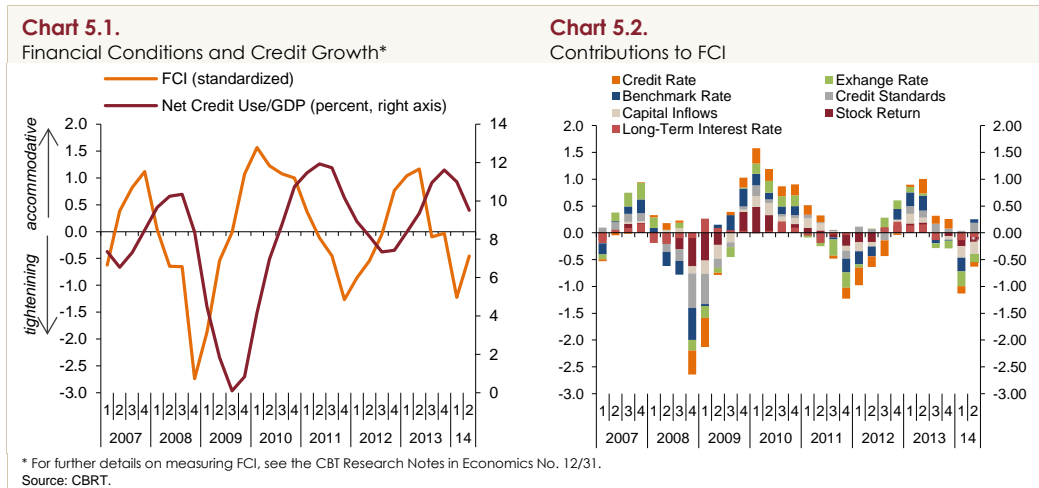


5. Financial Markets and Financial Intermediation

Accommodative monetary policy decisions made by major central banks regarding global liquidity and the expectation that the quantitative easing would continue for a while caused the global uncertainties to fade in the second quarter. Moreover, risk premiums and markets for bonds and bills, stocks and foreign exchange saw a dramatic decline in volatility in this period. These developments in global financial markets improved the risk sentiment for emerging economies as well and led capital flows to grow brisk in the second quarter. Turkey's financial indicators followed a similar path to those of other emerging economies in this period. In addition to global factors, the CBRT's tight monetary policy stance, the macro data pointing to an evident recovery in the current account deficit and the contribution of macroprudential measures to the balancing process improved Turkey's financial indicators. Even though capital flows displayed a fluctuating course, they saw great improvement on a quarterly basis, and the second quarter witnessed net inflows. The favorable course of the risk premium and the tight monetary policy stance limited the adverse effects of geopolitical risks on the Turkish lira in this period. Market rates declined in all maturities.

In the second quarter, the FCI for Turkey, which is calculated as the weighted average of various financial indicators, remained largely consistent with the forecast announced in the April Inflation Report. Thus, following the dramatic tightening in the first quarter of 2014, financial conditions have recently become less tight (Chart 5.1). The recovery in capital flows and stock markets, the normalization on loan standards and the decline in interest rates have affected financial conditions favorably.



5.1. Financial Markets

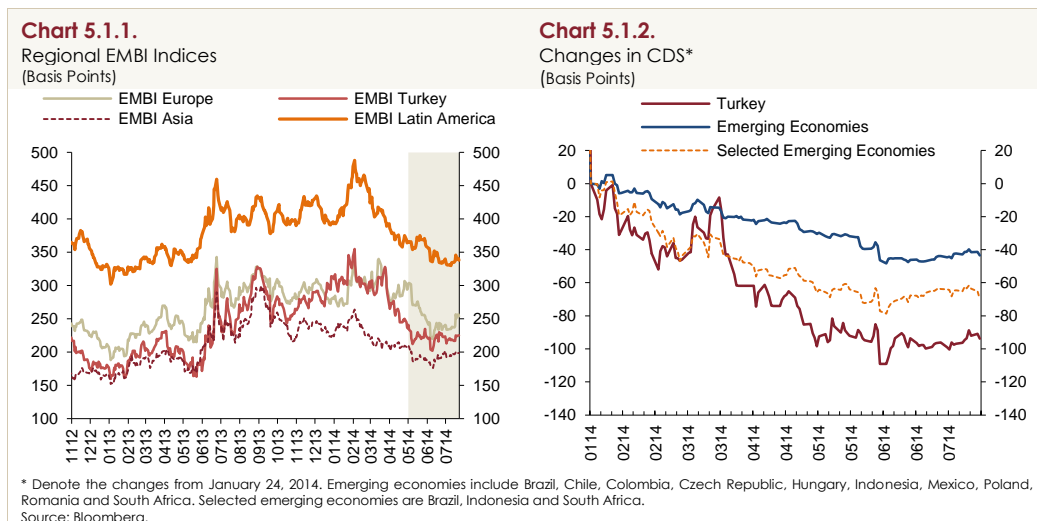
Global Risk Perceptions

Normalization in global monetary policies continued in the second quarter of 2014, and the Fed further reduced asset purchases. Global economic activity continued to recover on the back of advanced economies, while economic activity remained relatively weak in emerging economies in this period. The recovery in advanced economies is expected to affect emerging economies positively

through the exports channel while a probable sooner-than-expected normalization in global monetary policies may lead to a tightening in global financial conditions.

First-quarter growth figures proved lower than expected in the US economy and the ensuing high-rated revision created a perception that the policy rate increase may be postponed for a while, and the financial expansion in global markets following the crisis may last for a protracted period. Another important development in this period is the ECB's implementation of a negative interest rate on deposits held at the ECB starting from June due to deflationary risks, the gradual recovery in the Euro Area notwithstanding. Moreover, the ECB opted for a reduction by 10 basis points in the policy rate and enforced a new re-financing model to support the real sector.

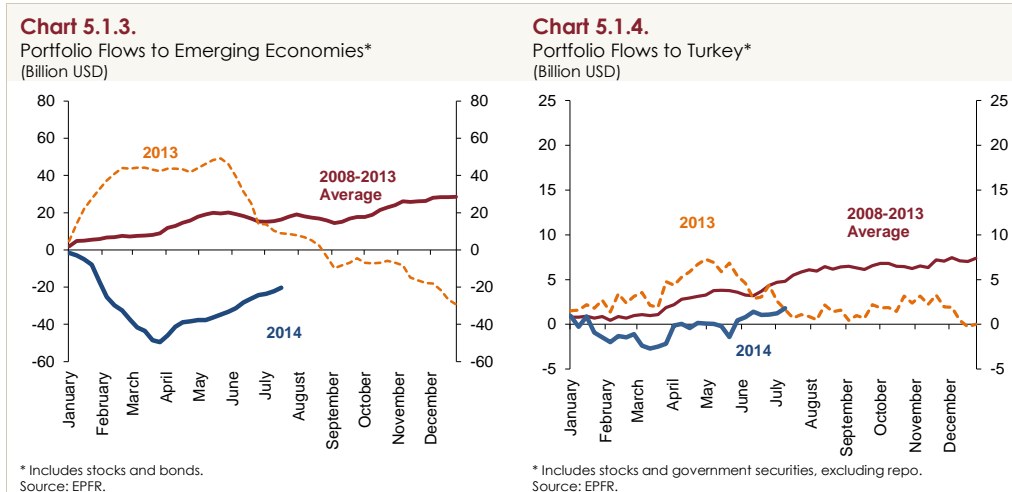
In the second quarter, signals from the Fed and the ECB affected the risk sentiment for emerging economies positively, causing a decline in the risk premiums of emerging economies (Chart 5.1.1). Falling figures in the CDS premiums of emerging economies since the waning of global uncertainties in January continued through the start of this quarter. However, concerns over oil supply amid the recent unrest in Iraq led the risk sentiment for emerging economies to slightly deteriorate. As a striking development, Turkey's sovereign risk premium worsened a little due to the geopolitical developments, yet posted more favorable figures compared to other countries (Chart 5.1.2). This is attributed to the positive growth and current account deficit figures announced in the second quarter, besides the CBRT's tight monetary policy stance and waning uncertainties specific to Turkey.



Portfolio Flows

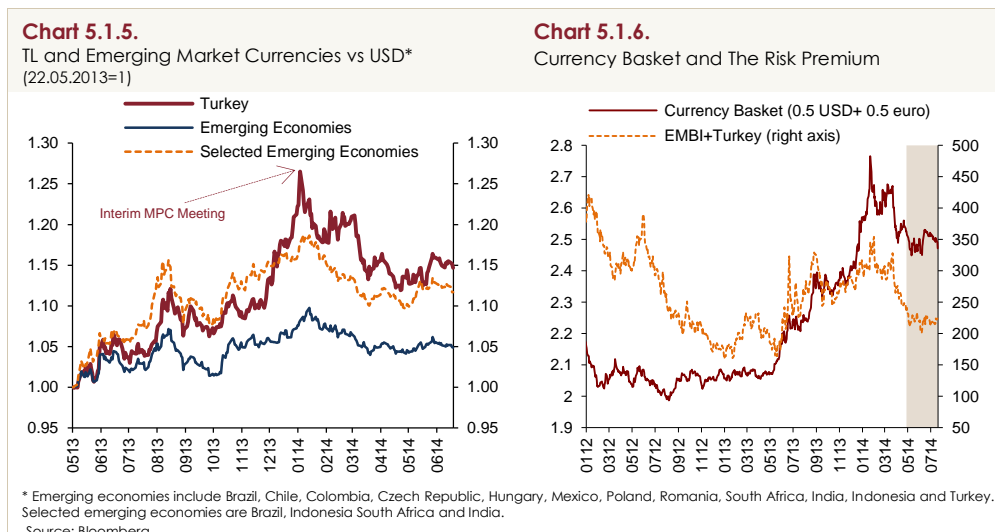
Decisions of major central banks to support global liquidity and the expectation that yields of advanced economies will remain low in the upcoming period have caused capital flows towards emerging economies to post favorable figures since the April Inflation Report. Moreover, due to the risk premiums of emerging economies, which fell in the second quarter of 2014, coupled with the rising global risk appetite, demand for the assets of emerging economies increased. Thus, capital outflows in the first quarter of 2014 reversed in this quarter (Chart 5.1.3). Capital inflows towards Turkey fluctuated in this period; yet net portfolio flows have proved positive in cumulative terms as of the start of the quarter

and compensated for the outflows in the first quarter (Chart 5.1.4). This is attributed to Turkey's reduced risk premium in addition to positive growth and the current account deficit data.

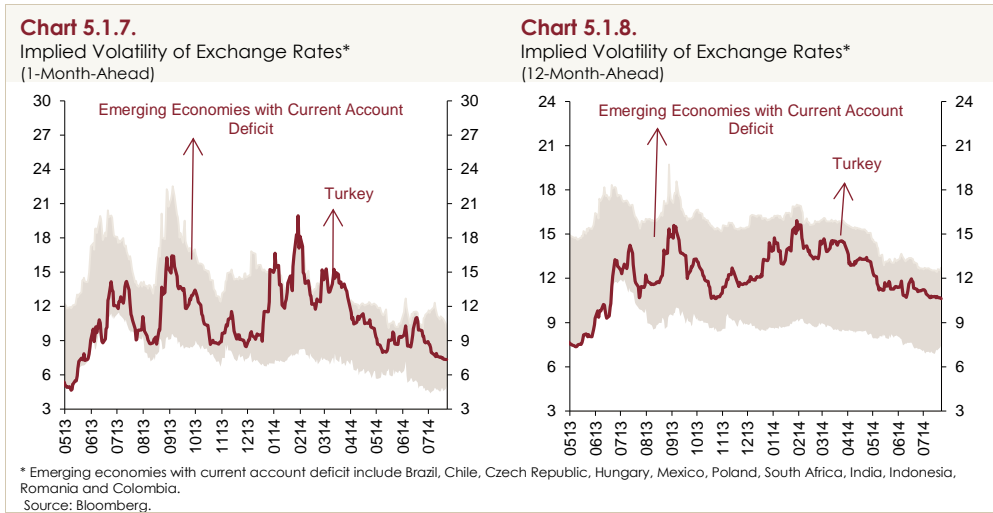


Exchange Rates

Due to the developments since the reporting period of April 2014, currencies of emerging economies firstly appreciated against the USD amid the increased global risk appetite, but slightly depreciated due to the rising geopolitical risks as of the second week of June (Chart 5.1.5). Although the Turkish lira moved in tandem with the currencies of other emerging economies, Turkey's being adjacent to the region of intense geopolitical risks and having Iraq as a foremost trading partner increased the sensitivity of the Turkish lira against these developments. The strong relationship between the currency basket and the risk premium continued in this period. Before June 10, the outbreak of extreme chaos in Iraq, the currency basket was around 2.45. Then, it hit 2.53 but compensated for some part of losses in the rest of the quarter and reverted to 2.47 on July 22 (Chart 5.1.6).



Second-quarter developments had repercussions on the implied exchange rate volatilities of emerging market currencies as well, and the implied volatilities of emerging market currencies declined. Turkey's implied exchange rate volatility moved in tandem with other emerging economies and posted a decline in both 1-month and 12-month maturities (Charts 5.1.7 and 5.1.8). In this period, the implied 1-month volatility in the exchange rate saw a bigger drop than that of the 12-month, which is striking. This is attributable to the decline in Turkey's short-term domestic uncertainty.



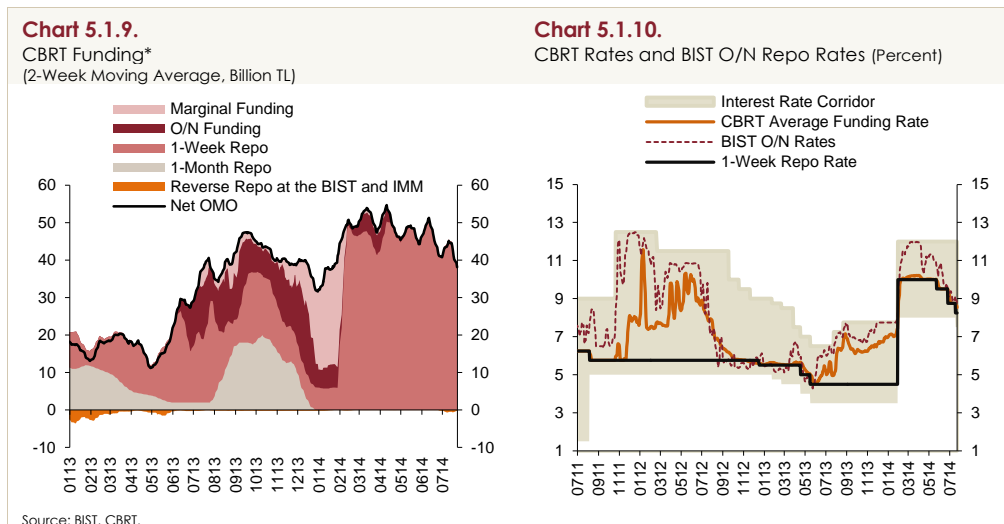
Monetary Policy

In the second quarter of 2014, the recent notable decline in uncertainties regarding the Fed's asset purchases coupled with the recovery in global growth led risk perceptions in global financial markets to witness improvements. Moreover, the Fed announced in June that the low interest rate policy would be maintained in the medium term. Additionally, long-term rate expectations of the FOMC members were down from 4 percent to 3.75 percent. In the same period, the ECB lowered the borrowing rate to negative and announced a new quantitative easing policy to be launched in September. These developments led to an easing in global liquidity conditions, and capital inflows towards emerging economies improved somewhat. Due to the reduced uncertainty and the slightly improved risk premium indicators, market rates saw a decline in all maturities. On the other hand, the tight monetary policy and macroprudential measures kept the credit growth rates at reasonable levels. In line with these developments, private final domestic demand exhibits a mild outlook. Given the current outlook of demand components, aggregate demand conditions are projected to limit inflationary pressures in 2014. Moreover, the negative effects of the cumulative foreign exchange rate developments since the mid-2013 on annual inflation will taper off. The recent stabilization of the exchange rate is estimated to improve the inflation outlook.

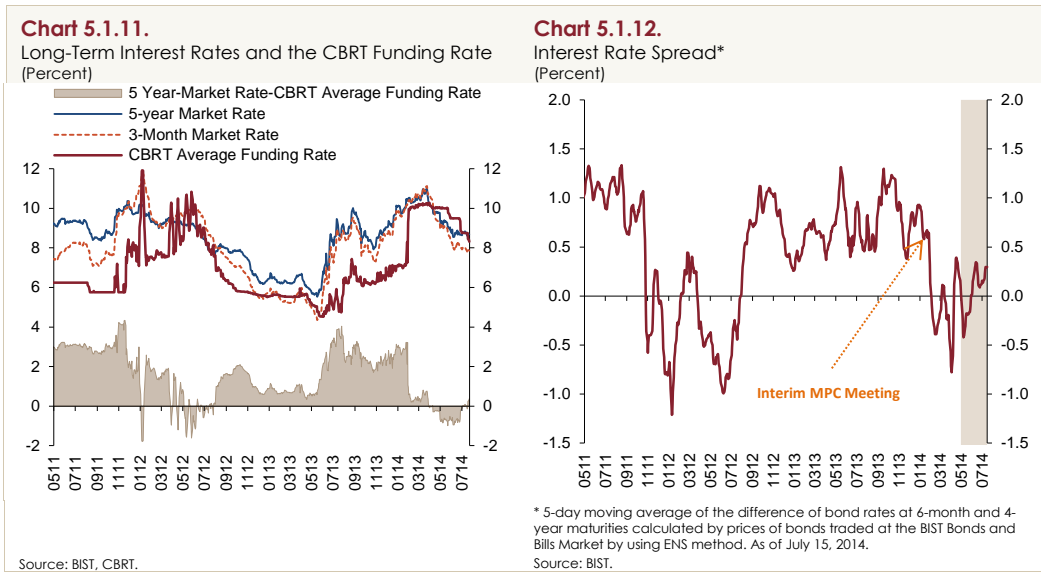
Due to external and internal developments that affected risk perceptions in the first quarter of 2014, the Turkish lira depreciated significantly and risk premiums increased notably. In order to contain the negative impact of these developments on inflation and macroeconomic stability, the CBRT decided at its interim MPC meeting on January 28 to deliver a strong and front-loaded monetary tightening and to simplify its operational framework. Considering the developments underlying this strong and front-loaded policy rate hike in January, the CBRT opted for moderate rate cuts in the

second quarter of 2014. Firstly, the late liquidity window lending rate was reduced from 15 percent to 13.5 percent in April. Afterwards, due to improvements in global liquidity conditions, waning uncertainties and improvements in risk premium indicators, the 1-week repo rate was reduced by 50 and 75 basis points, respectively, in May and June. Following these decisions, the rate on the funding through quantity auctions was lowered to 8.75 percent. Lastly, the CBRT reduced the 1-week repo rate to 8.25 percent and the overnight borrowing rate from 8 percent to 7.5 percent in July.

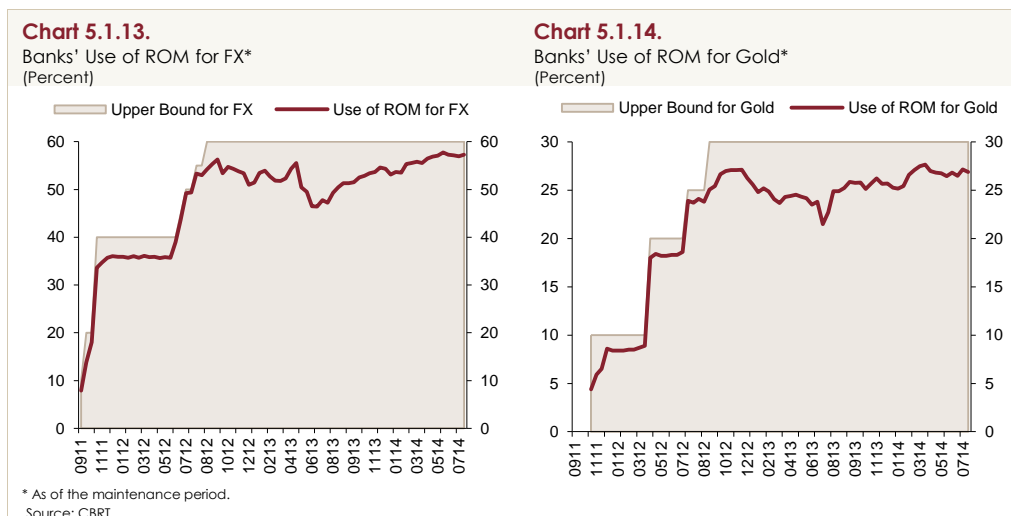
Since the publication of the April Inflation Report, CBRT funding, which was launched under the decision to simplify the operational framework of the monetary policy made in the MPC interim meeting in January, continued to be provided mainly through 1-week repo auctions (Chart 5.1.9). The provision of the CBRT funding mostly by 1-week repo auctions led the average CBRT funding rate to hover around the weekly funding rate. Therefore, moderate rate cuts delivered due to waning domestic and external uncertainties since April were also reflected on the average funding rate. Liquidity measures taken in the same context caused a slight fall in the BIST overnight repo rates. The BIST overnight repo rates have recently hovered around the 1-week repo rate (Chart 5.1.10).



While opting for moderate rate cuts recently, the CBRT maintained the tight monetary policy stance by keeping the yield curve nearly flat. Due to the slump in long-term rates in the second quarter of 2014, the spread between 5-year market rates and the CBRT's average funding rate hovered below zero in this period (Chart 5.1.11). Moreover, the spread between the 4-year market rate and the 6-month rate obtained from the yield curve hovered around zero (Chart 5.1.12). The distance of these indicators from the historical average values, which was positive, points to the tight stance in the monetary policy. The CBRT will closely monitor inflation expectations, pricing behaviors and other factors affecting inflation and maintain the tight monetary policy stance by keeping the yield curve almost flat until an evident improvement is seen in the inflation outlook in the upcoming period.



In the second quarter of 2014, Turkish lira costs remained higher than foreign currency costs as in the previous quarter, leaving the use of the ROM advantageous. Proving this advantage, banks continue to use both gold and foreign exchange ROM considerably (Charts 5.1.13 and 5.1.14). The rate of use of this facility by banks was 96 percent (57.3/60) for FX and 90 percent (26.9/30) for gold as of the maintenance period starting on 18 July 2014.

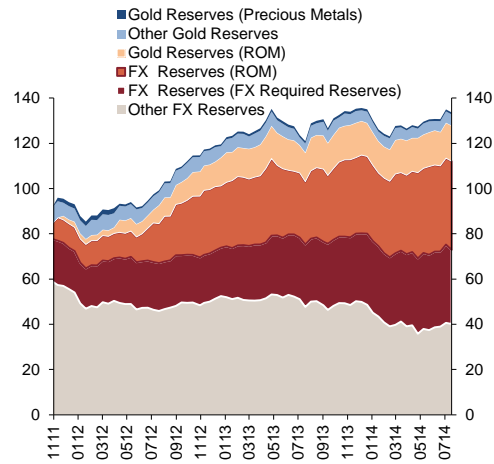


CBRT reserves exhibited a partial increase compared to the April Inflation Report (Chart 5.1.15). In this period, reserves that the banks maintained under the foreign exchange and gold reserve options and foreign currency required reserves did not display a noticeable change. Considering the recovery observed in the current account deficit since May, the CBRT revised the daily foreign exchange selling auction amount downwards. As of 9 May 2014, the foreign exchange selling auction amount was set as minimum 20 million USD. Thus, in May and June, the fall in reserves stemming from foreign exchange selling auctions decreased considerably. On the other hand, the rise in re-payments of export rediscount credits contributed to the rise in the CBRT's net reserves in the same period (Table 5.1.1).

Export rediscount credits are expected push the CBRT reserves upwards in the upcoming period as well.

Chart 5.1.15.

CBRT FX Reserves*
(Billion USD)



* As of July 18, 2014.
Source: CBRT.

Table 5.1.1.

Breakdown of FX Reserves*
(Billion USD)

	FX Sales (-)	Rediscount Credits (+)
October 2013	0.84	1.07
November 2013	1.44	1.70
December 2013	4.67	1.02
January 2014	5.8	0.57
February 2014	1.0	0.30
March 2014	1.05	0.48
April 2014	1.02	0.36
May 2014	0.50	2.06
June 2014	0.42	1.54
July 2014	0.32**	1.46
August 2014		1.37
September 2014		1.41
October 2014		1.30

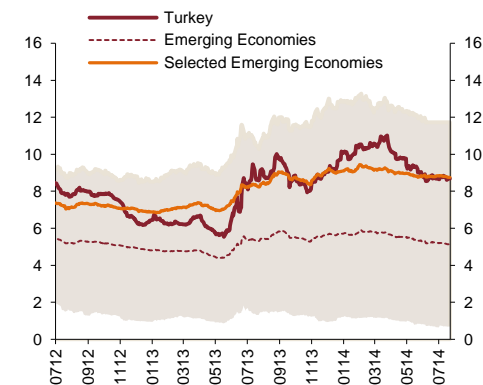
* Excludes direct FX sales on January 23, 2014. Provisional data for rediscount credits from July 2014 and onwards. As of July 22, 2014.
Source: CBRT.

Market Rates

In the second quarter of 2014, due to the decisions made by major central banks, the fall in the risk premiums of emerging economies and the improvement in capital flows, market rates in emerging economies followed a mild course (Charts 5.1.16 and 5.1.17). Turkey's market rates fell in all maturities due to the waning of risks specific to Turkey in this period. However, the risk premiums increased amid the recent political unrest in Iraq, taking some part of this fallback. Across countries, Turkey's 5-year and 6-month market rates are among those which exhibited the most dramatic decline since the previous reporting period (Charts 5.1.18 and 5.1.19).

Chart 5.1.16.

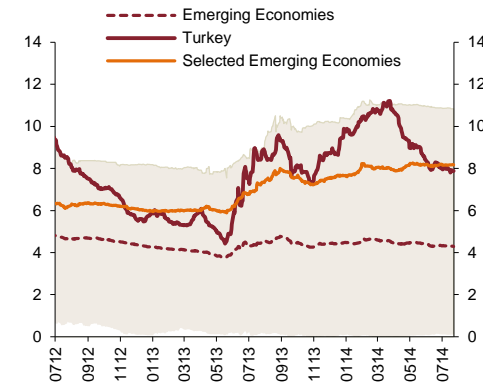
5-Year Market Rates*
(Percent)

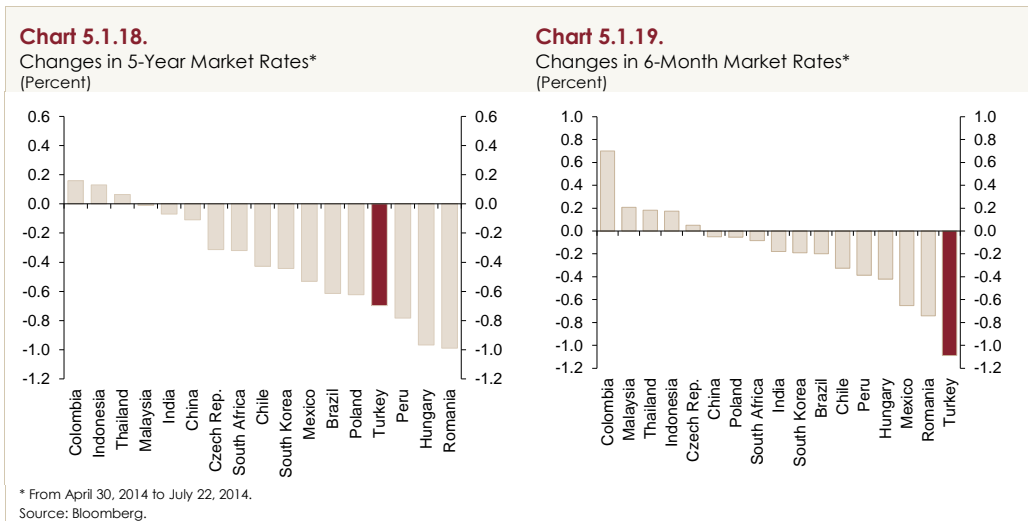


* Emerging economies include Brazil, Chile, Hungary, Poland, Peru, South Africa, Mexico, Malaysia, Colombia, China, South Korea, India, Romania, Indonesia, Czech Republic and Thailand. Selected emerging economies are Brazil, Indonesia, South Africa and India. As of July 22, 2014.
Source: Bloomberg.

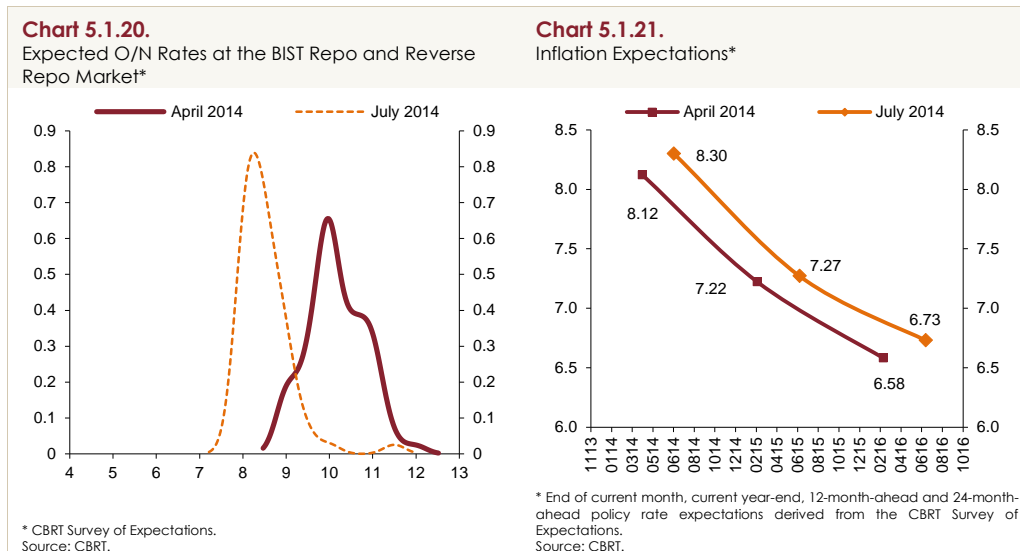
Chart 5.1.17.

6-Month Market Rates*
(Percent)

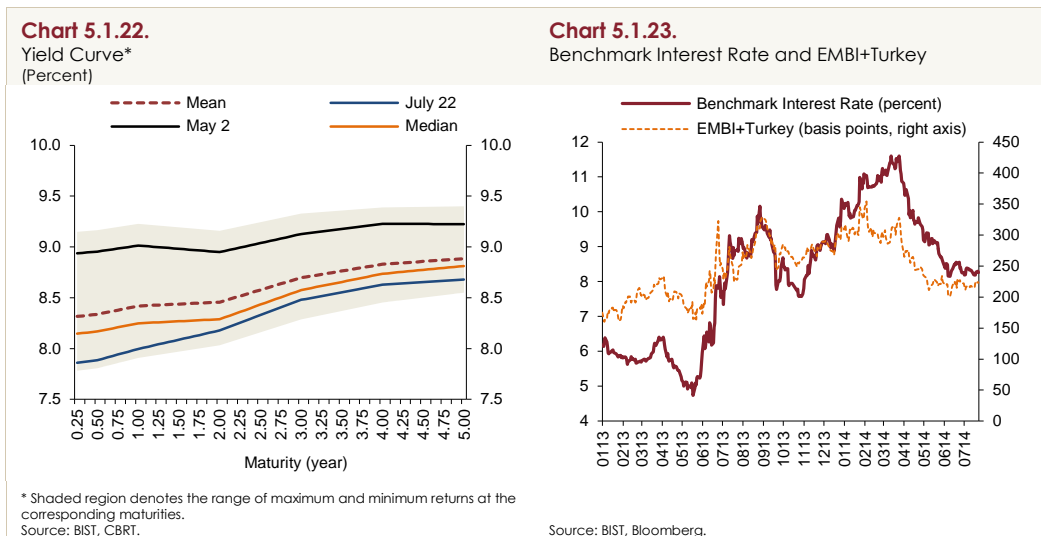




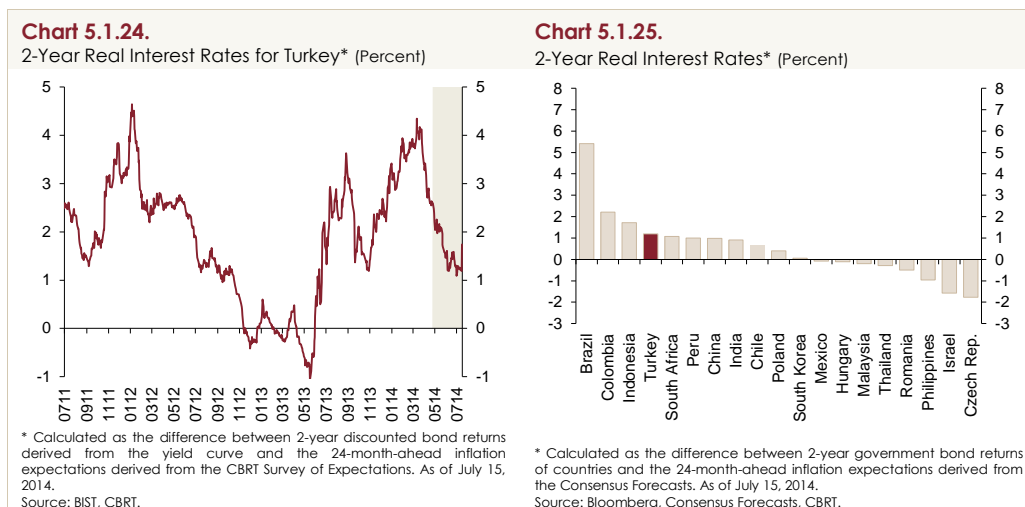
High BIST overnight repo rate expectations stemming from the tight monetary policy implemented in the previous quarter posted a decline due to the moderate rate reductions in this quarter. Accordingly, the BIST Repo and Reverse Repo Market overnight rate expectation distribution shifted towards left compared to April (Chart 5.1.20). Inflation expectations, another factor that may be influential on market rates, posted a slight increase compared to April (Chart 5.1.21).



Owing to positive developments in external markets in the second quarter of 2014, market rates fell in all maturities on a quarterly basis. Having flattened by the end of April, the yield curve has recently exhibited an additional decline in the short term following rate reductions (Chart 5.1.22). Meanwhile, the benchmark rate moved parallel to Turkey's risk premium in the second quarter. Moreover, the 1-week repo rate was also lowered in the MPC meetings in this quarter, which is thought to have been effective on the falling benchmark rate (Chart 5.1.23).

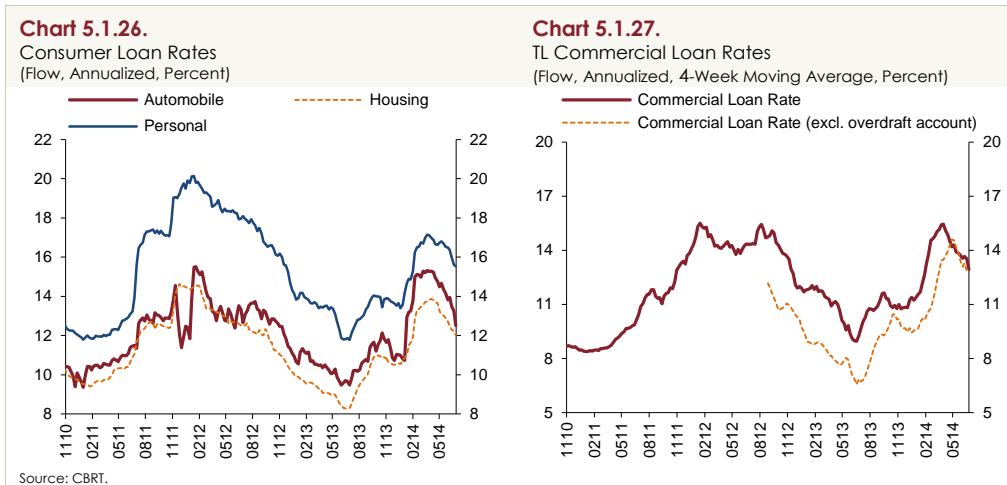


Having risen in the start of the previous quarter, real interest rates have started to decline as of mid-March and continued to fall across the second quarter. Although 2-year inflation expectations did not exhibit a noticeable change, the sizeable fall in nominal interest rates was determinant on the changes in the 2-year real interest rates (Chart 5.1.24). When compared to other emerging economies, Turkey's ranking in the list fell slightly due to the recent decline in the 2-year real interest rate (Chart 5.1.25).

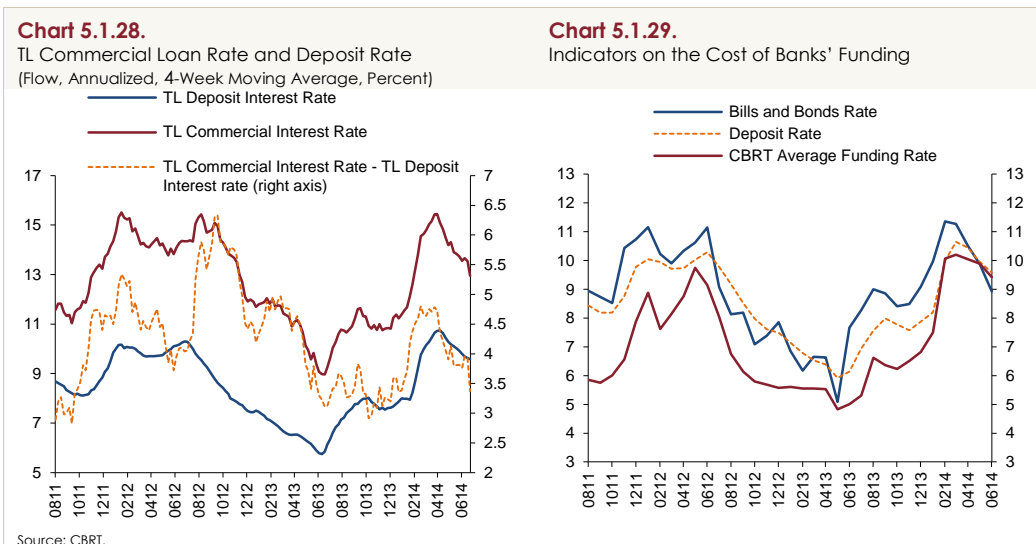


Loan Rates and Banking Sector Funding Costs

Rates on loans extended to the non-financial sector, which increased notably in early 2014, gradually decreased in the rest of the year due to the loosened domestic and external financing conditions. The largest fall in consumer loans appeared in automobile loans, while the rates on housing loans posted a quarter-on-quarter decline by 150 basis points (Chart 5.1.26). The fall in commercial loan rates, which are mostly extended in the short term, proved more evident compared to consumer loan rates (Chart 5.1.27). According to the results of the Loan Tendency Survey of the second quarter of the year, the tightening in fees and commissions (non-interest charges) implies that the fall in commercial loan rates was not reflected on firms.



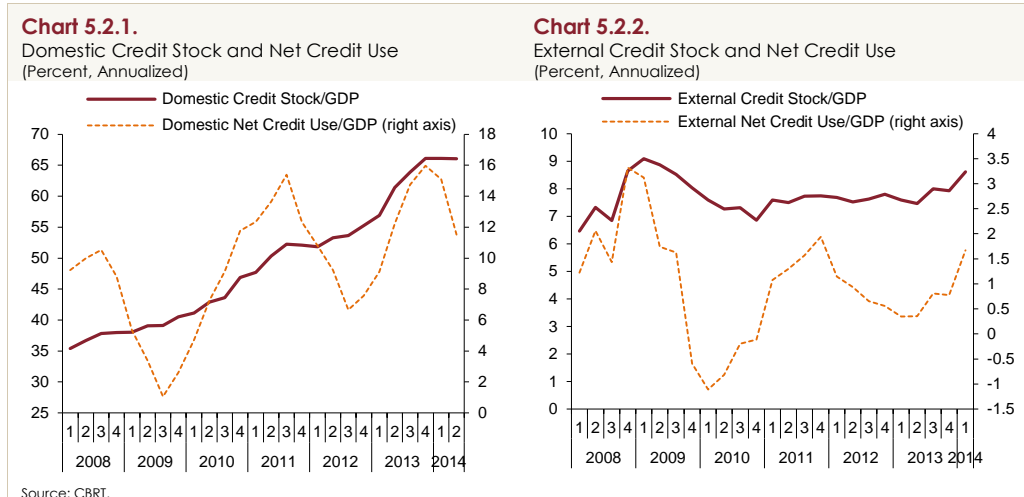
As the CBRT reduced the 1-week repo rate in May and June by 125 basis points in total, the TL-denominated deposit rate fell in the second half of the year. In the same period, as the commercial loan rates declined as well, the spread between the commercial loan rate and the deposit rate decreased and neared the long-term average (Chart 5.1.28). As the ECB started implementing a negative interest rate policy and the Fed signaled for a probable easing with the latest data from the US in the second quarter of the year, the funding amount flowing into Turkey with other emerging economies increased, and this had effects on the bonds and bills issued by banks. Rates on domestic issues of bills and bonds issued by banks saw a greater decline than that in deposit rates in the second quarter of the year (Chart 5.1.29).



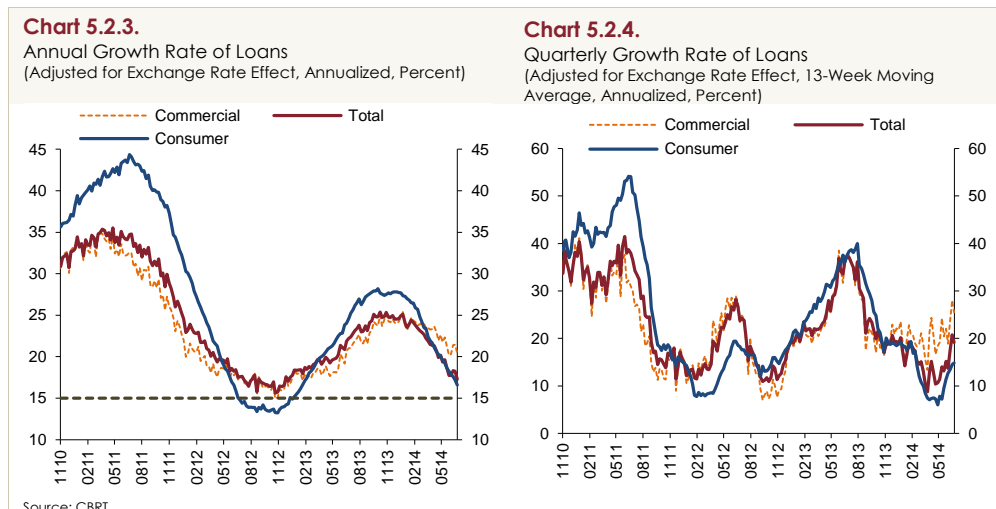
5.2. Credit Volume and Monetary Indicators

The net credits to GDP ratio, which is critical to financial stability and an indicator of the relationship among credit growth, economic activity and aggregate demand, trended further downwards in the second quarter of 2014 and fell below 12 percent reflecting the slowdown in the credit growth (Chart 5.2.1). In the next quarter, with more supportive financial conditions amid falling loan rates, assessments indicate that the decline in the net credits to GDP ratio will pace down. The

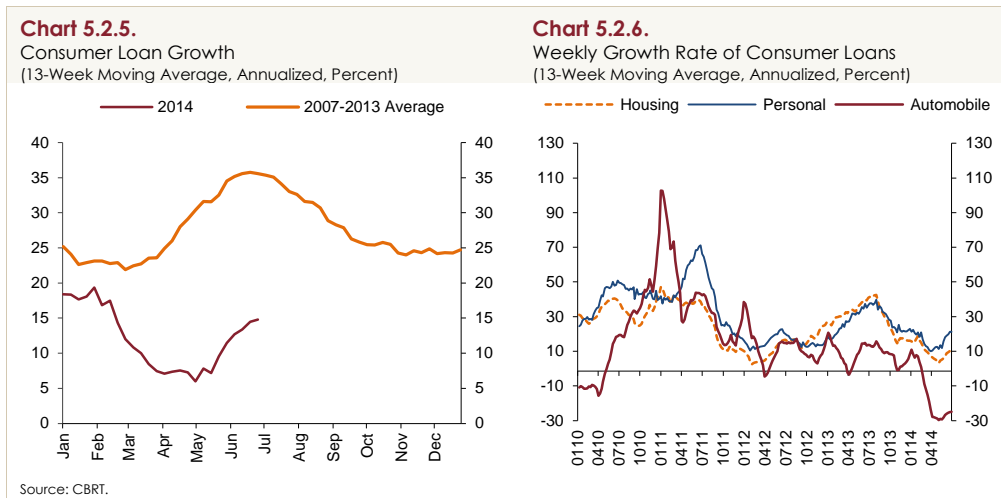
relatively flat course of the firms' external net credit use in this period shows that firms had easy access to external borrowing (Chart 5.2.2).



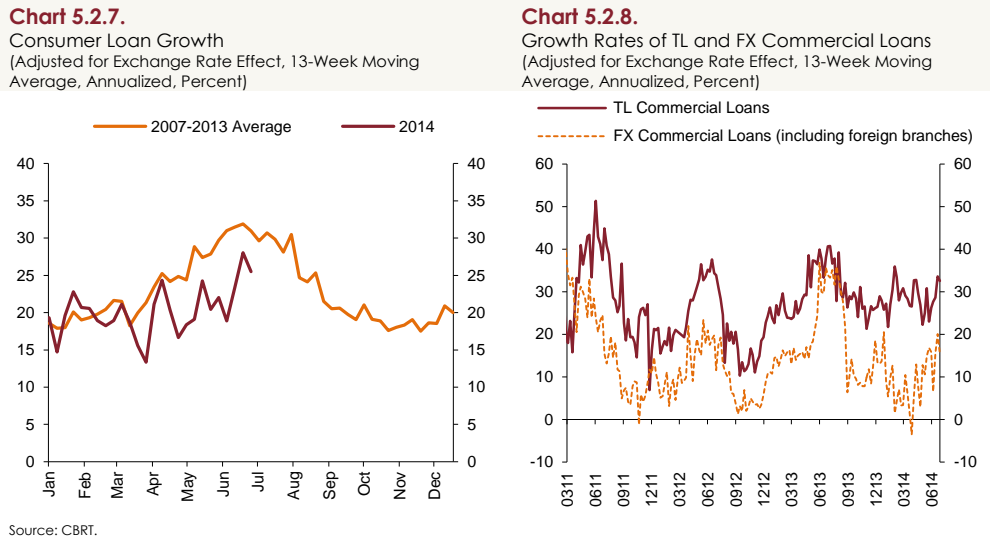
The annual growth rates of loans extended to the non-financial sector, which have been trending downwards since the start of 2014, continued with this trend in the second quarter. This fall is more evident in consumer loans due to the scope of the measures that the BRSA introduced in the beginning of the year and the tight monetary policy implemented by the CBRT. The improved sentiment for the overall economic outlook that affected the loan demand and supply negatively in the start of the year, the quarter-on-quarter increase in the consumer confidence indices, the fall in loan rates and the seasonality effect drove the annualized loan growth rates upwards. Against these developments, loans extended to the non-financial sector adjusted for the exchange rate effect posted a 17.3 percent year-on-year growth at the end of the second quarter of 2014 (Chart 5.2.3), and a 19.1 percent growth in annualized terms compared to the first-quarter average (Chart 5.2.4). The improved sentiment for the overall economic outlook amid the fall in loan rates, the expected reduction in banks' domestic funding costs and the decline in domestic risks imply that the decline in the loan growth rate may slow down in the upcoming quarter.



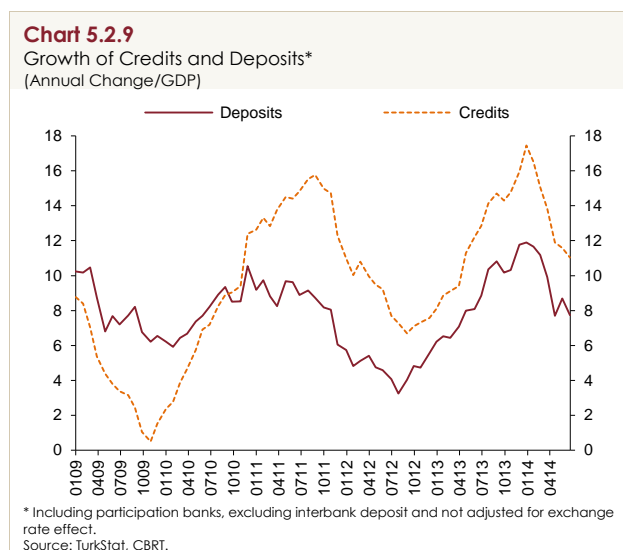
Having lagged behind past years' averages across the year, consumer loan growth started to increase in May (Chart 5.2.5). This is attributed to the gradual fall in consumer loan rates besides seasonality. Across sub-items, the annualized growth rate of housing loans, which has higher interest rate sensitivity, trended upwards in May. In the Loan Tendency Survey, the annualized growth rate of the demand for housing loans, which did not change on a quarterly basis, stood at 10.8 percent at the end of the quarter. The annualized growth rate of personal loans remained below the past years' average with 21.2 percent in the same period (Chart 5.2.6). Banks did not tighten housing loan standards, while personal loans were slightly tightened compared to the previous quarter. Automobile loans continued with a contracted trend in this quarter as well as across the year. Measures taken by BRSA coupled with the low course of durable goods sales led to a decline in the credit card stock.



Having shorter maturities than consumer loans, the growth rate of commercial loans remained slightly lower than past years' averages in the second quarter, while it was close to those levels at the start of the year (Chart 5.2.7). In terms of currencies, the growth rate of TL commercial loans, which are barely sensitive to interest rates, was flat, while the growth rate of FX-denominated commercial loans has trended upwards since March (Chart 5.2.8). According to the Loan Tendency Survey, demand for commercial loans remained almost unchanged, while demand for loans by the SMEs posted an increase in the second quarter. Commercial loan standards of banks recorded a limited easing. In terms of scales, loan standards remained the same, whereas banks tightened their FX-denominated commercial loan standards, and eased standards for TL-denominated commercial loans. Contrary to the previous quarter, perception of the overall economic outlook helped the easing in standards in this quarter. Banks cut their profit margins slightly on average loans, yet increased the non-interest fees and commissions. A limited easing in TL-denominated loans is expected in the third quarter, which is consistent with the expectation of the banks that domestic financing conditions will be eased. Demand for all types of commercial loans, particularly TL-denominated ones is expected to rise.



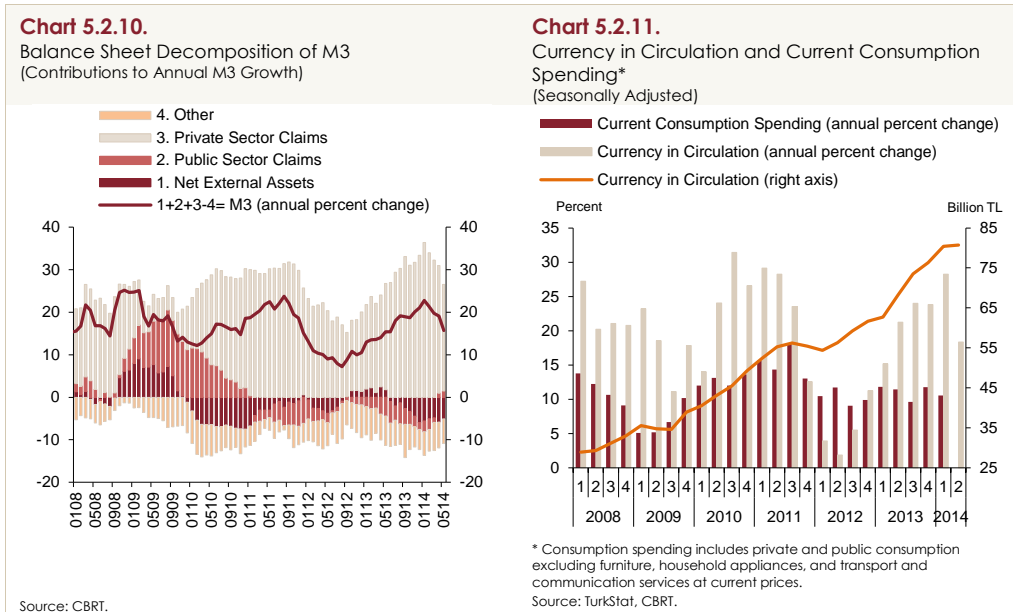
In the second quarter of 2014, the decline in the annual growth rate of total credits continued, although more apparent in consumer loans. Macroprudential measures led to a faster growth in commercial loans compared to consumer loans, supporting the balancing of the economy. This is consistent with an outlook in which domestic demand has little support for economic activity and net exports make a greater contribution. Gradually falling loan rates, expectations for easing in banks' financing conditions in addition to the rising consumer confidence are estimated to limit the decline in the loan growth rate and may ensure that it settles on a track of reasonable growth rates with a moderate pace in the upcoming quarter. The loan growth that has been slowing due to the policies implemented by the CBRT and the BRSA and the pace of deposit growth are expected to converge gradually (Chart 5.2.9). The decline in the loan-deposit growth gap is a factor that will enhance the resilience of the banking sector against possible financial fluctuations by also reducing the banking sector's need for external financing.



Monetary Indicators

The uptrend in credits extended to the private sector continued to be the determinant factor of the annual growth of M3, the broad measure of money supply, in the second quarter of 2014. The annual rate of increase in the Private Sector Claims mostly including the credits extended by banks to the non-financial individuals and organizations continued to fall in the second quarter of 2014, constituting the main factor of the decline in the growth of the M3 money supply.

Having contributed negatively since February 2011, Public Sector Claims started to support the M3 growth in the second quarter of 2014. The negative contribution of net external assets posted a slight increase compared to the first quarter of the year. Meanwhile, the item Other, which displayed a relatively steady course in line with bank profitability, is still a non-deposit funding resource for the banking sector, yet recorded a slight fall compared to the end of the first quarter (Chart 5.2.10).



The annual growth of seasonally adjusted currency in circulation registered a notable decline in the second quarter of 2014 (Chart 5.2.11). As also stated in the previous inflation report, growth rates of consumer loans lessened and the private domestic demand lost some momentum due to the tight monetary policy stance, macroprudential measures and weak capital flows. These became the main drivers of the fall in the annual growth of the currency in circulation.

Box
5.1

Credit Growth and the Current Account Balance

Global imbalances, which widened persistently before the crisis and narrowed suddenly following the crisis, caused an increased emphasis on analyzing the current account balance determinants. The effects of demographics, fiscal balance, growth expectations, net foreign assets and oil dependency on the current account balance were examined extensively in the economic literature. On the other hand, studies investigating the effects of financial variables on the current account balance have become popular only recently. In accordance with the higher prominence of financial variables, this box presents an analysis of the relationship between credit growth and the current account balance.

Accordingly, a panel dataset of 49 emerging and advanced economies is used in this analysis. The dataset is of annual frequency and covers the 1991-2011 period. The ratio of net credit use to the GDP, which is referred to as credit growth, is selected as the financial variable indicator, whereas widely cited factors determining the current account balance are used as control variables.

To test the effects of credit growth on the current account balance, the following equation is estimated by the generalized least squares method under various specifications after correcting for the strong autocorrelation observed in the current account balance:

$$(CA/GDP)_{it} = \beta_0 + \beta_1(\Delta CREDITS/GDP)_{it} + \beta_2 x_{it} + \varepsilon_{it}$$

Here, $(CA/GDP)_{it}$ denotes the ratio of the current account balance to the GDP of country i at time t ; $(\Delta CREDITS/GDP)_{it}$ shows the credit growth; x_{it} stands for the control variables; and ε_{it} expresses the error term. Table 1 presents the sources as well as the estimated effects of these control variables on the current account balance.¹

Table 1. Data Set			
	Source	Explanation	Expected Impact
Current Account Balance/GDP	WEO		
Credit Growth	WDI	New Loans/GDP	-
Net Foreign Assets/GDP (NFA/GDP)	Lane and Milesi-Ferretti (2007)	One period lagged	+
Dummy Variable for High Debt		=1 if NFA/GDP < -60%	-
Relative Income	WEO	Country's GDP per capita/ GDP per capita in US	+
Average Growth Rate	WDI	5-year average GDP growth	-
Oil Trade Balance/GDP	WEO		+
Fiscal Balance	The World Bank Global Economic Expectations		+
Financial Center Dummy	Phillips et al. (2013)	=1 for Netherlands, Switzerland and Belgium	+
Exorbitant Privilege	WEO	Local currency's share in world reserves	-
Dependency Ratio (Old)	WDI	Population over 65/working-age population	-
Dependency Ratio (Young)	WDI	Population under 15 /working-age population	-
Population Growth	WDI		-
Terms of Trade	WDI		+

¹ For further details, see Phillips et al. (2013).

Table 2 presents the estimation results. The first and the second columns show estimation results when control variables are added and excluded, respectively. Accordingly, credit growth has a strong and negative effect on the current account balance in both economic and statistical terms. For example, in the case where the control variables are excluded, a 10 percent increase in credit growth causes a 0.3 percent decline in the current account balance. When control variables are added, this effect remains the same in strength.

That the determinants of the current account balance can vary due to country-specific factors is a widely debated issue in the economic literature. Accordingly, whether the economy is emerging or advanced may alter the results. Therefore, dummy variables for advanced and emerging economies are included in the model. Results are presented in the last two columns of Table 2 for the inclusion and exclusion of control variables, respectively. In this context, the results indicate that credit growth has a negative effect on the current account balance in both country groups. Nevertheless, the most important finding is that the effect of credit growth on the current account balance is nearly 5 times larger in emerging economies than that in advanced economies. Thus, results point to significant differences among countries.

To make this differentiation more apparent, country-specific parameter estimations are extracted using the equation below:

$$(CA/GDP)_{it} = \beta_0 + \beta_1(\Delta CREDITS/GDP)_{it} + \beta_2 x_{it} + \alpha_i(\Delta CREDITS/GDP)_{it} * D_i + \varepsilon_{it}$$

Here D_i denotes dummy variable for country i and α_i shows the extent of deviation of this country from the panel average. Addition of parameters β_1 and α_i will suffice to calculate the estimated effect of credit growth on the current account balance in that specific country. In Table 3, this total effect is estimated for selected countries. As illustrated in the table, the effect of credit growth on the current account balance in some emerging economies deviate significantly from the panel average. More specifically, a 10 percent fall in credit growth results in 0.27 percent increase in the current account balance according to the panel average. However, the same amount of fall may cause a deterioration of 2.6 percentage points in Turkey's current account balance.²

	(1)	(2)	(3)	(4)
Credit Growth	-0.030*** (0.005)	-0.027*** (0.006)		
Credit Growth*AE			-0.012** (0.005)	-0.012** (0.006)
Credit Growth*EE			-0.060*** (0.011)	-0.056*** (0.013)
Control Variables	No	Yes	No	Yes
Number of Observations	1000	967	1000	967
Number of Countries	49	49	49	49
Wald Test p-values			(0.0001)	(0.0014)

***, ** and * denote significance level of 1, 5 and 10 percent, respectively. Standard errors are in parentheses. AE and EE denote dummy variables for advanced and emerging economies.

Table 3. Total Effect for Selected Countries ($\beta_1 + \alpha_i$)

Panel Averages	-0.027	Poland*	-0.07
Peru	-0.34	Mexico*	-0.07
Pakistan	-0.33	South Africa*	-0.01
Turkey	-0.26	Indonesia*	-0.01
Colombia	-0.23	Brazil*	0.01
Philippines	-0.17	India*	0.05
Hungary*	-0.12	China	0.12

* α_i is not statistically significant.

² For a discussion on the reasons for the heterogeneity of parameters and the probable effects of financial depth, see Ekinci et al. (2014).

In sum, the effects of financial variables on the current account balance, which have been relatively less discussed in the economic literature, are analyzed in this box. The use of a panel data set of 49 countries indicates that credit growth has a strong and negative effect that is both economically and statistically significant for the current account balance. It is inferred that this effect is much more pronounced in emerging economies compared to advanced economies. As per the country-specific estimations, the impact is quite powerful in Turkey relative to the other emerging economies.

REFERENCES

- Ekinci, M.F., F.P Erdem and Z. Kılınç, 2014, Credit Growth, Current Account and Financial Depth, CBRT Working Paper No. 14/21.
- Lane, P.R. and G.M. Milesi-Ferretti, 2007, External Adjustment and the Global Crisis, *Journal of International Economics*, 88(2): 252-265.
- Phillips, S., L. Catao, L. Ricci, R. Bems, M. Das, J. Di Giovanni, D.F. Unsal, M. Castillo, J. Lee, J. Rodriguez and M. Vargas, 2013, The External Balance Assessment (EBA) Methodology, IMF Working Paper Series No. 13/272.

Box
5.2

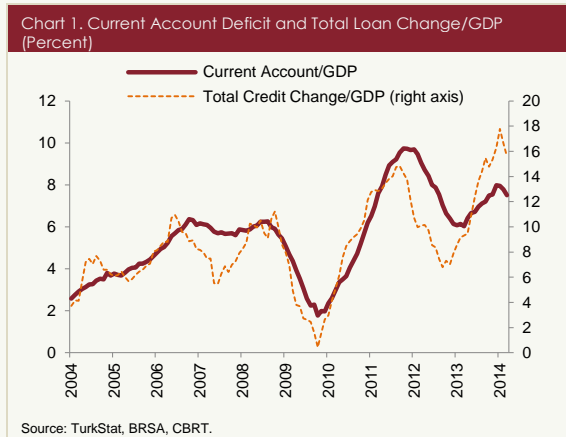
The Relationship between Consumer and Commercial Loans and the Current Account Deficit in Turkey

Turkey experienced a considerable financial deepening in the last decade. Financial deepening is integral to economic development and close monitoring of credit developments in the meantime is critical to the implementation of macroeconomic and financial stability policies.

Turkey exhibited a fast and robust economic growth after the global crisis. Total credit growth rates neared 40 percent in annualized terms and net credit use reached 15 percent in mid-2011 (Chart 1). Domestic financing resources may fail to meet sudden booms in loan demand, thereby deteriorating the current account balance.³ This deterioration may also be accompanied by an excessive appreciation of the local currency. In fact, as illustrated in Chart 1, credit growth remained elevated in 2010 and 2011 and the current account balance worsened considerably.⁴

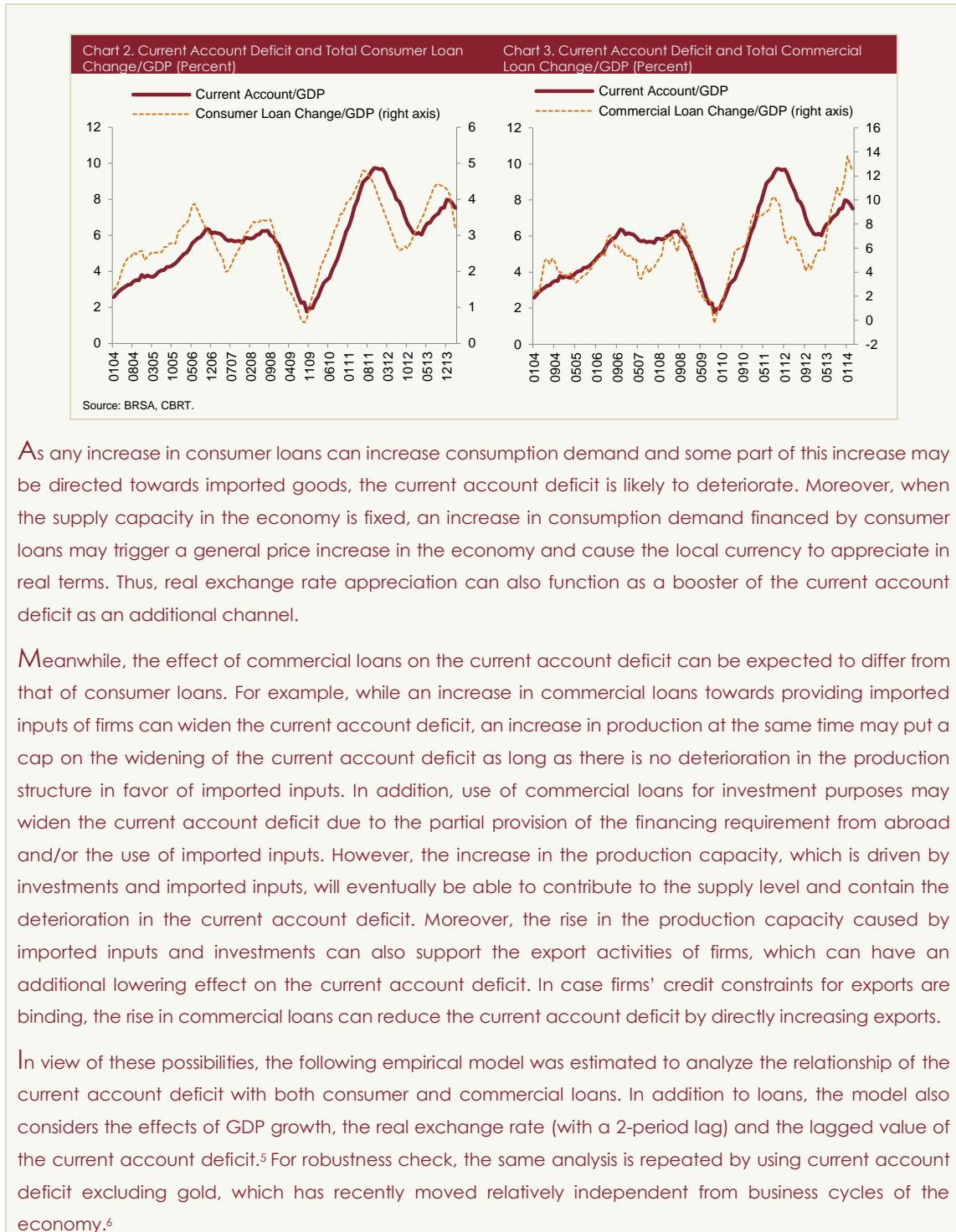
To contain financial risks caused by these factors, the CBRT developed a new policy framework in end-2010. Following the adoption of this policy, and also owing to the measures taken by other regulatory institutions, credit growth rates receded to reasonable levels; the current account deficit was reduced; and the excessive appreciation of the Turkish lira ended. These corrections, which were mostly observed during times of crisis in the past, were experienced without any contraction. This proves that the implemented policy measures successfully achieved a significant balancing in the economy.

Charts 2 and 3 illustrate net credit use for consumer and commercial loans along with the current account deficit. For a variety of reasons, the relationship of current account deficit with loans may differ by loan type. This fact is critical to the design of policy measures for improving the current account balance and also safeguarding financial stability.



³ The current account deficit may widen due to an increase in domestic loan demand through external financing. Also, an increase in capital inflows driven by external factors, like convenient global liquidity conditions, may ease domestic lending and lead to high rates of credit growth. In both cases, measures to contain credit demand and prevent the easing in lending conditions may cause an improvement in the current account deficit.

⁴ Recent studies also discuss that credits are an important determinant of the current account deficit. For example, see CBRT (2014a) and Ekinci et al. (2014).



As any increase in consumer loans can increase consumption demand and some part of this increase may be directed towards imported goods, the current account deficit is likely to deteriorate. Moreover, when the supply capacity in the economy is fixed, an increase in consumption demand financed by consumer loans may trigger a general price increase in the economy and cause the local currency to appreciate in real terms. Thus, real exchange rate appreciation can also function as a booster of the current account deficit as an additional channel.

Meanwhile, the effect of commercial loans on the current account deficit can be expected to differ from that of consumer loans. For example, while an increase in commercial loans towards providing imported inputs of firms can widen the current account deficit, an increase in production at the same time may put a cap on the widening of the current account deficit as long as there is no deterioration in the production structure in favor of imported inputs. In addition, use of commercial loans for investment purposes may widen the current account deficit due to the partial provision of the financing requirement from abroad and/or the use of imported inputs. However, the increase in the production capacity, which is driven by investments and imported inputs, will eventually be able to contribute to the supply level and contain the deterioration in the current account deficit. Moreover, the rise in the production capacity caused by imported inputs and investments can also support the export activities of firms, which can have an additional lowering effect on the current account deficit. In case firms' credit constraints for exports are binding, the rise in commercial loans can reduce the current account deficit by directly increasing exports.

In view of these possibilities, the following empirical model was estimated to analyze the relationship of the current account deficit with both consumer and commercial loans. In addition to loans, the model also considers the effects of GDP growth, the real exchange rate (with a 2-period lag) and the lagged value of the current account deficit.⁵ For robustness check, the same analysis is repeated by using current account deficit excluding gold, which has recently moved relatively independent from business cycles of the economy.⁶

⁵ Credit data used in this box are compiled by the BRSA, while the others are quarterly data obtained from the CBRT resources. All the data are seasonally adjusted covering the 2003Q4-2013Q4 period. Quarterly current account deficit and non-gold current account deficit variables are divided by the quarterly GDP; while consumer loan, commercial and total loan change variables are obtained by dividing the quarterly credit stock changes in these items to the quarterly GDP. The GDP growth is quarter-on-quarter change in GDP. An increase in real effective exchange rate means the appreciation of the Turkish lira against the USD and all variables excluding the exchange rate are calculated in percentages.

⁶ None of the variables in the current account deficit equation has the non-stationarity problem. However, the current account deficit excluding gold exhibits non-stationarity, which is removed by taking the first difference of the series.

$$CA_t = \alpha + \beta_1 CA_{t-1} + \beta_2 GDP_t + \beta_3 REER_{t-2} + \beta_4 CONSUMER_{t-1} + \beta_5 COMMERCIAL_{t-1} + e_t$$

Table 1. Credit Growth and the Current Account Deficit

	Dependent Variable : Current Account Deficit/GDP			Dependent Variable : Current Account Deficit excl. gold/GDP (First Difference)		
	(1)	(2)	(3)	(4)	(5)	(6)
Constant	3.268 (1.667)*	0.261 (1.469)	0.356 (1.280)	3.084 (1.358)**	1.808 (1.434)	1.950 (1.297)
Current Account _{t-1}	0.955 (0.095)***	0.859 (0.037)***	0.844 (0.035)***	-	-	-
GDP Growth	-0.157 (0.048)***	-0.090 (0.041)**	-0.051 (0.033)	-0.141 (0.030)***	-0.121 (0.033)***	-0.096 (0.032)***
Real Effective Exchange Rate _{t-2}	-0.028 (0.014)*	0.000 (0.012)	0.001 (0.010)	-0.024 (0.011)**	-0.010 (0.012)	-0.010 (0.011)
Total Loan Change/GDP _{t-1}	-	-0.108 (0.020)***	-	-	-0.049 (0.022)**	-
Consumer Loan Change/GDP _{t-1}	-	-	-0.365 (0.076)***	-	-	-0.229 (0.094)**
Commercial Loan Change/GDP _{t-1}	-	-	-0.035 (0.025)	-	-	0.004 (0.026)
R ²	0.917	0.959	0.969	0.368	0.490	0.548

*,** and *** denote significance level of 10, 5 and 1 percent, respectively. Number of observations is 39.

According to the estimation results, GDP growth stands out as an important explanatory variable. Moreover, the appreciation of the real exchange rate has a significantly positive effect on the current account deficit. When the net credit use is added, the real exchange rate continues to be influential on the current account deficit. As displayed in the second column, an increase in the net credit use by 1 percentage points adds 0.77 percentage points to current account deficit in the long term.

Joint use of consumer and commercial loans in estimations show that any rise in consumer loans deteriorates the current account balance and the effect of net consumer loan use on the current account deficit is stronger than that of the net credit use. Meanwhile, use of commercial loans does not have a significant effect on the current account deficit.⁷ From an economic point of view, this finding implies that use of consumer loan increases the current account deficit considerably, whereas commercial loan use does not have any effect.⁸ Another striking finding is the reduced significance of GDP and that the real exchange rate is no longer significant with the inclusion of loans to the empirical model. Therefore, some part of the effect of GDP growth that appears when the credit variable is not controlled and the effect of real exchange rate on current account balance manifest through credits. In fact, an increase in consumer loans may deteriorate the current account deficit through import demand and the appreciation of the real exchange rate by pushing prices upwards for a given supply.

⁷ This finding is valid under various robustness analyses like the use of the first difference of the current account deficit, the current account deficit excluding gold and energy or the cyclical component of the current account deficit as well. For further details, see Aloğulları et al. (2014).

⁸ Büyükkarabacak et al. (2009) analyzed 18 emerging economies to show that the composition of credit matters for the trade balance. The authors find that consumer loans have negative contribution, whereas commercial loans have a positive contribution on the trade balance.

The fact that the effects of consumer and commercial loans on the current account deficit are different also entails informative value regarding the measures to be taken to improve the current account balance. Obtained findings suggest that containing credit growth mostly by limiting consumer loans may improve the current account balance. Accordingly, with the liquidity policies recently adopted by the CBRT⁹ and the macroprudential measures enforced by the BRSA, consumer loans will further decelerate while commercial loans will remain strong, thereby favorably affecting the correction of the current account balance.

REFERENCES

- Aliođullan, Z.H., Y.S. Bařkaya, Y.E. Bulut and M. Kılınç, 2014, Türkiye'de Tüketici ve Ticari Kredilerin Cari Açıkla İliřkisi (in Turkish), forthcoming CBT Research Notes in Economics.
- Büyükkarabacak, B. and S. Krause, 2009, Studying The Effects of Household and Firm Credit On The Trade Balance: The Composition of Funds Matters, *Economic Inquiry*, 47(4): 653-666.
- CBRT, 2014a, Credit Growth and the Current Account Balance, Box 5.1, Inflation Report 2014-III.
- _____, 2014b, The Relationship between the System's Funding Need and TL Loans, Box 5.3, Inflation Report 2014-III.
- Ekinci, M.F., F.P. Erdem and Z. Kılınç, 2014, Credit Growth, Current Account and Financial Depth, CBRT Working Paper No. 14/21.
- Güler, M.H., G. Keleş, E. Kılıncı, 2014, Sistemin Fonlama İhtiyacı Bileşenleri ve Türk Lirası Kredi İliřkisi (in Turkish), CBT Research Notes in Economics No. 14/03.

⁹ For further details, see CBRT (2014b) and Güler et al. (2014).

Box
5.3

The Relationship between the System's Funding Need and TL Loans

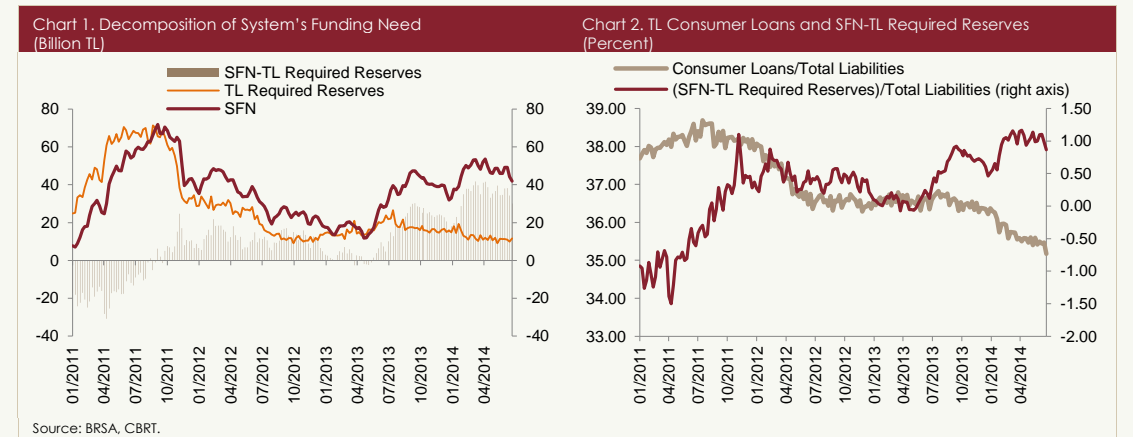
This box presents an analysis of the current monetary policy framework in terms of its effect on the divergence between the changes in the TL consumer and commercial loans. To this end, the changes in the amount of TL required reserves and system's funding need (SFN) excluding TL required reserves, which are the sub-components of the SFN, are examined in terms of their impact on consumer and commercial loans. Accordingly, Chart 1 presents the course of the SFN components.

Under the current monetary policy framework implemented since early 2011, the CBRT uses TL reserve requirement ratios and the liquidity gap as an active policy tool in addition to the interest rate corridor and the funding policy. In this context, by raising the share of SFN sub-items within the total liabilities of the banking sector, the CBRT may deliver both quantitative and qualitative tightening. The rise in the share of the SFN sub-items (which have shorter maturities than deposits) within the balance sheet increases the interest rate risk that the banking sector faces due to the maturity mismatch between assets and liabilities, and this can impose an additional hedging cost to banks. This cost appears in varying degrees by loan types, which may lead to a divergence between the TL consumer and commercial loan volumes. Due to this divergence, banks prefer extending commercial loans rather than consumer loans. Thus, the supply of goods and services as opposed to the demand thereof is supported, which in turn, contributes to price stability as well as the balancing of domestic and external demand.

SFN Sub-components and TL Loans

The data used in this study covers the January 2011 – November 2013 period, during which the new policy mix was effectively used. The data on net OMO is used as the SFN indicator.¹⁰ The net OMO is obtained by subtracting the undue Turkish lira sterilization amount from the undue Turkish lira funding provided by the CBRT through repo and depot. When the system's funding need is positive, this implies that the banking system has a Turkish lira liquidity need.

The effects of SFN sub-components on TL consumer and commercial loans are examined via the impulse response functions obtained from the structural VAR analyses based on weekly data. The course of TL consumer loans and SFN excluding TL required reserves is illustrated in Chart 2.



¹⁰For further details, see Güler et al. (2014).

The net OMO, which denotes the SFN, is determined by the items on the assets and liabilities sides of the CBRT's balance sheet. Basically, the asset side of the CBRT's balance sheet is composed of FX reserves (FX^{CBRT}), government domestic debt securities ($GDDS^{CBRT}$) and open market operations (SFN). The liabilities side covers the money in circulation ($Circulation$), banking sector reserves ($Reserves$) and public deposits ($Deposits_{CBRT}^P$).

$$FX^{CBRT} + GDDS^{CBRT} + SFN = Circulation + Reserves + Deposits_{CBRT}^P \quad (1)$$

In the CBRT's balance sheet,

- i. When FX^{CBRT} and $GDDS^{CBRT}$ are fixed, the increase in liabilities in equation (1) increases the net OMO.

Banks, which use nearly all of their deposits in purchasing foreign exchange assets, securities and/or giving loans, usually provide required reserves through open market operations. Thus, the net OMO mainly originates from the TL required reserves that the banks need to maintain. This is denoted as "Reserves" in equation (1).¹¹

On the other hand, external factors that are not directly determined by the CBRT, such as changes in public deposits held at the CBRT and the increase/decrease in the money in circulation, are also influential on the SFN. The net effect of external factors can take positive or negative values, while SFN usually fluctuates around the TL required reserves.

- ii. When the liabilities side of the Equation (1) is fixed, a decline in FX^{CBRT} and $GDDS^{CBRT}$ increases the net OMO as well.

Therefore, other than TL required reserves and external factors, another component influential on the SFN is FX sales or purchases of the CBRT and the purchases and sales of TL-denominated GDDS. Unlike OMO, this component affects SFN permanently as long as the operation is not reversed.

Examining the banking sector balance sheet will be helpful in monitoring the relationship between the credit development and the SFN. The simplified banking sector balance sheet, which has the assets side covering FX assets (FX^B), the government domestic debt securities ($GDDS^B$), reserves held at the CBRT ($Reserves$) and credits ($Credits$) and the liabilities side covering the household and public deposits ($Deposits$) and net open market operations (SFN) are formulated below:

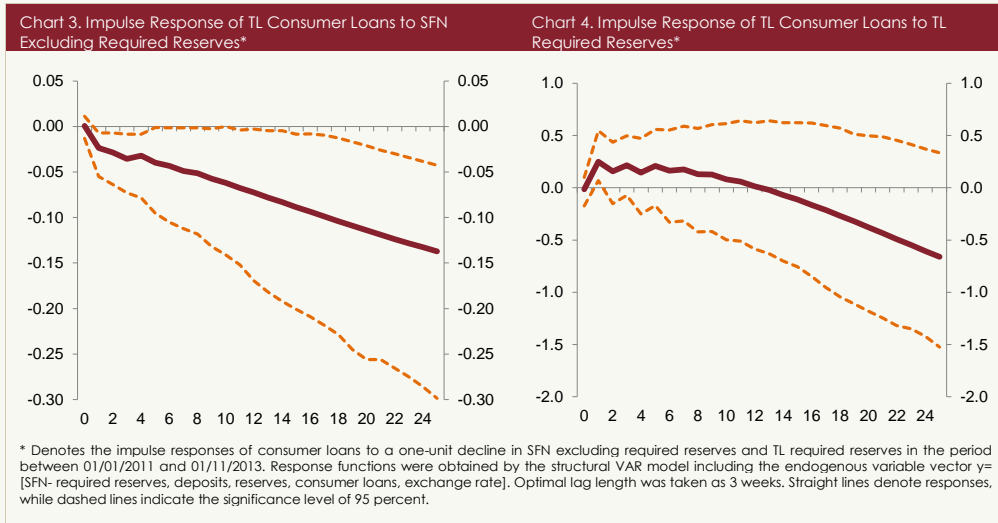
$$(FX^B + GDDS^B) + Credits = Deposits + (SFN - Reserves) \quad (2)$$

Under the current inflation targeting regime, the banking sector can have access to unlimited borrowing from the CBRT against their collaterals; thus changes in FX reserves are reflected on SFN. Therefore, the difference between SFN and FX reserves in equation (2) mainly moves in line with the changes in external factors or by the volition of the CBRT.

¹¹: Reserves indicate the sum of required reserves and free deposits of banks. As there is a liquidity gap in the system currently, reserves and TL required reserves are used interchangeably in this box.

TL Consumer Loans: Structural VAR analysis

Impulse response functions of the structural VAR analysis¹² scrutinizing how the changes in TL required reserves and SFN excluding TL required reserves affect TL consumer loans are given in Charts 3 and 4. As expected, an increase in the SFN excluding required reserves decreases consumer loans through the balance sheet channel. However, increases in TL required reserves surprisingly do not have a statistically significant effect on consumer loans. This can be attributed to the diminishing effect of exogenous increases in required reserves on deposit rates. More specifically, an increase in required reserve ratios raises the cost of deposits, which can be passed on to customers as lower rates. This fall in deposit rates is assessed to curb the boosting effect of required reserves (decreasing effect on the credit volume) on the consumer loan rates.



TL Commercial Loans: Structural VAR analysis

Impulse response functions of the structural VAR analysis¹³ scrutinizing how the changes in TL required reserves and SFN excluding TL required reserves affect TL commercial loans are given in Charts 5 and 6. Accordingly, effects of neither the SFN excluding TL required reserves nor the TL required reserves are considered to be statistically significant on TL commercial loans. This conclusion proves that a decline in commercial loans in times of heightened exchange rate volatility and loss of confidence in the economy cannot be attributed to an increase in the SFN excluding TL required reserves. This result is owed to the rotative structure of commercial loans besides the low elasticity of commercial loan demand.

¹² The analysis is conducted using the endogenous variable vector $y = [\text{SFN- required reserves, deposits, reserves, consumer loans, exchange rate}]$. For structural VAR analysis constraints, see Güler et al. (2014).

¹³ The analysis is conducted using the endogenous variable vector $y = [\text{SFN- required reserves, deposits, reserves, commercial loans, exchange rate}]$.

Chart 5. Impulse Response of TL Commercial Loans to SFN-Required Reserves*

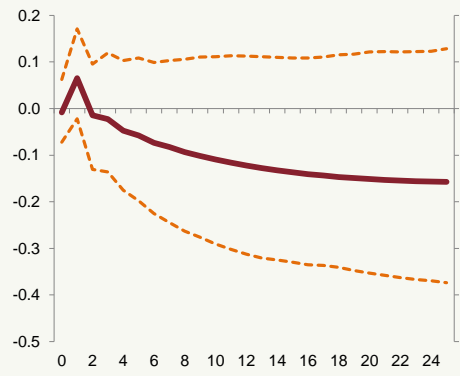
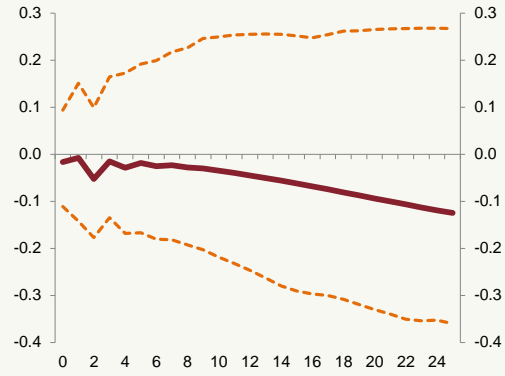


Chart 6. Impulse Response of TL Required Reserves to SFN-Required Reserves *



* Denotes the impulse responses of commercial loans to a one-unit decline in SFN excluding required reserves and TL required reserves in the period between 01/01/2011 and 01/11/2013. Response functions were obtained by the structural VAR model including the endogenous variable vector $y = [\text{SFN-required reserves, deposits, reserves, commercial loans, exchange rate}]$. Optimal lag length was taken as 2 weeks. Straight lines denote responses, while dashed lines indicate the significance level of 95%.

Conclusion

Findings highlight that required reserves do not have a significant effect on TL loans, while increases in SFN excluding TL required reserves may affect TL consumer and commercial loans differently. Time series analyses used in this study empirically show that increases in SFN excluding required reserves decrease TL consumer loans, while they may leave TL commercial loans unchanged. This conclusion is believed to be caused by differences in maturity as well as structural variation between consumer and commercial loans. Having a rotative structure and the ability to be extended even at an overnight maturity, TL commercial loans bear a lower interest rate risk than consumer loans. This lower risk is considered to be the primary factor that may cause a divergence between consumer and commercial loans. Another striking factor is the lower interest rate elasticity of demand for commercial loans, which causes commercial loans to be less responsive to rate increases delivered through the liquidity policy.

REFERENCES

Güler, M.H., G. Keleş and E. Kilimci, 2014, Sistemin Fonlama İhtiyacı Bileşenleri ve Türk Lirası Kredi İlişkisi (in Turkish), CBT Research Notes in Economics No. 14/03.

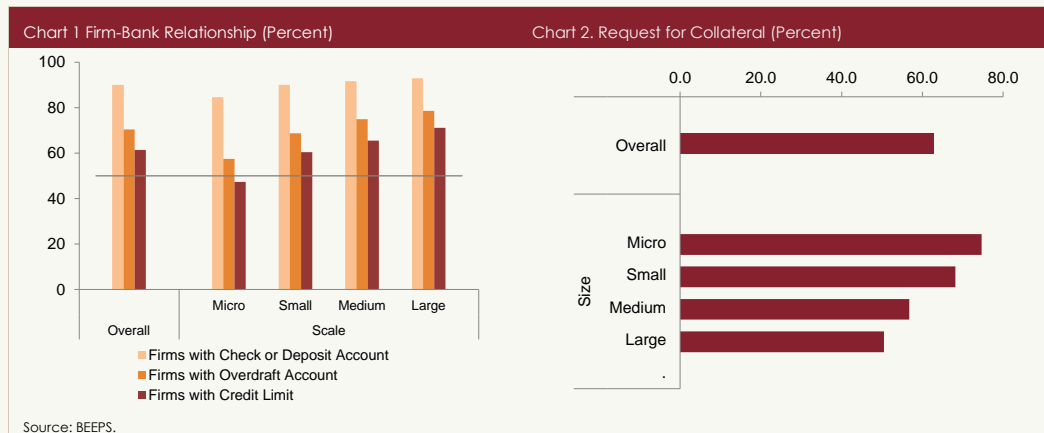
Box
5.4

Firms' Access to Credit in Turkey: A Survey-Based Analysis

Surveys conducted to understand the financing structure of the corporate sector enrich the information set about firms' balance sheets. Besides the regularly conducted surveys, others are also constructed which focus on certain firm-related issues. One such survey, called "The Business Environment and Enterprise Performance Survey (BEEPS)" created jointly by the EBRD and the World Bank, evaluates the business environment in Eastern Europe and Central Asia in a multi-dimensional way. Results of the BEEPS survey conducted in 2008 give important clues about the business environment and performance of firms in 29 countries including Turkey. The survey questions on financing enable a better comprehension of firms' access to credit in different countries. By adopting an original perspective, Kurul and Tiryaki (2014) examine the credit access of firms operating in Turkey using the results of the 2008 BEEPS survey. This box summarizes the findings of this study, which analyze the behavioral features of Turkish firms' financing status.

Findings on the financing structure and credit access of firms

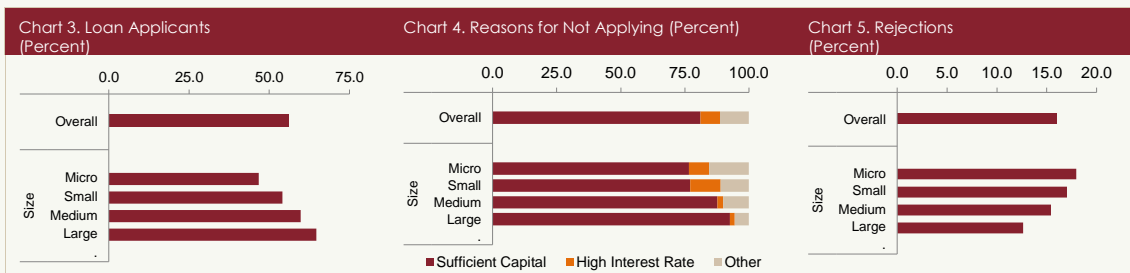
The 2008 BEEPS survey was conducted between April 2008 and January 2009 among 1152 firms, 58.4 percent of which were micro and small-sized.¹⁴ Several survey questions were asked to better identify firms' relationship with banks. The first question asks whether firms have check or deposit accounts. As expected, a majority of firms has either check or deposit accounts (Chart 1). Moreover, 70.3 percent of firms have overdraft accounts, while 61.4 percent have credit limits. The positive relation between firm size and having overdraft accounts and credit limits implies that small-sized firms may have greater credit constraints. In fact, more than half of micro-sized firms do not have a credit limit.



The survey also provides information on the collaterals requested from firms during borrowing. Accordingly, firms were asked whether any collateral was requested on their latest loan application (Chart 2). Survey responses indicate that 62.9 of the firms were not asked for collateral for their latest extended credit. Results show that firm size is a significant criterion for banks in their request for collaterals, and as the size becomes larger, banks have relatively easier ability to meet collateral requirements. The survey also asks the kind of collateral provided by the firm for the latest extended credit. Responses show that the most preferred collateral is real estate owned by firms.

¹⁴ It should be considered that the crisis effect may be present in responses given in the surveys conducted between end-2008 and early 2009. Accordingly, Kurul and Tiryaki (2014) examined how perceptions of firms regarding loan access have changed in the post-crisis period and found that credit constraints increased and requirement for collaterals got tighter following the crisis.

In addition, the survey asks firms whether they applied for loans in the latest financial year, finding that a majority of firms have applied for loans (Chart 3). The percentage of firms filing a loan application increased for larger firms, while this ratio was less than 50 percent for micro and small-sized firms. The reasons for firms not applying for loans are important to determine whether they do not need loans or there are obstacles in their access to credit. Thus, firms that did not apply for loans were asked for the reasons why they did not apply (Chart 4). Results show that the major cause is the sufficiency of capital, whereas high interest charges on loans constituted a constraint for only 7.7 percent of the firms. Analysis by firm size reveals that sufficient capital was a more common reply for large enterprises, whereas high loan rates proved to be a greater constraint for small-sized firms. However, the reason for small firms to state high loan rates as their primary reason for not applying for loans despite their need is mainly attributable to the fact that banks are willing to extend loans to small firms only under higher interest rates.



One of the important indicators for credit access is certainly firms' credit rejections. Chart 5 shows the percentage of rejected firms. Accordingly, most of the applications were accepted, while the rate of acceptance increased for larger firms.

Firm Size and Credit Constraints

This section discusses the extent of credit constraints faced by firms operating in Turkey. Accordingly, the above analysis is repeated in order to analyze whether credit constraints are smaller for larger sized firms.

In this respect, firms are categorized as those that applied for loans and those that did not apply for loans. Then, firms that applied for loans are further classified as accepted and rejected. Firms that did not apply for loans are categorized as firms that do not need loans and firms that are hopeless to attain loans. Consequently, the number of firms that need loans and those that have access to loans can be quite easily identified. Results indicate that 36 percent of firms do not need loans as they already have sufficient capital (Table 1). In general, 46 percent of the firms that applied for loans were accepted, while 9 percent of them were rejected. Against this background, the ratio of firms experiencing credit constraints was calculated by adding the percentage of those that applied for loans but were rejected and those that did not apply for loans, despite their need for financing, due their inability to attain loans for some reason. Accordingly, results show that 17 percent of the firms experience credit constraints.

Table 1. Summary Statistics on Firms' Credit Need and Access			
<i>Total number of firms</i> 1133 Percent 100,0			
Applicants		Non-Applicants	
<i>Total number of firms</i> 626		<i>Total number of firms</i> 507	
Percent 55.3		Percent 44.7	
Accepted	Rejected	Those without need	Those without hope
<i>Total number of firms</i> 526	<i>Total number of firms</i> 100	<i>Total number of firms</i> 411	<i>Total number of firms</i> 96
Percent 46.4	Percent 8.8	Percent 36.3	Percent 8.5

Source: BEEPS.

For an empirical analysis of how credit constraint varies according to firm size and to determine factors underlying credit constraint, a logistic regression model is estimated, the results of which are summarized in Table 2. Similar to the construction of the credit constraint variable, an access-to-credit variable is created, which is set to 1 for firms that obtained loans, while it is set to 0 for rejected firms and those that did not apply for loans as they had no hope. Access-to-credit was set as the dependent variable, and firm size variables besides a set of firm-specific control variables (having any payments overdue by more than 90 days, undergoing an independent auditing, and being an exporter) were selected as explanatory variables. A logistic regression model was estimated in which micro-sized firms were taken as the reference group.

Logistic Regression Model				Number of observations=699
Credit Access	Relative Probability	Standard Deviation	p-value	Result
Firm size (Small)	1.142	0.301	0.613	Not Reject Ho
Firm size (Medium)	1.808	0.534	0.045	**
Firm size (Large)	2.830	1.076	0.006	*
Overdue payments	0.323	0.075	0	*
Audited	1.373	0.259	0.093	***
Exporter	1.838	0.365	0.002	*
Constant	1.599	0.426	0.078	***

Ho: Contribution of the variable to the model is insignificant.
 *, **, *** denote rejection of Ho at 1, 5 and 10 percent significance level, respectively.

The results summarized in Table 2 support findings obtained by the descriptive analysis, and are in line with cross-country studies. Correspondingly, Turkish firms are more likely to have access to credit as their size grows. According to the relative probability (odds) ratio, the chances of medium-sized firms to have credit access are 1.8 times more of those of micro-sized firms. Similarly, the chances of large-sized firms to have access to loans are 2.8 times higher than those of micro-sized firms. The estimation results do not exhibit any statistical difference between micro and small-sized firms regarding their chances of having access to credit.

Overall, results suggest that micro and small-sized firms are considerably more credit constrained compared to medium and large-sized firms. Findings may have significant implications on the financial policy design. Given the high share of small and medium-sized firms in employment, implementation of policies to remove evident obstacles against credit access may increase potential production and the employment level.

Other factors determining credit access are overdue payments, being audited by an independent firm, and the firm being an exporter. If the firm is too troubled in financial terms to repay its credit or debts, its credit risk increases, and the bank would be unwilling to extend loans. Results suggest that if the firm has a credit or tax debt, which is overdue by more than 90 days, the chances of credit access decrease by 67.7 percent.

On the other hand, if the firm is audited by an independent firm, then the chances of credit access increase by 137 percent. If the firm accounts undergo a transparent audit, the firm can be said to have a reliable and institutional structure. As this can partially diminish the moral hazard and adverse selection problems that may stem from information asymmetry between the bank and the firm, an independent auditing of firms may enable a more effective functioning of the credit markets. In fact, the World Bank (2007) states that the percentage of small and medium-sized firms undergoing an independent auditing in Turkey is low by international comparisons. Hence, public policies to improve accounting and auditing practices are believed to have a potential to provide evident relief on credit access.

Lastly, if the firm is an exporter, the chances that the firm has access to credit increase 1.84 times. The positive correlation between the firm being an exporter and its chances to have credit access is attributed to the already-settled relation of exporting firms with banks. Firms engaged in exporting activities collect their export revenues through banks. They also have closer relations with banks compared to other firms as they undertake transactions regarding the letter of guarantee, the letter of credit, etc. Thus, the information asymmetry between the firm and the bank can be partially removed if the firm is an exporter. In other words, the bank may be more willing to extend credit to the firm as it is familiar with accounts and the activities of the firm.

Conclusion

Firms' links with the credit market have an important implication regarding the transmission of the monetary policy. Hence, constraints on firms' credit demand and access are crucial for their information content regarding the effectiveness of the credit channel, which may vary by sectors and firm size. The results of the Business Environment and Enterprise Performance Survey implemented jointly by the EBRD and the World Bank are important to reveal the relationship between firms and the credit market and that of firms with the banking sector. The survey results, which are also important in terms of indicating credit constraints faced by Turkish firms, show that credit constraint is inversely related to the firm size.

REFERENCES

Kurul, D.M. and S.T. Tiryaki, 2014, How Constrained is Firms' Access to Credit in Turkey? A Survey-based Analysis, CBT Research Notes in Economics No. 14/01.

World Bank, 2007, Turkey Investment Climate Assessment, vol. II, available at http://www.tepav.org.tr/upload/files/1271231892r5971.Turkiye_Yatirim_Ortami_Degerlendirmesi_Cilt_2.pdf.

