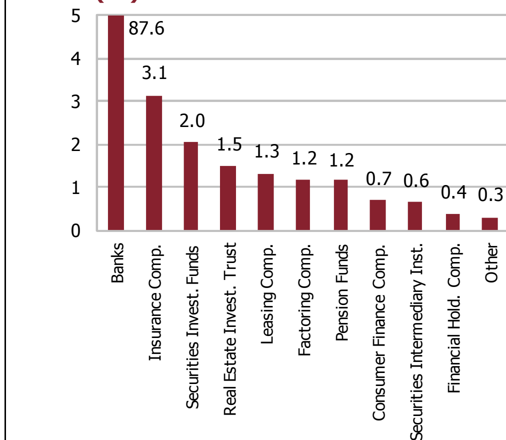
III. RISKS AND DEVELOPMENTS IN THE BANKING SECTOR

In order to minimize the potential adverse effects of the uncertainties regarding the global economy, the CBRT continues to implement macroprudential policies jointly with other authorities. Owing to the policy mix in place, the annual rate of increase in loans has been brought to reasonable levels for financial stability, interest rates have moved so as to support growth, banks have been provided with permanent TL liquidity, the country's FX reserves have increased and the potential adverse effects of short-term capital movements have been curbed. Within the Financial Stability Committee (FSC), studies aiming to strengthen the balance sheet structure of the banking sector continue. Turkey has been implementing Basel II regulations since the beginning of July 2012. On the back of the adoption of Basel II, the capital adequacy ratio of the banking sector has maintained its high levels. Turkey has initiated the preparation process for Basel III, covering liquidity and leverage regulations in addition to capital adequacy as well.

The Turkish financial sector, which is predominantly composed of the banking sector, continues to grow. In June 2012, the balance sheet of the financial sector grew11.5 percent annually and reached TL 1,453 billion, while its ratio to GDP materialized as 106.1 percent. 87.6 percent of the financial sector belongs to the banking sector (Chart III.1).

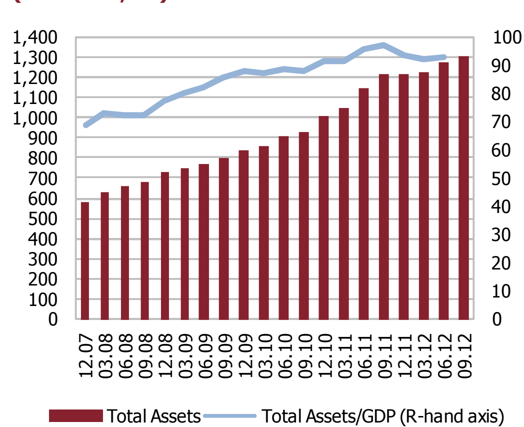
By September 2012, total assets of the banking sector increased by 7.5 percent compared to year-end and became TL 1,309 billion. The ratio of the sector's balance sheet size to GDP was 93 percent as of the second quarter of 2012 (Chart III.2). Although the 2011 figure for the said ratio is higher than that of Poland, Slovakia, Romania and Lithuania, it is below that of other EU countries and below the EU-27 average of 354 percent. This outlook suggests that the growth potential of the Turkish banking sector is still high (Table III.1).

Chart III.1. Balance Sheet Size of the Financial Sector (%)[1,2]



Source: BRSA –CBRT, ACMIIT, CMB, AIRCT
(1) Data for Portfolio Management Comp., Financial Hold. Comp. and Credit Guarantee Fund belong to December 2011 period.
(2) "Other" item includes the data on Credit Guarantee Fund, Venture-Capital Trust, Portfolio Management Comp., Asset Management Comp., Sec. Invest. Funds and Reinsurance Companies.

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



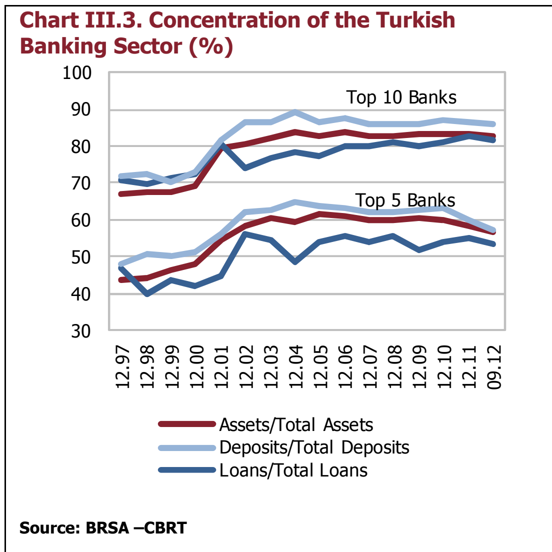
Source: BRSA –CBRT, TURKSTAT

As of September 2012, among the 48 banks operating in the Turkish banking sector, the share of the first five banks with respect to asset size was 57 percent while that of the first ten banks was 82.5 percent. While the concentration is more on deposits, it is lower on credits (Chart III.3).

Compared to EU countries, Turkey ranks in the middle based on the share of the first five banks in total assets as of end-2011 (Table III.1)

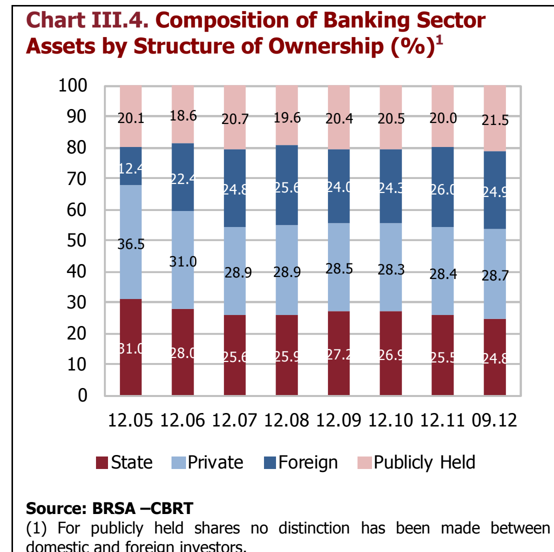
Based on their share in paid-up capital, the share of foreign shareholders in asset size was realized as 24.9 percent in September 2012. Meanwhile, according to data of the Central Registry Agency, when the share of foreign participation in publicly held shares, which accounts for 17.9 percent, is included as well, the share of foreign participation in the banking sector reaches 42.8 percent (Chart III.4). The share of foreign shareholders in the Turkish banking system, which was 26 percent in 2011 is on a par with EU average; however, it is below that of many Eastern and Central European Countries such as Poland, Bulgaria, Hungary, Romania, Latvia, the Czech Republic and Slovakia (Table III.1).

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

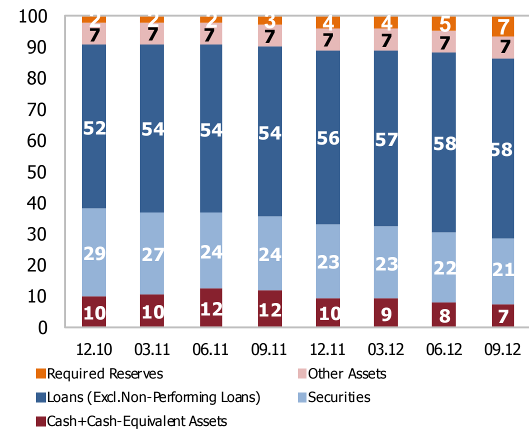
(1) For publicly held shares no distinction has been made between domestic and foreign investors.

The share of loan portfolio as the largest asset item continued to grow throughout the year and became 56 percent compared to end-2011. Yet, it reached 58 percent by September 2012 (Chart III.5).

By September 2012, the share of deposits as the largest source of funds decreased by 1 point compared to the previous year-end and stood at 56 percent, whereas the shares of equity capital increased by 1 point to reach 13 percent. During the same period, the amount due to banks and funds from repo transactions declined by 1 point each and became 13 percent and 7 percent, respectively (Chart III.6).

The Reserve Option Mechanism (ROM) that started to be gradually implemented in September 2011 had significant impacts on the balance sheets of the banking sector. The ROM enabled banks to maintain a certain fraction of their Turkish lira required reserves as foreign exchange and gold; thus decreasing the banks' needs and costs of borrowing in Turkish lira, which they used to borrow from the CBRT through repo transactions and from foreign banks through swap transactions. As a result, the net interest income has been positively affected and the conversion of short-term capital inflows into bank lending has been limited (Special Topic IV.1).

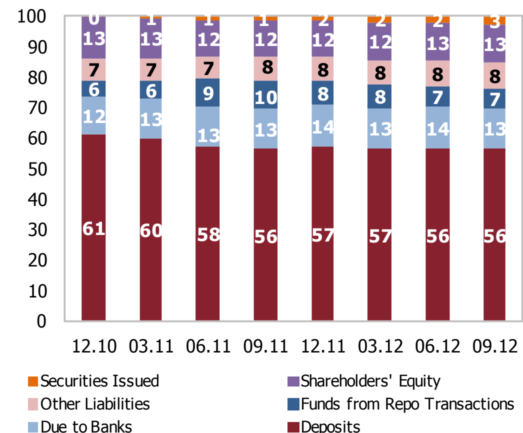
Chart III.5. Asset Structure of the Banking Sector (%)[1]



Source: BRSA –CBRT

(1) Cash and cash equivalent assets=Cash+ CBRT + Money Markets + Banks + Reverse Repo

Chart III.6. Liability Structure of the Banking Sector (%)



Source: BRSA –CBRT

By the second quarter of 2012, the ratio of deposits to GDP, which signifies the developments in depth and intermediary functions of the banking sector, was 52 percent, while the ratio of loans to GDP and deposits increased to 54 percent and 103 percent, respectively. The said ratios stand at 130 percent, 189 percent and 145 percent, respectively, in EU27. Turkey ranks quite below EU averages in terms of the number of banks in the banking sector (Table III.1). However, as of 2 October 2012, one more bank was granted official authorization in Turkey and started to function in the group of foreign capital banks established in Turkey. Thus, the number of banks in the sector has reached 49 in Turkey.

Table III.1. Comparison of the Selected Financial Indicators with the EU Countries[1]

Countries	Total Assets / GDP (%)	Deposits / GDP (%)	Loans / GDP (%)	Loans / Deposits (%)	Total Assets / No. of Credit	Share of Top 5 Credit Institutions (%)	No. of Credit Institutions	Foreign Shares in the Banking Sector (%)
Germany	308	116	182	157	4,213	34	1,898	12.1
Belgium	310	145	185	128	10,622	71	108	67.3
Bulgaria	102	71	80	114	1,265	53	31	80.6
Czech Republic	107	75	66	88	2,893	62	58	99.8
Denmark	384	95	255	268	5,713	66	161	18.7
Finland	335	84	120	143	1,938	81	327	71.5
France	334	124	182	146	10,112	48	660	12.1
Netherlands	470	209	319	152	9,868	84	287	11.2
United Kingdom	637	205	236	115	29,873	44	373	42.1
Ireland	750	150	320	213	2,485	53	480	41.2
Spain	368	188	253	135	11,687	48	335	8.8
Italy	177	66	122	185	3,706	40	754	19.6
Latvia	117	62	94	152	763	60	31	79.4
Lithuania	85	49	67	135	285	85	92	69.3
Luxembourg	1866	623	1275	205	5,640	31	141	94.1
Hungary	110	61	77	125	580	55	189	63.0
Poland	80	49	58	118	424	44	700	72.9
Portugal	300	143	223	156	3,308	71	155	24.0
Romania	62	34	39	115	2,047	55	41	80.0
Slovak Republic	80	56	56	99	1,783	72	31	99.7
Slovenia	146	75	112	149	2,117	59	25	28.1
Greece	204	102	154	151	7,323	72	58	21.3
EU-27 Av.	**354**	**130**	**189**	**145**	**5,560**	**-**	**299**	**26.0**
Turkey - 2011	**94**	**54**	**53**	**98**	**10,381**	**58**	**48**	**26.0**
Turkey - 06.2012	**93**	**52**	**54**	**103**	**11,747**	**57**	**48**	**24.9**

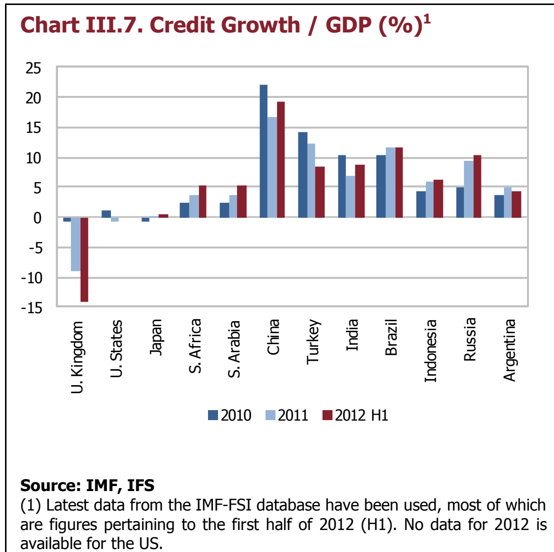
Source: BRSA-CBRT, Eurostat, ECB

(1) The figures of EU countries are as of 2011

Despite lingering uncertainties in international markets, credit growth has started to improve partially in many countries owing to measures taken by authorities. In line with developments in national and global financial markets, while the ratio of the credit growth to GDP in Japan improved partially, that of the UK displayed an opposite outlook in the first half of 2012.

Although the said ratio has decelerated in some emerging economies including Turkey, it hovers around high levels in others (Chart III.7, Chart III.8).

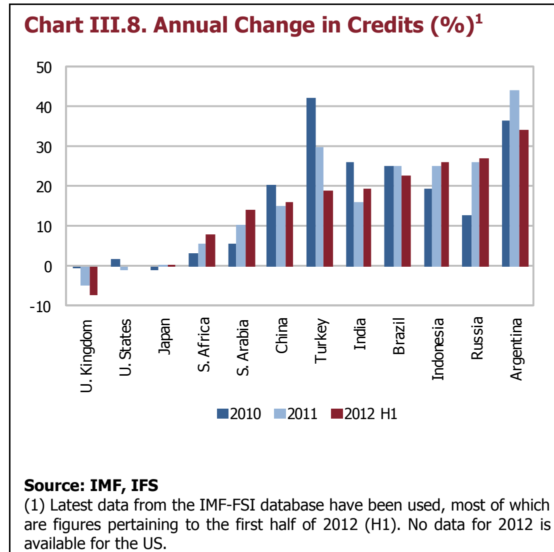
Chart III.7. Credit Growth / GDP (%)[1]



Source: IMF, IFS

(1) Latest data from the IMF-FSI database have been used, most of which are figures pertaining to the first half of 2012 (H1). No data for 2012 is available for the US.

Chart III.8. Annual Change in Credits (%)[1]

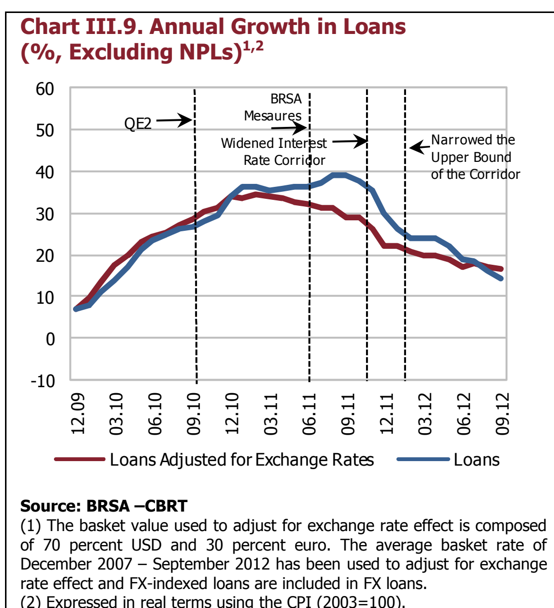


Source: IMF, IFS

(1) Latest data from the IMF-FSI database have been used, most of which are figures pertaining to the first half of 2012 (H1). No data for 2012 is available for the US.

The flexible macro prudential monetary policy and other measures taken by the authorities in Turkey, credit growth is at desired levels for financial stability. In response to the ongoing slowdown in the global economy, the flexible monetary policy implemented in Turkey and timely measures taken by the authorities leading to a surge in borrowing costs; the credit growth rate, which began to lose pace as of the third quarter of 2011, maintained its trend in 2012 as well. In December 2011, while the annual and real growth of loans adjusted for exchange rate effect were 21.9 percent and 29.9 percent, respectively; in September 2012 the mentioned rates materialized as 16.7 percent and 14.3 percent, respectively (Chart III.9). Despite the CBRT's policy in the second half of 2012, which increased the liquidity the Bank provided to the market and gradually decreased funding costs, the slowdown in the credit growth rate continued due to the deceleration in both domestic and foreign demand (Chart III.10).

Chart III.9. Annual Growth in Loans (%, Excluding NPLs)[1,2]

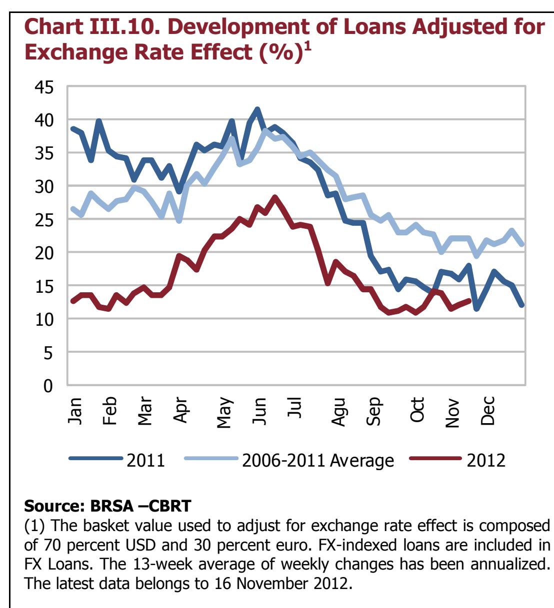


Source: BRSA –CBRT

(1) 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 2012 has been used to adjust for exchange rate effect and FX-indexed loans are included in FX loans.

(2) Expressed in real terms using the CPI (2003=100).

Chart III.10. Development of Loans Adjusted for Exchange Rate Effect (%)[1]

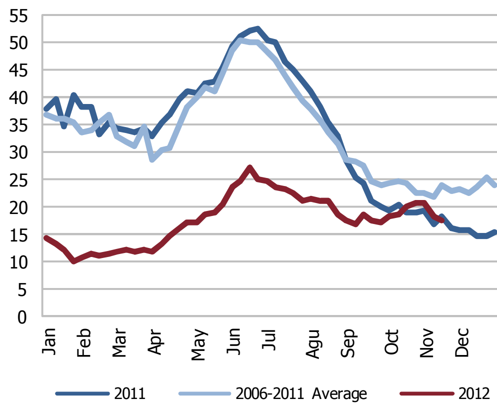


Source: BRSA –CBRT

(1) The basket value used to adjust for exchange rate effect is composed of 70 percent USD and 30 percent euro. FX-indexed loans are included in FX Loans. The 13-week average of weekly changes has been annualized. The latest data belongs to 16 November 2012.

The deceleration in corporate loans in the second half of 2012 is noteworthy. On the back of measures taken to contain the rate of increase in credits and the flexible monetary policy implemented, the credit growth rate hovered below that of the previous year and previous year averages; however, it went up slightly in the first half of 2012 due to seasonality. In the second half of 2012, the rate of increase in both corporate and retail loans hovered at reasonable levels, yet the decline in the growth rate of corporate loans outpaced that of retail loans. The CBRT Banks' Loans Tendency Survey suggests that this development is attributable to factors regarding both credit supply and credit demand. Apart from a slight loosening in the first quarter of 2012, tightening was predominant on the standards for corporate loans, whereas the demand for these loans generally displayed a downward trend except for the increase observed in the second quarter of 2012. By 16 November 2012, the annualized growth rate of corporate loans and retail loans adjusted for exchange rate effect became 9.3 percent and 17.4 percent, respectively (Chart III.11, Chart III.12).

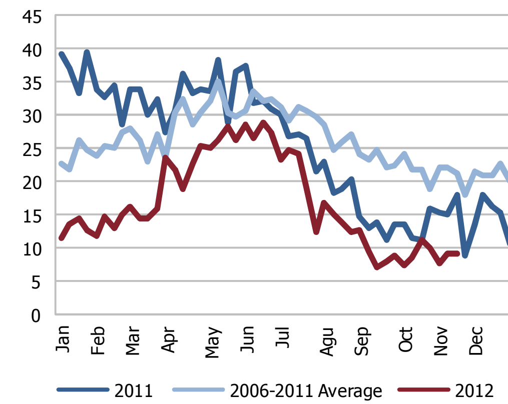
Chart III.11. Development of Retail Loans Adjusted for Exchange Rate Effect (%)[1]



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 are included in FX Loans. The 13-week average of weekly changes has been annualized. The latest data belongs to 16 November 2012.

Chart III.12. Development of Corporate Loans Adjusted for Exchange Rate Effect (%)[1]



Source: BRSA –CBRT

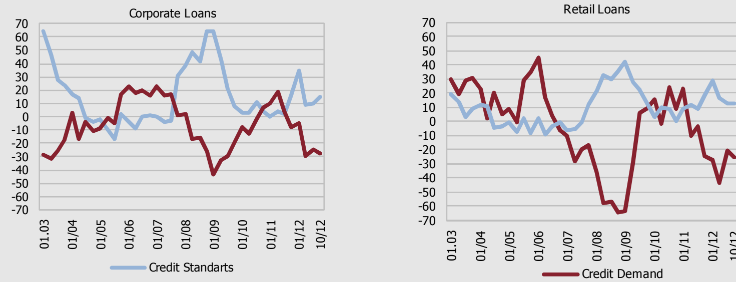
(1) The basket value used to adjust for exchange rate effect is composed of 70 percent USD and 30 percent euro. FX-indexed loans are included in FX Loans. The 13-week average of weekly changes has been annualized. The latest data belongs to 16 November 2012.

Box III.1. Bank Lending Surveys

Lending surveys are widely used by several central banks in order to evaluate supply and demand conditions in the credit market. In this context, lending surveys published by the Fed, the ECB and the CBRT mark the directions of and reasons for changes in credit standards and credit demand in USA, Europe and Turkey, and provide information regarding the nature of perceptions related to the credit market.

According to "The Euro Area Bank Lending Survey", published by the ECB, although the tightening of standards on credits extended to the private sector was eased in the first quarter of 2012, this situation reversed and the tightening on standards resumed in the second quarter. This development was mainly driven by the deterioration in expectations on the overall economic activity as well as the increase in industry-company based risks. The tightening of standards on retail loans remained unchanged in the third quarter compared to the second quarter of 2012.Parallel to the increased tightening on standards in the third quarter of 2012, the decline in the private sector's credit demand gained pace. While the decline in the demand for corporate loans was driven mainly by the decrease in the financing need with respect to fixed investments as well as stock and working capital, the partial decline in the demand for retail loans was attributable to the diminishing trend in consumer confidence and negative expectations regarding the real estate sector.

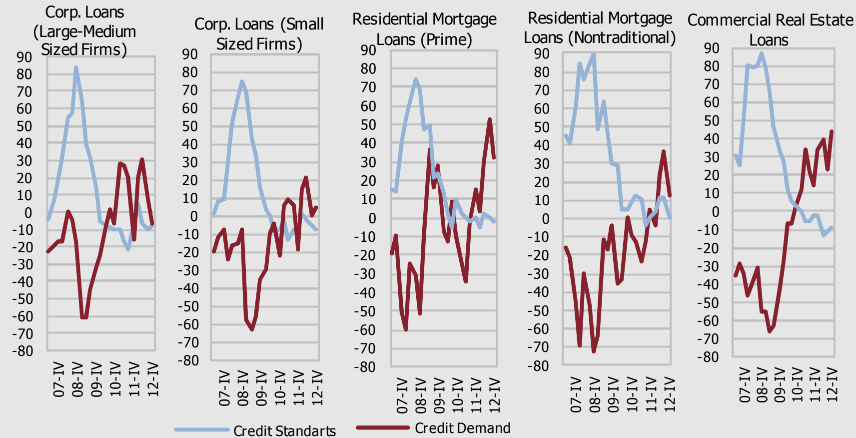
Chart 1. Credit Standards and Credit Demand in the Euro Area (Percent)[1,2]



Source: ECB Bank Lending Survey, Oct. 2012
(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.

The results of the lending survey prepared by the Fed in relation to the credit market reveal that in the recent period, while banks have partially eased their standards on corporate loans, they did not make any significant changes to the standards on retail loans. The survey also indicates that the limited rise in demand for corporate loans was mainly driven by large and medium-scale firms, whereas the demand for loans for small-scale firms remained unchanged. Borrowers mainly preferred borrowing from banks instead of non-bank sources and this situation became instrumental in the increase of demand for loans for large and medium scale firms. Meanwhile, the demand for housing loans, particularly individual mortgage loans increased.

Chart 2. Credit Standards and Credit Demand in the USA (Percent)[1,2]



Source: FED, Senior Bank Loan Officer Survey on Bank Lending Practices
(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) Data pertaining to the fourth quarter of 2012 is composed of expectations for the next three months.

In Turkey, the tightening trend in standards for corporate loans that had prevailed since the second quarter of 2010 according to the CBRT Banks' Loans Tendency Survey was replaced by a slight easing in the first quarter of 2012. However, the tightening trend resumed in the second and third quarters of 2012. In the third quarter, the deterioration in risk perceptions primarily in expectations regarding the overall economic activity, competition arising from market finance and competition of the non-bank financial sector supported the tightening in credit standards. Moreover, the tightening in medium and long-term credits has been more intense compared to that of short-term credits.

The demand for corporate loans, primarily those extended to large enterprises on long-term maturities, contracted in the first quarter of 2012. However, in the second quarter of 2012 the demand for these loans surged on account of the increase of demand for loans to small and medium size enterprises as well as the increase in demand for short-term loans. In the third quarter, the demand for corporate loans, primarily those on short-term maturities contracted. Although factors such as the debt restructuring process, discounts and other facilities implemented by vendors on cash purchases along with financing needs for stock enhancement and working capital boosted the

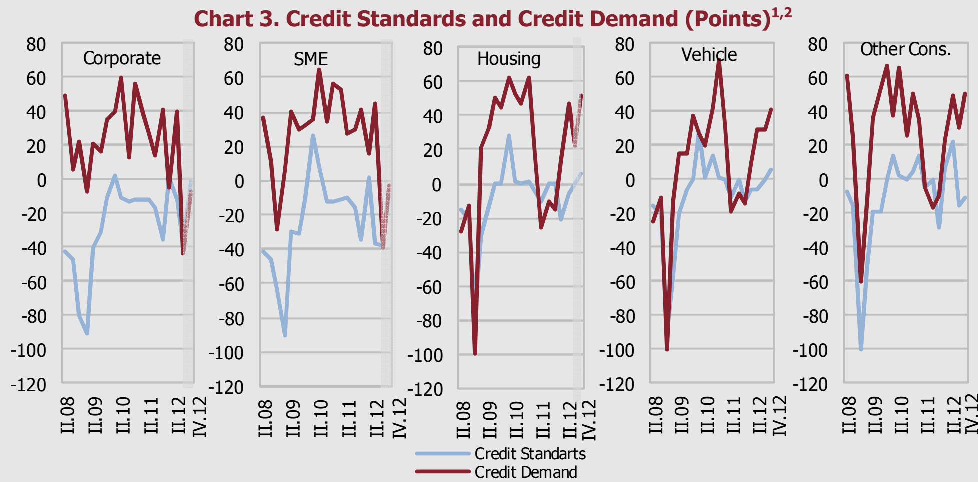
demand for credit, the decline in the financing need arising from fixed investments led to a recession in credit demand.

In the first two quarters of 2012, while standards on housing and vehicle loans were tightened, those on other loans were eased. Whereas, in the third quarter, the standards on housing loans remained mainly flat. This situation is attributable to the easing effects of funding costs and balance sheet constraints as well as the competitive pressure on housing loans despite the tightening effect of expectations regarding overall economic activity on standards applied to these loans. In the same period, standards remained mostly steady in spite of a tightening expectation regarding vehicle loans. Meanwhile, standards on other retail loans were tightened due to the expectations on the overall economic activity.

The demand for retail loans that started to decline in the second quarter of 2011 began to rise in the first quarter of 2012 and continued to increase in the second and third quarters as well. Consumer confidence was the most influential factor in the increase of demand for all types of retail loans.

In the last quarter of 2012, banks do not expect a notable change in the standards for corporate loans. Whereas, consumer loan standards are expected to be eased for vehicle and housing loans and tightened for other retail loans. Expectations regarding credit demand are on an upward trend with respect to retail loans and on a downward trend with respect to corporate loans except for those with long-term maturities.

Chart 3. Credit Standards and Credit Demand (Points)[1,2]



Source: CBRT Banks' Loans Tendency Survey
(1) Data pertaining to the fourth quarter of 2012 is composed of expectations for the next three months.
(2) A negative value in credit standards indicates a tightening in standards, whereas a positive value in credit demand indicates an increase.

The contribution of consumer loans to credit growth is declining considerably. In September 2012, total loans, corporate loans and retail loans, all adjusted for exchange rate effect, increased by 16.7 percent, 16.3 percent and 17.5 percent year-on-year, respectively (Chart III.13). In the same period, the annual growth rate of loans became 4.7 percent in real terms, of which 2 points came from other corporate loans, 0.9 points from consumer loans and 1.5 points from credit cards (Chart III.14). The contribution of consumer loans to credit growth declined rapidly on the back of the measures taken by the BRSA in June 2011.

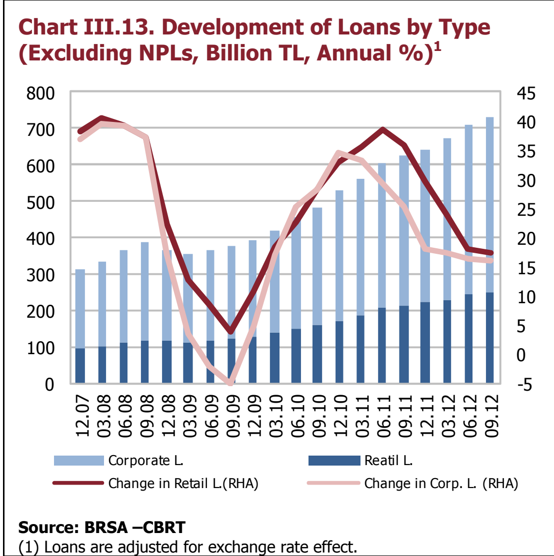


Chart III.13. Development of Loans by Type (Excluding NPLs, Billion TL, Annual %)[1]

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

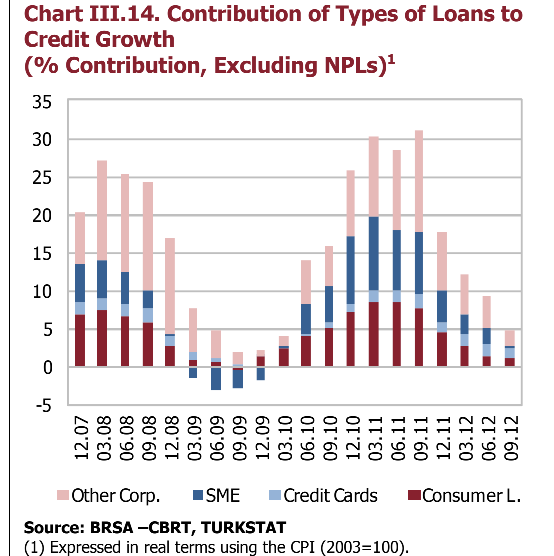


Chart III.14. Contribution of Types of Loans to Credit Growth (% Contribution, Excluding NPLs)[1]

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

No significant change was observed in the breakdown of loans by type in the first quarter of 2012. By September 2012, 67 percent and 33 percent of loans amounting to a total of TL 755.6 billion were composed of corporate loans and retail loans, respectively. 34 percent of SME loans, which account for one third of corporate loans, were extended to micro enterprises, 26 percent to small size enterprises and 40 percent to medium size enterprises. It is noteworthy that the share of other loans in consumer loans did not decline despite the measures taken. The installment loan portion of individual credit cards, which has been on the rise since the first quarter of 2009 materialized as 51.2 percent by September 2012 (Chart III.15, Chart III.16).

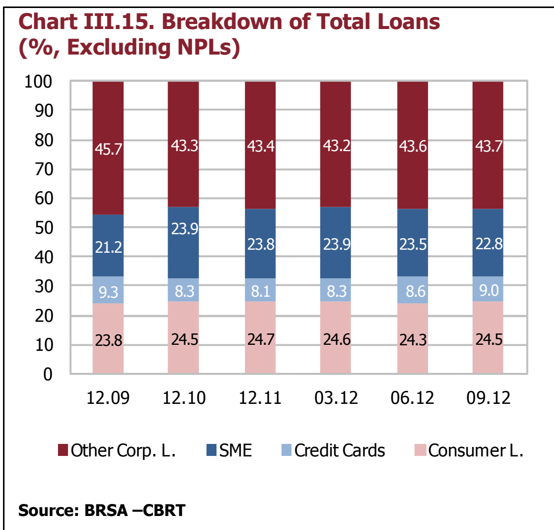


Chart III.15. Breakdown of Total Loans (%, Excluding NPLs)

Source: BRSA –CBRT

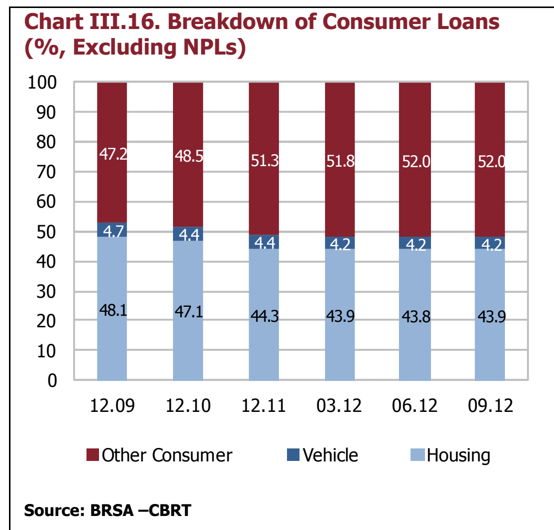
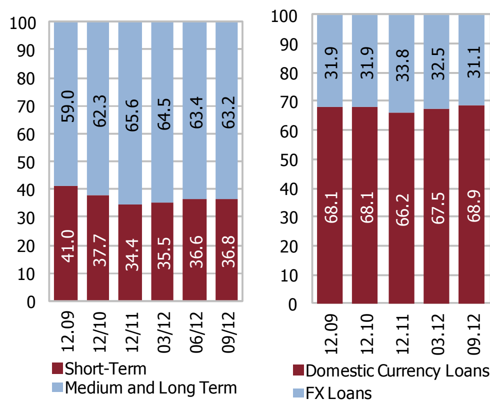


Chart III.16. Breakdown of Consumer Loans (%, Excluding NPLs)

Source: BRSA –CBRT

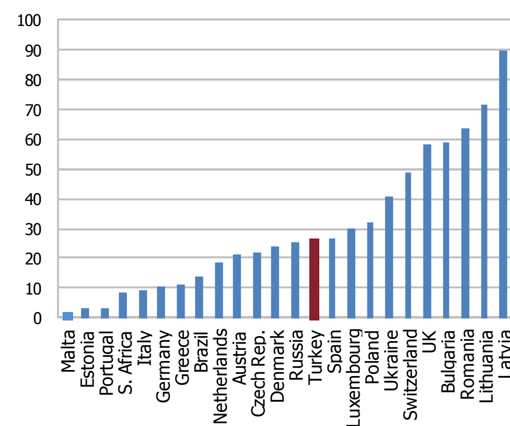
Loans are predominantly in medium and long-term maturities and denominated in Turkish lira, which is considered to be a favorable development in terms of the management of credit risk. It is noteworthy that the change observed in the share of FX-loans since the last quarter of 2011 has been driven by the volatility in exchange rates. In fact, adjusted for exchange rate effect, no significant change is observed in the currency composition of loans. There was a limited decline in the share of medium and long-term credits in the same period (Chart III.17). The share of FX-denominated loans in the loan portfolio of the Turkish banking system ranked in the middle among that of other countries (Chart III.18).

Chart III.17. Maturity and Currency Composition of Loans (%)[1,2]



Source: BRSA –CBRT
(1) FX-indexed loans are included in FX loans.
(2) Short-term denotes less-than-one-year maturity.

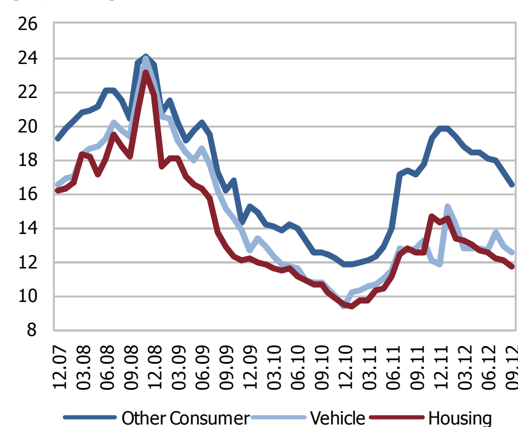
Chart III.18. FX Loans (% Total Loans)[1,2]



Source: IMF-Financial Soundness Indicators, BRSA –CBRT
(1) Up-to-date data, pertaining to the first half of 2012 in general, included in the FSI database are used.
(2) Data for Turkey denotes the share of FX loans including FX-indexed loans by September 2012.

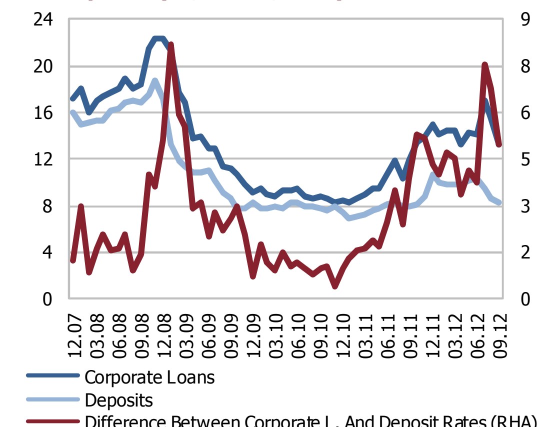
Due to the CBRT's liquidity policy framework, interest rates on loans and deposits declined in the third quarter. Throughout 2011, interest rates on loans generally followed an upward trend due to increasing costs owing to measures taken to bring the credit growth rate to reasonable levels and due to interest rates being kept at a level closer to the upper bound of the interest rate corridor in response to the monetary tightening implemented from October 2011 to mid-2012. In line with the increase of the liquidity provided to the market and the gradual decrease of the average funding cost since mid-2012, interest rates on loans, notably those on consumer loans, generally displayed a downward trend. By September, interest rates on housing loans, other consumer loans and vehicle loans materialized as 11.7 percent, 16.6 percent and 12.6 percent, respectively (Chart III.19). In the same period, interest rates on corporate loans and deposits became 13.3 percent and 8.3 percent, respectively. As interest rates on deposits declined more than those on corporate loans, the interest rate margin still continues to hover around high levels (Chart III.20).

Chart III.19. Interest Rate on Consumer Loans (%, Flow)



Source: CBRT

Chart III.20. Interest Rates on Corporate Loans and Deposits (%, Points, Flow)

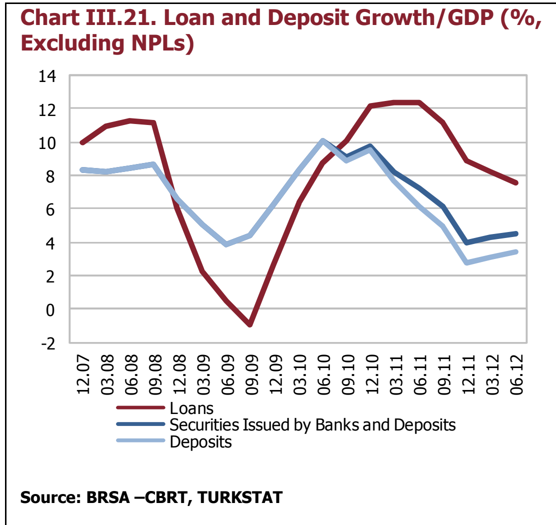


Source: CBRT

Although banks have used deposits as the main source of finance, they have continued to employ alternative sources. Although the share of loans in total assets increased by 1.7 points in September 2012 compared to end-2011, the share of total deposits in liabilities declined by 0.7 points. In this period, banks covered other funding needs mainly from banks abroad and from

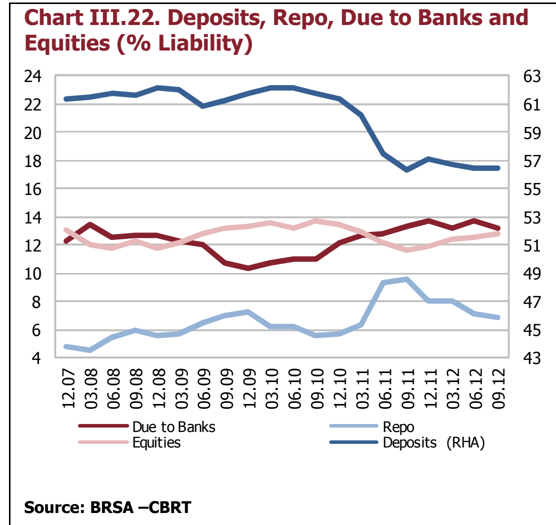
securities issued. The share of funds from repo transactions in the banks' funding sources narrowed. Since the first quarter of 2012, due to increased financing costs, banks tended to provide finance from their internal sources (Chart III.21, Chart III.22). The increase in the share of equities is attributable to the increase in the portion of profit of the period transferred to legal reserves on the back of the BRSA's policy of imposing certain restrictions on the distribution of profits within the sector, thus retaining profits in-house.

Chart III.21. Loan and Deposit Growth/GDP (%, Excluding NPLs)



Source: BRSA –CBRT, TURKSTAT

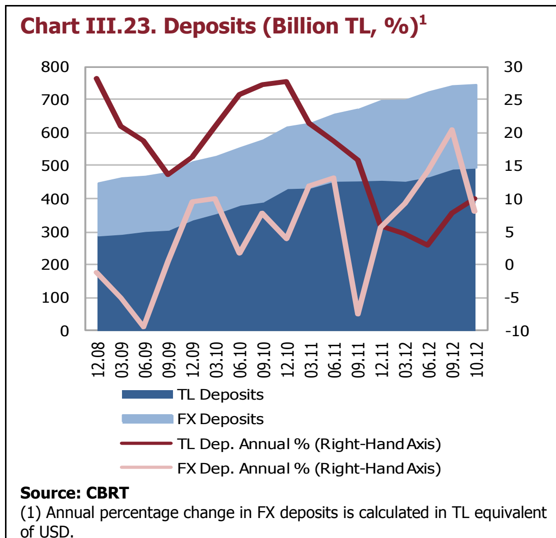
Chart III.22. Deposits, Repo, Due to Banks and Equities (% Liability)



Source: BRSA –CBRT

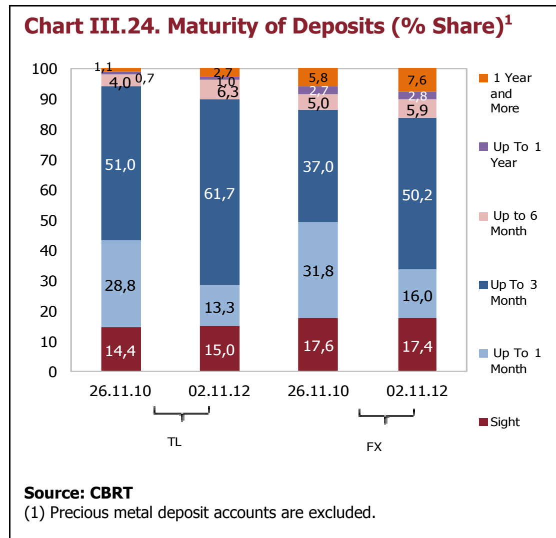
Turkish lira deposits/participation funds, which followed a flat course from early 2012, have recently displayed a moderate increase. FX deposits and FX participation funds have been on a steady rise since the beginning of 2012 (Chart III.23).

Chart III.23. Deposits (Billion TL, %)[1]



Source: CBRT
(1) Annual percentage change in FX deposits is calculated in TL equivalent of USD.

Chart III.24. Maturity of Deposits (% Share)[1]



Source: CBRT
(1) Precious metal deposit accounts are excluded.

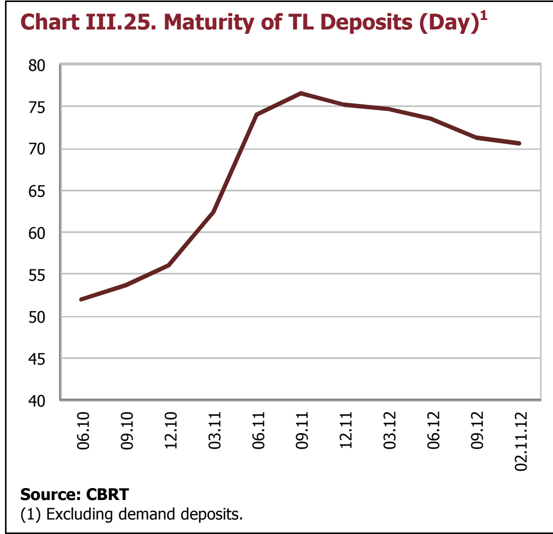
During the period from the end of 2010 when reserve requirement ratios were first differentiated according to maturity structure, to the first half of 2011, the maturity of deposits increased significantly. Following the horizontal trend in the second half of 2011, Turkish lira deposits, which had been on an upward course, started to decline, yet FX deposits remained flat in 2012.

Cooperation with other institutions was instrumental in the extension of maturities of deposits and participation funds, which are the major sources of finance. In this framework, the "Regulation on Deposits and Participation Funds Subject to Insurance and Premiums Collected by Savings Deposit

Insurance Fund", which stipulates the differentiation of insurance premiums according to maturity by the Savings Deposit Insurance Fund in order to extend the maturities of deposits and participation funds, became operative upon its publication in the Official Gazette dated 29 September 2011.

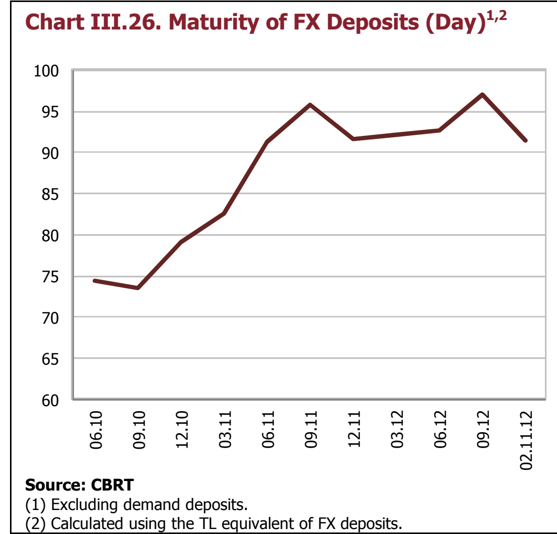
By October 2012, the increase in the share of deposits with maturities of up to three months and the decrease in the share of deposits with maturities of up to one month continued. In the same period, the weighted average maturity of Turkish lira deposits became 70.6 days and the weighted average maturity of FX deposits and participation funds became 91.4 days (Chart III.24, Chart III.25, Chart III.26).

Chart III.25. Maturity of TL Deposits (Day)[1]



Source: CBRT
(1) Excluding demand deposits.

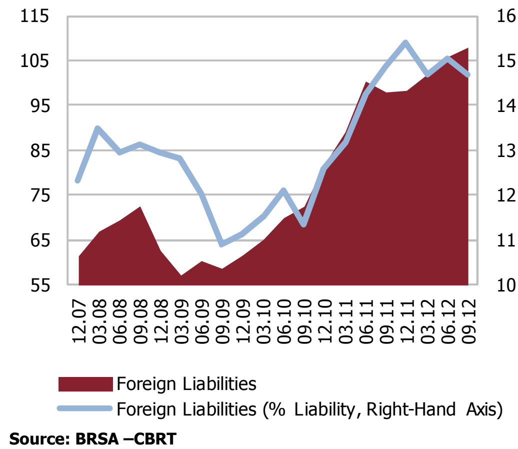
Chart III.26. Maturity of FX Deposits (Day)[1,2]



Source: CBRT
(1) Excluding demand deposits.
(2) Calculated using the TL equivalent of FX deposits.

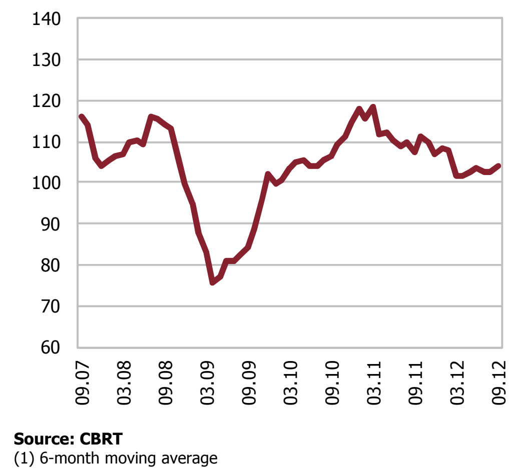
Foreign liabilities of banks have been on the rise since the end of 2011. Parallel to the recovery in the global risk appetite and ongoing capital flows towards emerging markets on the back of expansionary monetary policies implemented by advanced economies, banks' borrowings from abroad continue to increase. By September 2012, total foreign liabilities of banks surged by 9.8 percent compared to the year-end and reached USD 107.8 billion. 14.7 percent of total assets of the banking sector are funded by foreign liabilities (Chart III.27). In the same period, 18.8 percent, 12.3 percent and 10.2 percent of banks' foreign liabilities consisted of funds provided from the US, UK and Germany-based financial corporations, respectively. It is expected that banks will continue to have no difficulty obtaining funds from abroad and the upgrade in the Turkish sovereign rating will positively contribute to borrowing costs.

Chart III.27. Foreign Liabilities of Banks (Billion USD, % Liabilities)



Source: BRSA –CBRT

Chart III.28. External Debt Rollover Ratio of Banks (%)[1]

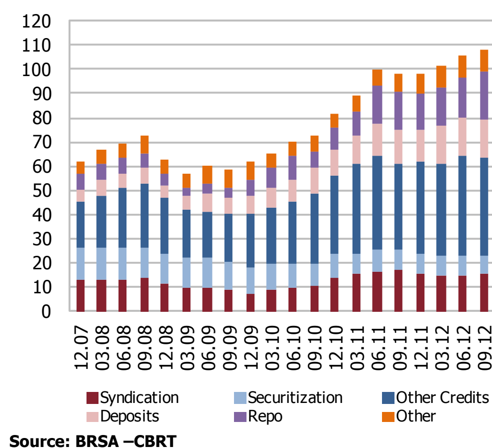


Source: CBRT
(1) 6-month moving average

The banks' external debt rollover ratio has been hovering above 100 percent (Chart III.28). By September 2012, the sum of syndication and securitization credits was USD 23.1 billion, with a share of 21.4 percent in foreign liabilities and 3.6 percent in total funding sources (Chart III.29). By the date of preparing this Report, that the amount of banks' foreign liabilities to mature in December 2012 or by the end of 2013 was USD 54.8 billion, USD 14.8 billion of which consisted of syndication and securitization credits.

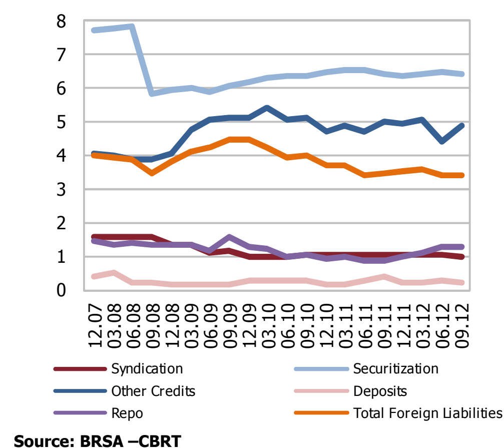
The long-term maturity structure of funds obtained by the banking sector from abroad, the share of which has been increasing, contributes to the extension of the maturity of liabilities. The weighted average maturity of foreign liabilities did not display a significant change over the past year and materialized as 3.4 years by September 2012. In the same period, the average maturity of syndication credits, which makes up 14.6 percent of foreign liabilities, was 1 year and the average maturity of securitization credits, which makes up 6.8 percent of foreign liabilities, was 6.4 years (Chart III.30).

Chart III.29. Composition of Foreign Liabilities (Billion USD)



Source: BRSA –CBRT

Chart III.30. Average Maturity of Foreign Liabilities (Years)

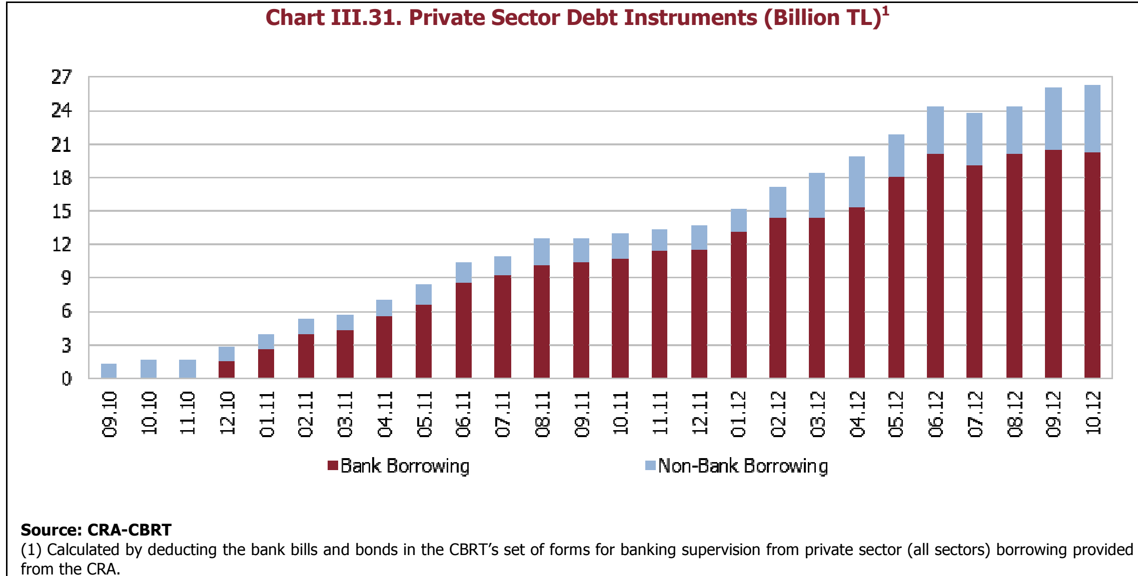


Source: BRSA –CBRT

Private sector debt instruments continue to grow. According to CRA data, in October 2012, the amount of private sector security issues denominated in Turkish lira, including the issues of the banking sector, increased by 31.5 percent compared to April 2012 and reached TL 26.3 billion.

The calculations, based on the data of the CRA and CBRT, reveal that TL-denominated securities issued by banks increased by 33.8 percent to become TL 20.2 billion and those issued by the non-bank private sector increased by 24.5 percent to become TL 6.1 billion in the said period (Chart III.31).

Chart III.31. Private Sector Debt Instruments (Billion TL)[1]

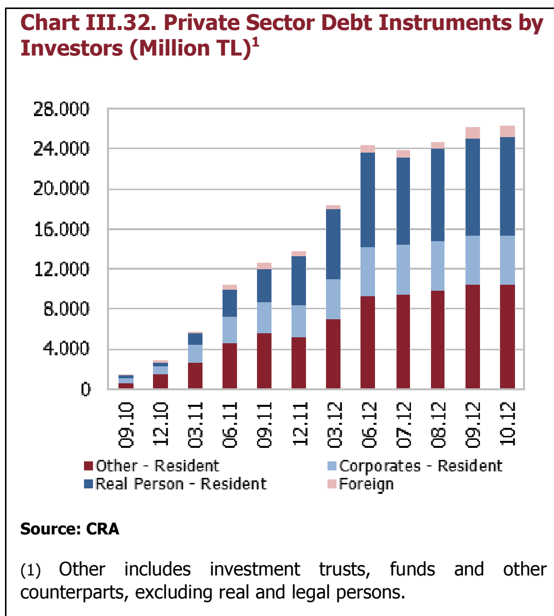


Source: CRA-CBRT
(1) Calculated by deducting the bank bills and bonds in the CBRT's set of forms for banking supervision from private sector (all sectors) borrowing provided from the CRA.

The average maturity of security issues by banks in the domestic market increased to 307 days from its level of 294 days in April 2012, whereas the average maturity of security issues in foreign markets climbed from 5.8 years to 6.5 years. In October 2012, the average maturity of securities issued by non-bank corporations in the domestic market was 694 days, while that of abroad was 7.4 years.

An analysis by distribution-by-investor of securities issued by the private sector including banks reveals that by October 2012 the largest share of 39.7 percent comprises resident real persons, followed by 37.7 percent share belonging to resident investment trusts and funds (Chart III.32, Chart III.33).

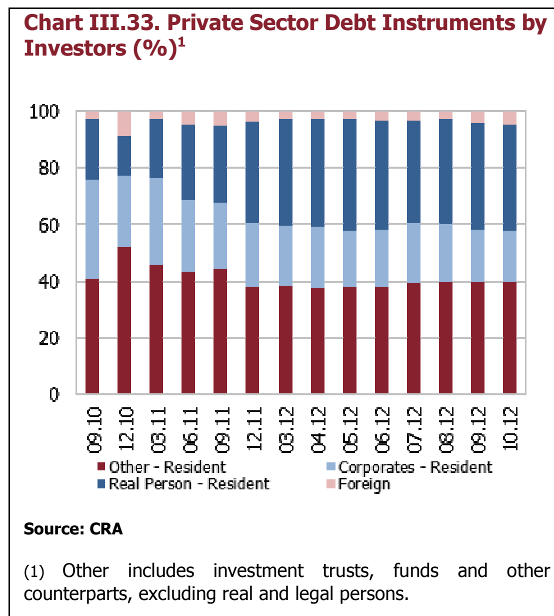
Chart III.32. Private Sector Debt Instruments by Investors (Million TL)[1]



Source: CRA

(1) Other includes investment trusts, funds and other counterparts, excluding real and legal persons.

Chart III.33. Private Sector Debt Instruments by Investors (%)[1]



Source: CRA

(1) Other includes investment trusts, funds and other counterparts, excluding real and legal persons.

By 14 November 2012, TL denominated bonds and bills issued by banks and non-bank corporations reached TL 20.6 billion and TL 3 billion, respectively; whereas FX-denominated issues materialized as USD 10.7 billion and USD 1.2 billion, respectively. In the meantime, it is also known that an amount higher than those outlined above was registered by the CMB, and besides, an application was made to the CMB for a significant amount. (Table III.2, Table III.3)

Table III.2. Bond and Bill Issues by Banks (Stock)

Nominal Amount	TL Denominated (Million TL)	FX Denominated (Million US dollar)
The realized issues approved by CMB	20.593	10.659
The non-realized issues approved by CMB	40.669	13.034
The applications to CMB	3.250	0
TOTAL	**64.512**	**23.693**

Source: CMB, PDP

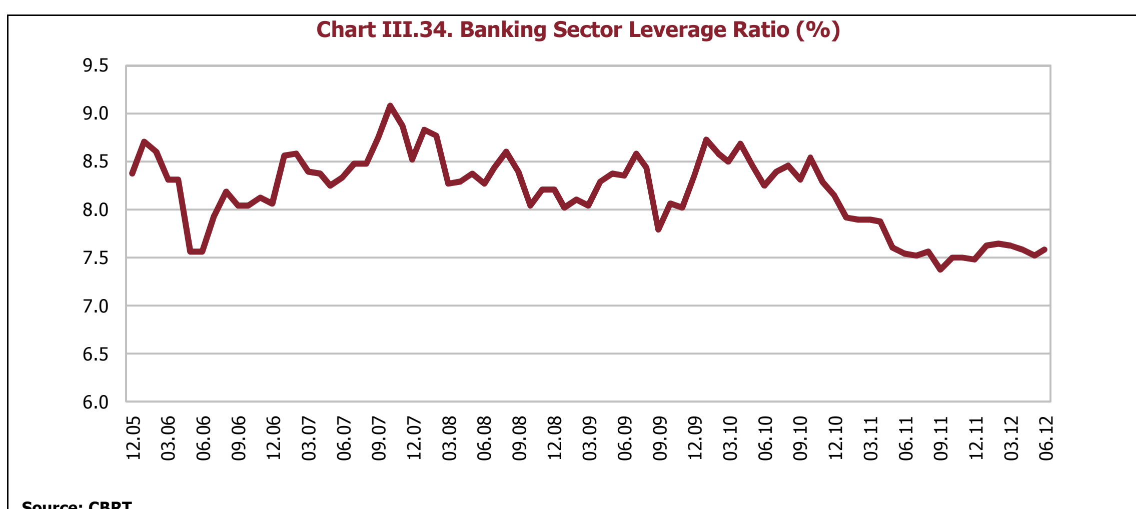
Table III.3. Bond and Bill Issues by Non-Bank Private Sector (Stock)

Nominal Amount	TL Denominated (Million TL)	FX Denominated (Million US dollar)
The realized issues approved by CMB	2.963	1.200
The non-realized issues approved by CMB	4.079	1.157
The applications to CMB	743	650
TOTAL	**7.784**	**3.007**

Source: CMB, ISE, PDP, BIS and the Press News

The leverage ratio that denotes the level of indebtedness of banks will also be implemented in Turkey as a supplementary to the capital adequacy ratios, within the scope of Basel III regulations. These regulations currently require banks to have a minimum leverage ratio of 3 percent. By June 2012, the Turkish banking sector had a leverage ratio of 7.6 percent, which is considered a positive indicator according to Basel III criteria. Continuity of the favorable trend in leverage ratios is important for restoring and sustaining financial stability (Chart III.34).

Chart III.34. Banking Sector Leverage Ratio (%)



Source: CBRT

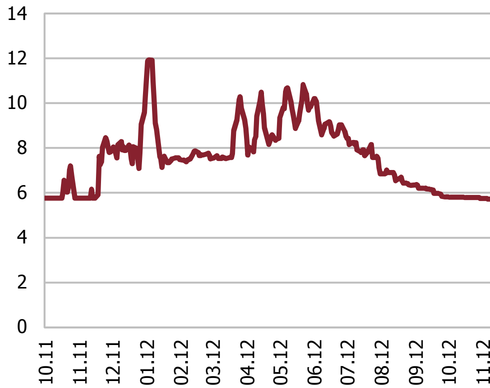
Box III.2. CBRT's Short-term Liquidity Measures

At its meetings in September, October and November the Monetary Policy Committee (MPC) kept policy rates and the lower limit of the interest rate corridor unchanged, while slightly decreased the upper limit of the corridor. Accordingly, the O/N lending rate has gradually been decreased to 9 percent; the interest rate on borrowing facilities provided for primary dealers via repo transactions has been decreased to 8.5 percent and the Late Liquidity Window Facility within the framework of overnight lending rates at the Interbank Money Market operating between 16:00-17:00 hours was cut to 12 percent.

The following are the MPC meeting dates and the announced amounts of daily funding via one-week quantity auctions: 21 February- between TL 3 - 7 billion; 27 March 2012-between TL 1 - 6 billion; 29 May 2012- between TL 1 - 5 billion; 19 July 2012-between TL 0.5 - 6.5 billion; 16 August 2012-between TL 0.5 - 7.5 billion; 18 October 2012-between TL 0.5 - 6.5 billion.

The upper limit for one-month repo auctions, which was decreased from TL 6 billion to TL 5 billion at the MPC meeting of 27 March 2012, was kept unchanged till September and was set as TL 3 billion and TL 4 billion in MPC meetings of 18 September 2012 and 18 October 2012, respectively.

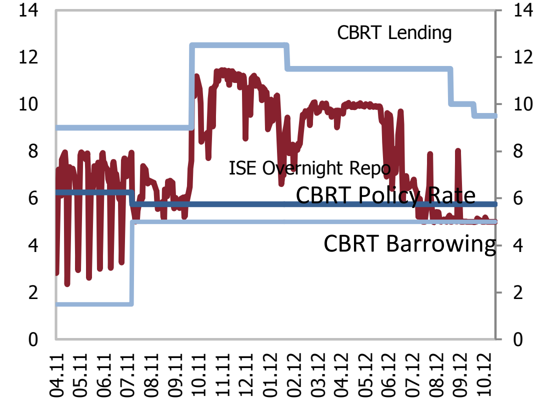
Chart III.35. CBRT Weighted Average Funding Cost (%)[1]



Source: CBRT

(1) CBRT weighted average funding cost is the weighted average cost of outstanding funds provided by the CBRT through Interbank Money Market (providing deposits) and Open Market Operations (ISE repo, primary dealer repo, weekly repo via quantity auction, weekly repo via traditional auction, monthly repo). Simple interest rates have been used in calculations.

Chart III.36. CBRT and Secondary Market Interest Rates (%)



Source: CBRT

With the increase of the upper limits of gold and foreign exchange held for Turkish lira reserve requirements, banks' Turkish lira liquidity needs and borrowings from the CBRT continued to decrease. By September 2012, the ratio of liquid assets to total assets declined by 2.3 percent compared to end-2011 and became 17.9 percent. This development is mainly attributable to the decrease in cash and cash equivalent assets due to the maintenance of a portion of Turkish lira required reserves as gold and foreign exchange in blocked accounts since 28 October 2011, despite the slight increase in the free securities (Chart III.37). Amounts held as foreign exchange and gold in blocked accounts (for Turkish lira reserve requirements) have been taken into account as average. As a result, 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 and hovering significantly above the legal ratio of 100 percent, have been rising since early 2012 (Chart III.38).

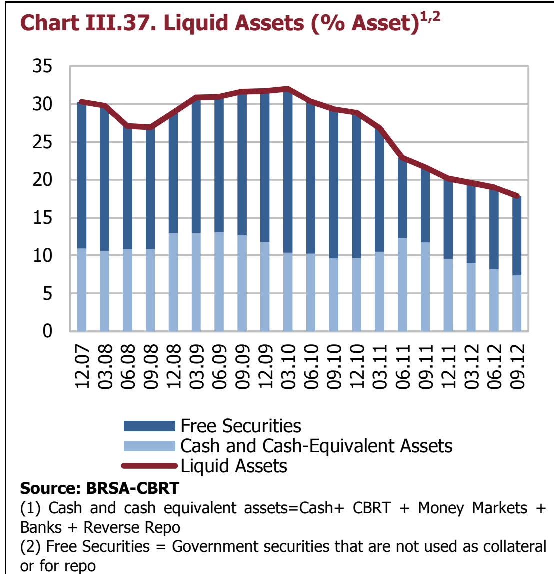


Chart III.37. Liquid Assets (% Asset)[1,2]

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

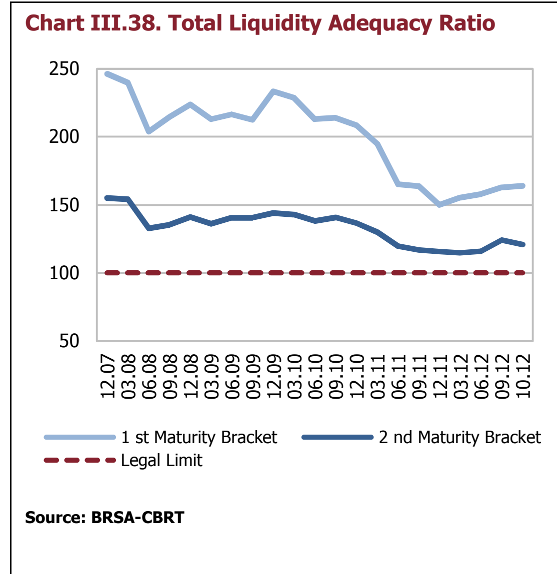


Chart III.38. Total Liquidity Adequacy Ratio

Source: BRSA-CBRT

Free securities, which are considered by the CBRT eligible collateral to meet the liquidity needs of banks in case of a temporary liquidity shortage, and the ratio of these securities to deposits have recently followed a relatively flat trend. Meanwhile, the ratio of the amount of borrowing to government securities, which had been on a downward trend until July 2012 on the back of the decline in borrowing from the ISE and CBRT, started to follow a horizontal course after the said date. These free securities, which were TL 129.6 billion at end-2011, remained almost flat and became TL 136.6 billion in October 2012. In the meantime, the ratio of the amount of borrowing from the ISE and CBRT to government securities, which had been on a downward track since early 2012 on account of the facilities allowing banks to hold Turkish lira reserve requirements in foreign exchange and gold, materialized as 35.9 percent in October 2012. The ratio of free government securities, which can be used by banks in the case of a liquidity shortage, to deposits followed a horizontal course and became 17.1 percent in October 2012 (Chart III.39, Chart III.40).

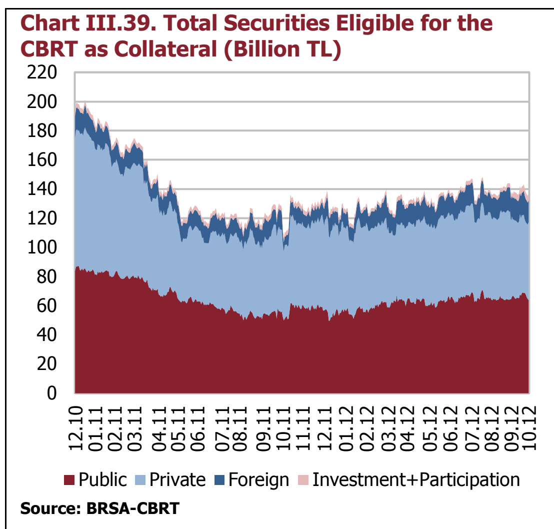


Chart III.39. Total Securities Eligible for the CBRT as Collateral (Billion TL)

Source: BRSA-CBRT

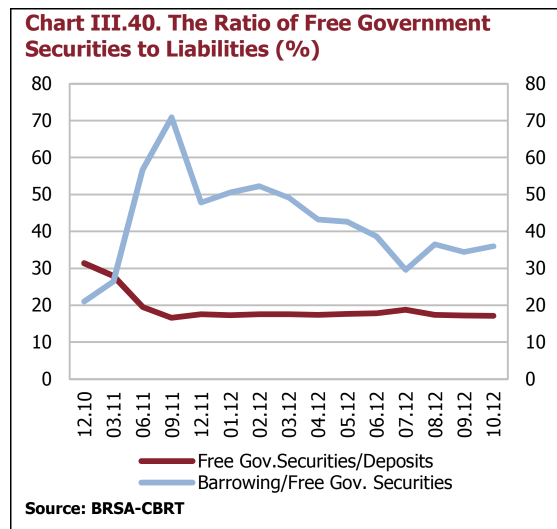


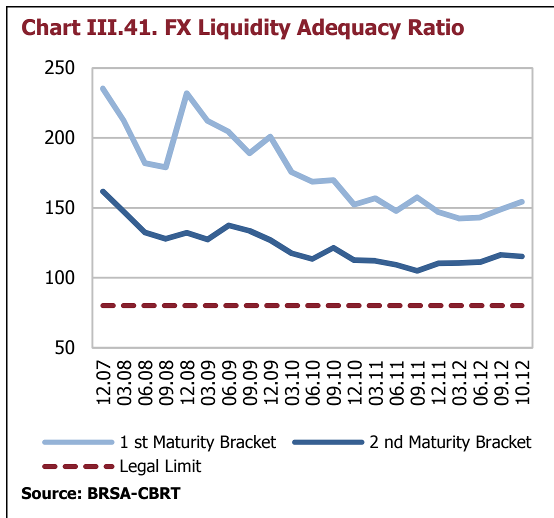
Chart III.40. The Ratio of Free Government Securities to Liabilities (%)

Source: BRSA-CBRT

Regarding foreign exchange liquidity adequacy ratios that are above legal limits, the 1st maturity bracket started to increase as of early 2012 (Chart III.41). The said increase is attributable to the fact that the amount of foreign exchange held in blocked accounts for Turkish lira reserve requirements has been taken into account as average in the calculation of legal liquidity ratios as per the Regulation on the Measurement and Assessment of Liquidity Adequacy of Banks.

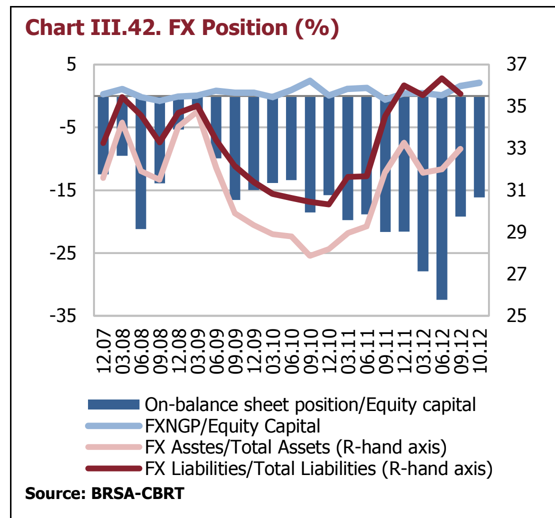
In the recent period, the share of FX assets has an upward tendency and that of FX liabilities has a downward one (Chart III.42). By September 2012, the ratio of FX assets including FX-indexed ones to total assets became 33 percent and the ratio of FX liabilities to total liabilities became 35.6 percent. The on-balance sheet short position, which is closed by off-balance sheet transactions mostly composed of swap transactions, posted a decline in October 2012. In the same period, while the ratio of on-balance sheet short position to equities was 16.1 percent, the ratio of foreign exchange net general position to total equity, calculated by taking into account off-balance sheet transactions as well, was 2.1 percent. Currency swaps executed to obtain Turkish lira in exchange for foreign currency started to decrease as of mid-2012 due to the facility provided to banks for the allocation of their FX funds for maintenance of Turkish lira reserve requirements owing to the application of ROC.

Chart III.41. FX Liquidity Adequacy Ratio



Source: BRSA-CBRT

Chart III.42. FX Position (%)



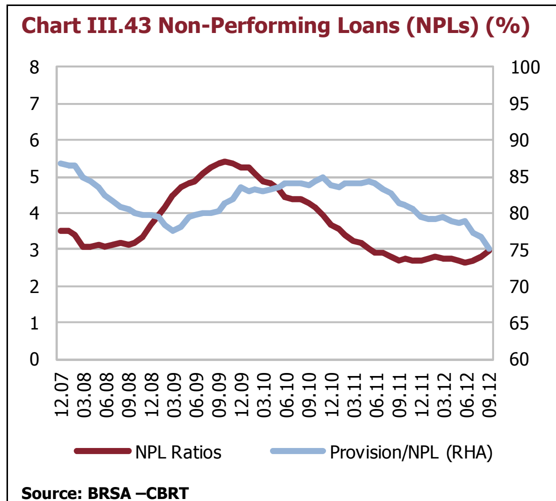
Source: BRSA-CBRT

The decline in NPL ratios prevailing since 2010 has ended as expected. In September 2012, the amount of NPLs of the sector increased by TL 4 billion compared to end-2011 and reached TL 23 billion. The increase in the amount of NPLs is mainly attributable to the increase of NPLs within the category of other corporate loans. Among the retail loans category, the other consumer loans item posted the highest increase in terms of the NPL amount. The NPL ratio that had declined in 2010 followed a flat course from end-2011 and materialized as 2.9 percent in September 2012. An analysis by types of loans indicates that the highest NPL ratios are seen in loans extended to micro-sized enterprises and credit cards. Considering the 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.43, Table III.4).

Pursuant to an amendment to BRSA regulation on 21 September 2012, the BRSA is authorized to set higher provision rates than those stipulated in the regulation considering the risk status of the sectors and countries that will utilize loans. Banks will assess their collaterals in terms of impairment in the event of any development that might engender a risk or at reasonable intervals. Moreover, in the

event that a customer's non-cash credit or his/her debt arising from derivative transactions is considered to be a non-performing loan due to the conversion of the customer's cash credit into a non-performing loan, special provisions will be set aside according to the conversion rates of the said amounts, rather than the total sum. However, the total sum of these amounts will be considered as a non-performing loan as of the date they turn into cash.

Chart III.43 Non-Performing Loans (NPLs) (%)



Source: BRSA –CBRT

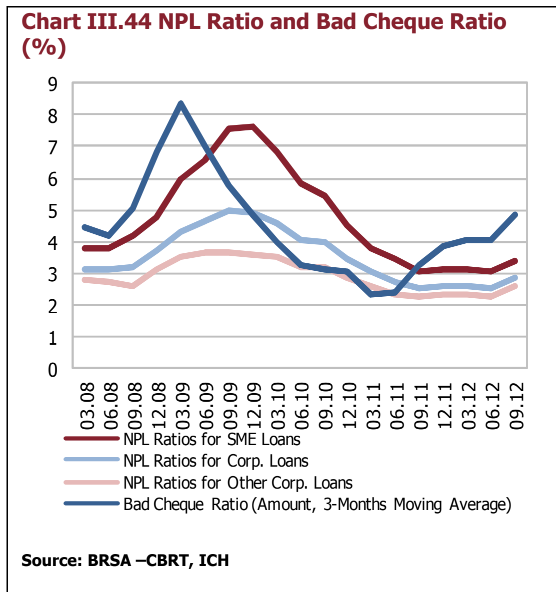
Table III.4. NPL Ratios (%)

	2010	2011	09.12
Total Loans	3.7	2.7	2.9
Corporate	3.4	2.6	2.9
-SME Loans	4.5	3.1	3.4
--Micro	6.7	4.3	4.1
--Small	4.1	2.9	3.4
--Medium	2.8	2.2	2.7
-Other Corp. L.	2.8	2.3	2.6
Retail Loans	4.1	2.9	3.1
-Consumer Loans	2.7	1.9	2.2
--Housing	1.4	0.9	0.8
--Vehicle	6.0	3.3	3.5
--Other	3.7	2.6	3.1
-Credit Cards	8.0	5.9	5.5

Source: BRSA –CBRT

Although there is no database on the total number of cheques used in Turkey, cheques submitted to the Interbank Cheque Clearing Houses Center (ICH) are considered to be a significant indicator. The upward trend in the ratio of bad cheques presented to the ICH to the total amount of cheques prevailing since the second half of 2011 has continued with increased pace (Chart III.44). When default rates are analyzed by sectors, it is observed that the improvement seen in 2011 ended in 2012 (Table III.5).

Chart III.44 NPL Ratio and Bad Cheque Ratio (%)



Source: BRSA –CBRT, ICH

Table III.5. Default Rates by Sectors[1]

	2009	2010	2011	09.12
Agriculture,Hunting,Wood Product Industry	19.7	17	10.8	10.5
Food, Beverage and Tobacco Industry	13.4	12.2	9.8	10.8
Textile and Textile Product Industry	15.5	14.5	12	13.2
Main Metal Industry	9.9	8.6	6.8	7.1
Machine and Equipment Industry	8.6	7.5	6.4	6.9
Electric, Gas and Water Resources	7.5	7.5	5.5	5.5
Construction	10.2	9.5	7.6	8.4
Wholesale Trade and Brokerage	11.8	21.3	11.3	13.4
Hotels and Restaurants	11.1	10.3	8	8.7
Transportation, Storage and Communication	9	8.2	5.3	5.3
First 10 Sector	**13.2**	**16.8**	**10.0**	**10.9**

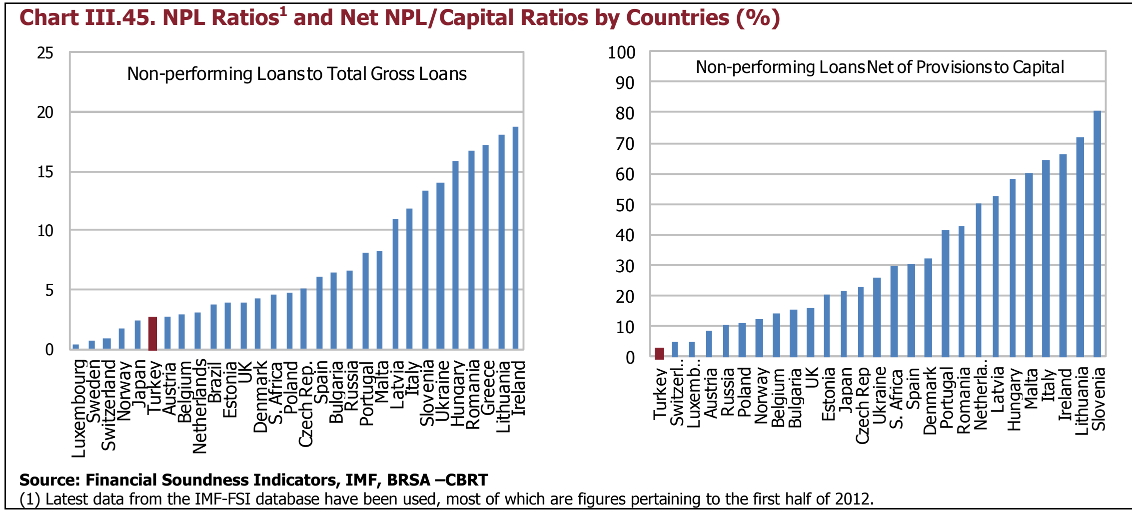
Source: BRSA –CBRT

(1) The default rate is the ratio of the number of firms with non-performing loans to that of firms with both performing and non-performing loans.

Due to the problems in the banking systems of some European countries and persisting global uncertainties, NPL ratios of these countries remain quite high compared to the Turkish banking system. Because of the general tendency of deceleration in the extension of loans due to the deleveraging process and contraction of financing facilities of these countries as well as economic underperformance, NPL ratios of many countries hover around high levels.

Compared to other advanced and emerging economies, the Turkish banking system shines with its strong asset quality (Chart III.45).

Chart III.45. NPL Ratios[1] and Net NPL/Capital Ratios by Countries (%)



Source: Financial Soundness Indicators, IMF, BRSA –CBRT

(1) Latest data from the IMF-FSI database have been used, most of which are figures pertaining to the first half of 2012.

The banking sector has maintained its strong profitability performance in the third quarter of 2012 as well. In the first nine months of 2012, the net profit of the banking sector increased by 16.9 percent year-on-year and became TL 17.1 billion. This increase was mainly driven by the surge in net interest income. Meanwhile, the increase in non-interest expenses due to the increase in operational expenses and other provisions and the rise in special provisions for non-performing loans had an adverse impact on the net profit of the banking sector.

By September 2012, the return on equity increased by 0.2 points compared to end-2011 and became 14.5 percent. Besides, it is noteworthy that the return received is above the benchmark interest rate (Chart III.46). In the same period, while the return on assets surged by 0.1 points to reach 1.8 percent, the net interest margin increased by 0.4 points to become 3.9 percent. In the mentioned period, the ratio of net trading income to average assets surged due to the fact that losses from FX transactions turned into profit, and the ratio of special provisions for non-performing loans to average assets displayed a rise on the back of the surge in special provisions for non-performing loans. (Chart III.47).

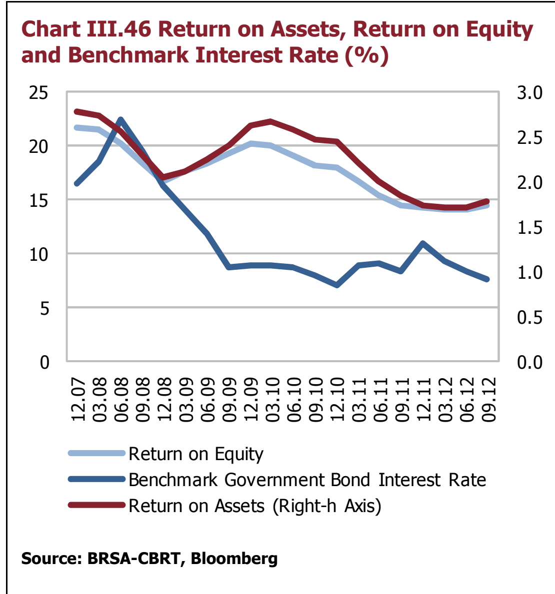


Chart III.46 Return on Assets, Return on Equity and Benchmark Interest Rate (%)

Source: BRSA-CBRT, Bloomberg

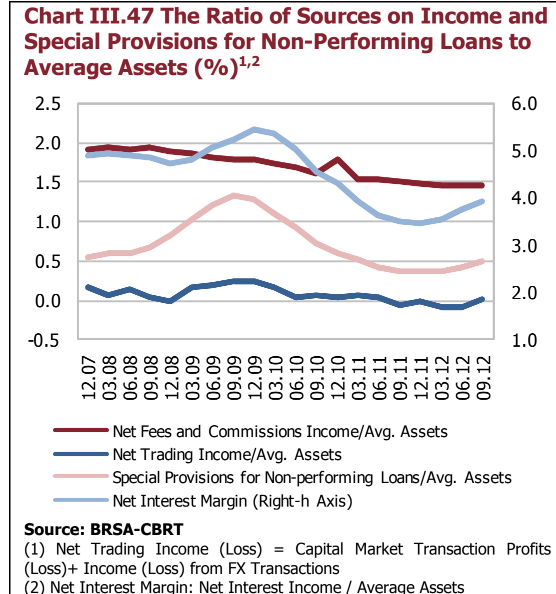


Chart III.47 The Ratio of Sources on Income and Special Provisions for Non-Performing Loans to Average Assets (%)[1,2]

Source: BRSA-CBRT

(1) Net Trading Income (Loss) = Capital Market Transaction Profits (Loss)+ Income (Loss) from FX Transactions

(2) Net Interest Margin: Net Interest Income / Average Assets

Profitability performance indicators of the banking sector maintain their high levels compared to those of many advanced and emerging economies. The return on equity and return on assets of the Turkish banking sector are well above those of other countries (Chart III.48).

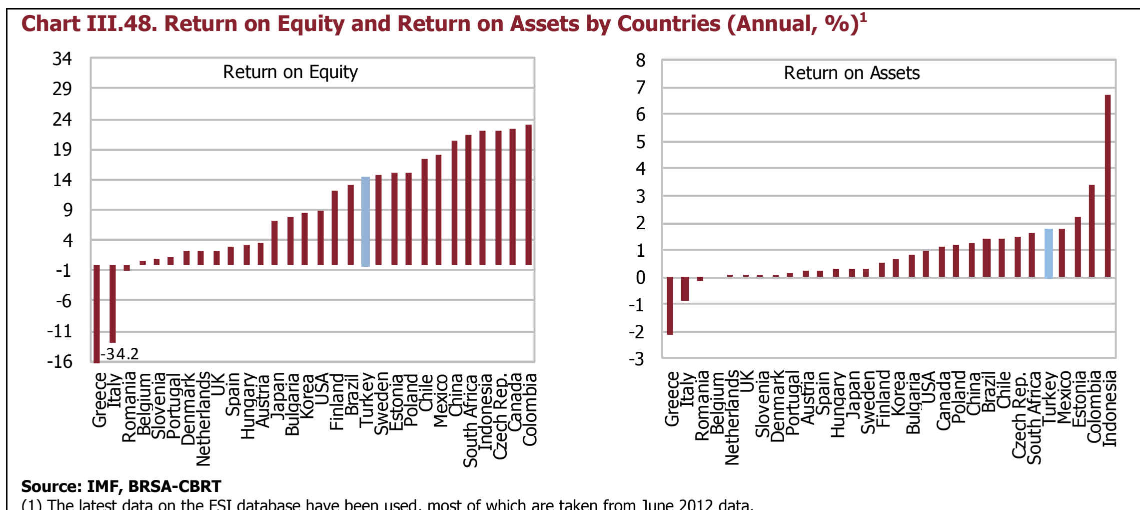


Chart III.48. Return on Equity and Return on Assets by Countries (Annual, %)[1]

Source: IMF, BRSA-CBRT

(1) The latest data on the FSI database have been used, most of which are taken from June 2012 data.

With the regulation by the BRSA, calculations of the legal capital adequacy ratios have been based on the Basel II framework since July 2012. Hence, the Basel II framework has had a limited impact on the capital adequacy ratio (CAR) of the banking sector. By September 2012, the sector's CAR declined by only 0.1 points compared to end-2011, whereas it remained unchanged compared to the ratio reported on June 2012, before Basel II implementation and materialized as 16.5 percent. Moreover, for all reporting periods, the sector's CAR has been well above the legal limit of 8 percent and the target ratio of 12 percent. Besides, the ratio of Tier 1 capital within own funds was 88 percent, which denotes the quality of the capital. In fact, by September 2012, the Tier 1 capital ratio materialized quite high, at 14.5 percent (Chart III.49). Furthermore, the ratio of the sector's equities to total assets increased by approximately 1 point compared to end-2011 and became 12.8 percent (Chart III.50). The improvement in profitability performance of the sector and the increase in the securities increment value fund have a positive impact on the equity capital structure of the banking sector. In addition, the ongoing implementation imposing restrictions on

banks in the distribution of profits, introduced by the BRSA, contributed to the formation of a significant amount of legal reserves, which also adds to the positive impact.

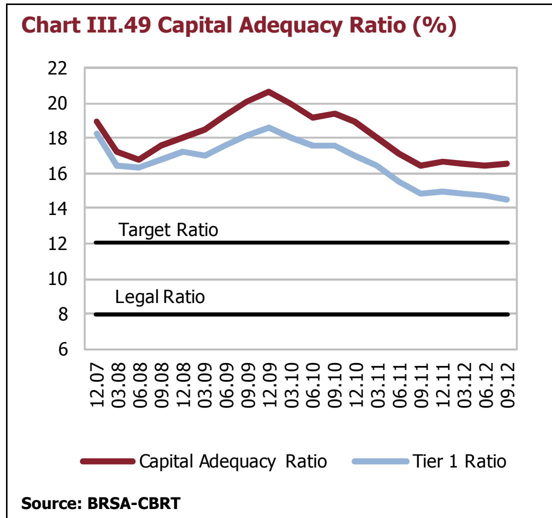


Chart III.49 Capital Adequacy Ratio (%)

Source: BRSA-CBRT

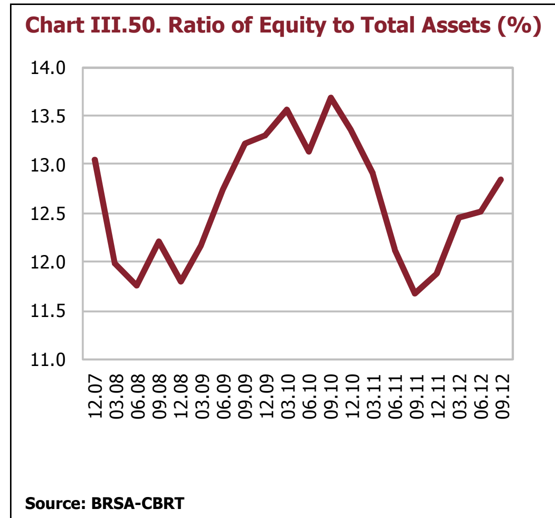


Chart III.50. Ratio of Equity to Total Assets (%)

Source: BRSA-CBRT

The Turkish banking sector has a high capital adequacy ratio. Compared to other countries, Turkey is one of the countries that enjoy high ratios with regard to the capital adequacy ratio, Tier 1 capital ratio, and the ratio of equity to total assets (Chart III.51).

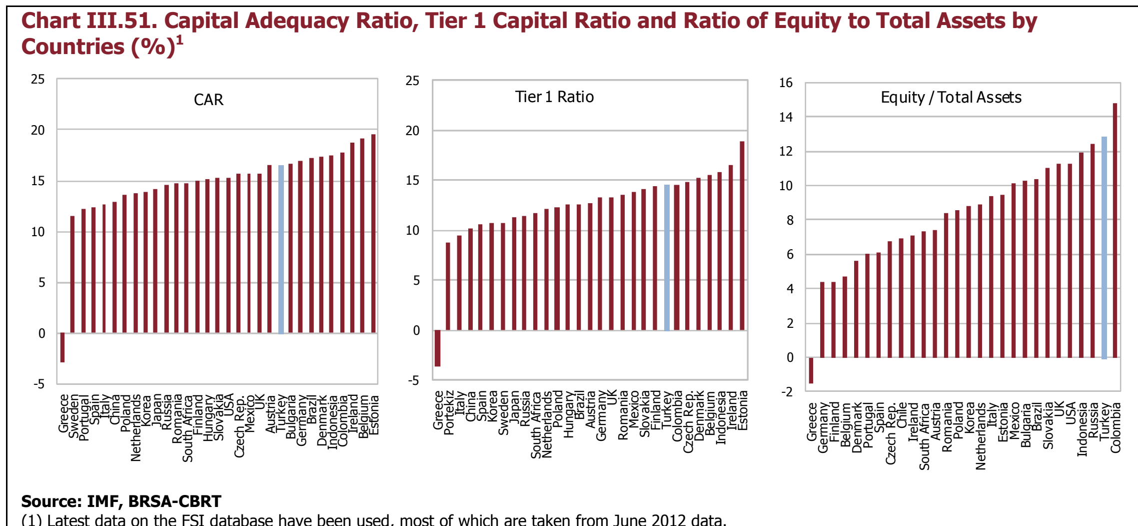


Chart III.51. Capital Adequacy Ratio, Tier 1 Capital Ratio and Ratio of Equity to Total Assets by Countries (%)[1]

Source: IMF, BRSA-CBRT

(1) Latest data on the FSI database have been used, most of which are taken from June 2012 data.

The share of total risk exposure of the banking sector in total assets continues to rise. By September 2012, the said ratio increased by five points compared to end-2011 mainly due to the credit risk and became 83.2 percent (Chart III.52). In the same period, the ratio of free capital to total assets surged by 0.4 points to become 7.1 percent (Chart III.53). This surge was mainly driven by the increase in equities.

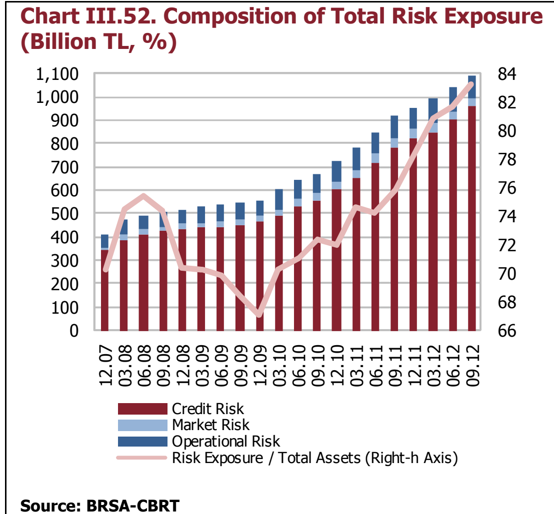


Chart III.52. Composition of Total Risk Exposure (Billion TL, %)

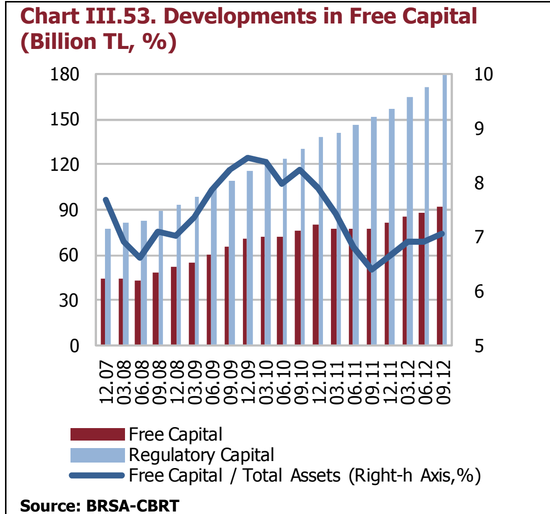


Chart III.53. Developments in Free Capital (Billion TL, %)

With the publication of the Banking Regulation and Supervision Agency's Regulation on Measurement and Evaluation of Capital Adequacy of Banks (the Regulation) in the Official Gazette of 28 June 2012, the Basel II framework became operative. Taking into consideration the country-specific conditions and by adopting a more prudential stance, the Turkish banking system was adjusted to Basel II principles upon the enforcement of the above-mentioned Regulation. Accordingly, exposures secured by mortgages on residential property with 35 percent risk weight pursuant to EU legislation are subject to 50 percent risk weight in the Regulation. Besides, of credit card receivables, the amount of installment payments with residual maturities from 6 to 12 months is subject to 150 percent risk weight, while that of installment payments with residual maturities exceeding 12 months is subject to 200 percent risk weight, according to the Regulation. Likewise, as stipulated by the Regulation, other consumer loans with a residual maturity from 1 to 2 years have a risk weight of 150 percent, whereas those with a remaining maturity longer than two years have a risk weight of 200 percent. The said items are subject to a risk weight of 75 percent according to international practice.

Box III.3. Quantitative Impact Study on Basel III

The preliminary studies for Basel III implementation have started in Turkey and it is planned to be incorporated into the national legislation and applied by the BRSA in concordance with the timetable set by the Basel Committee.

In 2010, the Basel Committee launched a comprehensive quantitative impact study to assess the effect of Basel III. The Committee has recently carried out a quantitative impact study by using the end-2011 data of a total of 209 banks. Of these 209 banks, 102 are Group 1 banks and 107 are Group 2 banks. Group 1 banks are those that have Tier 1 capital in excess of r 3 billion euros and are internationally active. All other banks are considered Group 2 banks.

The quantitative impact study found that the common equity Tier 1 ratio for Group 1 banks decreased from 10.4 to 7.7 percent, for Group 2 from 10.4 to 8.8 percent. The study shows that Tier 1 capital ratio for Group 1 banks decreased from 11.7 to 8 percent and total capital ratio from 14.2 to 9.2 percent. The decline in the same ratios of Group 2 banks is less remarkable. Accordingly, while Tier 1 capital ratio decreased from 11 to 9.2 percent; ratio of total capital decreased from 14.3 to 11 percent (Table 1). According to the results of the study, as compared to current risk-weighted assets, total risk-weighted assets increased by 18.1 percent for Group 1 banks and by 7.5 percent for Group 2 banks. These increments were mainly driven by counterparty credit risk, trading book exposures and securitization exposures.

Table 1. Results of the Quantitative Impact Study on Basel III

	Minimum Basel III Ratios (%)		Realized Ratios (%)	
	Minimum Ratio	Minimum Ratio Plus Capital Conservation Buffer	Current Practice	Basel III
Group 1				
Common Equity Tier 1 Capital	4.5	7.0	10.4	7.7
Tier 1 Capital	6.0	8.5	11.7	8.0
Total Capital	8.0	10.5	14.2	9.2
Group 2				
Common Equity Tier 1 Capital	4.5	7.0	10.4	8.8
Tier 1 Capital	6.0	8.5	11.0	9.2
Total Capital	8.0	10.5	14.3	11.0

Source: BIS

6 banks from Turkey participated in the study as Group 1 banks. The capital adequacy ratio, which is calculated by taking the weighted average according to the asset size of the 6 banks, is well above the 8 percent of minimum ratio and the 10.5 percent of minimum ratio including the conservation buffer and this suggests that Turkish banking sector will unlikely have any problems in harmonizing with the Basel III principles in the criteria of capital adequacy.

Scenario analyses, which test the resilience of the banking sector to shocks coming from credit and market movements, show that the sector has the capacity to absorb shocks. As of September 2012, according to the scenario analysis applied, even when exchange rates, Eurobond returns, interest rates and NPLs are exposed to maximum shocks simultaneously, the capital adequacy ratio materializes as 7.9 percent which is slightly under the legal ratio (Table III.6, Chart III.54).

Table III.6 Scenarios Applied[1]

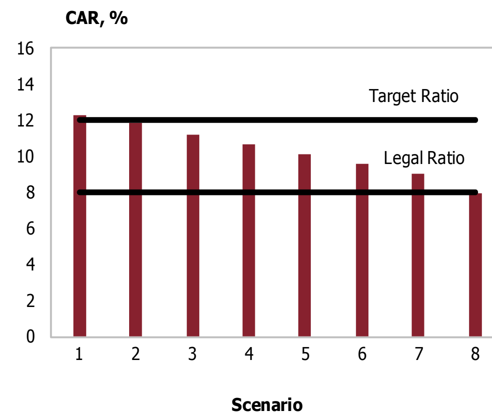
Scenario	Exchange Rate (% increase)	Eurobond (% loss of value)	Interest Rate (point increase)[2]	NPL (point increase)
1	30.0	15.0	10.0	3.0
2	31.5	15.8	10.5	4.0
3	33.0	16.5	11.0	5.0
4	34.5	17.3	11.5	6.0
5	36.0	18.0	12.0	7.0
6	37.5	18.8	12.5	8.0
7	39.0	19.5	13.0	9.0
8	40.5	20.0	13.5	11.0

Source: CBRT

(1) In scenario analysis, taking into account also 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 lira interest rate. In the shocks applied to commercial portfolios, impairment is about 17 percent on sectoral basis. Effective Eurobond shocks are three times the table figures.

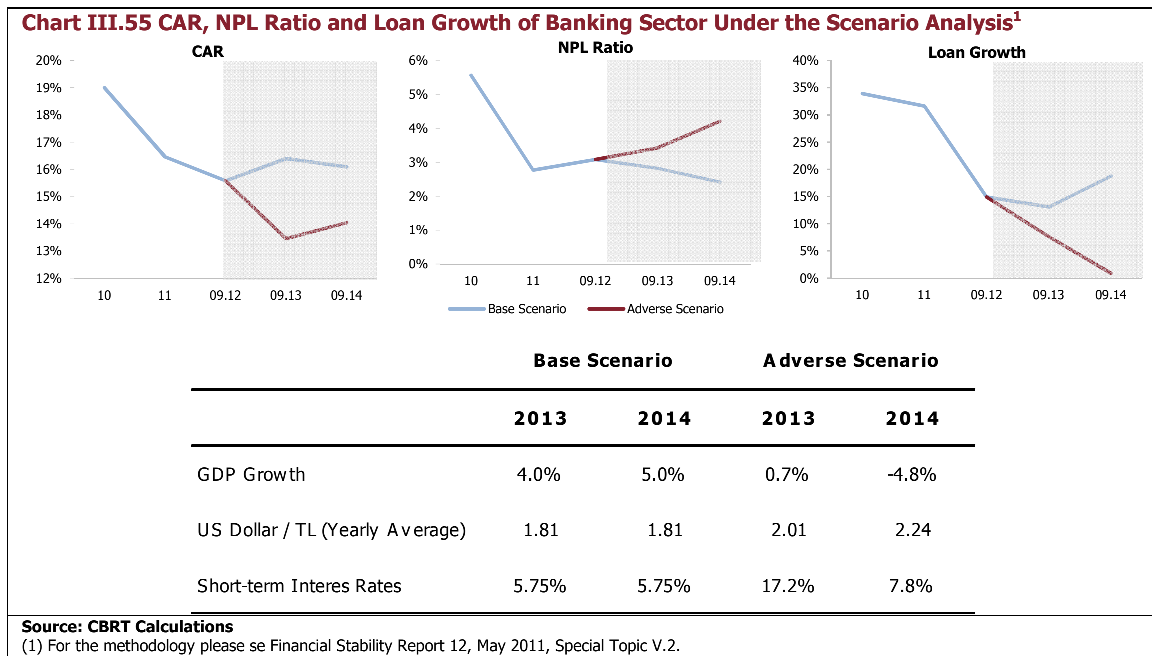
Chart III.54 Results of Scenario Analysis



Source: CBRT

Meanwhile, according to the macro scenario analysis, it is observed that a potential adverse macro-economic situation due to a global crisis similar to the one in 2008 does not lead to a significant deterioration in the sector's NPL ratio and capital adequacy and that the sector remains robust. Within the context of the analysis, while under the adverse scenario, the NPL ratio of the sector is estimated to increase up to 4.2 percent; under the base case, the said ratio is estimated to fall down to 2.4 percent. Under the baseline scenario, the CAR of the sector rises to 16.4 percent by the third quarter of 2014, yet only three banks remain below the 12 percent target ratio. Under the adverse scenario, the CAR declines to 14 percent in the third quarter of 2014 (Chart III.55). Under the adverse scenario, while eight banks remain below the target ratio, no bank remains under the legal limit of 8 percent. The maturity structure (shorter maturities) of the sector liabilities in times of crisis dominated by plummeting inflation and interest rates, which makes the sector inclined to be positively affected by re-pricing, and the limited increase in the NPL ratio can be cited as the most important factors that ensure the resilience of the banking sector in the face of the stress test.

Chart III.55 CAR, NPL Ratio and Loan Growth of Banking Sector Under the Scenario Analysis[1]



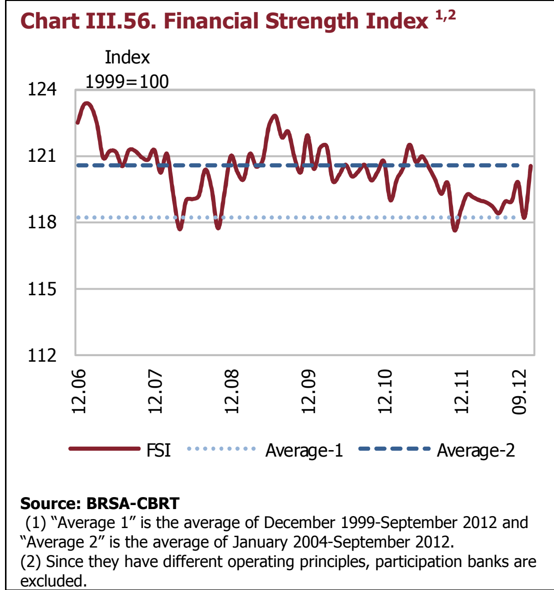
	Base Scenario		Adverse Scenario	
	2013	2014	2013	2014
GDP Growth	4.0%	5.0%	0.7%	-4.8%
US Dollar / TL (Yearly Average)	1.81	1.81	2.01	2.24
Short-term Interes Rates	5.75%	5.75%	17.2%	7.8%

Source: CBRT Calculations
(1) For the methodology please se Financial Stability Report 12, May 2011, Special Topic V.2.

Banking indicators suggest that the sector continues to broadly present a favorable outlook. The asset quality of the sector improved compared to that of the crisis period and followed a parallel trend with that of the previous reporting period. However, the amount of NPLs has recently increased and accordingly, the NPL ratio has also risen by a small margin. Nevertheless, profitability performance indicators have started to trend upwards owing to the improvement in the sector's net interest income. The CAR of the sector remains high on the back of the improvement in profitability performance and the slowdown in the credit growth rate. Although the on-balance sheet FX short position has been on the rise since end-2011, it is counter-balanced by the off-balance sheet long position; hence the FX net general position maintains its low level. 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; yet, an increase is observed particularly in non-core funding. Due to

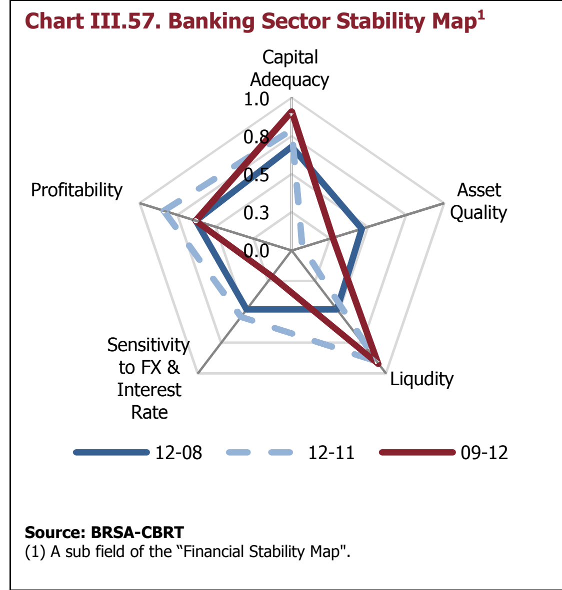
all these changes, the financial strength index (FSI) became 119.8 in September 2012 and the sector remains strong (Chart III.56, Chart III.57).

Chart III.56. Financial Strength Index [1,2]



Source: BRSA-CBRT
(1) "Average 1" is the average of December 1999-September 2012 and "Average 2" is the average of January 2004-September 2012.
(2) Since they have different operating principles, participation banks are excluded.

Chart III.57. Banking Sector Stability Map[1]



Source: BRSA-CBRT
(1) A sub field of the "Financial Stability Map".