TÜRKİYE CUMHURİYET MERKEZ BANKASI

Financial Stability Report

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FOREWORD

From the publication of our previous Financial Stability Report to date, measures that will bring a lasting solution to public finance and banking sectors in Europe are still pending and this situation has started to threaten global economic activity and the financial markets significantly.

Developing countries are affected by this situation not only through the channel of international capital flows, which now display more volatility, but also that of expectations and trade. Central Banks of developing countries, who attach more importance to financial stability today as compared to that in the past, are implementing a countercyclical monetary policy in order to minimize potential adverse effects of this situation on their countries.

Owing to the countercyclical monetary and financial sector policies implemented in Turkey, the credit growth rate has assumed a reasonable trend in line with projections, which signals a positive development. Credit growth rate being stable around these levels is considered to be a prerequisite for containing the adverse effects of exogenous factors on the current account deficit as well as for curbing the risks on financial stability. Besides, a disciplined fiscal policy is an integral part of financial stability.

On the back of its sound balance sheet structure and strong policy tools, the Central Bank of the Republic of Turkey has enough flexibility to minimize the adverse effects of global developments on the Turkish economy. It will continue to employ these tools in the period ahead in a timely and effective manner when needed, as it has done so far.

I hope that financial stability assessments in the Report will be of benefit to all readers.

Erdem BAŞÇI

Governor

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OVERVIEW

The impact and extent of the global financial turmoil have reached to a level that has never been experienced before. Public sector, which at the onset of the global turmoil played a role supportive of financial and corporate sectors that were at the heart of problems, became the main risk factor at this stage of the crisis and the notion of "sovereign risk" started to be spelled out. Fiscal stimulus and policy measures taken with a view of settling the problems in financial structures of certain European Union countries failed to alter the negative perception in markets. Deterioration of the financial structures of the distressed countries has deepened further since the last reporting period.

Excessive falls in the values of particularly risky sovereign bonds due to increased sovereign risk, started affect the banking sectors of the countries via the government securities that they hold in their portfolios. Along with the problems spreading across Europe due to the interconnected structure of financial markets, the global risk appetite decreased significantly. Consequently, the central banks of many developed countries tended to implement "unorthodox" monetary policies. Due to the reduced opportunities for banks to raise funds through money markets, central banks took measures to provide funds in order to reduce banks' borrowing costs and to ease their liquidity crunch. Moreover, structural measures aiming to strengthen the capital structure of the banking sector negatively affected the credit supply of banks that were already risk-sensitive and created deleveraging pressure on banks.

Meanwhile, the loss of confidence in risky countries started to spill over to other countries as well, due to the concerns over inadequacy of measures taken by the authorities, both in scope and extent, to mitigate the effects of the crisis. Given the expectation that the environment of uncertainty will prevail in the upcoming period, exacerbation of the effects of problems on global financial system constitutes an important risk factor. Therefore, it is of utmost importance that the main contagion channels should be identified and closely monitored, and the authorities should implement policy tools effectively and in a coordinated manner taking macroprudential concerns into account as well.

Deterioration of the growth performance of developed countries reflects on developing countries through the channels of funding, expectations and trade. The excessive increase in public debts and the money supply also raises the volatility of capital flows to developing countries. It is therefore important to employ the monetary policy tools in a countercyclical way in developing countries as emphasized in the previous report.

Ongoing capital inflows in the first half of 2011, strong macroeconomic fundamentals and accommodative market conditions gave way to a high growth performance in Turkey. Parallel to measures taken to curb credit growth, the growth rate decelerated starting from the second quarter of the year, accompanied by a narrower gap between internal and external demand. In line with increased uncertainty over the global economy and the deterioration in the risk appetite, capital

outflows were observed in Turkey in the third quarter as was the case in other developing countries; and the Turkish lira depreciated, albeit within a narrower band compared to the said countries. Besides, imports have continued to weaken recently on the back of the deceleration in domestic demand and exports have displayed a limited increase. This situation has contributed to curbing the high growth trend of the current account deficit. Meanwhile, the increased share of long-term borrowings in financing the current account deficit has improved the quality of financing.

Credit growth lost pace starting from the third quarter and attained reasonable levels. For a lasting improvement in the current account deficit, credit growth should continue to record reasonable levels. It is considered that the slowdown in consumer credits will particularly contribute to the narrowing of the current account deficit by spurring the propensity to save in the period ahead.

Owing to the measures taken, the rate of increase in household liabilities has been slowing down gradually in 2011. Exchange rate risk and interest rate risk on consumer loans are quite low. Given the ongoing surge in corporate indebtedness, it is crucial for companies to be aware of the risk they are exposed to and to manage risks effectively for the sake of financial stability. Improvement in the budget balance and public debt stock continues thanks to increased tax revenues on the back of robust economic activity and containing public expenditures.

Meanwhile, the rise in exchange rate and administered price adjustments had a negative impact on inflation indicators. The Central Bank of the Republic of Turkey (CBRT) has taken a series of measures in order to contain fluctuations in the foreign exchange market and the adverse effects of global economic developments on domestic economic activity. Furthermore, a five-point action plan comprising price stability, interest rate policy, foreign exchange reserves policy, reserve requirement policy and financial stability, which will significantly reinforce the value of the Turkish lira, was made public on 26 October 2011.

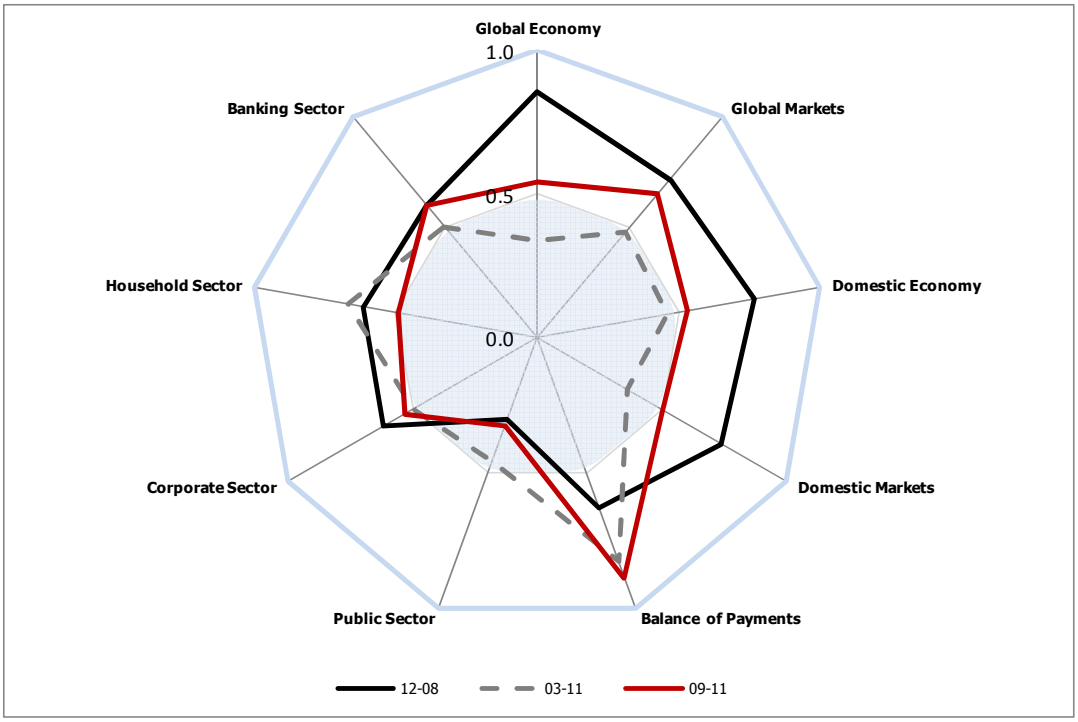
On the back of measures taken by the authorities to bring the credit growth rate down to reasonable levels for financial stability, banks met their liquidity needs from primarily repo transactions, external borrowings and sale of securities. However, deposits continue to be the main source of funding for the banking sector. Banks' liquidity ratios still hover above legal ratios. Taking into account the limits for borrowing at the foreign exchange deposit markets provided by the Central Bank of the Republic of Turkey (CBRT), along with reserve requirements maintained in foreign exchange and in gold, it is considered that Turkish banks will not have any difficulty meeting their external liabilities throughout the upcoming year.

Net interest margin has narrowed down and primary expenditures have increased recently, as a result of which profitability of the banking sector has declined. However, profitability performance indicators remain robust compared to other countries. Meanwhile, despite a decline stemming mainly from the surge in credits, the capital adequacy ratio of the sector hovers above the minimum and target ratios. The quality of capital is above the levels stipulated by international standards, which

indicates robustness of the capital structure of the sector. Furthermore, the asset quality of the banking sector remains strong.

As can be seen from the illustration of determinants of financial stability, sectors other than households and public sector display a riskier outlook globally as of September 2011 compared to the previous reporting period, which is in general attributed to negative developments in global markets.

Financial Stability Map[1,2]



(1)The closer to the center, the more stable the sector is. Analysis allows time series comparisons within each sector. Among sectors, the comparison can be made in terms of the directional change in position with respect to the center.
(2) For the set of variables and methodology used in the financial stability map, see Special Topic IV. 10.

Negative developments regarding the global economy constitute a risk factor not only for Turkey but also for all other countries in the upcoming period. The Turkish Central Bank has the necessary flexibility to minimize the effect of global turbulence on the Turkish economy thanks to its sound balance sheet structure and strong policy tools.

In the case of worsening of global liquidity conditions, the CBRT will continue to take the necessary policy measures for a timely, controlled and effective provision of liquidity to the market. Within this framework, in order to increase predictability of daily foreign exchange selling options, the upper limit of the total foreign exchange amount planned to be sold through auctions in the next two working days will be made public on a daily basis.

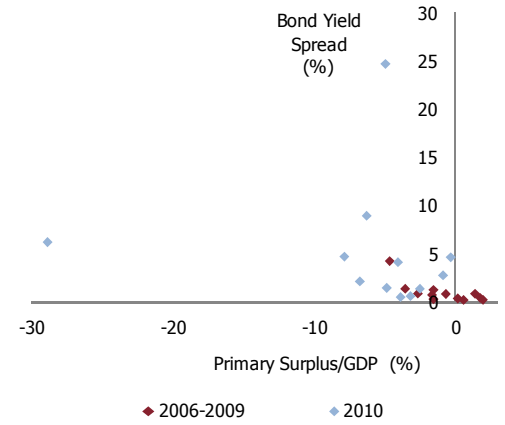
Moreover, implementation of structural reforms to increase savings ratio and to decrease the dependence on foreign sources in the case of energy is of great importance for the purpose of implementing the fiscal framework stipulated in the Medium Term Program and a permanent solution to the current account deficit issue.

I. INTERNATIONAL DEVELOPMENTS

Due to post-crisis measures supportive of growth and fiscal stimulus provided to the financial sector, problems in the financial structure of some European Union (EU) countries deepened. The increase in sovereign risks spilled over to the banking sector especially due to the government securities on banks' balance sheets and the banking sector started facing funding pressures. Along with problems spreading over to other countries due to the interconnected nature of financial markets, the global risk appetite decreased significantly and global economic activity was adversely affected. Parallel to these developments, even though overheating concerns in emerging market economies weakened, it is still of importance to address price stability and financial stability in a coordinated manner. Even though some measures were taken by the EU and national authorities to mitigate the effects of the crisis and reduce the speed of contagion, these measures failed to avoid concerns. Within that respect, policy decisions to be taken promptly and implemented decisively by policy makers are essential for alleviating the concerns.

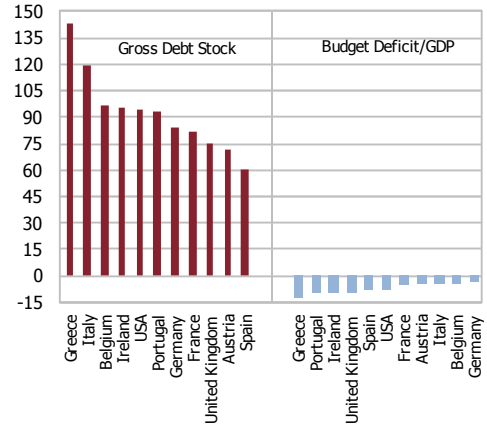
High debt stock and budget deficits along with low growth performance in some European countries have further heightened the concerns regarding debt sustainability in these countries. The financial turmoil, which started as it became obvious that public debt and budget performance of Greece had been worse than assumed and further deepened on the back of lower savings ratios due to increased social security spending, spread across other EU countries through weak banking sectors. Particularly countries with high budget deficits and with structural budget deficits in recent years were considered more risky by markets and bond yields of these countries increased further. In other words, their bond yields became more sensitive to primary surplus and budget developments. As a result, the distinction between risky countries and safe countries within the EU became more apparent (Charts I.1 and I.2).

Chart I.1. Difference Between Primary Surplus (PS) and Bond Yield Spreads[1] in Selected EU Countries[2]



Source: IMF, Bloomberg
(1) The bond yield spread shows the difference between 10-year bonds of countries and German bonds.
(2) Austria, Belgium, Finland, France, Ireland, Italy, Holland, Portugal, Slovakia, Slovenia, Spain, Greece.

Chart I.2. Gross Debt Stock and Budget Deficits of Selected Countries as of 2010 (GDP %)

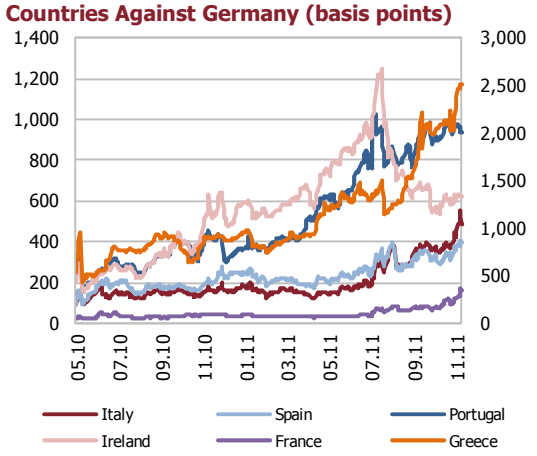


Source: IMF

In order to restrain negative market perceptions over debt sustainability, various measures were put into practice within the EU. On October 26, 2011, Euro area leaders set out

a plan covering five essential areas in order to ease distressed markets and to restore confidence (Box I.1). There are fears over insufficiency of measures including the increasing of the capacity of the European Financial Stability Facility (EFSF), which has been established to contain increased concerns of default and to provide funds to those EU countries facing difficulty rolling over their debts. Moreover, countries have been striving to alleviate concerns regarding debt sustainability by taking the necessary steps to narrow their budget deficits and by announcing savings packages. Nevertheless, as can be seen from the high yield spreads between the bonds of risky EU countries and Germany, the measures taken has not been sufficient to provide relief to the markets effectively due to the rapid deterioration in CDSs and borrowing costs and the unfavorable future outlook. These developments suggest a need to implement and expand savings packages sooner (Chart I.3 and Table I.1).

Chart I.3. Bond Yield Spreads of Selected EU Countries Against Germany (basis points)



Source: Bloomberg

Table I.1. Debt and Budget Expectations in Selected EU Countries (2011-2016)

	Projected interest rate–growth differential 2012–16 (percent)	Average Primary Balance	Estimated Gross Debt Stock 2011	Estimated Gross Debt Stock 2016
Greece	2.5	3.0	165.6	162.8
Portugal	2.0	1.5	106	110.5
Ireland	0.8	-1.2	109.3	114.3
Spain	1.0	-2.2	67.4	77.4
Italy	2.2	3.5	121.1	114.1
Belgium	0.0	0.1	94.6	93
France	-0.3	-0.8	86.8	87.7
Germany	0.5	1.4	82.6	75

Source: IMF

Box I.1. Plan Introduced for Restoration of Confidence in EU Markets

Euro Area leaders, who gathered on October 26, 2011, agreed on a plan which covers five essential areas to restore confidence and address current tensions in the financial markets. The plan includes the following points:

• *Securing decline of the Greek debt to GDP ratio to a level equivalent to 120 % by 2020.* (The nominal discount of 50 % on the national Greek debt held by private investors is a step towards this end).

• *Putting in place a new EU-IMF multiannual program financing up to 100 billion Euros by the end of the year.*

• *Leveraging of the EFSF resources and enhancing its ability to extend loans, finance bank recapitalisations and conduct bond purchases in the primary and secondary markets.* (Though the details have not yet been cleared, it is planned to increase EFSF's capacity to provide funds through leveraging existing EFSF resources by up to 4-5 times).

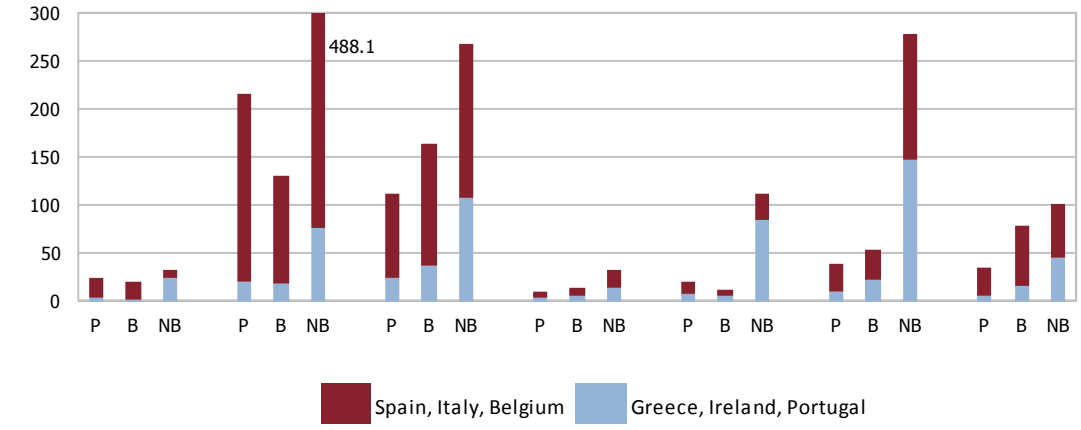
• *Increasing the capital position of banks to 9 % of Core Tier I by the end of June 2012 and facilitating access to term-funding through a coordinated approach at the EU level.*

• *Strengthening of economic and fiscal coordination and surveillance, introducing a set of very specific measures going beyond the recently adopted package on economic governance.*

The said plan, details of which have not been finalized yet, did not have the expected impact on markets and engendered a conviction that the measures envisaged will not be sufficient to overcome the problems.

Excessive falls in the values of certain sovereign bonds and increased credit risk due to economic tensions in Europe has fed risks related to banking sectors in some countries. Loss incurred due to risky sovereign bonds held by the banking sector caused deterioration in the financial structures of banks across Europe due to the interconnected structure of the financial sector. Moreover, parallel to the slowdown in economic activities of the risky countries, increased counterparty credit risk exposure of banks to these countries is likely to further deepen the deterioration (Chart I.4).

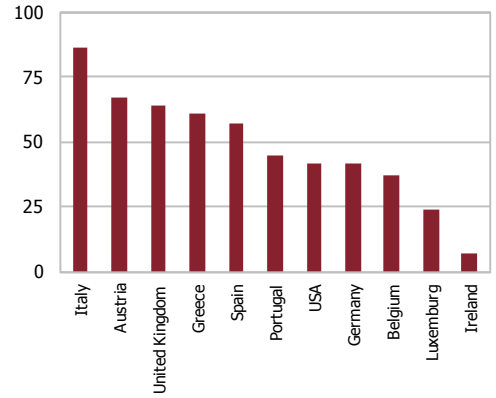
Chart I.4. Consolidated Foreign Claims of Selected National Banking Sectors from Distressed European Countries (Billion USD)



Source: BIS Consolidated Banking Statistics, June 2011
(1) The mentioned data are provisional.
P=Public, B=Banking Sector, NB=Non-Bank Sector

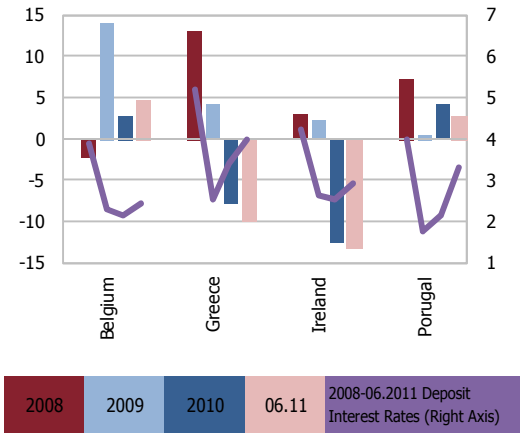
Sovereign risk-driven problems in markets led to the narrowing of funding channels and increases in funding costs of the banking sectors. In such an environment of lack of confidence, banks faced difficulties in raising funds through money markets and maturity mismatches began emerging in the balance sheets of banks that opted for short-term sources. European banks are facing strains in wholesale funding channels. As a matter of fact, US money market funds (MMF), a significant fund provider to European banks, curbed funds they provide to banks remarkably. Moreover, there also exist problems in renewal of due bonds (Chart I.5). In addition to these problems in the wholesale funding markets, the increase in deposits is not sufficient to meet funding needs (Chart I.6).

Chart I.5. Banking Sector Gross Debt Issued as a Percentage of Maturing Debt (to end August 2011) (%)



Source: IMF

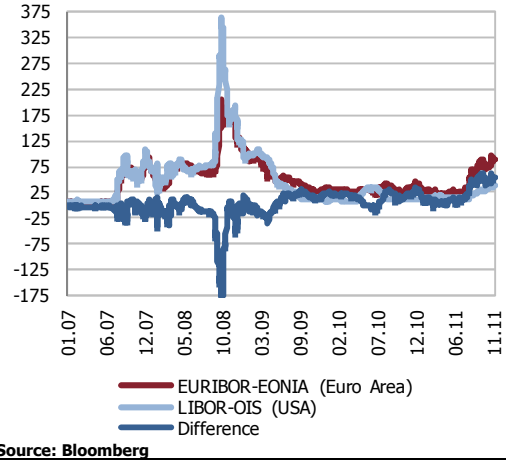
Chart I.6. Annual Deposits Growth and Deposit Rates[1] in Selected Countries (%)



Source: ECB
(1) Includes households' and non-financials' deposits.

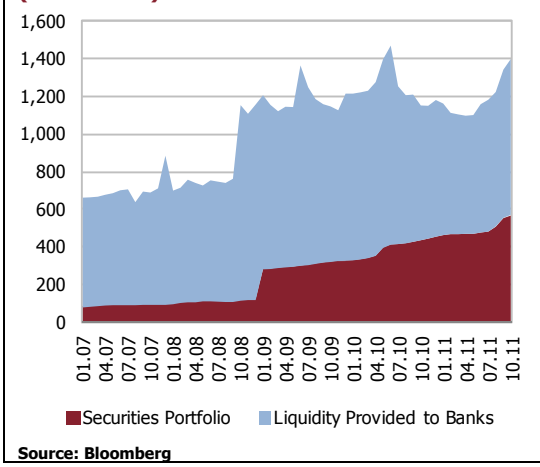
Central Banks sought to prevent deterioration in functioning of markets by providing liquidity to the banks that face funding pressures through various tools. The European Central Bank (ECB) accelerated bond purchases and extended the liquidity facilities provided to banks not only to decrease the borrowing costs of distressed countries but also to fix the liquidity crunch of banks. The Federal Reserve Bank (Fed) started to shift from long-term to short-term securities on its balance sheet in order to reduce funding costs of banks and increase liquidity by pushing down the long-term interest rates. Other central banks took similar measures for the provision of liquidity to their banks (Charts I.7 and I.8). On 21November 2011, the International Monetary Fund (IMF) disclosed a set of measures to enhance the flexibility and scope of the tools in its use to provide liquidity and emergency funds more effectively to troubled countries.

Chart I.7. Euro Area and US Money Markets Stress Indicators (basis points)



Source: Bloomberg

Chart I.8. Funds Provided by the ECB (Billion Euro)

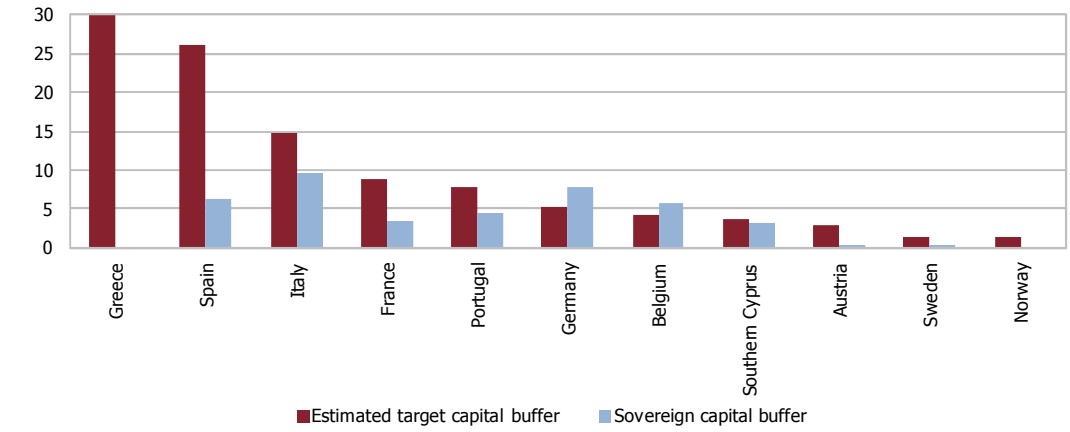


Source: Bloomberg

In addition to the measures taken by central banks, it was aimed to strengthen the banking sector through a number of structural measures. With the Basel III framework, a gradual increase was envisaged in the Tier 1 capital ratio that banks had to maintain, to be fully effective as of 2019, and a minimum liquidity and net stable funding ratio (NSFR) were introduced. Moreover, higher capital adequacy ratios were introduced to be met by globally systemically important

institutions (See IV.5). The EU, on the other hand, decided to enforce the implementation of the minimum Tier 1 core capital ratio sooner to be effective by the end of June 2012, and set the minimum Core Tier 1 ratio as 9% in order to bolster the capital position of banks, in line with its plan to restore confidence in markets that was announced on 26 October 2011. Accordingly, banks are expected to create a capital buffer by marking to market their sovereign debt exposures. Hence, the required capital as a result of the new regulation is estimated to be Euro 106 billion (Chart I.9).

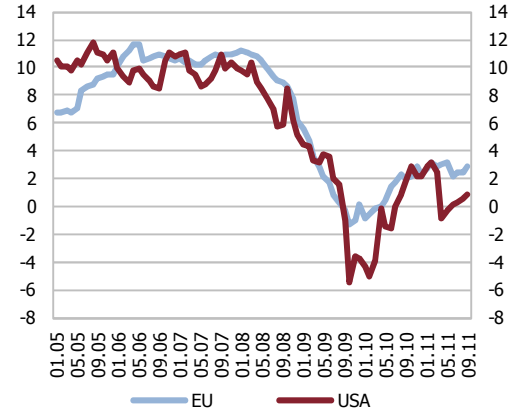
Chart I.9. Banks' Estimated Capital Target Buffers due to New EU Recapitalization Programme [1] (Billion Euro)



Source: The European Banking Authority
(1) Countries with a total capital requirement above Euro 1 billion are not illustrated on the chart and the total capital buffer is estimated as Euro 106 billion.

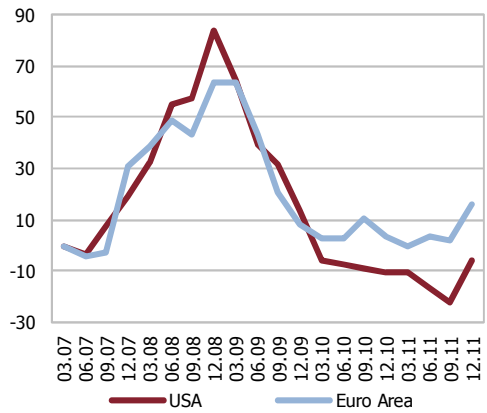
The capital requirement that emerged due to the measures taken to strengthen the capital structure, along with increased riskiness of assets and losses incurred has an adverse effect on banks' lending capacity. Banks are required to increase their capital or reduce their risky assets in a short period of time primarily due to the EU's implementation of capital adequacy regulation sooner. In addition, the fall in capital due to EU, primarily Greek debt write-offs, and high cost of a capital increase created a deleveraging pressure on banks. This situation is expected to hamper the recovery in currently weak credit markets (Charts I.10 and I.11).

Chart I.10. Annual Credit Growth in Euro Area and the USA (%)



Source: Fed and ECB

Chart I.11. Bank Lending Survey in Euro Area and the USA [1] (Index)

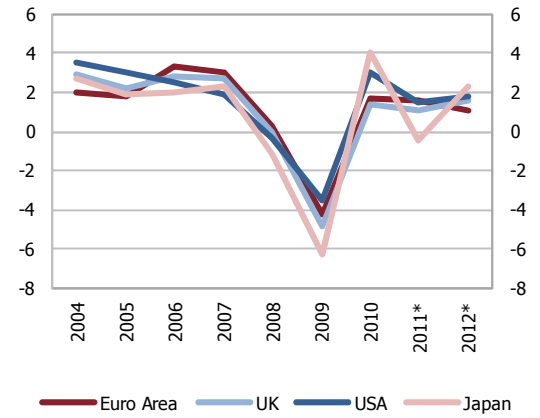


Source: Fed and ECB
(1) Positive values imply a tighter outlook for credit standards compared to the previous quarter.

The strains in credit markets negatively affect the growth performance of developed countries. The functioning of credit markets that started to improve on the back of

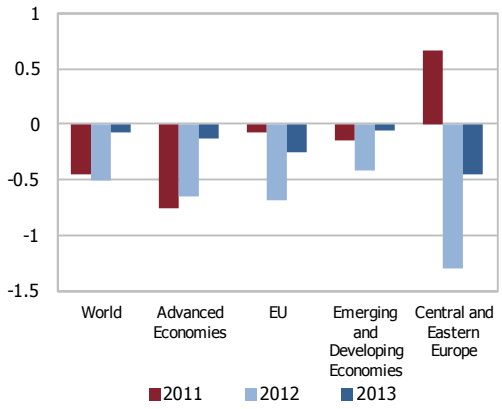
measures taken began deteriorating again due to increased risks in the financial structures of banks and risks over the soundness of national financial sectors. This situation led to an underperformance in economic growth of primarily developed countries. The worsening in the growth performance of developed countries curbs global growth through funding, expectations and trade channels (Charts I.12 and I.13).

Chart I.12. Annual Growth in Developed Countries (%)



Source: IMF
* Prediction

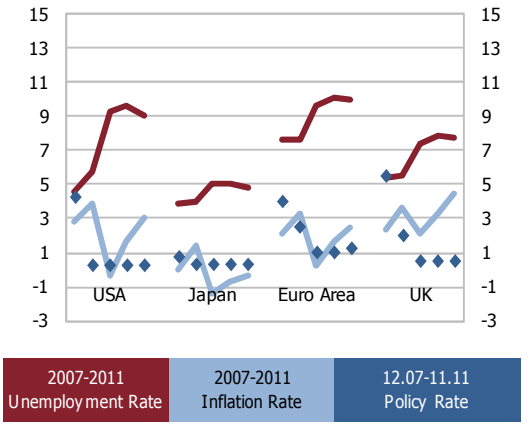
Chart I.13. Annual Change in Global Growth Estimations



Source: IMF

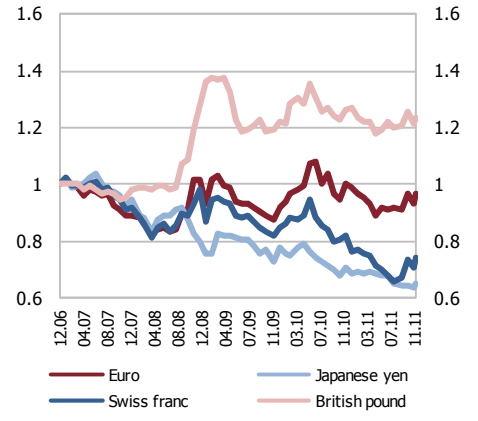
Decelerating economic activity, deteriorating public finance and financial stability cause unemployment rates to rise and push central banks to seek new policies. Developed country central banks started to focus more on financial stability concerns while formulating their monetary policies. In fact, despite the slight increase in inflation, the said central banks still keep their policy rates at low levels (Chart I.14). Moreover, the decrease in the global risk appetite parallel to the deteriorating global economic activity has increased investments in safe haven currencies. This situation led central banks of the mentioned countries to intervene in foreign exchange markets so as to prevent the overvaluation of their national currencies (Chart I.15).

Chart I.14. CPI, Policy Rates and Unemployment Rates in Developed Countries (%)



Source: IMF and Country Central Banks

Chart I.15. Exchange Rates of Developed Country Currencies Against USD [1] (Index, 31 December 2006=100)

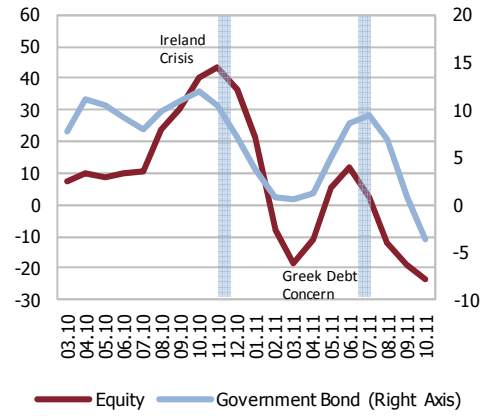


Source: Bloomberg
(1) Increase of index means depreciation of the currency whereas decrease of index means appreciation.

The problems in developed country markets and the measures taken affect emerging markets, as well. The excessive rise in public debt and money supply in developed

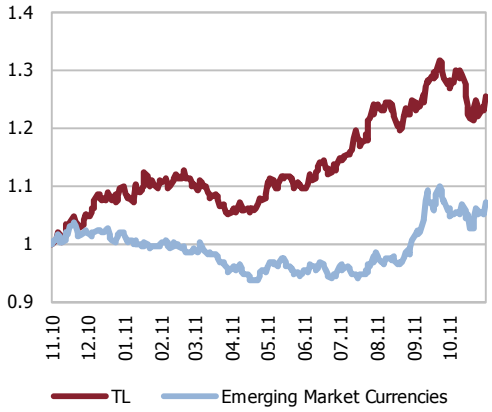
countries increase the volatility of capital flows to developing countries. Currencies of developing countries depreciated due to recent capital outflows (Charts I.16 and I.17).

Chart I.16. Flow of Funds Towards Developing Countries [1] (Billion USD)



Source: EPFR, IMF
(1) Data represent the past three-month totals.

Chart I.17. Exchange Rates of Developing Country Currencies Against USD (Index, 11 November 2010=1)[1,2]

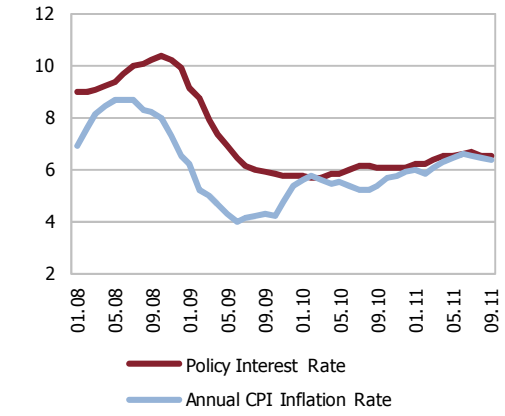


Source: CBRT, Bloomberg
(1) Developing country average includes Brazil, Chile, Czech Republic, Hungary, Mexico, Poland, South Africa, Indonesia, South Korea and Colombia.
(2) Increase of index means depreciation of the exchange rate whereas decrease of index means appreciation.

Banking sectors of developing countries, with significant foreign share and/or in need of external funding may be affected notably by the deterioration in the financial structures of EU banks. Banks in countries with high foreign ownership may have difficulty raise funds from the country of origin and those banks, which raise funds from abroad through wholesale funding, might curb their lending supply due to reduced funding from the said channel.

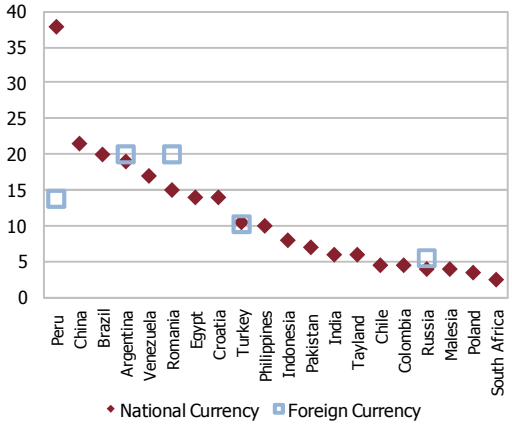
Although concerns of overheating in emerging market economies are subdued, it is still of importance to address price stability and financial stability together in a coordinated manner. Due to the re-emergence of concerns related to the slowdown of global economic activity and easing of concerns over inflation on the back of the decline in commodity prices, interest rates in emerging markets followed a stable course. Within this framework, a number of emerging market economies have been using their reserve requirement ratios as an easing tool and continue to actively use other macroprudential measures (Charts I.18 and I.19).

Chart I.18. Policy Rates and Annual Consumer Price Inflation in Emerging Economies



Source: Bloomberg and CBRT Calculations

Chart I.19. Reserve Requirement Ratios in Emerging Economies (%)



Source: Country Central Banks

In conclusion, despite all measures taken, problems arising from risky EU countries and affecting the whole Europe are still of utmost concern. It is important to dissipate concerns related to debt sustainability by supporting growth, in order to control inter-feeding sovereign and banking risks. This requires primarily a prompt decision-making process by the European Union and implementation of the necessary steps decisively by the relevant authorities.

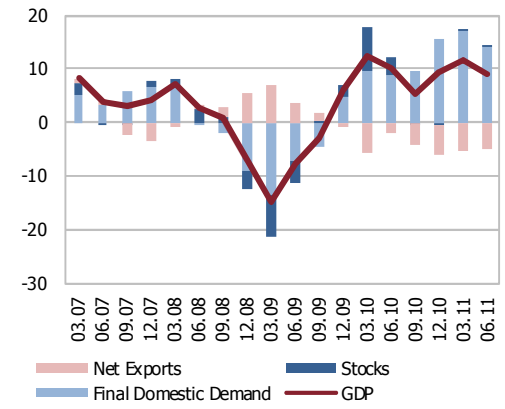
The possibility of the crisis, arising from risky countries, spilling over to other countries and increase in its impact on the global financial system is a significant risk factor. Within this scope, it is essential to identify and monitor closely the main contagion channels. Although it is unavoidable for all national financial sectors to be affected from the global economic slowdown, national authorities should continue to use their monetary policy, fiscal policy and financial stability tools effectively.

II. DOMESTIC ECONOMIC OUTLOOK

The Turkish economy displayed a high growth performance in the first half of 2011 owing to sound macroeconomic fundamentals, the ongoing capital inflow, low level of interest rates and credit expansion. Domestic demand slowed down on the back of the measures taken, thus, the growth rate lost pace starting from the second quarter of the year, accompanied by the rebalancing of demand components. Parallel to increased concerns over the global economy and deterioration in the risk appetite, Turkey faced capital outflows in the third quarter and the Turkish lira depreciated. Due to the depreciation of the Turkish lira as well as the slowing domestic demand, imports continued to weaken in the third quarter, whereas exports increased slightly. This situation helped control the rapid expansion of the current account deficit in the third quarter and the increased share of long-term borrowings in financing the current account deficit improved the quality of financing. Exchange rate effect adjusted credit growth lost pace in the third quarter. The rate of increase in household liabilities started to decelerate but corporate debt is still on the rise. Meanwhile, the budget balance continued to improve on the back of increased tax revenues owing to strong economic activity and limited public expenditures. Nevertheless, hikes in exchange rates and administered prices had an unfavorable impact on inflation indicators. In this scope, the CBRT has taken a series of measures in order to contain the adverse effects of fluctuations in the foreign exchange market and global economic developments on the domestic economic activity and to prevent the rise of inflation expectations. The CBRT will continue to take all the necessary measures to ensure price stability and financial stability in the upcoming period as well.

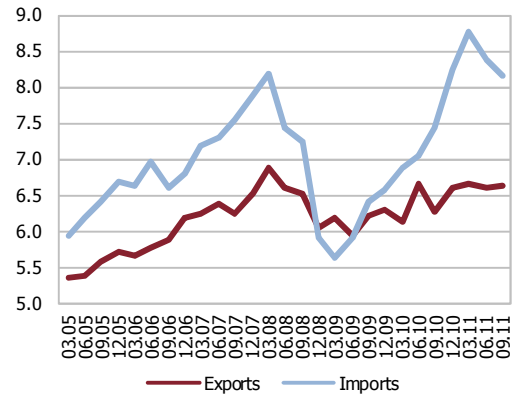
Economic activity remains robust, albeit with decreased pace and the decelerating domestic demand contributes to rebalancing of demand components. In the first and second quarter of 2011, GDP increased by 11.6 percent and 8.8 percent year-on-year, respectively (Chart II.1). Although economic activity displayed a more subdued growth pace in the second quarter compared to the first, it remained robust. Thus, GDP, which had grown by 11.2 percent in the first half of 2010, increased by 10.2 percent in the first half of 2011. The increase in GDP is attributed to the final domestic demand. In the first half of 2011, while the total contribution of final domestic demand to GDP growth was percentage 15.5 points, with a breakdown of percentage 7.6 points from private consumption expenditures, 7.1 percentage points from investment expenditures, 0.7 percentage points from public consumption, the contributions of net exports and stock changes were –5.3 and zero percentage points, respectively. According to seasonally adjusted data, while exports remained weak amid global economic developments in the second quarter of 2011, imports displayed a decline on the back of the slowdown in domestic demand after the measures taken (Chart II.2). Accordingly, seasonally adjusted data reveal that the contribution of net exports to quarterly growth was positive and demand components started to rebalance in the second quarter of 2011.

Chart II.1. GDP and Its Components (%, Annual Contribution)



Source: TURKSTAT

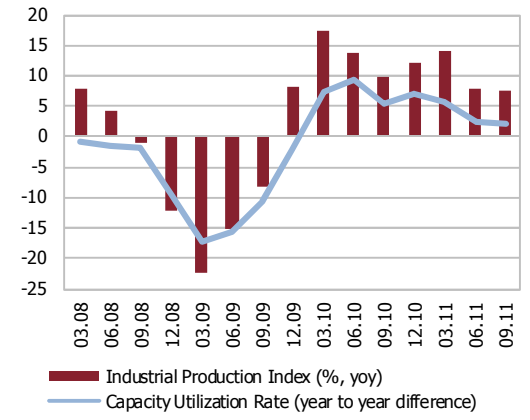
Chart II.2. Imports and Exports of Goods and Services (Billion TL) [1,2]



Source: TURKSTAT, CBRT
(1) Seasonally adjusted national accounts at 1998 constant prices are used.
(2) September 2011 data are estimations.

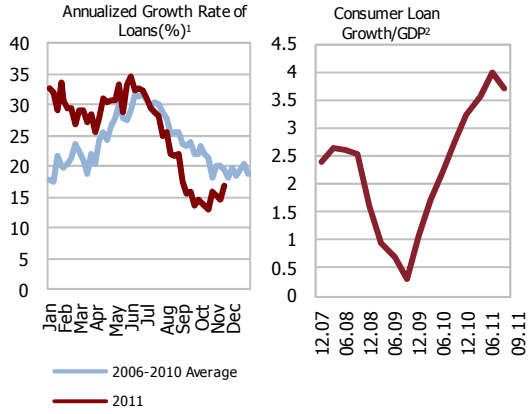
Data pertaining to the third quarter suggest a slowdown in economic activity. With the contribution of tightening reserve requirement and liquidity policies along with precautionary measures taken by the Banking Regulation and Supervision Agency (BRSA) as well as the tight stance in fiscal policy, growth of domestic demand was taken under control in the third quarter of 2011, whereas external demand remained weak despite a modest increase, due to global economic developments. Industrial production and capacity utilization data pertaining to the third quarter indicate that economic activity continued to slow down in the third quarter as well. Industrial production that had surged by 7.9 percent year-on-year in the second quarter of 2011, increased by 7.5 percent in the third quarter. The capacity utilization rate rose by 2.5 points year-on-year in the second quarter and by 2.3 points in the third quarter (Chart II.3). While, the annual growth trend of exchange rate effect adjusted loans hovered above 2006-2010 average figures in the first half of 2011, it fell below previous averages after this period and the surge in consumer loans lost pace (Chart II.4). The consumer confidence index declined to 89.7 in October 2011 from 96.4 in June 2011, which indicates a deceleration in consumption demand. The MTP announced in October envisages a relative slowdown in the growth rate starting from the second quarter of 2011 due to increased concerns worldwide, yet suggests 7.5 percent growth for the Turkish economy in 2011, despite this slowdown.

Chart II.3. Industrial Production and Capacity Utilization



Source: TURKSTAT, CBRT

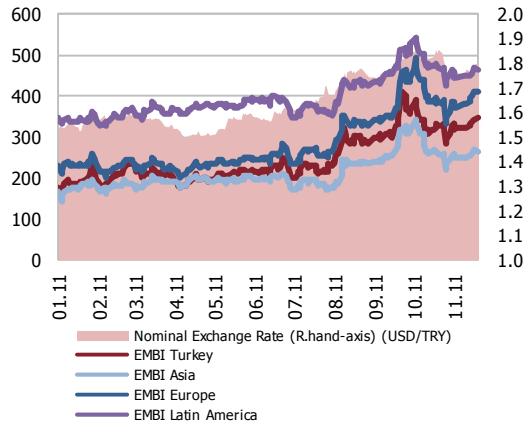
Chart II.4. Loans



Source: BRSA-CBRT
(1) Adjusted for exchange rate effect
(2) GDP data for 2011 Q3 is estimation.

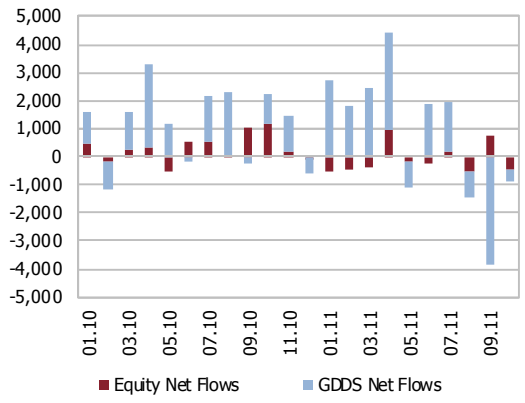
Parallel to increased uncertainties over the global economy and deterioration in the risk appetite, capital outflows were realized and the Turkish lira depreciated. Concerns over public debt in the Euro area led to a deterioration in global risk perceptions. As downside risks became more pronounced, risk premiums of emerging market economies increased and Turkey's risk premium indicators followed a similar course with other emerging markets (Chart II.5). The unfavorable course of global risk perceptions had an adverse impact on capital inflows to Turkey in the form of portfolio investments and especially the GDDS market posted outflows in August and September 2011 (Chart II.6). In line with capital outflows, Turkish lira depreciated primarily against US dollar (Chart II.5).

Chart II.5. EMBI [1] and Nominal Exchange Rate



Source: Bloomberg, CBRT
(1) Latin America: Peru, Colombia, Mexico, Brazil, Chile
Asia: Indonesia, Thailand, South Korea, Malaysia, Philippines
Europe: Romania, Poland, Hungary, Czech Republic, Bulgaria

Chart II.6. Net Portfolio Flows of Non-Residents (Monthly, Million US Dollar)

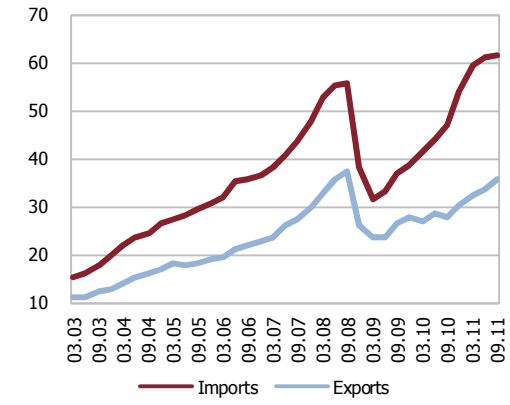


Source: CBRT

The narrowing gap between internal and external demand helped curb the rapidly growing current account deficit. Seasonally adjusted data suggest that on account of the depreciation of the Turkish lira, deceleration in credits and slowdown in domestic demand, imports remained weak in the third quarter as well and exports rose modestly (Chart II.7). Thus, according to seasonally adjusted data, the current account deficit that was USD 20.5 billion in the second quarter of 2011 declined to USD 18.6 billion in the third quarter. The current account deficit excluding energy fell to USD 6 billion from USD 8.9 billion in the same period (Chart II.8). The MTP envisages the

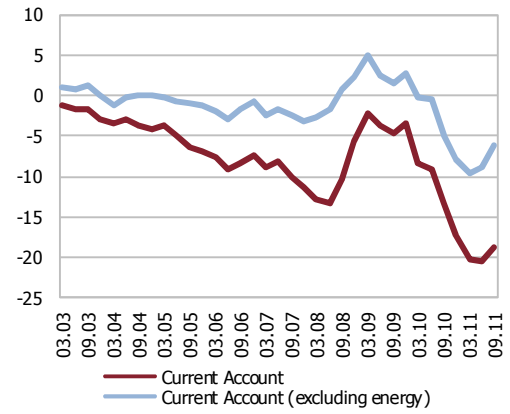
implementation of policies that will increase domestic savings and decrease the high dependency of the production structure of the economy on imports during the course of the Program. Thus, it is targeted to bring the current account deficit, which is expected to materialize at 9.4 percent of GDP by the end of 2011, to 7 percent of GDP by 2014.

Chart II.7. Imports and Exports (3-month, Billion US Dollar)[1]



Source: TURKSTAT, CBRT
(1) Seasonally adjusted data are used.

Chart II.8. Current Account Balance (3-month, Billion US Dollar)[1]

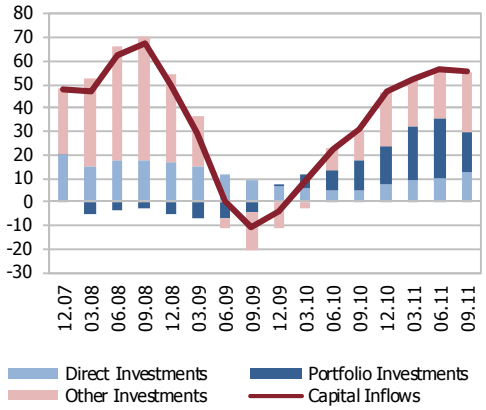


Source: CBRT
(1) Seasonally adjusted data are used.

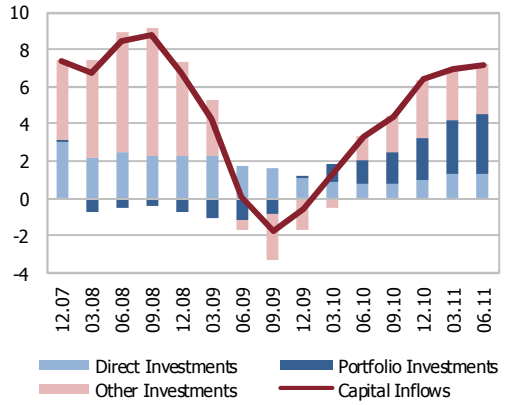
The share of long-term borrowings in the financing of the current account deficit increased. Capital inflows which were 6.4 percent of GDP at end-2010 reached 7.2 percent in the first half of 2011. Net capital inflows, which stood at USD 56.4 billion by June 2011, decreased to USD 55.2 billion by September 2011 due to outflows stemming from global economic problems (Chart II.9). Capital inflows were composed of USD 12.7 billion of direct investments, USD 17.4 billion of portfolio investments and USD 25.1 billion of other investments. Compared to June 2011, the share of portfolio investments in net capital inflows declined to 31.5 percent from 44.8 percent while that of other investments rose from 36.5 percent to 45.6 percent and the share of direct investments increased from 18.8 percent to 23 percent. This reveals that the quality of financing the current account deficit improved and changed in favor of long-term capital inflows in the said period.

Chart II.9. Financing Structure of the Current Account Deficit

Amount of Capital Inflows (Annual, Billion USD)[1]



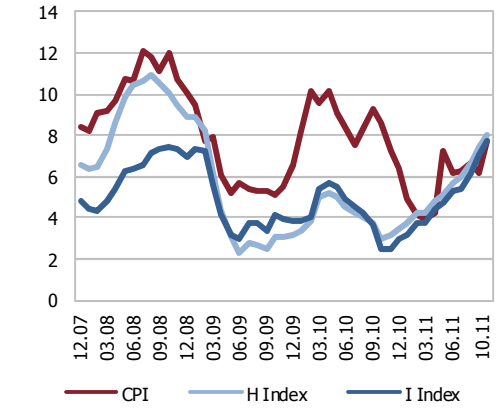
Capital Inflows (Annual, % GDP)[1]



Source: CBRT
(1) Capital inflows is composed of net direct investments, net portfolio investments and net other investments. Foreign exchange assets of banks and other sectors are not included in other investments.

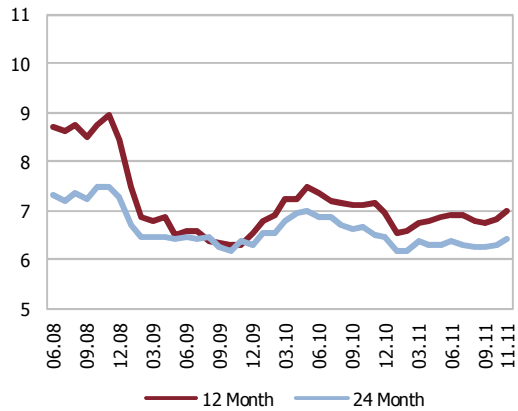
Depreciation of the Turkish lira and the hikes in administered prices have affected inflation indicators adversely, whereas inflation expectations displayed a modest rise in November. In the second quarter, the CPI increased by 6.2 percent year-on-year due to the rise in food inflation, lagged effects of cumulative increases in Turkish lira denominated import prices and the base effect. Core inflation indicators calculated by H and I indices rose on the back of core goods inflation and materialized as 5.7 percent and 5.3 percent, respectively. As of October 2011, the annual increase in the CPI rose to 7.7 percent along with the increases in H and I indices to 8 percent and 7.7 percent, respectively (Chart II.10). Despite the decline in annual inflation of the food group due to the base effect in unprocessed food prices in the said period, inflation indicators surged mainly driven by the depreciation of the Turkish lira and adjustments in administered prices[1] While core good prices were adversely affected by exchange rate developments, services prices maintained their moderate course. Inflation expectations, which displayed a rise in the first half of 2011, followed a flat course in the third quarter and annual inflation expectations for 12 and 24 months ahead rose slightly in November, due to the hikes in administered prices (Chart II.11).

Chart II.10. Inflation (Annual, %)



Source: TURKSTAT

Chart II.11. 12 and 24 Month Ahead CPI Expectations (%)



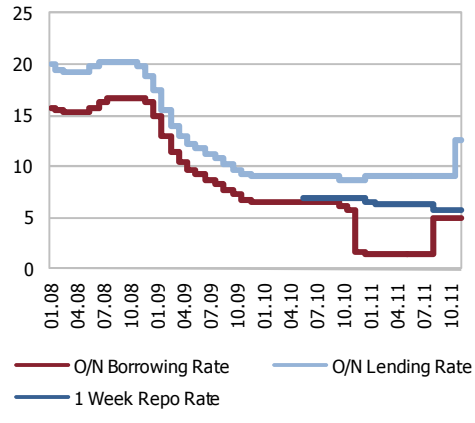
Source: CBRT

The CBRT has taken measures to contain the adverse effects of fluctuations in the foreign exchange market and global economic developments on domestic economic activity and to prevent an increase in inflation expectations. At the interim meeting of the Monetary Policy Committee (MPC), which gathered on August 4, 2011 to reduce any risk of recession in domestic economic activity driven by global economic problems, the policy rate was cut by 50 basis points and the interest rate corridor was narrowed significantly by increasing the overnight borrowing rate by 350 basis points in order to limit the potential downside volatility in the short-term interest rates (Chart II.12). Moreover, the CBRT started to hold foreign exchange selling auctions in order to alleviate the adverse effects of the excessive volatility of exchange rates on economic and financial stability during July and August and the lending rate in transactions, which the CBRT is party to, was reduced for both the USD and the euro. In October 2011, the CBRT overnight lending rate was increased by 350 basis points to ward off any negative impact of the depreciation of the Turkish lira on medium-term inflation expectations and outlook (Chart II.12). Furthermore, the Bank decided to resume its activities as an intermediary in the foreign exchange deposit markets in Foreign Exchange

[1] Rates of SCT on certain motor vehicles, mobile phones, alcoholic beverages and tobacco products were increased.

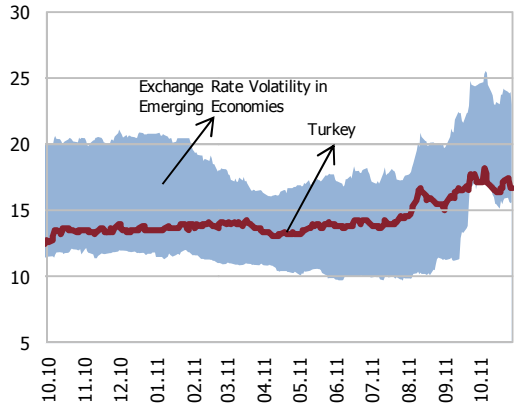
and Banknotes Market starting from November 10, 2011 with the aim of enhancing the mobility of foreign exchange liquidity until the heightened uncertainties in international markets disappear. Recently, depreciation of the Turkish lira and volatility of exchange rates remained subdued relative to other developing countries in response to the measures taken (Chart II.13).

Chart II.12. CBRT Interest Rates (%)



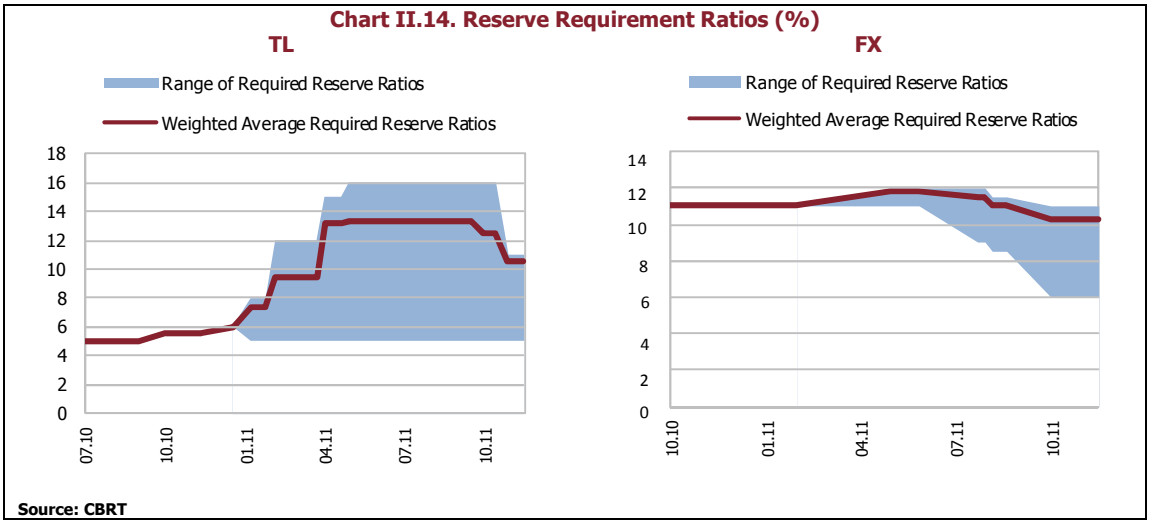
Source: CBRT

Chart II.13. Exchange Rate Volatility (%, Implied Volatility of Exchange Rates, 12-month)

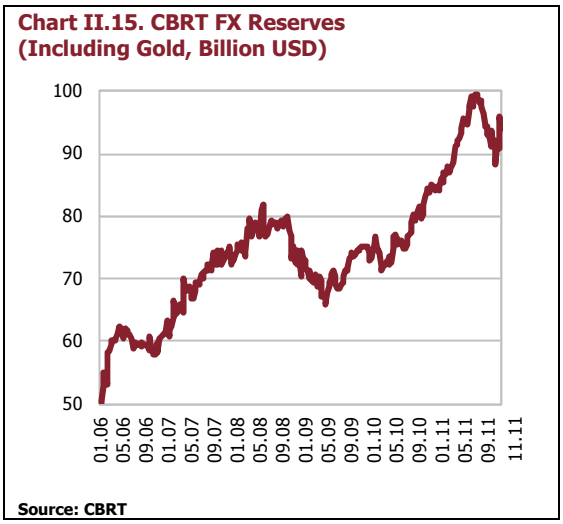


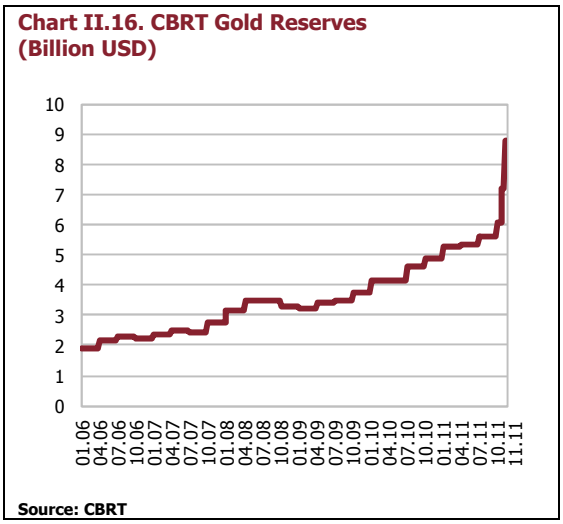
Source: Bloomberg, CBRT

Reserve requirements continued to be used as an active policy tool for the management of Turkish lira and foreign exchange liquidity and for the enhancement of reserves. In order to supply foreign exchange liquidity to the market and to lengthen the maturity structure of liabilities, the foreign exchange reserve requirement ratios were decreased in July, August and October (Chart II.14). Thus, liquidity amounting to USD 2.8 billion was supplied to the market. With a view to meeting the TL liquidity requirement permanently and at a lower cost, the Turkish lira reserve requirement ratios were reduced twice in October. Hence, the weighted average Turkish lira reserve requirement ratio materialized as 10.5 percent (Chart II.14) and liquidity amounting to TL 14.2 billion was provided to the market. Moreover, the Turkish lira reserve requirement ratio was set to encourage the lengthening of the maturities of the Turkish lira liabilities other than the deposit/participation funds (particularly those of TL-denominated bonds that started to be issued by banks as a new financing source). In order to meet the TL liquidity requirement of the Turkish banking system permanently and at a lower cost and to strengthen the build-up of foreign exchange reserves, up to 10 percent of the reserve requirements maintained for Turkish lira liabilities was allowed to be maintained as foreign exchange in September. The said upper limit was increased to 20 percent in October and to 40 percent in November. Gold deposit accounts that had displayed a surge recently were also included in the coverage of the reserve requirements in September. The facility of maintaining reserve requirements as "standard gold" in the accounts of Central Bank against the total amount of reserve requirements to be maintained for precious metal deposit accounts and up to 10 percent of reserve requirements for foreign currency liabilities excluding precious metal deposit accounts were provided. Besides, up to 10 percent of the reserve requirements maintained for Turkish lira liabilities were permitted to be maintained as gold.



Parallel to the policies implemented, CBRT's gold reserves rose, accompanied by an increase in the FX reserves including gold in November. Owing to changes in implementation of the reserve requirement ratios (Box III.6), CBRT FX reserves increased to reach USD 94 billion as of November 18, 2011 (Chart II.15). Gold reserves of the CBRT surged by USD 2.7 billion in the period of September-November and stood at USD 8.8 billion (Chart II.16). Meanwhile, the Regulation on Rediscount and Advance from the CBRT was revised in September 2011 and the duration for fulfilling the export commitment was raised from 4 months to 6 months and the overall limit of export rediscount credits was increased to USD 3 billion. As the said credits are extended in Turkish lira but collected in foreign exchange, the increase in the utilization of these credits raise CBRT foreign exchange reserves.

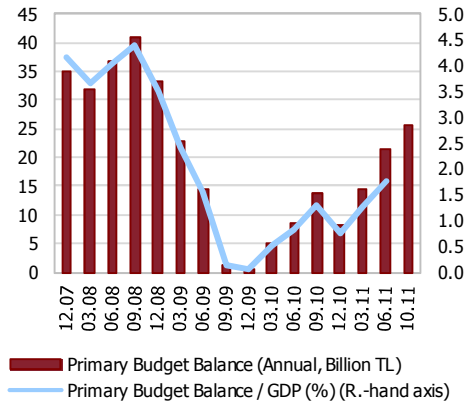




Strong economic activity, public spending under control and the decrease in interest expenses support the favorable outlook in the public finance. In the first ten months of 2011, budget revenues increased with respect to the same period in 2010 due to the surge in tax revenues, interest expenses decreased and primary expenditures surged at a relatively limited level. Moreover, additional revenues incurred via the restructuring of tax claims within the context of the "Law on Restructuring of Public Receivables" became TL 11.7 billion as of October 2011 and contributed to the public finance positively. These developments led to a positive performance on the budget and the

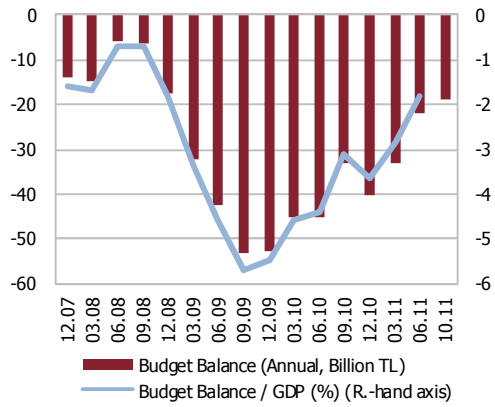
central government primary budget surplus, which had been TL 8.2 billion at end-2010, increased to TL 25.6 billion by October 2011 (Chart II.17). While the central government budget deficit was TL 40.1 billion at the end of 2010, it decreased to TL 18.7 billion by October 2011. The budget deficit, which was 3.6 percent of GDP at end-2010, was down to 1.8 percent of GDP by June 2011 (Chart II.18).

Chart II.17. Primary Budget Balance



Source: Ministry of Finance, TURKSTAT

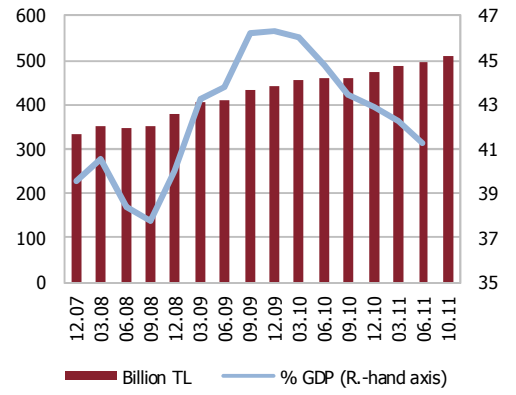
Chart II.18. Budget Balance



Source: Ministry of Finance, TURKSTAT

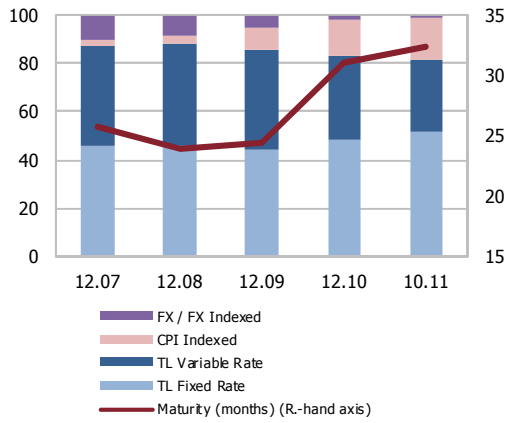
Public debt stock indicators continue to have a positive outlook. Central government debt stock, which was up by 7.3 percent in 2010 to become TL 474 billion, materialized as TL 511 billion with a year-on-year increase by 11.1 percent as of October 2011. The ratio of GDP to debt stock that had been 42.9 percent in 2010, dropped to 41.3 percent in June 2011 (Chart II.19). As of October 2011, 72 percent of the central government debt stock accounted for domestic debt. As to the composition of domestic debt stock, the share of TL denominated fixed-rate debts and CPI-indexed debts increased in 2011 compared to 2010. In October 2011, the share of TL denominated fixed-rate debts in domestic debt stock increased by 3.1 points to become 51.4 percent and CPI-indexed debts increased by 2.1 points to become 17.1 percent, compared to end-2010. Moreover, the maturity of domestic debt stock also increased from 31 months at end-2010 to 32.3 months in October 2011 (Chart II.20). The decline in the share of FX denominated and FX-indexed stock reduces sensitivity to exchange rate risk while the increase in the share of fixed income securities and extension of maturities reduces sensitivity to interest rate hikes, therefore both of them should be evaluated as a positive development.

Chart II.19. Central Government Debt Stock



Source: Undersecretariat of Treasury, TURKSTAT

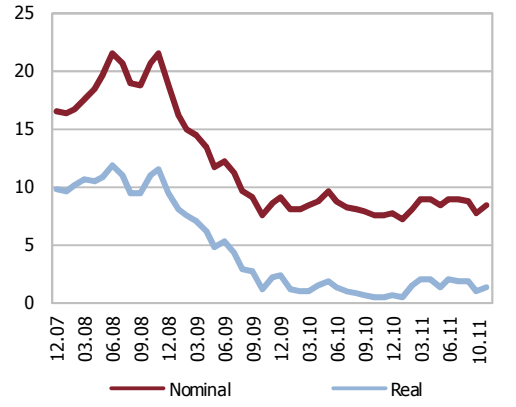
Chart II.20. Composition of Domestic Debt Stock (%)



Source: Undersecretariat of Treasury

Borrowing costs of the public sector hover around low levels and the MTP envisages a tightening in public finance in the upcoming period. The treasury discounted auction interest rate displayed a downward trend from early 2009 and is still at low levels despite a slight increase in 2011. The rate that was 8.3 percent as of October 2011 stands at 1.4 percent after being adjusted for 12-month inflation expectations (Chart II.21). According to the framework outlined in the MTP regarding public finance, primary budget expenditures will gradually be reduced during the Program period. Furthermore, it is targeted to increase tax revenues and the total public primary surplus as well as to decrease the ratio of debt stock to GDP by way of legal and administrative regulations (Table II.1).

Chart II.21. Treasury Discounted Auction Interest Rate (%)



Source: Undersecretariat of Treasury, CBRT

Table II.1. Main Variables Related To Public Finance (Ratio to GDP, %)

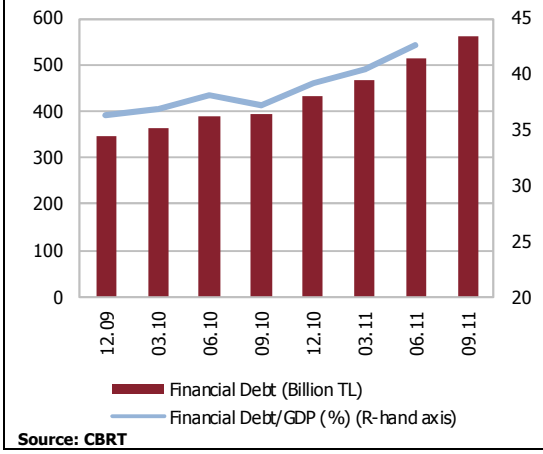
	2011*	2012**	2013**	2014**
Central Gov. Budget Balance	-1.7	-1.5	-1.4	-1.0
Central Gov. Budget Revenues	22.7	23.1	22.9	22.5
Central Gov. Budget Expenditures	24.4	24.6	24.2	23.6
Total Public Primary Balance (Program-Defined)	1.2	1.1	1.3	1.5
Central Government Primary Balance (Program-Defined)	0.9	1.0	1.2	1.4
Central Gov. Revenues (Program-Defined)	22.0	22.1	22.0	21.8
Central Gov. Primary Expenditures (Program-Defined)	21.1	21.1	20.9	20.4
EU Defined Nominal Debt Stock	39.8	37.0	35.0	32.0

Source: Medium Term Program (2012-2014)
* Forecast
** Target

Corporate sector debt increases while the share of their foreign borrowing decreases. While no significant change was observed in corporate sector total financial debt in 2009, it increased gradually in early 2010 and became TL 563 billion by September 2011. Consequently, the ratio of the corporate sector financial debt to GDP increased by 3.4 points in the first half of 2011 compared to end-2010 and reached 42.6 percent (Chart II.22). As of September 2011, 60.8 percent of corporate sector financial debt was denominated in foreign currency; however, majority of this debt was long term. In the same period, the share of foreign borrowing in total loans (excluding branches) was 20 percent, whereas the share of loans extended to the corporate sector by domestic and foreign

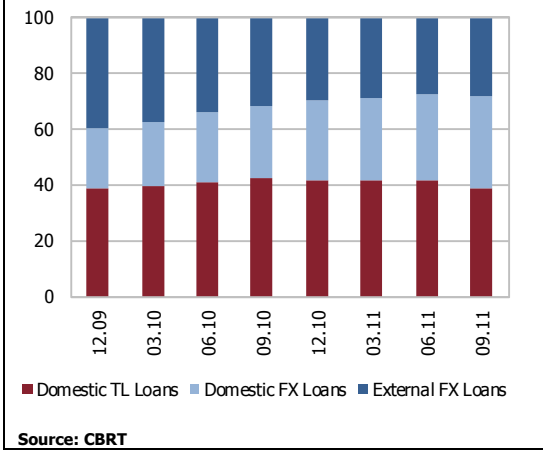
branches and affiliates of Turkish banks in total loans increased by 3.3 points compared to end-2010, reaching 40.9 percent. TL loans extended to the corporate sector dropped in the reporting period and became 39.2 percent as of September 2011(Chart II.23).

Chart II.22. Financial Debt of Corporate Sector (Billion TL, %)



Source: CBRT

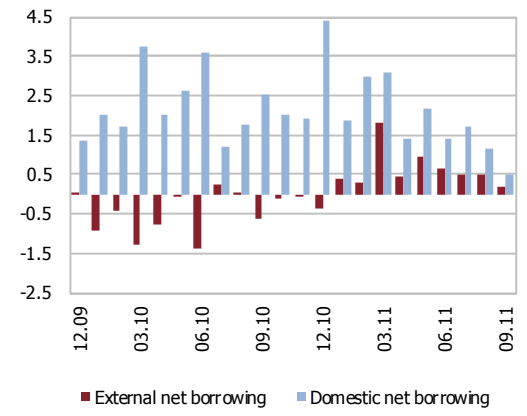
Chart II.23. Composition of Financial Debt (%)



Source: CBRT

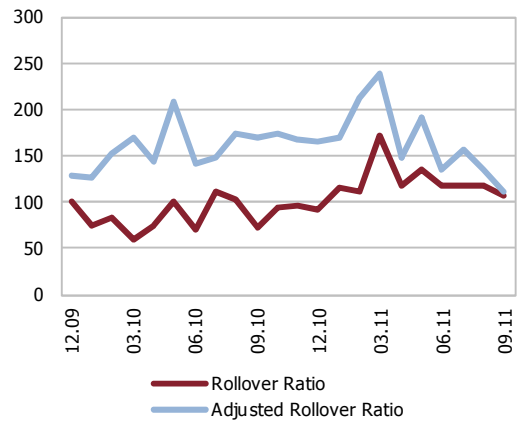
After the amendment to Decree No. 32 in June 2009, firms opted for FX loans from the domestic market and the external loans rollover ratio displayed a downward trend in the second half of 2011. From end-2010 to August 2011, the amount of loans extended to the corporate sector by foreign branches and affiliates of Turkish banks decreased by USD 1.4 billion, whereas loans extended by foreign banks increased by USD 2.5 billion. On the other hand, FX loans extended by domestic branches of banks increased by USD 21.8 billion (Chart II.24). According to balance of payments data, the external debt rollover ratio of non-banks was 107 percent as of September 2011; however, taking into consideration the increase in the volume of FX loans extended by domestic branches, the ratio is calculated as 112 percent. The decrease in the external debt rollover ratio in September 2011 compared to March 2011 was mainly attributable to the decline in long-term external borrowing (Chart II.25).

Chart II.24. Non-Bank Sector Net FX Borrowings[1] (Billion USD)



Source: CBRT
(1) Corporate sector net FX borrowings are calculated by subtracting repayments from borrowings in the respective month.

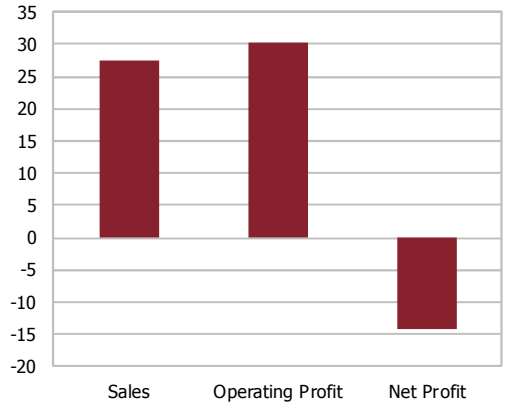
Chart II.25. Non-Bank Sector External Debt Rollover Ratio[1] (%)



Source: CBRT
(1) The external debt rollover ratio is computed from the balance of payment statistics, by dividing non-banks' borrowing with repayments. The external debt rollover ratio of non-banks, which decreased due to the amendment to Decree No: 32, has been re-calculated by taking into account the rise in FX loans extended by domestic branches of Turkish banks and the rise in repayments to domestic branches of Turkish banks.

Corporate sector's profits decreased despite increased sales. While the total amount of sales revenues of firms quoted on the Istanbul Stock Exchange (ISE) increased by 28 percent year-on-year in September 2011, operating profits increased by 30 percent; however, net profits decreased by 14 percent. Despite higher sales revenues and operating profits of firms, financial expenditures that rose on the back of increased provisions for exchange rate movements were instrumental in the decline of the net profit (Chart II.26). As a result of these developments, the return on equity, which was 12 percent in September 2010, declined to 9.5 percent in September 2011 (Table II.1). The decrease in the profit margin was influential on the decline of return on equity of firms. The surge in financial expenditures, which are excluded from operating profits, affected their profit margins negatively.

Chart II.26. Sales and Profitability of Firms by September 2011 (Annual % Change)[1]



Source: PDP
(1) Consolidated data of 224 manufacturing industry firms quoted on the ISE.

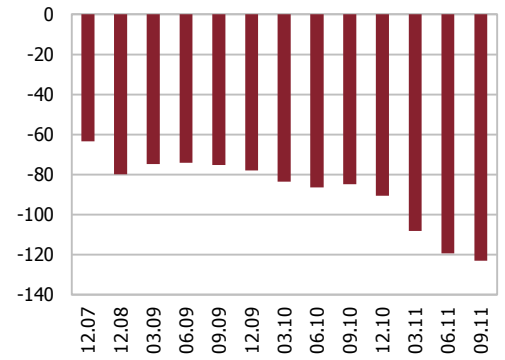
Table II.2. Return on Equity and Its Components[1]

	09.10	09.11
Net Profit / Equity (%)	12.0	9.5
Assets / Equity	2.1	2.2
Net Profit / Assets (%)	5.9	4.2
Sales / Assets	0.7	0.8
Net Profit / Sales (%)	7.8	5.3
Operating Profit / Sales (%)	9.2	9.4
Financial Income (Expenditures) / Sales (%)	0.3	-2.8

Source: PDP
(1) Consolidated data of 224 manufacturing industry firms quoted on the ISE.

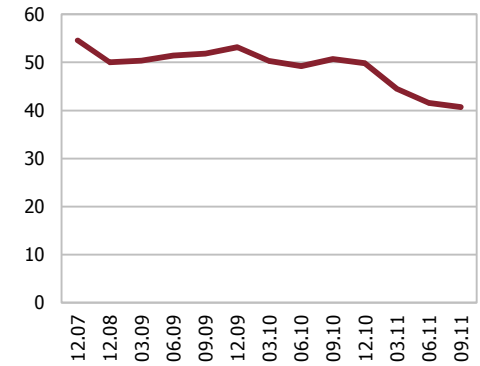
The FX assets and liabilities of firms suggest that the net FX short position has increased and currency risk still remains significant for them. The net short position of the corporate sector, which started to decrease after the global crisis, assumed an upward trend with the economic recovery. The FX short position that rose by 16.4 percent year-on-year in 2010 increased by 35.7 percent in the first nine months of 2011 and reached USD 123 billion (Chart II.27). As of September 2011, the ratio of FX assets to FX liabilities went down by 3.8 points from the first quarter of 2011 and declined to 40.7 percent (Chart II.28).

Chart II.27. Foreign Exchange Position of the Corporate Sector (Billion USD)[1]



Source: CBRT
(1) Data for September 2011 are provisional.

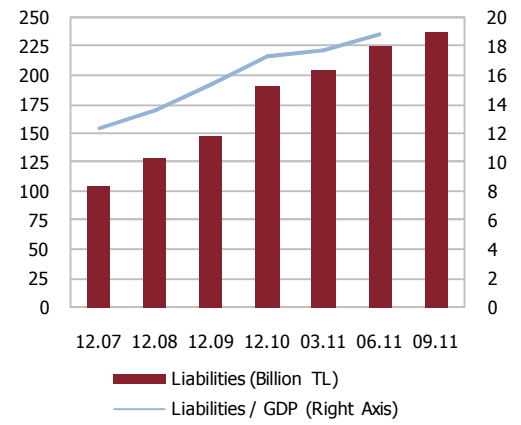
Chart II.28. FX Assets to FX Liabilities Ratio of the Corporate Sector (%)[1]



Source: CBRT
(1) Data for September 2011 are provisional.

As a result of measures taken to curb credit growth, the increase of household liabilities declined gradually in 2011. Apart from measures taken by the authorities, deterioration of the global risk appetite, which led to depreciation of the Turkish lira, and decreased consumer confidence arising from external developments were influential in the deceleration of the growth of household indebtedness (Chart II.29). Meanwhile, rising costs incurred by banks due to the measures taken as well as external risk developments became instrumental for them in setting loan rates, which led to rise in household borrowing cost. This situation was also reflected on the interest payments of households (Table II.3).

Chart II.29. Household Liabilities (%, Billion TL)[1]



Source: BRSA-CBRT, TURKSTAT
(1) Household liabilities consist of gross consumer credits and credit card balances extended by banks and consumer finance companies (including NPLs) and liabilities to TOKI due to TOKI's housing sales with long-term maturity.

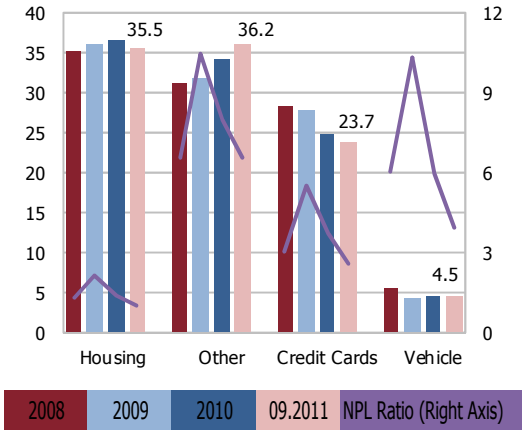
Table II.3. Household Disposable Income/Liabilities and Interest Payments [1,2,3] (Billion TL)

	12.09	12.10	09.11
Household Disp. Income	408.9	463.4	529.7
Household Liabilities	147.1	191.1	236.6
Household Interest Payments	21.1	20.4	22.3
Interest Paym. / Hh. Disp. Income (%)	5.2	4.4	4.2
Liabilities / Hh. Disp. Income (%)	36.0	41.2	44.7

Source: BRSA-CBRT, TURKSTAT, Development Bank of Turkey
1) Household liabilities consist of gross consumer credits and credit card balances extended by banks and consumer finance companies (including NPLs) and liabilities to TOKI due to TOKI's housing sales with long-term maturity.
(2) As the repayments related to liabilities from TOKI's housing sales with long-term maturity are indexed to civil servant salaries, they are not included in interest payments.
(3) Household disposable income for 2010 and 2011 September has been calculated by using the private sector disposable income estimation for 2010 and 2011 as mentioned in the 2011 Annual Program, assuming that the ratio of household disposable income for 2009, which was generated from the Income and Living Conditions Survey, to private sector disposable income has not changed.

Housing loans that have the largest share in household liabilities were replaced by other loans in the third quarter of 2011 on the back of measures taken and decline in housing demand. Housing loans and number of house sold increased due to the fall of interest rates and the recovery in economic activity during the post-crisis period. However, with the decision of BRSA limiting the loan amount to 75 percent of the value of the house[2] the interest rates on loans surged, as a result of which the growth rate of housing loans decelerated and other loans had the largest share in households liabilities in September 2011 (Chart II.30). The number of house sold, which had reached 532 thousand at end-2009, was down to 380 thousand in June 2011 due to the decline in housing loans and demand for purchase of house (Chart II.31).

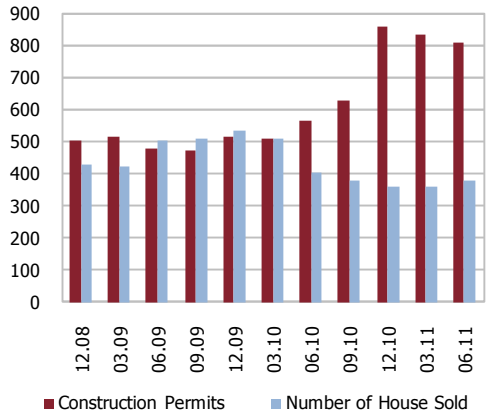
Chart II.30. Decomposition of Household Liabilities and NPL Ratios by Type (%)[1,2,3,4]



Source: CBRT-BRSA

(1) Household liabilities consist of gross consumer credits and credit card balances extended by banks and consumer finance companies and liabilities to TOKI due to TOKI's housing sales with long term maturities.
(2) Liabilities to TOKI due to TOKI's housing sales with long-term maturity are also included in housing loans.
(3) Other loans consist of all consumer loans excluding housing and vehicle loans.
(4) TOKI loans and loans extended by consumer financing companies are not included in calculation of NPL ratios.

Chart II.31. Number of House Sold and Construction Permits (Thousand) [1]



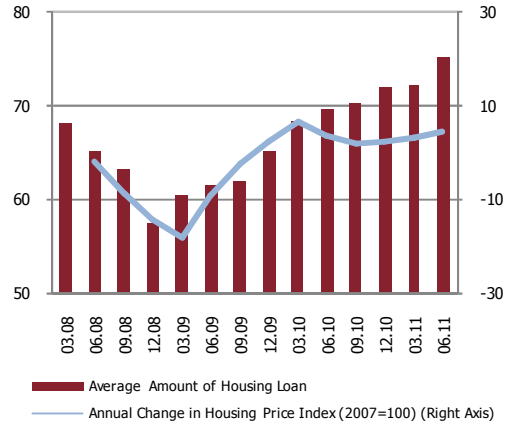
Source: TURKSTAT

(1) Data represent 12-month sum of apartments at buildings used for residency purposes.

The increase of housing prices is one of the factors that have led households to use higher amount of loans. The annual growth rate of housing loans, which fell due to the crisis, recovered in 2009 on the back of the decline in housing stock and followed a stable course due to the excess supply arising from the increase of construction permits starting from 2010 (Chart II.31 and Chart II.32). The change in housing prices also has an impact on the average amount of housing loan used by households (Chart II.32). Rebounds in housing prices may lead households to use higher loans than they can afford. However, the increase of housing prices in Turkey seems more reasonable than that in selected countries (Chart II.33).

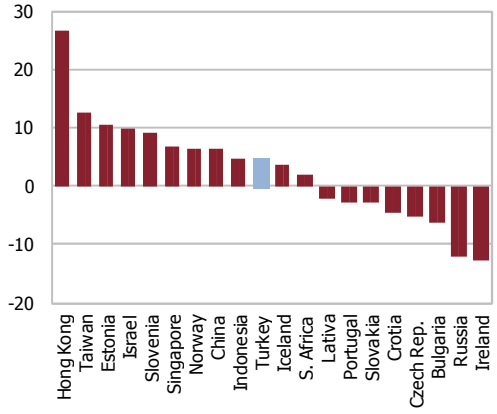
[2] With the BRSA decision No. 3980, published in the Official Gazette No. 27789 dated December 18, 2010, the amount of the credit that can be extended was limited to 75 percent of the value of the real estate subject to collateral, to be effective as of January 1, 2011.

Chart II.32. Average Amount of Housing Loan and Annual Change in Housing Price Index (Thousand TL, %)[1]



Source: The Banks Association of Turkey, Reidin.com-The Association of Real Estate Investment Companies
(1) Average amount of housing loans are computed by dividing annualized housing loans by annualized number of borrowers, which are issued by the BAT.

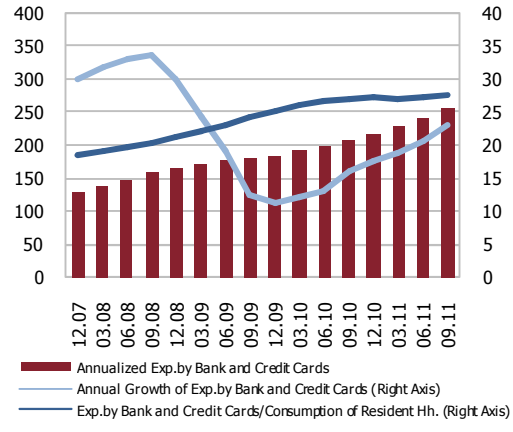
Chart II.33. Annual Change in Housing Prices in Selected Countries (2011 June, %)



Source: Knight Frank Global House Price Index

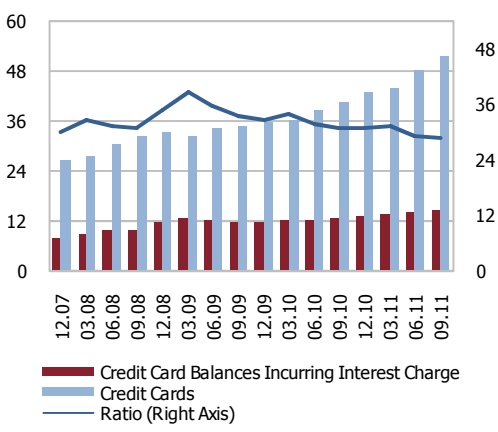
Household expenditures by bank and credit cards continued to rise over the years, whereas the ratio of credit card balances that incur interest charges to total credit card balances is in decline. With more widespread use of credit cards, the share of expenditures by bank and credit cards in household consumption increased. The increase in expenditures by cards, which plays an important role for the registered economy as well, slowed down during the crisis, however it gained pace afterwards (Chart II.34). Credit card balances continued to rise albeit with a decreased share in household liabilities by years. In the meantime, the ongoing favorable economic outlook reduces the ratio of credit card balances that incur interest charges to total credit card balances (Chart II.35).

Chart II.34. Expenditures by Bank and Credit Cards and Resident Household Consumption (Billion TL, %)[1]



Source: TURKSTAT, Interbank Card Center (ICC)
(1) Spending by deposit and credit cards are calculated by annualizing the use of local bank and credit cards in domestic shopping.

Chart II.35. Credit Card Balances of Deposit Banks and Balances that Incur Interest Charge[1]

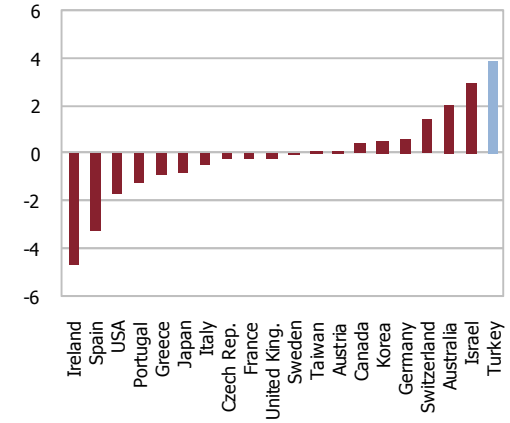


Source: CBRT

Recovery in the employment market added to the household disposable income and facilitated access to loans. Unemployment, the biggest risk for households continued to be a serious problem particularly in developed countries in the post-crisis period. As for Turkey, the unemployment rate returned to its pre-crisis average levels thanks to increased employment on the back of high growth performance (Chart II.36). Improvement in the employment market had a

positive impact on household disposable income; however it also led to a surge in liabilities. Accordingly, the ratio of household liabilities to disposable income continued to rise (Table II.3). Nevertheless, the ratio of household liabilities to GDP, which was 18.8 percent by June 2011, is still at low levels compared to EU countries (Chart II.37).

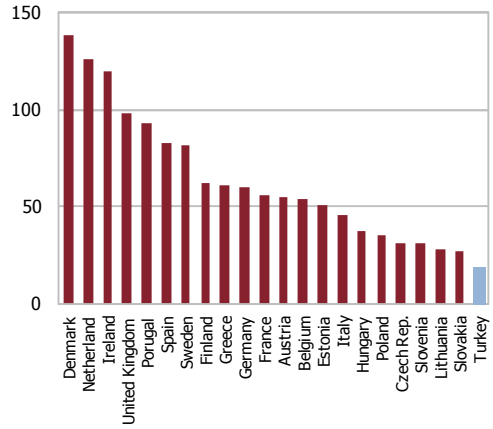
Chart II.36. Annual Average Growth Rate of Employment in Selected Countries (2007-2010, % Growth)[1]



(1) Natural logarithm differences.

Source: IMF WEO, TURKSTAT, CBRT

Chart II.37. Ratio of Household Liabilities to GDP in Selected EU Countries (June 2011, %)



Source: BRSA-CBRT, TURKSTAT, TRMD ECB

The number of credit card and consumer loan defaulters decreased and the Non-performing Loan (NPL) ratio for consumer loans declined. The number of credit card and consumer loan defaulters declined owing to the economic recovery and the surge in employment (Table II.4). The NPL balances also displayed a similar outlook and the NPL ratio for consumer loans started to fall in 2009 (Chart II.30).

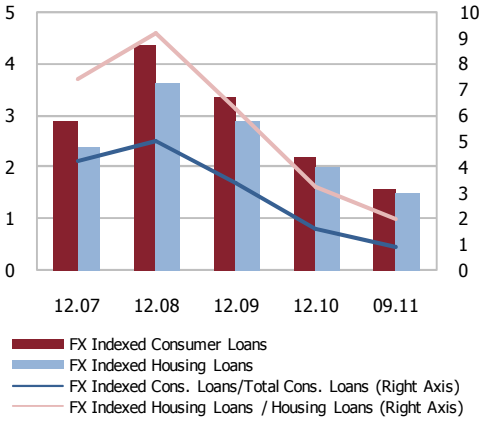
The exchange rate and interest rate risk on consumer loans observed in some EU countries is quite low in Turkey. Housing loans extended in FX and generally with variable rates have surged significantly primarily in Eastern and Central European countries in the recent period. Therefore, mortgage risks coupled with problems in the EU have increased. Thus, some countries (Hungary, Romania, etc.) have taken measures related to FX-denominated loans in order to safeguard financial stability. As for Turkey, with the amendment to Decision No. 32 in June 2009, households, unable to borrow in foreign exchange, were prevented from borrowing FX-indexed loans as well; hence, hedging against FX risk was provided (Chart II.38). Moreover, the minority of housing loans are variable-rate loans, which reduces the interest rate risk of households.

Table II.4. Number of Credit Card and Consumer Loan Defaulters [1]

	12.08	12.09	12.10	09.11
Banks	997,095	1,489,131	1,319,111	1,204,213
Asset Management Companies[2]	139,862	330,156	574,541	625,127
Finance Companies	21,884	23,463	18,003	15,313
Total[3]	1,093,474	1,721,004	1,689,788	1,616,436

Source: CBRT
(1) Customers with more than one registry to a particular financial institution group are counted only once.
(2) Represents non-performing loans taken over by asset management companies from the SDIF and banks.
(3) As customers may be registered in more than one financial institution group, the sum of the three rows in the table and grand total are not equal.

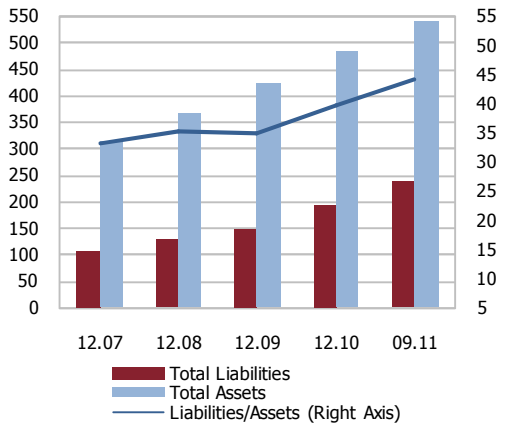
Chart II.38. FX-Indexed Consumer Loans and FX-Indexed Housing Loans (Billion TL, %)



Source: BRSA-CBRT

The ratio of household liabilities to assets has increased. The ratio of household liabilities to financial assets is on the rise due to the fact that liabilities increase faster than assets (Chart II.39). As of September 2011, the share of TL deposits continued to have the largest share in household assets. In the said period, the shares of precious metal deposit, repos and private pension funds in household assets increased compared to end-2010, whereas the share of other financial assets declined (Table II.5).

Chart II.39. Household Financial Assets and Liabilities (Billion TL, %)[1]



Source: BRSA-CBRT, CMB, CRA
(1) Household Assets = Savings Deposits +FX Deposits + Currency in Circulation + GDDS + Eurobonds + Stocks + Repos + Pension Funds + Mutual Funds (since December 2006). Household liabilities consist of gross consumer credits (including NPLs) and credit card balances (including NPLs) extended by banks and consumer finance companies and liabilities to TOKI due to TOKI's housing sales with long-term maturity.

Table II.5. Household Financial Assets (Billion TL, %) [1]

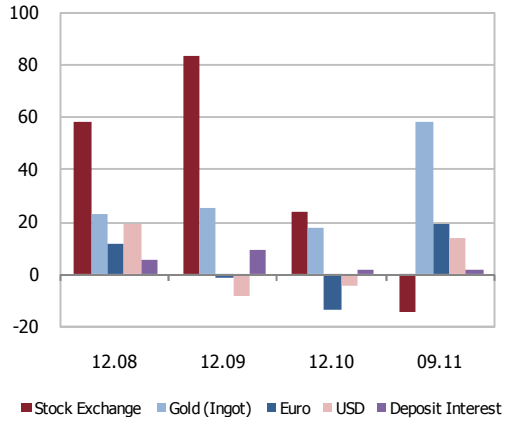
	12.09		12.10		09.11	
	Billion TL	% Share	Billion TL	% Share	Billion TL	% Share
TL Deposits	209.6	49.9	253.8	52.7	280.4	52.1
FX Deposits	98.2	23.4	96.9	20.1	106.9	19.9
- FX Deposits (Billion USD)	*65.2*	-	*62.7*	-	*58.0*	-
Currency in Circulation	35.4	8.4	44.6	9.3	52.1	9.7
GDDS+Eurobond	14.1	3.3	9.4	2.0	8.8	1.6
Mutual Funds	26.1	6.2	28.5	5.9	28.3	5.3
Stocks	24.6	5.9	32.6	6.8	32.4	6.0
Private Pension Funds	9.0	2.1	12.1	2.5	14.1	2.6
Repos	2.3	0.5	1.5	0.3	2.2	0.4
Precious Metal Deposits	1.1	0.3	2.3	0.5	12.5	2.3
Total Assets	**420.4**	**100**	**481.7**	**100**	**537.7**	**100**

Source: BRSA-CBRT, CMB, CRA
(1) TL and FX deposits include participation funds.

Households' portfolio preferences are shaped according to risk perceptions, expectations on future and yields of financial assets. In the first three quarters, gold yielded the highest real return while the ISE index performed the worst. This development reverberated on the financial assets of households as well (Chart II.40 and Table II.5). The stable course of foreign exchange rate also reflects on portfolio preferences between TL and FX financial assets. Adjusted for

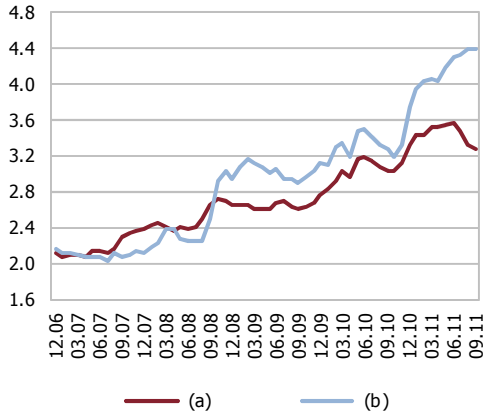
exchange rates, it is observed that the ratio of TL investment instruments to FX investment instruments continued to increase by years (Chart II.41).

Chart II. 40. Real Return of Financial Investment Instruments by Types (%)[1]



Source: TURKSTAT
(1) Expressed in real terms by using the CPI.

Chart II. 41.
Ratio of Household TL Investment Instruments to FX Investment Instruments [1]



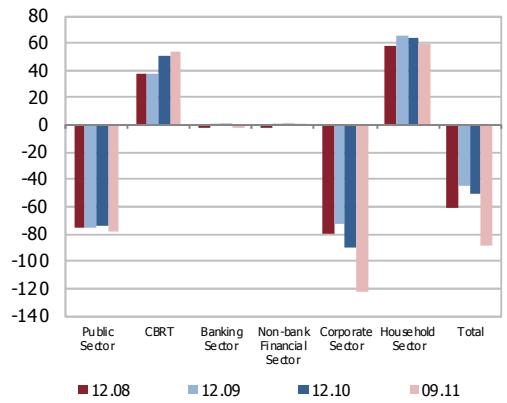
Source BRSA-CBRT, CMB, CRA
(1) TL Instruments = Deposits + Repos + GDDS. + Participation Funds (TL) + Stocks + Private Pension Funds + Mutual Funds (starting from April 2006); FX Instruments = FX Deposits + GDDS. + Eurobond, (a) Current TL value of FX deposits and Participation Funds (FX). (b) For FX deposits and Participation Funds (FX), exchange rate prevailing on 29.12.2006 is used and the parity effect is eliminated.

Monitoring Turkey's macro FX position is important for the assessment of the exchange rate risk of economic units. Turkey's FX short position stood at USD 88.9 billion as of September 2011. An analysis by years indicates that in Turkey, the public and corporate sector have FX short positions, the CBRT and households have long positions and the banking sector and non-bank financial sector have a position of almost zero. In this framework, the public and corporate sectors are those that will be adversely affected by the depreciation of the Turkish lira. As of September 2011, the corporate sector posted a short position of USD 123 billion, followed by USD 78.4 billion of the public sector, USD 0.5 billion of the banking sector; whereas households had a long position of USD 59.1 billion, followed by USD 53.9 billion of the CBRT, and USD 0.1 billion of the non-bank financial sector (Chart II.42). In September 2011, Turkey's FX short position materialized as 11.2 percent of GDP[3] (Special Topic IV.8).

While CBRT reserves are on the rise, the ratio of reserves to short-term external debt stock according to days to maturity excluding foreign branches and affiliates is 85.3 percent. The ratio of CBRT reserves to short-term external debt stock according to days to maturity excluding foreign branches and affiliates declined to 85.3 percent in September 2011 from 96.2 percent in June 2011 (Chart II.43). The amount of reserves that surged on the back of policy measures taken is expected to drive this ratio upwards in the coming period.

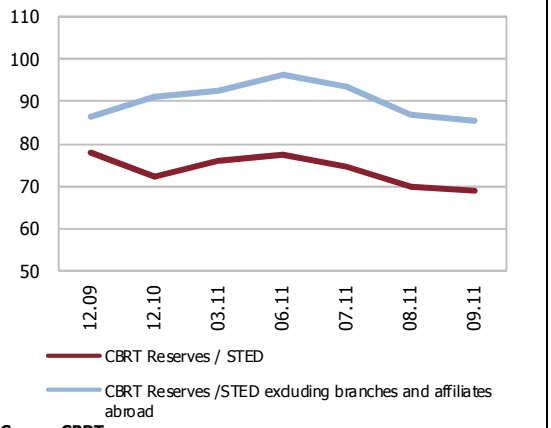
[3] The GDP figure for 2011 Q3 is estimation.

Chart II.42. Turkey's FX Short Position (Billion USD) [1]



Source: CBRT-BRSA, Undersecretariat of Treasury
(1) Public FX liabilities for September 2011 consist of central government external debt stock data and central government FX-denominated and FX-indexed domestic debt stock data.

Chart II.43 Ratio of CBRT Reserves to Short-Term External Debt (STED) According to Days to Maturity (%) [1]



Source CBRT
(1) Represents external debt with days to maturity of one year or less, regardless of the original maturity.

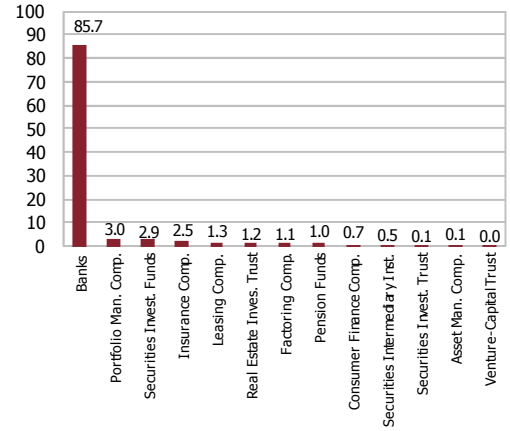
Uncertainties over global economic activity remain important in terms of financial stability in the period ahead. Primarily, problems over the sovereign debt in the Euro area spill over to the banking sector and sustain the downside risks on the global economy. Despite the counter-cyclical effects of policy measures taken to deal with the deterioration of the global growth outlook on domestic demand, the likeliness of deepening of global problems constitutes a major risk factor for Turkey as well. The CBRT, owing to its sound balance sheet and strong policy tools, has the room for maneuver to minimize the adverse effects of global concerns on the Turkish economy and will monitor economic developments closely and continue to take the necessary measures to ensure stability in domestic markets. In the forthcoming period, implementation of the fiscal framework envisaged in the MTP as well as the institutional and structural arrangements are of great importance for both supporting financial stability and for the decoupling of the Turkish economy and other emerging market economies in favor of the former. Moreover, the implementation of structural reforms that increase savings and reduce external dependency with regard to energy as set out in the MTP; and, thus, providing a lasting solution to the current account deficit is crucial to bolster financial stability.

III. RISKS AND DEVELOPMENTS IN THE BANKING SECTOR

Economic activity has decelerated in tandem with heightened uncertainties about the global economy fuelled by the deepening European debt crisis and slower than expected recovery in the economies of developed countries. The authorities, bearing in mind the said global developments as well as developments in domestic economic activity, have taken the required measures, the CBRT has taken the necessary steps to supply required liquidity to the market in a controlled, effective and timely manner. In Turkey, credit growth has been slowed down to reasonable levels on the back of deceleration in economic activity observed since the second quarter and the impact of the measures against credit growth on credit interest rates. Meanwhile, the improvement in employment conditions has bolstered financial stability and the sector's asset quality has improved on the back of the increased debt service capacity of the corporate sector and households. Banks' profitability has been adversely affected by the continued decline in the net profit margin and the rise in non-interest expenditures; however the Turkish banking sector's capital adequacy ratio is still well above the legal and target ratios and the strong capital structure is maintained.

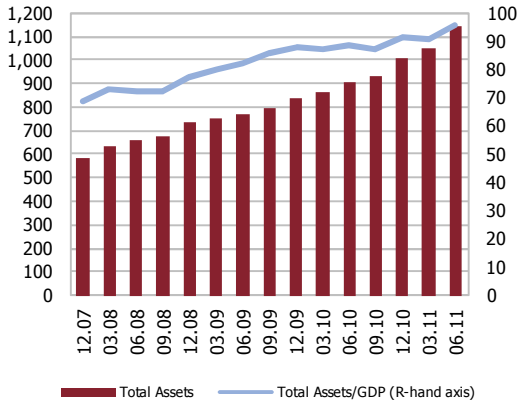
The Turkish financial sector, which is predominantly composed of the banking sector, maintains a sound growth path. The balance sheet of the Turkish financial sector, which has been growing since end-2009, grew by 25.3 percent in June 2011 year-on-year and reached TL 1,337 billion, and its ratio to GDP became 111.3 percent. The share of banks, which accounts for 85.7 percent of the sector assets, increased by 0.5 percentage points compared to the same period last year, whereas there has been no significant change in the share of other financial institutions (Chart III.1). In September 2011, the total asset size of the banking sector, which has the largest share in the financial sector, increased by 20.6 percent in nominal terms and by 15.3 percent in real terms compared to end-2010 and reached TL 1,214 billion. Thus, the ratio of the banking sector's balance sheet size to GDP, which was 91.2 percent at end-2010, rose to 95.4 percent in the second quarter of 2011 (Chart III.2).

Chart III.1. Balance Sheet Size of the Financial Sector (%)[1]



Source: BRSA –CBRT, ACMIIT, CMB, AIRCT
(1) For data of portfolio management companies, the portfolio size that the companies manage has been used.

Chart III.2. Development of the Banking Sector (Billion TL, %)[1]

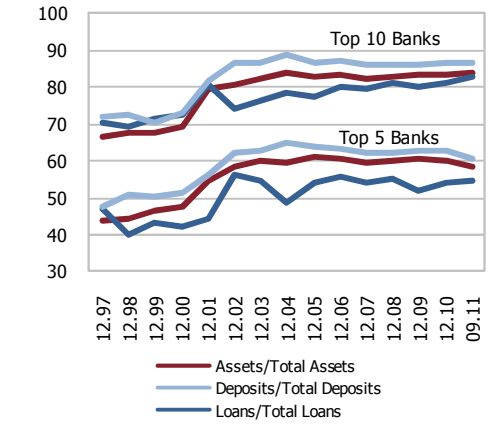


Source: BRSA–CBRT,TURKSTAT
(1) By June 2012.

As of September 2011, among the 48 banks operating in the Turkish banking sector, the share of the first 5 banks with respect to asset size is 58.8 percent while that of the

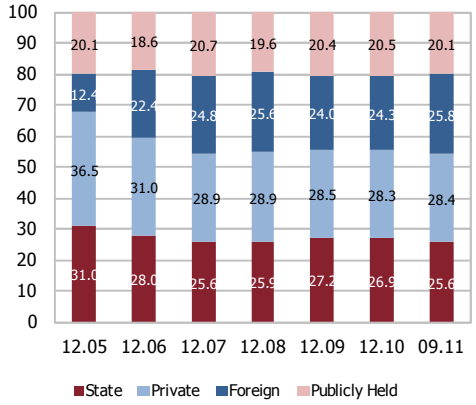
first 10 banks is 83.9 percent (Chart III.3). While concentration is seen more on deposits, it is lower on credits. Based on their share in paid-up capital, the share of foreign shareholders in asset size, which was 24.3 percent at end-2010, was realized as 25.8 percent in September 2011. Meanwhile, according to data of the Central Registry Agency, when the share of foreign participation in publicly held shares, which accounts for 17.2 percent, are included as well, the share of foreign participation in the banking sector reaches 43 percent (Chart III.4).

Chart III.3. Concentration of the Turkish Banking Sector (%)



Source: BRSA –CBRT

Chart III.4. Composition of Banking Sector Assets by Structure of Ownership (%)[1]

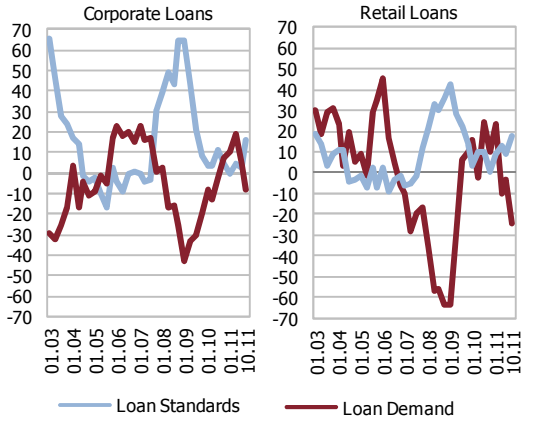


Source: BRSA–CBRT

(1) For publicly held shares no distinction has been made between domestic and foreign investors.

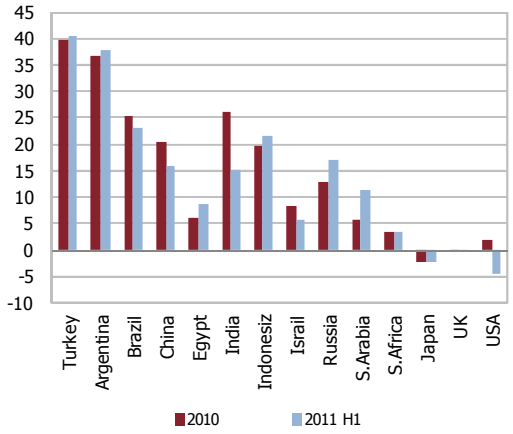
Capital flows into emerging markets has been decelerating due to the decrease in global risk appetite on the back of the problems in European economies and because of the prevailing weakness in global economic confidence, acceleration in credit demand has lost pace in developed economies. Persisting sovereign debt problems in European economies; the social and political repercussions of economic problems and sluggish solutions offered to lingering financial vulnerabilities in developed countries lead to deterioration in expectations for global growth. Parallel to these developments, demand for corporate loans and retail loans in Europe is still weak and the tightening in credit conditions continues (Chart III.5). Capital flows to emerging economies indicating high growth rates, has been decelerating due to increased concerns over the global economy and the deterioration in risk appetite. If it is considered that the deceleration in capital flows might continue in the upcoming period, rapid credit growth in emerging markets, which was observed in the post-crisis period, is expected to lose pace slightly (Chart III.6).

Chart III.5. Credit Standards and Credit Demand in the Euro Area (Percent)[1,2]



Source: ECB, Euro Area Bank Lending Survey, October 2011
(1) A negative value in credit standards indicates an easing in standards, whereas a positive value in credit demand indicates an increase in credit demand.
(2) The demand for retail loans is related to housing loans.

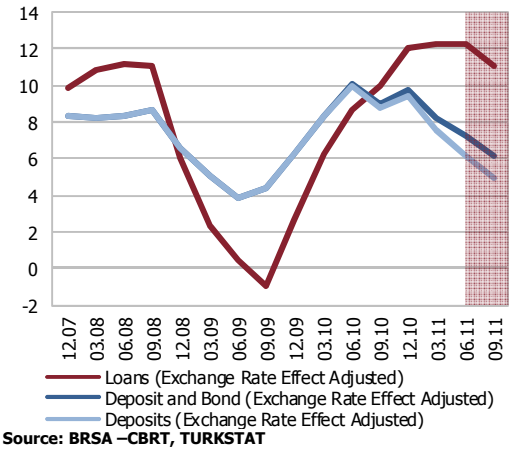
Chart III.6. Annual Change in Credits (%)



Source: IMF, IFS
2011 H1 data is the annualized value of change in the first half of the year.

The credit growth has been decelerating on the back of the precautionary measures taken by the CBRT in the framework of the new policy mix and recent measures introduced by the BRSA. Nevertheless, concerns over financial stability still feature at the top of the agenda due to mounting uncertainties over the global economy and capital outflows from emerging markets. The ratio of exchange rate adjusted credit growth to GDP, which remained flat in the first half of 2011, slowed down slightly in the third quarter. Meanwhile, as the rise in deposits, main source of finance for banking sector, remained limited, the ratio of deposit growth to GDP continues to decline. Should the rapid rise in securities issued by banks observed in 2011 continue in the upcoming period, the sector will have an additional source of finance besides deposits, funds from repo transactions and liabilities to banks abroad. The difference between the ratio of credit growth to GDP and the ratio of deposit growth to GDP point to a savings gap; however one third of all bank securities are issued domestically and they are mostly held by Turkish investors, and this is considered to be a favorable development for private savings (Chart III.7). Domestic demand has recently slowed down on the back of the measures taken by the CBRT with a view to mitigating the macro-financial risks and the risk of overheating in loans; the measures taken by the BRSA with respect to provisioning and capital requirement to address the rise in consumer loans (Box III.3) and deceleration in domestic economic activity. Parallel to these developments, credit growth is declining and the annual growth of credits adjusted for exchange rate effects is expected to become 25 percent by the end of the year if the rate of growth in credits adjusted for exchange rate effects in the first 9 months of the year is sustained in the last quarter as well (Chart III.8).

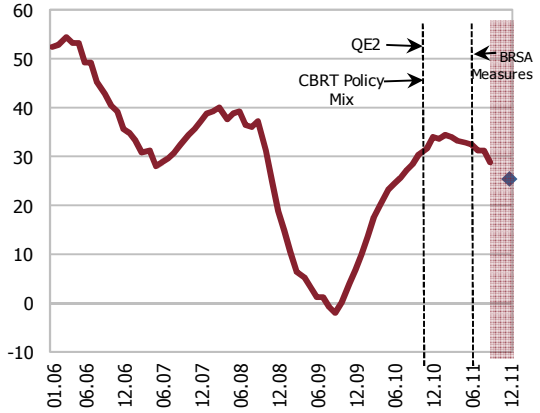
Chart III.7. Loan and Deposit Growth / GDP (Excluding NPLs, %)[1,2,3]



Source: BRSA –CBRT, TURKSTAT

(1) The basket value used to adjust for exchange rate effect is composed of foreign exchange buying rate of 70 percent USD and 30 percent Euro for credits; 60 percent USD and 40 percent Euro for deposits.
The average basket rate of December 2007 – September 2011 has been used to adjust for exchange rate effect and FX-indexed credits are included in FX credits.
(2) GDP data for the third quarter of 2011 are estimated values.
(3) Bonds refer to securities that have been issued by banks since September 2010.

Chart III.8. Annual Growth of Credits (%, Excluding NPLs)[1,2,3]



Source: BRSA –CBRT, TURKSTAT

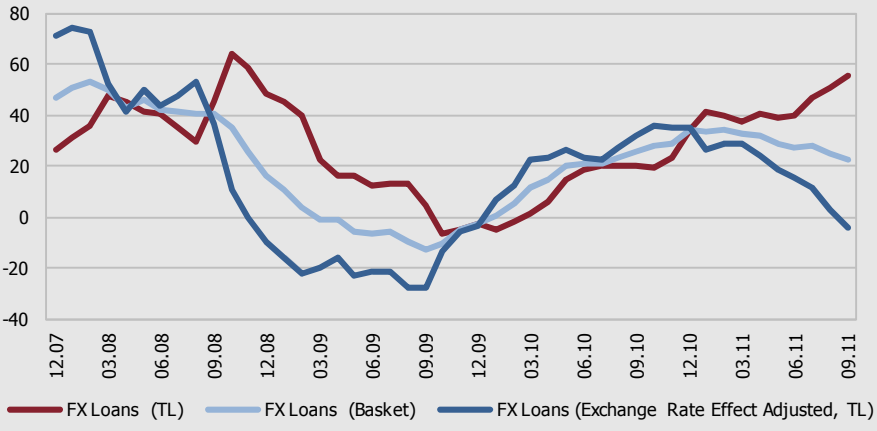
(1) The blue dot shows the forecast value for end-2011.
(2) The basket value used to adjust for exchange rate effect is composed of 70 percent USD and 30 percent Euro. The average basket rate of December 2007 – September 2011 has been used to adjust for exchange rate effect and FX-indexed credits are included in FX credits.
(3) QE2 refers to the second round of quantitative easing introduced by the FED in November 2011.

Box III.1. FX-Denominated Loans and Exchange Rate Effect

In September 2011, 34.1 percent of loans extended by the banking system was either FX-denominated or FX-indexed loans. However, for the aggregate reporting the data in their financial statements collectively, banks show FX-denominated or FX-indexed loans in terms of TL taking into account exchange rates.

Currently, floating exchange rate regime is being implemented in Turkey; thus, any upward or downward change in exchange rates affects the total credit volume on banks' balance sheets. As it has been recently observed, the TL equivalent of FX loans can display a change in a different direction/ magnitude than the movement in exchange rates is supposed to trigger. Therefore, it would be useful either to keep records of FX loans in the foreign currency that they are extended in or to adjust FX loans for exchange rate effect if they are to be compiled along with TL-denominated loans. Adopting this method for other balance sheet items that include FX data would improve the accuracy and effectiveness of the analysis.

Chart 1. Change in Credit Volume (Annual Percentage Change, %)



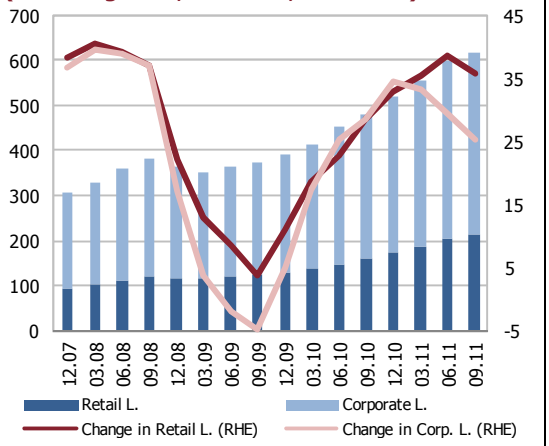
Source: BRSA-CBRT

As illustrated in the chart above, the annual growth rate of FX loans (in TL equivalent) in banks' balance

sheets displayed an upward trend especially in the third quarter of 2011 due to exchange rate movements. Nevertheless, when FX loans are analyzed in terms of exchange rate in that period, it is observed that there has been a slowdown in the annual rate of growth in FX loans in terms of the basket currency since end-2010. Therefore, while examining growth rate in credits, it is important to consider the FX loans after they are adjusted for exchange rate effect. When FX denominated and FX indexed loans are adjusted for exchange rate effect, the annual growth rate of credits is expected to converge to 25 percent by the end of the year if the growth pace observed in total credits throughout 2011 continues.

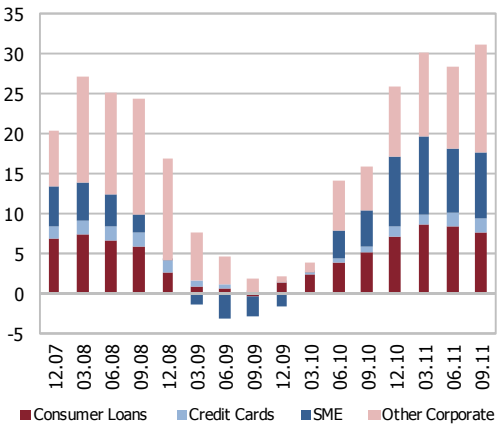
Credit growth has been slowing down on the back of the measures taken by the authorities. Growth rates of corporate loans and retail loans adjusted for exchange rate effect have been decelerating (Chart III.9). In September 2011, the annual growth of credits became 31 percent in real terms, of which 7.7 percentage points came from consumer loans; 8.2 percentage points from SMEs and 13.5 percentage points from other corporate loans (Chart III.10). Compared to end-2010, total credits grew by 20.3 percent in real terms; while growth in consumer loans -due to the acceleration in other consumer loans - and other corporate loans was higher than sector averages. Nevertheless, when SME loans and other corporate loans are adjusted for exchange rate effect, it is observed that the contribution of the said loans to credit growth has decreased compared to end-2010.

Chart III.9. Credit Developments by Type (Excluding NPLs, Billion TL, Annual %)[1]



Source: BRSA –CBRT
(1) Loans have been adjusted for exchange rate effect.

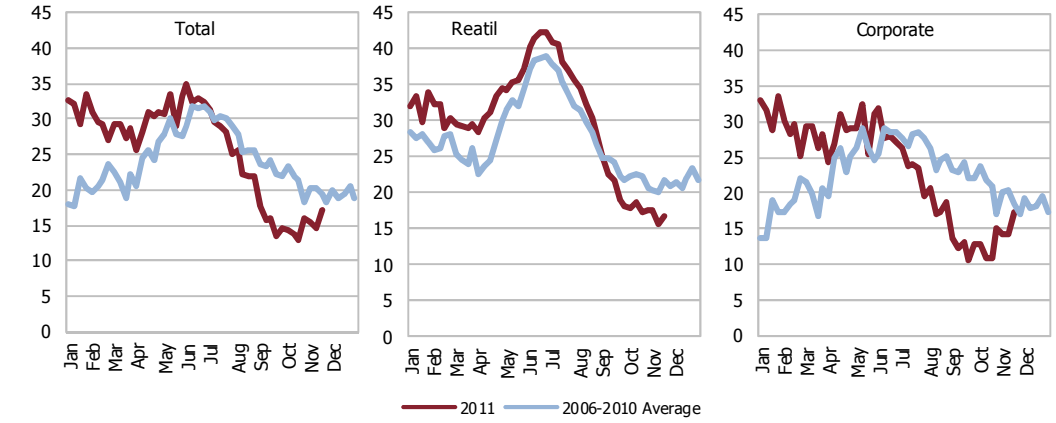
Chart III.10. Contribution to Credit Growth by Type (% Contribution, Excluding NPLs)[1]



Source: BRSA –CBRT
(1) Expressed in real terms using the CPI (2003=100).

The annual growth trend of loans is lower than the average of past years. While the growth rate of corporate loans fell below previous averages in the third quarter; that of retail loans adjusted for the same effect fell below previous averages in September 2011 with a time lag. This development is believed to be underpinned by the measures taken by the BRSA and the tight stance in fiscal policy fostering the measures taken by the CBRT in the framework of the policy mix (Chart III.11). The recent rebalancing in domestic and external demand would continue in a stable manner provided that the current trend in consumer loans is maintained.

Chart III.11. Developments of Loans Adjusted for Exchange Rate Effect (%)[1]



Source: BRSA –CBRT

(1) The basket value used to adjust for exchange rate effect is composed of 70 percent USD and 30 percent Euro. FX-indexed loans have been compiled under FX Loans. The 13-week average of annualized weekly changes has been calculated.

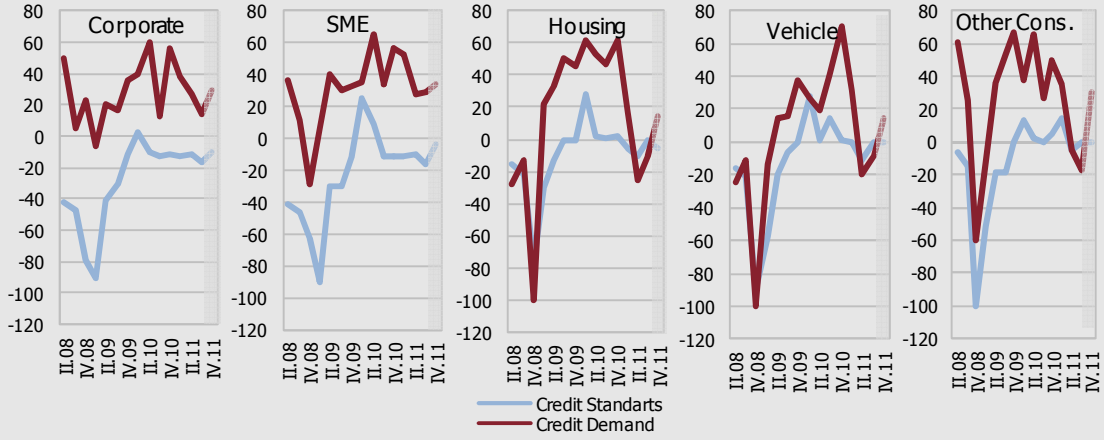
Box III.2. CBRT Banks' Loans Tendency Survey Results

Results of the CBRT's "Banks' Loans Tendency Survey" revealed that banks have tightened credit conditions for corporate loans while they have kept standards for retail loans unchanged. Banks foresee that credit standards for corporate and housing loans would be further tightened while standards for vehicle loans and other consumer loans would be kept unchanged in the last quarter (Chart III.12).

In the third quarter of 2011, standards were tightened the most in long-term loans among corporate loans. While the tightening impact of the constraints on capital adequacy decreased; the impact of factors pertaining to competition and risk perception increased. In this period, the main reasons for the tightening of standards by banks were expectations for overall economic activity and the outlook for industry/ firms. For the final quarter of the year, banks expect credit standards for corporate loans to continue to be tightened.

An analysis of demand for corporate loans reveals that not only the demand of big-scale enterprises but also the demand of medium and small-scale enterprises for corporate loans have increased compared to the previous quarter. With respect to maturity, enterprises' demand for short-term loans has increased while the decline in demand for long-term loans has further accelerated. Factors that strengthened the rise in credit demand have been the financing requirements of firms and discounts and extra payment facilities offered by suppliers in cash payments. Banks expect growth in credit demand to continue in the upcoming period.

Chart 1. Credit Standards and Demand for Credits (Points)[1,2]



Source: Banks' Loans Tendency Survey

(1) Data for 2011-Q4 are expectations for the next quarter.

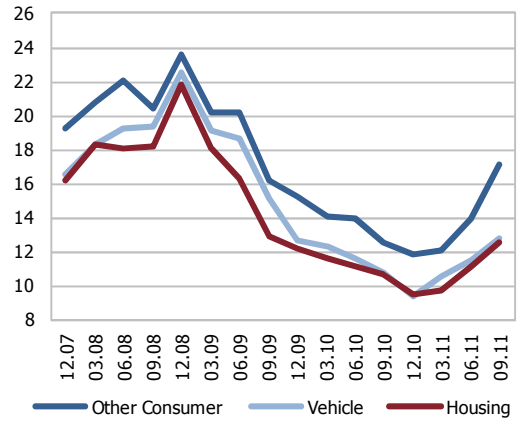
(2) A negative value for credit standards indicates a tightening of standards whereas a positive value in credit demand indicates an increase in credit demand.

As for consumer loans, it is observed that the standards applied to retail loans have remained unchanged in the third quarter. Banks expect standards for housing loans to be tightened and those for vehicle loans and other consumer loans to be maintained in the next quarter.

Demand for consumer loans decreased compared to the previous quarter. Banks participating in the survey stated that the decline in demand was mainly driven by factors pertaining to the financing requirement for housing and vehicle loans and by availability of alternative funding facilities for other consumer loans. Banks expect demand for housing, vehicle and other consumer loans to increase in the final quarter of the year.

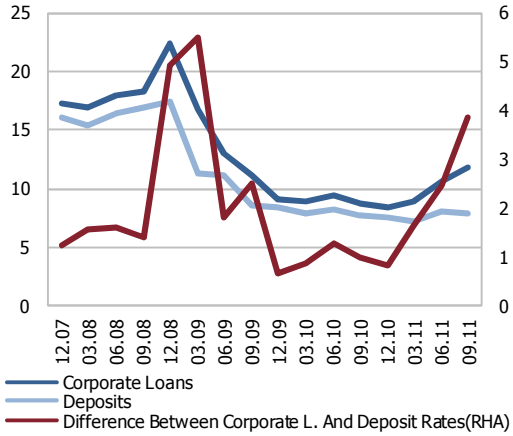
Credit interest rates increased on the back of the measures taken. Credit interest rates, which recorded historic lows at the end of 2010, posted a significant climb in 2011. As of September 2011, annual interest rates of vehicle loans, housing loans, other consumer loans and corporate loans were 12.8 percent, 12.5 percent, 17.2 percent and 11.8 percent, respectively (Chart III.12). Due to the limited rise in interest rates of deposits, the difference between interest rates of corporate loans and interest rates of deposits have been increasing since March 2011 (Chart III.13).

Chart III.12. Interest Rates on Consumer Loans (%, Flow)



Source: CBRT

Chart III.13. Interest Rates on Deposits and Corporate Loans (%, Flow)



Source: CBRT

Box III.3. Measures Taken by the BRSA and the SDIF

Measures taken by the BRSA

On 18 June 2011, the BRSA made some amendments to regulations regarding provisions and capital adequacy. In the BRSA's press release on the issue, it was stated that the highest growth among consumer loans was recorded in other consumer loans [4] and necessity arises to encourage parties to behave more prudential during the credit process.

With the amendment made regarding provisions to be set aside for loans, banks with a ratio of consumer loans to total loans above **20 percent** and banks with a ratio of non-performing loans in other consumer loans to total other consumer loans above **8 percent**, should set aside 4 percent general provision for other consumer loans that fall within Group 1 (loans with standard qualifications and other receivables) and 8 percent general provision for Group 2 (Loans and other receivables that are closely monitored) for other consumer loans that they will extend as of 18 June 2011. Of these loans, those whose contract terms have been changed to extend the payment plan, the banks will set aside a general provision of 2.5 folds or 1.25 folds of the mentioned ratios. Prior to the amendment, general provision ratios were 1 percent and 2 percent and a general provision of 5 and 2.5 folds were set aside for

[4] Other consumer loans comprise all consumer loans other than housing and vehicle loans.

loans subject to a change in the contract.

With the aim of curbing the potential risks that consumer loans could pose in the long run, the BRSA amended the regulation on capital adequacy and raised the risk weights that are taken into account while calculating the capital adequacy ratio for other consumer loans. Accordingly, other consumer loans to be extended as of 18 June 2011 would be classified according to days to maturity and a risk weight of 150 percent shall be applied to loans with days to maturity of between 1-2 years and of 200 percent to loans with days to maturity longer than 2 years.

Consequently, due to the new amendments stipulating higher general provisions and higher capital requirements, the cost of new other consumer loans has increased. By September 2011, 17 banks met the two criteria stipulated in the amendment to the Regulation on Provisions. These 17 banks make up 88.7 percent and 92.3 percent of all consumer and other consumer loans in the sector and these banks shall set aside high general provisions for any new other consumer loans that they will extend.

Measures taken by SDIF

Insurance premiums to be paid by credit institutions are calculated in accordance with the provisions of the "Regulation on Deposits and Participation Funds Subject to Insurance and Premiums Collected by the Savings Deposit Insurance Fund". Premium amounts are calculated by multiplying credit institutions' insured deposits/ participation funds with premium percentages. Credit institutions are evaluated with respect to 14 risk factors under 5 headings such as capital adequacy, asset quality, profitability, liquidity and other risk factors and scored between "0" for the lowest and "100" for the highest over the threshold values prescribed for each heading. According to their total score, credit institutions fall under one of four premium categories A, B, C and D; and, according to their corresponding category, they are subject to a premium of 11-19 basis points.

The "Regulation on Amendments Made to the Regulation on Deposits and Participation Funds Subject to Insurance and Premiums Collected by Savings Deposit Insurance Fund" promulgated in the Official Gazette No: 28069 dated 29.09.2011 introduced some changes. With the amendments, the range for threshold value set for risk factors pertaining to profitability ratios and the insured deposit ratio has been changed, the free capital ratio as a risk factor was replaced by the average maturity (days) of deposit/ participation Fund[5] as a risk factor, while the Free Float of Bank Shares as a risk factor was omitted and other information determined and reported by SDIF to credit institutions as risk factors were added. With the amendment made, the threshold values for banks, which were 85 and 70 points, were lowered to 80 and 65 points. Moreover, a size factor premium rate is added to the premium rate. The size factor premium rate is 2 basis points for credit institutions with a Size Factor equal to and greater than TRL 120 billion and 1 basis point for credit institutions with a Size Factor equal to or greater than TRL 50 billion and less than TRL 120 billion[6].

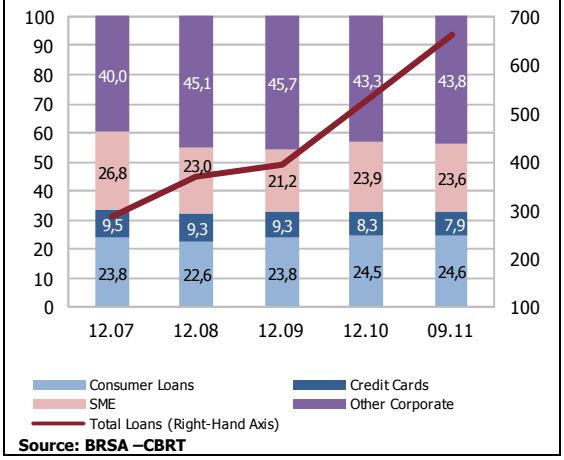
The amendments exert an extra cost on the banks' 3-month premium obligation. While the size factor increases the banks' premium obligations, the change introduced in the threshold values curbs the total costs of the banks.

[5] Average Maturity shall be the weighted average maturity to be calculated by taking into account the following figures: zero for sight deposits, private accounts and 7-day notice deposits; 15 for deposits and participation accounts up to 1-month maturity, 60 for deposits and participation accounts up to 3-month maturity, 135 for deposits and participation accounts up to 6 months, 360 for deposits and participation accounts with maturities up to 1 year, 1 year and longer than 1 year; 360 days for cumulative deposits and participation accounts and special fund pools.

[6] The size factor is composed of the sum of assets, non-cash credits and liabilities commitments (excluding revocable commitments) on the balance sheet of the credit institution. The mentioned amounts will be increased by the average inflation rate in PPI by the TURKSTAT.

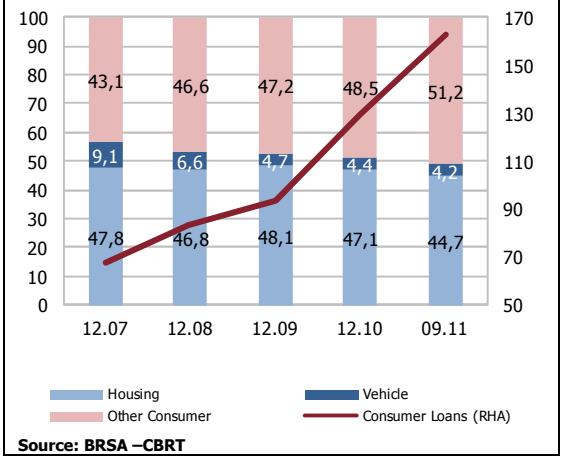
Compared to end-2010, there has not been a significant change in the breakdown of loans. In September 2011, the share of loans extended to SMEs decreased while that of other corporate loans increased due to exchange rates. While the share of credit cards decreased, the share of consumer loans, which started to climb in the aftermath of the crisis, remained relatively flat compared to end-2010. (Chart III.14). The shares of housing and vehicle loans among consumer loans decreased, while the share of other consumer loans increased by 2.7 percentage points (Chart III.15). The rise in other consumer loans is attributed to the fact that credit card holders opted for other consumer loans for their short-term finance needs instead of credit cards as the latter incurs higher interest rates.

Chart III.14. Breakdown of Total Loans (%, Billion TL, excluding NPLs)



Source: BRSA –CBRT

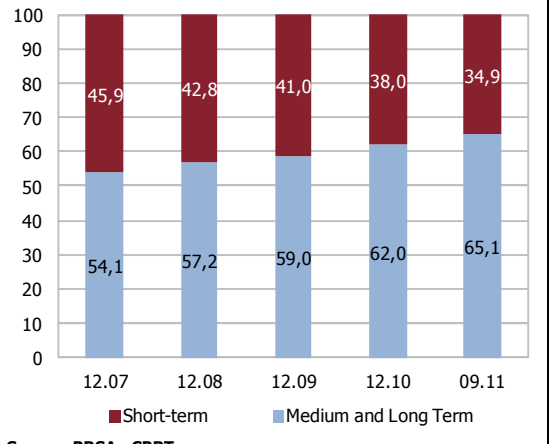
Chart III.15. Breakdown of Consumer Loans (%, Billion TL, excluding NPLs)



Source: BRSA –CBRT

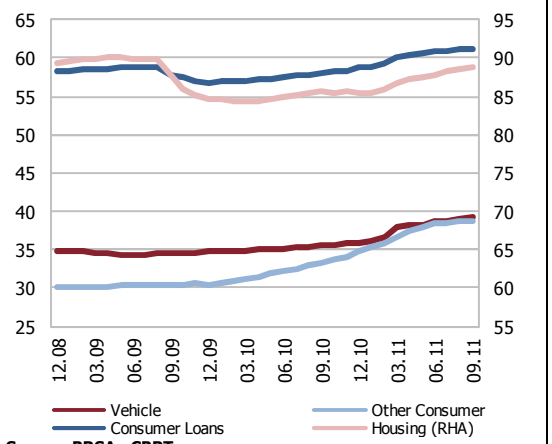
Extension of maturities of credits is perceived as a favorable development for corporate sector and households. Compared to end-2010, the share of medium and long-term loans increased by 3.1 percentage points and reached 65.1 percent by September 2011 (Chart III.16). Even maturities of consumer loans have generally been extended; the extension in other consumer loans which are used to address short-term funding needs and have no collateral other than the debtor's solvency is remarkable (Chart III.17). While consumers prefer other consumer loans with longer maturities, as the monthly payments are smaller, this leads to a higher total interest payment for the loan.

Chart III.16. Maturity Composition of Loans (%)[1]



Source: BRSA –CBRT
(1) Short-term refers to maturities shorter than 1 year.

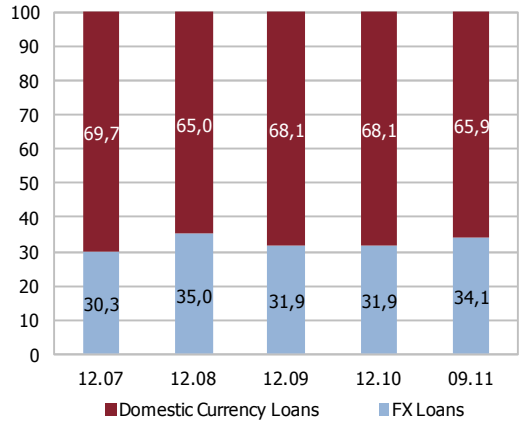
Chart III.17. Weighted Average Maturity of Consumer Loans (Month)[1]



Source: BRSA –CBRT
(1) Weighted average maturity.

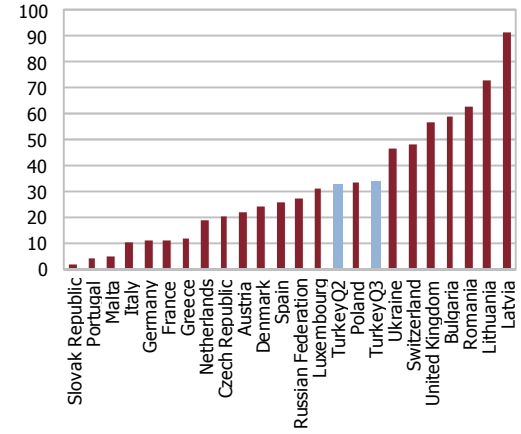
Although the share of FX loans increased due to the recent rise in exchange rates, loans are generally denominated in Turkish lira. Compared to end-2010, the share of FX-loans in total loans increased by 2.2 percentage points and reached to 34.1 percent in September, mainly due to the significant depreciation of TL against foreign currencies (Chart III.18). Nevertheless, it should be taken into consideration that when FX-loans are adjusted for exchange rate effect, it is observed that the share of FX-loans in total loans have decreased compared to end-2010. Compared to other countries, the share of FX loans in the Turkish banking system is close to the EU average (Chart III.19).

Chart III.18. Currency Composition of Loans (%)[1]



Source: BRSA –CBRT
(1) FX-indexed loans are included in FX loans.

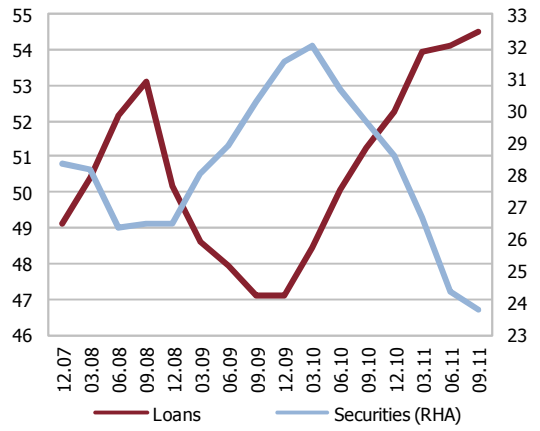
Chart III.19. FX Loans (%, Total Loans)[1,2]



Source: IMF-Financial Soundness Indicators, BRSA –CBRT
(1) Up-to-date data, pertaining to 2011-Q2 in general, included in the FSI database are used.
(2) Turkey Q2 and Turkey Q3 denote the share of FX loans including FX-indexed loans by June 2011 and September 2011, respectively.

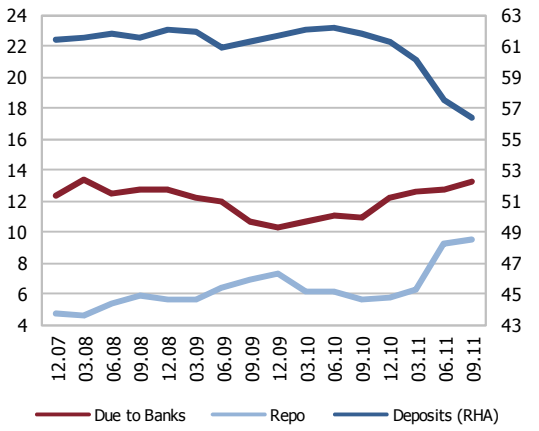
As deposit growth remained flat, alternative sources were employed to finance credit growth. While the share of loans in total assets increased by 2.2 percentage points in September 2011 compared to end-2010, the share of deposits in total liabilities dropped by 5 percentage points in the same period. In this period, banks covered their financing needs with funds from repo transactions, external borrowings, proceeds from securities issued and the sale of securities to some extend due to the measures introduced pertaining to reserve requirements and liquidity. In the first eight months of 2011, the share of funds from repo transactions increased by 4.4 percentage points and reached to 10.1 percent; however, the share of the mentioned item decreased in September 2011. Meanwhile, in September 2011, the share of securities declined by 4.8 percentage points compared to end-2010 (Chart III.20 and Chart III.21).

Chart III.20. Loans and Securities (% Asset)[1]



Source: BRSA –CBRT
(1) NPL is excluded.

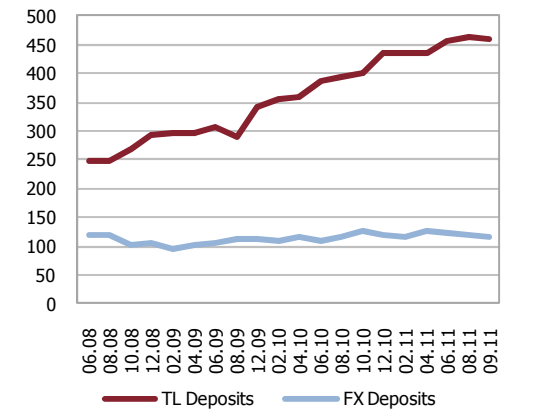
Chart III.21. Funds Obtained from Deposits, Repo Transactions and Due to Banks (% Asset)



Source: BRSA –CBRT

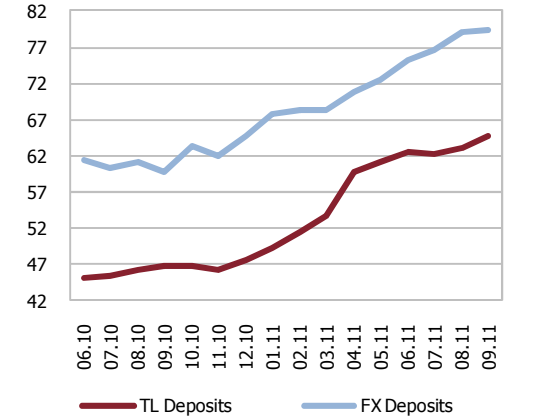
Extension in maturity of deposits continues in the second half, albeit slower. The weighted average maturity of Turkish lira deposit and participation funds, which was 47.9 days in end-2010, increased to 64.7 days in September 2011. Meanwhile, weighted average maturity of FX deposits and FX participation funds, which was 64.8 days at the end of 2010, became 79.2 days in September 2011 (Chart III.22 and Chart III.23).

Chart III.22. Developments in Deposits Subject to Reserve Requirement (Billion TL)



Source: CBRT

Chart III.23. Maturity of Deposits Subject to Reserve Requirement (Weighted Average, Day)[1]

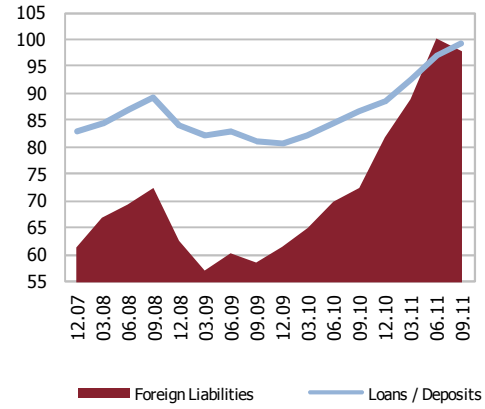


Source: CBRT
(1) Average maturity for deposits up to 1 month, 1-3 months, 3-6 month, up to 1 year and maturities for 1 year and longer have been assumed as 15 days, 60 days, 135 days, 272 days and 360 days, respectively.

The upward trend in banks' foreign liabilities, which started at the end of 2009, went into a decline as of September 2011. In September 2011, the banking sector's foreign liabilities increased by 19.6 percent compared to end-2010 and reached USD 97.9 billion; while 14.9 percent of the total assets were funded by foreign liabilities. The rise in total foreign liabilities observed in the first two quarters of the year was replaced by a decline in the third quarter (Chart III.24 and Chart III.25). This development was fuelled by the deterioration in risk appetite stemming from heightened concerns over sovereign debt sustainability in some European countries and unfavorable data pertaining to global economic activity. With the aim of enhancing mobility of foreign exchange liquidity in the interbank foreign exchange market, the CBRT resumed its activities

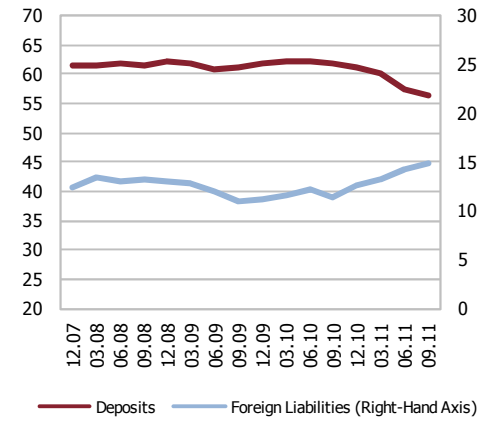
as an intermediary in the foreign exchange deposit markets in the Foreign Exchange and Banknotes Markets on November 10, 2011 and will continue this function until heightened uncertainties in international markets disappear. In this framework, banks were offered a facility where they could lend and borrow in the foreign exchange deposit market through the intermediation of the Central Bank; however as this report went to press this facility had only been used minimally.

Chart III.24. Foreign Liabilities and Ratio of Loans/Deposits (Billion USD, %)



Source: BRSA –CBRT

Chart III.25. Foreign Liabilities and Deposits (% Liabilities)

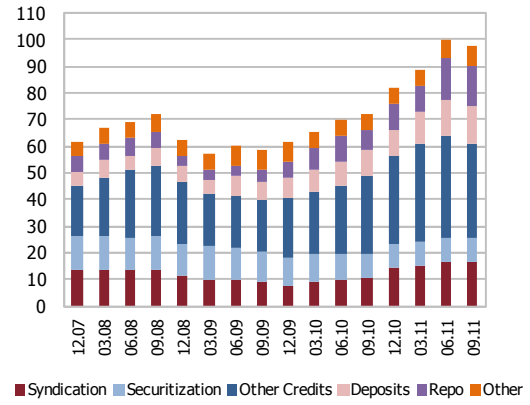


Source: BRSA –CBRT

In the upcoming period, banks are not expected to have problems paying syndication and securitization credits. Compared to end-2010, the sum of syndication and securitization credits went up by 9 percent, reaching USD 25.5 billion in September 2011 (Chart III.26). The share of syndication and securitization credits in foreign liabilities is 26.1 percent, while that in total funding sources is 4.4 percent. The amount of credits other than syndication and securitization credits is USD 35.5 billion and their share in foreign liabilities is 36.2 percent. As this report was being compiled, the amount of banks' foreign liabilities to mature in December 2011 or till the end of 2012 was USD 57.5 billion; and USD 17.8 billion of this total amount was composed of syndication and securitization credits. When the borrowing facility in the foreign exchange deposit market and the reserve requirements maintained in terms of foreign exchange and gold are taken into account, the liquidity facilities available are expected to be adequate to cover the banks' syndication and securitization credits in case of need.

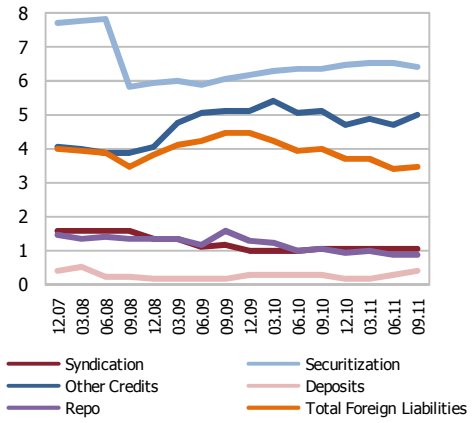
The rise in the share of foreign liabilities in the banking sector's balance sheet continues to contribute to the extension of maturity of liabilities. The weighted average maturity of foreign liabilities assumed a downward trend due to the rise in the share of deposits and repos and became 3.4 years in September 2011. In the same period, the average maturity of syndication credits, which makes up 17.2 percent of foreign liabilities, was 1 year and the average maturity of securitization credits, which makes up 8.9 percent of foreign liabilities, was 6.4 years. (Chart III.27).

Chart III.26. Composition of Foreign Liabilities (Billion USD)



Source: BRSA –CBRT

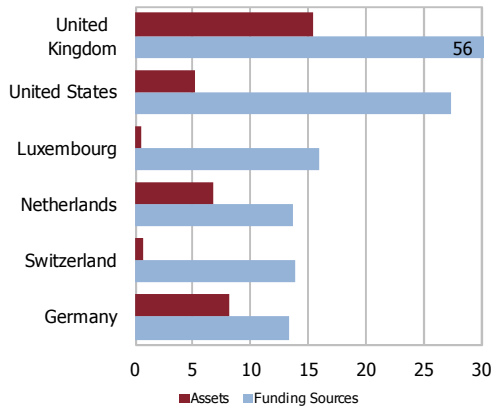
Chart III.27. Average Maturity of Foreign Liabilities (Years)



Source: BRSA –CBRT

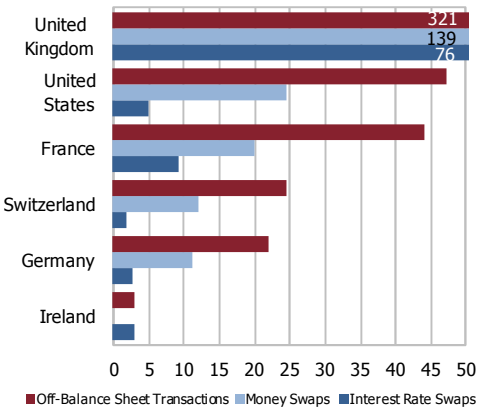
An analysis of the breakdown of banks' total assets and funding sources by countries reveals that the Turkish banking system is a net payer. As of September 2011, 4.8 percent of the total assets of banks in Turkey were composed of investments abroad and 19.3 percent of total funding sources were composed of foreign funding. The United Kingdom, which has the largest share among these countries, has a share of 1.3 percent in total assets and 5.3 percent in funding sources (Chart III.28). When the breakdown of off-balance sheet transactions of the banking sector is evaluated by countries, it is observed that the total share of foreign countries is 35.3 percent and the United Kingdom has the largest share with 22.3 percent (Chart III.29). The share of PIIGS countries is negligibly low with respect to breakdown of assets, funding sources and off-balance sheet transactions. On-balance sheet transactions carried out with foreign countries are mostly composed of receivables from banks and due to banks; while off-balance sheet transactions are mostly money swaps and interest rate swaps.

Chart III.28. Turkish Banks' Foreign Assets and Funding Sources by Countries (September 2011, Billion TL)



Source: BRSA –CBRT

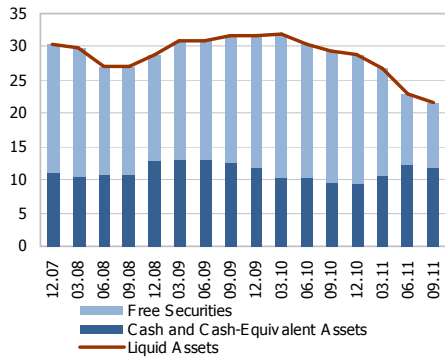
Chart III.29. Turkish Banks' Off-balance Sheet Transactions by Countries (September 2011, Billion TL)



Source: BRSA –CBRT

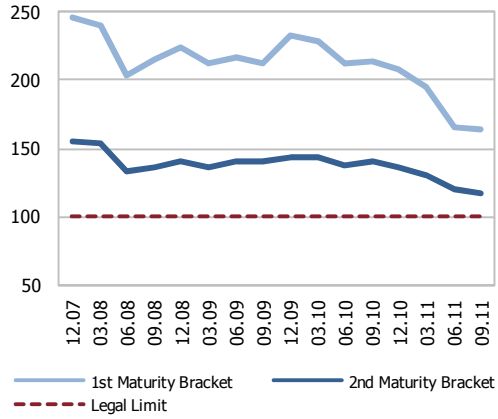
In the first half of 2011, banks met their liquidity requirements, which increased due to their reserve requirement liabilities, by borrowing from the Central Bank via repo auctions. The decline in the government securities portfolio to support credit growth, which started in the first quarter of 2001, continued and further accelerated as of the first quarter of 2011. In September 2011, the ratio of liquid assets to total assets increased by 7.2 percent compared to end-2010 and reached 21.6 percent. This development was mainly driven by the decline in free government securities stemming from repo funding that was on the rise despite the increase in cash and cash-equivalent assets (Chart III.30). Despite the decline in the share of liquid assets to total assets, the total liquidity adequacy ratios of the banking sector, computed in accordance with the Regulation on the Measurement and Assessment of Liquidity Adequacy of Banks, still remains well above the legal ratio of 100 percent[7] (Chart III.31).

Chart III.30. Liquid Assets (%Asset) [1,2]



Source: BRSA-CBRT
1) Cash and cash equivalent assets=Cash+ CBRT + Money Markets + Banks + Reverse Repo
(2) Free Securities = Government securities that are not used as collateral or for repo

Chart III.31. Total Liquidity Adequacy Ratio (%)

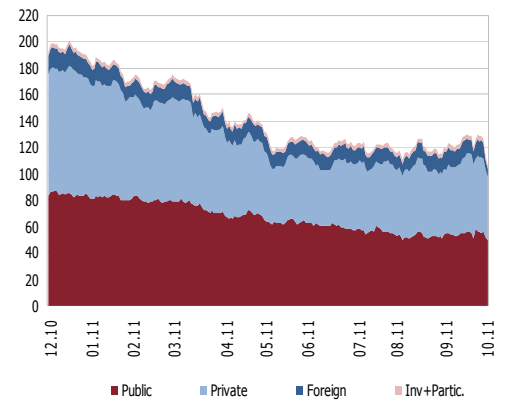


Source: BRSA-CBRT

Free securities and rates pertaining to these securities, which are considered eligible collateral by the Central Bank to meet the liquidity needs of the banks in case of a temporary liquidity shortage, remained relatively flat recently to be followed by a decline as of the last week of October. Free government securities, which had reached TL 200 billion by mid-January, have been declining since then and became TL 113.6 billion by the end of October. Meanwhile, the ratio of borrowing from the ISE and interbank money markets to government securities, which had been on the rise from end-2010 on and had remained flat since July 2011, became 76.6 percent in October 2011. The ratio of free government securities that can be used by the banks in case of a liquidity shortage to deposits, which was approximately 31 percent at the end of 2010, became 15.9 percent in October 2011 (Chart III.32, Chart III.33).

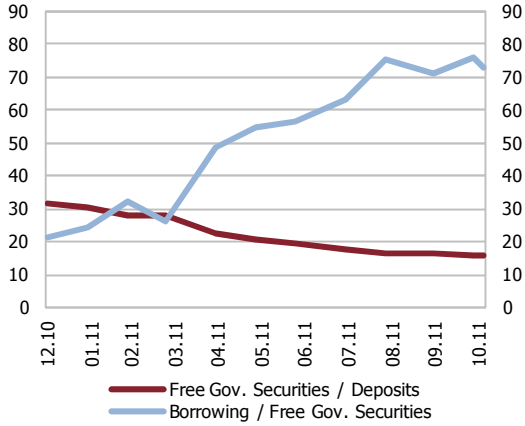
[7] The study on systemic liquidity analysis that discusses legal ratios so as to include their contagion effect is presented in the special topics section.

Chart III.32. Total Securities that the CBRT Accepts as Eligible Collateral (Billion TL)



Source: BRSA-CBRT

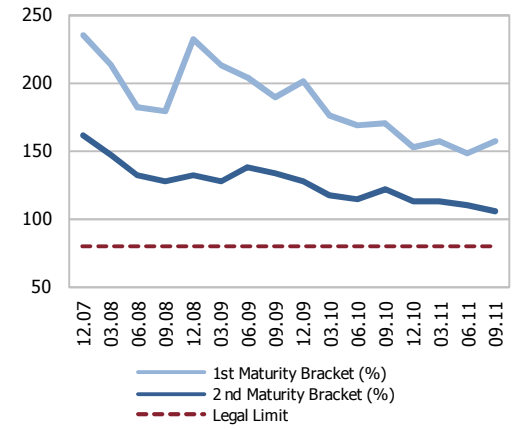
Chart III.33. Total Free Government Securities/ Total Borrowing and Deposits/Free Government Securities (%)



Source: BRSA-CBRT

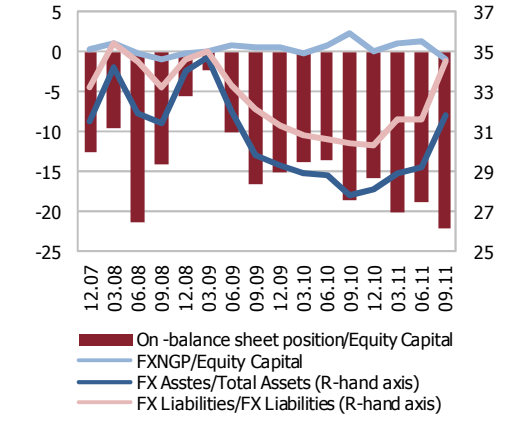
The foreign currency liquidity adequacy ratio, which was above the legal limits, started to decline as of 2010 and the decline continued throughout 2011 as well (Chart III.34). It is noteworthy that the weight of FX assets and FX liabilities on the balance sheet has been on the rise. As of September 2011, the ratio of total FX assets including those indexed to foreign exchange to total assets was 31.8 percent and the ratio of total FX liabilities to total liabilities was 34.5 percent. The on-balance sheet short position, which is closed by off-balance sheet transactions that are mostly composed of swap transactions, increased by USD 3.8 billion compared to end-2010 and reached USD 17.7 billion in September 2011. In the same period, the ratio of the on-balance sheet short position to equity capital was 22 percent, while the ratio of net FX short position to total equity capital, which is calculated by taking into account the off-balance sheet transactions, became 0.8 percent (Chart III.35).

Chart III.34. Foreign Currency Liquidity Adequacy Ratio (%)



Source: BRSA-CBRT

Chart III.35. Foreign Currency Position (%)



Source: BRSA-CBRT

Box III.4. Turkish Lira Liquidity Management of the Central Bank of the Republic of Turkey

The operational framework of the Central Bank of the Republic of Turkey is as follows:

i. The Central Bank will continue to announce overnight borrowing and lending rates between 10:00 a.m.– 12:00 p.m. and 1:00 p.m. – 4:00 p.m. on business days, between 10:00 a.m.– 12:00 p.m. on half business days, in the Interbank Money Market within the Central Bank. If a liquidity shortage arises during the day, banks will be able to borrow at the Central Bank's lending rate against collateral within their limits. In case of excess liquidity, banks will be able to lend Turkish lira to the Central Bank at the Central Bank's borrowing rate without any limit.

ii. In the framework of the "Late Liquidity Window Facility", banks will be able to borrow from the Central Bank against collateral, and lend to the Central Bank without any limit between 4:00 p.m. – 5:00 p.m. on business days, between 12:00 p.m. – 12:30 p.m. on half business days and on the last working day of the reserve requirements maintenance period between 4:00 p.m. – 5:15 p.m. on business days, between 12:00 p.m. – 12:45 p.m. on half business days.

iii. The one-week repo auction interest rate is the policy rate. In case of a liquidity shortage, the Central Bank will announce the amount of repo auction on Reuters' "CBTF" page at 10:00 a.m.

iv. One-week maturity repo auctions will be held at 11:00 a.m. on business days, at 10:30 a.m. on half business days and the results will be announced on Reuters' "CBTG" page within 30 minutes. Institutions are required to notify the Bank of the securities against their repo operations until 12:00 p.m. on business days, until 11:30 a.m. on half business days and fulfill their liabilities regarding open market operations until 4:45 p.m. on business days, until 12:30 p.m. on half business days. Auctions will continue to be held at the interest rate set for one-week repo auctions by the Committee, via the quantity auction method.

v. In case of an unforeseen excessive liquidity shortage during the day, which may exert excessive pressure on money market interest rates, the Central Bank may announce one-week maturity "Intra-day Repo Auctions" via the quantity auction method in addition to the regular ones announced at 11:00 a.m.

vi. Each participating institution's bid for the weekly repo auctions is limited to 20 percent of the total auction amount. This 20 percent upper limit is not valid for the one-week maturity "Intra-day Repo Auctions" that the Central Bank may announce in case of an unforeseen excessive liquidity shortage during the day, the upper limit for each participating institution's bid for the weekly repo auctions is limited to the total repo auction.

vii. The amount of funding that the Central Bank plans to provide via one-week repo auctions is announced regularly. Bi-weekly, every Friday morning at 9:30, the planned lower limit of the outstanding amount of funding (one-week repo funding amount) for any day throughout the following maintenance period is announced on Reuters "CBTF" page.

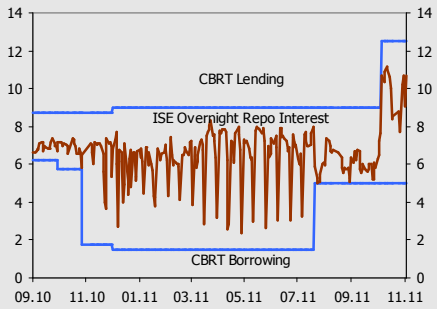
viii. The primary dealer banks can conduct O/N repo transactions within the framework of open market operations, between 10:00 a.m.–12:00 p.m. and 1:00 p.m.– 4:00 p.m. on business days and between 10:00 a.m.–12:00 p.m. on half business days.

ix. In case of increased concerns about the safety and soundness of the banking system and an accelerated run on deposits, within the framework of the principles set out in the Central Bank Regulation on the Liquidity Support Facility, the Central Bank provides liquidity support credit to banks, which are illiquid but solvent and are experiencing uncertainty and concerns regarding soundness, with the aim of preventing these banks from creating systemic risk, to ease uncertainty and lack of confidence in the financial system, and to safeguard financial stability.

Box III.5. Short-term Turkish lira and Foreign Exchange Liquidity Measures Taken by the Central Bank

At its interim meeting of 4 August 2011, the Monetary Policy Committee lowered the one-week repo auction rate - the policy rate- to 5.75 percent, and narrowed the interest rate corridor by increasing the overnight borrowing rate to 5 percent to reduce the potential downside volatility in short-term interest rates. Due to the excessive depreciation of the Turkish lira and with the aim of preventing any adverse impact on the medium-term inflation expectations and outlook, at its meeting of 20 October 2011, the Committee decided to widen the interest rate corridor by raising the overnight lending rate to 12.5 percent; the interest rate on borrowing facilities provided for primary dealers via repo transactions to 12 percent, and the overnight lending rate within the framework of the late liquidity window facility to 15.5.

Chart 1.Overnight Interest Rates (%)

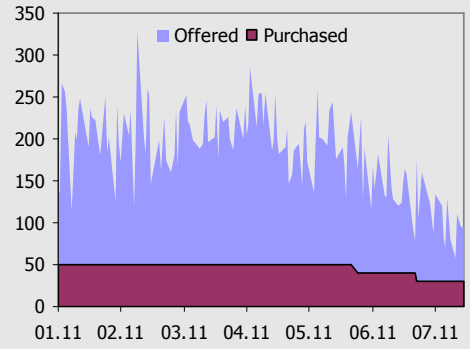


Source: CBRT

The Central Bank of Turkey holds foreign exchange buying auctions to increase the level of foreign exchange reserves without conflicting with the main principles and mechanism of the floating foreign exchange rate regime at times when foreign exchange supply increases relative to foreign exchange demand. However, in response to the slowdown in capital flows to emerging economies due to heightened concerns over sovereign debt sustainability in some European countries and global growth, the daily amount to be purchased in daily foreign exchange buying auctions was decreased from USD 50 million to USD 40 million as of May 31, 2011. On July 25, 2011, foreign exchange buying auctions were suspended to observe the implementation and repercussions of the decisions made at the EU Leaders Summit.

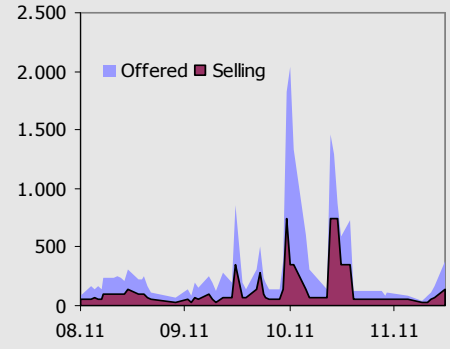
At its interim meeting on August 4, 2011, the Committee decided to supply liquidity to the market via foreign exchange selling auctions in case of unhealthy price formations due to a decrease in the depth of the foreign exchange market and without prejudice to the basic principles of the floating exchange rate regime, and the maximum amount to be offered in the auctions by each bank was limited to 20 percent of the total auction. Meanwhile, as of August 9, 2011, it was decided to reduce the lending rate for transactions, which the Central Bank is a party to, from 5.5 percent to 4.5 percent for US Dollar and from 6.5 percent to 5.5 percent for Euro. On September 12, 2011, it was decided that on the days when the Central Bank decide to sell foreign exchange based on daily market developments, the selling amount announced on Reuters page CBTQ at 11:00 a.m. would be the maximum daily amount that could be sold. The Central Bank of Turkey will continue to take the necessary policy measures to supply liquidity to the market in a timely, controlled and effective manner in case of worsening global liquidity conditions. To this end, in response to global developments, the Central Bank started to supply foreign exchange liquidity to the market via high-volume foreign exchange selling auctions as of October 5, 2011. On October18, the Central Bank directly intervened in the market by selling foreign exchange as unhealthy price formations were observed in exchange rates due to some speculative behavior stemming from a decrease in market depth. Starting from November 10, 2011, the Central Bank, with an aim to enhance the mobility of foreign exchange liquidity in the Interbank Foreign Exchange Market, resumed its activities as an intermediary in the foreign exchange deposit markets in the Foreign Exchange and Banknotes Markets and the Bank will continue to act as an intermediary until the uncertainties in the international markets are eased and only a limited number of transactions have been conducted in this scope.

Chart 2. FX Buying Auctions Against TL (Million USD)



Source: CBRT

Chart 3. FX Selling Auctions Against TL (Million USD)



Source: CBRT

Box III. 6. Central Bank of the Republic of Turkey's Measures Pertaining to Raising Reserve Requirements and Foreign Exchange Reserves

At its interim meeting of August 4, 2011, the Monetary Policy Committee (The Committee) laid the groundwork for a timely, controlled and effective provision of liquidity to the market in case of possible financial turmoil that may be triggered by global developments and decided to gradually implement a comprehensive package of measures when deemed necessary. In this framework, as of the second half of 2011, considering the slowdown in the global economy and developments regarding domestic demand, the Turkish lira and foreign exchange (FX) required reserve ratios were gradually decreased with the aim of supplying liquidity to the market. Turkish lira required reserve ratios were cut so as to encourage the extension of the maturity of deposits with a maturity of up to 3 months and other non-deposit liabilities. On October 28, 2011, Turkish lira required reserve ratios for shorter maturities were lowered to permanently supply the liquidity necessary for the market. With these arrangements, Turkish lira 14.2 billion was supplied to the market. FX required reserve ratios were lowered on July 22, 2011 for longer maturities and on 5 August 2011 and 5 September 2011 across all maturities. The amount of liquidity supplied to the market through these changes became USD 2.8 billion.

In order to meet the Turkish lira liquidity needs of the banking system in a more permanent way; on the one hand at a lower cost, and on the other to support and use the Central Bank's foreign exchange reserves in a timely, controlled and effective manner, banks were offered a facility where they could maintain up to 10 percent of their reserve requirements for Turkish lira liabilities in US dollar and/or euro, effective as of September 16, 2011. On September 30, 2011, this ratio was raised to 20 percent and to 40 percent on October 28, 2011. As a result of this facility, the Central Bank's foreign exchange reserves increased by USD 10 billion.

Gold deposit accounts, which became more popular as an investment instrument due the rise in gold prices and the cancellation of the physical declaration obligation when opening such accounts, has displayed a rapid rise in the last few years and these accounts became subject to reserve requirements as of October 14, 2011. Accordingly, the total amount of reserve requirements for precious metal deposit accounts and up to 10 percent of the reserve requirements for foreign currency liabilities, excluding precious metal deposit accounts, can be maintained as "standard gold". In order to strengthen the build-up of gold reserves and to provide more flexibility to the banking system's liquidity management, up to 10 percent of reserve requirements maintained for Turkish lira liabilities was allowed to be maintained as "standard gold". With a view to strengthening the build-up of gold reserves and granting more flexibility to the banks in their liquidity management, up to 10 percent of reserve requirements maintained for Turkish lira liabilities was allowed to be maintained as "standard gold" to be effective as of October 28, 2011. As a result of this facility, gold reserves increased by USD 2.8 billion, equivalent to 52 tons of gold.

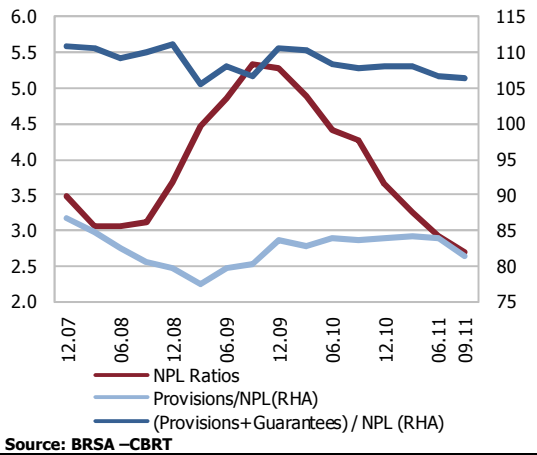
Table.1. Required Reserves as a Macroprudential Tool

01.10.2010	12.11.2010	07.01.2011	04.02.2011	01.04.2011	29.04.2011	22.07.2011	05.08.2011	16.09.2011	30.09.2011	14.10.2011	28.10.2011
TIGTHENING MEASURES						EXPANDING AND RESERVE BUILDING MEASURES					
Increase in TL RR, End of renumeration	Increase in TL RR	Differentiation of TL RR according to maturity, Repo was subjected to RR	Increase in TL RR	Increase in TL RR	Differentiation of FX RR according to maturity, Increase in TL RR	Decrease in FX RR	Decrease in FX RR	Facilty of holding up to 10% of TL RR as FX	Decrease in FX and TL RR, Differentiation of other TL RR according to maturity, Facility of holding up to 20% of TL RR as FX	Precious Metals was subjected to RR, Facility of maintaining the whole RR held against the precious metal deposit accounts and up to 10% of RR for foreign currency liabilities excluding precious metal deposit accounts as gold	Decrease in TL RR, Facility of maintaining up to 10% of TL RR as gold, Facility of holding up to 40% of TL RR as FX

In addition, the Regulation on Rediscount and Advance Rates has been amended and conditions for lending export rediscount credits have been eased. In this context, the duration of fulfilling the export commitment has been raised from 4 months to 6 months and the limit of export rediscount credits has been increased from USD 2.5 billion to USD 3 billion. These credits are extended in Turkish lira and they are repaid in foreign currency, and the rise in the said credits contributes to the increase in the Central Bank's foreign exchange reserves.

The decline in non-performing loans (NPL) continues. NPLs, had increased annually by 56 percent in nominal terms, and reached TL22 billion by the end of 2009 due to the global financial crisis, posted a decline during the exit from the crisis, and compared to end-2009, by decreasing 16 percent, going down to TL 18.4 billion in 2011. This development was driven by the rise in collected debts due to the improvement in the economic units' solvency capacity and the elimination or sale of certain non-performing loans. The contribution of the amount that was eliminated from the assets to NPL ratio became 0.2 percent during the first nine months of 2011. Consequently, the NPL ratio, which was 5.3 percent at the end of 2009, decreased to 2.7 percent in September 2011. When the collaterals received for loans are considered along with provisions set aside for NPLs, it is observed that the sector is strong enough to cover the credit risk it is exposed to (Chart III.36, Table III.1).

Chart III.36 Non-Performing Loans (NPL) (%)



Source: BRSA –CBRT

Table III.1. NPL Ratios (%)

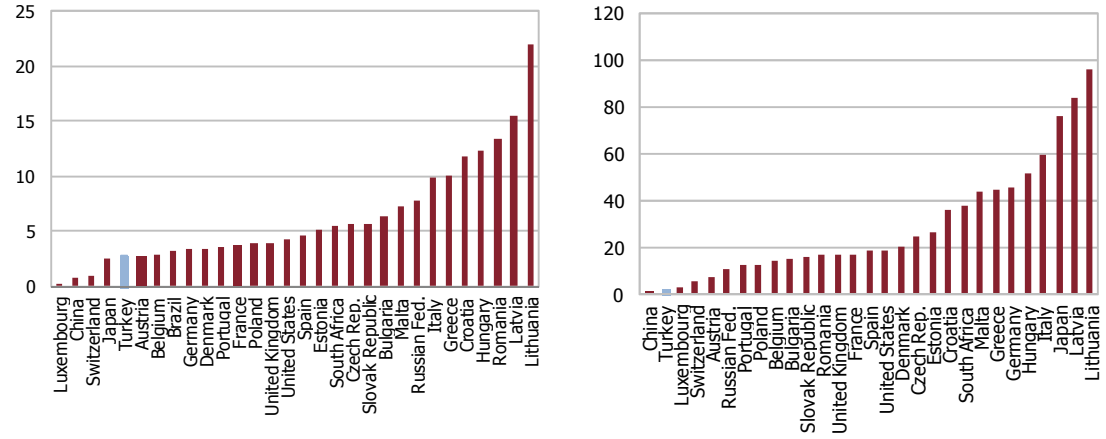
	2009	2010	09.11
Total Loans	5.3	3.7	2.7
Corporate	4.9	3.4	2.5
-SME Loans	7.6	4.5	3.1
-Other Copr. L.	3.6	2.8	2.2
Retail Loans	6.0	4.1	3.1
-Consumer Loans	4.1	2.7	1.9
--Housing	2.1	1.4	1.0
--Vehicle	10.3	6.0	3.9
--Other	5.5	3.7	2.6
-Credit Cards	10.4	8.0	6.5

Source: BRSA –CBRT

The NPL ratio for retail loans is higher than that of corporate loans. In 2009, when NPL ratios were on the rise, NPL ratios in retail loans and corporate loans were 6.0 percent and 4.9 percent respectively; in September 2011, the mentioned ratios became 3.1 percent and 2.5 percent. During the crisis, NPL ratios of vehicle loans, credit cards and SME loans were higher than those of other types of loans (Table III.1).

Compared to other countries, the Turkish banking sector performs better with regard to NPLs. The relatively slow recovery in economic activity in advanced economies and troubles experienced in the financial systems of some EU countries led the ratio of NPLs remain high in these countries (Chart III.37).

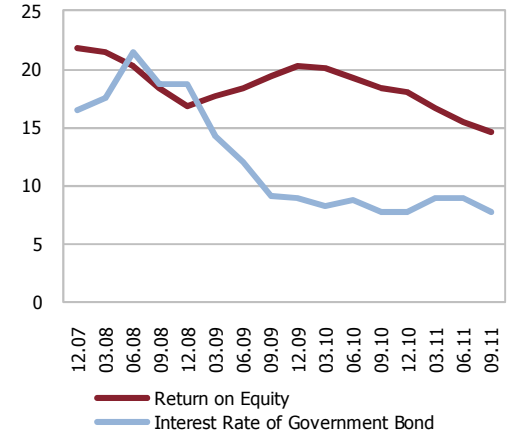
Chart III.37. NPL and Net NPL/Own Funds Ratios of Countries[1] (%)



Source: Financial Soundness Indicators, IMF, BRSA –CBRT
1) Latest data from the IMF-FSI database have been used, most of which are taken from 2011-Q2.

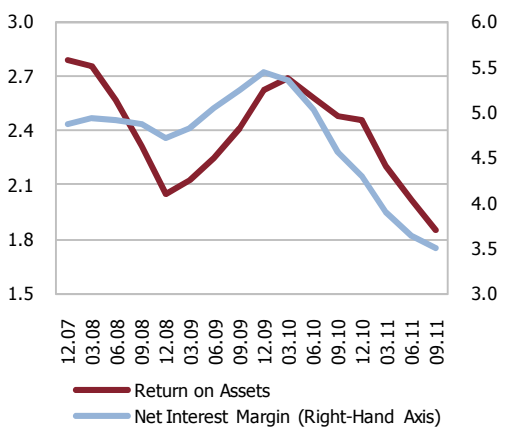
The decline in the profitability performance of the banking sector continues. In September 2011, the net profit of the banking sector was realized as TL 14.6 billion with a year-on-year decrease of 13.2 percent. Despite the favorable impact of the decline in special provisions for non-performing loans, net profit decreased due to the decrease in net interest income and the rise in non-interest expenses. The increase in non-interest expenses was due to the fact that personnel expenses, provision for general loan losses and other non-interest expenses increased and net trading income (which is the sum of net capital market transactions profits (losses) and net foreign currency gains (losses)) turned into losses. The rise in provision for general loan losses, which underpinned the increase in non-interest expenses, stemmed from the amendments made by the BRSA on 16 June 2011 to the Regulation regarding provisions set aside for loans. Meanwhile, according to the annualized data, the net profit decreased by 10 percent compared to end-2010 and became Turkish lira 19.9 billion. Although the return on equity fell by 3.5 points to 14.6 percent by September 2011 compared to end-2010 figures, the return received is still above the alternative risk-free rate of return (Chart III.38). In the same period, the sector's return on assets decreased by 0.6 points compared to the end of last year and became 1.8 percent, while the net interest margin contracted by 0.8 points and went down to 3.5 percent (Chart III.39).

Chart III.38 Return on Equity and Risk Free Interest Rate (%)



Source: BRSA-CBRT

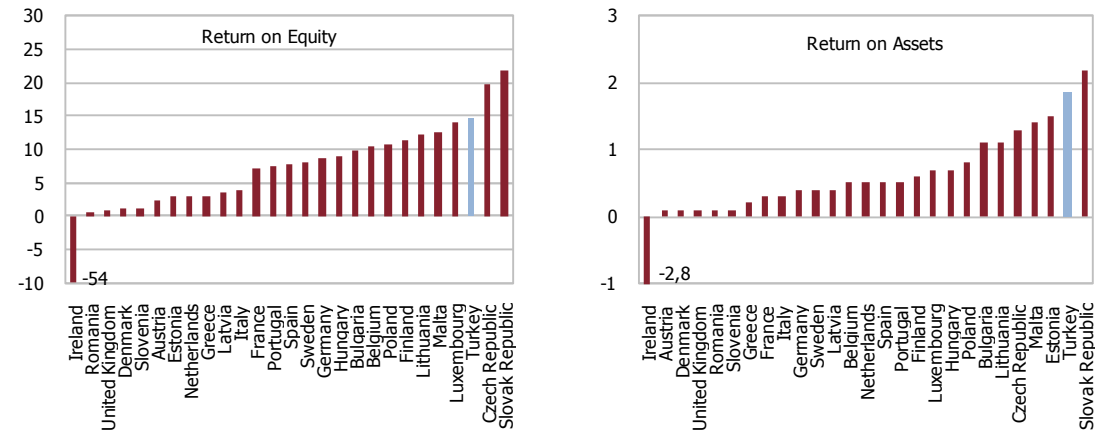
Chart III.39 Return on Assets and Net Interest Margin (%)[1]



Source: BRSA-CBRT
(1) Net Interest Margin = Net Interest Income / Average Assets

Although the profitability performance indicators of the banking sector indicate a downward trend, they are still high compared to other countries. The return on equity and return on assets of the Turkish banking sector are well above those of EU-member countries (Chart III.40).

Chart III.40. Return on Equity and Return on Assets of Countries (Annual, %)[1]

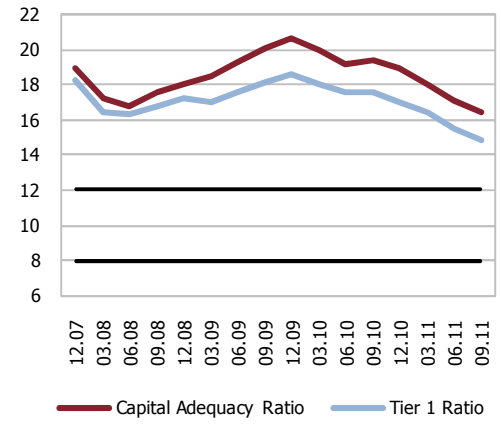


Source: Financial Soundness Indicators, IMF, BRSA-CBRT
(1) The latest data on the FSI database have been used, most of which are taken from June 2011.

Continued credit growth has led to a decline in the capital adequacy ratio. The capital adequacy ratio, which was 19 percent at the end of 2010, dropped to 16.4 percent in September 2011. This decline was driven by the faster growth of risk-weighted assets compared to own funds. (Chart III.41). Moreover, the rise in the risk weight of long-term other consumer loans had a downward impact on the capital adequacy ratio. The capital adequacy ratio is above the legal limit of 8 percent and the target ratio of 12 percent. As of September 2011, the ratio of Tier I capital within own funds is approximately 90 percent which indicates that own funds is composed of high-quality elements. In fact, in September 2011, the Tier 1 capital ratio was only 1.6 points lower than the capital adequacy ratio, which was realized as 14.9 percent. In the same period, the ratio of equity to total assets decreased by 1.7 points compared to end-2010 and came down to 11.7 percent

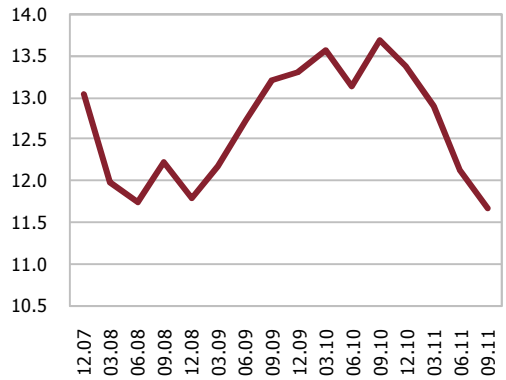
(Chart III.42). This decline was driven by the decrease in equity stemming from the downward trend in the sector's profitability performance and the fall in the Securities Revaluation Fund.

Chart III. 41 Capital Adequacy Ratio (%)



Source: BRSA-CBRT

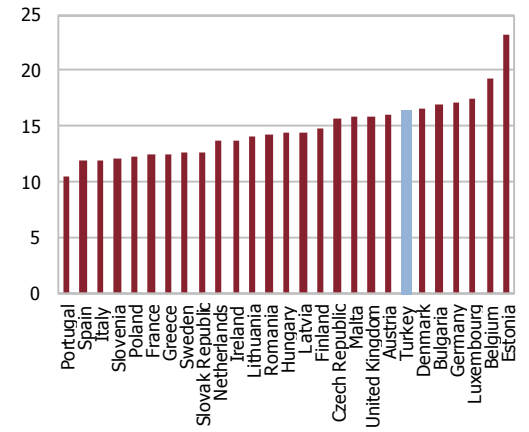
Chart III.42 Ratio of Equity to Total Assets (%)



Source: BRSA-CBRT

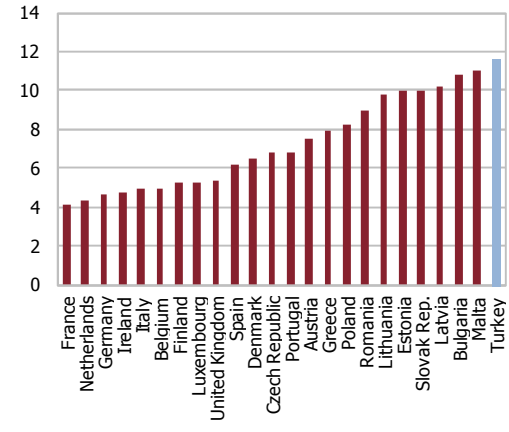
The Turkish banking sector has high capital adequacy ratio. Compared to other countries, Turkey is one of the countries that enjoy high ratios with regard to both capital adequacy ratio and the ratio of equity to total assets (Chart III.43 and Chart III.44).

Chart III.43 Capital Adequacy Ratios of Countries (%)[1]



Source: Financial Soundness Indicators, IMF, BRSA-CBRT
(1) Latest data on the FSI database have been used, most of which are taken from June 2011.

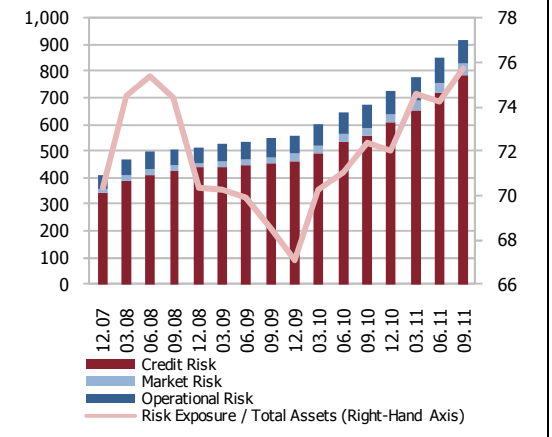
Chart III.44 Ratio of Equity to Total Assets of Countries (%)[1]



Source: Financial Soundness Indicators, IMF, BRSA-CBRT
(1) Latest data on the FSI database have been used, most of which are taken from June 2011.

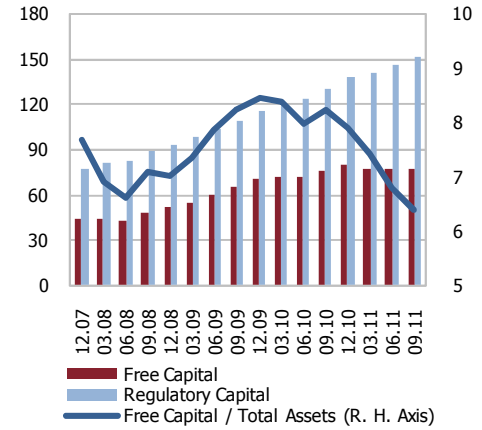
The rise in the share of total risk exposure of the banking sector in total assets continues on the back of credit growth. In September 2011, the mentioned share increased by 3.7 points compared to end-2010 and reached 75.8 percent (Chart III.45). Again, in the same period, the ratio of free capital to total assets decreased by 1.5 points down to 6.4 percent (Chart III.46). This decline was mainly driven by the rapid rise in the risk-weighted assets.

Chart III.45. Composition of Total Risk Exposure (Billion TL, %)



Source: BRSA-CBRT

Chart III.46. Developments in Free Capital (Billion TL, %)



Source: BRSA-CBRT

As stated in Box III.2 regarding the measures taken by the BRSA, the risk weight of long-term other consumer loans was increased with the amendment to the Regulation on Measurement and Evaluation of Capital Adequacy of Banks on 18 June 2011. Another important measure taken by the BRSA was the Regulation Pertaining to Measurement and Assessment of Interest Rate Risks Arising from Banking Accounts with Standard Shock Method, which was promulgated in the Official Gazette of 23 August 2011. The Regulation stipulates that the standard ratio of interest rate exposure arising from banking accounts shall not exceed 20 percent. Moreover, the BRSA would be able to discriminate standard ratios of interest rate exposure arising from banking accounts by banks or bank groups. In case the upper limit of 20 percent is exceeded, the excess amount in the last period shall be deducted from the own funds that will be used to calculate the standard ratio of capital adequacy for the same period. The change will take effect as of 1 July 2012.

After the announcement of the results of the latest Quantitative Impact Study (QIS-TR3) measuring the impact of Basel II on the sector's capital adequacy ratio, the one-year parallel run period, during which Basel-I and Basel-II was to be implemented simultaneously, started in July 2011. Turkey will have fully implemented Basel II by the time the parallel run period terminates in July 2012. The BRSA issued the third Quantitative Impact Study for Basel-II in March 2011. Consolidated data for March 2010 has been used in the study in which 45 banks participated; and, while the banks' consolidated capital adequacy ratio was 18.4 percent, it became 17 percent with a 1.4-point decline after the implementation of the Basel II standardized approach. The fact that the sector's capital adequacy ratio is well above 8 percent indicates that the banks' capital requirements are adequate in the scope of the Basel II harmonization process. In Turkey, the capital adequacy ratio is high and the fact that own funds is mostly composed of paid-up capital and retained earnings that have a higher capacity of covering losses indicates that Turkey will not have difficulty achieving harmonization with Basel III implementations. Studies are already underway for the implementation of Basel-III principles and the BRSA is expected to incorporate Basel III principles into Turkish legislation and start implementation in line with the timetable determined by the Basel Committee.

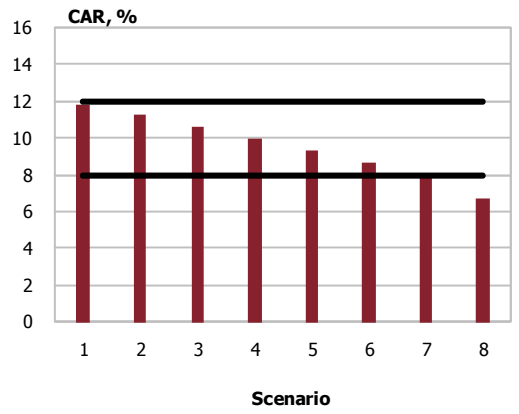
Scenario analysis, which tests the resilience of the banking sector to shocks originating from credit and market movements, shows that the sector has the capacity to absorb shocks. According to the scenario analysis, when exchange rates, Eurobond returns, interest rates and NPLs are exposed to maximum shocks simultaneously, the capital adequacy ratio only decreases below the legal ratio in the final scenario (Table III.2 and Chart III.47).

Table III.2 Scenarios Applied[1,2]

Scenario	Exchange Rate (% increase)	Eurobond (% loss of value)	Interest Rate (point increase)[2]	NPL (point increase)
1	30.0	5.0	10.0	3.0
2	31.5	5.3	10.5	4.0
3	33.0	5.5	11.0	5.0
4	34.5	5.8	11.5	6.0
5	36.0	6.0	12.0	7.0
6	37.5	6.3	12.5	8.0
7	39.0	6.5	13.0	9.0
8	40.5	6.8	13.5	11.0

Source: CBRT
(1) In scenario analysis, taking into account past crises, shocks are applied to risk factors simultaneously.
(2) It refers to the Turkish Lira interest rate shock. The FX interest rate shock is about 1/3 of that applied to Turkish lire interest rate. In the shocks applicable commercial portfolios, impairment is about 17 percent on sectoral basis.

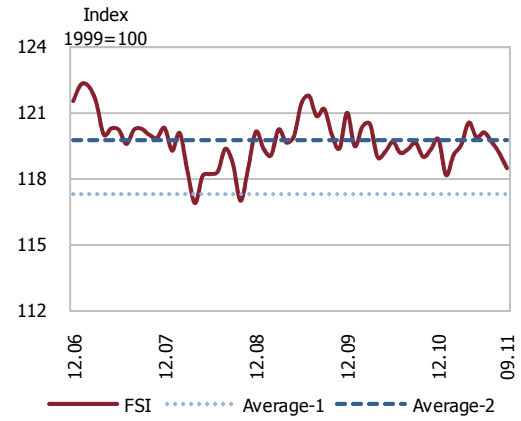
Chart III.47 Results of Scenario Analysis



Source: CBRT

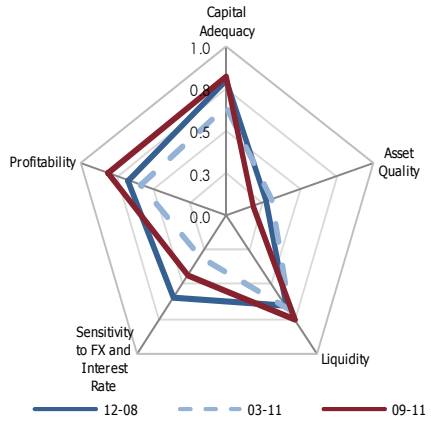
Banking sector indicators show that the financial strength of the system pervades. Despite the favorable trend in the sector's asset quality, indicators of profitability performance assumed a downward trend due to the contraction in the net interest margin and the rise in non-interest expenses. Even if the capital adequacy ratio decreased owing to credit growth, it is still above the regulatory and target ratios. While the on-balance sheet foreign exchange open position is on the rise, the net overall foreign exchange position is quite low owing to the excess off-balance sheet foreign exchange position. The banking sector's liquidity adequacy ratios for the 1st and 2nd maturity brackets are above the legal limit both in terms of total amount and in foreign exchange. However, the liquidity ratios assume a downward trend due to the significant decline in securities and the changes in the required reserves affect these ratios. Due to all these changes, the financial strength index became 118.5 in September 2011 and the sector remains strong (Chart III.48 and Chart III.49).

Chart III.48. Financial Strength Index [1,2]



Source: BRSA-CBRT
(1) "Average 1" is the average of December 1999 – September 2011 and "average 2" is the average of January 2004- September 2011.
(2) Since they have different operating principles, participation banks are excluded.

Chart III.49. Banking Sector Stability Map[1]



Source: BRSA-CBRT
(1) Computed as a sub field of the Financial Stability Map.

In the upcoming period, the slowdown in credit growth is expected to continue as uncertainties over the global economy are mounting and the impact of the measures taken pertaining to loans will become clearer. External demand is expected to remain subdued due to lingering global uncertainties and domestic demand to further decelerate because of the impact of measures taken. Besides, it is important to ensure the stable sustainability of the current balance in internal and external demand. In this framework, further decreasing the already decelerating credit growth in consumer loans would be very useful. The Central Bank of the Republic of Turkey will closely monitor the global economic developments and will take the necessary policy measures to domestic stability within the framework of the strategy.

IV. SPECIAL TOPICS

IV.1. Private Pension System and its Importance for the Financial Stability

Even though individual pension system was recently introduced in Turkey, it has shown significant progress. Individual pension system aims to broaden the coverage of social security, to raise the welfare level of individuals during the retirement period and to improve the living standards in the long term. It has also positive impact on macro economy and financial stability because of the volume and maturity structure of funds collected in the system.

Individual Pension System and Financial Stability

Funds collected in the individual pension system enable the volume of saving to increase in the country. Mattress savings are high and so accumulation of the funds directed to investment is not enough in countries without pension system. Accumulation of funds that supports the financial development and deepening can be achieved when these small savings are gathered and registered with the system. Moreover, the aim of pension funds to get profit in the long term rather than in the short term helps to increase the longer term institutional investments, which limit fluctuations caused by short-term capital flows, increase resistance of capital markets against crisis and contribute financial stability by making these markets safer for investors.

Private pension system provides regular flow of new and long term funds into the capital markets, which contributes to decline in interest rates and increase the borrowing opportunities for public and private sector. Thus public sector can borrow for longer term at a lower interest rate. In addition, financial system functions better with the support of reduction in budget deficit and borrowing needs due to the cut in social security expenses. Moreover, increasing opportunities for private sector regarding funding resources boosts issuance of securities and investments, while distributing risks among investors.

Savings directed to investments support the growth of production and employment and become an important resource for maintaining stable economic growth. In addition, rising volume of saving because of fall in consumption helps to be kept inflation under control. Also, the higher weight of local currency in funds like in Turkey reinforces the credibility of the national currency.

Private Pension Funds in Turkey

The Individual Pension Savings and Investment System Law, part of the social security reform and aiming to complement social security system, was published in the Official Gazette no. 24366 on April 2001 and came into force six months later after the publication date. However, the Individual Pension System officially commenced on October 27, 2003 after pension companies started to offer pension products.

The main goal of the system is to direct people's savings, accumulated regularly during working life, into investment and to maintain individual's welfare level during retirement period by providing a supplementary income with these savings.

The main futures of the Individual Pension System are as follows;

i. The system functions on the basis of voluntary participation and anybody who is able to use his civil rights can enter the system.

ii. The contributions are transmitted by the retirement companies, established with permission of Undersecretariat of Treasury, to the pension funds, established as the structure of a mutual fund and authorized by Capital Markets Board (CMB).

iii. Pension companies are obliged to create at least three funds having different risk and yield structure in case individuals are able to choose a fund according to their personal risk and yield expectations.

iv. Pension funds may invest in fixed yield capital market instruments, such as repos and treasury bonds, as well as variable yield instruments, such as stocks.

v. Pension mutual funds are managed by the portfolio management companies established within the Capital Markets Law with the principles of professional portfolio management. At the end of a minimum period, accumulated contributions can be transferred into another retirement company.

vi. Assets of the fund, disconnected from assets of the retirement company, are deposited in a custodian bank, approved by the CMB. Currently, the custodian is ISE Settlement and Custody Bank in Turkey.

vii. Different institutions have the responsibility for supervision, monitoring and safety of the private pension system. While the Undersecretariat of Treasury, CMB and independent audit firms are responsible for supervision, Pension Monitoring Center (PMC) and ISE Settlement and Custody Bank have monitoring duty.

viii. In order to qualify retirement, people have to make contributions to the fund at least ten years and must complete age of 56. Private pension system encourages people to make long term savings due to regular contribution requirement of the system for qualifying retirement.

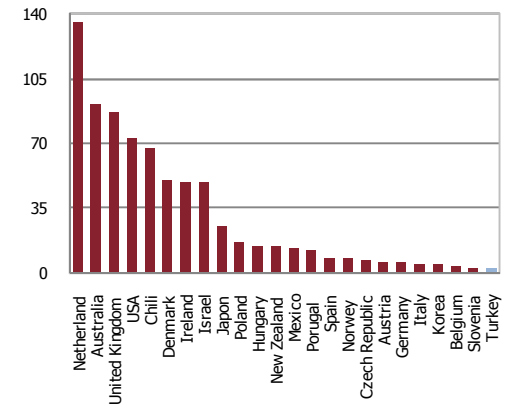
ix. Participation to the system is also encouraged with tax incentives by the public. Contributions are tax deductible up to ten percent of income with a cap of annual minimum wage. In investment stage, there is not any withholding tax on earnings of the private pension funds. Where the participant has contributed for more than ten years and is 56 or older, 25 percent of the benefit payment of a lump sum pension is tax free and the remaining part is subject to a withholding tax of five percent.

Development of Private Pension System in Turkey

In Turkey, the ratio of private pension funds to GDP is relatively low compared to other countries due to its short history and voluntary participation framework (Chart IV.1.1). However, since

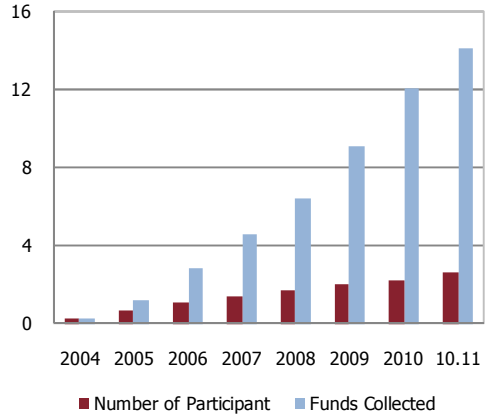
2003, the beginning date, system has shown a successful performance and improved significantly. While the number of pension companies, the number of participants and the amount of funds collected was 11, 314 thousand people and TL 296 million respectively in 2004, figures increased to 14[8], 2.6 million people and TL 14 billion as of October 31, 2011 (Chart IV.1.2). Given the relatively young demographic structure of our country, the growth potential of the system is thought to be quite high. In this context, the PMC expects that the number of participant and funds collected will reach to 4 million people and TL 48 billion at the end of 2015, 5.5 million people and TL 115 billion at the end of 2020.

Chart IV.1.1. Ratio of Pension Funds to GDP in OECD Countries (%)



Source: OECD

Chart IV.1.2. Development of the Number of Participant and Funds Collected (Million Person, Billion TL)



Source: PMC

The share of private pension funds in household financial assets has increased day by day with the growing interest to the system. Private pension funds, which has 1.5 percent share in household financial assets in 2007, grew by 207 percent in nominal terms and the share rose to 2.6 percent due to consistently increasing participants and regular contributions until September 2011 (Table IV.1.1).

When asset distributions of the pension funds are examined, it is seen that public debt securities have the largest share over the years (Chart IV.1.3). While the share of public debt securities in total assets of funds is 63 percent, the share of stocks is 15 percent as of October 31, 2011. High demand for public debt securities indicates that the large portion of the funds accumulated in the system is transferred to the public sector. Thus, reducing the public sector borrowing costs and increasing borrowing opportunities are positive development. However, increasing the amount of funds, transferred from system to the capital markets, is thought to be very important in order to deepen and develop these markets. In addition, the scarcity of foreign currency denominated assets in funds' asset allocation is noteworthy. Indeed, it is seen that while 3.4 percent of contract owner prefers to index their contributions to USD and Euro, 96.6 percent prefers TL.

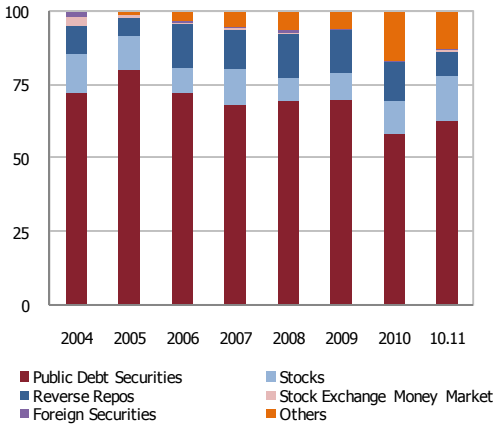
[8] As of October 31, 2011, companies operating in the system are as follows; Aegon Emeklilik ve Hayat A.Ş., Allianz Hayat ve Emeklilik A.Ş., Anadolu Hayat Emeklilik A.Ş., Avivasa Emeklilik ve Hayat A.Ş., BNP Paribas Cardif Emeklilik A.Ş., Deniz Emeklilik ve Hayat A.Ş., Ergo Emeklilik ve Hayat A.Ş., Finans Emeklilik ve Hayat A.Ş., Garanti Emeklilik ve Hayat A.Ş., Groupama Emeklilik A.Ş., Ing Emeklilik A.Ş., Vakıf Emeklilik A.Ş., Yapı Kredi Emeklilik A.Ş., Ziraat Hayat ve Emeklilik A.Ş..

Table IV.1.1. Composition of Household Financial Assets (Billion TL, %)[1]

	2007		09.11		2007-09.11
	Billion TL	% Share	Billion TL	% Share	Nominal Change (%)
TL Deposits	142.5	45.4	280.4	52.1	96.8
FX Deposits	78.5	25.0	106.9	19.9	36.2
- FX Deposits *(Billion USD)*	*67*	-	*58*	-	*36.2*
Currency in Circulation	26.2	8.4	52.1	9.7	98.8
GDDS+Eurobond	19.6	6.3	8.8	1.6	-55.1
Mutual Fund	22.6	7.2	28.3	5.3	25.2
Stocks	17.5	5.6	32.4	6.0	85.1
Private Pension Funds	4.6	1.5	14.1	2.6	206.5
Repos	1.9	0.6	2.2	0.4	15.8
Precious Metal Deposits	0.2	0.1	12.5	2.3	6150.0
Total Assets	313.6	100	537.7	100	71.5

Source: BRSA-CBRT, CMB, CRA
(1) TL and FX deposits include participation funds.

Chart IV.1.3. Distribution of Private Pension Funds Assets (%)



Source: CMB

Diminishing yields parallel with the change in the financial markets in recent years make regulatory arrangements, related the use of different investment instruments in the private pension system, an important current issue. It is expected that long-term savings in the system will increase even more by covering the funds based on precious metals, real estate investment trusts and alternative investment vehicles, such as lease certificates. Continuation of works done by relevant authorities about regulations that allow the use of different investment instruments is thought to be crucial for development and growth of private pension system.

Private pension system, by providing long-term funds to economy, contributes positively on reduction of the cost of public borrowing and accession of the long term and low cost borrowing opportunities for private sector. It is considered that development of private pension systems is important for our country and the system has serious contributions for sustainable economic growth and financial stability.

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IV.2. Leverage and Procyclicality

Banks are institutions that raise funding for financial assets with equity and debt. If leverage ratio is defined as the ratio of financial assets over equity, change in the value of financial assets is reflected in equity, thus it affects leverage ratio[9]. In this context, assuming that the value of debt stays constant, in an environment where an increase in asset prices would lower leverage, on the other hand when asset prices tend to fall, the leverage ratio would increase[10]. This phenomenon is known as counter cyclical leverage, and is the case for economic agents other than financial institutions that do not target leverage. However, for the financial institutions that perform with a specific leverage target the opposite may be the case. For example, Adrian and Shin (2008, 2010) find that the leverage, particularly for the U.S. investment banks, increases during financial expansion, while it declines during contraction, thus they conclude that leverage is procyclical for these banks.

The procyclicality of leverage accelerates the financial cycles. If the balance sheet arithmetic discussed in Adrian and Shin (2010) is considered, to access the leverage target, banks would increase their funding, in turn increase their leverage in the cases where the asset prices are increasing, while in the case of falling asset prices banks tend to reduce their leverage. Therefore, the periods during which bank balance sheet expands and leverage increases overlap with the periods of credit cycles. In this regard, leverage could be used as a macroprudential tool to mitigate credit cycles.

The academic literature does not provide conclusive evidence on the procyclicality of leverage. For example, Adrian and Shin (2008) provide evidence in favor of strong procyclical leverage for the United States, especially for investment banks, while Panetta et al. (2009) find countercyclical leverage for some developed countries. In addition, Kalemli-Özcan et al. (2011) find that the leverage is procyclical for large commercial banks in the United States, but to a lesser extent for the banks in Europe.

Leverage and Procyclicality - Overview

Adrian and Shin (2010), Greenlaw et al. (2008) and Kalemli-Ozcan et al. (2011) associate procyclical leverage phenomenon with countercyclical value at risk (VaR). For example, when VaR per dollar of assets held by a bank is V, and total equity is equal to total value at risk, then Capital=V*Assets, leverage ratio (L)=Asset/Equity, hence L=1/V. In this case, during boom times of financial expansion leverage will be high due to low risk. This implies that there is a relation between the leverage and banks' risk perceptions. At this point, Adrian and Shin (2008) argue that the value at risk is the main determinant of the balance sheet size and leverage, and similarly Greenlaw et al. (2008) argue that, as a result of procyclicality, banks take value at risk rather than regulatory restrictions into account when determining their capital structure.

On the other hand, the countercyclicality of risk and procyclicality of leverage is a fact that could accelerate financial cycles. Banks exhibit a behavior of expanding their balance sheets in an

[9] As shown in Table IV.2.1, depending on the definitions used, increase in the leverage ratio might imply an increase or a decrease in indebtedness. In this section, increase in leverage refers to increased indebtedness.
[10] See Adrian and Shin (2010) for the representation of this arithmetic.

environment of low risk perceptions which increases the demand for assets, in turn, if this situation is accompanied by a market that is not perfectly liquid, such an asset demand would put upward pressure on asset prices. In this case, the balance sheet growth, asset demand and price increases would introduce a structure that feeds each other, and an additional accelerator effect could be seen if there is specific leverage target. Therefore, as a result of an increase in asset prices, banks raise more funds to increase their leverage, and in case of falling asset prices, they reduce their liabilities to lower leverage.

As a result of this cyclical relationship between leverage and balance sheet, periods of rapid growth of bank balance sheet and increasing leverage could overlap with credit cycles. Thus, it is possible establish a linkage between business cycles and leverage cycles. Indeed, the ongoing economic recession after the global financial crisis is partially attributed to deleveraging of banks and other economic agents.

Alternative Leverage Definitions and Evidence

In discussions presented so far, without providing specific definitions, asset / equity multiplier was used as a general definition. As shown in Table IV.2.1, it is possible to find alternative definitions of leverage in banking literature. While some of these definitions, such as asset/equity ratio, are widely used in academic literature, other definitions are used by regulatory institutions as a risk indicator in banking system or as an indicator in framework of policies to reduce the macro-financial risks. On the other hand, for example, the Savings Deposit Insurance Fund (SDIF) in Turkey uses definition of Leverage-VI as "capital asset multiplier" in the framework of saving deposit premium. However, without discussing which leverage definition is relevant for any particular purpose, alternative leverage definitions are used to look at procyclical relationship between leverage and asset growth in this special topic.

Table IV.2.1. Alternative Leverage Definitions

I	Debt / Equity
II	(Debt+Off Balance Sheet Liabilities) / Equity
III	Asset / Equity
IV	(Tier 1 Capital-Regulatory Deductions) / (Asset+Off Balance Sheet Liabilities)
V	(Tier 1 Capital-Regulatory Deductions) / (Debt+Off Balance Sheet Liabilities)
VI	(Assets + Contingencies + Commitments (except derivatives and revocables)) / Regulatory Capital

Note: For Leverage -IV and Leverage -V definitions, all contingencies are included in off-balance sheet transactions, and only 10 percent of revocable commitments are taken into account. Increase in Leverage -IV and Leverage –V ratios implies reduction of debt, while increase in other leverage definitions implies increasing debt.

Table IV.2.2 presents the descriptive statistics for different leverage ratio definitions. The leverage ratios in the Turkish banking sector are relatively lower when compared to the banks and countries analyzed in Kalemli-Özcan et al. (2011). It is possible to reconcile this with the strong capital and high capital adequacy ratios of the Turkish banks due to the regulations.

Statistics based on business models reveal that commercial and participation banks work with higher leverage ratios than the development and investment banks. This is the consequence of the fact that an important determinant of the leverage is the size of the bank balance sheets.[11] On the other hand, the regulations about the banks' capital adequacy limits the cross sectional and time series variation of the leverage. As Greenlaw et al. (2008) state, however, one should recall the finding that as a result of the procyclicality of the leverage, banks consider internal Value at Risk (VaR) rather than the regulations when utilizing their capital.

Table IV.2.2. Descriptive Statistics

	Commercial Banks		Participation Banks		Development/Investment Banks		Banking Sector	
Leverage	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
I	7.32	0.68	7.60	1.35	1.22	0.22	6.60	0.56
II	12.79	1.92	18.71	7.14	2.51	0.46	11.72	1.87
III	8.32	0.68	8.60	1.35	2.22	0.22	7.60	0.56
IV	7.03	0.51	6.08	0.67	32.11	3.03	7.80	0.53
V	7.66	0.59	6.50	0.76	48.22	6.74	8.57	0.64
VI	11.41	0.85	15.21	2.10	2.63	0.25	10.40	0.66

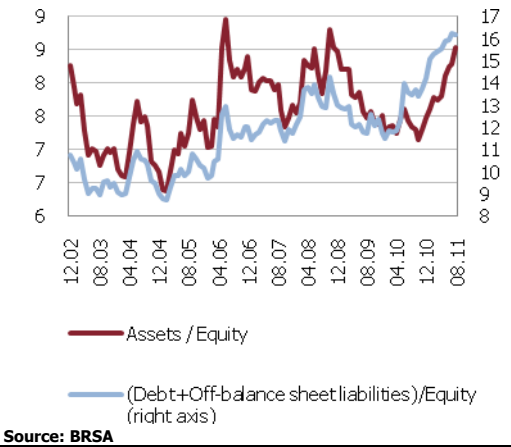
Note: All Leverage definitions are in proportions except for IV and V, which are in percentages.

When Leverage II and III definitions are examined for the banking sector, it is seen that Leverage II displays an increasing trend due to the increases in off-balance sheet transactions, whereas the assets/equity ratio (Leverage III) displays cycles that have relatively longer durations and it fluctuates around the mean of 7.6 (Chart IV.2.1). For example, after the last quarter of 2008 in which the global crisis spreads to the emerging markets, there is a clear cycle in the leverage ratio and this cycle overlaps with the credit cycle. Therefore, as discussed earlier, this relationship between leverage and credit cycle might provide an opportunity to the policy makers to use the leverage as a macroprudential tool to smooth the financial cycles.

It is necessary to examine the relationship between various leverage definitions and the asset growth to test statistically whether the leverage is pro-cyclical. As an example, Chart IV.2.2 displays a strong positive relationship between asset growth and assets/equity ratio which is a widely used measure of leverage for the banking sector. Formal estimation results for the banking sector presented in Table IV.2.3 show that the relationship between asset growth and the leverage ratio is statistically significant. These results indicate that the leverage is procyclical for the banking sector, and higher asset growth is associated with higher leverage.

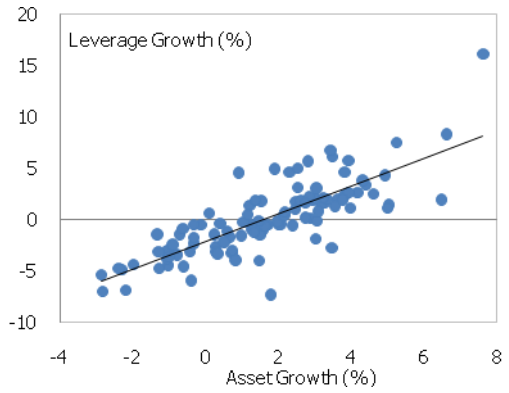
[11] In a panel data analysis, Çalışkan (2011) finds that there is a statistically significant relationship between the growth of the leverage and the size of the bank balance sheets measured by total assets.

Chart IV.2.1. Time-series behavior of the leverage ratios



Source: BRSA

Chart IV.2.2. Growth of assets and leverage (III)



Source: BRSA

Table IV.2.3. Leverage and Asset Growth – Estimation Results for the Sector

Leverage Definitions	(1)	(2)	(3)	(4)	(5)	(6)
Asset Growth	1.549***	1.332***	1.346***	-0.969***	-1.087***	1.178***
	(0.115)	(0.126)	(0.101)	(0.096)	(0.105)	(0.120)
Constant	-2.521***	-1.745***	-2.201***	1.703***	1.896***	-1.996***
	(0.174)	(0.300)	(0.152)	(0.295)	(0.320)	(0.248)
N	103	103	103	103	103	103
R-squared	0.63	0.41	0.63	0.34	0.36	0.45

Note: All estimations are done by OLS. Dependent variables are the leverage ratios defined in Table 1. Heteroskedasticity and serial correlation adjusted standard errors are given in the parentheses. ***, **, and * show significance levels at 1%, 5% and 10% levels, respectively.

The following model is utilized to see how results change when different business models are considered:

$$Y_{it} = \beta_0 + \beta_1 X_{it} + \beta_2 (X_{it} \times D_1) + \beta_3 (X_{it} \times D_2) + \varepsilon_{it} \quad (1)$$

where Y is the leverage growth, X is the asset growth, D_1 and D_2 are dummy variables for participation and development/investment banks, respectively, i and t denote banks and time, respectively, and ε is the error term. Commercial banks are the excluded group. $\beta_1 \neq 0$, $\beta_1+\beta_2 \neq 0$, and $\beta_1+\beta_3 \neq 0$ indicate a statistically significant relationship between leverage and asset growth for the commercial banks, participation banks, and development/investment banks, respectively. When the estimated values of β_1, $\beta_1+\beta_2$, and $\beta_1+\beta_3$ are positive (negative) for Leverage I,II,III,VI (Leverage IV,V), the leverage is procyclical.

Table IV.2.4 presents results from estimating equation (1). Results from joint hypotheses tests indicate that the leverage of the participation banks is not pro-cyclical, whereas the leverage of the commercial banks and development/investment banks are pro-cyclical.

Table IV.2.4. Leverage and Asset Growth Relationships According to Banking Groups

Leverage Definitions	(1)	(2)	(3)	(4)	(5)	(6)
Asset Growth	1.559***	1.313***	1.372***	-0.958***	-1.066***	1.209***
	(0.139)	(0.139)	(0.123)	(0.088)	(0.096)	(0.143)
Asset Growth × D_1	-1.054***	-1.223***	-0.935***	0.709**	0.799**	-0.906***
	(0.389)	(0.438)	(0.343)	(0.307)	(0.327)	(0.331)
Asset Growth × D_2	0.368**	0.320*	-0.305**	-0.138	-0.608***	-0.211
	(0.163)	(0.192)	(0.139)	(0.156)	(0.216)	(0.160)
N	284	284	284	284	284	284
R-squared	0.59	0.10	0.52	0.30	0.36	0.39
Joint Hypotheses						
$\beta_1 + \beta_2$	1.93	0.05	1.87	0.72	0.73	1.03
$\beta_1 + \beta_3$	512.29***	151.73***	28□.45***	72.03***	74.55***	191.19***

Note All estimations are done by OLS. Dependent variables are the leverage ratios defined in Table 1. Heteroskedasticity and serial correlation adjusted standard errors are given in the parentheses. Commercial banks are the base group. Joint hypotheses test results are the values of the χ^2 statistic. ***, **, and * show significance levels at 1%, 5% and 10% levels, respectively.

In conclusion, analysis presented in this section shows that the leverage of the Turkish banking sector is procyclical. Therefore, financial cycles and credit cycles feed each other implying that the leverage can be considered as a financial accelerator.

D'Hulster (2009) argues that the leverage should be used as a macro- and micro-prudential tool. He discusses that the leverage ratio is a useful and easy-to-use policy tool, but it is not a tool to limit the debt and riskiness of the financial system when used alone. In this context, as argued by D'Hulster (2009), some authors think that the use of the leverage ratio together with Basel type capital adequacy ratios might decrease the risks of the banks and the whole financial system originating from high leverage.

Considering the results from the current literature suggesting that the leverage is procyclical and triggers financial cycles (Geanakoplos, 2009), the increases in credit and assets might be limited by employing a dynamic countercyclical leverage rule. That is, lowering the leverage ratio when the asset growth of the banks is high, and raising it in the opposite case should contribute to smoothing credit/financial cycles. Accordingly, a countercyclical leverage ratio interval is a possible policy proposal.

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IV.3. Over the Counter Derivatives Markets-Regulations

The recent financial crisis has highlighted the importance of significantly grown but not adequately regulated derivatives markets. Since most of the derivatives trading take place in the over-the-counter (OTC[12]) markets, there has been considerable challenge while gathering data for such products and markets, thereby making it difficult for the regulators and market participants to identify the risks associated with the OTC derivatives. Those products, that are traded through bilateral agreements based on mutual needs, have the benefit of facilitating flexibility with their less standard structure and with being subject to less regulatory supervision where they can be used for both hedging and speculation. However, the impacts of those products have far gone beyond the two parties and they have imposed risk on the world economy through contagion. In relation to this, financial engineers have been widely criticized and blamed for triggering the recent financial crisis with their complex mathematical models and being the designers of complex financial products. However, especially considering the impossibility of modeling human behavior, anyone who intends to rely on theories or models must first understand how they work and what their limits are[13].

Financial derivatives emerged as a consequence of market dynamics. Nevertheless, due to the firm/system-wide failures during the global crisis, regulatory authorities have taken considerable steps in regulating the OTC derivatives, dominating portion of all the derivatives markets. The logic behind the relevant regulations is to provide transparency in OTC derivatives markets and making the risks associated to these markets more manageable. In September 2009, G-20 Leaders agreed in Pittsburgh that: *All standardized OTC derivative contracts should be traded on exchanges or electronic trading platforms, where appropriate, and cleared through central counterparties by end-2012 at the latest. OTC derivative contracts should be reported to trade repositories. Non-centrally cleared contracts should be subject to higher capital requirements*. In this way, it is aimed to improve transparency in the derivatives markets, mitigate systemic risk, and limit highly risky transactions that would swell destructive impacts on markets.

The FSB's OTC Derivatives Working Group (ODWG) monitors the implementation of OTC derivatives reforms toward meeting the G-20 commitments. The main topic and findings of the reports prepared so far by the Group are summarized as follows:

Table IV.3.1. ODWG Reports

October 2010 Implementing OTC Derivatives Market Reforms	FSB made 21 recommendations addressing practical issues that authorities may encounter in implementing the G-20 Leaders' commitments.
April 2011 First Implementation Progress Report	FSB warned that in order for this target to be achieved, jurisdictions needed to take substantial, concrete steps toward implementation immediately.
October 2011	It is highlighted that the pace of legislative and regulatory action should be

[12] According to the BIS (2011) "OTC derivatives market activity in the first half of 2011" Report, total notional outstanding amounts of derivative transaction at OTC market equal to around USD 708 trillion as of first half of 2011. OTC interest rate derivatives constitute the largest portion of these global OTC contracts.

[13] Derman (2011): Emanuel Derman and Paul Wimott (2009) indicate that financial models represent simple structures such that they cannot encapsulate human behavior; hence people should never forget that the model is not a world….. in the "The Financial Modelers' Manifesto".

Progress Report on Implementation	increased to ensure that as many frameworks are as possible in place by 2012. The coherent practices regarding OTC regulations among countries are of utmost importance. Many jurisdictions have indicated that final decisions on domestic legislative frameworks will follow to the international baseline established once EU and US legislation and implementing regulations are in place and international standards are finalized. To meet the end-2012 deadline, it is important that all jurisdictions do as much as they can without waiting for finalization of approaches in the largest markets.

The issues (i) central clearing, (ii) exchange and electronic platform trading, (iii) reporting to trade repositories, (iv) capital requirements and (v) standardization presented in the above-mentioned Reports are summarized as follows:

Central clearing: After the global crisis, regulatory initiatives focus more on Central Counterparties (CCPs), which are a vital building block of a well-functioning transparent system. In this framework, all standardized OTC derivative contracts should be cleared through central counterparties by end-2012 at the latest. Although there are both pros and cons of CCPs, in order to mitigate counterparty credit risk CCPs play a crucial role given their effective risk management implementations. In that sense, regulations of central banks and the other authorities, especially the access of CCPs to central bank liquidity without creating moral hazard risk are of great importance. CCPs are very likely to contribute to the OTC derivatives market by applying multilateral netting of trades given their robust risk management standards and the default funds that mutualise losses. Hence, such a system is highly likely to help reduce the spillover of counterparty credit risk. Although CCPs have different waterfall structures to absorb and mutualise losses, the general order is the following: (1) posted collateral of the defaulted clearing member; (2) default fund contribution of the defaulted clearing member; (3) default fund contribution of the CCP; and (4) default fund contributions of non-defaulting clearing members. Such a structure is a significant gain in terms of contagion and systemic risk. FSB members highlight the end-2012 goal and indicate that central clearing of OTC derivatives has increased, particularly in the interest rate and credit asset classes. Nevertheless considering the complex nature of the required rules and the pace at which various jurisdictions are implementing central clearing mandates, central clearing of standardized products would not be met fully, but seems to be met partially by the end-2012. All in all, there are vital regulatory initiatives related with banks, as the most crucial participants in this market, that are required to maintain more capital for their OTC transactions not cleared through CCPs, while encouraging central clearing. In this way, it is intended to help the banks protect themselves against the counterparty credit risk, which will in the end contribute to the health of the financial system. Another point to mention is that there are still discussions ongoing regarding the local and global CCPs.

Exchange and electronic platform trading: In general terms, a trading platform is a system or facility that brings together buying and selling interests in one or more financial instruments, leading to the execution of transactions in those instruments[14] (IOSCO's "Report on Trading of OTC Derivatives" published on February 2011 is a very informative international guidance regarding the organized trading platforms). As for the OTC markets, most trading occurs via

[14] IOSCO's "*Report on Trading of OTC Derivatives*" published on February 2011.

telephone or electronic tools, where the subject of trade is highly structured products depending on the investors' various risk appetite. Considering the G-20 commitments, FSB progress Report indicates that the legislative and regulatory framework implementation is markedly behind the progress made toward other commitments. The United States is the only jurisdiction that has adopted legislation requiring exchange and electronic platform trading of standardised derivatives, and it is working toward putting in place implementing regulation, where the European Commission expects that the proposals will be adopted in 2013. FSB points out that jurisdictions should aggressively push forward to meet the end-2012 deadline in as many areas as possible, including accelerating jurisdictional policy decision-making with regard to organised platform trading.

Reporting to trade repositories: Trade repositories, entities that maintain a centralised electronic database of OTC derivatives transaction data, are of great innovation for the markets which will enable authorities to ascertain accurate information concerning OTC derivatives. Such data would be accessible by market regulators and other authorities in order to review overall OTC derivatives activity, or a portion of it, based on counterparty or otherwise. While all parties of the related transaction would store relevant information, reporting to trade repositories would contribute to the health of the financial system to a great extent. Currently, commitment to putting in place by end-2012 the legislative and regulatory frameworks for achieving the G-20 commitment to reporting to trade repositories is maintained as indicated by the FSB. However, there are a number of implementation issues that need to be resolved around ensuring the suitability of the data collected in trade repositories for meeting different regulatory mandates (including financial stability) and authorities' effective access to data stored in trade repositories relevant to their respective mandates. Actual reporting of OTC derivatives contracts to trade repositories is showing progress in the interest rate, credit, and equity derivatives asset classes. Currently, trade repositories are not operational for the commodity and foreign exchange asset classes, although infrastructure is under development. Based on the current state of implementation, the FSB believes that, as is the case with central clearing, the target of having all OTC derivatives contracts reported to trade repositories will not be fully met by end-2012 in all FSB member jurisdictions. Nonetheless, the FSB emphasizes that jurisdictions should aggressively push forward to meet the trade repositories reporting deadline for as many OTC derivatives contracts as practicable.

Capital requirements: New regulations are designed to ensure that banks' exposures to CCPs are adequately capitalised, such that regulations require banks to more appropriately capitalise their exposures to OTC derivatives, while creating incentives for banks to increase their use of CCPs. Since the risk embedded in CCPs may adversely affect the clearing members, the exposures to CCPs should be priced in terms of risk and capital, as well. The Basel III capital framework, which strengthens the requirements for counterparty credit risk exposures, will take effect on 1 January 2013. The Basel III capital framework strengthens the requirements for counterparty credit risk exposures including the mark-to-market value of counterparty credit risk which has not been covered under Basel II. When entering into bilateral OTC derivative transactions, banks are required to hold capital to protect against the risk that the counterparty defaults and for credit valuation adjustment (CVA) risk. Banks are not required to hold capital for CVA risk for derivatives that are centrally cleared. Commitment to putting in place by end-2012 the legislative and regulatory frameworks to achieve the G-20

commitment to higher capital requirements for non-centrally cleared derivatives is maintained. BCBS is undertaking a series of quantitative impact studies involving banks and CCPs, including checking whether capital charges appropriately reflect the higher risk of non-centrally cleared transactions. Additionally, BCBS, CPSS, IOSCO and CGFS are participating in a working group to set margining standards for non-centrally cleared derivatives.

Standardization: The main concern regarding standardization is the fact that non-standard nature of OTC derivatives is the main reason of the emergence of OTC markets and thus has become key characteristic of these markets. It is important to achieve standardization while maintaining flexibility. Standardisation is a core element for meeting the G20 commitments relating to central clearing, organised platform trading and reporting to trade repositories. To date, coordinated industry action led by the OTC Derivatives Supervisors Group, composed of the supervisors of the main derivatives dealers, has been the main driver of increased standardisation through a series of quantitative and qualitative commitments. The ongoing work has substantial progress and the views and needs of market participants are delicately taken into account. In Turkey, OTC derivatives are mostly composed of swaps, which are vanilla, thus standardization process has less challenge comparing to advanced countries. According to FSB survey responses, most jurisdictions believe that the proportion of OTC derivatives that are standardised will have substantially increased by end-2012.

All in all, FSB mentions that till now there is significant progress in implementation of OTC derivatives regulations, whereas the consistency among jurisdictions is highlighted. ODWG will continue to actively monitor the consistency of implementation, and bring any overlaps, gaps, or conflicts to the attention of the FSB that may prove detrimental to the G-20 reform objectives of increasing transparency, mitigating systemic risk, and protecting against market abuse. With the end-2012 deadline rapidly approaching, the FSB is committed to maintaining its intense focus on monitoring and assessing the adequacy of progress being made to fully and consistently implement the G-20 commitments through the development of international standards and policies, the adoption of legislative and regulatory frameworks, and changes in market structures and activities. Collecting useful and comprehensive qualitative and quantitative data to carry out this monitoring function requires significant effort. Until reporting to TRs and other reforms have been fully implemented, alternative sources of data and metrics need to be identified for tracking progress toward achieving the G-20 commitments. Turkey closely monitors the international developments and continues working towards G20 commitments. However, due to the lack of structured products, especially the secondary market of mortgage loans, Turkey has much less concerns in this issue comparing to the advanced economies[15].

Global regulations may bring strict rules. However, considering the delicacy of the financial markets, it is crucial to avoid regulations that could cause the market players to exit the markets. Regulations can bring some costs that could lower the cost advantage of OTC markets and may discourage investors to trade in the markets where the main motivation behind the OTC derivatives markets is its nonstandard nature and flexibility. Transparency has a number of advantages which is highlighted, whereas some issues could emerge which may hinder well-functioning of markets.

[15] In IOSCO (2010)'s Report, "*OTC Markets and Derivatives Trading in Emerging Markets*", the total daily turnover is reported as USD 5,149 billion in 2007, whereas the corresponding figure for Turkey is USD 3 billion.

Especially the transactions done with the central banks are of great importance in that sense. In addition to transparency, to improve firm/system-wide risk management, investor protection and market efficiency, an effective risk management framework for financial firms should involve higher risk-based capital requirements, a better risk management framework with manageable leverage and also a better regulatory/supervisory framework[16].

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[16] Coşkun (2011) aims to analyze whether increased transparency in OTC markets would contribute to market efficiency and risk management and he concludes that more transparency in the OTC markets may result in sub-optimal consequences. More transparency in OTC market and derivatives trading may support over-reaction and, hence, increase risks of single/systemic failures.

IV.4. Recent Trends in Macroprudential Policy and the Financial Stability Committee in Turkey

The main objective of the macroprudential policy which is mentioned frequently in the post global crisis era is to prevent and/or mitigate the negative effects of systemic risk on the financial system and whole economy. The features of macroprudential policy and some examples on institutional framework had been mentioned in the previous Financial Stability Report (May 2011, Volume 12) under the Special Topic V.8. In this issue, recent trends in the institutional structure, studies in the international arena together with the current framework and latest developments in Turkey are addressed.

Since macroprudential policies are more flexible, easier to implement and result in a shorter time period and observed with more clarity relative to other policy alternatives, they have been used by an increasing number of countries. Besides, it is observed that developing countries apply macroprudential policies and tools in order to deal with exchange rate volatilities and capital flows more intensively with respect to advanced countries.

Within the framework of the IMF Survey results on "Financial Stability and Macroprudential Policy", which had been applied to 50 countries (including Turkey) and the ECB at the end of 2010, and recent developments in some countries, models in macroprudential policymaking can be classified into three in broad terms and seven in detail. The supranational model in the European Union (EU) is listed as a separate model.

The five criteria which were selected in forming these models were shown below:

1- Degree of institutional integration of central bank and financial regulatory functions,
2- Ownership of macroprudential policy,
3- Role of the treasury,
4- Institutional separation of policy decisions from control over policy instruments,
5- Existence of a separate body coordinating across policies to address systemic risk.

Stylized models for macroprudential policy which were formed according to these five criteria are shown at Table IV.4.1.

Table IV.4.1. Stylized Models for Macroprudential Policy

Features of the model/Model	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model (EU)
Degree of institutional integration of central bank and supervisory agencies	Full (at a central bank)	Partial	Partial	Partial	No	No (Partial*)	No	No
Ownership of macroprudential policy mandate	Central bank	Committee "related" to central bank	Independent committee	Central bank	Multiple agencies	Multiple agencies	Multiple agencies	Committee (multinational; regional)
Role of MoF/ treasury/ government	No (Active*)	Passive	Active	No	Passive	Active	No (Active*)	Passive (European Commission; Economic and Financial Committee)
Separation of policy decisions and control over instruments	No	In some areas	Yes	In some areas	No	No	No	Yes
Existence of separate body coordinating across policies	No	No	No (Yes*)	No	Yes	Yes (de facto**)	No	No
Examples of specific model countries/ regions	Czech Rep. Ireland Singapore*	Malaysia Romania Thailand U.K.	Brazil* France U.S.A	Belgium The Netherlands Serbia	Australia	Canada Chile Hong Kong* Korea** Lebanon Mexico	Iceland Peru Switzerland	EU (ESRB)

Source: Towards Effective Macroprudential Policy Frameworks: An Assessment of Stylized Institutional Models, IMF Working Paper, November 2011

Models in Table IV.4.1 can be classified under three broad classes: Full integration between the central bank and all financial supervisory and regulatory functions (Model 1), twin peaks model in which the central bank retaining prudential functions, while conduct and securities regulation is separate (models 2, 3, and 4) and the central bank is separate from both prudential and securities market regulation (models 5, 6, and 7). Although models within these groups tend to share certain similarities, there are also important differences between models within each group.

Studies in the international arena on macroprudential policy framework and institutional structure have been continuing. It should be emphasized that there is no "one size fits all" model in that sense. The most suitable framework should be established by taking into account the economic, political, institutional and socio-cultural structure of each country, assessing strengths and weaknesses of each model. In this context, determining the main objective of the policies and policy tools to be used are important in designing the institutional structure. In addition to that, designing a communication strategy and accountability mechanisms regarding policies; measuring and assessing the effectiveness of the policies are among significant issues for building a framework.

Establishing a coordinating committee can diminish the weaknesses of models and provide a platform for policies to be implemented effectively. Besides, such a committee is expected to increase information sharing among institutions and encourage initiatives regarding financial stability which is the common objective. Accountability and transparency mechanisms are essential for the success of

the policy; however these mechanisms should be designed in balance in order results and effectiveness of policies not to be affected negatively by third parties.

On the other hand, there is a consensus in the economics literature that central banks should play an important role in determining and applying macroprudential policies whatever their duties and mandates are. Other than carrying out monetary policy, its comprehensive database and information, analytical and macro perspective, technical capability, role in payment systems and being a lender of last resort put central banks forward in designing macroprudential policy.

Benefits of including Treasury/Minister of Finance/Government into institutional structures are mentioned frequently in the academic literature. If distinguishing monitoring systemic risk is separated from taking macroprudential measures and crisis management processes; high representativeness of these bodies will prevent costs which might arise because of their short-term vision and political well-being. Moreover, leadership of these bodies in crisis management is significant by means of their roles in crisis management and resolution, and facilitating decision making processes.

Another important point in policy design is providing authorities to react flexibly against risks. Complex and fragmented regulatory and supervisory structures are unlikely to be conducive to effective mitigation of risks to the system as a whole. Many institutions' involvement in decision making mechanism may lead to delays in decision making process. In order to prevent this, mechanisms such as simple majority/qualified majority could be run instead of unanimity rule. At the same time, it should be noted that another extreme method which is decision making by a single authority only may create important drawbacks.

As a result, it should be emphasized that macroprudential policy framework should define systemic risk, analyze and monitor the risk; use policy tools in timely and effective manner, and provide an efficient coordination among policies addressing systemic risk.

Current Institutional Framework in Turkey

In Turkey, authorities responsible for financial stability take policy measures as part of their duties, mandates and responsibilities, especially in line with macroprudential policies. These authorities' main responsibility areas which are closely related with financial stability are indicated below:

- *Central Bank of the Republic of Turkey (CBRT):* Monetary policy within the framework of price stability, financial stability, and oversight of payment systems,
- *Banking Regulation and Supervision Agency (BRSA):* Regulation and supervision of banks and financial holding companies, leasing, factoring and consumer finance companies,
- *Undersecretariat of Treasury:* Public finance and fiscal policies, regulation and supervision of insurance companies,
- *Capital Markets Board (CMB):* Regulation and supervision of capital markets and intermediary institutions,

- *Savings Deposit Insurance Fund (SDIF):* Protecting the rights of depositors, and resolution of banks.

Other than these authorities, some institutional structures exist in Turkey in line with systemic risk and macroprudential policies. In this context, Systemic Risk Coordination Committee, Financial Sector Commission and Financial Stability Committee are the important bodies.

Systemic Risk Coordination Committee

Under Article 72 of the Banking Law No. 5411, Systemic Risk Coordination Committee, whose members are the Undersecretariat of Treasury, the CBRT, BRSA and SDIF, has been established in April 14, 2009 by the "Memorandum of Understanding (MoU) for Cooperation on Systemic Risk regarding the Financial System". In cases where threatening developments that could spread over to the entire financial system occurs, the Committee is responsible for taking measures promptly and efficiently in order to maintain the stability. The Committee is also responsible for assessing the developments in the financial markets and taking necessary measures. Besides, providing the coordination, cooperation and information sharing among the institutions is one of the tasks of the Committee. The mentioned MoU is on crisis management, secretariat mission of the Committee is carried out by the BRSA and the Committee convenes at least twice a year.

Financial Sector Commission

Another important platform which has a broader representative structure is the Financial Sector Commission. Members of the Commission are the BRSA, CBRT, Ministry of Finance, Undersecretariat of Treasury, CMB, SDIF, and Competition Authority, Ministry of Development, İstanbul Gold Exchange, Stock Exchanges, Derivatives Exchanges and some associations. The Commission shall ensure exchange of information, cooperation and coordination among institutions, propose joint policies and express views regarding the matters that relate to the future of the financial sector, with a view to establishing and ensuring confidence and stability as well as development in the financial markets. The Financial Sector Commission convenes once every six months and briefs the Council of Ministers regarding the results of its meetings.

On the other hand, there exist various MoUs signed by the Undersecretariat of Treasury, the BRSA, CMB, SDIF and CBRT. These MoUs contribute to maintaining financial stability, monitoring and preventing systemic risk by increasing the cooperation, coordination and information sharing among the mentioned institutions.

Financial Stability Committee in Turkey

In line with the developments in the international platform and necessities emerged after the global financial crisis, the Financial Stability Committee was established by the Decree Law dated June 8, 2011 and numbered 637 on the Organization and Duties of the Ministry of Economy. Members of the Committee are the Minister in charge of the Undersecretariat of Treasury (Chair), Undersecretary of Treasury and Heads of the CBRT, BRSA, CMB and SDIF; and main tasks of the Committee are

monitoring and preventing systemic risks and ensuring the coordination regarding systemic risk management.

Tasks of the Committee are as follows:

- Determining and monitoring systemic risks which could spill over the whole financial system, and detecting necessary measures and policy proposals for mitigating these risks,

- Warning the concerned parties regarding systemic risks, and following the implementations related to warnings and policy proposals,

- Assessing systemic risk management plans prepared by related institutions,

- Ensuring the coordination regarding systemic risk management,

- With respect to their mandate, providing every kind of data and information from public institutions, and ensuring coordination of the policies and their implementations among institutions,

- Deciding on other issues which legislation authorizes.

Additionally, other ministers and public officials could be invited to the Committee meetings by the Minister when it deems necessary. In addition, the Minister briefs the Council of Ministers regarding the results of the Committee meetings and decisions taken by the Committee.

As of the end of November 2011, six meetings were held. In this context, recent global economic and financial developments, outlook regarding the upcoming period and steps taken so far by the Committee member institutions have been assessed. Furthermore, structural arrangements in related institutions' agenda, which strengthen financial stability in medium and long term, have been reviewed in an integrated approach, and coordinating institutions have been determined. Sub-working groups have been doing some detailed research and studies on issues relating with financial stability.

The Committee is regarded as an important step for Turkey in macroprudential policy design as it ensures a corporate structure for coordination among institutions and an efficient communication channel.

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International Monetary Fund (IMF), Macroprudential Policy – An Organizing Framework, IMF Policy Paper, March 2011

Towards Effective Macroprudential Policy Frameworks: An Assessment of Stylized Institutional Models, IMF Working Paper, November 2011

Macroprudential Policy Tools and Frameworks, FSB-IMF-BIS Progress Report to G20, October 2011

Central Bank Governance and Financial Stability, A report by a Study Group, Bank for International Settlements, May 2011

IV.5. Progress in the Financial Sector Reform

As a response to the global crisis which started in 2008, the leaders of the G-20 countries met for the first time[17] in Washington in November 2008 in order to restore global economic growth and achieve needed reforms in the world's financial systems. Taking into consideration that the major failures in the financial sector and in financial regulation and supervision were fundamental causes of the crisis, taking actions to build a stronger, more globally consistent supervisory and regulatory framework for the future financial sector constitutes an important part of the G-20 reform agenda. Within that framework, G20, which was set as the primary platform for international economic cooperation, towards the aim of implementing reforms to strengthen the financial markets and the regulatory regimes, committed to introduce policies which are consistent with five common principles.

The leaders agreed on an action plan regarding the implementation of those common principles which are set as:

- Strengthening Transparency and Accountability
- Enhancing Sound Regulation
- Promoting Integrity in Financial Markets
- Reinforcing International Cooperation
- Reforming International Financial Institutions.

Financial Stability Board (FSB) whose mandate has been strengthened and membership has been expanded at the London Leaders Summit in April 2009, was asked to monitor progress in implementing the G-20 recommendations within the framework of the action plan.

Turkey is the member of the Financial Stability Board since 12 March 2009 and is represented by the Central Bank of Turkey at the Plenary[18].

Below is a summary of the main areas where progress is made by the FSB and its members to promote financial stability and strengthen the resilience of the global financial system.

Improving the quality of capital

The Basel III regulatory framework for capital and liquidity was endorsed by the G20 Leaders at their Seoul Summit and the detailed rules text was issued on 16 December 2010[19]. The framework includes prudential measures that will enhance the quality of capital; increase the level of capital; promote the build-up of capital buffers to mitigate pro-cyclicality; supplement the risk-based capital requirements with a leverage ratio; and introduces a set of global liquidity standards. Phased implementation of the framework will start on 2013 with full application by 2019. Regarding the leverage ratio and liquidity requirements, the Basel III framework includes transition periods that

[17] The subsequent G20 summits took place in April (London) and September (Pittsburg) 2009, June (Toronto) and November (Seoul) 2010 and in November 2011 (Cannes).
[18] Türkiye Cumhuriyet Merkez Bankası (TCMB)-Financial Stability Report Volume:8 Pg.15, May 2009
[19] Basel Committee on Banking Supervision (BCBS)-Basel III rules text and results of the quantitative impact study, 16 December 2010 **http://www.bis.org/press/p101216.htm**

provide for parallel runs and observation. The BCBS was tasked with observing the impact of the new requirements.

Table IV.5.1. Amendments in the Capital Adequacy Framework

		Basel II	Basel III	
		Minimum Ratio (%)	Minimum Ratio (%)	Incl. Conservation Buffer
Capital Adequacy Ratio	= Capital / Risk Weighted Assets ≥	8	8	10.5
Tier 1 Ratio	= Tier 1 Capital / Risk Weighted Assets ≥	4	6	8.5
Core Tier 1 Ratio	= Core Tier 1 Capital / Risk Weighted Assets ≥	2	4.5	7

G-20 leaders are committed that all major G20 financial centres adopt Basel II by November 2011. FSB and BCBS agreed that Basel II.5 should be implemented by end 2011. Even though, most countries have made progress in implementation, it is not expected for all major G20 economies to meet the deadlines within the agreed time frame.

In Turkey, Banking Regulation and Supervision Agency (BRSA) announced that there will be a parallel run of both Basel I and II during July 2011-June 2012 period and that the impact studies conducted show that due to the strong capital structure of the Turkish Banking Sector, the Basel III requirements is not expected to have significant effect on the banking sector.

Systemically Important Financial Institutions (SIFI)

At the Seoul Summit in November 2011, the G20 Leaders endorsed the recommendations set out in the October 2010 FSB Report "Reducing the moral hazard posed by systemically important financial institutions"[20]. The report specified that the policy framework for SIFIs should combine:

- A resolution framework and other measures to ensure that all financial institutions can be resolved safely, quickly and without destabilising the financial system and exposing the taxpayer to the risk of loss (includes principles to be met by the national resolution regimes; resolvability assessments and recovery and resolution plans (RRPs) to be prepared by the GSIFIs; and cross border resolution arrangements among related authorities),
- a requirement that SIFIs and initially in particular global SIFIs (G-SIFIs) have higher loss absorbency capacity to reflect the greater risks that these institutions pose to the global financial system,
- more intensive supervisory oversight for financial institutions which may pose systemic risk;
- robust core financial market infrastructures to reduce contagion risk from the failure of individual institutions and

[20] Reducing the moral hazard posed by systemically important financial institutions, FSB Recommendations and Time Lines, 20 October 2010 http://www.financialstabilityboard.org/publications/r_101111a.pdf

- Other supplementary prudential and other requirements as determined by the national authorities.

In line with the SIFI framework, in November 2011, BCBS issued a finalised assessment methodology and additional loss absorbency requirements for globally systemically important banks (G-SIBs)[21]. The assessment methodology is an indicator-based measurement approach designed to assess the likely impact of the failure of a bank on the global financial system and wider economy. The selected indicators reflect the size of banks, their interconnectedness, substitutability, their global cross-jurisdiction activity and their complexity (Table IV.5.2). Using this methodology an initial set of 29 institutions has been identified as G-SIBs and the list was publicly disclosed following the G20 Cannes Summit[22]. The BCBS will continue to improve the quality and transparency of the data underlying the assessment methodology in time for implementation beginning 1 January 2016. The list of GSIBs which will be updated every year will be published by the FSB in November each year.

Table IV.5.2. Indicator based measurement approach for the identification of GSIBs

Category and weighting	Individual Indicators	Indicator Weighting
Cross-jurisdictional activity (20%)	Cross-jurisdictional claims	10%
	Cross-jurisdictional liabilities	10%
Size (20%)	Total exposures as defined for use in the Basel III leverage ratio	20%
Interconnectedness (20%)	Intra-financial system assets	6.67%
	Intra-financial system liabilities	6.67%
	Wholesale funding ratio	6.67%
Substitutability/financial institution infrastructure (20%)	Assets under custody	6.67%
	Payments cleared and settled through payment systems	6.67%
	Values of underwritten transactions in debt and equity markets	6.67%
Complexity (20%)	OTC derivatives	6.67%
	Level 3 assets	6.67%
	Trading book value and Available sale value	6.67%

The additional loss absorbency requirement will be met with Common Equity Tier 1 (CET1) capital, which is the highest quality capital. Depending on the ranking of the bank according to their systemic importance scores, G-SIBs will be allocated to "buckets" requiring levels of additional loss absorbency ranging from 1.0% to 2.5%. To provide a disincentive for banks facing the 2.5% charge, there is an empty top bucket requiring 3.5% additional capital. The requirement will be phased in between 1 January 2016 and 1 January 2019, in parallel with the Basel III capital conservation and countercyclical buffers (Table IV.5.3).

[21] BCBS-Global systemically important banks: Assessment methodology and the additional loss absorbency requirement, November 2011 **http://www.bis.org/publ/bcbs207.htm**
[22] FSB-Press Release, 4 November 2011. **http://www.financialstabilityboard.org/press/pr_111104cc.pdf**

Table IV.5.3. Additional loss absorbency requirements for GSIBs

Bucket	Score range*	Minimum additional loss absorbency (% of risk weighted assets)
5 (empty)	D-	3.5%
4	C-D	2.5%
3	B-C	2.0%
2	A-B	1.5%
1	Cut-off point-A	1.0%

*Scores equal to one of the boundaries are assigned to the higher bucket.

Work is underway regarding identification of non-bank systemically important financial institutions. Within this framework, the International Association of Insurance Supervisors (IAIS) is expected to complete its assessment methodology for identifying globally systemically important insurers in time for the G20 Summit in June 2012.

Following the G20 Summit in November 2011, the FSB has finalised the Key Attributes of Effective Resolution Regimes for Financial Institutions[23] which will form an international standard. The attributes apply to all resolution regimes for the resolution of financial institutions whose failures may create systemic risk, and financial market infrastructures (FMIs) where necessary. The principles set out by the FSB aim to minimise disruptions arising from the failure of a financial institution and ensure that national authorities can resolve institutions in an orderly manner that does not expose taxpayers to the risk of loss and their implementation may require legislative changes in many jurisdictions.

FSB SIFI policy measures include cross-border cooperation agreements between relevant authorities and mandatory resolvability assessment and a recovery and resolution plan (RRP) for each GSIFI. The initial group of 29 banks that have been identified will be expected to have RRPs by 2012.

As of 2012, the FSB will establish a Peer Review Council (PRC) to review the full and consistent implementation of the G-SIFI measures and, working together with the SSBs, will begin this year to define the modalities to extend expeditiously the policy framework to all SIFIs.

Increasing the intensity and effectiveness of supervision is also a key component of the FSB's framework for SIFIs. Within this framework, the FSB report on Intensity and Effectiveness of Supervision[24] which was prepared in consultation with the IMF and released in November 2010, sets out recommendations aimed at making financial institutions less susceptible to failure. Following the G20 Cannes Summit, a Progress Report[25] assessing the progress by national authorities towards implementation of these recommendations, was published. According to this, many countries are making progress in intensifying their supervision of SIFIs by improving their supervisory tools and methods. To ensure that such changes to supervisory practices endure, the FSB called on supervisors to adhere to higher standards. On the other hand, The BCBS is reviewing the Basel Core Principles for Effective Banking Supervision and plans to issue the revised Core Principles at end-2011.

[23] FSB-Key Attributes of Effective Resolution Regimes for Financial Institutions, October 2011
http://www.financialstabilityboard.org/publications/r_111104cc.pdf
[24] FSB-Report on Intensity and Effectiveness of SIFI Supervision, 20 October 2010.
http://www.financialstabilityboard.org/publications/r_101111a.pdf
[25] FSB-Progres report on implementing the recommendations on enhanced supervision, 27 October 2011
http://www.financialstabilityboard.org/publications/r_111104ee.pdf

The robustness of the infrastructure underpinning financial transactions is central to containing contagion in the event of a SIFI failure. Within that framework, The Committee on Payment and Settlement Systems (CPSS) and IOSCO will issue in early 2012 international standards for core financial market infrastructures.

There are no G-SIBs that are headquartered in Turkey and the presence of the GSIBs as branches or subsidiaries of foreign banks is limited. However, due to the interconnected nature of the financial systems and taking into account that the G-SIFI framework will be extended to cover all SIFIs, the developments in the area are being closely monitored by the Turkish authorities.

Expansion of the regulatory perimeter

It is restated in G-20 Seoul Summit that stricter bank regulation revealed the need for oversight and regulation of shadow banking to avoid risky behaviour previously taken on by banks is pushed to that area.

The FSB has conducted an assessment of the progress made by national and international authorities regarding the shadow banking sector. Following that study, in October 2011, the FSB has set out recommendations for a framework to enhance the monitoring of trends and risks in the shadow banking sector and identified five key areas in which regulatory measures should be examined[26]. Those areas are set as: the interactions of banks with shadow banking entities; ways to reduce the susceptibility of money market funds to runs; the regulation of other shadow banking entities on prudential grounds; retention requirements and transparency in securitisation; and the possible regulation of margins and haircuts in securities lending and repos. During the course of 2012 BCBS, IOSCO and FSB are expected to set out additional principles in those areas that are identified by the FSB.

Implementation of OTC derivatives reforms

In September 2009 in Pittsburgh, the G20 Leaders agreed that all standardised OTC derivative contracts should be traded on exchanges or electronic trading platforms, and cleared through central counterparties by end-2012 at the latest; OTC derivative contracts should be reported to trade repositories; and non-centrally cleared contracts should be subject to higher capital requirements. In October 2010, the FSB set out recommendations to address practical issues in implementing the G20 Leaders' commitments. Within that framework, the FSB has been monitoring the implementation of the OTC derivatives markets reforms, with reports every six months.

In Turkey derivatives products' being relatively simple is believed to make it much easier for Turkey to comply with the standardisation commitments.

Macroprudential frameworks and tools

In response to the G20 request of November 2010, the FSB, IMF and BIS published a joint progress report[27] in October 2011 on macroprudential policy frameworks and tools and presented to

[26] FSB-Shadow Banking: Strengthening Oversight and Regulation-27 October 2011
http://www.financialstabilityboard.org/publications/r_111104.pdf
[27] FSB, IMF, BIS - Macroprudential Policy Tools and Frameworks, 27 October 2011
http://www.financialstabilityboard.org/publications/r_111027b.pdf

the G20 leaders. According to the Report, effective macroprudential frameworks require institutional arrangements and governance structures, tailored to national circumstances, that can ensure an open dialogue among policymakers on policy choices that have an impact on systemic risk, resolve conflicts between policy objectives and instruments, and mobilise the right tools to limit systemic risk. Even though the development and implementation of macroprudential frameworks is still at an early stage, important steps have been taken nationally and internationally. Efforts to monitor macro risks have focused on closing data gaps and on analysis and models to assess systemic risk. There has also been progress in developing new macroprudential tools and in assessing the effectiveness of existing ones. Basel III's countercyclical capital buffer and the additional loss absorbency requirement for G-SIFIs are examples of new macroprudential tools.

A number of jurisdictions have been adjusting institutional arrangements to support macroprudential policy. In the US, the Financial Stability Oversight Council (FSOC) established by the Dodd-Frank Act, in the EU, the European Systemic Risk Board (ESRB), which is responsible for macroprudential oversight of the financial system has been established. In the UK an interim Financial Policy Committee has been set up to identify, monitor and take action to remove or reduce systemic risks.

In Turkey, the Financial Stability Committee (FSC) was established in June 8, 2011 to monitor and identify systemic risks and to determine macroprudential measures and policies as needed. The FSC is chaired by the Deputy Prime Minister for Economic and Financial Affairs and consists of Treasury, Central Bank of Turkey, Banking Regulation and Supervision Agency, Capital Markets Board and Savings Deposit Insurance Fund (See IV.4).

Reducing reliance on credit rating agencies

Over-reliance on credit ratings, particularly for structured products and build-up of exposures in such instruments before the crisis, lead to "cliff effects" on market prices after the crisis when confidence in the ratings of these products was diminished and investors acted together to exit from those positions. In October 2010, the FSB published a set of principles for reducing reliance on CRA ratings, and requested standard setters and regulators to consider next steps to translate the principles into more specific policy actions. Within that respect, a number of national and regional regulators have begun to take steps to reduce reliance on CRAs in their laws and regulations.

The FSB is given the responsibility to coordinate, monitor and report on the consistent implementation of agreed G20 and FSB financial reforms. Within that framework, the FSB has set up a coordination framework, in collaboration with international standard-setting bodies, to intensify monitoring and public reporting of implementation on a country-by-country basis. This framework will cover the full range of financial regulatory and supervisory reforms, with more intense monitoring in priority areas: the Basel capital and liquidity framework; OTC derivatives market reforms; compensation practices; G-SIFI policy measures; resolution frameworks; and shadow banking.

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Basel Committee on Banking Supervision (BCBS)-Basel III rules text and results of the quantitative impact study, 16 December 2010

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FSB-Key Attributes of Effective Resolution Regimes for Financial Institutions, October 2011

FSB-Report on Intensity and Effectiveness of SIFI Supervision, 20 October 2010

FSB-Progress report on implementing the recommendations on enhanced supervision, 27 October 2011

FSB-Shadow Banking: Strengthening Oversight and Regulation-27 October 2011

FSB, IMF, BIS - Macroprudential Policy Tools and Frameworks, 27 October 2011

IV.6. Systemic Liquidity Analysis

As no one has adequately defined and quantified liquidity, which is markedly highlighted during the recent global crisis, it remains to be one of the hot topics of the day. This study aims to compare liquid assets with the liabilities which may not rollover, on a cash-flow basis according to their maturities along with an interbank loan analysis. Hence, this analysis is an extension of the liquidity stress test[28] which was presented in the previous Financial Stability Reports, covering now also the contagion effect coming from the interbank market.

In the first stage, the liquidity adequacy ratios of the 2nd maturity bracket, calculated pursuant to the Regulation Relating to the Measurement and Assessment of the Liquidity Adequacy of Banks issued by the BRSA, are simulated 1000 times based on some probability distributions. While doing this, hair-cuts and run-off rates are simulated under conservative scenarios such that these rates are set more severe than the legal ones. Each simulation corresponds to a different scenario covering different shocks coming from market risk factors. Simulation of the hair-cuts and run-off rates is designed considering the dependencies among each of the balance sheet items as well as the linkage between market and funding liquidity in a conservative manner. Banks can get benefit of liquidity facilities of central banks as long as they are able to submit eligible security as collateral. In general, banks' capacity to fund from central banks via repos is limited by their eligible collaterals, thus one of the most important risks in this area is the value fall of the collateral. Moreover, central banks do not accept collateral at more generous terms than the market, which is crucial for a well functioning market and avoiding moral hazard. Hair-cuts are sharp enough to take into account these issues. Also, the fact that the run-off rates of noncore liabilities and the derivatives have 100 percent rollover rate for each of the 1000 simulations supports conservative approach employed in the analysis.

In the second stage, contagion effect that could come from interbank market is examined. When banks are unwilling to fund or incapable of fulfilling their obligations to each other, system could be subject to considerable risk in terms of funding liquidity. In such a situation, banks which cannot rollover their funding or are not able to find new source of fund and/or cannot collect their receivables may tend to sell their securities portfolio. Due to confidence loss and depending on the supply-demand balance, banks may not be able to sell their securities at the price they expect and this may amplify liquidity problems, thereby leading a feedback loop between funding and market liquidity. As the liquidity problems get more severe, liquidity problems may be transformed into solvency problems.

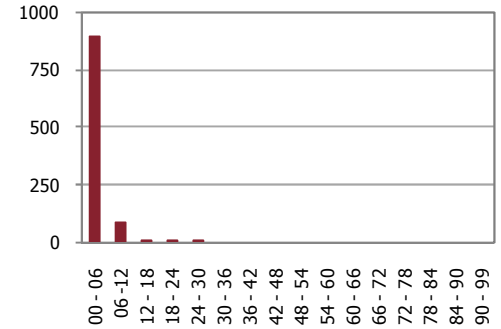
In order to integrate the interbank contagion effect to the liquidity stress test, banks' exposures to each other should be estimated[29]. To do this, banks operating abroad are assumed to be a single bank and the interbank loans among the banks operating in Turkey are estimated according to "Maximum Entropy (ME)" method. Exposures of banks operating abroad, which are taken as a single bank, to each of the banks operating in Turkey are the corresponding receivables/payables from/to the banks operating abroad and the figures regarding their receivables from and payables to the banks operating in Turkey are available data. Hence, it is only necessary to carry out ME for the banks

[28] Financial Stability Report-November 2009, No 9.
[29] Data for banks' exposure are accessible. The reason for RAS algorithm is to investigate various network structures.

operating in Turkey. To do this, given the banks' balance sheet data, assuming various amounts and structures for the interbank market, contagion effect is analyzed using different methods. First category of methods includes simulating the exposures directly based on "uniform" and "beta" distributions in addition to equal distribution. As for the second category total payables are simulated based on "uniform", "beta" and equal distribution assumptions, then bank-to-bank exposures are acquired by using RAS algorithm[30]. To be conservative, collaterals are not considered when a bank becomes unable to pay its obligation according to the simulation analysis. In other words, loss given default (LGD) ratio is set to be 100 percent. In practice, generally collaterals used in the interbank market are high quality and LGD could be taken lower. In the analysis 48 banks are included and policy responses are not taken into account, whereas in real world, policy reactions with effective liquidity actions undoubtfully limit the impacts of the shocks.

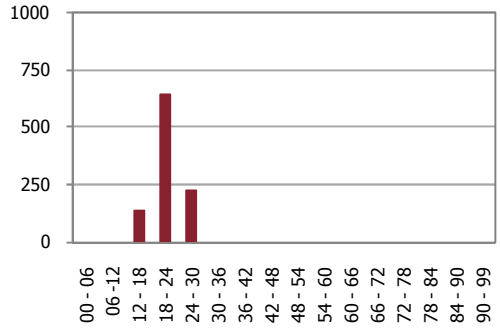
According to the findings, based on the fact that the interbank market in Turkey is small in total, contagion effect coming from interbank market is highly limited. As a consequence of this, when the actual total interbank exposures are used, the structural changes in the interbank market do not make any difference in terms of the results. On the other hand, as the interbank market becomes larger, contagion effect turns out be observable. This is due to the domino effect stems from the increased dependencies among banks. As seen from the charts below, around 900 simulations occur within the range of 0-6 percent share of the total sector, meaning that a small portion of the sector is affected by the severe shocks. Whereas, when the interbank market becomes larger, simulations concentrate on larger portion of the system (Charts IV.6.1 and IV.6.2).[31]

Chart IV.6.1. Illiquid sector share after shocks (with the current interbank market)



Source: BRSA-CBRT

Chart IV.6.2. Illiquid sector share after shocks (with the increased interbank market)



Source: BRSA-CBRT

All in all, interbank market in Turkey, considering also the presence of the Central Bank, does not constitute an important source of risk, in terms of contagion effect. However, this exercise is carried out since banking sector has a dynamic structure. Stress tests results indicate that using the current interbank market size, the system is affected mainly by the simulated hair-cuts and run-off rates instead of the interbank market contagion. It is worth mentioning that the shocks that could come from international markets is taken into the stress testing analyses by assuming the run-off

[30] RAS algorithm is implemented by converting the VBA codes provided by Petr Jakubik, ECB economist, to Matlab platform.
[31] In the simulations, the criterion to default is 100 percent whereas the criterion to remain in the system is 80 percent.

rates of noncore liabilities as 100 percent and the results imply a robust banking system against severe shocks.

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IV.7. Markets and Technology

Financial markets have significantly advanced in recent years and this has affected the capacity of market authorities in supervising market effectively. Impacts of technological developments on the financial markets are multidimensional. Developments helped foster globally competitive markets and reduced transaction time and cost. Also, among the benefits brought by technological advancement are generation of electronic audit trails, the enhancement of order and trade transparency, and the ability to develop and apply automated risk controls etc. On the other hand technological innovations pose some risks to the markets. These risks are discussed in the following pages.

Upon the request of G-20 Leaders, International Organization of Securities Commissions (IOSCO) prepared a Report on the *impact of technological developments on market integrity and efficiency* to be reported to the FSB. This Report is to present tools that inform and guide regulators to mitigate the risks of technological developments to market integrity and efficiency, to reach a consistent regulatory framework on a global basis and propose ways to mitigate the risks posed to the financial system by the latest technological developments. It is important for competent authorities to seek to ensure that financial markets continue to fulfill their role of financing the real economy, by channeling investments and savings, facilitating capital formation and efficiently allocating and transferring risks.

This Report focuses on the major technological and market developments and the risks they pose. These are: (i) algorithmic trading, (ii) market fragmentation and dark liquidity, (iii) direct electronic access, (iv) co-location, (v) tick sizes, and (vi) fee structures. In parallel to the said Report, the above topics will be presented briefly and then potential issues raised by high frequency trading (HFT), which is defined as a subset of algorithmic trading will be discussed more elaborately.

(i) Algorithmic trading: Algorithms have been used in trading for many years but their breadth, variety and complexity has continuously evolved and has affected the investors' profile. Algorithmic trading may provide liquidity to the markets in which they operate; however, the presence of high frequency traders discourages some market participants from participating as they feel at an inherent disadvantage to these traders' superior technology. Algorithmic trading has started to dominate markets and algorithms may now be designed to predict the presence and actions of other algorithms, which are redesigned frequently. Interconnections between markets, which may be amplified by algorithms programmed to operate on a cross-market basis, may allow for a shock to pass rapidly from one market to another, potentially increasing the speed at which a systemic crisis could develop.

(ii) Market fragmentation and dark liquidity: The technological advances and regulatory changes have resulted in increased competition and this has yielded a number of benefits, among which are lower trading fees per transaction and enhanced potential for innovation as venue operators aim to compete to attract liquidity. However, competition has also led to fragmentation of markets, both in terms of liquidity and information. This has increased search costs and reduced transparency. Dark liquidity is the trading volume created by institutional orders that are unavailable to the public. Dark liquidity has long existed and endowed with some positive features, however the degree of automation of trading in dark pools and dark orders have raised the concerns regarding especially risks related with transparency price discovery and market fragmentation.

(iii) Direct electronic access (DEA): As the electronic platforms are used more intensively, customers being given direct access to the markets have become a concern for the market authorities. Direct electronic access poses a number of risks to market integrity., such as: without proper controls, for a customer to intentionally or unintentionally cause a market disruption; an increased risk of non-compliance with market rules, especially where those that directly access markets are not familiar with regulatory requirements; credit risk, whereby an intermediary will be held financially responsible for trades that are beyond its available financial resources; a lack of information to the intermediary from the market and/or the clearing house regarding the trading by the DEA customer.

(iv) Co-location: Co-location services exist to house trading systems used by market participants in a location close to trading venue servers. Co-location offers the advantage of extremely low latency, an essential ingredient in certain trading strategies typically used by high frequency traders and other firms wanting high speed access to the markets. Its provision has increased considerably in recent years, in part with the building of sometimes massive out-of-town data centers. The offering and use of co-location services raises potential issues with regard to the costs associated with accessing markets and liquidity.

(v) Tick sizes: A tick is the minimum price movement by which an instrument's price can move. Typically, as the liquidity and price of a financial product decrease, its tick size gets smaller. Tick sizes are determined by regulation in some jurisdictions, and left to market forces in others. Lower tick sizes can benefit retail investors by increasing competition, tightening spreads and lowering trading costs, but it may cause some problems regarding the orders and transactions. Lowering tick sizes smaller tick sizes may inappropriately encourage HFT firms to submit orders that are then cancelled prior to execution.

(vi) Fee structures: Competition between trading venues is reflected in both the structure and the level of fees they charge their members. The main approaches in use at trading venues today include graduated pricing, differential pricing depending on the nature of the order (proprietary versus client account), and maker/taker" pricing. Importantly, the high competition in the market means that fee structures are commonly more complex and more frequently revised. The fee structures in place may have changed market behaviours; for this reason public sector regulators in some jurisdictions regulate trading venues' fee structures. Some types of fee structures may raise questions in terms of the risk of distorting the price formation process. Thus, fee structures should not result in inappropriate discrimination between members or lead to an overt bias in trading methods.

HFT, as a subset of algorithmic trading, has been the focus of discussions especially after the Flash Crash Event of May 2010[32]. Also the high share of HFTs in the market raises the importance of the issue. Especially, HFTs on equity is known to have highly large volume.

As mentioned in the Report, Defining HFT is difficult and there is no single agreed definition. Determining a precise definition may not even be practical for regulatory purposes as it could easily become obsolete or the object of regulatory arbitrage as HFT may be used in different ways across

[32] For detailed information please refer to "*Testimony Concerning the Severe Market Disruption on May 6, 2010*" http://www.sec.gov/news/testimony/2010/ts051110mls.pdf

various markets and asset classes. An additional complexity in seeking to define HFT is that it encompasses many players, different organizational and legal arrangements and, most importantly, a wide number of diverse strategies. HFT is hence a very quantitative trading form. It draws from the latest advances in statistical and econometric techniques and employs state of the art computer and communication systems. Algorithms are used to interpret signals from the market and automatically implement trading strategies that involve round-trip trades that last for just seconds or even milliseconds. HFT firms profit mostly from small price changes and by small but frequent trades executed. The strong focus on speed of execution and portfolio turnover are probably the key characteristics that distinguish HFT from other types of algorithmic trading. The difficulty in distinguishing HFT from other transactions leads to data constraints and causes some challenges for the authorities.

A number of common features and trading characteristics related to HFT can be identified as follows: (i) It involves the use of sophisticated technological tools for pursuing a number of different strategies, ranging from market making to arbitrage; (ii) It is a highly quantitative tool that employs algorithms along the whole investment chain; (iii) A large number of orders are cancelled in comparison to trades executed; (iv) It usually involves flat or near flat positions at the end of the trading day, meaning that little or no risk is carried overnight, with obvious savings on the cost of capital associated with margined positions; (v) It is mostly employed by proprietary trading firms or desks; and (vi) It is latency sensitive, hence it requires much faster execution of trading strategies than its competitors.

The empirical evidence on the impact of HFT on markets is still scarce due both to a limited availability of appropriate dataset. The academic literature has so far mainly focused on some measures of liquidity, price discovery and volatility. Main difficulty related with disentangling the impact of HFT from other factors stem from highly dynamic structure of the trading environment. Indeed, the ongoing emergence of HFT has coincided with a period of high market turbulence, regulatory reforms and regulatory actions. Moreover, HFT is employed in many different strategies, each potentially having different impacts on the markets. These issues call for caution to be exercised in drawing firm conclusions from the existing body of research, and more is needed. In IOSCO's Report the risks posed by HFT are grouped as follows: (i) the efficiency of markets; (ii) the fairness and integrity of markets; and (iii) the stability and resiliency of markets.

1- The efficiency of markets: The main concern is the quality of the price discovery process in the context of a growing share of trading accounted for by HFT firms. The very short term nature of many HFT strategies, coupled with high speed, high volume trading algorithms, might move the market prices away from fundamental values in the short term and impair the price discovery process. Having substantial amount of HFT participation in markets may lead fundamental traders to reduce their participation in such markets and increase their use of dark execution venues. However, the limited empirical evidence and dataset available so far has not clearly identified negative effects of HFT on the efficiency of the price discovery process. Another concern regards the quality of liquidity provided by HFT firms. The events surrounding the May 6 "Flash Crash" suggest that HFT firms, whilst not triggering the crash, rapidly withdrew from the markets as they began to move, thereby

intensifying the liquidity crisis. The main concern is that the fast and automatic operation of algorithms by HFT firms may increase transitory volatility in both normal and turbulent market conditions, for example through an error in the programming of an algorithm causing it to buy or sell heavily and unexpectedly.

2-The fairness and integrity of markets: HFT firms invest heavily in technological infrastructure. The development of successful algorithms also requires very skilled and expensive human resources. A challenge posed by HFT is the need to understand whether HFT firms‟ superior trading capabilities result in an unfair advantage over other market participants such that the overall fairness and integrity of the market are put at risk. Moreover, the cost to acquire the most advanced technology will bring the concern for the companies that they may not be able to afford to meet that cost at some point. In such a situation the ones who are disadvantageous may leave the markets and this may create the risk of liquidity dry-up and thereby adversely affecting the price discovery process, which will again concern the authorities. Furthermore, with the algorithms, consciously or not, HFT firms may hinder the markets well functioning with various strategies.

3-The stability and resiliency of markets: Stable and resilient markets boost investors confidence and participation, which in turn help make markets more liquid and efficient. However, the nature of HFT contributing to liquidity dry-ups, underlines the importance of regulatory structures. A clear understanding of the degree by which HFT firms may exacerbate the transmission of shocks across markets is still lacking. However this issue has not been also elaborated yet in terms stability and resilience of the markets. The heavy reliance on algorithms for trading decisions and execution may pose serious risk when one or more algorithms behave in an unexpected way. Moreover, rogue algorithms, may trigger a chain reaction and, in turbulent market conditions, withdraw liquidity from the market or impair orderly trading. Furthermore, HFT can lead some problems based on the risks associated with the technological infrastructures.

All in all, HFTs provide significant liquidity to the markets, this liquidity can easily dry up as observed from the past experiences, and finally this issue has intense technological side. All these require the regulations to be designed highly delicately.

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IV.8. Turkey's Foreign Currency Position

Turkey's foreign currency net general position was calculated in order to monitor Turkey's foreign currency position over time. In order to compute this figure, the foreign currency assets and liabilities of all sectors, namely; public sector, banking sector, non-bank financial sector, corporate sector, CBRT and households; composing Turkey's foreign currency position were calculated individually. The foreign currency asset and liability figures for these sectors were added up to attain Turkey's total foreign currency asset and liability figures. The foreign currency net general position was calculated by subtracting liabilities from assets. One important point to note in this calculation is that an item in an individual sector's assets can be included in another sector's liabilities. For instance, foreign currency deposit that the public sector holds at the CBRT accounts is included in public sector's foreign currency assets, whereas it is included in CBRT's foreign currency liabilities. Similarly, foreign currency deposit of households which is a foreign currency asset for household is an liability item for the banking sector.

Foreign currency assets of the public sector consist of foreign currency deposits and securities of the general budget and special budget institutions, regulatory and supervisory institutions, social security institutions, state economic enterprises, funds, local administrations, revolving funds and other public institutions. Foreign currency liabilities of the public sector on the other hand, consist of external debt of central government and other public and foreign currency denominated as well as foreign currency indexed domestic debt of central government.

In the calculation of CBRT's foreign currency position, the total foreign currency assets and liabilities obtained from weekly statements was utilized.

The foreign currency position data for the banking sector was obtained from the statements reported by banks in accordance with the "Communiqué on the Calculation and Implementation of Foreign Currency Net General Position/Equity Standard Ratio by Banks on Consolidated and Non-Consolidated Basis" published in the Official Gazette No. 26333 dated November 1, 2006. Both on and off-balance sheet foreign currency assets and liabilities were included.

In the calculation of non-bank financial institutions' foreign currency position, unaccrued income was subtracted from the total foreign currency assets of factoring and leasing companies and for consumer finance companies foreign currency indexed receivables were added to total foreign currency assets obtained from their balance sheets. Liabilities on the other hand, were calculated by subtracting foreign currency equity from total foreign currency liabilities of the non-bank financial institutions.

"Foreign Exchange Assets and Liabilities of Non-Financial Companies" data published on CBRT's website every three months was employed for the determination of corporate sector's foreign currency position. The "Assets" and "Liabilities" headings in this table are used for net position calculation.

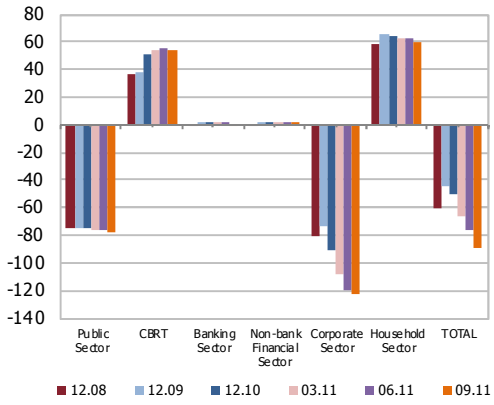
The foreign currency assets of the household sector consist of household's foreign currency deposits and participation funds held at deposit and participation banks, foreign currency GDDS and Eurobonds held by real persons. Foreign currency liabilities, on the other hand, consist of foreign currency indexed loans extended to households by banks and consumer finance companies.

According to the foreign currency net general position calculation outlined above, Turkey's foreign currency short position which was USD 50.7 billion as of end-2010, increased to USD 66.5 billion as of March 2011 and as of June 2011 USD 76.7 billion, owing to the rise in corporate sector's short position.

The foreign currency short positions of the corporate sector, the public sector and the banking sector were USD 123 billion, USD 78.4 billion and USD 0.5 billion respectively as of September 2011. Households, CBRT and non-bank financial sector, on the other hand, carried USD 59.1 billion, USD 53.9 billion and USD 0.1 billion foreign currency long position. Turkey's foreign currency short position as a percent of GDP is 11.2 as of September 2011.

In Turkey, the public sector and the corporate sector carry foreign currency short position, CBRT and households carry foreign currency long position, whereas the banking sector and the non-bank financial sector carry foreign currency square position. Accordingly, the public sector and the corporate sector are the most vulnerable sectors in Turkey to a depreciation of the Turkish lira.

Turkey's Foreign Currency Position (USD Billion) [1,2]



SECTORS (September 2011)	FX ASSETS	FX LIABILITIES	NET POSITION	NET POSITION / GDP
Public Sector	9.3	87.8	-78.4	-9.9
CBRT	97.8	43.9	53.9	6.8
Banking Sector	309.4	309.9	-0.5	-0.1
Non-bank Financial Sector	9.8	9.7	0.1	0.0
Corporate Sector	84.5	207.5	-123.0	-15.5
Households	60.0	0.9	59.1	7.5
TOTAL	**570.8**	**659.6**	**-88.8**	**-11.2**

Source: CBRT-BRSA, Undersecretariat of Treasury
(1) Public FX liabilities for September 2011 consist of central government external debt stock data and central government FX-denominated and FX-indexed domestic debt stock data.
(2) GDP for 2011 Q3 is estimation.

IV.9. Financial Consumer Protection

Developing policies on protection of consumers using financial products or services contributes to financial stability, increases competition within financial markets and influences household's risk management in a positive manner. Along with households' informed investment and saving decisions, being protected from potential risks is gaining greater importance while financial products and services are getting more complex and diversified. In this framework, studies regarding strengthening and developing local and international policies to protect consumers' rights have intensified with the global financial crisis majorly attributed to pressure arising from households' increased financial risks in the financial system. Parallel to the international efforts, Financial Stability Board (FSB) has also dealt with financial consumer protection issues covering especially retail credits from financial stability perspective.

At the G20 Summit in November 2010 in Seoul, G20 leaders asked the FSB to prepare a report on financial consumer protection in collaboration with OECD and other international institutions in the field of financial stability and report back by the November 2011 Summit.

With the harmonized collaboration of all related institutions, a comprehensive report analyzing current situation and providing international comparisons concerning regulations and implementations on financial consumer protection was prepared. This report was mainly prepared by the FSB meanwhile the Task Force on Financial Consumer Protection which was established under the Committee on Financial Markets within OECD developed high level principles on financial consumer protection[33]. The report and principles were endorsed by G20 Finance Ministers and Governors and then published in October 2011.

The report analyses consumer credits including mortgages, credit cards, secured and unsecured loans and largely draws on FSB members' responses to the questionnaire sent to them along with the OECD members in May 2011[34].

While efforts regarding strengthening regulatory and supervisory framework of the financial system against fragilities are on progress, it is emphasized in the report that these studies should be coherent with effective supervision on financial consumer protection. In this framework, this report provides a global overview for policy initiatives improving regulatory scope on consumer protection and authorities' current and planned studies on this issue. The report provides strengths and weaknesses of developed practices with international comparisons including Turkey.

Though institutional arrangements vary across countries, it ranges from a single regulator to two or multiple responsible agencies for protecting financial consumers. Additionally, most of the countries indicate that consumer protection and prudential supervision are complementary factors. In

[33] Turkey was represented by the CBRT in this Task Force. The established principles are listed as; Legal, Regulatory and Supervisory Framework; Role of Oversight Bodies; Equitable and Fair Treatment of Consumers; Disclosure and Transparency; Financial Education and Awareness; Responsible Business Conduct of Financial Services Providers and Authorized Agents; Protection of Consumer Assets against Fraud and Misuse; Protection of Consumer Data and Privacy; Complaints Handling and Redress; Competition.

[34] This questionnaire was responded by the BRSA, the Ministry of Customs and Trade and the CBRT for Turkey.

fact, though many countries do not have explicitly determined mandates on financial consumer protection; macroprudential supervision measures indirectly protect consumers.

Strengthening consumer protection framework mainly concentrates on responsible bank lending practices, disclosures about risks and details for financial transaction and prevention of excessive indebtedness. Besides regulatory framework to protect consumers, it is also emphasized in the report that consumer rights do come with consumer responsibilities.

Assessments and conclusions drawn from this report include policy recommendations and enlighten potential further studies on financial consumer protection. Establishing an international body to coordinate initiatives at both national and international level, review international implications and develop best practices, and strengthen supervisory tools by identifying gaps and weaknesses are proposed as further studies in the report.

Parallel to all these assessments, it is evaluated that financial consumer protection and financial stability are complementary issues and further studies on consumer protection will strengthen financial stability.

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IV.10. Financial Stability Map

FINANCIAL STABILITY MAP-INDICATOR SET

Global Economy
OECD Composite Leading Indicator
Confidence Index (US Conference Board, Ifo Pan Germany)
Inflation Volatility
Global Markets
Asset Prices (Equity, Commodity)
Volatilities (VIX, OVX)
Interbank (TED Spread and OIS Spread (US and Euro Zone))
Risk premium (10-year iTraxx Europe Crossover Index and EMBI Global)
Domestic Economy
CBRT Composite Leading Indicator
Confidence Index (Consumer and Corporate Sector)
Inflation (CPI) rate volatility
Loans/GDP
Domestic Markets
FX Rates and Implied Volatilities (TL/USD and TL/EUR)
Risk Premium (Turkey 5-year CDS Premium, EMBI+ Turkey)
ISE30
Benchmark Government Securities Interest Rate
Market Liquidity Index
Benchmark Government Securities Interest Rate Volatility
Balance of Payments
Current Account Deficit/GDP
FDI/GDP
Short Term External Debt/International Reserves
Foreign Trade Rates (TL)
Public Sector
Budget Balance/GDP
Total Debt Stock/GDP
Net New Domestic Borrowing/Domestic Debt Stock
Domestic Debt Interest Payment/Tax Revenues
Corporate Sector
Non-Financial Sector Borrowings/GDP
Non-Financial Sector Net FX Position
Corporate Loan NPLs
Number of Newly Established Companies and Cooperatives (Net)
Ratio of Over-Drawn Cheques
Household Sector
Household Liabilities/GDP
Unemployment Rate
Household Loan NPLs
Banking Sector
Capital Adequacy
Regulatory Capital/RWA
Regulatory Tier 1 Capital/RWA
Non-Performing Loans (net of Provisions)/Capital
Asset Quality
Non-Performing Loans /Gross Loans
Sectoral Concentration in Loan Portfolios
Liquidity
Funding Liquidity
(Narrow) Liquid Assets/Total Assets
(Broad) Liquid Assets/Total Assets
Total Liquidity Adequacy Ratio (7 day)
Total Liquidity Adequacy Ratio (1 month)
Loans/Deposits
Sensitivity to FX and Interest Rates
Net Open FX Position/Capital
Interest Rate Sensitive Gap (TL)/Capital
Interest Rate Sensitive Gap (FC)/Capital
Profitability
ROA (Return on Assets)
ROE (Return on Equity)
Net Interest Margin= (Net Interest Income/ (Net Interest Income+ Non Interest Income)
Non-Interest Expense/(Net Interest Income+ Non-Interest Income)

Although there are intensive discussions, yet there is no final agreed definition for the financial stability concept. However, commonly in analyses, indicators that have the potential to affect financial stability are assessed under an integrated macro approach. One of the best representation ways of such a macro approach is the financial stability map. In this approach, the closer to the center, the more stable the sector is. Analysis allows time series comparisons within each sector. Among the sectors, the comparison can be made in terms of the directional change in position with respect to the center. Each of the sectors in the Map consists of selected variables which enable financial stability analysis. Above indicator set is built after examining international work, reports and CBRT Financial Stability Report as well as the literature review. Taking into account the data constraints and interrelations among the indicators, the indicator set is finalized.

Moreover, to composite the indicators within each sector into a single indicator for each sector, indicators are transformed by using percentile method, and then within each sub category equal weights are applied. Finally, for each sector, time series of indicators are acquired. These indicators presented by using a cob-web presentation to do a macro analysis. Some points to mention regarding financial stability map is:

- Each sector can only be compared within a historical perspective in itself not with the other sectors in terms of the amount.
- The ranking positions of the indicators in the Map show whether there is an increase in risk or not.
- In terms of the distance from the center, sectors cannot be compared directly, however, indirectly they can be compared whether they become closer or distant to the center.
- However, this analysis does not allow any comparison among the sectors in terms of the distance to the center.

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ABBREVIATIONS

ACMIIT	:	The Association of Capital Market Intermediary Institutions of Turkey
AIRCT	:	The Association of the Insurance and Reinsurance Companies of Turkey
BAT	:	The Banks Association of Turkey
BCBS	:	Basel Committee on Banking Supervision
BIS	:	Bank for International Settlements
BRSA	:	Banking Regulation and Supervision Agency
CAR	:	Capital Adequacy Ratio
CBRT	:	Central Bank of the Republic of Turkey
CCPs	:	Central Counterparties
CDS	:	Credit Default Swap
CGFS	:	Committee on the Global Financial System
CMB	:	Capital Markets Board
CPI	:	Consumer Price Index
CPSS	:	Committee for Payment and Settlement Systems
CRA	:	Credit Rating Agency
CVA	:	Credit Valuation Adjustment
DEA	:	Direct Electronic Access
ECB	:	European Central Bank
EFSF	:	European Financial Stability Facility
ESRB	:	European Systemic Risk Board
EU	:	European Union
FC	:	Foreign Currency
FDI	:	Foreign Direct Investment

Fed	:	Federal Reserve System
FMI	:	Financial Market Infrastructures
FSB	:	Financial Stability Board
FSC	:	Financial Stability Committee
FSI	:	Financial Strength Index
FSOC	:	Financial Stability Oversight Council
FX	:	Foreign Exchange
G-20	:	Group of Twenty
G-SIB	:	Global Systemically Important Banks
G-SIFI	:	Global Systemically Important Financial Institutions
GDDS	:	Government Domestic Debt Securities
GDP	:	Gross Domestic Product
IAIS	:	International Association of Insurance Supervisors
ICC	:	Interbank Card Center
IFS	:	IMF International Financial Statistics
IMF	:	International Monetary Fund
IOSCO	:	International Organization of Securities Commissions
ISE	:	Istanbul Stock Exchange
LGD	:	Loss Given Default
ME	:	Maximum Enthropy
MPC	:	Monetary Policy Committee
NPL	:	Non-performing Loan
NSFR	:	Net Stable Funding Ratio
ODWG	:	OTC Derivatives Working Group

OECD	:	Organisation for Economic Co-operation and Development
OTC	:	Over the Counter (Markets)
PDP	:	Public Disclosure Platform
PIIGS	:	Portugal, Ireland, Italy, Greece and Spain
PMC	:	Pension Monitoring Center
PRC	:	Peer Review Council
PS	:	Primary Surplus
QIS	:	Quantitative Impact Study
RoA	:	Return on Asset
RoE	:	Return on Equity
RRP	:	Recovery and Resolution Plan
RR	:	Reserve Requirement
RWA	:	Risk Weighted Assets
SDIF	:	Savings Deposit Insurance Fund
SIB	:	Systemically Important Bank
SIFI	:	Systemically Important Financial Institution
SME	:	Small and Medium Size Enterprise
SSB	:	Standard Setting Bodies
TL	:	Turkish Lira
TOKI	:	Housing Development Administration of Turkey
Treasury:		Republic of Turkey Undersecretariat of Treasury
TURKSTAT:		Turkish Statistical Institute
UK	:	United Kingdom
USA	:	United States of America

USD : United States Dollar

VaR : Value at Risk

VBA : Visual Basic Application

VIX : Chicago Board Options Exchange Market Volatility Index