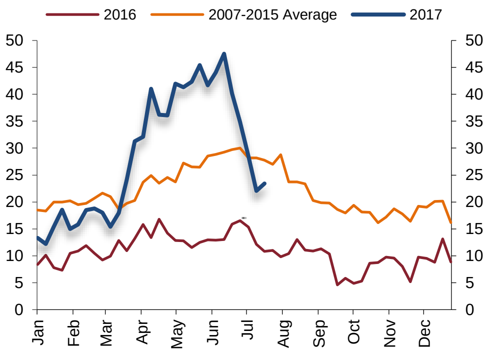
In the second quarter of 2017, consumer loans remained on the rise amid the favorable course of consumer confidence and macroprudential measures. Additionally, incentives such as SMEDO loans and the Treasury-backed Credit Guarantee Fund helped commercial loans accelerate further. Accordingly, the annual growth of exchange rate adjusted total loans extended to the non-financial sector has increased to 18.8 percent (Chart 5.2.6). Having trended upward since the third quarter of 2016, the growth rate of total loans hovered above past years' averages through the second quarter of 2017 on the back of commercial loans (Chart 5.2.7). However, with Credit Guarantee Fund loans almost hitting their predetermined cap, the re-balancing of the TL commercial loan growth since mid-June also had an impact on total loan growth and the annualized growth rate of total loans in 13-week moving average terms amounted to about 21.6 percent by 21 July 2017.

Chart 5.2.7.
Annualized Loan Growth
(Adjusted for Exchange Rate, 13-Week Moving Average, Percent)



Source: CBRT.

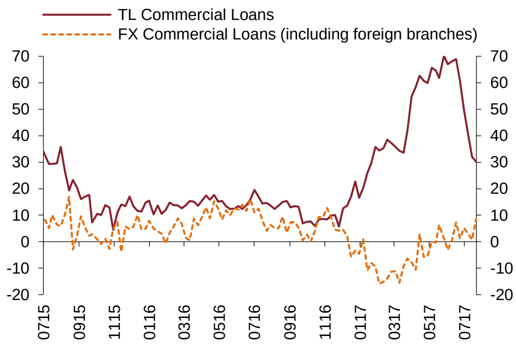
Chart 5.2.8.
Annualized Commercial Loan Growth
(Adjusted for Exchange Rate, 13-Week Moving Average, Percent)



Source: CBRT.

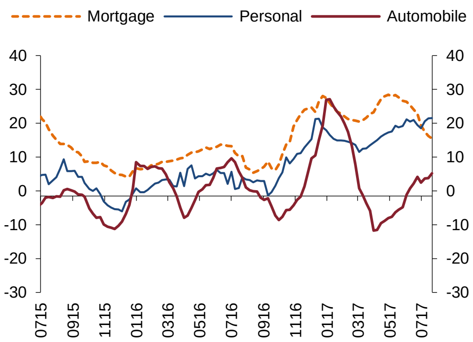
After having accelerated in March 2017 and exceeded historical averages, the commercial loan growth rate started falling by mid-June and dropped back down below historical averages in July (Chart 5.2.8). The March-June spike in commercial loan growth is attributed to the upsurge in TL commercial loans backed by public incentives (Chart 5.2.9). On the other hand, the growth rate of FX commercial loans has been low since the start of the year due to higher FX funding costs and the weak investor appetite. The annualized growth rate of FX loans inched up in the second quarter amid base effects and a more stable exchange rate.

Chart 5.2.9.
Annualized TL and FX Commercial Loan Growth
(Adjusted for Exchange Rate, 13-Week Moving Average, Percent)



Source: CBRT.

Chart 5.2.10.
Annualized Consumer Loan Growth
(13-Week Moving Average, Percent)



Source: CBRT.

Across subcategories of consumer loans, mortgage and personal loans remained strong in the second quarter of 2017 (Chart 5.2.10). Accounting for the largest share of consumer loans, the annualized growth rate of mortgage loans remained robust yet fell below past averages in early June and hovered around 15.5 percent as of 21 July 2017. The growth of personal loans gained some pace in the second quarter, hitting an annualized 21.6 percent. The annualized growth rate of automobile loans edged up in line with seasonal movements and amounted to about 5.2 percent on 21 July 2017.

Loan Standards

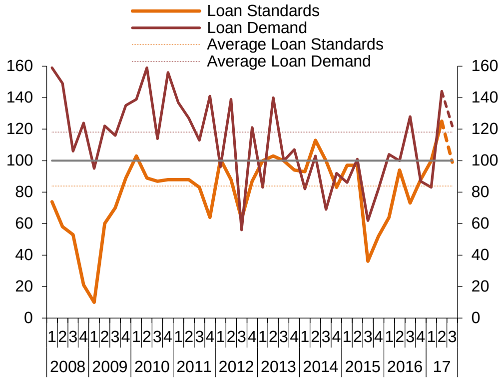
According to the results of the Bank Lending Survey, commercial loan incentives such as SMEDO loans and the Treasury-backed Credit Guarantee Fund prompted a change in banks' lending standards in the second quarter of 2017. Banks eased their standards for commercial loans, which thus surpassed historical averages (Chart 5.2.11). Standards displayed a similar pattern across all firm sizes, maturities and currencies. On the size front, the loosening of lending standards was more aggressive for SMEs than for large-sized enterprises in the second quarter as in the preceding quarter. Standards were much looser for short-term loans and TL loans in terms of maturity and currency, respectively.

All factors affecting lending standards for commercial loans mentioned in the survey seem to have contributed to the easing of lending standards. In this quarter, banks cited the sentiment about industries/companies and the economy, risk on the collateral demanded and bank competition among the major factors that stimulated a loosened lending standard. This hints at waning sentiment for uncertainty, a growing risk appetite and improved conditions of competition in the banking sector. As for the conditions and rules applied to commercial loans, profit margins on average loans and collateral requirements were eased, while profit margins for riskier loans were tightened.

Responses of the banks participating in the survey also revealed a dramatic increase in the demand for commercial loans in the second quarter (Chart 5.2.11). A similar pattern was observed in terms of size and maturity, but whereas the demand for TL loans surged, that for FX loans declined. While the need for debt restructuring and inventory buildup remained an impetus for loan demand, fixed investments put downward pressure on loan demand. Moreover, the need for domestic financing was another driver of the demand for commercial loans.

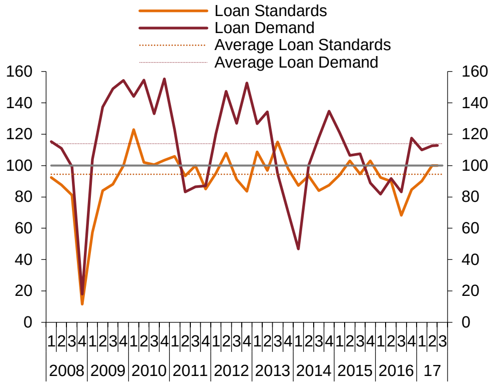
In the third quarter, banks expect no additional easing in commercial loan standards, which also do not differ by loan size (Chart 5.2.11). However, long-term loans and FX-denominated loans are anticipated to tighten. On the other hand, the demand for commercial loans is envisioned to grow further at a pace near its historical average.

Chart 5.2.11.
Commercial Loan Standards and Demand*



* Index values above 100 indicate easing in loan standards and increased loan demand. The third-quarter data for 2017 is forecast.
Source: CBRT.

Chart 5.2.12.
Consumer Loan Standards and Demand*



* Index values above 100 indicate easing in loan standards and increased loan demand. The third-quarter data for 2017 is forecast.
Source: CBRT.

Responses related to consumer loans indicate that loan standards remained unchanged in the second quarter but were slightly looser than past averages (Chart 5.2.12). The demand for consumer loans rose at a pace in line with its historical average. Among subcategories of consumer loans, mortgage and personal loans saw a rising demand index. Expectations for the housing market, consumer confidence, taxes and provisions as well as other financing sources boosted the demand for mortgage loans. On the personal loans front, demand was boosted by consumer confidence and personal savings but curbed by taxes and other charges paid for loans.

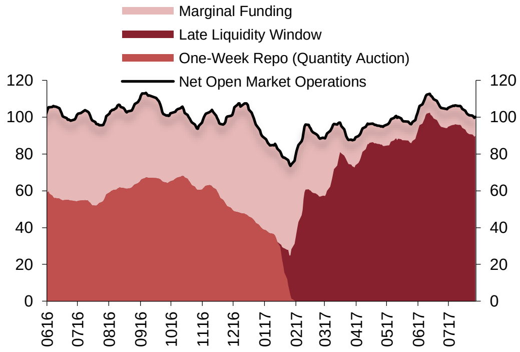
Standards for consumer loans are expected to remain unchanged in the third quarter of 2017, and the demand for consumer loans is likely to grow at a rate in line with its historical average (Chart 5.2.12).

5.3. Monetary Policy

Market Developments

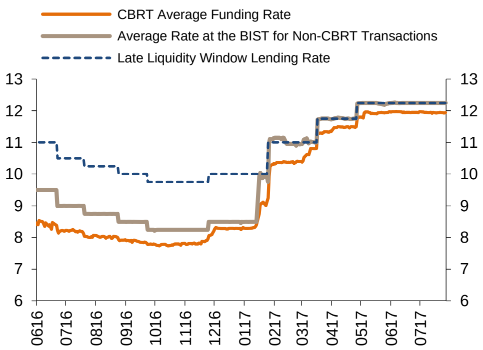
As of mid-January 2017, one-week repo auctions have been suspended, marginal funding has been reduced gradually, and the system's funding requirement has increasingly been met by the late liquidity window facility (Chart 5.3.1). Over the current reporting period, the late liquidity window has remained the primary source of funding, and the funding composition has been flat.

Chart 5.3.1.
CBRT Funding*
(2-Week Moving Average, Billion TL)



* Marginal funding is overnight funding quoted at the upper band of the interest rate corridor.
Source: CBRT.

Chart 5.3.2.
Bank's Funding Costs at the Money Markets
(5-Day Moving Average, Percent)

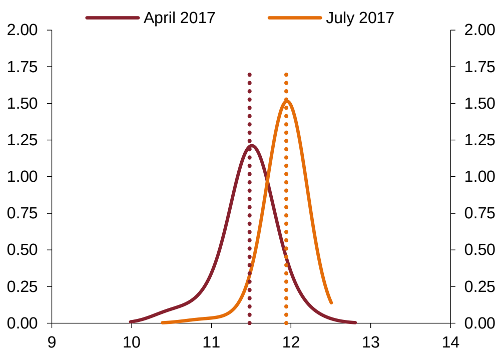


Source: BIST, CBRT.

Following the change in the liquidity policy, the MPC hiked the late liquidity window lending rate at its January, March and April meetings, which drove the CBRT average funding rate higher. The average rate for non-CBRT funding at the BIST Interbank Repo and Reverse Repo Market hovers close to late liquidity window lending rate (Chart 5.3.2).

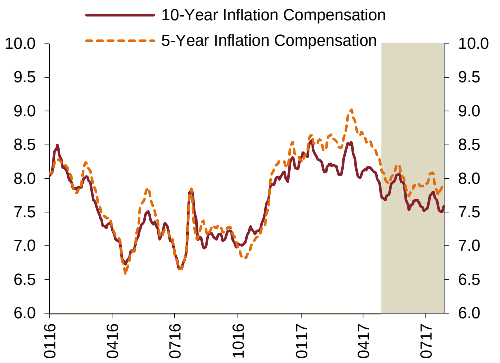
The expectation distribution for the CBRT average funding rate derived from the CBRT Survey of Expectations implies less volatility in expectations for July than in April, while the mid-point of expectations indicates no change in the CBRT average funding rate in July (Chart 5.3.3). In this period, the CBRT's continued monetary tightening had an impact on the market-based inflation expectations, causing long-term inflation compensations to remain on a gradual decline (Chart 5.3.4).

Chart 5.3.3.
Distribution of Expected CBRT Average Funding Rate*
(Percent)



* Measured by Kernel probability density function using CBRT Survey of Expectations. Vertical dashed lines represent the CBRT's average funding cost on the days when the survey answers were gathered.
Source: CBRT.

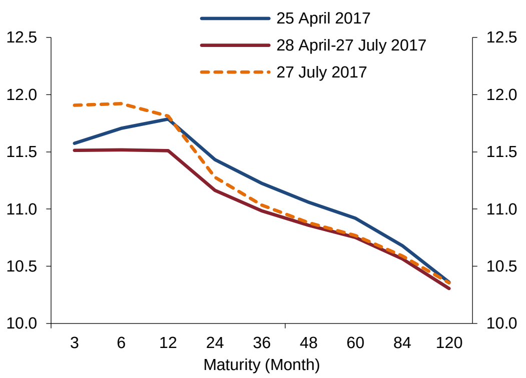
Chart 5.3.4.
Inflation Compensation*
(5-Day Moving Average, Percent)



* Shaded area denotes the current reporting period.
Source: Bloomberg.

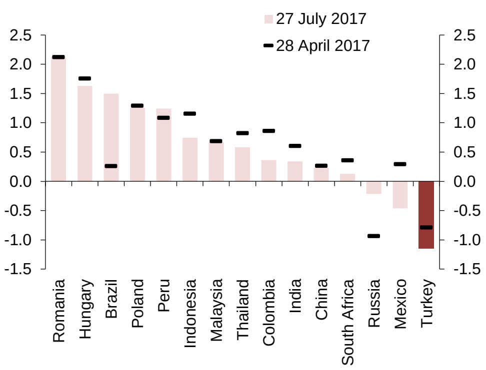
Medium and long-term currency swap rates saw small declines from the previous Report due to the CBRT's tight monetary policy stance and the increased global risk appetite (Chart 5.3.5). Thus, short-term currency swap rates continued to hover above long-term currency swap rates (Box 5.1). In the current reporting period, Turkey has had the smallest (most negative) yield curve slope among emerging economies (Chart 5.3.6).

Chart 5.3.5.
Yield Curve on Currency Swaps
(Percent)



Source: Bloomberg.

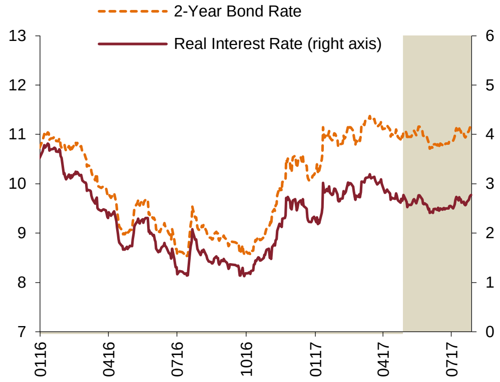
Chart 5.3.6.
Slope of Yield Curves in Emerging Markets*
(Percentage Point)



* Slope of the yield curve is calculated as the difference between 5-year bond rates and 6-month bond rates. Swap rates were used instead of bond rates to calculate the slope of the yield curve for Turkey.
Source: Bloomberg.

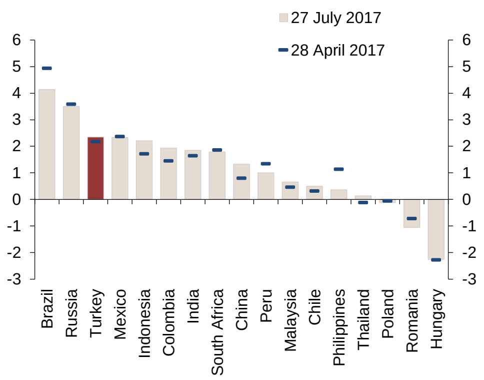
In the recent period, 2-year bond rates have reached a plateau around 11 percent (Chart 5.3.7). As 24-month-ahead inflation expectations hardly changed, 2-year real interest rates were roughly the same as in the previous reporting period. Turkey has scored above the emerging market average in the ranking of 2-year real interest rates (Chart 5.3.8).

Chart 5.3.7.
2-Year Bond Rate and the Real Interest Rate in Turkey*
(Percent)



* Real interest rate is calculated as the difference between 2-year bond rate and the 24-month-ahead inflation expectations derived from the CBRT Survey of Expectations. Shaded area denotes the current reporting period. As of 27 July 2017.
Source: Bloomberg, BIST, CBRT.

Chart 5.3.8.
2-Year Real Interest Rates*
(Percent)



* Real interest rate is calculated as the difference between 2-year bond rate and the 24-month-ahead inflation expectations derived from the Consensus Forecasts for respective countries.
Source: Bloomberg, Consensus Forecasts, CBRT.

Monetary Policy Reaction

January's volatile exchange rates and their repercussions on inflation expectations were the main drivers of the monetary policy decisions in the first quarter. In this period, exchange rate developments added to the upward risks to inflation. Thus, in response to the deteriorating inflation outlook, the MPC delivered an aggressive monetary tightening at its January meeting, hiking both the marginal funding rate and the late liquidity window lending rate. Additionally, the MPC took a series of liquidity measures to avoid any negative spillovers into price stability and financial stability. Accordingly, the CBRT halted the one-week repo auctions, gradually raised the marginal funding rate, and relied more heavily on the late liquidity window facility to meet system's funding requirement. Moreover, the CBRT also adopted some measures to allow flexibility in the management of FX liquidity. To this end, the CBRT lowered FX reserve requirements and opened the Foreign Exchange Deposits against Turkish Lira Deposits Market. In March, cost pressures driven by the cumulative Turkish lira depreciation sent inflation soaring despite the modest economic recovery. In addition, inflation was expected to remain on the rise over the short term largely due to the base effect from unprocessed food prices. Against this backdrop, the MPC raised the late liquidity window lending rate from 11 to 11.75 percent at its March meeting. In the first quarter, coordinated policy decisions aimed at alleviating the exchange rate driven cost pressures on inflation without causing additional tightening in financial conditions. In fact, as a result of these measures, financial indicators such as exchange rate volatility, inflation compensation and risk premium have seen some improvement.

In April, global financial conditions were relatively benign, but the FX market remained somewhat volatile. On the other hand, the Turkish lira diverged positively from other emerging market currencies in this period and recovered some of the past losses. Credit conditions began to ease thanks to accommodative macroprudential policies as well as public incentives and measures. Observing that inflation posed a threat to the pricing behavior after having soared due to the lagged effects of the Turkish lira depreciation as well as rising import prices and food prices, the MPC decided to tighten its monetary policy stance further and raised the late liquidity window lending rate from 11.75 to 12.25 percent at the April meeting.

Global economic activity appears to be recovering since June. The upward revision in global growth forecasts and waning volatility help bolster risk appetite. As a consequence, portfolio flows into emerging economies remained robust. Commercial loans saw a notable growth thanks to the Credit Guarantee Fund scheme while the new incentives and measures helped strengthen economic activity. Moreover, the tight monetary policy stance drove FX volatility further down and rendered risk premium more favorable. However, noting the risks to the pricing behavior, the MPC maintained its tight monetary policy stance in June and July and kept policy rates unchanged.

The CBRT will continue to use all available instruments in pursuit of the price stability objective. Inflation expectations, the pricing behavior and other factors affecting inflation will be closely monitored and further monetary tightening will be delivered if needed.

Box 5.1 The Transmission of Monetary Policy to Swap Market Rates

The cross currency swap market is an outlet that Turkish banks use primarily to hedge their open FX positions and meet their Turkish lira liquidity requirement. The volume of swap transactions and thus the importance of this market for the transmission of the monetary policy have increased in recent years. In this respect, the aim of this box is to estimate the response of swap market rates to CBRT's policy rate surprises.

The transmission of monetary policy to swap market rates at various maturities is analyzed for two sub-periods, which are:

- The period between 2005 and 2010, which is marked by the implementation of a conventional inflation targeting regime
- The period from 2011 and onward when financial stability measures were used frequently in addition to the policy rate and liquidity policies.

The response of swap market rates at different maturities to policy rate surprises is measured via an event study using the changes in interest rates on the days of MPC announcements.[1] The monetary policy surprise is calculated as the daily change in one-month forward rate in basis points.[2] Empirical evidence showing the effects of short-term interest rates on swap market rates at different maturities is presented in Table 1. The results indicate that monetary policy transmission to the swap market was strong in both periods (March 2005-December 2010 and January 2011-April 2017). Indeed, all coefficients are statistically significant at the 99 percent level. In both periods, swap rates at various maturities responded to changes in short-term interest rates in the same direction and at similar magnitudes. As expected, the reaction is weaker at longer maturities, which implies that the yield curve flattens as policy rate increases.

Studies that analyze the policy rate transmission in Turkey mostly focus on the response of the government bonds market to policy rate changes. These studies find that policy rate shocks have a strong influence on government bond rates for various maturities. This box reveals that the policy rate transmission to the swap market, a major source of Turkish lira funding for banks, is also strong, as in the bond market, in both of the analyzed sub-periods.

[1] Event study is the most commonly used methodology in the literature to analyze high-frequency responses of market rates to monetary policy announcements. For technical details, see Duran et al. (2012).
[2] Duran et al. (2012) measure policy rate surprises by using the government bond rate with one-month maturity. The reason for using forward rate instead of the government bond rate in this box is the decreased transaction volume in the short-term government bonds market over the recent years and the absence of daily data on interest rate for all the required maturities.

Table 1. Transmission of Policy Rates to Swap Market Rates

Maturity (Month)	March 2005-December 2010	January 2011-April 2017
6	-	0.746 (0.050)
12	0.592 (0.048)	0.564 (0.049)
24	0.460 (0.048)	0.489 (0.045)
36	0.434 (0.050)	0.421 (0.044)
48	0.350 (0.048)	0.395 (0.044)
60	0.184 (0.052)	0.311 (0.047)
84	0.309 (0.044)	0.251 (0.051)
120	0.245 (0.044)	0.220 (0.052)

Notes: Values in parenthesis denote standard deviation. The data for 6-month swap rate is unavailable during March 2005-December 2010. Hence the coefficient for 6-month swap rate is reported for only January 2011-April 2017 sub-period.

References

Duran, M., G. Özcan, P. Özlü and D. Ünalmış, 2012, Measuring the Impact of Monetary Policy on Asset Prices in Turkey, Economics Letters, 114(1): 29-31.