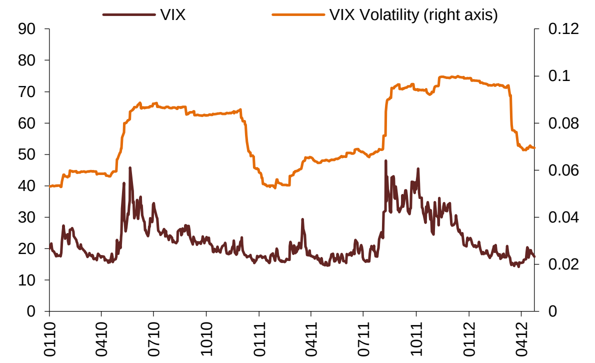
5. Financial Markets and Financial Intermediation

5.1. Financial Markets

First-quarter data on the global economy indicate signs of recovery, while also implying ongoing downside risks. The ECB took measures for the solution of the debt problem and continued with monetary easing in order to boost economic growth. Despite having declined amid adopted measures, bond yields of the debt-ridden countries continue to remain elevated. Moreover, with a view to bolstering economic growth, the Bank of Japan also implemented monetary easing in the first quarter. Monetary easing by major central banks, alleviating uncertainties on the resolution of the Greek debt problem coupled with the favorable outlook in the U.S. growth, thereby improving the global risk appetite (Chart 5.1.1). However, the absence of signals for further monetary easing by major central banks, concerns over the debt problem in the Euro Area and the downward revision of growth forecasts for the Chinese economy have recently deteriorated the global risk appetite. Despite the adopted measures, growth forecasts remained broadly unchanged in the first quarter, for both advanced and emerging economies.

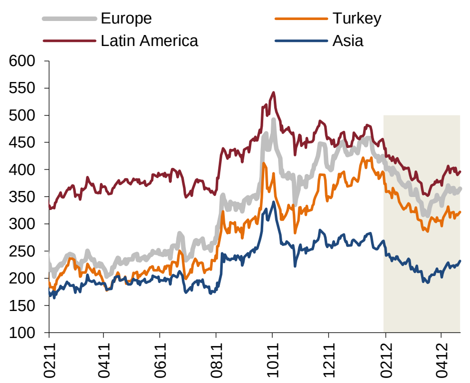
Chart 5.1.1.
Volatility Index*



* 150-day standard deviation of the daily VIX.
Source: Bloomberg, CBRT.

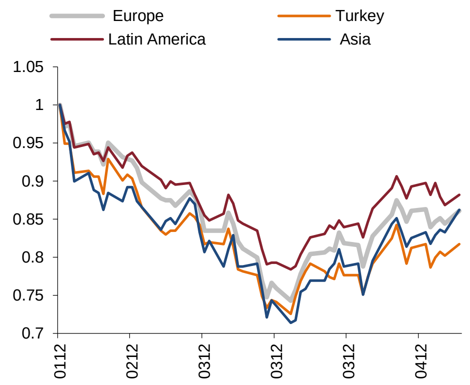
Favorable developments improving the global risk appetite in the inter-reporting period have also lowered risk premium in emerging economies (Chart 5.1.2). However, risk premium edged up on the recently adverse developments regarding the global economy as well as soaring oil prices. Turkey's risk premium remained in tandem with the other emerging economies in this period (Chart 5.1.3).

Chart 5.1.2.
EMBI



Source: Bloomberg.

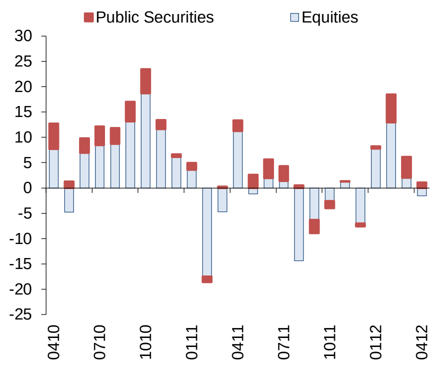
Chart 5.1.3.
Relative EMBI
(01.31.2011=1)



Source: Bloomberg, CBRT.

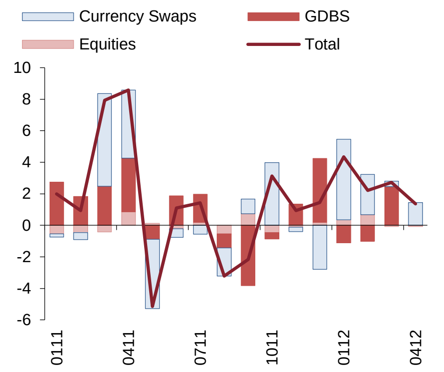
Monetary easing in advanced economies and the favorable course of global risk perceptions accelerated portfolio flows, especially the equity flows, to emerging economies (Chart 5.1.4). As for Turkey, inflows to equity market and outflows from the GDBS market were observed during January and February (Chart 5.1.5), mainly on the back of profit realizations by non-residents amid declining market rates at the start of the period. On the other hand, non-residents started to re-invest in the GDBS market, following the rate hikes in March.

Chart 5.1.4.
Net Portfolio Flows to Emerging Economies*
(Adjusted for Index and Interest Rate, Million USD)



* As of April 18, 2012.
Source: EPFR.

Chart 5.1.5.
Net Portfolio Flows of Non-Residents*
(Adjusted for Index and Interest Rate, Million USD)



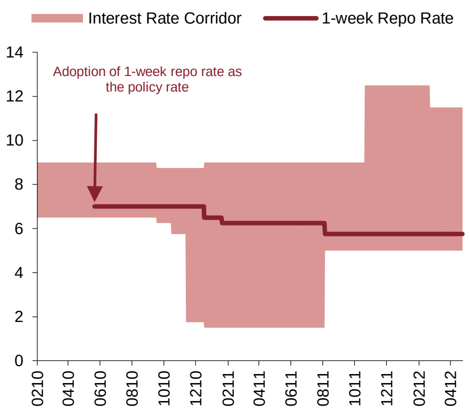
* As of April 13, 2012. Currency swaps are the largest and the most volatile FX-denominated off-balance sheet item. The volume of currency swaps is calculated as the change in off-balance sheet FX-denominated position of banks.
Source: BRSA, CBRT.

Short-term capital investments, the majority of which is composed of currency swaps by non-residents, increased in early-2012, reflecting also on the off-balance sheet FX-denominated net position of domestic banks, which is a major indicator on the volume of the currency swaps by non-residents. Flows to currency swap market in a period of outflows from the GDBS market indicate that non-residents switched to relatively short-term instruments given the ample global liquidity amid monetary easing and the relatively high yields registered in money markets. Overall, non-residents continued to invest in Turkey, when currency swap transactions are included (Chart 5.1.5).

Monetary Policy Implementation

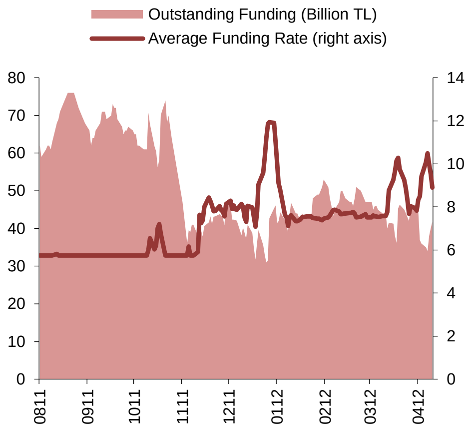
Owing to the upside risks on cost factors, the CBRT maintained its cautious stance in the inter-reporting period, despite the favorable course of global risk perceptions. The upper limit of the interest rate corridor was lowered by 100 basis points in February, in view of the decisions for monetary easing at a global scale (Chart 5.1.6). Meanwhile, in order to prevent oil price hikes and other cost factors to worsen inflation expectations, the CBRT delivered an additional monetary tightening during March 23 and March 29, 2012. Accordingly, the weighted average funding rate was raised by lowering the quantity of 1-week repo funding (Chart 5.1.7). In the April meeting, stating that temporary cost factors would not be allowed to worsen the inflation outlook, the MPC underlined that additional monetary tightening might be more frequently implemented in the period ahead.

Chart 5.1.6.
CBRT Policy Rate and the Interest Rate Corridor
(Percent)



Source: CBRT.

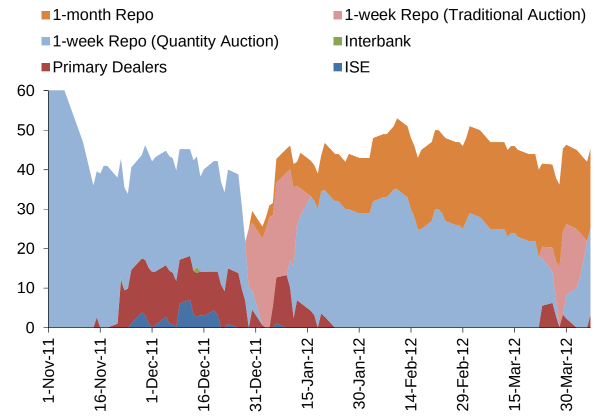
Chart 5.1.7.
CBRT Funding and the Average Funding Rate
(Percent)



Source: CBRT.

With a view to facilitating the liquidity management of banks and assisting them in envisioning their total funding costs, the CBRT continued to announce the amount of funding on the days of the quantity auctions besides the upper limit of the 1-month repo auction amount. Accordingly, in February, funding quoted on the policy rate was kept between TL 3 billion and TL 7 billion, while the upper limit for traditional 1-month repo auctions was raised from TL 5 billion to TL 6 billion. In the MPC meeting on March 27, the range for the funding amount to be provided through 1-week repo auctions was changed as TL 1 billion to TL 6 billion provided and the upper limit for 1-month repo auction amount was lowered to TL 5 billion. The total amount of funding provided by the CBRT remained broadly unchanged in this period, ranging between TL 40-50 billion (Chart 5.1.8). Moreover, in order to provide a permanent and flexible funding for banks, besides enhancing gold reserves, 20 percent of the required reserves for TL liabilities were facilitated to be held as standard gold, as opposed to the previously 10 percent.

Chart 5.1.8.
Market Liquidity
(Billion TL)

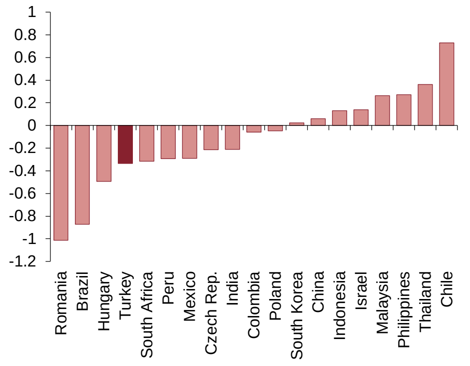


Source: CBRT.

Market Rates

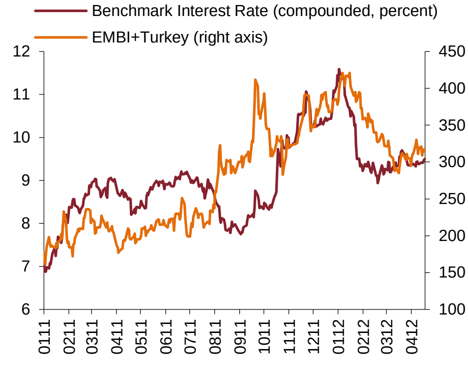
In the first quarter of 2012, market rates edged down in Turkey in tandem with the other emerging economies (Chart 5.1.9). Despite the downward course of the risk premium, market rates declined only slightly owing to the ongoing tight monetary stance of the CBRT (Chart 5.1.10).

Chart 5.1.9.
Changes in 2-year Market Rates in Q1*



* Between January 30 and April 20, 2012.
Source: Bloomberg, CBRT.

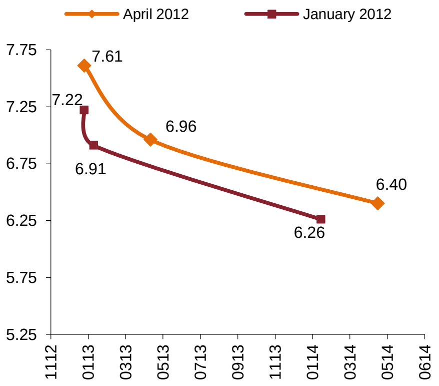
Chart 5.1.10.
Yields on GDBS



Source: ISE, Bloomberg.

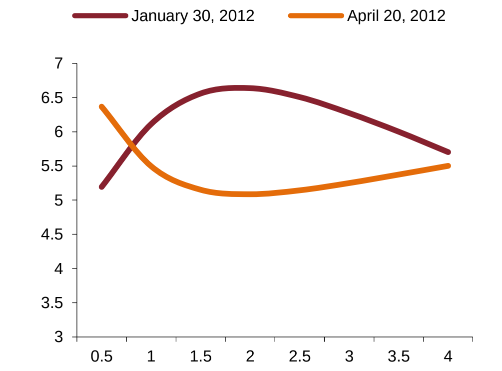
Inflation expectations, a key determinant of market rates, increased slightly in the inter-reporting period (Chart 5.1.11). On the other hand, short-term inflation compensations soared markedly since January, amid the increase in short-term inflation expectations (Chart 5.1.12). Meanwhile, on the back of the ongoing tight monetary policy stance by the CBRT, inflation compensation declined notably in the medium to long-term.

Chart 5.1.11.
Inflation Expectations*



* 12 and 24-month ahead inflation expectations from the CBRT's Survey of Expectations, second survey period results.
Source: CBRT.

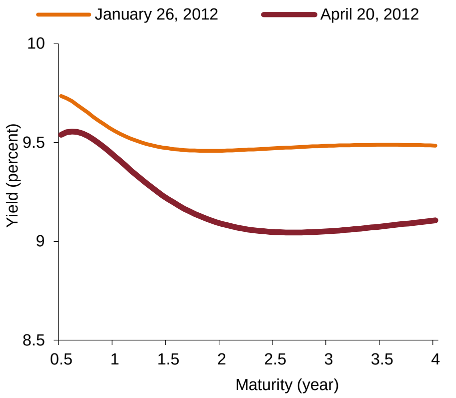
Chart 5.1.12.
Forward Inflation Compensation*



* Implied forward inflation compensation of the nominal and CPI-indexed bonds traded at the ISE. Forward inflation compensation is adjusted for inflation compensation up to the relevant maturity, thus reflecting the annual inflation expectation after the expiration of the maturity.
Source: CBRT.

In the first quarter of 2012, yield curve declined across all maturities, particularly in the long-term, in line with the heightening global risk appetite (Chart 5.1.13). Also in tandem with the CBRT's additional tightening at the end of March, the interest rate spread turned negative (Chart 5.1.14). The downward slope of the yield curve indicates a tight monetary policy stance.

Chart 5.1.13.
Yield Curve*



* Calculated from the compounded returns on bonds quoted at the ISE Bonds and Bills Market by using ENS method.
Source: ISE, CBRT.

Chart 5.1.14.
Interest Rate Spread*

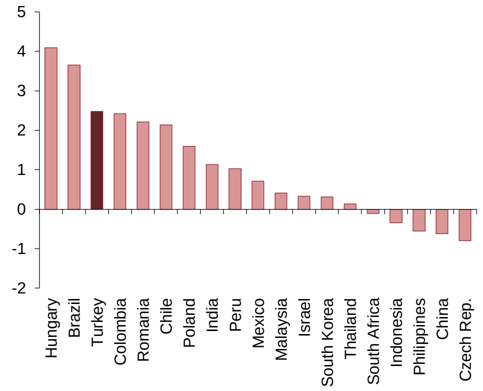
* Spread between 4-year and 6-month yields derived from the ENS yield curve, 5-day moving average.
Source: ISE, CBRT.

The flat course of market rates also reflected on the real rates in the first quarter of the year (Chart 5.1.15). Real interest rates have hovered above other emerging economies in this period (Chart 5.1.16).

Chart 5.1.15.
2-Year Real Interest Rates for Turkey*
(Percent)

* Calculated as the 2-year discounted bond returns derived from the yield curve, minus the 24-month ahead inflation expectations from the CBRT's Survey of Expectations.
Source: ISE, CBRT.

Chart 5.1.16.
2-Year Real Interest Rates*
(Percent)

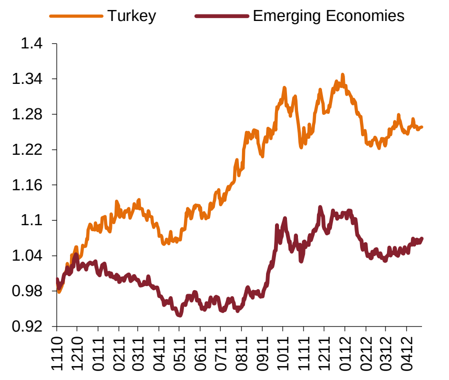


* As of April 20, 2012. Calculated as the 2-year government bond returns of countries minus the 2-year ahead inflation expectations from the Consensus Forecasts.
Source: Bloomberg, Consensus Forecasts, CBRT.

Exchange Rate and Reserves

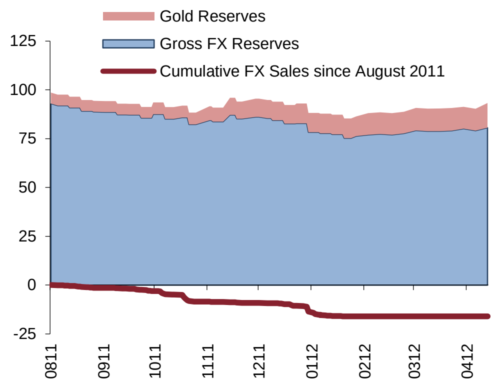
The Turkish lira depreciated slightly in the first quarter, similar to currencies of other emerging economies. The Turkish lira diverged from other emerging economies in March, amid soaring oil prices and the lower-than-envisioned correction in the current account deficit (Chart 5.1.17). However, on account of the additional tightening delivered by the CBRT as well as the interruption of the acceleration in oil prices, the Turkish lira appreciated in April. Amid the lower-than-expected current account deficit in April, the Turkish lira appreciated further.

Chart 5.1.17.
TL and Emerging Market Currencies*
(11.01.2010=1)



* Emerging economies include Brazil, Chile, Czech Republic, Hungary, Mexico, Poland, South Africa, Indonesia, South Korea, Colombia and Turkey. Increases denote depreciation of the currency.
Source: Bloomberg, CBRT.

Chart 5.1.18.
CBRT Reserves and FX Sales*
(Billion USD)



* CBRT reserves include gross FX reserves, overdrafts and gold reserves. FX sales include auctions and direct interventions.
Source: CBRT.

The suspension of FX auctions reversed the downward course of the CBRT's FX reserves, after the January meeting of the MPC (Chart 5.1.18). Additionally, following the required reserves decision taken at the MPC meeting in March, gold reserves as well as FX reserves have increased (Box 5. 1). Due to the CBRT's tight monetary policy stance and the favorable course of the global risk appetite, implied volatility of the Turkish lira remained low both in short and in long-term, compared to the currencies of other emerging economies (Charts 5.1.19 and 5.1.20).

Chart 5.1.19.
Implied Volatility of Exchange Rates*
(1-Month Ahead)

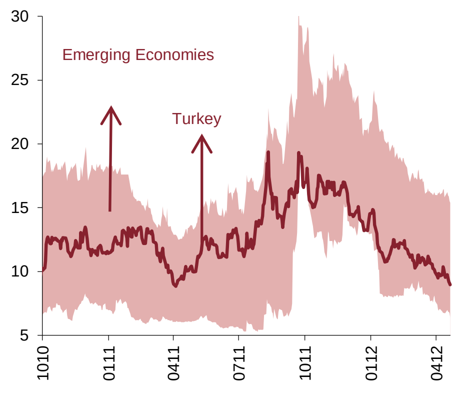
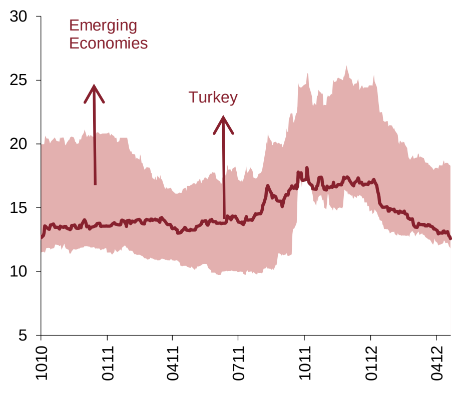


Chart 5.1.20.
Implied Volatility of Exchange Rates*
(12-Month Ahead)

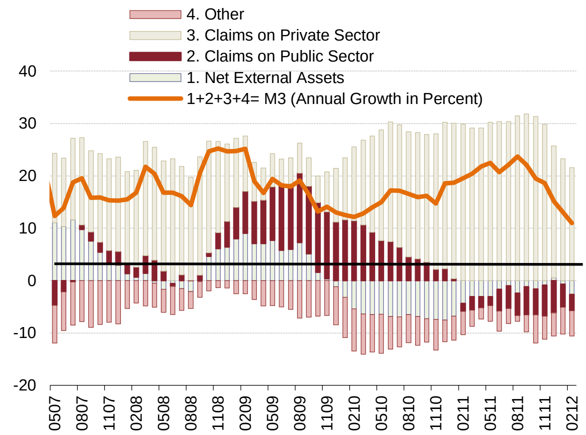


* Emerging economies include Brazil, Chile, Czech Republic, Hungary, Mexico, Poland, South Africa, Indonesia, South Korea and Colombia.
Source: Bloomberg, CBRT.

Monetary Indicators

Domestic and external economic climate continued to weigh on monetary indicators amid the ongoing volatility in the financial markets. Accordingly, the annual growth of M3, the broad measure of money supply, continued to decline. In fact, balance sheet decomposition of M3 points that the surge in Claims on Private Sector, which mostly consist of bank loans extended to non-financial private individuals and institutions, has recently paused. Meanwhile, Claims on Public Sector continued to provide negative contribution to M3 growth. The fall in Net External Assets is mainly attributed to the interruption of the decline in commercial banks' FX-denominated assets. Lastly, the negative contribution of the item Other, i.e. the monetary sector's non-deposit resources, to the M3 growth remained flat (Chart 5.1.21).

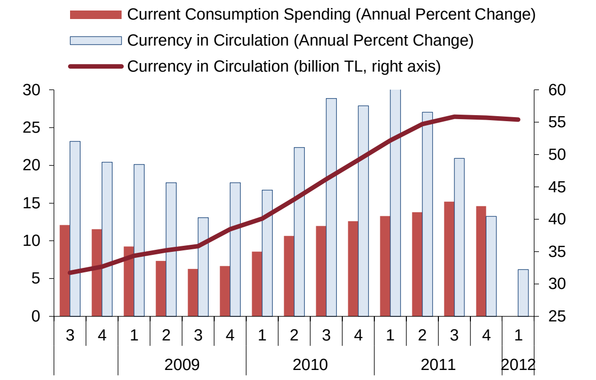
Chart 5.1.21.
Balance Sheet Decomposition of M3
(Contributions to Annual M3 Growth)



Source: CBRT.

Owing to the slowdown in economic activity, the rate of increase in the seasonally adjusted money in circulation continued to decline in the first quarter of the year (Chart 5.1.22). The adopted measures in addition to the slowdown in the economic activity, as well as soaring interest rates increased the opportunity cost of holding cash, thus resulting in a deceleration in the growth of the money in circulation.

Chart 5.1.22.
Currency in Circulation and Current Consumption Spending*
(Seasonally Adjusted)

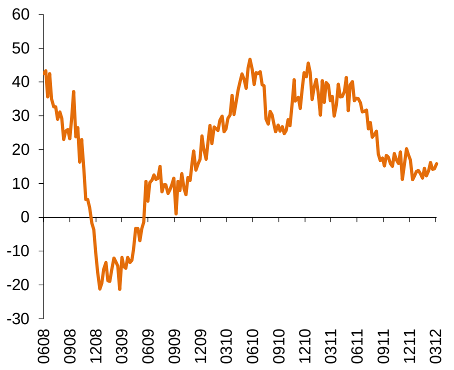


* Consumption spending includes private and public consumption excluding furniture, household appliances, transport and communication services at current prices.
Source: TurkStat, CBRT.

5.2. Financial Intermediation and Loans

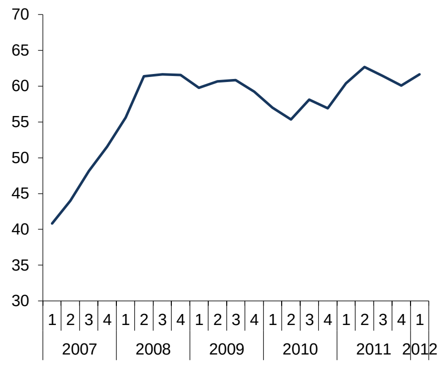
On account of the CBRT's tight monetary policy, the slowdown in the economic activity and the surge in margins, growth of loans extended to the real sector by domestic banks still remain low, notwithstanding the edging up in the first quarter (Chart 5.2.1 and Box 5.2). Accordingly, real sector loans posted a year-on-year increase by 21.7 percent in the first quarter, growing by 19.1 percent in annualized terms (Chart 5.2.1). Meanwhile, external borrowing by firms has increased in the first two months of the year (Chart 5.2.2).

Chart 5.2.1.
Growth Rate of Real Sector Loans
(Adjusted for Exchange Rate, 13-Week Average, Annualized, Percent)



Source: BRSA.

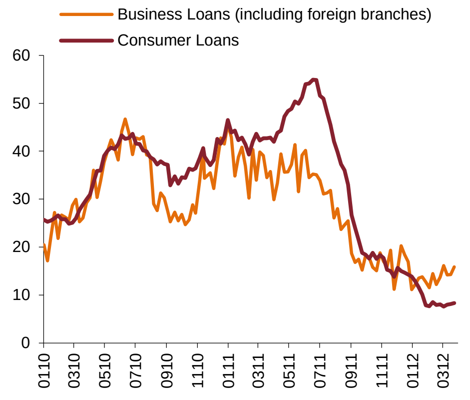
Chart 5.2.2.
External Borrowing of Firms
(Billion USD)



Source: CBRT.

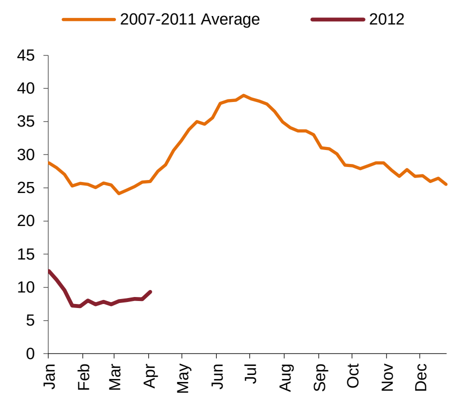
Despite the limited quarter-on-quarter increase in real sector loans extended by domestic banks, growth rate of total loans remained low amid the slowdown in consumer loans (Chart 5.2.3). Annualized data for the first quarter suggest that the growth rate of consumer loans went down to 8.3 percent. Although a substantial part of this decline was driven by seasonal effects, growth of loans declined notably, compared to the same period of the preceding years (Chart 5.2.4).

Chart 5.2.3.
Growth Rates of Business and Consumer Loans*
(Adjusted for Exchange Rate, 13-Week Average, Annualized, Percent)



* Including automobile loans extended by consumer financing firms.
Source: CBRT.

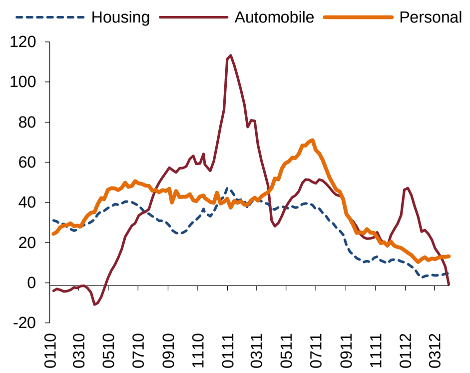
Chart 5.2.4.
Consumer Loan Growth
(Adjusted for Exchange Rate, 13-Week Average, Annualized, Percent)



Source: CBRT.

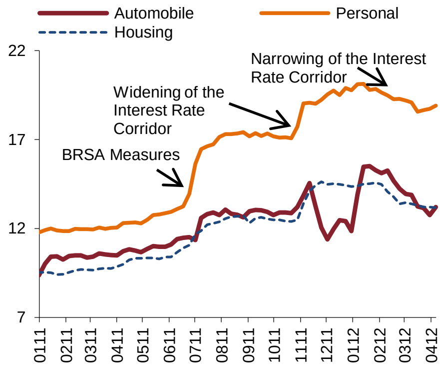
Amid the monetary tightening delivered as of October 2011, growth rates of all types of consumer loans decelerated significantly. Despite the limited recovery in the first quarter of the year, growth rates of consumer loans still exhibit a fairly weak outlook compared to the pre-tightening period (Chart 5.2.5). Growth rates of housing and personal loans edged up in March, albeit remaining low. The CBRT's Business Tendency Survey of the last quarter of 2011 indicates that the absence of a tightening in housing loan standards points that the housing loans slowed down mainly on the back of soaring interest rates amid the tight monetary policy stance. Meanwhile, the deceleration in personal loans is attributed to supply-side factors besides the tight monetary policy. In fact, personal loan rates increased more sharply than other loan rates (Chart 5.2.6). The Business Tendency Survey also indicates increased concerns of banks over credit risk, thereby causing tightening in standards for loans with strong cyclicality in credit risk. This is also confirmed by the higher increase in personal loan rates than other loan rates amid the additional monetary tightening delivered in late March. In the first quarter of the year, automobile loans, which constitute less than 10 percent of the consumer loans, decreased sharply due to seasonal effects. Overall, all these developments signify that money and credit markets maintain their tight stance.

Chart 5.2.5.
Weekly Growth Rates of Consumer Loans*
(13-Week Average, Annualized, Percent)



* Including automobile loans extended by consumer financing firms.
Source: CBRT.

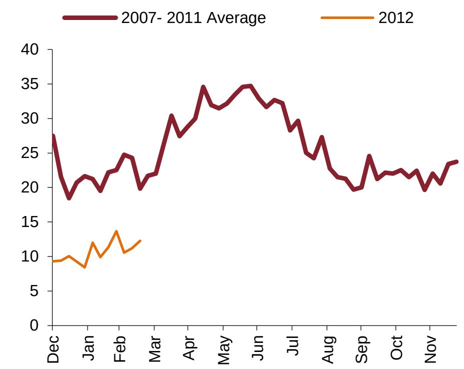
Chart 5.2.6.
Consumer Loan Rates
(Flow, Annualized, Percent)



Source: CBRT.

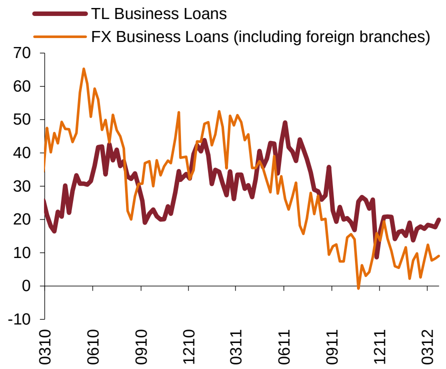
Unlike consumer loans, the growth rate of business loans edged up notably in the first quarter. However, the growth rate of business loans, in both TL and FX, lagged behind the average of the preceding years (Charts 5.2.7 and 5.2.8). In particular, growth of FX-denominated loans has remarkably converged to the growth rate of TL-denominated business loans. In a period with an absence of a strong indicator on accelerating investments, the rise in FX loans, which are mainly used for the financing of investment spending, is viewed to be fuelled by supply-side factors. In fact, soaring FX-denominated deposits generating in-balance sheet FX short position in the first quarter is a prominent factor, which is likely to drive banks to extend FX loans.

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



Source: BRSA.

Chart 5.2.8.
Growth Rates of TL and FX Business Loans*
(Adjusted for Exchange Rate, 13-Week Average, Annualized, Percent)

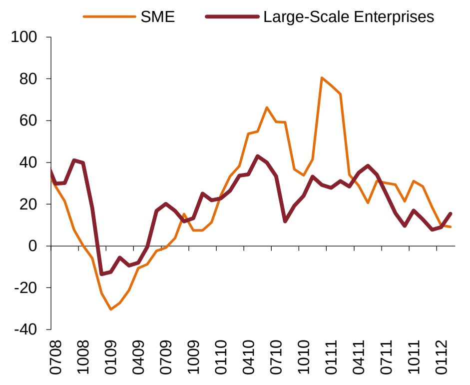


Source: CBRT.

An analysis of business loans by scale reveals that growth rates of loans extended to large-scale enterprises notably exceeded the growth of loans to

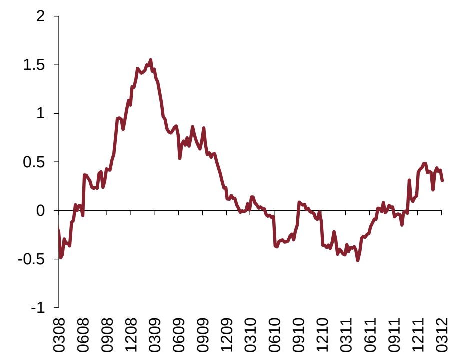
SMEs in the first two months of the year (Chart 5.2.9), confirming the heightening concerns of banks over the credit risk. In fact, the previous quarter's Business Tendency Survey results suggest that banks have tightened their lending conditions in tandem with their recent concern over bad loans. This is also confirmed by the accelerating growth of past-due loans (Chart 5.2.10). However, the expectation that the slowdown in economic activity in the first quarter would be temporary stands out as a factor to ease tightening in credit supply.

Chart 5.2.9.
Business Loan Growth Rates by Scale*
(Nominal, Adjusted for Exchange Rate, 13-Week Average, Annualized, Percent)



Source: CBRT.

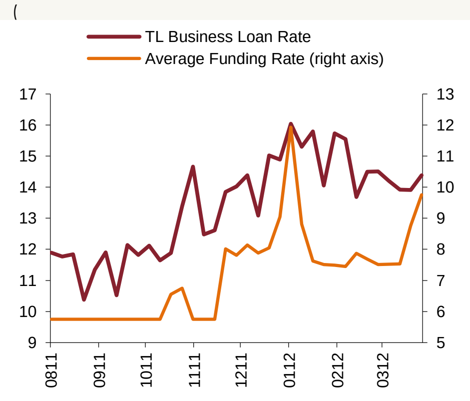
Chart 5.2.10.
Weekly Growth of Past-Due Loans
(13-Week Average, Percent)



Source: CBRT.

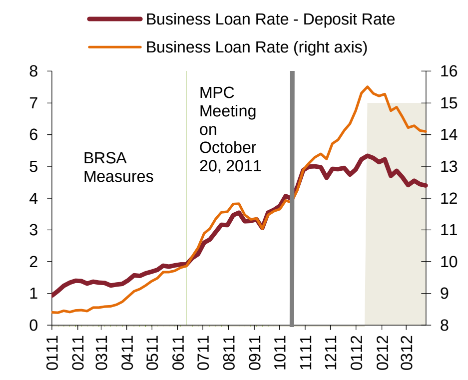
The accelerating growth of business loans in the first quarter is also attributed to the slightly reduced average funding rate by the CBRT (Chart 5.2.11). The decline in funding cost was simultaneously reflected on loan rates and loan-deposit rate spread as well (Chart 5.2.12).

Chart 5.2.11.
TL Business Loan Rate and the Average Funding Rate (Flow, 4-Week Average, Percent)
(



Source: CBRT.

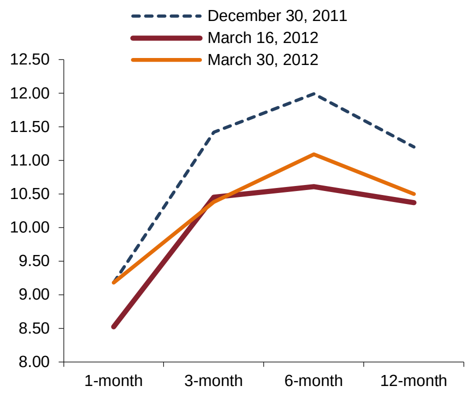
Chart 5.2.12.
TL Business Loan Rate
(Flow, 4-Week Average, Percent)



Source: CBRT.

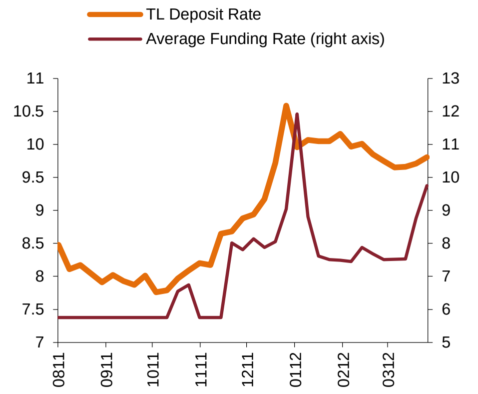
The recent monetary policy measures taken by the CBRT have been influential on deposit rates. Following the CBRT's suspension of the additional tightening in January, TL deposit rates edged down (Chart 5.1.13). Owing to the ongoing tight monetary policy stance as well as the competitiveness in the deposit market, deposit rates declined less heavily than the CBRT's weighted average funding rate. In particular, banks, which are challenged to meet total liquidity adequacy ratios, have recently competed drastically to attract more deposits, thereby preventing deposit rates to decline. Following the CBRT'S recourse to additional tightening, deposit rates have recently edged up (Chart 5.1.14).

Chart 5.2.13.
Yield Curve on TL Deposits



Source: CBRT.

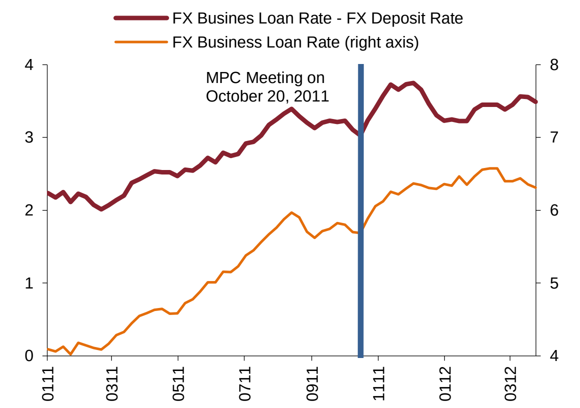
Chart 5.2.14.
TL Deposit Rate and the Average Funding Rate



Source: CBRT.

FX-denominated business loan rates soared slightly on a quarterly basis (Chart 5.2.15). Owing to the decline in FX deposit rates, the spread on FX-denominated loans and deposit rates widened in this period.

Chart 5.2.15.
FX Business Loan Rates
(Flow, 4-Week Average, Percent)



Source: BRSA.

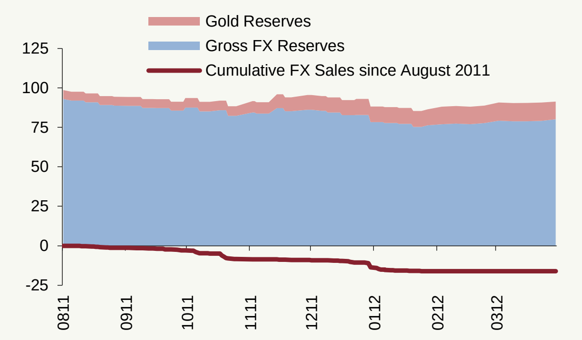
In sum, the monetary tightening in the last quarter of 2011 decelerated loan growth. In particular, consumer loans, which are expected to be more sensitive to interest rates, have notably lost pace. On the other hand, heightened concerns of banks over credit risk have weighed on the credit supply as of the last quarter of 2011. However, the relatively favorable economic outlook in the first quarter may alleviate these concerns. Hence, assuming that external borrowing will not pose a significant constraint, credit developments in the period ahead are expected to be largely shaped by demand-side factors.

Box 5.1 The Effects of the CBRT's Monetary Policy Decisions on Reserves

Amid mounting concerns over sovereign debt problems in some European countries, the CBRT has adopted extensive measures as of the second half of 2011, in order to contain the possible adverse effects on domestic markets. Accordingly, external markets were closely monitored and FX liquidity was provided with appropriate means and methods, when deemed necessary. This Box analyzes the effects of the adopted monetary policy decisions since the second half of 2011, on CBRT's FX and gold reserves.

With a view to meeting the need for FX liquidity amid worsening risk perceptions, the CBRT has conducted regular FX sale auctions as of August 5, 2011. In addition, the CBRT also provided FX liquidity through direct sale interventions, in the event that unhealthy price formations are observed in the exchange rate. Amid favorable global liquidity conditions at the onset of 2012, the CBRT has suspended regular FX sale auctions as of January 25, 2012. The FX liquidity provided through auctions and direct interventions amounted to USD 16 billion, pulling FX reserves down (Chart 1 and Table 1).

Chart 1. CBRT Reserves and FX Sales*
(Billion USD)

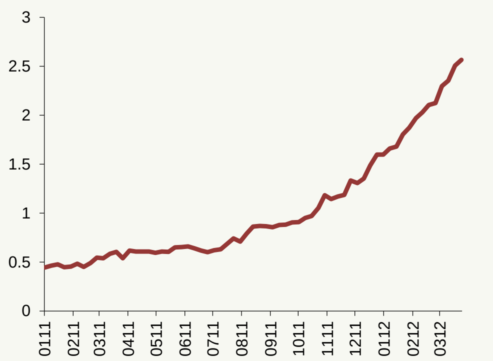


* CBRT reserves include gross FX reserves, overdrafts and gold reserves. FX sales include auctions and direct interventions.
Source: CBRT.

In order to provide FX liquidity to the market, the CBRT also opted for reductions in FX required reserve ratios. Accordingly, FX required reserve ratios were lowered by 0.5 points across all maturities on August 5, thereby providing FX liquidity of USD 930 billion to the market. Moreover, in order to provide additional FX liquidity to the market and to stimulate the extension of the maturity of the banking sector FX liabilities, FX required reserve ratios were lowered further on October 5, providing FX liquidity of USD 1.3 billion to the market.

In order to curb the adverse effects of the FX sale auctions and direct sale interventions on reserves, on September 12, the CBRT facilitated to hold up to 10 percent of the TL-denominated required reserves in USD and/or in euro, thus providing a permanent and relatively low-cost funding to meet the TL liquidity deficit. Thus, 10 percent of the TL required reserves, amounting to TL 6.8 billion, was enabled to be kept in USD, corresponding to USD 3.9 billion, out of which, USD 2.9 billion was facilitated as of September 30, 2011. This facility was raised to 20 percent and 40 percent, respectively on October 5 and October 27, 2011. Finally, USD 11.1 billion was facilitated as of March 30, 2012 (Table 1).

Chart 2. Export Rediscount Credits
(Billion USD)



Source: CBRT.

Another tool for affecting FX reserves is through changes in rediscount credits. Rediscount credits are granted in TL, but collected in FX, thus resulting in an increase in FX reserves. Hence, the CBRT, with a view to enhancing the FX reserves, facilitated the use of export rediscount credits on September 12, 2011. Accordingly, the closure period for rediscount credit commitments was extended from 4 months to 6 months, with credit limits being raised from USD 2.5 billion to USD 3 billion. The credit limit was further raised to USD 4.5 billion and the closure period for commitments was extended to 12 months. Following these arrangements, rediscount credits increased by USD 1.7 billion and reached to USD 2.6 billion as of March 30, 2012 (Chart 2 and Table 1).

In order to enhance gold reserves and provide flexibility to banks in their liquidity management, the CBRT facilitated to hold up to 10 percent of the TL required reserves as standard gold on November 1, 2011, corresponding to 55 tons (USD 3.1 billion), out of which, 87 percent has been facilitated as of March 30, 2012. This facility was raised to 20 percent on March 27, to be effective as of April 13, thus leading to an increase in gold reserves (Chart 1 and Table 1).

In order to enhance gold reserves, on September 12, the CBRT facilitated to hold up to 100 percent and 10 percent of the required reserves to be kept as standard gold for precious metal deposit accounts and for FX liabilities other than precious metal deposit accounts, respectively. With the extension of required reserves regulation to cover precious metal deposit accounts, the CBRT reserves increased by USD 685 million. Moreover, banks have exploited 66 percent of the facility to keep up to 10 percent of the FX liabilities other than precious metal deposit accounts as standard gold (Table 1). However, this facility was lowered to 0 percent on March 27, to be effective as April 13, 2012. Extension of required reserves regulation to cover precious metal deposit accounts caused CBRT gold reserves to increase, while facilitation of FX required reserves to be held as standard gold affected the composition of reserves, without affecting the quantity.

Table 1. Effects of Policy Measures on Reserves*,,*****
(Changes since Jun. 30, 2011, Million USD)

Adopted Measures	Sept. 30, 2011		Dec. 30, 2011		Mar. 30, 2012	
	Gold Reserves	FX Reserves	Gold Reserves	FX Reserves	Gold Reserves	FX Reserves
FX Sale Auctions and Direct Sale Interventions	0	-3030	0	-13450	0	-16056
Facilitation of TL Required Reserves to be kept as FX	0	2915	0	10221	0	11057
Facilitation of TL Required Reserves to be kept as standard gold	-	-	2291	0	2711	0
Facilitation of FX Required Reserves to be kept as standard gold	-	-	1720	-1720	2284	-2284

* Does not include the additional FX liquidity provided through FX required reserve ratio reductions.
** Does not include the additional gold reserves due to coverage of precious metal deposit accounts under reserve requirement.
*** Does not include the effect of rediscount credits on reserves as the maturity of these credits is 4 months, and hence, the effects can only be observed with a 4-month lag.
Source: CBRT.

In sum, the CBRT's FX sale auctions and direct sale interventions since August 2011, as well as reductions in FX required reserve ratios caused FX reserves to decline. On the other hand, the arrangements on reserve requirements and rediscount credits largely compensated for this decline. Accordingly, the CBRT's reserves fell merely to USD 91.4 billion on March 30, 2012 from USD 97.6 billion on August 5, since the launch of FX sale auctions.

Box 5.2

Consumer Loan Margins and Credit Supply

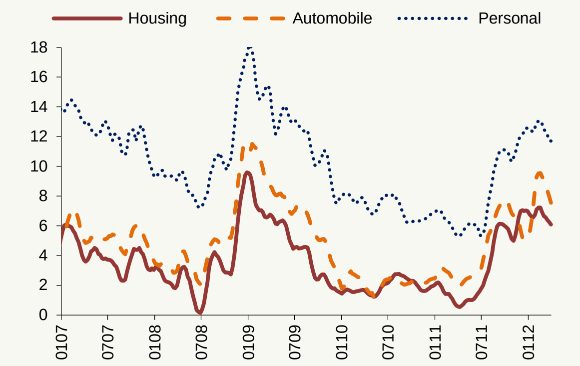
Assessing credit conditions is crucial for evaluating financial and monetary conditions as well as regarding financial stability. This Box analyzes consumer loan margins, which may be considered to be indicative of the conditions in credit supply.

Calculation of margins is based on Button et al. (2010). Accordingly, the cost of funding and credit risk premium is subtracted from loan rates, which also include other non-interest fees and commissions charged on the newly extended consumer loans.[1] The increase in margins when calculated as such shows that the additional cost brought about by changing economic climate is passed over to consumers through increased costs. Hence, margins can be considered to be an indicator for credit supply. Studies based on banking sector surveys also reveal that loans are initially adjusted through changes in loan rates.[2] However, for assessing changes in margins, operational costs and competitiveness should also be taken into account. Assuming that operational costs and competitiveness remain broadly unchanged in the short term, loan margins are viewed to be a better indicator of the credit supply conditions in the short term.

The derived margin series for the relevant loan categories are depicted in Chart 1. Accordingly, margins soared sharply immediately after the 2008 global crisis, implying that credit tightness experienced during that period was mainly owed to supply-side factors. As the adverse effects of the crisis on the Turkish economy were alleviated, margins declined, indicating that supply- side factors were largely influential on the rapid credit expansion experienced during the post-crisis period. Meanwhile, credit growth slowed down notably in the second half of 2011. The derived margin series imply that the additional cost brought about by the adopted measures of the BRSA and the CBRT was more than proportionately passed over to loan rates, thus indicating stronger supply-side factors weighing on credit growth.

[1] For further details on the calculation of the funding cost and credit risk premium, see Karaşahin and Özel (2012).
[2] Alper et al. (2011).

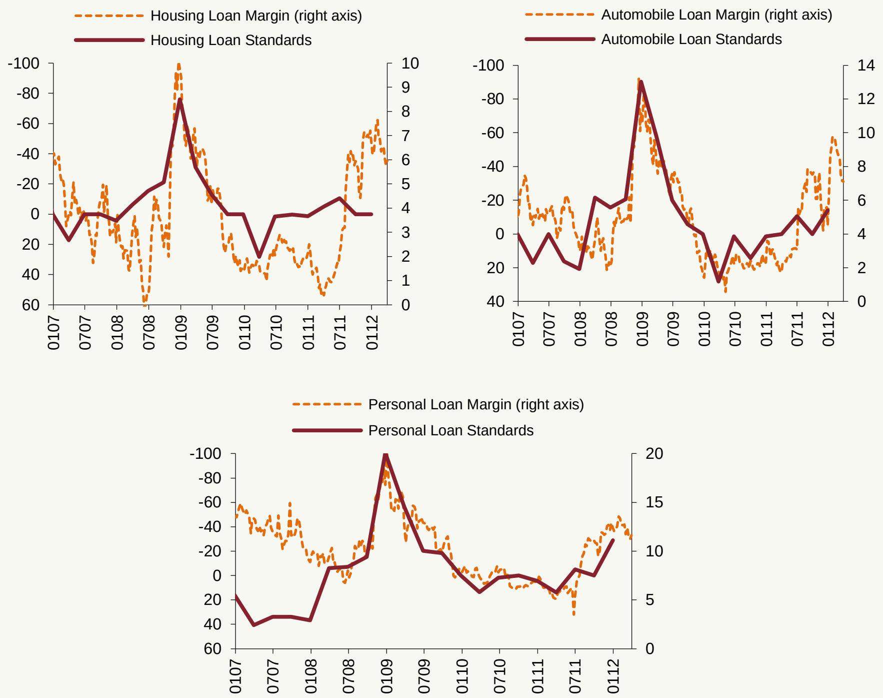
Chart 1. Consumer Loan Margins
(Percent, 4-Week Average)



Source: CBRT.

Banks' Loans Tendency Survey, quarterly conducted by the CBRT for monitoring and assessing credit supply and demand conditions, is another indicator for credit supply conditions. For a quantitative analysis of the survey, the net percent change in survey responds are computed, with positive values of the net percent change indicating a loosening in the credit conditions. The reverted net percent change series are displayed in Chart 2, where positive values thus indicate tightness in credit conditions.

Chart 2. Margins and Loan Standards
(Percent)



Changes in margins should not always be interpreted as changing credit supply conditions. Measurement biases in the calculation of funding cost and credit risk premium may complicate the attribution of minor changes in margins to changes in credit supply conditions. Yet, these biases are relatively negligible for sizeable changes in margins. Hence, our analysis focuses on periods with sharp changes in margins. Meanwhile, banks can restrict credit supply also through credit rationing, thus without resorting to loan rate adjustment. Hence, a thorough understanding of the changes in credit supply requires not only analyzing margins, but also the volume of credits.

In sum, loan margins enable relatively closer and timely monitoring of the credit supply developments than Banks' Loans Tendency Survey. Assessing the recent credit supply conditions against this background, the slowdown in the credit growth may well be attributed to the recent surge in loan margins after June 2011.

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