

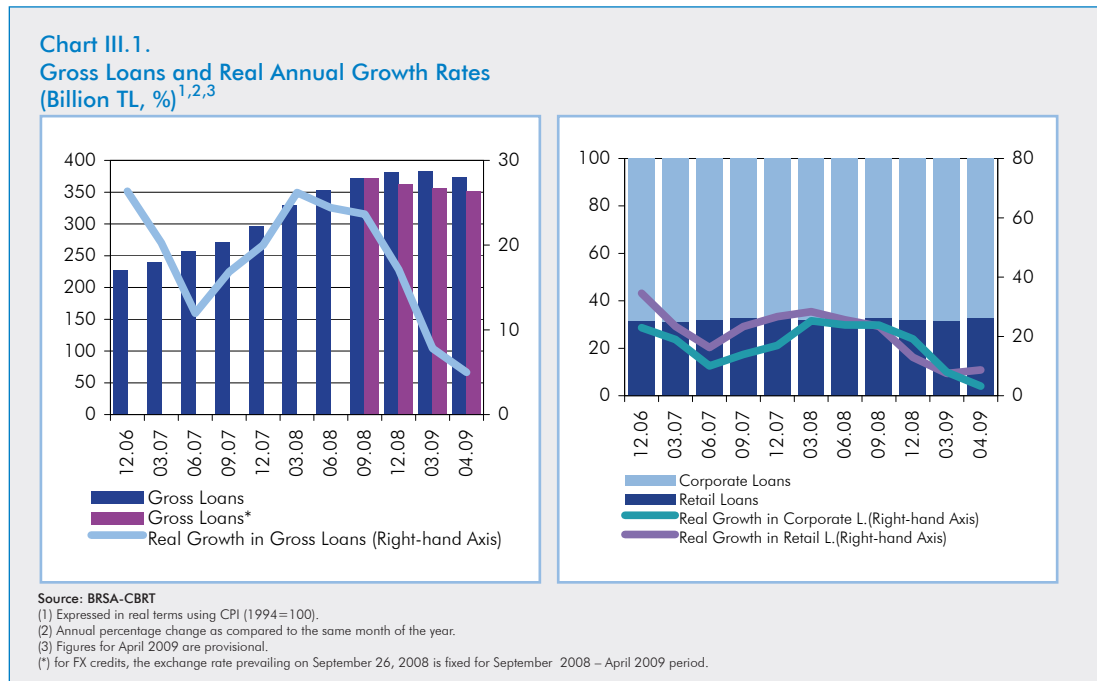
III. BANKING SECTOR RISKS

III.1. Credit Risk and Scenario Analysis

III.1.1. Credit Portfolio

Not only the fall in credit supply, which was due to contraction and thus the increased cost of the banking sector's international funding sources as a result of the crisis in the global markets and accompanying anxiety about the increase in defaults, but also the fall in demand for credit, stemming from the slowdown of economic activity, led to a decrease in credit volume.

Nonetheless, a limited recovery has been seen in loans lately as a result of positive developments in the global risk perceptions and the impact of monetary policy rate cuts on the domestic market rates.

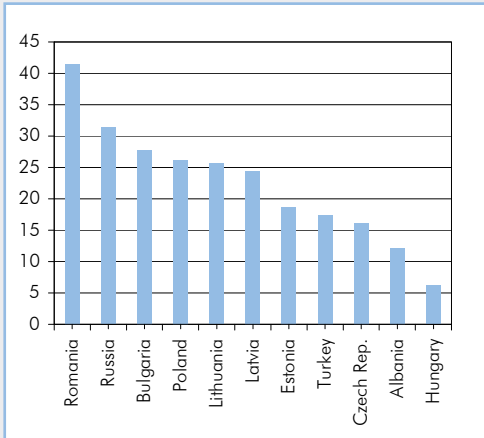


The real rate of growth in gross credit volume slowed down after the first quarter of 2008 and this trend continued in 2009. However, in April 2009, credits increased in real terms by 5 percent annually and amounted to TL 373.8 billion (Chart III.1).

Although the credit volume seemed to increase except in April 2009, the increase after September 2008 was mainly due to the increase in FX credits in TL terms due to the depreciation of TL. As a matter of fact, the total credit volume decreased when the exchange rate for September 2008 has been fixed for the period between September 2008 and April 2009 (Chart III.1).

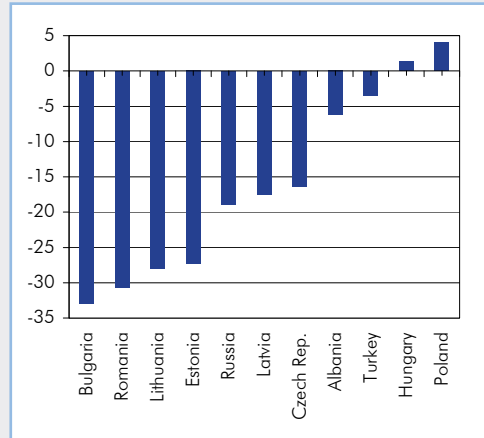
While the real growth rates of corporate and retail loans decreased since September 2008, with the effect of campaign of state banks on consumer loans, the real growth rate of retail loans increased slightly in April 2009 (Chart III.1).

Chart III.2.
Average Real Credit Growth in Selected Countries for 2006-2008 (%)



Source: IMF International Financial Statistics

Chart III.3.
Real Credit Growth Differences between 2008 and 2007 for Selected Countries (Points)



Source: IMF International Financial Statistics

When compared with some Central and Eastern European countries, the average real credit growth for the last three years was moderate in Turkey and also the decrease in real rate of growth of credits was limited for the 2007-2008 period (Chart III.2 and Chart III.3).

Table III.1. Selected Credit Ratios^{1,2} (Million TL, %)

	2006	2007	09.08	2008	04.09
First 5 Banks					
Total Gross Loans	127,494	162,452	204,063	211,543	202,265
Share in Total Gross Loans	56.0	54.9	54.8	55.5	54.1
NPLs / Total Gross Loans	4.01	3.84	3.13	3.66	4.56
Loans / Deposits	79.9	88.8	93.6	89.4	86.3
First 10 Banks					
Total Gross Loans	183,154	236,833	298,601	309,321	301,400
Share in Total Gross Loans	80.5	80.0	80.1	81.1	80.6
NPLs / Total Gross Loans	3.83	3.63	3.03	3.54	4.39
Loans / Deposits	68.5	77.2	82.6	79.0	76.4
Sector					
Total Gross Loans	227,537	295,962	372,716	381,497	373,843
NPLs / Total Gross Loans	3.76	3.50	3.12	3.68	4.60
Loans / Deposits	74.0	82.9	89.0	83.9	81.8

Source: BRSA-CBRT

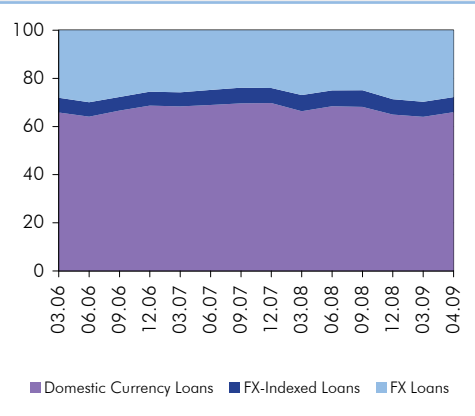
(1) The first 5 and 10 banks have been taken into consideration according to their gross loans.

(2) Figures for April 2009 are provisional.

By April 2009, the share in total loans of the first five banks that extended the majority of loans decreased by 0.7 percentage points, compared to September 2008, while the share of first ten banks rose by 0.5 percentage points.

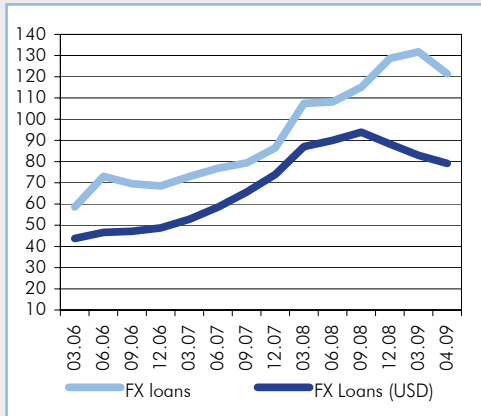
Loans to deposits ratio of the banking sector increased during recent years, owing to the growing credit volume of the sector, but it started to decline since the last quarter of 2008. The said ratio reached its highest value of 89 percent in September 2008 and with the effect of tightened credit conditions, it started to diminish after this date and dropped to 81.8 percent by decreasing 7.2 percentage points in April 2009 (Table III.1).

Chart III.4.
Currency Composition of Loans
(%, Excluding NPLs)¹



Source: BRSA-CBRT
(1) Figures for April 2009 are provisional.

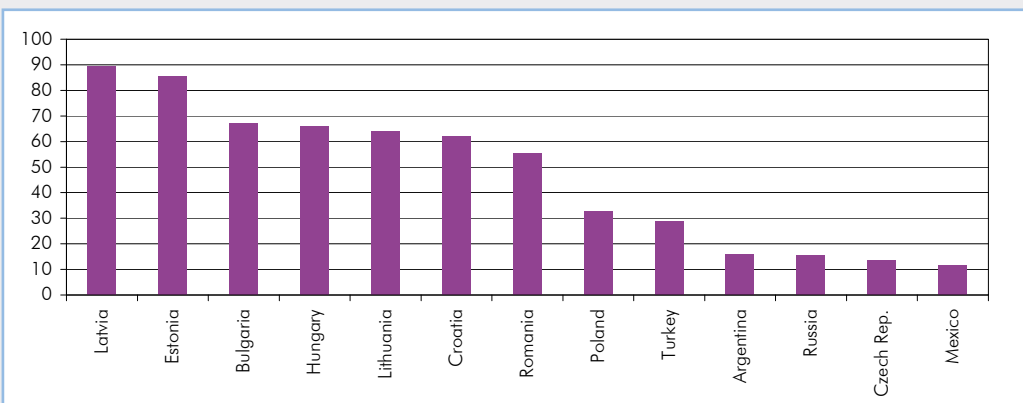
Chart III.5.
FX Loans
(Billion TL-USD, Excluding NPLs)^{1,2}



Source: BRSA-CBRT
(1) Figures for April 2009 are provisional.
(2) Converted to USD using the CBRT buying exchange rate as of month-end.

Due to depreciation of TL, the share of FX loans⁷ increased by 4.1 percentage points in March 2009, compared to September 2008. However, the share of FX loans decreased slightly to 34 percent and amounted to TL 121.4 billion in April 2009 due to the appreciation of TL. Nonetheless, the USD equivalent of FX loans decreased by 15.7 percent during September 2008 – April 2009 (Chart III.4 and Chart III.5).

Chart III.6.
Share of FX Credits in Total Credits for Selected Countries (2008) (%)



Source: IMF Global Financial Stability Report (April 2009)

Although the share of FX loans in total loans was mostly over 50 percent for new EU member countries at the end of 2008, the same ratio was approximately 29 percent for Turkey (Chart III.6).

The high level of exchange rate volatility during global financial crisis caused an increase

⁷ FX-indexed loans are considered within the scope of foreign currency loans.

in both risk premiums and vulnerability of the countries where the share of FX loans in total loans is high. The fact that the share of these loans is low in Turkey came forward as one of the most important factors that limited the effects of crisis on the banking sector.

Table III.2. Loan Distribution by Size (% , Excluding NPLs)

	Total Loans				Number of Customers			
	2007	09.08	2008	03.09	2007	09.08	2008	03.09
Greater than TL 1 Million	40,6	43,5	46,3	48,1	0,06	0,06	0,07	0,06
Between TL 501 Thousand-1 Million	5,0	4,8	4,3	4,0	0,06	0,06	0,06	0,05
Between TL 101-500 Thousand	13,6	12,6	11,4	10,6	0,56	0,56	0,60	0,53
Between TL 51-100 Thousand	7,8	7,6	7,2	6,9	0,89	0,94	1,03	0,96
Less than TL 51 Thousand	33,1	31,5	30,9	30,4	98,43	98,38	98,25	98,40
Total	100	100	100	100	100	100	100	100

Source: BRSA-CBRT

The distribution of loans by size suggests that only the share of loans over TL 1 million increased throughout 2008 and first quarter of 2009. This is partly due to the high weight of FX loans within this group of loans (Table III.2).

Table III.3. Maturity Structure of the Loans (% , Excluding NPLs)

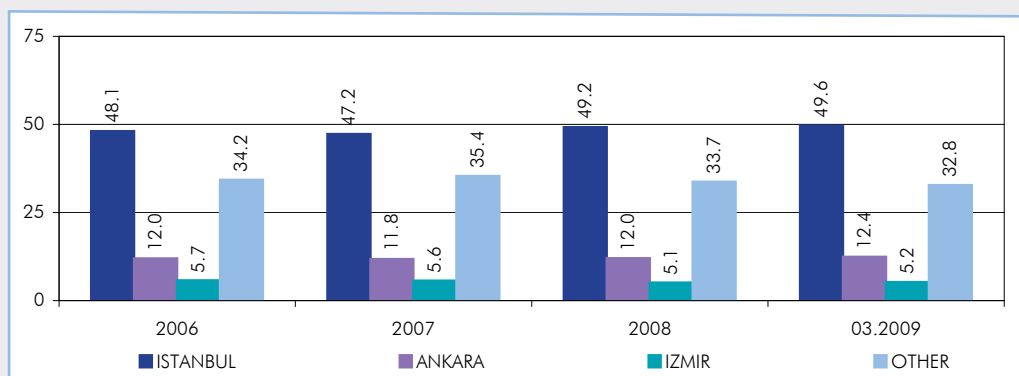
	2007	09.08	2008	03.09
Short Term Loans	45.9	44.6	42.8	42.0
Medium and Long Term Loans ¹	54.1	55.4	57.2	58.0

Source: BRSA-CBRT

(1) The maturity of credit in this group is more than a year

Until September 2008, the share of long-term loans has been increasing especially due to the fact that the share of retail loans in total loans has been increasing and most of these loans are housing and other consumer loans with a maturity over 24 months. In March 2009, despite the tightened credit conditions, this trend did not change and the share of these credits increased to 58 percent (Table III.3). However, this development is partly related with the increase in FX credits due to depreciation of TL.

Chart III.7.
Distribution of Loans by Provinces (%)¹

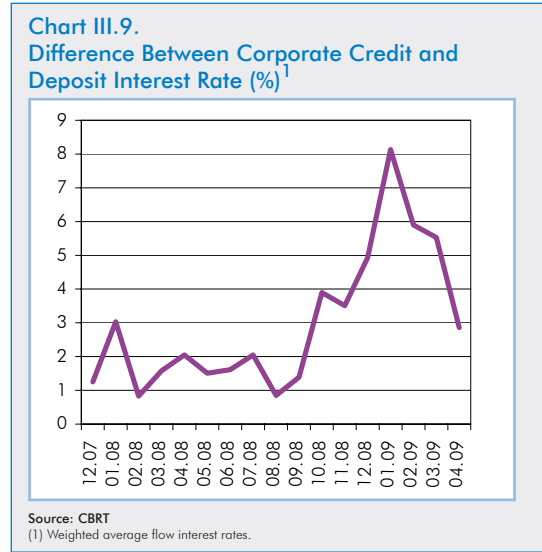
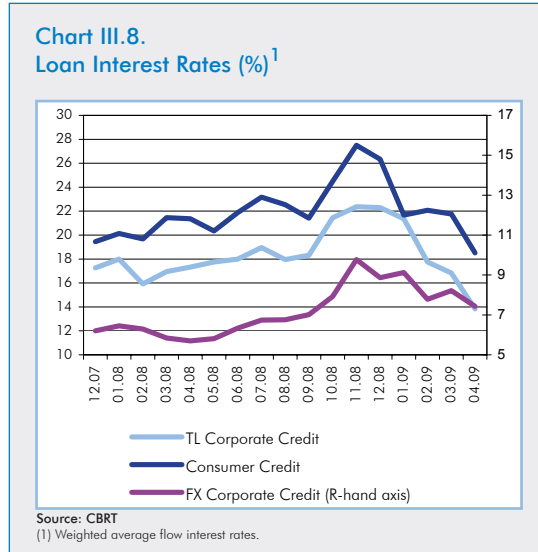


Source: CBRT

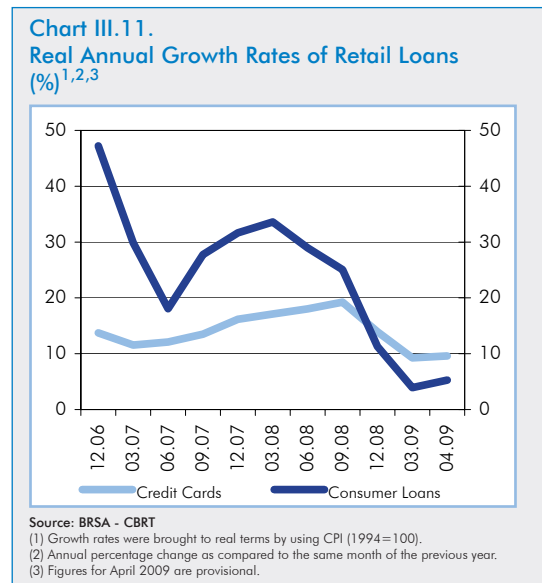
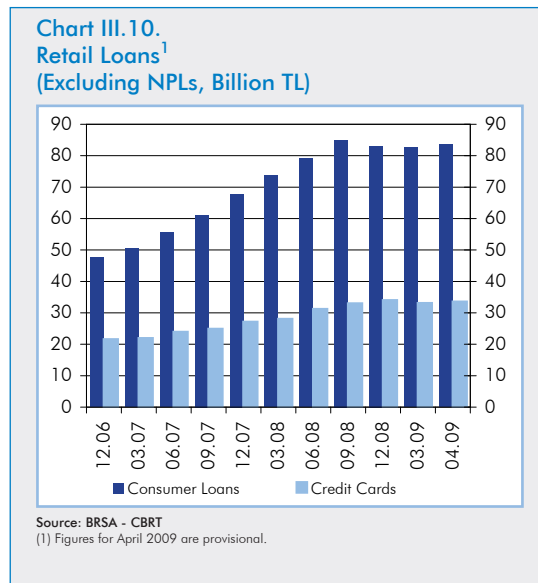
(1) Loans are compiled based on bank reportings under the scope of Central Bank Law No:1211, Article:44. They include corporate loans that are greater than ten thousand Turkish Liras (inclusive) and retail loans that are greater than 5 thousand Turkish Liras (inclusive); extended to real and legal bodies by banks (including external loans used by firms with the intermediation of banks). They are inclusive of non-performing loans and accrued interest and exclusive of non-cash loans. Since October 2007, firms have been disclosing their NPL's without any limits.

Geographical breakdown of loans shows that share of Istanbul, Ankara and Izmir in total

loans increased, whereas the share of other cities decreased in March 2009, compared to end-2008 (Chart III.7).



Although the effects of increased funding costs of the banking sector and adverse expectations about economic activity brought about an increase in loan rates in October 2008, these rates have decreased since November with the effect of interest rate cuts of CBRT. In April 2009, interest rates on domestic currency commercial loans and consumer loans decreased to 13.8 and 18.5 percent, respectively (Chart III.8). The difference between corporate credit and deposit rate increased significantly from September 2008 to January 2009. In addition to banks' tendency to charge higher interest rates due to their decreasing profitability because of building higher provisions for non-performing loans, increasing maturity mismatch between deposits and loans was also effective on the above-mentioned margin increase (Chart III.9). During the following period the improvement in risk perceptions caused a reduction in this difference.

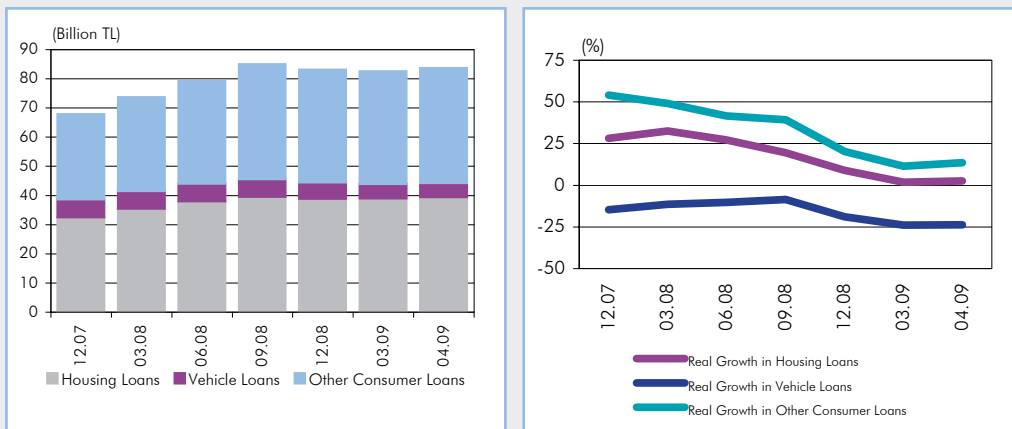


While retail loans, composed of consumer loans and credit cards, declined from September 2008 to March 2009, it started to recover, though limited, since April and amounted

to TL 117.2 billion. Consumer loans and credit cards⁸ increased annually in real terms by 5.3 percent and 9.6 percent, respectively and amounted to TL 83.7 billion and 33.5 billion in April 2009 (Chart III.10 and Chart III.11).

On the other hand, the part of the credit card balance on which interest is charged was 31.1 percent in September 2008 and by increasing to 38.7 percent in March 2009, it reached to TL 12.5 billion (Chart I.36). Since credit cards are charged higher interest rate compared to consumer loans, it is thought that in the forthcoming period there will be an increase in the number of defaulters and in the amount of non-performing loans.

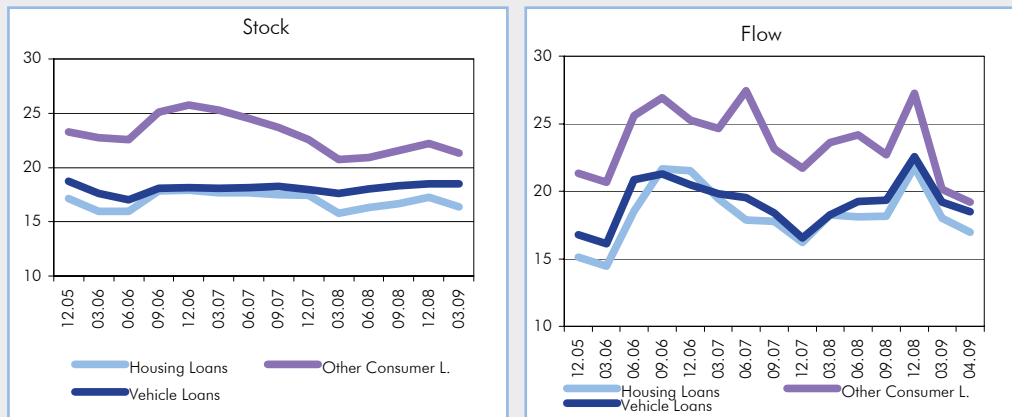
Chart III.12
Consumer Loans by Type and Real Growth Rate (Excluding NPLs, Billion TL, %)^{1,2,3}



Source: BRSA-CBRT
 (1) Other consumer loans are consumer loans excluding housing and vehicle loans.
 (2) They were brought to real terms using CPI(1994=100)
 (3) Figures for April 2009 are provisional.

When consumer loans are analyzed based on their components, it was seen that the rates of growth in both housing and other consumer loans started to decline from the first quarter of 2008 but since April 2009, due to the fiscal stimulus package and the general improvement in expectations, these growth rates increased slightly. On the other hand, the share of vehicle loans has continued to decline since the end of 2007 (Chart III.12).

Chart III.13
Consumer Loans Interest Rates (%)^{1,2}

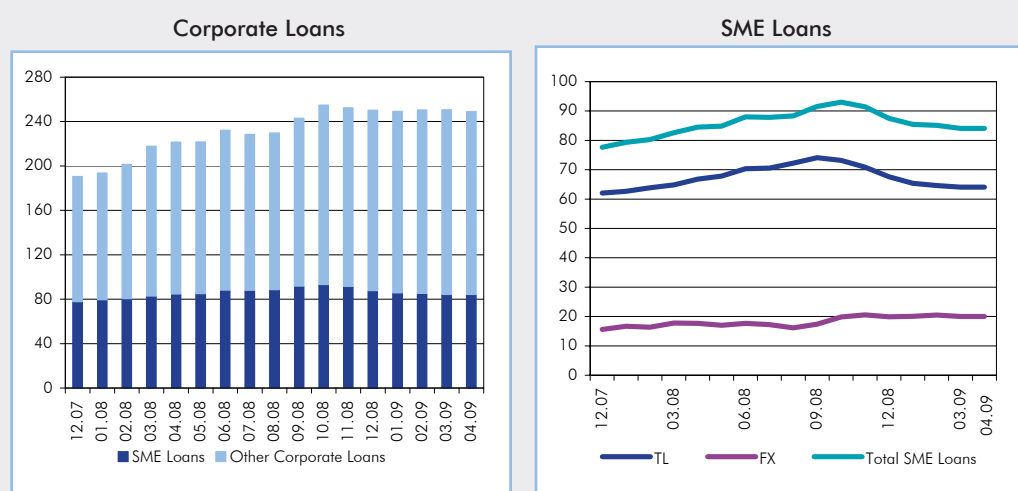


Source: CBRT
 (1) Other consumer loans are consumer loans excluding housing and vehicle loans.
 (2) Weighted average interest rates.

⁸ Refers to the balance in the cash loans item, until credit card spending and cash withdrawals are paid back to the bank by the cardholder.

The flow interest rates referring to interest rates on newly extended consumer loans increased in the last quarter of 2008 with the effect of global financial crisis, but they started to decline in the first quarter of 2009 with the effect of CBRT policy rate cuts and other measures (Chart III.13).

Chart III.14.
Corporate and SME Loans (Excluding NPLs, Billion TL, %)^{1,2}



Source: BRSA-CBRT

(1) For SME Loans, March 2009 is fixed for April 2009.

(2) Figures for April 2009 are provisional.

With the effect of tightening credit conditions, corporate loans has declined since October 2008 despite the depreciation of exchange rates and amounted to TL 249.2 billion in April 2009. The 33.7 percent of corporate loans was extended to Small and Medium Sized Enterprises (SMEs)⁹ and these credits amounted to TL 84.1 billion by declining 9.6 percent during October 2008–April 2009. The amount of reduction in SME loans was greater than other corporate loans (Chart III.14).

Table III.4. Sectoral Composition of Corporate Loans (Excluding NPLs) (%)^{1,2}

		Loans			FX Loans/Total Loans		
		2007	2008	03.09	2007	2008	03.09
1	Wholesale and Ret. Trade, Brokerage, Repair of Mot. Veh.	19.7	18.2	18.3	35.6	43.0	44.9
2	Transport, Storage and Communication	8.5	8.2	8.3	58.3	62.1	62.8
3	Textile and Textile Product Industry.	5.9	5.2	5.0	63.9	66.6	67.2
4	Construction	8.5	9.4	9.5	51.0	59.1	60.1
5	Industry of Tobacco, Beverages and Food	5.8	5.3	5.1	43.5	50.7	54.3
6	Manuf. of Basic Metals and Fabr. Metal Prod.	5.8	6.1	5.6	70.6	71.7	76.2
7	Sources of Electricity, Gas and Water	4.1	5.0	5.3	90.3	90.9	90.7
8	Agriculture, Hunting and Forestry	5.6	5.1	4.9	24.4	25.6	25.5
9	Manuf. of Mach. and Equipment	3.2	3.0	2.9	41.7	50.6	55.2
10	Hotels and Restaurants (Tourism)	3.1	3.4	3.6	71.2	79.1	80.2
	Total of 10 Sectors	70.2	68.9	68.6	50.3	56.7	58.5

Source: CBRT

(1) Loans are compiled based on bank reportings under the scope of Central Bank Law No: 1211, Article:44. They include corporate loans that are greater than 10 thousand Turkish Liras (inclusive); extended to real and legal bodies; by banks (including external loans used by firms with the intermediation of banks). They are inclusive of accrued interest and exclusive of non-cash loans. Therefore, they differ from the figures in the balance sheet-based analysis.

(2) Excluding Financial Intermediation.

⁹ Enterprises that are included in the Regulation on "Definition, Properties and Classifications of Small and Medium Sized Enterprise", prepared by the Ministry of Industry and Trade and published in the Official Gazette dated 18.11.2005 and numbered 25997.

According to Central Bank Risk Center data, the share of ten selected sectors in total corporate loans continued to decline and stood at 68.6 percent in March 2009. The sector with the largest share in total corporate loans is “Wholesale and Retail Trade, Brokerage and Motor Vehicles Maintenance and Repair Services” with 18.3 percent. Shares of the “Construction”, “Electricity, Gas and Water Sources” and “Hotels and Restaurants (Tourism)” sectors in total corporate loans increased, while those of other sectors declined compared to the end of 2007. The rise in the share of FX loans in total loans as of March 2009 actually stemmed from the depreciation of the Turkish currency (Table III.4).

III.1.2. Non-performing Loans

Non-performing loans, which were TL 11.6 billion in September 2008, increased by 47.4 percent in March 2009 and became TL 17.1 billion (Table III.5).

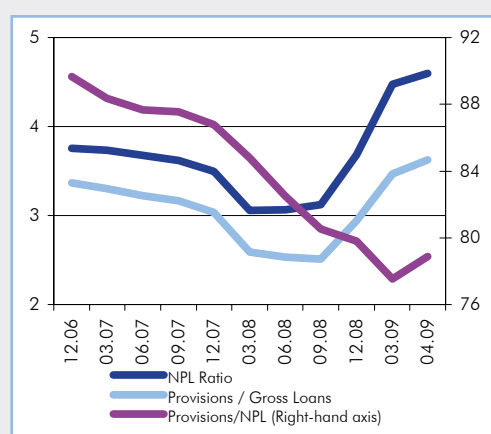
Table III.5. Total NPLs (Million TL)¹

	2006	2007	09.08	2008	03.09
Loans and Other Receiv. with Limited Collectibility	1,210	1,441	2,044	3,305	4,363
Doubtful Loans and Other Receivables	879	1,814	2,543	3,078	4,361
Loans and Other Receivables Classified As Loss	6,461	7,090	7,047	7,670	8,423
Total NPLs	8,550	10,345	11,633	14,053	17,147

Source: BRSA-CBRT
(1) Excluding İller Bank

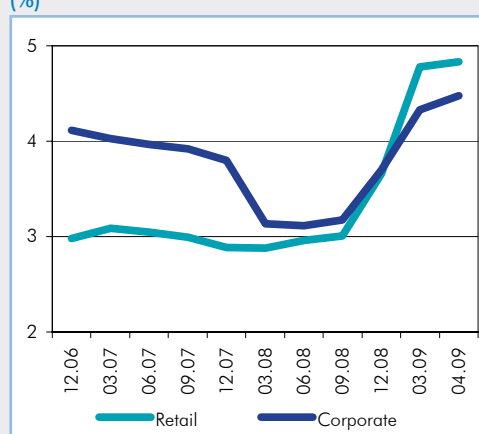
The increase in total NPL was mainly due to the rise in “Loans and Other Receivables with Limited Collectibility” and “Doubtful Loans and Other Receivables” (Table III.5).

Chart III.15.
NPL Ratio and Provisions to NPLs (%)¹



Source: BRSA-CBRT
(1) Figures for April 2009 are provisional.

Chart III.16.
NPL Ratios for Retail¹ and Corporate Loans^{2,3} (%)



Source: BRSA-CBRT
(1) Retail Loans=Consumer Loans+Credit Cards
(2) Corporate Loans=Total Loans-Retail Loans
(3) Figures for April 2009 are provisional.

While the loan growth rate was slowing down, the substantial increase in total NPL triggered the rise in NPL ratio¹⁰ to 4.6 percent in April 2009 from 3.1 percent in September 2008. Besides, the provisions to non-performing loans ratio declined whilst the loan loss provisions to total loans was increasing. (Chart III.15).

¹⁰ Non-Performing Loan Ratio = Gross Non-Performing Loans/ Gross Loans

The total NPL amount for retail loans rose by 62.8 percent in April 2009 compared to September 2008 and reached TL 5.9 billion. Meanwhile, the total NPL amount for corporate loans increased by 40.7 percent in April 2009 and amounted to TL 11.2 billion. The NPL ratio for retail and corporate loans reached 4.8 percent and 4.5 percent, respectively (Chart III.16).

Box 13.

Amendment to the Regulation on the Procedures and Principles for Determination of Qualifications of Loans and Other Receivables by Banks and Provisions to be Set Aside

“Amendment to the Regulation on the Procedures and Principles for Determination of Qualifications of Loans and Other Receivables by Banks and Provisions to be Set Aside”, which was published in the Official Gazette Nr. 27119 dated January 23, 2009, introduced new facilities regarding loan classification and provisions to be set aside. The changes that will be effective starting from October 1, 2008 are summarized as follows;

- Loans and other receivables for which repayment is highly likely but the collection of capital and interest payments is delayed for more than thirty days as of the day of their payment dates for several reasons, however which do not carry the condition of delaying time to be classified among Group Three, can be classified as Group Two.
- Excluding the ones extended to natural persons and legal entities that are included in the risk group the bank belongs to, the loans extended to natural persons and legal entities that are in the same risk group are evaluated separately in the application of this Regulation.
- Concerning customers having more than one loan; if any loan belonging to loan customer is treated as bad loan, the other loans with no default problems will be classified in the same group with the bad loans. However, special provision implementation can be delayed for such loans until March 1, 2010 in the event that overdue part of loans and other receivables in default is collected and also, loans with no default problems may be classified in the First Group on condition that it is monitored in the Second Group for a period of at least six months .
- Loans and other receivables classified in the Second Group may be tied to a new redemption plan provided that it is limited with two times. In the event that failure to meet payment obligations towards banks stems from temporary liquidity difficulties, loans and other receivables including any overdue interest may be restructured three times whereas it was only two times before and loans and other receivables subject to a new redemption plan may be classified in First and Second Groups of loans and other receivables until March 1, 2010, provided that a specified percent of the total sum of receivables has been repaid.
- One fourth of the rates determined in general and specific provisions are to be applied for the payment obligations emanated from the legislation related to Act Nr. 3167 on Regulating the Payments by Cheque and Protecting the Cheque Holders, relating to the each cheque leaf of the chequebook which are received five years ago.

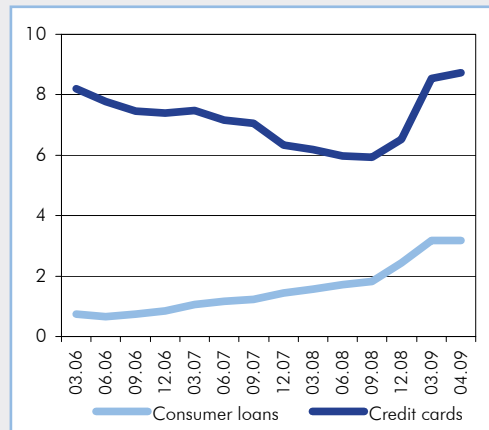
Table III.6.
NPL Ratios for Selected Countries

	2006	2007	2008	Last Data
USA	0.8	1.4	2.3	September
Brazil	3.5	3.0	2.9	October
Bulgaria	2.2	2.1	2.4	December
Czech Republic	3.6	2.7	3.1	September
Croatia	5.2	4.8	4.8	September
United Kingdom	0.9	0.9	-	December
Hungary	2.5	2.5	2.9	December
Latvia	0.4	0.4	2.2	December
Lithuania	1.0	1.0	1.1	March
Poland	7.4	5.2	4.4	September
Romania	7.9	9.7	9.8	June
Russia	2.6	2.5	2.5	September
Serbia	4.1	3.8	5.3	December
Turkey	3.8	3.5	3.7	December

Source: IMF Global Financial Stability Report, April 2009.

In 2008, the NPL ratio of Turkey remained below that of Poland, Romania, Serbia and Croatia, but it was still higher than the NPL ratios of other selected countries (Table III.6). On the other hand, the increase in NPL ratio was moderate when compared with most of the developed countries.

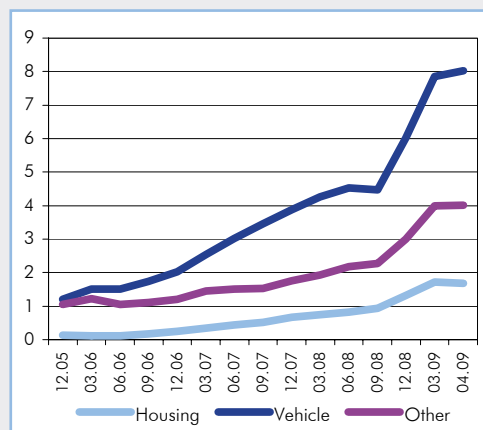
Chart III.17.
NPL Ratios for Retail Loans (%)¹



Source: BRSA-CBRT

(1) Figures for April 2009 are provisional.

Chart III.18.
NPL Ratios for Consumer Loans (%)^{1,2}



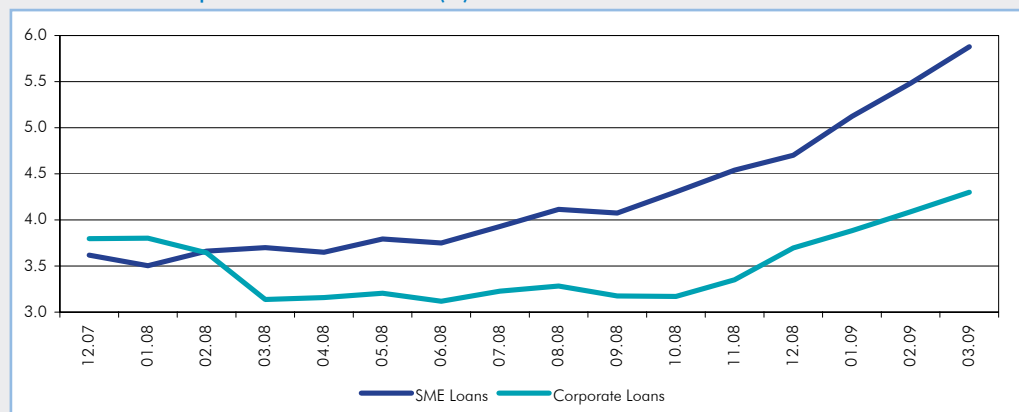
Source: BRSA-CBRT

(1) Other consumer loans are consumer loans excluding housing and vehicle loans.

(2) Figures for April 2009 are provisional.

NPL ratio for consumer loans maintained its upward course and rose to 3.2 percent as of April 2009. The NPL ratio for credit cards, which had been declining since the enforcement of the Law on Bank Cards and Credit Cards, started to increase in September 2008 and reached 8.7 percent in the same period (Chart III.17). Based on types of consumer loans, the highest NPL ratio increase since September 2008 among the consumer loans was in vehicle loans with 3.5 point and NPL ratio for vehicle loans became 8.0 percent as of April 2009. In the said period, the NPL ratio for housing loans stood at 1.7 percent, while the NPL ratio for other consumer loans increased to 4 percent (Chart III.18).

Chart III.19.
NPL Ratios for Corporate and SME Loans (%)



Source: BRSB-CBRT

While the NPL ratio for SME loans was 3.6 percent in 2007, it rose to 4.1 percent in September 2008 and reached 5.9 percent as of March 2009 (Chart III.19). The increase in NPL ratio was higher for loans granted to SMEs than other corporate loans suggesting that the negative impact of the crisis was more intense for the SMEs.

Table III.7.
NPL Ratio for Selected Sectors (%)¹

	2007	09.08	2008	03.09
1 Textile and Textile Product Industry	11.7	9.8	10.1	11.0
2 Agriculture, Hunting and Forestry	3.2	3.7	4.2	5.1
3 Wholesale and Ret. Trade, Brokerage, Repair of Motor Vehicle	3.3	3.3	4.0	4.8
4 Industry of Tobacco, Beverages and Food	4.7	3.2	4.4	4.8
5 Hotels and Restaurants (Tourism)	2.4	2.5	2.6	2.7
6 Construction	2.4	2.3	2.6	3.2
7 Manufacture of Machinery and Equipment	2.1	1.7	2.1	2.5
8 Transport, Storage and Communication	1.2	1.4	1.7	2.0
9 Manufacture of Basic Metals and Fabricated Metal Prod	1.1	0.9	1.2	1.8
10 Sources of Electricity, Gas and Water	0.1	0.1	0.1	0.1
Total of 10 sectors	3.2	3.0	3.4	3.8

Source CBRT

(1) Loans are compiled based on bank reporting under the scope of Central Bank Law No:1211, Article 44. They include corporate loans that are greater than ten thousand Turkish Liras (inclusive) and retail loans that are greater than 5 thousand Turkish liras (inclusive); extended to real and legal bodies by banks (including external loans used by firms with the intermediation of banks) They are inclusive of non-performing loans and accrued interest and exclusive of non-cash loans. Since October 2007, firms have been disclosing their NPLs without any limits.

According to the Central Bank Risk Center data, in March 2009, NPL ratios for all sectors apart from "Sources of Electricity, Gas and Water" increased, compared to September 2008, thanks to the decrease in loans granted (Table III.7). In this period, the highest NPL ratio increase among all sectors was Industry of Tobacco, Beverages and Food with 1.6 point.

Table III.8.
Default Rates for Some Selected Sectors (Item, %)^{1,2}

	2007	09.08	2008	03.09
1 Wholesale and Ret. Trade, Brokerage, Repair of Motor Vehicle	14.4	11.4	14.4	15.5
2 Agriculture, Hunting and Forestry	9.9	10.0	10.3	11.0
3 Textile and Textile Product Industry.	10.9	9.5	11.6	12.7
4 Industry of Tobacco, Beverages and Food	8.1	6.8	9.0	10.7
5 Construction	7.2	7.0	8.5	9.7
6 Hotels and Restaurants (Tourism)	5.9	6.2	7.8	8.9
7 Sources of Electricity, Gas and Water	4.1	5.0	6.1	7.1
8 Manufacture of Machinery and Equipment	3.9	4.5	5.5	6.5
9 Manufacture of Basic Metals and Fabricated Metal Prod.	4.4	4.6	5.9	7.3
10 Transport, Storage and Communication	3.0	3.5	4.6	5.3
Total of 10 Sectors	10.8	9.5	11.2	12.3
Total Corporate Sector	10.1	9.0	10.8	11.7

Source: CBRT

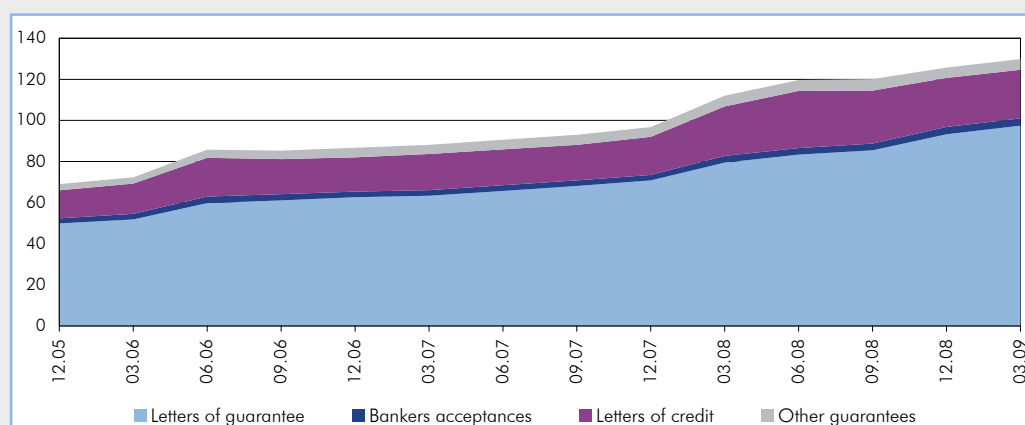
(1) Loans are compiled based on bank reporting under the scope of Central Bank Law No:1211, Article 44. They include corporate loans that are greater than ten thousand Turkish Liras (inclusive) and retail loans that are greater than 5 thousand Turkish liras (inclusive); extended to real and legal bodies by banks (including external loans used by firms with the intermediation of banks) They are inclusive of non-performing loans and accrued interest and exclusive of non-cash loans. Since October 2007, firms have been disclosing their NPLs without any limits. (2) Excluding Financial Intermediation.

The analysis of firms by sector reveals that the average default rate, which is calculated by dividing the number of loans monitored in NPL accounts to total number of credits, rose to 11.7 percent as of March 2009 (Table III.8).

The default rates of “Wholesale and Retail Trade, Commissions and Motor Vehicles Services” and “Textile and Textile Products Industry” remained above the average default rate of the selected 10 sectors as of March 2009 (Table III.8).

III.1.3. Non-cash Loans

Chart III.20
Non-Cash Loans by Type (Billion TL)



Source: BRSA-CBRT

The ratio of off-balance sheet liabilities, consisting of banks’ non-cash loans and commitments, to total assets remained broadly unchanged at 17.3 percent in the period of September 2008-March 2009.

The ratio of non-cash loans, which are composed of primarily letters of guarantee and letters of credit, to cash loans slightly increased from 33.3 percent in September 2008 to 34.1 percent as of March 2009 (Chart III.20).

III.1.4. Credit Risk Scenario Analysis

With the aim of assessing credit risk that the banking sector might be exposed to, analyses were conducted on how CARs of banks might be affected by a probable increase in NPL ratios as of March 2009.

In this framework, scenario analyses were conducted under the following assumptions:

i) The total credit amount of banks remains unchanged.

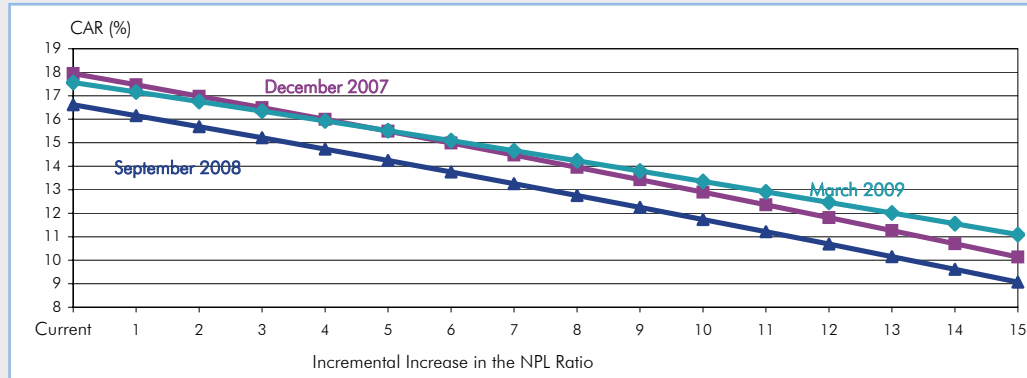
ii) NPLs resulting from shocks have the same composition as the existing NPLs of banks. For those banks that did not have any NPLs before the shocks, the NPLs that came to existence due to the shock implemented are classified as “loans and other receivables with limited collectibility”, setting aside a 20 percent provision.

iii) Post-shock NPLs are assumed to have been categorized as loans under 100 percent risk weight for the calculation of pre-shock CAR.

iv) There is no change in the total risk-weighted assets and own funds of the sector except for the shocks.

Moreover, collateral amounts were not taken into account when calculating additional provisions.

Chart III.21.
Effects of Credit Shocks on the CAR of the Sector (%)¹



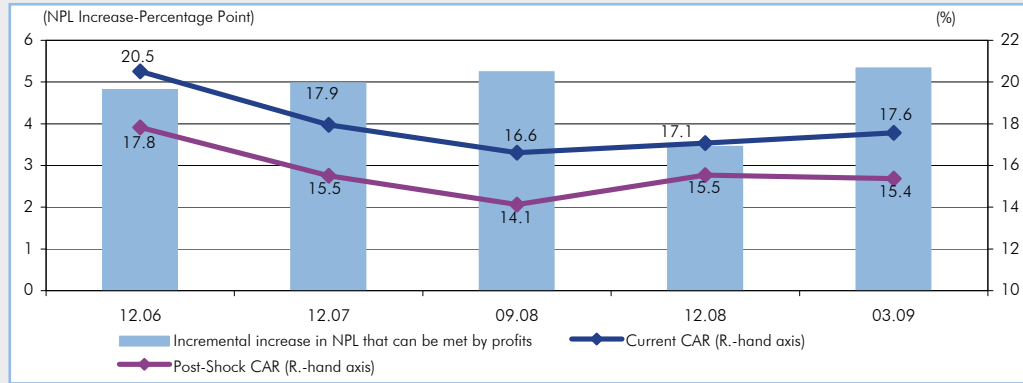
Source: BRSA - CBRT

(1) Excluding the SDIF Bank, Iller Bank and banks that do not have loans in their portfolio.

The scenario analysis assesses the effects of 1-15 point-incremental increases in the NPL ratio on the CAR of the banking sector¹¹. Accordingly, a 15-point increase in the NPL ratio of the banking sector reduced the CAR of the sector by 7.55 percentage points as of September 2007, the period when the global crisis started to affect our country, and by 6.5 percentage points as of March 2009. As a result of the maximum shock, the CAR of the sector remained above the legal limit of 8 percent, and was realized as 11.1 percent. On the other hand, as a result of the shocks up to 13 percentage points, the CAR of the sector remained above the target ratio of 12 percent (Chart III.21).

¹¹ After loans are classified as NPLs and additional provisions are set aside, the post-shock capital adequacy ratio is calculated as follows: (Own funds – Additional Provisions) / (Risk Weighted Assets – Additional Provisions)*100.

Chart III.22.
Effect of Credit Shock on the Profitability of the Sector (%)^{1,2}



Source: BRSA – CBRT
 (1) Excluding the SDIF Bank, İller Bank and banks that do not have loans in their portfolio.
 (2) Post-shock CAR is calculated based on the increase in NPL, which is not covered by the annualized profit.

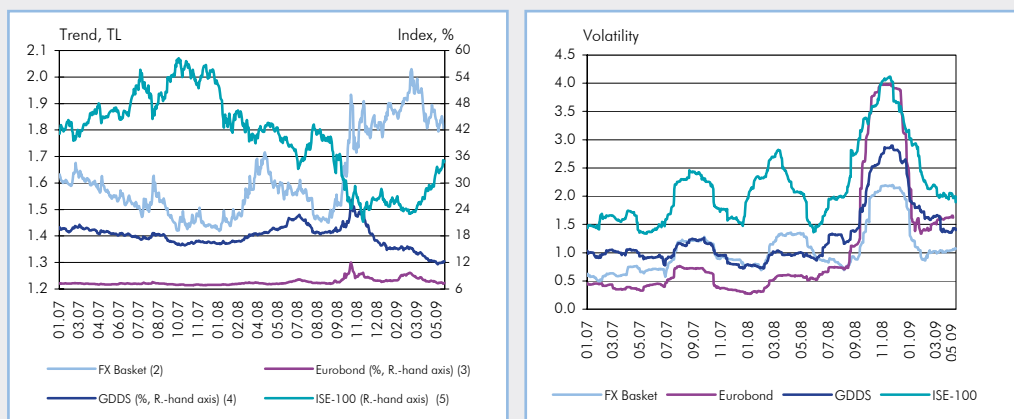
An analysis of how much additional NPLs can be met by the net profit of the banking sector reveals that an increase of 5.2 percentage points in NPLs can be met by that period’s net profit as of September 2008, whereas as of end-2008, the figure falls down to 3.5 percentage points. However, as a result of the increase in sector profitability during the first quarter of 2009, the increase in NPLs that can be met by net profits rose back to 5.3 percentage points (Chart III.22).

III.2. Market Risk and Scenario Analyses

In this section, where the implications of the developments in interest rate and FX risk on bank balance sheets are assessed, the impact of two scenarios based on hypothetical data are also analyzed.

III.2.1. Market Risk

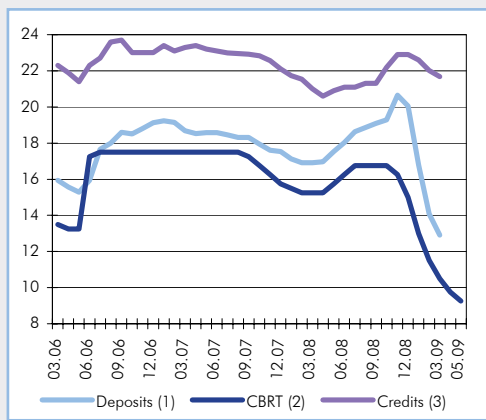
Chart III.23.
Foreign Exchange Rates, Interest Rates and Equity Prices¹



Source: CBRT
 (1) For volatility calculations, standard deviation of daily logarithmic yield of the related market instrument (60 business -days moving average) is used.
 (2) 50 percent of the Foreign Exchange Basket is in USD and the rest is in Euro.
 (3) Based on USD denominated Eurobond interest rate with 2030 maturity.
 (4) Based on the interest rate on the benchmark GDDS.
 (5) Calculated by dividing ISE-100 by 1,000.

As was the case with other economies, the global crisis led to increased volatility in Turkish financial markets. Turkish lira depreciated starting from September 2008, just like the currencies of other developing economies, but gained ground starting from mid-March. Similarly, the ISE index declined markedly starting from August 2009, but displayed an increasing trend starting from mid-March 2009. Parallel to CBRT's interest rate cuts, interest rates on GDDS fell starting from November 2008 and was realized as 12 percent on average as of May 2009. Banks' reduced appetite for loan extension and their inclination to invest in GDDS as a safe financial instrument was influential on the quicker recovery of GDDS interest rates compared to other indicators (Chart III.23).

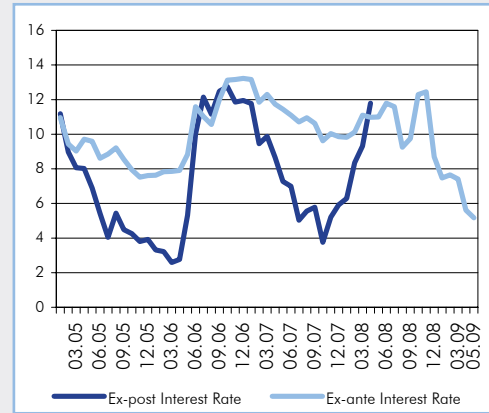
Chart III.24.
Interest Rates (%)



Source: CBRT

- (1) Banking sector 3-month weighted "stock TL deposit" interest rate.
 (2) CBRT overnight (O/N) borrowing rate.
 (3) Banking sector weighted "stock TL credit" interest rate.

Chart III.25.
Ex-ante¹ and Ex-post² Real Interest Rates³ of GDDS (%)



Source: Calculated by using the data of CBRT, ISE and TURKSTAT

- (1) Ex-ante interest rate = $\frac{(1 + \text{nominal interest rate})}{(1 + \text{expected inflation rate})} - 1$ * 100
 (2) Ex-post interest rate = $\frac{(1 + \text{last year's nominal interest rate})}{(1 + \text{realized inflation rate})} - 1$ * 100

As expected inflation rate, yearly ex-ante CPI figures in the bi-weekly Survey of Expectations published by the CBRT are used.

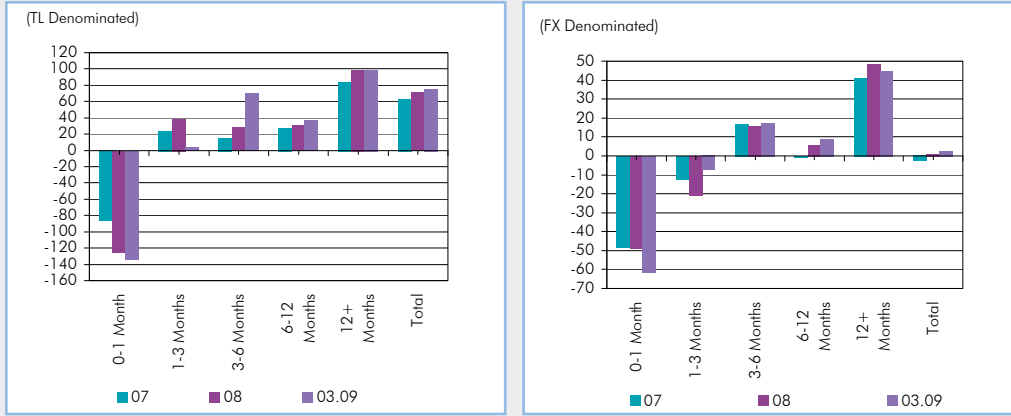
(3) GDDS interest rates are the monthly average interest rates on the benchmark GDDS.

With the expectation that the decline in aggregate demand due to the slow down in economic activity and the rapid fall in commodity prices will lead to a sharp decline in inflation, CBRT cut overnight borrowing rate by a total of 7.5 percentage points between November 2008 and May 2009.

Parallel to the decline in policy interest rates, interest rates on deposits also declined starting from November 2008, however the fall in interest rates on loans was not that pronounced (Chart III.24).

Due to the fall in interest rates starting from November 2008, expected GDDS interest rate also fell markedly and was realized as 5.1 percent as of May 2009 (Chart III.25).

Chart III.26.
Interest Rate Sensivity Gap of the Banking Sector (Billion TL)^{1,2}

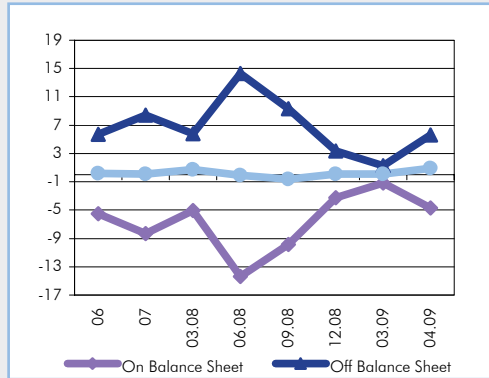


Source: BRSA-CBRT
(1) Time to re-pricing is used.
(2) Excluding SDFIF bank.

In terms of time to re-pricing, negative interest-rate sensitive TL and FX gaps were mainly observed in the 0-1 month maturity bracket similar to previous periods, and as of March 2009, the gap in this maturity bracket widened compared to previous years (Chart III.26).

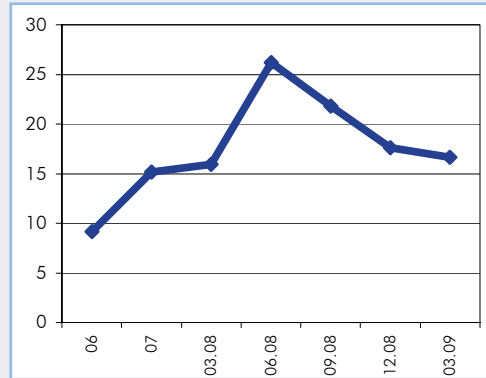
As of March 2009, the banking sector, which displays a short position in the 0-1 month maturity bracket for TL and in the 0-1 and 1-3 month maturity brackets for FX, holds long position for longer terms. In terms of overall position, the sector is long in both interest-rate sensitive TL and FX (Chart III.26).

Chart III.27.
Foreign Exchange Position of the Banking Sector¹ (Billion USD)



Source: BRSA
(1) Participation Banks are included.

Chart III.28.
Swaps Transacted in TL/FX^{1,2} (Billion USD)



Source: BRSA-CBRT
(1) Consists of banks that extend housing loans.
(2) Participation Banks are excluded.

The net overall FX position of the banking sector is almost balanced (Chart III.27).

The banking sector, which tended to invest its foreign currency funds in Turkish currency loans through derivatives, especially through swap operations and, therefore carried an on-balance sheet short position and an off-balance sheet long position, changed its stance in the latest months of 2008 due to the changes in international liquidity conditions. However, also due to the positive atmosphere in global financial markets, the on-balance sheet short and off-balance sheet long position of the banking sector started to display a rising trend as of April 2009 (Chart III.27, Chart III.28).

The banking sector, which balances its on-balance sheet short position with its off-balance sheet long position, holds 26.5 billion USD of selected TL/FX derivative assets as of March 2009. For 23 billion USD of this amount, the counterparty is a financial institution. (Chart III.28).

III.2.2. Scenario Analyses

III.2.2.1. Interest Rate and Exchange Rate Increases

In this section, assuming that the shocks occur independently, the individual and collective effects of interest rate increases and appreciation of exchange rates on the banking sector are analyzed under two scenarios. The magnitude of the shocks was revised in the previous Report taking into consideration the effects of the global crisis.

Under Scenario A, it is assumed that the Turkish lira depreciated by 30 percent against other currencies, the interest rates for the Turkish currency and foreign currencies increase by 6 and 5 percentage points, respectively, and Eurobond prices decline by 15 percent.

Under Scenario B, it is assumed that the Turkish lira depreciated by 40 percent against other currencies, interest rate increases are twice the increases given in Scenario A and Eurobond prices decrease by 25 percent.

Table III.9.
Interest and FX Rate Increase Scenarios

	SCENARIO A	SCENARIO B
A. Depreciation of TL	30 percent depreciation of TL against other currencies	40 percent depreciation of TL against other currencies
B. Interest Rate Increase-TL	Re-pricing of TL interest sensitive assets and liabilities falling in 0-1 and 1-3 month maturity brackets at 6 points higher	Re-pricing of TL interest sensitive assets and liabilities falling in 0-1, 1-3, 3-6 month maturity brackets at 12 points higher
C. Interest Rate Increase-FX	Re-pricing of TL interest sensitive assets and liabilities falling in 0-1 and 1-3 month maturity brackets at 5 points higher	Re-pricing of TL interest sensitive assets and liabilities falling in 0-1, 1-3, 3-6 month maturity brackets at 10 points higher
D. Trading Portfolio-TL ¹	6 points increase in market interest rates of YTL denominated fixed income securities in the trading portfolio	12 points increase in market interest rates of TL denominated fixed income securities in the trading portfolio
E. Eurobond Portfolio	Decrease in prices of Eurobonds in the trading portfolio by 15 percent	Decrease in prices of Eurobonds in the trading portfolio by 25 percent

(1) Trading portfolio consists of "financial assets at fair value through profit or loss" and "securities available for sale".

FXNGP data was used to calculate the effects of exchange rate appreciation on the sector. To calculate the impact of interest rate increases on the sector, the re-pricing gap method, which complements the standard method and is recommended by the Basel Banking Committee, was employed. In this framework, the difference between interest-rate sensitive assets and liabilities in the time to repricing maturity brackets of 0-1, 1-3, and 3-6 months were used.

In the scenario analyses based on repricing, it was assumed that:

- The interest rate sensitivity of banks' assets and liabilities has remained unchanged throughout the analysis period,
- Demand deposits are not interest-rate sensitive,

- There are no new fund inflows or outflows,
- Interest rate increases would last for 3 months in Scenario A and for 6 months in Scenario B.

The loss of value in the Turkish currency-denominated discount securities within the trading portfolio and the Eurobond portfolio, stemming from the rise in interest rates, has also been calculated.

Table III.10.
Results of Market Risk Scenarios¹ (Million TL)

	Senaryo A			Senaryo B		
	2007	09.08	03.09	2007	09.08	03.09
A. TL Depreciation						
a. Total Profit (Loss)	7.3	-325.5	147.8	9.7	-434.0	197
Profit (Loss)/Own Funds (%)	0.0	-0.4	0.2	0.0	-0.6	0.2
b. Banks Gaining Profits	226.5	155.7	352.5	302.0	207.5	470
c. Banks Suffering Losses	-219.2	-481.1	-204.8	-292.3	-641.5	-273
Losses of Banks Suff. Loss/Own Funds (%)	-0.1	-1.2	-0.5	-0.7	-1.6	-0.7
B. Interest Rate Increase						
a. TL	-466.0	-1,393.6	-1,449.8	-1,002.8	-1,532.4	-1,621.8
b. FX	-425.7	-466.6	-547	-818.6	-1,345.3	-1,338
Profit (Loss) due to Interest Rate Increase (a+b)	-891.7	-1,860.1	-1,996.8	-1,821.4	-2,877.7	-2,959.8
Profit (Loss) due to Interest Rate Incr./Own Funds (%)	-1.3	-2.4	-2.4	-2.7	-3.8	-3.5
C. TL Trading Portfolio²						
Loss in Value due to Interest Rate Increase	-2,342.0	-2,089.9	-1,754	-4,379.7	-3,914.6	-3,291.9
Loss in Value due to Interest Rate Incr./Own Funds (%)	-3.5	-2.7	-2.1	-6.5	-5.1	-3.9
D. Eurobond Portfolio						
Loss in Value	-2,088.0	-2,627.6	-2,135	-3,480.0	-4,379.3	-3,558.4
Loss in Value/Own Funds (%)	-3.1	-3.5	-2.5	5.2	-6.3	-4.2
E. Total Impact						
Profit (Loss)	-5,314.4	-6,902.9	-5,738	-9,671.4	-11,603.2	-9,613.1
Profit (Loss)/Own Funds (%)	-7.9	-9.1	-6.8	-14.4	-15.2	-11.4
Current CAR of the Sector (%)	17.4	16.0	-17.1	17.4	16.0	17.1
After-Shock CAR of the Sector³ (%)	16.1	14.6	16	14.9	13.6	15.2

Source: CBRT

(1) Excluding SDIF bank, T. Kalkınma Bank, İller Bank and Eximbank.

(2) Due to the changes in the trading portfolios as a result of re-classification of securities portfolios by banks in accordance with Communiqués No. 105 and 106 promulgated by the Turkish Accounting Standards Board in the Official Gazette No. 27040 dated October 31, 2008, results for September 2008 differ from those in the previous Report.

(3) After-shock profit/loss amounts under the scenarios are assumed to affect only own funds but not the risk weighted assets.

III.2.2.1.1. Depreciation of TL

As a result of Scenarios A and B, the banking sector incurs profits amounting to TL 147.8 million and TL 197 million, respectively, as of March 2009 owing to its long position. Besides, the share of losses of banks arising from their open positions in their own funds is realized as 0.5 percent and 0.7 percent, respectively, as of March 2009 (Table III.10).

III.2.2.1.2. Interest Rate Increases and Loss in Value

i) As a result of Scenarios A and B, the TL denominated interest income declines as of March 2009. Under both scenarios, the amount of decline in interest income increases compared to September 2008, owing to the increasing short position in the 0-1 month maturity bracket.

As for foreign currency, under Scenario A, despite the decreasing short position in the 1-3 month maturity bracket, the amount of decline in interest income increases as of March 2009 compared to September 2008, owing to the increasing short position in the 0-1 month maturity bracket. Under Scenario B on the other hand, the amount of decline in interest income decreases as of March 2009 compared to September 2008, owing to the increasing long position in the 3-6 month maturity bracket.

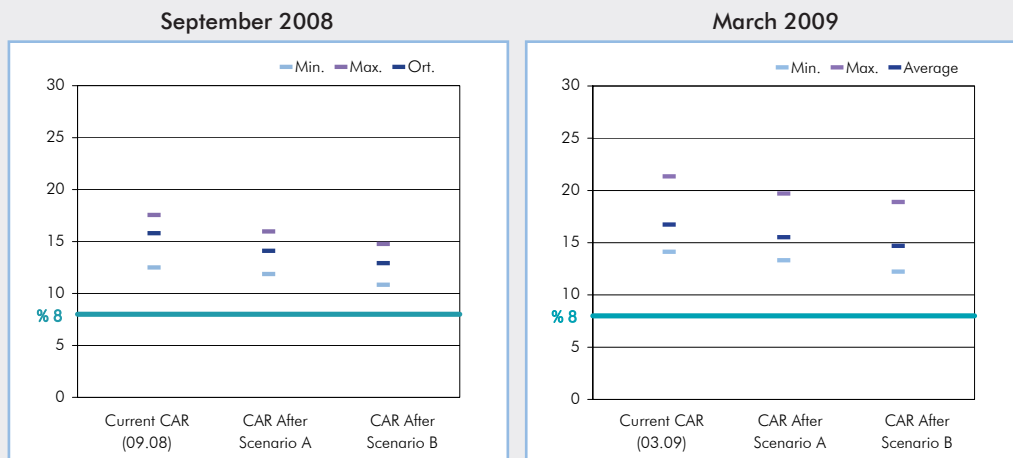
ii) As is known, with the aim of easing the negative impacts of probable major market fluctuations on balance sheets, the Communiqués No. 105 and No. 106 promulgated by the Turkish Accounting Standards Board in the Official Gazette No. 27040 dated October 31, 2008, and the amendment made to TMS 39 and TFRS 7 to enter into force from 1 July 2008 onwards enable the re-classification of financial assets that were classified as "financial assets at fair value through profit or loss" and "securities available for sale". As banks have made use of this opportunity, the size of the trading portfolio decreased remarkably starting from October 2008.

In this framework, the loss in market value of fixed income securities denominated in Turkish currency as a result of the increase in interest rates declines considerably in March 2009 compared to September 2008.

iii) The loss of value in Eurobond portfolio slightly decreases compared to September 2008 under both scenarios.

In conclusion, as of March 2009, losses resulting from both Scenario A and Scenario B decrease, compared to September 2008. Although the CAR of the sector declined by 1.1 percentage points under Scenario A and by 1.9 percentage points under Scenario B, it still stands above the legal ratio of 8 percent and target ratio of 12 percent.

Chart III.29.
Impacts of the Scenarios on the Largest 10 Banks of the Sector¹



(1) Largest 10 Banks considering their share in total assets are included in the analysis.

When the impacts of Scenario A and B on the CARs of the 10 banks with the highest share in assets are analyzed, as of March 2009, it is observed that their maximum, minimum, and average CAR levels remained above the legal limit under both scenarios (Chart III.29).

Box 14.

Financial Stress Index and Relative Performance of Turkey

The effects of the financial crisis, which first started in the developed countries, deepened and then spread to the global system, are still being observed both in developed and developing countries. The stress that financial markets faced intensified especially since the fourth quarter of 2008, due to further deepening of the crisis. The purpose of this box is to make a comparative analysis of the the pressure on the financial markets and to touch upon the sub-components of this pressure for the Turkish financial system. In this context, Financial Stress Index (FSI) is used as an indicator of the stress that has occurred in the financial markets.

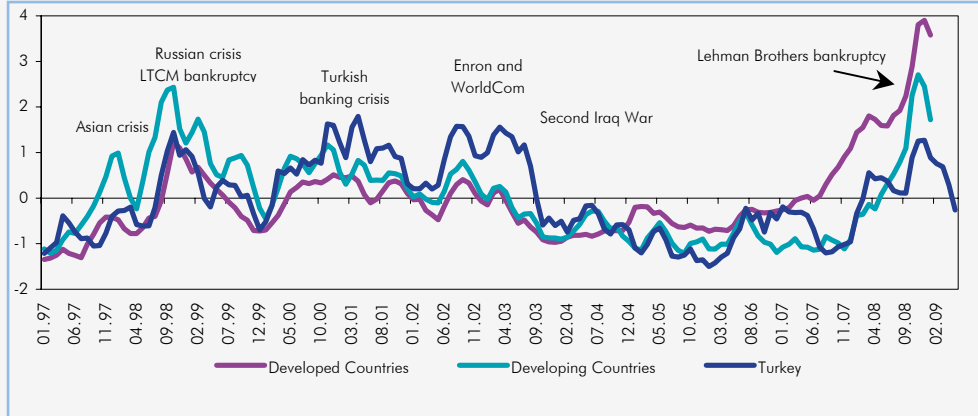
Financial Stress Index is a composite index that combines all the sub- components of stress into a single variable and enables a comparison between different time horizons and countries. The index was first constructed for developed countries and the version for developing countries was produced by Danninger and others (2009)¹. Financial Stress Index is constructed by combining five sub-components that might be the source of stress in the financial sector. These sub-components are FX market, country credit risk, riskiness of the banking sector, equity market and perceptions of uncertainty towards this market.

While constructing the Financial Stress Index, as an indicator of each stress sub-component, different indicies and variables are used. In this context, as an indicator of the pressure on the FX market, "FX market Pressure Index" is used. This index covers the changes in the FX rate and central bank international reserves and an increase in the FX rate or a decrease in the central bank international reserves means a rise of pressure on the FX market. For the country credit risk, another sub- component which can lead to stress in the financial system, emerging markets sovereign bond index (EMBI Global) that was constructed by JP Morgan is used as an indicator. An increase in this index means an increase in the stress related with country credit risk. Equity market returns are used as an indicator of the stress in the equity market while calculating the Financial Stress Index. Negative returns in this market increase the financial system stress. On the other hand, implied return volatilities which are derived from the models for equity market returns are used to measure perceptions of uncertainty towards equity market. Lastly, beta of the banking sector, which is calculated by using CAPM, is used as an indicator of the stress in the banking sector. If the banking sector beta is above "1" during downward movement in the equity markets, this means a rise in the relative riskiness of banking sector. All these sub-components are combined together and formed into a single composite index, namely the financial stress index.

Historical movement of the financial stress indicies that were computed for developing countries, Turkey and developed countries are presented in Chart 1². Until the recent financial crisis, during the financial turmoils, the increase of stress in the financial systems of developing countries is much higher than that in developed countries (Chart 1). The reason for this was the high level of vulnerability against shocks in both financial systems and real economies of developing countries. As a matter of fact, if the last crisis is left aside, most of the past

financial crises originated in developing countries. From this point of view, this financial crisis is separated from many other crises since it originated in developed countries. As a result of this, during the financial crisis period, the developing countries experienced the increase in stress in their financial markets at a later stage and much more limited than the developed countries (Chart1).

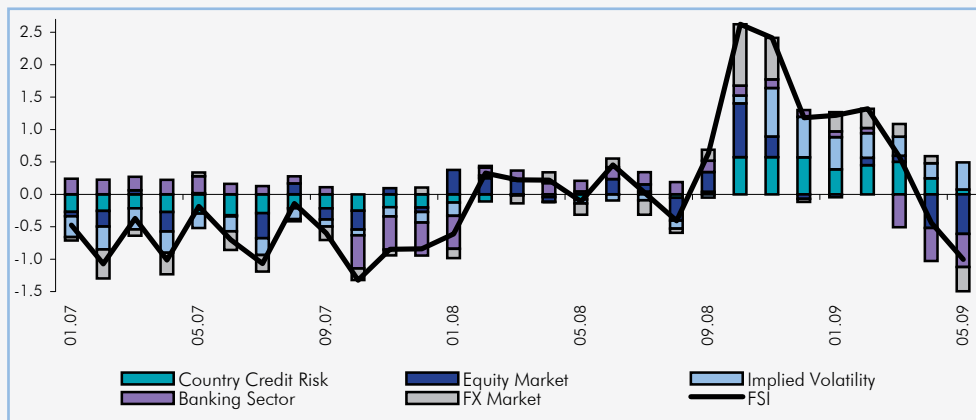
Chart 1. Financial Stress Index¹



Source: CBRT, IMF
 (1) Standardized three month moving average of indexes. Index for Turkey was updated on May 20.

On the other hand, when FSI of Turkey is compared with the FSIs of developing countries, stress in the financial markets of Turkey is observed to increase more than the average of developing countries during global stress periods. This situation became more obvious during the banking sector crisis of 2001 in Turkey and second Iraq War in 2003. However, during the current financial crisis, Turkey's financial stress index performed better than that of developing countries. Turkey's FSI increased less and in the last period decreased remarkably more than the average of developing country FSIs.

Chart 2. Financial Stress Index–Turkey's Components



Source: CBRT, IMF

To understand the possible reasons regarding why the increase of stress in Turkish financial markets remained relatively limited, sub-components of FSI should be analyzed. Since September 2008, when the crises deepened, the increase in stress first started in equity and FX markets (Chart 2). Also, the increase in country credit risk contributed to the increase in financial stress during this period. After October, country riskiness still remains as a source for stress, whereas following the first shock financial stress related with equity and FX markets decreased, being replaced by the increase in perceptions of uncertainty. During this period, while banking sectors of most developing and developed countries were putting pressure on their financial systems, when FSI for Turkey is analyzed, it is observed that this pressure was limited. Behind this lies the fact that, unlike many other developing and developed countries, Turkish banking sector is sound and has got limited risk exposure. In line with this, the banking sector and the positive outlook of the equity markets were the main drivers of the downward trend in the financial stress in 2009.

(1) Danninger, Balakrishnan, Elekdağ, and Tytell (2009), World Economic Outlook (April).

(2) Chart 1 shows the standardized indices. In other words, when the index value is 2, this means that the index is 2 standard errors away from its long term average.

III.3. Liquidity Risk

The impact of the liquidity squeeze, which surfaced in the global financial markets due to deterioration in risk perceptions and loss of confidence, has remained limited on local financial markets also owing to the measures taken by the Central Bank of the Republic of Turkey.

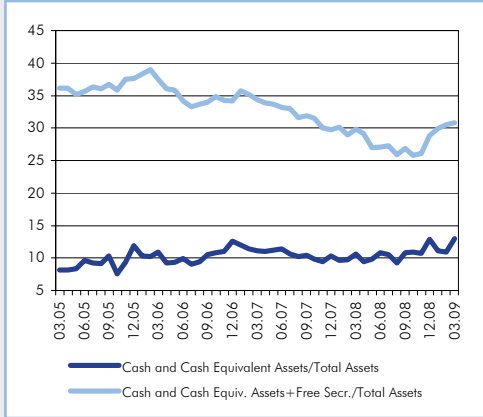
Due to its ability to directly control the Turkish Lira liquidity, the Central Bank may effectively support the smooth operation of the market by providing the necessary liquidity. In case of tightened liquidity conditions in the market in the upcoming period, the Central Bank will take the necessary measures such as bringing a technical interest rate cut by modifying the operational structure, extending the maturity of repo funding, direct purchases of government securities from the secondary market and a limited reduction in the TL reserve requirement.

On the other hand, although external conditions play a significant role in FX liquidity, the Central Bank of the Republic of Turkey continues to take the necessary measures in order to make its FX market perform well and to enhance FX liquidity management by banks.

In this framework, in addition to the measures emphasized in the previous report, by reducing the FX required reserve ratio by 2 percentage points, an additional FX liquidity approximately equivalent to USD 2,5 billion has been provided to the banking system, the maturity of the transactions in the Foreign Exchange and Banknotes Markets-Foreign Exchange Deposit Market has been extended from one month to three months and the lending rate has been reduced to 5,5 percent from 7 percent for USD and to 6,5 percent from 9 percent for Euro and through daily foreign exchange selling auctions of USD 50 million, USD 900 million has been provided to the market in total.

In the upcoming period, if the FX liquidity conditions tighten, measures such as launching foreign exchange selling auctions or directly intervening in the foreign exchange market in line with the principles of floating exchange rate regime, increasing transaction limits for banks in the Foreign Exchange and Banknotes Markets, extending maturities and reducing lending rates in the Foreign Exchange Deposit Market, reducing the FX required reserve ratio to a limited extent, will be considered.

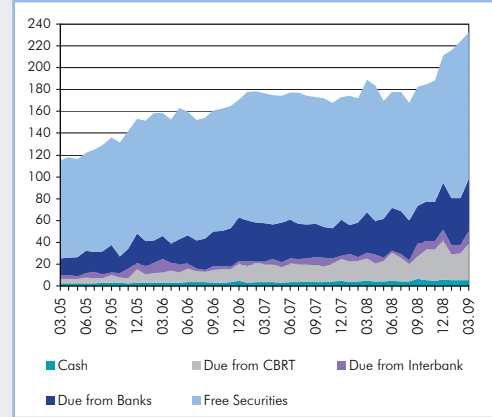
Chart III.30.
Liquidity Ratios (%)^{1,2}



Source: BRSA-CBRT

(1) Cash and Cash Equivalent Assets = Cash + Due from CBRT + Due from Interbank + Due from Banks.
(2) Free Securities = Securities that are not used as collateral or for repo transactions.

Chart III.31.
Liquid Assets (Billion TL)



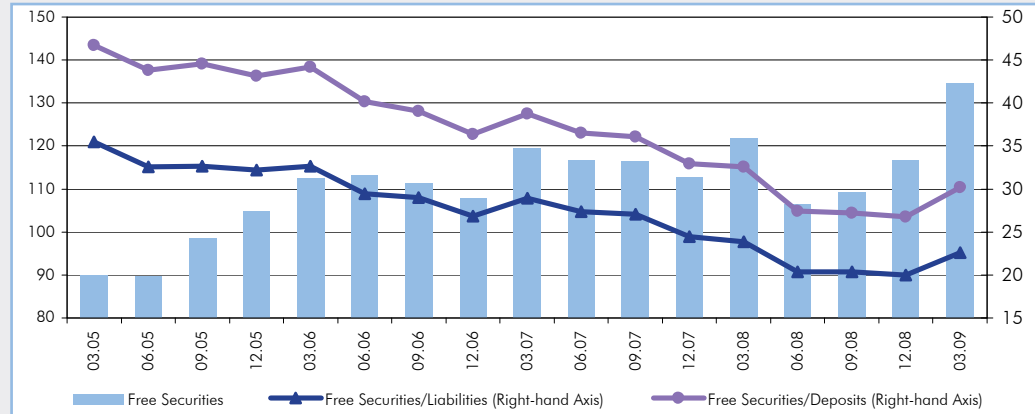
Source: BRSA-CBRT

When the basic liquidity indicators of the banking sector are analyzed, the ratio of cash and cash equivalent assets to total assets maintained a rather horizontal course until September 2008, but afterwards displayed a tendency to increase (Chart III.30).

When the free securities not used as collateral or for repo transactions are taken into consideration, this ratio displayed a tendency to decline until September 2008, but afterwards started to increase due to the impact of free securities (Chart III.30).

As the largest item in liquid assets, the recent increase in free securities is noteworthy. In this development, the tendency of banks to invest in government bonds due to their reluctance to provide credit is effective (Chart III.31).

Chart III.32.
Free Securities and Liabilities¹ (Billion TL, %)

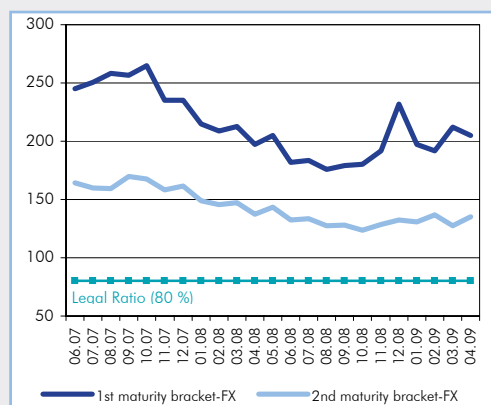


Source: BRSA-CBRT

(1) Participation banks are not included in this calculation.

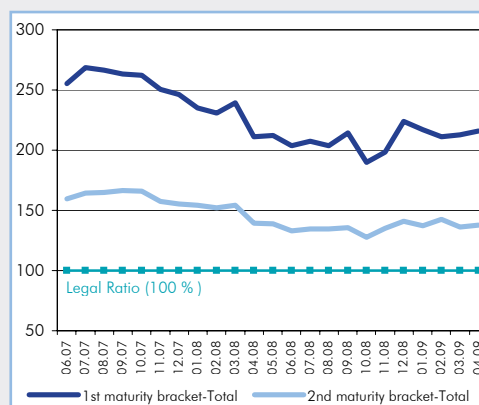
The ratio of free securities, which can be accepted as collateral by the Central Bank to provide liquidity to banks in case of a temporary liquidity shortage, to liabilities and to deposits maintained a rather horizontal course since mid-2008. In March 2009, due to the increase in free securities, the aforementioned ratios have increased to 23 percent and 30 percent, respectively (Chart III.32).

Chart III.33.
FX Liquidity Adequacy Ratio (%)



Source: BRSA-CBRT

Chart III.34.
Total Liquidity Adequacy Ratio (%)



Source: BRSA-CBRT

The liquidity adequacy ratios of the banking sector, calculated pursuant to the “Regulation Relating to the Measurement and Assessment of Liquidity Adequacy of Banks”, displayed a downward trend for both total and foreign currency, 1st and 2nd maturity brackets¹² until the last quarter of 2008, but showed an increase afterwards (Chart III.33 and Chart III.34).

Box 15.

Amendment to the Regulation Relating to the Measurement and Assessment of Liquidity Adequacy of Banks

With “The Amendment to the Regulation Relating to the Measurement and Assessment of Liquidity Adequacy of Banks”, published in the Official Gazette dated January 23, 2009 and numbered 27119;

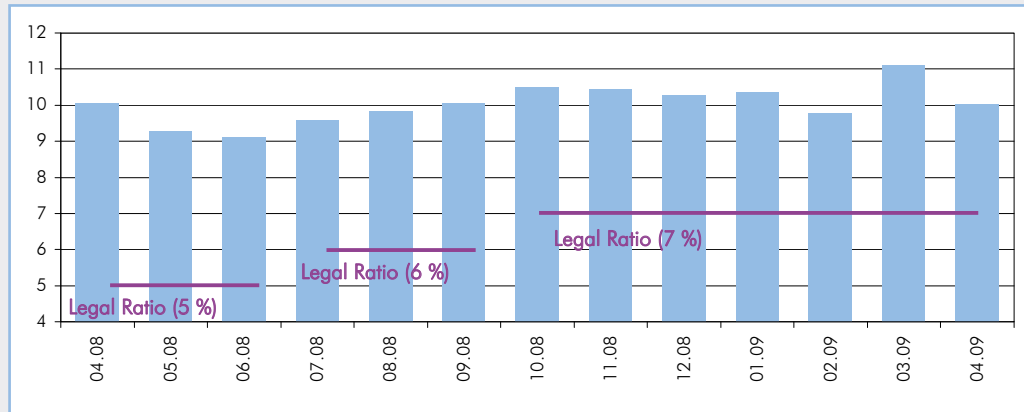
- In the calculation of the liquidity adequacy ratio, the weight to be applied for “Turkish Government bonds”, “Securities held for Repo Transactions”, “Receivables From the Securities Borrowing Market and Guarantees to Be Released” accounts that are classified under “Securities to be held until maturity”, is changed as 80 percent.
- For a period of eighteen months, foreign currency indexed assets and liabilities are taken into consideration in the calculation of foreign currency liquidity adequacy ratio with a 45 percent weight.

With this amendment, it is intended to provide flexibility to liquidity management by banks.

The third liquidity adequacy ratio, which was introduced with an amendment to the “Regulation Relating to the Measurement and Assessment of Liquidity Adequacy of Banks” on April 5, 2008 and calculated by using the full stock values of selected assets and liabilities, also stands above the legal ratio of 7 percent (Chart III.35).

¹² Assets and liabilities with a remaining maturity of 0 to 7 days are included in the 1st and those between 0 and 31 days are included in the 2nd maturity bracket.

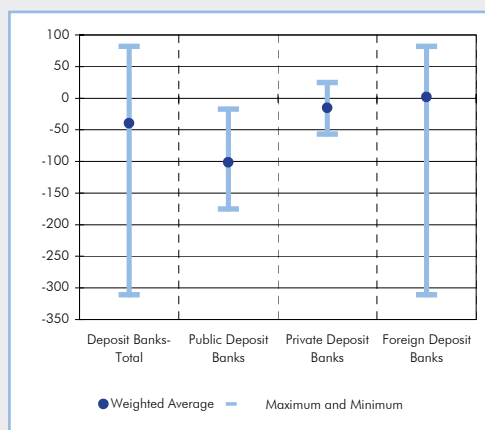
Chart III.35.
Liquidity Ratio of the Banking Sector Calculated By Using Stock Values of Selected Assets and Liabilities (%)



Source: BRSA-CBRT

When the funding position of the sector is analyzed, it is observed that public deposit banks have the highest negative funding gap as of March 2009. However, foreign deposit banks have a positive funding gap due to being funded by their foreign partner (Chart III.36). Retail deposits, being the most important source of the Turkish banking system, restrain the vulnerability of banks to the volatility of interbank funds (Chart III.37). Deposit banks' negative funding gap, which follows a downward trend since the beginning of 2008, has displayed a tendency to increase since October 2008 and was realized as TL 94.3 billion as of March 2009.

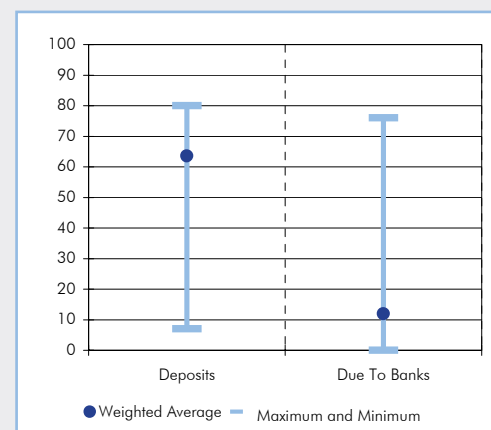
Chart III.36.
Funding Gap (%)^{1,2}
(March 2009)



Source: BRSA-CBRT, SPO

(1) Funding Gap = (Credits-Deposits)/Credits
(2) Bank under SDIF is excluded.

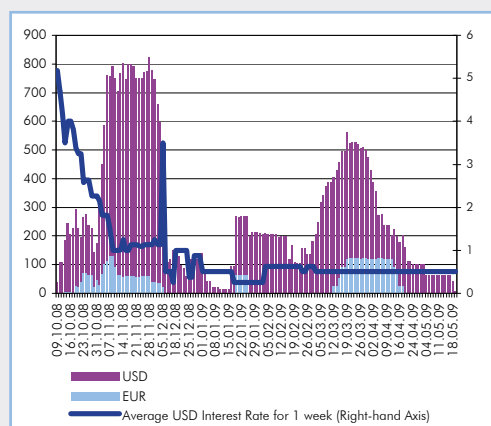
Chart III.37.
Funding Structure As a Percentage of Total Assets (%)
(March 2009)



Source: BRSA-CBRT

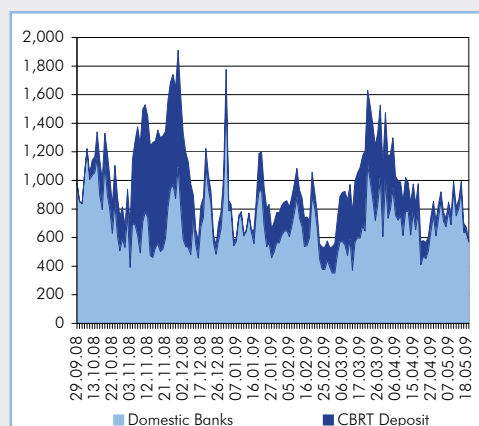
The transaction volume in the Central Bank Foreign Exchange and Banknotes Market-Foreign Exchange Deposit Market, which started to re-operate on 9 October 2008, increased from January to April 2009 and thereafter it is observed that the banks have started to increase interbank operations again. Within this period the interest rate follows a stable course (Chart III.38, Chart III.39).

Chart III.38.
Total Foreign Exchange and Banknotes Market-
Foreign Exchange Deposit Market Operations
and Interest Rates (Million USD, %)



Source: CBRT

Chart III.39.
FX Interbank Operations
(Million USD)



Source: BRSA-CBRT

Since retail deposits are the main funding source of the Turkish banking system and accordingly the dependence to wholesale interbank funds is limited, the sector is significantly protected in terms of liquidity risk. Moreover, since the last quarter of 2008, the increase in the free securities and upward trend of the basic liquidity indicators of the banks are considered positive developments.

III.4. Financial Strength Index

The Financial Strength Index (FSI) is computed with the aim of forming an “aggregate indicator” relating to the direction of the financial strength of the banking sector. Six sub-indices (asset quality, liquidity, exchange rate risk, interest rate risk, profitability, and capital adequacy) were used to form this index. Ratios projecting the risks and fragilities of the banking sector were selected under each sub-index and these ratios formed the index with certain weights (Table III.11).

Table III.11 Financial Strength Index Variables

	Financial Strength Indicators	Direction of the Impact	Weight
Asset Quality	Gross Non-Performing Loans / Gross Loans	Negative	0.33
	Net NPL / Shareholders Equity	Negative	0.33
	Fixed Assets / Total Assets ¹	Negative	0.33
Liquidity	Liquid Assets / Total Assets ²	Positive	1.00
Exchange Rate Risk	On-Balance Sheet FX Position / Own Funds ³	Negative	0.50
	FX Net General Position / Own Funds ^{3,4}	Negative	0.50
Interest Rate Risk	(Int. Sens. TL Assets with a Mat. up to 1 Month – Int. Sens. TL Liab. with a Mat. up to 1 Month) / Own Funds ⁵	Negative	0.50
	(Int. Sens. FX Assets with a Maturity up to 1 Month – Int. Sens. FX Liab. with a Maturity up to 1 Month)/Own Funds ⁵	Negative	0.50
Profitability	Net Profit/Total Assets	Positive	0.50
	Net Profit/Shareholders Equity	Positive	0.50
Capital Adequacy	Free Capital/Total Assets ⁶	Positive	0.50
	Capital Adequacy Ratio	Positive	0.50

(1) Fixed Assets consist of subsidiaries, assets to be sold, fixed assets and net non-performing loans.

(2) Liquid Assets consist of cash, due from the CBRT, due from money market, due from banks and receivables from reverse repo transactions.

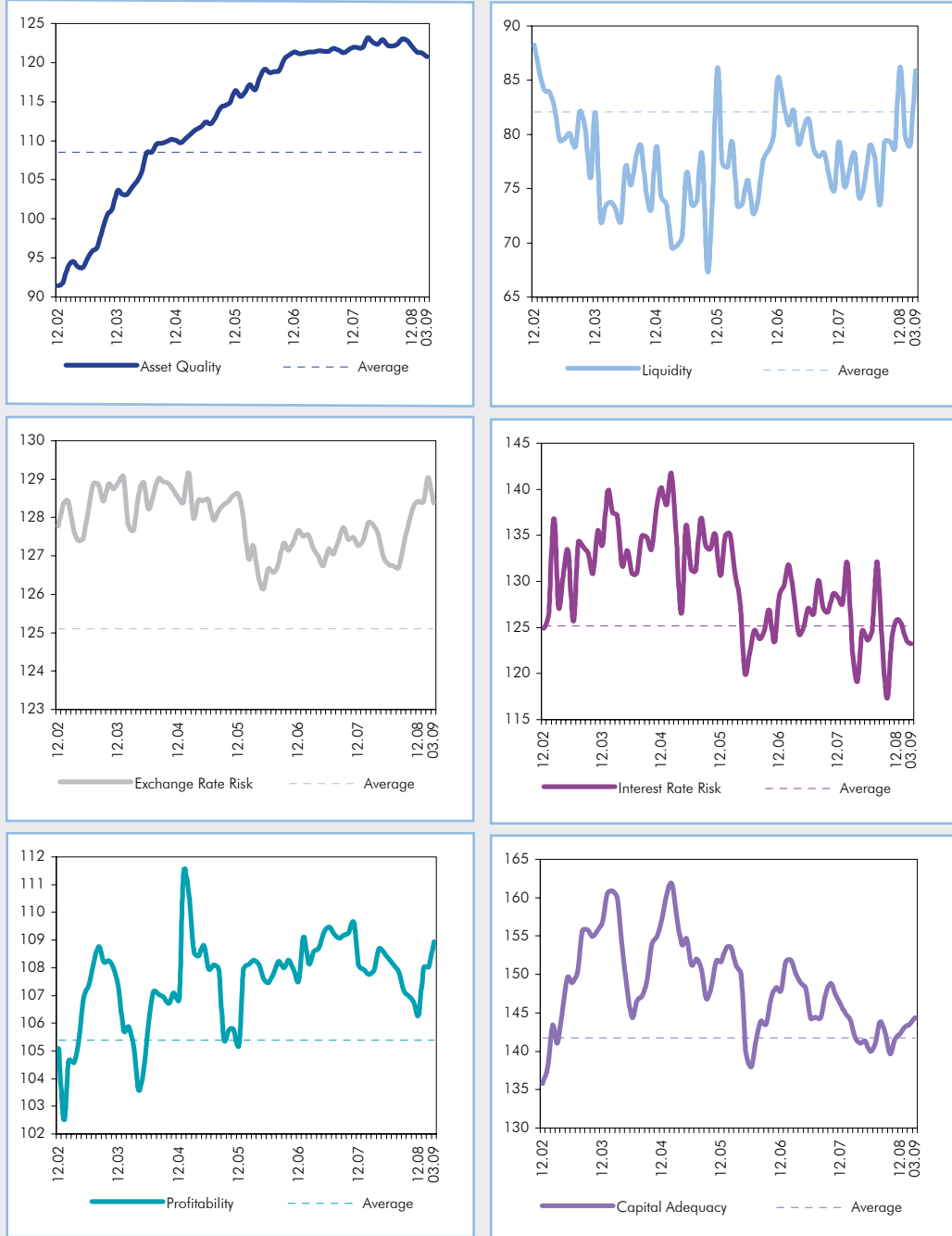
(3) Own funds is the regulatory capital, and it is different from the equity in the balance sheet. The calculation is in absolute values.

(4) Foreign exchange net open position is the sum of on and off balance sheet foreign currency positions. The calculation is in absolute values.

(5) The calculation is in absolute terms.

(6) Free capital is calculated by deducting fixed assets from equity.

Chart III.40.
Financial Strength Sub-Indices¹ (1999=100)



Source: BRSA-CBRT

(1) The averages used are the averages of related sub-indices between December 1999 and March 2009.

The assessment of the sub-indices forming the FSI is as follows (Chart III.40);

i. Asset Quality Index: The Asset Quality Index, which was 121.9 at end-2007, followed quite a stable course until end-2008 and was realized as 122. As of March 2009, the index fell to 120.8 due to the increase in the Net NPL to Shareholders Equity ratio and the NPL ratio.

ii. Liquidity Index: The Liquidity Index, which was 79.3 at end-2007, increased to 86.2 at

end-2008 due to the increase in the share of liquid assets in total assets. As of March 2009, the index fell to 85.9, as liquid assets, especially the “due from CBRT” account, declined.

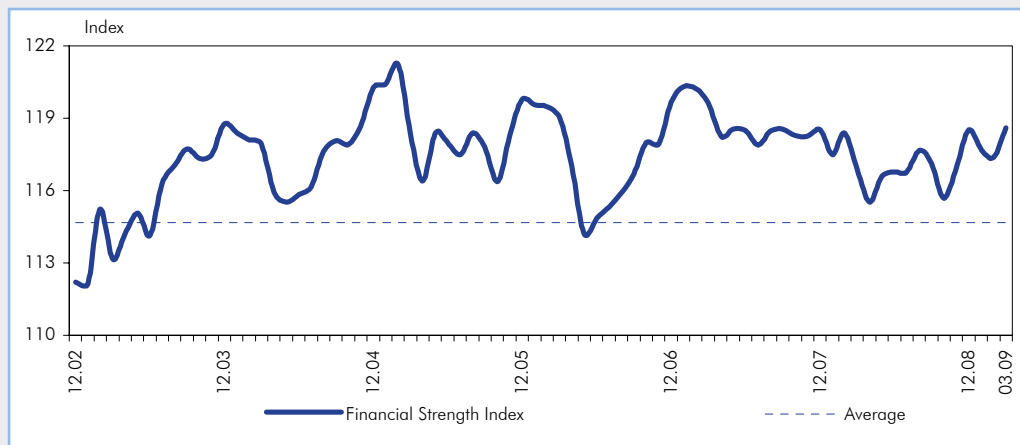
iii. Exchange Rate Risk Index: The Exchange Rate Risk Index, which was 127.3 at end-2007, increased to 128.4 at end-2008, due to the decline in the ratio of on-balance sheet open position to own funds. This index follows a rather stable course in March 2009.

iv. Interest Rate Risk Index: The Interest Rate Risk Index, which was 128.3 at end-2007, fell to 125.8 at end-2008, due to the increase in TL interest sensitive gap in spite of the decrease in FX interest sensitive gap. The index fell further to 123.3 in March 2009 due to the increase in the ratio of the difference between both TL and FX-denominated interest-sensitive assets and liabilities with a maturity up to 1 month to equity.

v. Profitability Index: The Profitability Index, which was 108.1 at end-2007, was realized as 106,3 at end-2008 taking its lowest value for the last three years, due to the decrease in the return on equity and return on assets of the banking sector. Meanwhile, the index increased to 108,9 as of March 2009 due to the increase in both of the ratios forming the index.

vi. Capital Adequacy Index: The index, which stood at 146.3 at end-2007, fell to 142.3 at end- 2008, due to the decline in the capital adequacy ratio and the ratio of free capital to total assets. In March 2009, the index increased to 144,3 due to the increase in the ratios which form the index.

Chart III.41.
Financial Strength Index¹ (1999=100)



Source: BRSA-CBRT

(1) The average used is the average of financial strength index between December 1999 and March 2009.

The Financial Strength Index that is monitored as an indicator of the soundness of the banking sector was realized as 118,5 at end-2007, and afterwards although the index followed a volatile course, it reached its end-2007 value as of year-end 2008. In March 2009, the index reached 118.6 due to the increase in the Profitability and Capital Adequacy Indices (Chart III.41).