



CENTRAL BANK OF THE REPUBLIC OF TURKEY



# Financial Stability Report

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This report, which aims to inform the public, is based mainly on September 2008 data. However, the report also includes the developments and evaluations until the publishing date of the report in Turkish. This text is fully available at the CBRT web site. The CBRT cannot be held accountable for decisions taken based on the information and data provided in this report.

## FOREWORD

*The current global crisis started to affect developing countries like Turkey, especially in the last quarter of 2008. The effects of the slowdown in capital inflows and the credit contraction have become more apparent. In many developed and developing countries, growth expectations are either diminishing or turning into expectations for contraction.*

*All around the world, concerns regarding inflation are being replaced with efforts to ensure the flow of liquidity into the financial system and the efficient-functioning of credit markets. The Central Bank of Turkey has all the essential tools to effectively meet both the New Turkish Lira and foreign exchange liquidity needs of the banking system. As a matter of fact, our Bank has taken the necessary measures to contain the effects of problems in international markets on the domestic economy. Also in the upcoming period, the smooth functioning of payment systems will continue to be ensured.*

*The negative repercussions of the global crisis on our banking sector have remained limited due to the resolute reform process following the 2001 crisis. Although the default rates are expected to rise due to the unfavorable developments in the economic conjuncture, according to the analyses made, the capital adequacy of our banks stands at a level that is able to cover this risk.*

*I hope that the analyses and assessments presented in this report will contribute to a financial system that is more stable and less susceptible to crises.*



Durmuş YILMAZ  
Governor  
Central Bank of the Republic of Turkey



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## OVERVIEW

The global financial crisis, which started in the United States of America in the second half of 2007 and expanded its area of impact by subsequently spilling over to Europe and Asia, entered a new phase when Lehman Brothers—one of the leading investment banks in the US—filed for bankruptcy protection in September 2008. The situation, which emerged as a liquidity problem in the interbank markets during the early stages of the crisis, gradually turned into concerns regarding the reliability of financial institutions. Accordingly, deposit owners and other investors headed for reliable means of investment, particularly US government bonds. This tendency led not only to rapid appreciation of the US dollar but also to repricing of financial assets and a significant decline in market capitalizations of financial institutions. Therefore, in addition to the liquidity support they have been providing for quite some time to maintain financial stability, the authorities of developed countries took measures, such as offering various levels of guarantees for deposits and other liabilities of financial institutions, providing capital support to these institutions and easing monetary and fiscal policies. Although a certain amount of improvement was observed in the functioning of credit markets following these measures, the volatility in the markets is still high and indicators of global economic activity are negative.

Parallel to these developments in the markets of developed countries, the impact of the crisis started to be strongly felt by developing countries in the second half of 2008, due to the reversal of international capital flows and the start of a slowdown in the global economy. Developing countries, including Turkey, faced capital outflows owing to the decline in the risk appetite of investors and hence, their currencies and investment instruments depreciated significantly.

The effects of the global crisis-based credit contraction on growth rates of countries are becoming increasingly pronounced. Growth expectations either diminish or change to expectations for contraction in many economies, particularly in developed countries. In the meantime, this expected slowdown in the global economy and the downward trend in commodity prices started to have favorable effects on the inflation rates of developed and developing countries. It is anticipated that the downward trend in global inflation will become more apparent in the upcoming months.

In Turkey, although the decline in external financing prospects and the acceleration in capital outflows stand as factors that may pose difficulties for the financing of the current account deficit in the upcoming period, the fall in energy prices, the slowdown in domestic demand and the depreciation of the YTL will possibly lead to a rapid narrowing of the current account deficit and hence a reduced need for external financing.

The ratio of public debt stock to gross domestic product (GDP) and the share of debt stock susceptible to movements in exchange rates continued to decline in September 2008. Moreover, both the ratio of expenditures covered by central government budget revenues and the ratio of non-interest expenditures covered by tax revenues increased in the first ten months of 2008. The 2009 Program envisages 2008 central government budget revenues and expenditures to exceed the initial targets and the central government budget deficit to narrow. However, it is expected that the IMF-defined primary surplus target will fall short, as the majority of central government revenues is composed of privatization revenues and other revenues items. Maintaining fiscal discipline and improving its quality will continue to be critical for economic stability in the upcoming period.

Although the ratio of household financial liabilities to GDP increased in recent years, it is still lower than many countries including new members of the EU. The low level of FX-indexed and variable rate portion of household liabilities leaves households in Turkey less vulnerable to unfavorable developments in the economic conjuncture compared to other countries.

It is likely that individuals will increasingly resort to credit cards as an instrument of credit in the upcoming period, as banks will apply stricter terms on consumer loans. This tendency of consumers to meet their credit needs with credit cards, for which higher interest rates are charged compared to consumer loans, may lead to an increase in the number of defaulters. Therefore, applying caution to the use of credit cards in line with their essential function as a payment instrument is critical for maintaining the soundness of financial markets.

The debt roll-over ratio of external long-term loans of the non-banking private sector has never been below 100 percent, not even during the 2001 crisis. However, when making assessments for likely future developments, it should be kept in mind that the problem in the 2001 crisis was rather Turkey-specific, whereas currently the global crisis is the main culprit for the scarcity of external borrowing facilities.

2007 was a year, in which firms maintained their profitability and sound financial structures. However, it is expected that there will be a deterioration in the financial conditions of firms, especially those with short FX positions, and a corresponding decline in their debt repayment capacity in the upcoming period, owing to the depreciation of YTL, appreciation of the US dollar against the Euro and the increase in financing costs in the second half of 2008. Such a development will probably lead to a certain amount of increase in the NPLs of the Turkish banking sector.

In a period where the leading banks in the world are supported by serious amounts of capital injection, the Turkish banking sector maintains its strong capital structure as a result of the reforms implemented decisively in the aftermath of the 2001 crisis. The banking sector continues to grow, accompanied by an ongoing rise in the ratio of deposits and loans to the GDP and the ratio of loans to deposits.

The share of loans in banking sector assets has continued to rise. Nevertheless, credit growth in Turkey has remained moderate in recent years compared to other developing countries, due to the influence of monetary tightening. Considering that external borrowing will be more difficult due to the global financial crisis, the rate of increase in credits is expected to decelerate further in the upcoming period.



The exchange rate risk aversion tendency of the banking sector continues. Both the levels of on-balance sheet short position and off-balance sheet long position of the banking sector declined in line with liquidity conditions in international markets.

Deposits stand as the main funding source of the banking sector. The dependency of the sector on wholesale funding sources is low and liquidity adequacy ratios are far above the legal requirements. However, developments in global liquidity conditions increase the importance of liquidity management of banks. The Central Bank has taken and will continue to take necessary measures to enable emergence from this period with minimal adverse impact and to maintain the sound functioning of the payments system. However, it is crucial that banks continue their prudent and effective liquidity management in order to ensure the effectiveness of these measures.

The profitability performance of the Turkish banking sector declined albeit moderately in the third quarter of 2008. It is anticipated that unfavorable developments in the economic conjuncture will increase the non-performing loans of banks and hence, have a negative impact on their profitability performance.

The capital adequacy ratio of the sector increased in the third quarter of 2008, due to both the rise in equity and the decelerated rate of increase in risk-weighted assets, and maintained a high level above both the legal requirement and the target ratio. According to scenario analyses, the current capital structure of the sector is strong enough to absorb the losses likely to be incurred under various shock assumptions. Moreover, the decision of the BRSA to make the distribution of 2008 profits of banks subject to approval will help maintain the strong capital structures of banks.

In this period of increased risks, the soundness of the banking system becomes more critical. The Financial Strength Index, monitored closely as an indicator of the soundness of the banking sector, remained favorable despite a decline in September 2008 due to declines in Profitability, Capital Adequacy and Interest Rate sub-indices compared to end-2007.

In the current period where the effects of the global crisis is becoming more pronounced in Turkey as well as in other developing countries, effective risk management by all economic agents is considered crucial for the soundness of financial markets. In this respect, it becomes especially important for the safeguarding of economic stability that fiscal discipline is maintained without concessions and public authorities take the necessary measures in a concerted and prompt manner as they have done up to now.



## I. MACROECONOMIC DEVELOPMENTS

In this chapter, macroeconomic developments will be elaborated, taking into account the importance of such developments for financial stability.

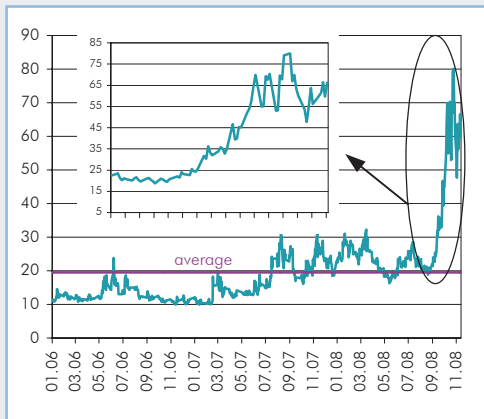
### I.1. External Sector

#### I.1.1. International Developments

As uncertainties in the international financial markets were transformed into a loss of confidence in financial institutions, the effects of the crisis that started in the US became more pronounced at global level in the last quarter of the year. Emerging markets, which had curbed the slowdown in the global economy with their growth performance in previous periods, also started to be influenced by the crisis due to the reversal of capital flows in an environment of decreasing confidence and contracting global economy.

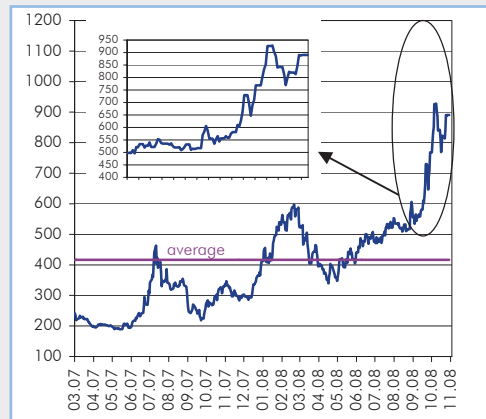
Unfavorable expectations escalated following the bankruptcy of certain large institutions operating in the financial markets of the US. Consequently, the VIX index, a widely accepted core volatility measure for the US stock market, reached a level around 80 following the fluctuation in the second half of 2007, while it remained at only 19.5 on average from 2006 to 2008 (Chart I.1). Likewise, averages of the iTraxx Europe Crossover Index, comprising 50 of the most highly traded sub-investment grade corporate bonds became 416.3 during the March 2007-November 2008 period and was over 900 in October 2008 (Chart I.2).

Chart I.1.  
VIX Index



Source: Bloomberg

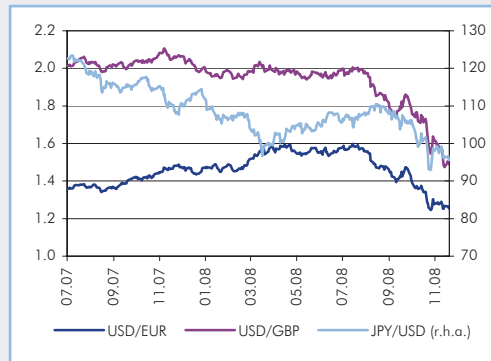
Chart I.2.  
iTraxx Europe Crossover Index



Source: Bloomberg

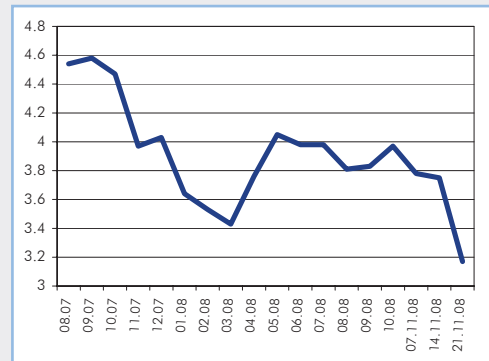
The lack of confidence problem that hinders banks operating in international markets from supplying each other with the required liquidity has spilled over to depositors and investors providing funds to banks. There is an increase in the capital requirement created by the losses due to non-performing loans of financial institutions and loss of value in securities. This fact causes the global liquidity shortage to deepen.

**Chart 1.3.**  
FX Rates of Developed Countries



Source: Bloomberg

**Chart 1.4.**  
10-Year US Treasury Bond Yield (%)

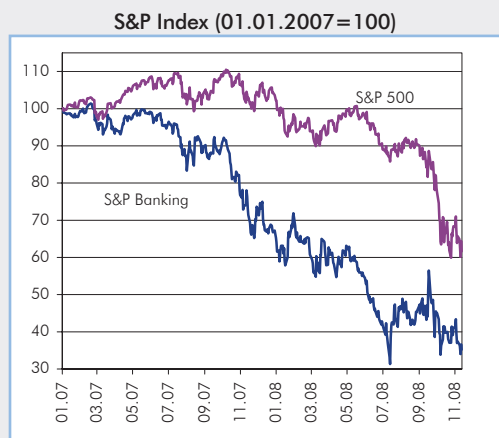


Source: Bloomberg

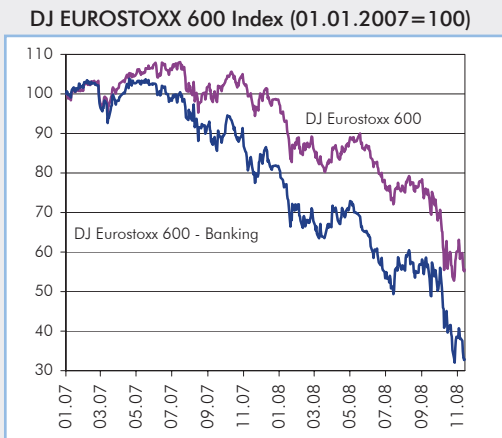
While credit and stock markets conducting USD transactions contracted, financial institutions carrying risks in these markets increased their demand for cash in order to compensate for their losses and to protect themselves from rising volatility. Thus, the rise in USD demand from financial institutions caused a rise in the value of USD against other important currencies. The yield on US government bonds has rapidly declined over the last year, reaching the lowest level of the last 48 years (Chart 1.3 and 1.4). Therefore, the Fed increased the volume of swap operations with the central banks of other developed countries in order to meet the USD demand.

The decrease in the asset prices of banks and the increase in liquidity requirements are interrelated and this issue combined with the lack of confidence problem leads to further deterioration of the fund raising capabilities of financial institutions. According to the October 2008 Global Financial Stability Report of the International Monetary Fund (IMF) the total loss of banks in the period between mid-2007, when the global turmoil began, and September 2008 was USD 580 billion. While 20 percent of this loss comprises that of 3 large banks, 75 percent is of 20 large banks and 95 percent of the mentioned loss is of North American and European banks. As a result of these developments leading to the accelerated loss of stock value of the financial institutions in stock markets of developed countries, the market value of the banks dropped more than 50 percent compared to early-2007 (Chart 1.5).

**Chart 1.5.**  
Stock Market Indices of Developed Countries



Source: Bloomberg



**Box 1.****Financial Institutions Experiencing Problems due to Global Financial Crisis and the Interventions Made**

The mortgage crisis that began in July 2007 in the US was aggravated through the integrated financial markets and led to the collapse or change of hands of many financial institutions.

In the US, IndyMac Bank was taken over by the Federal Deposit Insurance Corporation (FDIC) and the liabilities of Fannie Mae and Freddie Mac were brought under Treasury guarantee in July 2008. The US Treasury took over Fannie Mae and Freddie Mac that it had provided with USD 200 billion worth of funds. In September 2008, after Lehman Brothers had filed for bankruptcy protection, US investment banks either closed down or transformed their activities one after another and their extensive international liabilities accelerated the spillover of the crisis.

In March 2008 Bear Stearns was acquired by JPMorgan and in September Merrill Lynch by Bank of America. The remaining two large investment banks Goldman Sachs and Morgan Stanley abandoned their investment bank status and became bank holding companies. Besides, the American insurance conglomerate AIG, which had provided large amounts of guarantee to European banks, was rescued from bankruptcy with collateralized emergency loans extended by the Fed and capital supplied by the US Treasury. In September, the bankruptcy of Washington Mutual, the 6th largest bank in the US, became the largest deposit-bank-bankruptcy yet to happen in the history of this country. The bank, which was placed into conservatorship of the FDIC was sold to JP Morgan on the same day, protecting taxpayers' interests. Finally, in the second half of November 2008, due to a significant decline in the stock value of Citigroup, the US Treasury decided to purchase USD 20 billion-worth of preferred stock in addition to its previous USD 25 billion-worth capital injection. Moreover, a government guarantee was provided for USD 306 billion of its domestic assets.

In Europe, mainly the Benelux countries have made extensive interventions. Following the loss of confidence by investors in the financial soundness of Fortisbank, the bank experienced a financial squeeze and the market value of its stocks fell by almost 35 percent. Consequently, in September 2008, the governments of Belgium, the Netherlands, and Luxembourg decided to inject EUR 11.2 billion of capital in the bank. When it became evident that this support was insufficient, on 3 October 2008 the Dutch government decided to buy the bank's operations in the Netherlands for EUR 16.6 billion. With this purchase the Dutch government also took over ABN Ambro stocks of Fortis. On 6 October 2008, the French bank BNP Paribas bought most of Fortis' operations in Belgium and Luxembourg for EUR 14.5 billion. This process made the Belgian government the largest shareholder of BNP Paribas with 11.6 percent and BNP Paribas became the bank with the largest deposit base in the Euro area.

At end-2007, investors lost confidence in Dexia, whose total asset size was EUR 605 billion and the market value of its stocks dropped by 30 percent. Based on these developments the French, Belgian, and Luxembourgian governments decided to inject EUR 6.4 billion capital in Dexia on 29 September 2008. Moreover, 10 days later it was announced that all liabilities of the bank had been put under guarantee for one year. After the rescue operation, the Belgian government became a shareholder and owned 25.5 percent of Dexia.

In the UK, Bradford&Bingley, the 9th largest bank of the country based on asset size, was nationalized. On 18 September 2008, HBOS, the largest mortgage provider in the UK, announced a merger with Lloyds Bank Plc as a result of losses stemming from its mortgage loan portfolio and the liquidity shortage caused by the global financial crisis. These two banks, which are expected to complete the merger by early 2009, will receive GBP 17 billion of capital support from the rescue package of the British government. Within the scope of the bailout package, details of which were unveiled on 13 October 2008, the British government declared that it would provide GBP 20 billion capital support for the Royal Bank of Scotland, whose asset size has been declining considerably with the deepening crisis.

The Swiss government decided to inject capital amounting to CHF 6 Billion to UBS, which has been subject to rapid fund withdrawals, and a maximum CHF 60 billion of troubled assets on the balance sheet of the bank would be transferred to a special fund guaranteed by the Swiss National Bank.

In the second half of 2008, the crisis that emerged in the US not only continued to intensify but also spilled over to European and Asian countries. In view of these developments, developed countries resorted to comprehensive measures in addition to liquidity support. The first of these measures was implementing emergency funding packages stipulating capital injection to financial institutions by the Treasuries of these countries. The most extensive of these financial aid packages was the one authorized by the US Congress. The second measure to be taken was to provide government guarantees of various degrees to liabilities of financial institutions in order to overcome the faults and problem of lack of confidence in the borrowing markets. The third measure taken was the easing of fiscal and monetary policies. However, the said measures failed to suffice due to the rapid decline in global financial activity and persistent lack of confidence in financial institutions.

## Box 2. Measures Taken Against the Crisis

	US	EU/ECB	Germany	Argentina	Australia	Brazil	Czech Republic	China	Indonesia	France	South Korea	UK	Switzerland	Italy	Iceland	Japan	Hungary	Mexico	Russia	Turkey
Liquidity injections <sup>1</sup>	x	x	#	x	x	x		x	x	#	x	x	x	#		x	x		x	x
Policy rate cuts <sup>2</sup>	x	x	#		x		x	x		#	x	x	x	#	x	x	x			x
Modif. to dom. market facilities <sup>3</sup>	x	x	#	x	x	x	x		x	#	x	x	x	#	x	x		x	x	x
Introduction or increase in foreign currency swap lines <sup>4</sup>	x	x	#		x	x			x	#	x	x	x	#	x	x		x		
Collateral swaps <sup>5</sup>	x											x	x	x						
Partial/full guaran. to bank liabilities	x	x	x		x					x	x	x		*					x	
Direct or indirect purchases of illiquid assets <sup>6</sup>	x	*	*		*														x	
Capital injections	x	x	x							x		x	x	*	x	*			x	
Nationalisations/conservatorships <sup>7</sup>	x	*										x		*	x					x
Restrictions on short selling <sup>8</sup>	x		x		x				x	x	x	x	x	x		x				x
Increased depositor protection <sup>9</sup>	x	x	x		x		x	x				x		*	x	*	x		x	*
Stand-by Agreement with IMF <sup>10</sup>															x		x			

Source: G-20 Study Group on Global Credit Market Disruptions, Central Bank web sites of above mentioned countries

x Measures implemented or in the process of being implemented.

\* New capacity created or announcements about intensions, but measures not implemented at this point.

# European Central Bank's decisions.

<sup>1</sup> To meet the liquidity requirements which have stemmed from the decline in the asset prices and loss of confidence in the markets, country central banks injected liquidity to the markets. In the US, where the problems are the deepest, Fed extended the range of collateral and provided significant amount of liquidity to the markets by implementing a number of new instruments. Likewise, ECB injected liquidity to the markets, and BoE increased its short term lending facilities and extended the maturity of repo operations. In Turkey, funding is increased via weekly repos.

<sup>2</sup> During the August 2007-November 2008 period, major Central Banks cut their policy rates as following: Fed: from 5.25 percent to 1 percent; ECB: from 4 percent to 3.25 percent; BoJ: from 0.5 to 0.3. As for Turkey, Monetary Policy Committee (MPC), kept its borrowing rates the same, while decreased the lending rates by 50 basis points on 22 October 2008. Then, on 19 November 2008 MPC cut its borrowing rates by 50 basis points and lending rates by 100 basis points. Iceland cut its rates by 350 basis points on October 15 and on October 28 increased by 600 basis points to 18 percent, whereas Hungary increased its rates by 300 basis points to 11.5 percent due to the depreciation of Forint on October 22, then on November 24 cut its rates by 50 basis points to 11 percent for the sake of growth and stability.

<sup>3</sup> On October, 2008, CBRT resumed its activities as an intermediary in the foreign exchange deposit market. Transaction limits in the Foreign Exchange and Banknotes Markets were increased to USD 10.8 billion in total on 24 October 2008. In addition, valid after 21 November 2008, the maturity of foreign exchange depo, that can be provided from CBRT, denominated both in US Dollars and Euro within the limits allowed in Foreign Exchange Depo Markets was increased from 1 week to 1 month. In the same market the lending rate which is used to be 10 percent was decreased to 7 percent for US Dollars and to 9 percent for Euro. As the majority of Hungarian Banks' loans is denominated in non domestic currency, private banks' need for foreign currency created pressure on Forint. Hungary borrowed EUR 5 billion from ECB against Euro-denominated collateral, and provided Euro to the private banks in Hungary in exchange for Forint.

<sup>4</sup> Within a coordinated fashion, central banks expanded their existing swap lines and created new swap lines. In this framework, Brazil, Korea, Mexico and Singapore are among the countries with which Fed did swap operations to control the pressures on US dollar funding markets.

<sup>5</sup> In UK with SLS and in the US with TSLF, the counterparties had the facility to swap their illiquid collateral with relatively liquid government securities.

<sup>6</sup> For example, the US Commercial Paper Funding Facility and an Australian government agency's intended purchase of MBS.

<sup>7</sup> For example, in UK, Northern Rock and Bradford & Bingley; in Iceland Glitnir, Landsbanki and Kaupthing banks are nationalised. In US, on 7 September 2008 FHFA placed Fannie and Freddie into conservatorship, where the shareholders' voting rights and dividend rights were suspended. Conservatorship will end when Fannie and Freddie reach sufficiently sound condition.

<sup>8</sup> Temporary restrictions on short selling. The restrictions on short selling in Japan have already existed before the crisis.

<sup>9</sup> The recent arrangements concerning the deposit insurance are presented within the table below.

<sup>10</sup> Via the stand-by agreements, IMF provided USD 15.7 billion to Hungary, USD 16.4 billion to Ukraine, USD 2.1 billion to Iceland and USD 7.6 billion to Pakistan. Moreover, IMF revealed to provide emergency liquidity support to the member countries up to five times of their quota if needed.

The developed countries, which take the most extensive measures against the crisis, are also the source of the crisis. Other countries take the necessary measures depending on the degree they have been affected by the crisis and the specifications of their financial sector.

In the early stages of the crisis, the authorities of developed countries, mainly the central banks, failed to follow coordinated policies. However, countries have now reached a consensus on strengthening coordination considering the unfair competition and the spill over effect. As a matter of fact, at the G-20 summit dated 14-15 November 2008, determination in enhancing cooperation, working together to restore global growth, and achieving the required reforms in the global financial system was declared.

Due to the severity and potential prevalence of recent fluctuations, many countries have increased the coverage of deposit insurance.

**Table 1. Changes in Deposit Guarantee Schemes**

	Pre-crisis	Post-crisis
USA	Full guarantee up to USD 100 thousand for all accounts.	Guarantee amount for all accounts was increased to USD 250 thousand until 31 December 2009.
Germany	Various guarantee forms apply for different bank groups in Germany and the general practice is a minimum of EUR 20 thousand.	All accounts of real persons have full guarantee. This was a political announcement, there is no planned legislation.
Australia	No apparent deposit insurance scheme.	Unlimited guarantee for all deposits until 31 December 2011.
Czech Rep.	EUR 25 thousand	Unlimited guarantee up to EUR 50 thousand
EU	Minimum limit for deposit insurance is EUR 20 thousand.	Currently, the suggestion is to raise the EUR 20 thousand lower limits to EUR 100 thousand in one year and while the limit is suggested as EUR 50 thousand during the transition period.
Indonesia	Rupiah 100 million	Rupiah 2 billion
UK	Full guarantee up to GBP 35 thousand	The limit was raised to GBP 50 thousand.
Iceland	Private guarantee, no government security.	Unlimited guarantee for deposits of all persons and institutions.
Hungary	Forint 6 million	Forint 13 million. Political commitment was made to implement unlimited guarantee for all deposits.
Russia	Up to Rubles 100 thousand 100 percent, between 100 thousand and Rubles 400 thousand 90 percent guarantee.	Up to Rubles 200 thousand 100 percent, between 200 thousand and Rubles 700 thousand 90 percent guarantee.

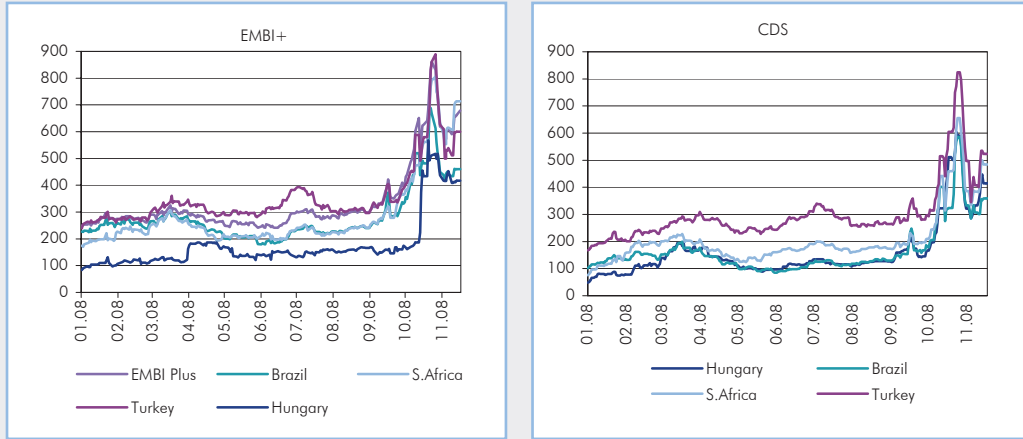
Source: Deposit Insurance Institutions, central banks of the countries, ECB.

Over a short period of time, the limit and coverage of deposit guarantees were increased in many countries. Due to the integrated nature of the markets, this might cause unfair competition in countries that have not made any changes. Therefore in Turkey, while the power to regulate the coverage and amount of saving deposits and participation funds of real persons subject to insurance was vested in SDIF as stipulated by Banking Law No: 5411, the authority to increase the current YTL 50 thousand and to extend the insurance coverage was given to the Council of Ministers for a period of two years.

As emphasized in the previous report, the concerns of central banks of developed countries related to financial stability and economic growth are more evident. This pronouncement is becoming valid for emerging markets. It can be observed from the EMBI+ and CDS spreads of these countries that risk premiums are rising and fund withdrawals are experienced (Chart I.6).



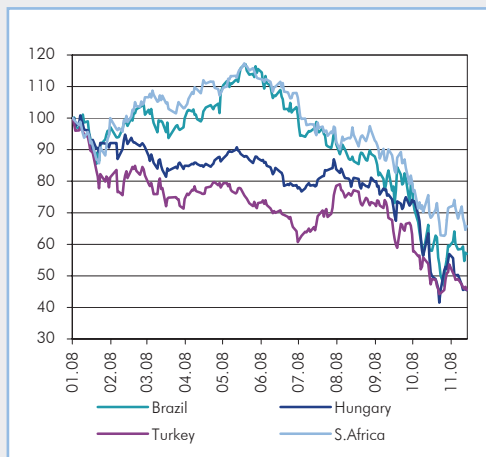
**Chart I.6.**  
Risk Premia<sup>1,2</sup> and Credit Default Swap Spreads<sup>3</sup> of Selected Developing Countries and Turkey  
(Basis Points)



Source: Bloomberg(1) Country risk premium is the difference between the relevant country's EMBI+ index and returns of US Treasury instruments. (2) EMBI+ index includes Eurobonds of 18 developing countries, Brady bonds and traded loans. The weight of each country in the index is different. For instance, Brazil's weight is 22.4, Turkey's weight is 10.04 and South Africa's weight is 1.82 percent in the EMBI+ index. Also the index is calculated for each country individually. (3) 5 year CDS contracts in USD are taken as benchmark.

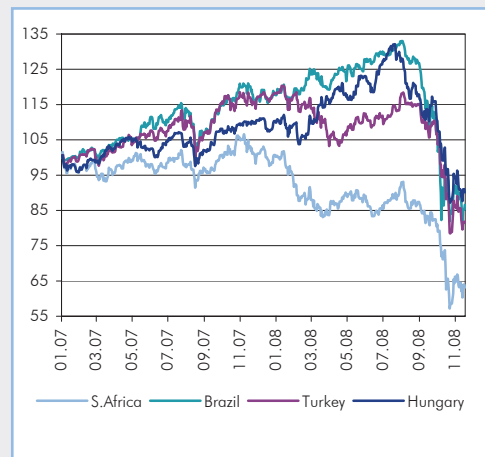
Uncertainties based on the enhanced turmoil in global financial markets lead to a weakening of the risk appetite and thus, capital outflow from developing countries. This situation causes significant depreciation in the currencies and financial instruments of developing countries, including Turkey (Chart I.7 and I.8).

**Chart I.7.**  
Stock Market Indices of Developing Countries  
(01.01.2008=100)



Source: Bloomberg

**Chart I.8.**  
Nominal Exchange Rates of Developing Countries  
(01.01.2007=100)

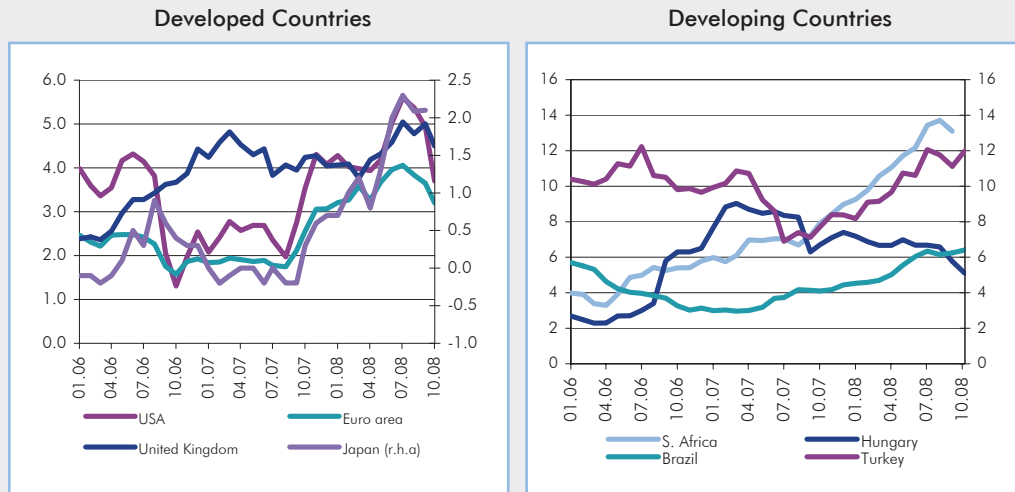


Source: Bloomberg

When assessed as a whole, despite having stronger macroeconomic foundations than before, developing countries are expected to be affected at various degrees from the global crisis based on their financing needs. Moreover, fragilities due to the depreciation of local currencies might be higher in countries of recent rapid credit growth, where most of this credit is in foreign currency and unhedged.

In the face of global turmoil, some countries need international support along with domestic measures to maintain confidence in the markets and provide FX liquidity and therefore they choose to make stand-by agreements with the IMF. Iceland, Hungary, Ukraine and Pakistan are countries that have made stand-by agreements with the IMF and Belarus and Serbia have been negotiating its terms.

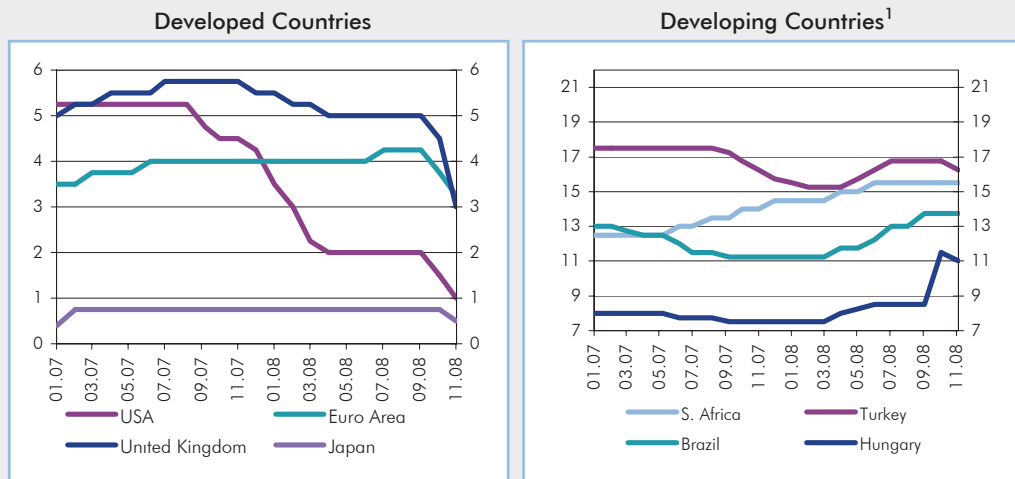
**Chart I.9.**  
Inflation Rates of Selected Countries (CPI, annual % change)



Source: IMF IFS

The slowdown in the global economy and the downward trend of commodity prices had favorable effects on the inflation rates of developed and developing countries and this situation is projected to continue in the upcoming period (Chart I.9).

**Chart I.10.**  
Policy Interest Rates of Selected Countries (%)

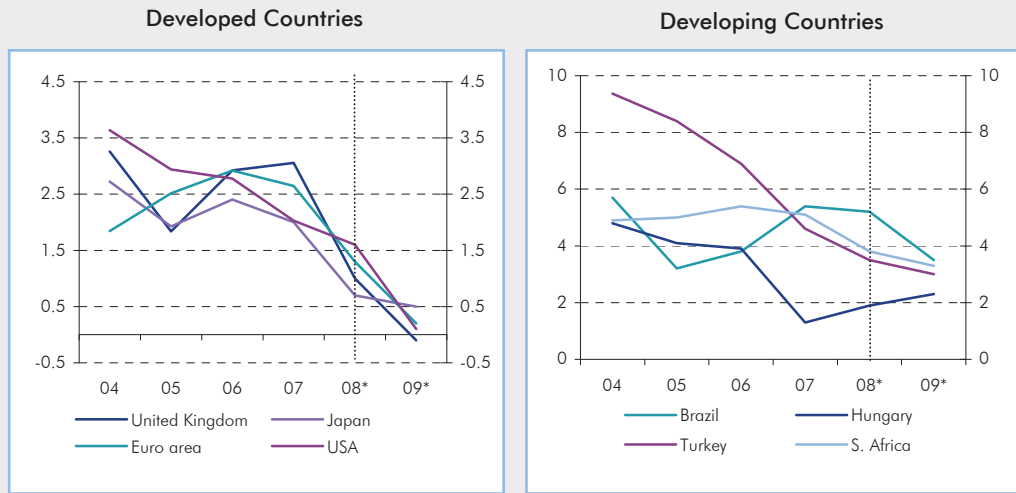


Source: Central Banks  
(1) Overnight borrowing rate was used for Turkey.

Interest rate cuts, which had been initiated by the central banks of developed countries with financial stability and economic growth concerns, continued following the downward

trend of inflation. Meanwhile, the central banks of developing countries either raised policy rates or kept the current level due to inflation worries (Chart I.10). However, with concerns of inflation diminishing after the second half of November 2008, albeit limited, interest rate cuts are observed in developing countries.

**Chart I.11.**  
Growth Rates of Selected Countries (Annual % change)



Source: IMF IFS, IMF WEO, EU European Economy  
(\* Forecast (IMF, October 2008))

It is expected that the negative repercussions of the turbulence in financial markets on the corporate sector will continue, leading to further deterioration in expectations of investors and a serious contraction of the global economy. As a matter of fact, growth rates for both developed and emerging economies have been revised downwards.

To sum up, the fact that early measures taken against the crisis by developed countries were uncoordinated, limited the expected positive impact. The efforts for coordinated policies against the crisis following the G-8 summit and central banks' coordinated measures such as interest rate cuts and liquidity supports to the financial markets started to produce results. Nevertheless, despite financial markets returning to normal operation, the deepening crisis in developing countries and the spillover to the rest of the world raise questions regarding the efficiency of the steps taken. Even though credits extended to some developing countries by the Fed or funds provided for EU member countries in distress by other members outside the EU budget have stimulated a recovery in expectations, the effect remains limited. Therefore, it is considered that in order to attain a permanent solution, the coordination between developed countries at central bank level should be enhanced to include developing countries and cover fiscal policy and structural areas as well. Besides, the short-term liquidity facility (SLF) announced by the IMF for developing countries which have sound macroeconomic conditions but experiencing a liquidity shortage due to unfavorable developments is a noteworthy step in this direction.

**Box 3.****G-20 Leaders Summit and Short-term Liquidity Facility Launched by the IMF**

On account of the evident effects of the global financial crisis on emerging economies, the International Monetary Fund (IMF) announced on 29 October 2008 that it would launch a program called "SLF-Short-term Liquidity Facility" to address the liquidity requirements of these countries.

The main goal of the program is to carry emerging markets through temporary FX liquidity problems that they may face due to the global financial crisis. The first prerequisite for applicant countries to qualify for the program is to have a strong track record of sound policies. Other criteria for eligibility are having access to international capital markets and sustainable debt burdens according to the IMF's analyses. Disbursement of IMF resources can be up to 500 percent of the quota for eligible countries, without the standard phasing and loan conditions of more traditional IMF arrangements, a process rendering the disbursement to be made quickly. Loans with three-month maturities are allowed to be drawn up to three times during a 12-month period.

Although the SLF program is considered a favorable step by the markets, some criticism have been made that its maturity is too short and the quantity limit of 5 times the country quota will be insufficient for some countries with deep markets. Moreover, some critics are of the opinion that SLF may encourage a capital outflow from the emerging countries, thereby creating an increasing effect on total indebtedness of the countries. Additionally, another point made is that countries supported by this IMF liquidity facility may slump as loss of confidence will arise with regard to their financial status (stigma effect).

In the declaration made following the G-20 summit held in Washington D.C. on 15 November 2008 to discuss the measures to be taken against the global crisis, the major role of the IMF regarding intervention in the crisis was referred to and it was emphasized that the SLF program is an appropriate step. Additionally, it is clear from the statements made following the summit that additional resources may be transferred to the IMF, thereby the IMF may function as a global lender of the last resort in this process. Accordingly, the Japanese government declared that an additional amount of USD 100 billion would be offered to the IMF.

In the G-20 summit issues such as:

- Reinforcement of transparency and accountability of financial markets,
- Improvement of supervision and oversight structures,
- Promotion of accuracy and reliability of financial markets
- Enhancement of international cooperation
- Restructuring of international financial institutions

were agreed upon.

Short and medium-term action plans were designed in this context and the responsibility for these plans - which are due in the first quarter of 2009 - were assumed by the finance ministers of member countries. The G-20 is going to review the course of the international financial system reform process, which is initiated by the decisions taken at this meeting, in the next summit to be held on 30 April 2009.

## I.1.2. Balance of Payments

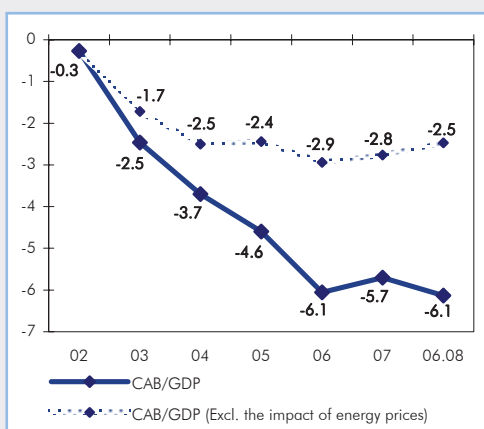
Table I.1. Balance of Payments (Billion USD)

	2004	2005	2006	2007	09.08*
<b>CURRENT ACCOUNT</b>	<b>-14.4</b>	<b>-22.1</b>	<b>-31.9</b>	<b>-37.7</b>	<b>-47.0</b>
Foreign Trade Balance	-22.7	-33.0	-40.9	-46.7	-57.6
Total Exports of Goods	68.5	78.4	93.6	115.4	145.1
Total Imports of Goods	-91.3	-111.4	-134.6	-162.0	-202.7
Coverage Ratio (%)	75.1	70.4	69.6	71.2	71.6
Balance of Services	12.8	15.3	13.8	13.9	16.3
Balance of Income	-5.6	-5.9	-6.7	-7.1	-7.9
Current Transfers	1.1	1.5	1.9	2.2	2.2
<b>CAPITAL &amp; FINANCIAL ACCOUNT</b>	<b>13.4</b>	<b>20.3</b>	<b>32.1</b>	<b>36.6</b>	<b>51.4</b>
Foreign Direct Investments	2.0	9.0	19.3	20.1	14.8
Portfolio Investments	8.0	13.4	7.4	0.7	-3.2
Other Investments	4.2	15.7	11.5	23.8	44.1
Reserve Assets	-0.8	-17.8	-6.1	-8.0	-4.3
<b>NET ERRORS &amp; OMISSIONS</b>	<b>1.0</b>	<b>1.8</b>	<b>-0.2</b>	<b>1.1</b>	<b>-4.4</b>

Source: CBRT  
(\* Cumulative figures for the last 12 months)

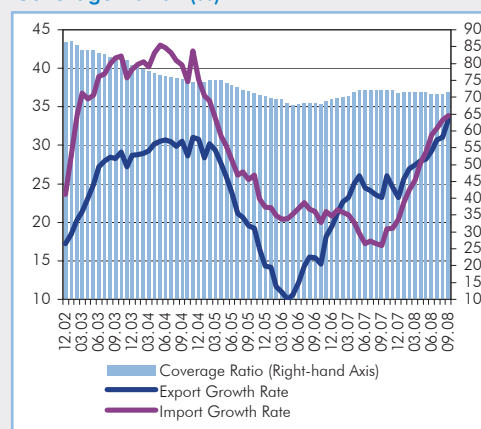
The upsurge in energy prices as of the second half of 2007 led the rate of increase of imports to transcend that of exports not in quantity but in value. This stimulated a fast growth in the current account deficit, reaching a historical peak of USD 48.4 billion as of August 2008. However, as the monthly deficit in September became less than USD 1 billion for the first time since October 2005, the current account deficit for 12 months became USD 47 billion. This is considered to be the first sign of the contraction trend to be seen in the current account deficit in the coming period. On the other hand, the ratio of current account deficit to GDP, which was 5.7 percent at end-2007, increased to 6.1 percent in the first half of 2008. Excluding the impact of energy prices, the ratio of current account deficit to GDP indicates a decline (Table I.1, Chart I.12).

Chart I.12.  
Current Account Balance (CAB) to GDP Ratio & The Impact of Energy Prices<sup>1</sup> (%)



Source: CBRT, TURKSTAT  
(1) The impact of energy price increases on the current account through the period 2003- June 2008 was calculated by keeping the prices of 2002 intact. Energy sub-items taken into account are stone coal and lignite, crude oil and natural gas under the mining and quarrying sector, and coke coal, refined petroleum products and nuclear fuels under the manufacturing industry.

Chart I.13.  
Export-Import Growth Rates and The Coverage Ratio<sup>1</sup> (%)

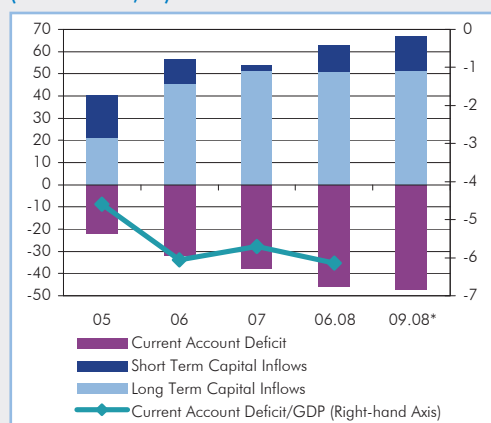


Source: CBRT  
(1) Export and import growth rates are calculated on a monthly basis and cumulatively for the last 12 months.

In September 2008, exports of the last 12 months recorded an increase of 33.3 percent compared to the same period of the previous year and amounted to USD 145.1 billion. Imports, which indicated an increase of 33.9 percent rose to USD 202.7 billion in the same period. Although the annual rate of increase in imports lagged behind that of exports in February 2007-April 2008 period, this was reversed in May 2008. Finally, the annual rate of increase in exports caught up with that of imports in September 2008 (Chart I.13).

While the surplus in the balance of services, which is another component of the current account, increased with the recovery in tourism revenues, the deficit in balance of income grew slightly particularly owing to increasing interest payments of the corporate sector. Current transfers comprising the amounts granted to the general government and the workers' remittances did not mark a remarkable change.

**Chart I.14.**  
Current Account Deficit and Capital Inflows<sup>1,2</sup>  
(Billion USD, %)



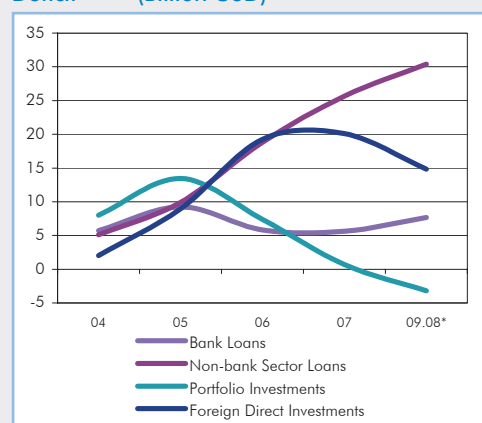
Source: CBRT

(1) Long-term capital inflows consist of foreign direct investment, debt securities of general government and banks, long-term cash loans, long-term trade loans and long-term deposits at CBRT.

(2) Short-term capital inflows consist of portfolio investments including equities and government bonds, short-term cash loans, short-term trade loans, short-term deposits at CBRT and banks and other short-term liabilities.

(\*) Cumulative figures for the last 12 months.

**Chart I.15.**  
Main Financing Items of The Current Account Deficit<sup>1,2,3,4</sup>  
(Billion USD)



Source: CBRT

(1) Bank loans: Net short-term and long-term loans borrowed by the banking sector from abroad.

(2) Non-bank sector loans: Net short-term and long-term loans borrowed by the nonbank sector (general government excluded) from abroad.

(3) Foreign Direct Investments: Foreign direct investment inflows (real estate purchases included).

(4) Portfolio investments: Government bonds, Treasury bills and stock purchases (+) and sales (-) of non-residents.

(\*) Cumulative figures for the last 12 months.

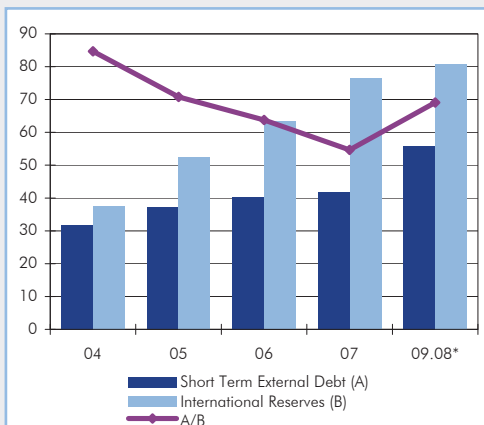
An analysis of the financing structure of the current account deficit suggests that the most important component is still the long-term capital inflows and that the major part of these inflows is provided through external borrowings made by the private sector. As a matter of fact, the share of the "other investments" item, comprising long-term external borrowings of the private sector and banks, in total financing has increased in the last 12-month-period by September 2008. The decline in the share of direct investments within total capital inflows is noteworthy, which is significant for the financing quality and sustainability of the current account deficit (Chart I.14. Chart I.15).

Net capital inflows to our country through direct investments and other investments amounted to approximately USD 58.9 billion in the last 12-month period by September 2008. Net capital outflows through portfolio investments became USD 3.2 billion in the same period. The increased outflow in portfolio investments was caused by the sales of government securities by non-residents due to the outbreak of the crisis in international markets (Chart I.15).

The drastic contraction of foreign liquidity facilities and the acceleration of capital outflows due to the setbacks in international markets are considered to be challenging factors

against the financing of the current account deficit. However, the decline in energy prices and the possible decrease in domestic and external demand resulting in the relative slowdown in growth may lead to a natural contraction period in the current account deficit. Therefore, the need for foreign financing may decrease.

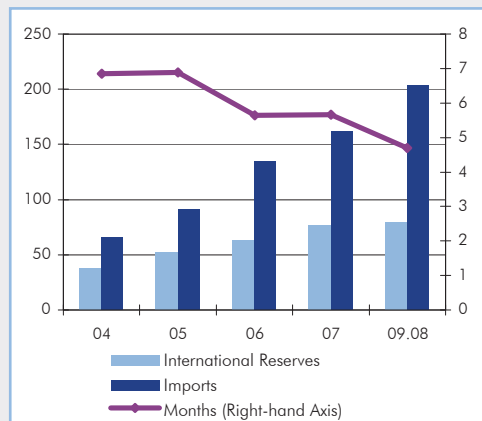
**Chart I.16.**  
Short-Term External Debt<sup>1</sup> and International Reserves<sup>2</sup> (Billion USD, %)



Source: TREASURY, CBRT

- (1) Short-Term External Debt = General Government + CBRT + commercial banks + other sectors.  
 (2) International Reserves = CBRT gross foreign exchange reserves (including gold)  
 (\*) Short-Term External Debt data are provisional.

**Chart I.17.**  
Import Coverage Ratio of Reserves<sup>1,2</sup>  
(Billion USD, Months)



Source: CBRT

- (1) International Reserves = CBRT gross foreign exchange reserves (including gold)  
 (2) Months figure indicates the number of months of imports that is covered by the year-end international reserve amount of that year.

The ratio of short-term external debt stock to international reserves, one of the indicators of external debt service capacity, was 54.7 percent at end-2007. However, as the increase in short-term external debt stock outpaced that of the Central Bank's reserves, this ratio reached 69.1 percent by September 2008 (Chart I.16). The ratio of international reserves to total imports of a country indicates how long that country can provide the inputs needed from external markets without depending upon any external support. Although this ratio has dropped due to significant increases in imports recently, it remains above the minimum three-month-threshold acceptable by the IMF (Chart I.17).

**Table I.2. Parties Financing the Current Account Deficit (Billion USD)**

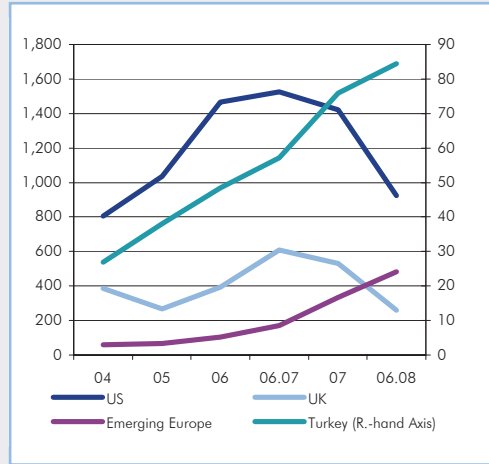
	2004	2005	2006	2007	09.08*
<b>Current Account Balance</b>	-14.4	-22.1	-31.9	-37.7	-47.0
<b>Finance Accounts</b>	13.4	20.3	32.1	36.6	51.4
General Gov. (incl. CBRT and CBRT Reserves)	2.4	-16.5	-2.9	-15.5	-9.2
Private Sector (incl. Banks)	11.0	36.8	35.0	52.1	60.6
<b>Net Errors and Omissions</b>	1.0	1.8	-0.2	1.1	-4.4

Source: CBRT

(\*) Cumulative figures for the last 12 months.

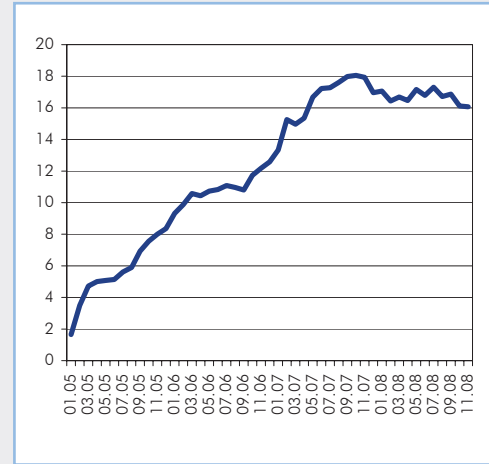
In general terms, the current account deficit resulting from the private sector's economic activities are financed by long-term funds obtained mainly by the private sector, including banks, as in previous years (Table I.2).

**Chart I.18.**  
Net Receivables of International Banks from Selected Countries<sup>1</sup>  
(Billion USD)



Source: BIS  
(1) Data for June 2008 are provisional.

**Chart I.19.**  
YTL-Denominated Bonds Issued by Foreigners  
(Outstanding Amount in Billion YTL)



Source: CBRT

Funds extended to developing countries by banks reporting to the Bank for International Settlements (BIS) continued to rise in the first half of 2008 despite global financial volatility. Net assets of these international banks in Turkey reached USD 84.5 billion by June 2008. On the other hand, it is remarkable that the net assets of these international banks in the US, the place of origin of the global credit crisis and the UK, one of the countries mostly affected by this crisis, recorded a significant decline (Chart I.18).

The outstanding amount of bonds denominated in YTL issued by foreigners had reached YTL 18.1 billion by October 2007. However, the decline in new issuance owing to the negative developments in international markets in the subsequent period, led the total amount of outstanding bonds to decrease to YTL 16.1 billion by November 2008 (Chart I.19).

The current account deficit, which originated from high growth rates as a result of the economic policies implemented since 2001, rapidly expanded due to hikes in energy prices. However, sharp decreases in commodity prices, the recent slowdown in domestic demand and the depreciation in YTL will create a decreasing effect on the current account deficit in the forthcoming period.

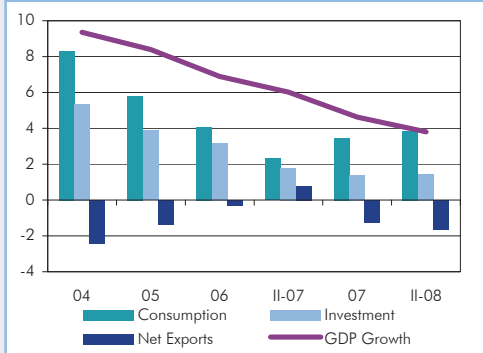
## I.2. Growth and Inflation

### I.2.1. Growth

The Gross Domestic Product (GDP) grew by 3.8 percent per annum in the first half of 2008 as imports of goods and services outpaced exports of goods and services, and the slowdown in stocks growth.



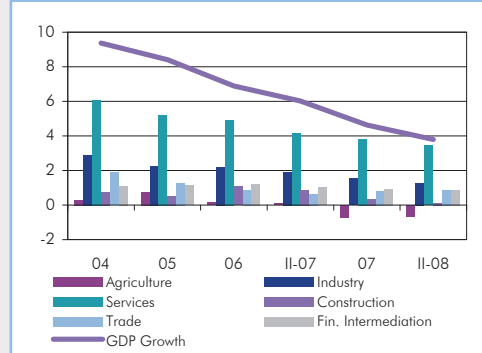
**Chart I.20.**  
Growth Rate and Its Composition<sup>1, 2</sup> (% , Points)



Source: TURKSTAT

(1) Percentage change compared to the same period of the previous year.  
(2) Net exports = Exports of Goods and Services-Imports of Goods and Services

**Chart I.21.**  
Contributions of Sectors to Growth<sup>1</sup> (% , Points)



Source: TURKSTAT

(1) Construction, trade and financial intermediation are accepted as sub-sectors of services sector and are included therein.

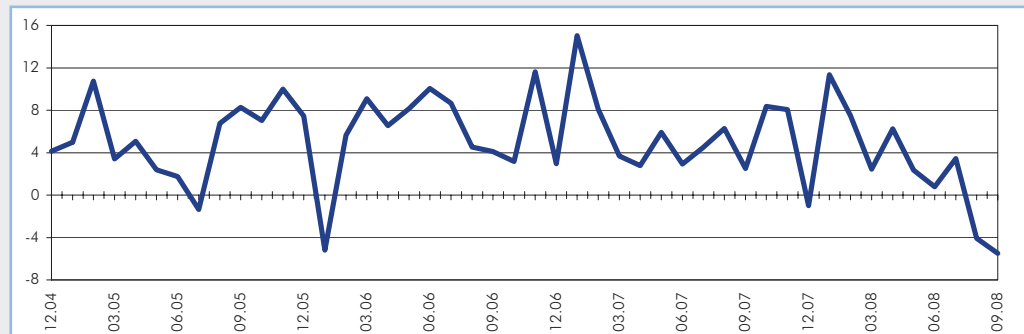
The household consumption expenditures item, which is the major expenditure component of the GDP remained strong, increasing by 5.3 percent per annum in the first half of 2008, thereby contributing to growth by 3.6 points, which is 0.8 point higher than the figures of end-2007. On the other hand, public consumption expenditures grew by 2 percent annually in the same period, which emerged as a factor to decelerate growth (Chart I.20).

While investment expenditures of the private sector, which has a high share in total investment expenditures, rose annually by 6.8 percent in the first half of 2008, those of the public sector decreased by 1.2 percent. Despite the decline in public investments, the contribution of total investment expenditures to growth increased by 0.1 point to 1.5 points compared to the figures of end-2007 due to the increase of private sector investment expenditures (Chart I.20).

As the increase in exports of goods and services lagged behind the increase in imports of goods and services, the negative contribution of net exports to growth rose by 0.4 point compared to end-2007, which became a determining factor in the deceleration of growth (Chart I.20).

An analysis of the GDP by sectors with respect to production reveals that in the first half of 2008, the contribution of trade to growth increased, the contraction in agriculture continued and the contributions of other sectors to growth decelerated. On the other hand, financial intermediaries remained strong in terms of contribution to growth (Chart I.21).

**Chart I.22.**  
Industrial Production Index (%)<sup>1,2</sup>

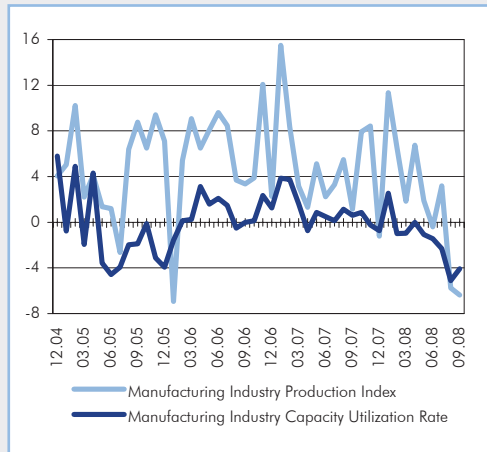


Source: TURKSTAT

(1) Percentage change compared to the same month of the previous year.  
(2) Monthly Industrial Production Index 1997=100

Owing to the slowdown in economic activity, industrial production decreased by 5.5 percent in September 2008 compared to the same month of the previous year. This deterioration originates from the manufacturing industry (Chart I.22).

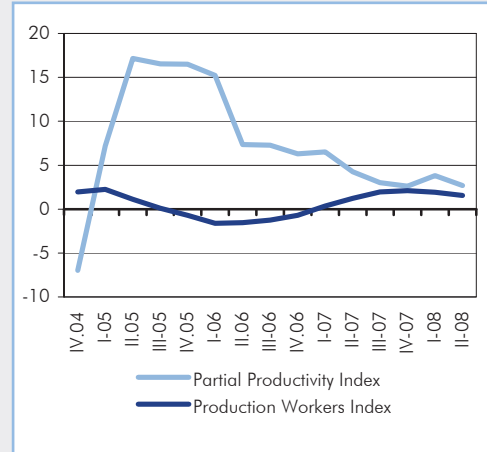
**Chart I.23.**  
Manufacturing Industry Production and Capacity Utilization Rate<sup>1,2</sup> (%)



Source: TURKSTAT

- (1) Percentage change compared to the same month of the previous year.  
(2) Monthly industrial production index 1997=100

**Chart I.24.**  
Number of Workers and Partial Productivity per Worker for the Manufacturing Industry<sup>1,2</sup> (Annual % Change)



Source: TURKSTAT

- (1) Annualized data is used in calculations.  
(2) 1997=100 index is used.

Manufacturing industry production dropped by 6.4 percent in September 2008 compared to the same month of the previous year. Additionally, the rate of increase in the first nine months average of manufacturing industry production fell by 2.8 points to 1.9 percent compared to the previous year. This deterioration stems particularly from the manufacturing of communication apparatus, textiles, leather and clothing.

The capacity utilization rate in the manufacturing industry declined by 4.1 points in September 2008 compared to the same month of the previous year and became 79.8 percent (Chart I.23). According to the Manufacturing Industry Tendency Survey results, the shortfall of domestic demand still remained the main reason for workplaces operating under capacity in September 2008.

The rate of increase in partial productivity per worker employed in the manufacturing industry declined to 2.7 percent in the second quarter of 2008 from 4.2 percent in the second quarter of 2007 due to the decline in the rate of increase in production during the second quarter of 2008 (Chart I.24).

### I.2.2. Inflation

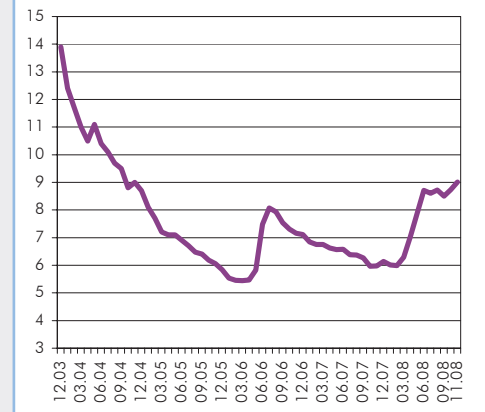
Annual Consumer Price Index (CPI) inflation, which was 8.39 percent in 2007, rose to 9.15 percent in the first quarter of 2008, remaining above the upper limit of the uncertainty band set around the path consistent with the end-year inflation target. In the first quarter of 2008, developments in the prices of food, oil and other commodities impeded the disinflation process.

**Chart I.25.**  
Annual PPI and CPI Developments  
(Annual % Change)



Source: TURKSTAT

**Chart I.26.**  
12 Months Ahead CPI Expectations  
(Annual % Change)



Source: CBRT

In the second quarter of 2008, the annual CPI increase became 10.61 percent due to both the direct effects of the high rises in food and energy prices, and their indirect effects on prices of services. In addition to this, the delayed effects of the depreciation of the New Turkish Lira in the first four months of the year also played a role in the rise in inflation during the second quarter. The base effect of food prices and the hike in energy prices in July 2008 became determining factors in the annual rise of the CPI to 12.06 percent. Although the annual CPI increase fell to 11.13 percent in September 2008 due to the effect of the deceleration of food price inflation, it rose to 11.99 percent in October mainly owing to the temporary increase in vegetable prices (Chart I.25).

Annual changes in the producer price index (PPI), which is significant in terms of the assessment of cost-side effects on consumer inflation, was 5.94 percent in 2007, but it rose to 17.03 percent in the first half of 2008 and to 18.41 percent in July 2008. This increase is mainly driven by the rises in prices of agricultural and petroleum products besides the basic metal industry. In the subsequent period, although the annual PPI increase fell to 12.49 percent in September owing to the decreases in commodity prices like oil and basic metal, it rose to 13.29 percent in October, which can be attributed to increases in the manufacturing prices of furniture and clothing (Chart I.25).

The deterioration in inflation expectations stemming from price hikes in energy and commodity prices in the first half of 2008 ceased in the third quarter of 2008 as a result of the monetary tightening. The expectation of an annual CPI increase of 8.95 percent in November 2008 relating to the upcoming 12 months indicates that the expectations that inflation will fall below current levels still remain (Chart I.26).

It is foreseen for the coming period that problems in international credit markets and the global economy will continue to limit the domestic and external demand for a relatively long time and therefore the effect of movements in exchange rates on inflation would be limited. Moreover, plunges in oil and other commodity prices will have a favorable effect on inflation.

### I.3. Public Finance

Central government budget expenditures and revenues rose by 7.4 percent and 12.8 percent respectively in the first ten months of 2008 compared to the same period of 2007. Meanwhile, the ratio of expenditures covered by revenues increased by 4.6 percentage points compared to the same period of the previous year and became 97.3 percent (Table I.3).

While the rise in expenditures is driven by the primary expenditures, which rose by 11.2 percent, interest expenses limited the increase in expenditures with a decrease of 2.9 percent. Current transfers, personnel expenditures and capital expenditures items are influential in the increase of primary expenditures (Table I.3).

**Table I.3. Central Government Budget Performance (Bilion YTL)**

	January- October 2007	January- October 2008	Change (%)	Budget Realizations 2007	2008 Budget Target	Real./Annual Real. (Jan.- Oct. 2007) (%)	Real./Budget Target (Jan.- Oct. 2008)(%)	Realization Forecast 2008 <sup>1</sup>
<b>Expenditures</b>	168.2	180.7	7.4	204.1	222.6	82.4	81.2	229.5
Interest Expenditures	44.7	43.4	-2.9	48.8	56.0	91.6	77.5	54.5
Primary Expenditures	123.5	137.3	11.2	155.3	166.6	79.5	82.4	175.0
<b>Revenues</b>	155.9	175.8	12.8	190.4	204.6	81.9	85.9	215.4
Tax Revenue	123.8	140.3	13.3	152.8	171.2	81.0	82.0	174.7
Reven. to Expend.	92.7	97.3	-	93.3	91.9	-	-	93.9
<b>Budget Deficit</b>	-12.3	-4.9	-60.2	-13.7	-18.0	89.8	27.2	-14.1
<b>Primary Surplus</b>	32.4	38.5	18.8	35.0	38.0	92.6	101.3	40.4

Source: Ministry of Finance, State Planning Organization  
(1) Taken from the 2009 Annual Program.

The rise in revenues is mainly triggered by the increase of 13.3 percent in tax revenues. When analyzed in terms of tax types, it is observed that the highest increases were recorded in corporate tax with 27.2 percent, VAT on imports with 19.6 percent, income tax with 13.1 percent and SCT with 10.4 percent. While the primary expenditures rose by 11.2 percent, the ratio of primary expenditures covered by tax revenues increased from 100.2 percent in the first ten months of 2007 to 102.2 percent in the same period of 2008, as a result of an increase of 13.3 percent in tax revenues.

Non-tax revenues went up by 9.4 percent in the same period. This increase is mainly driven by the transfer of YTL 6 billion from the Privatization Fund within the scope of Law No. 4046 and the transfer of YTL 1.3 billion from the Unemployment Insurance Fund within the scope of Law No 4447 to the Treasury. These funds were registered as revenue in the central government budget and were intended to finance investments in GAP (Southeastern Anatolia Project) and expenses of the employment package. Parallel to these developments, the central government budget primary surplus increased by 18.8 percent compared to the same period of the previous year and became YTL 38.5 billion, while the central government budget deficit decreased by 60.2 percent and became YTL 4.9 billion.

The 2009 Annual Program presents the Central Government Budget Realization forecasts for the year 2008. According to the Program, both revenues and expenditures are expected to exceed the target by the end of 2008. The Program also states that, as the nominal GDP is expected to exceed program targets due to the deflator being remarkably higher than the program, tax revenues for 2008 are expected to exceed the target by YTL 3.5 billion. Non-tax revenues are also expected to exceed the budget target, particularly due to YTL 7.3 billion which was transferred from Privatization and Unemployment Insurance Funds to the Treasury within the scope of Laws No. 4046 and 4447 and registered as revenue in the central bank government budget, despite not being anticipated in the budget. It is foreseen in the Program that primary expenditures will exceed the central government budget target by YTL 8.5 billion due particularly to personnel and capital expenditures, which are expected to exceed the target. Personnel expenditures, for which YTL 48.7 billion is allocated in the budget, are expected to

amount to YTL 50.4 billion by end-2008 due to the salary improvements. Besides, capital expenditures are expected to exceed the budget by YTL 5.9 billion by end-2008 due to GAP Action Plan; other investments relating to economic development and social improvement; and additional expenditures for expropriations allocated to the General Directorate of Highways and the Ministry of Health.

The Program also estimates that total revenues and total expenditures will exceed the budget target by YTL 10.8 billion and YTL 6.9 billion respectively. Accordingly, the budget deficit, which was targeted to be YTL 18 billion for the year 2008, is expected to decline to YTL 14.1 billion. However, as the major part of revenues is composed of privatization revenues and other revenue items, while the central government primary surplus target, as defined by the IMF, was YTL 31.7 billion, its realization is estimated to remain at YTL 25.8 billion and its ratio to GDP is expected to be 2.6 percent.

#### Box 4. 2009 Budget Targets

The 2009 Annual Program was published in the Official Gazette on 30 October 2008. According to the Program, the ratio of central government budget revenues to GDP, which is expected to be realized as 21.7 percent in 2008, is targeted to increase to 22.4 percent in 2009. Tax revenues are expected to be influential in 0.6 percentage point of this increase.

The ratio of central government primary expenditures to GDP are expected to increase by 0.8 percentage point; while interest expenses are foreseen to decline by 0.3 percentage point in 2009 compared to 2008. The highest- proportional increase within total expenditures is expected to be in current transfer expenditures with 28.8 percent. This increase is mainly attributed to the cost of around YTL 4.7 billion arising from the compensation of 5 percentage points of the employer insurance premium by the Treasury and the transfers aimed at covering the social security deficit. A transfer of YTL 2.8 billion from the Privatization and Unemployment Insurance Funds is foreseen for expenditures to be made within the context of the GAP Action Plan in 2009.

Within the context of the expectations for revenues and expenditures, the central government budget deficit, which is expected to be realized as 1.4 percent of GDP in 2008, is targeted to decline to 1.2 percent in 2009. The ratio of central government budget primary surplus to GDP, as defined by the IMF, which is expected to become 2.6 percent in 2008, is targeted to be 2.4 percent in 2009. The ratio of public sector primary surplus to GDP, as defined by the IMF, on the other hand, is targeted to increase from 2.7 percent to 3 percent as a result of the expected decline in the other public sector borrowing requirement.

**Table 1. 2009 Annual Program**

	2008 <sup>1</sup>	2009 <sup>2</sup>
GDP (% Change)	4.0	4.0
End-year CPI (%Change)	10.0	7.5
Public Sector Primary Surplus as Defined by the IMF <sup>3</sup> / GDP	2.7	3.0
Central Government Primary Surplus as Defined by the IMF / GDP	2.6	2.4
Central Government Budget Expenditures/ GDP	23.1	23.6
Central Government Budget Revenues / GDP	21.7	22.4
Central Government Primary Expenditures / GDP	17.6	18.4
Central Government Interest Expenses / GDP	5.5	5.2
Central Government Tax Revenues / GDP	17.6	18.2
Central Government Budget Balance/ GDP	-1.4	-1.2

Source: SPO

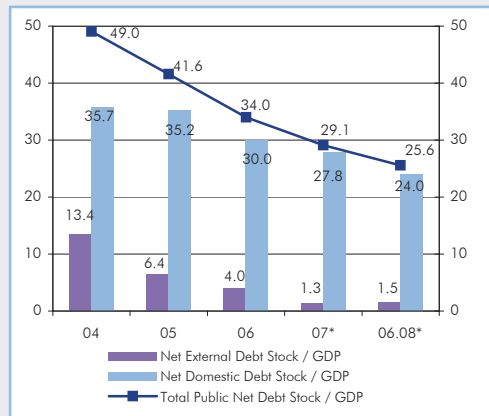
(1) Realization forecasts

(2) Program

(3) Includes General Public and SEE'S.

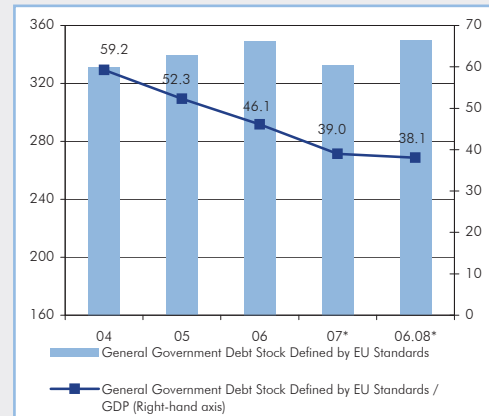
The ratio of public sector net debt stock to GDP continued to fall and stood at 25.6 percent by June 2008. This decrease was mainly attributable to the increase in public deposits and net assets of the Central Bank (Chart I.27). The public sector gross debt stock, on the other hand, increased due to the rise in both domestic and external gross debt stock. The general government nominal debt stock to GDP ratio, as defined by the EU, displayed a limited decrease (Chart I.28).

**Chart I.27.**  
**Composition of Total Public Sector Net Debt Stock<sup>1</sup> (%)**



Source: Treasury  
(1) Public sector net debt stock is calculated by subtracting central bank net assets, public deposits and unemployment insurance fund net assets from public gross debt stock.  
\*Figures for 2007 and 2008 are provisional.

**Chart I.28.**  
**General Government Nominal Debt Stock Defined by EU Standards<sup>1</sup> (% , Billion YTL)**

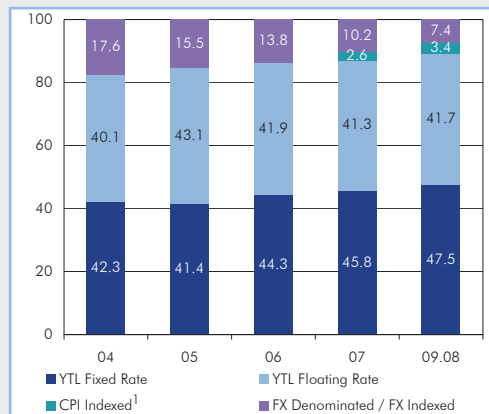


Source: Treasury  
(1) Consolidated nominal debt stock as defined in European System of Accounts 95 (ESA 95) deficit and debt manual.  
\*Figures for 2007 and 2008 are provisional.

Regarding the composition of domestic debt stock, the share of debt stock, sensitive to exchange rate, has fallen by September 2008; whereas the share of floating-rate government securities displayed a limited increase (Chart I.29).

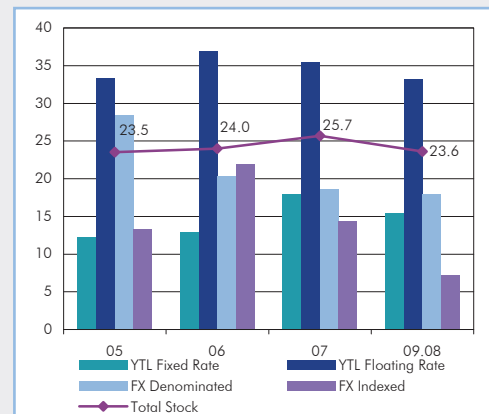
The average maturity of government securities, which increased to 25.7 months at end-2007, decreased to 23.6 months in September 2008 (Chart I.30).

**Chart I.29.**  
**Composition of Domestic Debt Stock (%)**



Source: Treasury  
(1) CPI-indexed bonds have been issued since February 2007.

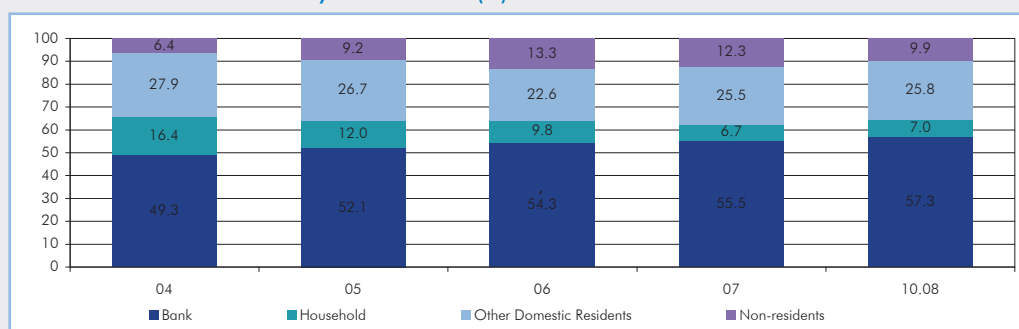
**Chart I.30.**  
**Maturity Structure of Government Debt Securities (Month)<sup>1</sup>**



Source: Treasury  
(1) Calculation is based on term to maturity.

A large portion of total government bonds is owned by banks, thus comprising a major part of banking sector assets. The share of banks increased, whereas that of non-residents maintained its downward trend in 2008 (Chart I.31).

**Chart I.31.**  
Government Debt Securities by Holders<sup>1,2,3,4</sup> (%)



Source: BRSA-CBRT

(1) Based on nominal amounts.

(2) "Bank" includes GDSS owned by banks operating in Turkey; "Household" includes GDSS that belong to real persons kept at domestic banks; "Other domestic residents" includes GDSS of domestic legal persons except banks and households also GDSS of mutual funds kept at banks and "Non-residents" involves non-resident real and legal persons' GDSS kept at domestic banks.

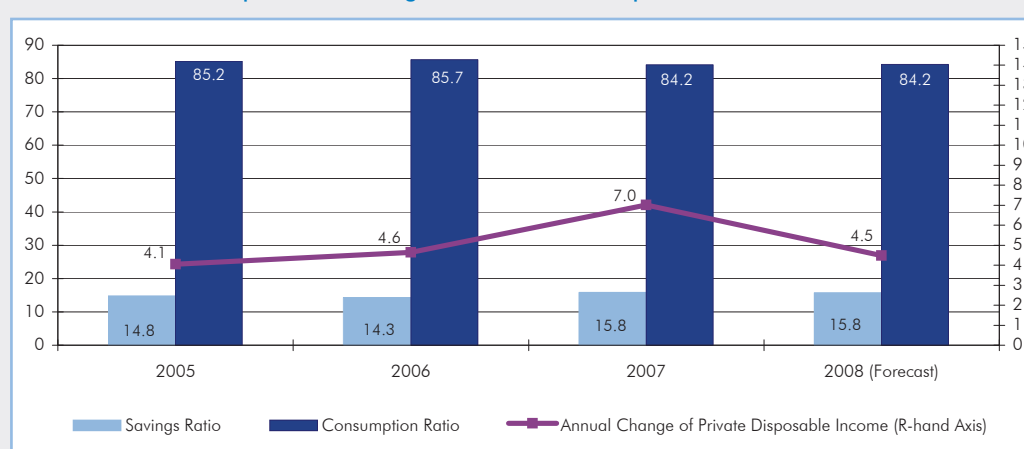
(3) GDSS owned by the Central Bank are excluded.

(4) Data for October 2008 are as of October 10, 2008.

#### I.4. Private Sector Developments

Private disposable income rose by 7 percent in 2007. The growth rate of private consumption which was 5 percent in 2006, declined to 4 percent in 2007 owing to decreases in clothing-footwear and recreation-culture sectors and slow growth in food-beverages-tobacco, furnishings-household equipment and transportation-communication sub-sectors. Due to the deceleration of the private consumption rate, savings ratio increased to 15.8 percent in 2007. The Annual Program for 2009 envisages that private disposable income will grow by 4.5 percent in real terms in 2008, while the rate of increase in private consumption will drop to 3.5 percent (Chart I.32).

**Chart I.32.**  
Private Sector Consumption and Savings Ratios and Real Disposable Income<sup>1,2,3</sup>



Source: SPO

(1) Private sector's consumption and savings ratio is in current prices, private sector's disposable income is calculated using CPI (1998=100)

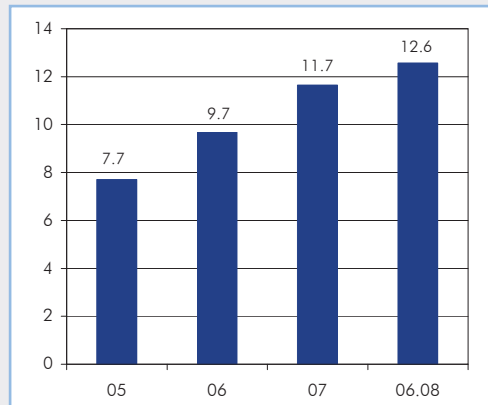
(2) Savings Ratio = Total Private Savings / Private Disposable Income

(3) Consumption Ratio = Total Private Consumption / Private Disposable Income

### I.4.1. Households

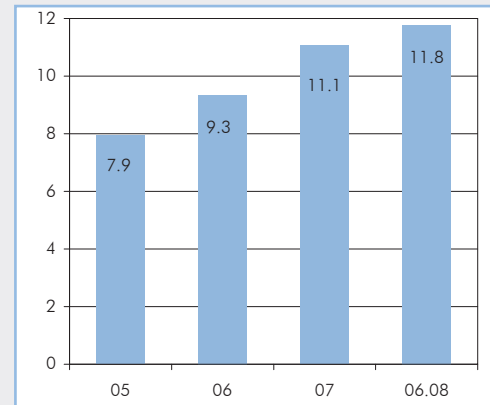
Household liabilities continued to increase in the first half of 2008. The ratio of total household liabilities to GDP rose to 12.6 percent in the first half of 2008 from 11.7 percent in 2007 (Chart I.33). In the same period, the portion of household consumption expenditures financed by retail loans, increased from 11.1 percent to 11.8 percent (Chart I.34).

**Chart I.33.**  
Household Liabilities to GDP (%)<sup>1</sup>



Source: CBRT-BRSA, TURKSTAT  
(1) Household liabilities consist of gross consumer credits and credit card balances extended by banks and consumer finance companies

**Chart I.34.**  
Retail Loans to Household Consumption Expenditures (%)<sup>1</sup>



Source: CBRT-BRSA, TURKSTAT  
(1) Retail loans consists of gross consumer credits and credit card balances extended by banks and consumer finance companies less housing credits.

By September 2008, household liabilities increased by 24 percent and interest payments rose by 19.8 percent compared to end-2007. The ratio of household interest payments to disposable income, one of the indicators of households' repayment capacity, did not display a remarkable change compared to 2007, whereas the ratio of total household debt to disposable income increased to 22.6 percent (Table I.4).

**Table I.4. Household Disposable Income, Indebtedness and Interest Payments<sup>1,2</sup> (Milion YTL)**

	2006	2007	09.08
Household Interest Payments	12.109	15.576	18.655
Household Debt	73.410	99.494	123.409
Household Disposable Income	404.677	465.992	545.377
Interest Payments / Disposable Income (%)	3,0	3,3	3,4
Debt / Disposable Income (%)	18,1	21,4	22,6

Source: BRSA-CBRT, TURKSTAT, SPO

(1) Household debt consists of gross consumer credits and credit card balances extended by banks and consumer companies and is assumed to remain unchanged until year-end.  
(2) Household disposable income is calculated by using private sector disposable income estimation for 2006, 2007 and 2008 as mentioned in the 2009 Annual Programme, under the assumption that the 2005 ratio of household disposable income to private sector disposable income has not changed.

When compared with selected countries, the ratio of household liabilities excluding housing loans to GDP stands close to those of newcomers to the EU, whereas the ratio of total liabilities to GDP is still lower than that of many countries, including new members of the EU (Table I.5).



Table I.5. Household Liabilities to GDP in Selected Countries (%)

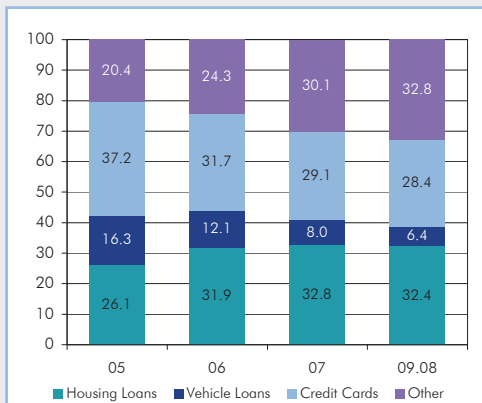
	Household Liabilities Excluding Housing Loans/GDP <sup>1</sup>			Household Liabilities/GDP <sup>2</sup>		
	2005	2006	2007	2005	2006	2007
Lithuania	4.1	6.7	8.6	13.2	19.3	25.9
Czech Republic	4.7	5.3	6.2	14.3	17.3	21.4
Hungary	6.8	9.2	10.9	16.9	21.1	23.2
Latvia	7.7	9.3	9.3	27.1	38.3	43.3
Poland	9.7	10.7	13.1	15.1	18.2	23.7
Italy	12.3	12.7	13.0	27.6	29.2	30.3
Greece	12.4	14.2	13.2	36.2	41.0	40.9
Portugal	13.9	15.1	16.5	67.3	74.3	78.6
Spain	19.1	20.8	21.2	68.6	76.8	80.4
EU 27	15.3	15.3	15.0	54.6	56.4	55.8
Turkey	5.7	6.6	7.8	7.7	9.7	11.7

Source: ECB, CBRT

(1) The figure for Turkey as of June 2008 is 8.4.

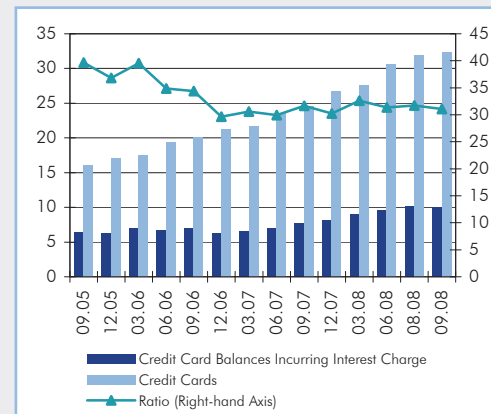
(2) The figure for Turkey as of June 2008 is 12.6.

When the development of household liabilities is analyzed in terms of debt types, it is observed that housing loans increased by 22.1 percent and other loans by 35.3 percent in September 2008 compared to end-2007. The share of other loans in total loans continued to rise, whereas that of vehicle loans declined. The share of housing loans and credit card balances, on the other hand, remained approximately the same (Chart I.35).

Chart I.35. Decomposition of Household Debt (%)<sup>1</sup>

Source: BRSA-CBRT

(1) Household debt consists of gross consumer credits and credit card balances extended by banks and consumer finance companies.

Chart I.36. Credit Card Bal. of Deposit Banks and Balances That Incur Interest Charge (Billion YTL, %)<sup>1</sup>

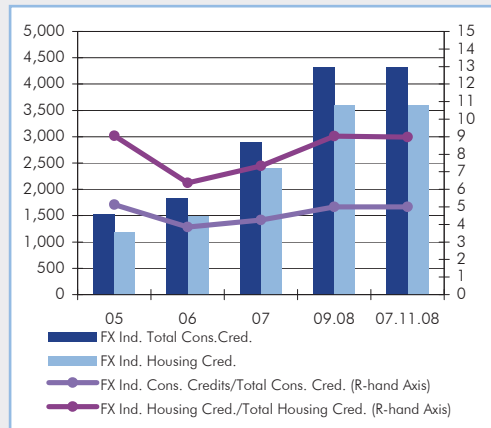
Source: CBRT

While their share in households' financial liabilities did not display a significant change compared to end-2007, credit card balances are still on the rise. Credit card balances incurring interest charges, on the other hand, rose to YTL 10.1 billion as of September 2008 from YTL 8.1 billion as of end-2007 and the ratio to credit card balances increased to 31.1 percent. (Chart I.36).

The floating-rate is only applicable to housing loans in Turkey. However, the share of such loans is only 0.22 percent, limiting the interest rate risk of households. The ratio of FX-

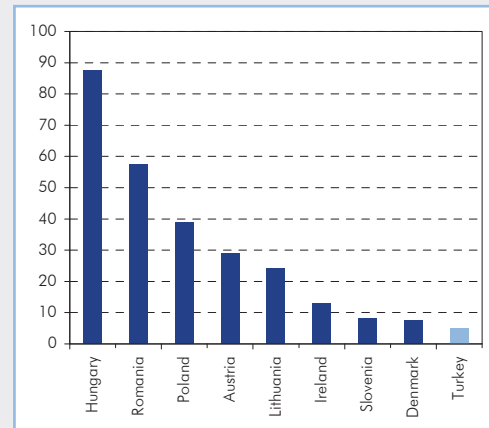
indexed consumer loans to total consumer loans increased to 5 percent as of September 2008 from 4.3 percent at end-2007, whereas the share of FX-indexed housing loans in total housing loans increased from 7.3 percent to 9 percent during the same period (Chart I.37). On the other hand, FX-indexed retail loans have a relatively low share in total retail loans compared to selected countries (Chart I.38). Additionally, FX indexed liabilities of households to the banking sector is USD 3.5 billion as of September 2008, whereas FX assets of households is USD 70.7 billion and households carry a long position in FX. While these indicators reveal that exchange rate risk of households is low, it is obvious that the repayment ability of households without foreign exchange income will be adversely affected if Turkish Lira depreciates.

**Chart I.37.**  
FX Indexed Total Consumer Credits and FX Indexed Housing Credits (Million YTL, %)<sup>1,2</sup>



Source: CBRT-BRSA  
(1) Consumer finance companies are excluded.  
(2) NPLs are excluded.

**Chart I.38.**  
FX Retail Loans in Total Retail Loans for Selected Countries (%)



Source: CBRT, National Central Banks

According to Central Bank Risk Center data, as of September 2008 the number of consumer loan and credit card defaulters increased by 39.8 percent in comparison to end-2007 and reached 911.456 (Table I.6).

**Table I.6. Number of Consumer Loan and Credit Card Defaulters<sup>1</sup>**

	2007	03.08	06.08	09.08
Banks	641,708	646,425	754,307	832,698
Asset Management Companies <sup>2</sup>	0	87,132	82,315	123,251
Finance Companies	12,898	11,112	15,005	17,627
Total <sup>3</sup>	651,911	706,282	812,571	911,456

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

Total financial assets of households increased by 12.2 percent in comparison to end-2007 and reached YTL 351.6 billion as of September 2008 (Table I.7).

Table I.7. Composition of Household Financial Assets<sup>1</sup> (Billion YTL, %)

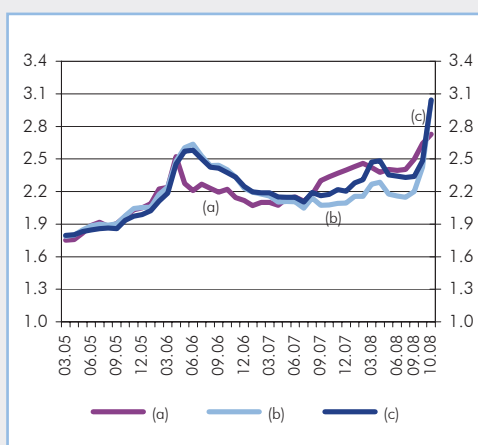
	2006		2007		09.08	
	Billion YTL	% Share	Billion YTL	% Share	Billion YTL	% Share
YTL Deposits	113.6	40.6	142.5	45.5	170.7	48.5
FX Deposits	75.0	26.8	78.5	25.0	83.9	23.9
FX Deposits (Billion USD)	53.4	-	67.0	-	68.1	-
Currency in Circulation	24.7	8.8	26.2	8.4	32.1	9.1
GDDS+Eurobond	28.2	10.1	19.6	6.3	21.1	6.0
Mutual Fund	17.5	6.3	22.6	7.2	21.5	6.1
Stocks	15.8	5.6	17.5	5.6	13.7	3.9
Private Pension Funds	2.9	1.0	4.6	1.5	5.8	1.6
Repos	2.0	0.7	1.9	0.6	2.8	0.8
Total Assets	279.7	100.0	313.4	100.0	351.6	100.0

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

The share of savings deposits, which has the largest share in household assets, continued to grow and reached 48.5 percent as of September 2008. The share of savings deposits in total deposits, which was 64.5 percent at end-2007, increased to 67 percent as of September 2008 (Table I.7). However, due to the depreciation of the Turkish currency since October 2008, real persons converted their FX deposit accounts into Turkish Lira. As a matter of fact, when adjusted according to the exchange rate and parity effect, the ratio of total Turkish currency instruments to foreign currency instruments started to increase as of September 2008 (Chart I.39).

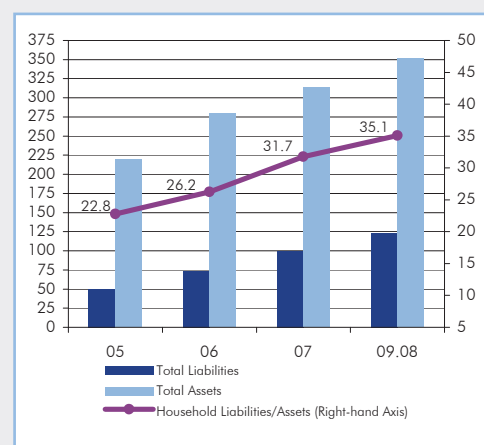
Meanwhile, the ratio of household financial liabilities to financial assets rose to 35.1 percent as of September 2008, due to the faster increase of liabilities (Chart I.40).

Chart I.39.  
Ratio of YTL-FX Denominated Investment  
Instruments<sup>1</sup>



Source: BRSA-CBRT, CMB, CRA  
(1) YTL instruments = Deposits + Repos + Gov.Dom.Debt.Sec. + Participation Funds (YTL) + Stocks + Private Pension Funds + Mutual Funds (starting from April 2006); FX Instruments = FX Deposits + Gov.Dom.Debt.Sec. + Eurobond + Participation Funds (FX).  
(a) Current YTL value of FX deposits and Participation Funds (FX)  
(b) For FX deposits and Participation Funds (FX), exchange rate prevailing on 31.12.2004 is used.  
(c) For FX deposits and Participation Funds (FX), exchange rate prevailing on 31.12.2004 is used and the parity effect is eliminated.

Chart I.40.  
Households' Financial Assets and Liabilities  
(Billion YTL, %)<sup>1</sup>



Source: BRSA-CBRT, CMB, CRA  
(1) Household Assets = Savings Deposits + FX Deposits + Money in Circulation + Gov.Dom.Debt.Sec. + Eurobonds + Repos + Stocks + Pension Funds + Mutual Funds (starting from April 2006). Household liabilities consists of gross consumer credits and credit card balances extended by banks and consumer finance companies.

Since the share of floating-rate and FX-indexed household liabilities is limited, households are affected less by unfavorable developments in the economic conjuncture relative to other countries.

## I.4.2. Corporate Sector

### I.4.2.1. Financial Analysis of Firms

As it is known, the most comprehensive data set concerning the corporate sector is CBRT Company Accounts. Table I.8 presents the provisional data related to 5602 firms, compiled within the scope of this study.

**Table I.8. Financial Ratios (%)**

	All Companies			Manufacturing Comp.		
	2005	2006	2007	2005	2006	2007
<b>Leverage and Capital Structure Ratios</b>						
Leverage Ratio	49.2	49.9	48.2	47.9	48.9	47.8
Equity / Total Debt	103.1	100.3	107.6	108.8	104.5	109.4
Short-Term Debt / Total Liabilities	35.8	36.0	35.4	34.8	35.6	34.7
Bank Loans / Total Debt	31.3	34.7	33.2	38.6	41.5	41.7
Bank Loans / Total Liabilities	15.4	17.3	16.0	18.5	20.3	19.9
Short-Term FX Cash Loans/Foreign Sales	14.7	13.9	11.3	15.0	14.3	10.8
Interest Expense / Net Sales (%)	1.6	3.1	2.1	1.7	3.2	2.0
Interest Coverage Ratio (Times)	4.1	3.1	4.4	3.5	2.8	4.5
<b>Liquidity Ratios</b>						
Current Ratio	139.8	143.6	143.4	157.5	157.6	160.8
Liquidity (Acid Test) Ratio	101.9	103.9	103.1	94.4	94.6	96.7
Cash Ratio	23.9	25.7	24.8	29.4	26.7	28.7
<b>Profitability Ratios</b>						
Net Profit / Assets (ROA)	3.8	5.7	5.7	3.7	5.7	6.9
Net Profit / Equity (ROE)	7.5	11.4	10.9	7.0	11.2	13.2
<b>Turnover Ratios</b>						
Inventory Turnover Ratio (Cost of Sales/Aver. Invent.)	-	7.6	7.1	-	5.5	5.4
Receivables Turnover Ratio (Net Sales / Trade Receiv.)	5.7	5.5	5.4	5.6	5.5	5.7
Asset Turnover Ratio (Net Sales/Total Assets)	1.0	1.0	1.0	1.2	1.2	1.2

Source: CBRT Company Accounts (Provisional Data)

The corporate sector maintained its profitability thanks to the brisk domestic and external demand together with the low course of financing costs in 2007. Another factor that affected the profitability ratio of firms positively in 2007 was the appreciation of the YTL. As a matter of fact, the net foreign currency gain that accounted for 7.2 percent of the net profit in 2006 rose to 20.3 percent in 2007. In the meantime, financing costs contributed to profitability by decreasing 32.6 percent in real terms parallel to the fall in interest rates.

The appreciation of the YTL in 2007 decreased the FX debt of firms, which, in turn, slowed down the growth of total debt. While total debt increased by 7 percent, the leverage (debt/asset) ratio dropped as a result of the increase in total assets by 11 percent (Table I.8).

The high course of liquidity ratios indicates that firms have the financial capability to repay their short-term debts. Despite liquidity ratios that remained relatively flat in the corporate sector in 2007, the ratios of manufacturing firms increased.

The ratio of short-term FX cash loans to foreign sales, which indicate the firms' repayment capacity of short-term FX loans, was realized as 11.3 percent with a decline by 2.6 points in 2007. This was mainly driven by the fact that the revenues of firms from sales were denominated in Euro, which appreciated against the USD. However, beyond the contraction in external demand due to global developments, it is expected that the depreciation of the Euro against the USD will have adverse effects on firms that borrow in foreign currency.

Moreover, it is seen that the inventory turnover ratio declined in 2007, in other words, the stock-keeping duration for goods and services produced extended (Table I.8).

Since CBRT Company Accounts are published on an annual basis, it is necessary to find an alternative and up-to-date data set to use in the financial analysis of the corporate sector. Therefore, basic financial ratios were calculated using the data pertaining to the selected 189<sup>1</sup> firms traded on the ISE in order to analyze the developments in 2008.

**Table I.9. Financial Ratios of Selected ISE Firms<sup>1</sup> (%)**

	All Companies		Manufacturing Comp.	
	12.07	06.08	12.07	06.08
Leverage Ratio	46.2	50.8	46.8	52.1
Short-Term Debt / Total Liabilities	31.8	34.2	32.3	36.6
Financial Debt / Total Debt	40.3	42.1	43.2	43.8
Financial Debt / Total Liabilities	18.6	21.4	20.2	22.8
Liquidity (Acid Test) Ratio	98.7	93.5	91.8	82.4
Cash Ratio	37.4	33.7	25.2	19.9
Net Profit / Assets (ROA)	8.3	7.8	7.8	6.8
Net Profit / Equity (ROE)	15.5	15.3	14.6	13.7

Source: ISE

(1) Financial Reportings of firms is in line with Communiqué on Principles Regarding Financial Reporting Standards in Capital Markets\* (Serial: XI, No: 29) of the Capital Markets Board of Turkey, starting from first interim period financial tables after 1 January 2008. Regarding past data, only 2007 year-end statements have been prepared in accordance with the new reporting principles. Therefore, to carry out the analyses December 2007-June 2008 financial statements were used.

The leverage ratio of firms that declined in 2007 rose in the first half of 2008 in addition to other factors, due to the depreciation of the YTL and the share of financial debt in total debt increased (Table I.9).

The decline in profitability ratios, especially the slowdown in domestic and external demand in the second half of the year, the depreciation of the YTL and the increase in interest rates have led to a deterioration in financial structures and a decline in the debt service capacity of firms in 2008 (Table I.9). The CBRT's liquidity measures also aim to restrain the adverse effects of these developments.

<sup>1</sup> Due to the change in accounting period of a firm operating in the tourism sector, the number of firms is different from the number stated under the "Foreign Exchange Position of the Corporate Sector" heading due to the inaccessibility of the firm's December 2007 financial statements as per the "Communiqué on Principles Regarding Financial Reporting Standards in Capital Markets" (Serial: XI, No: 29) of the Capital Markets Board of Turkey.

### Box 5. Export Developments

According to Turkish Exporters Assembly (TEA) data, exports of Motor Vehicles and Related-Industry, Iron and Steel Products, Clothing and Ready-Wear Sector, Chemicals and Chemical Products, and Electric-Electronic sectors accounted for 60.4 percent of the total exports as of October 2008. While the ten-month export growth of the said sectors that made up 66.2 percent of total exports in January-October 2008 period is 34.44 percent, a decline of 4.25 percent in October is noteworthy. As a matter of fact, motor vehicles and related-industry, one of the sectors with the largest share in exports, and the clothing and ready-wear sectors displayed a monthly decline of 21.8 percent and 17.15 percent, respectively, compared to October 2007.

**Table 1. First 5 Sectors with the Largest Share in Exports as of October 2008 (Thousand USD)**

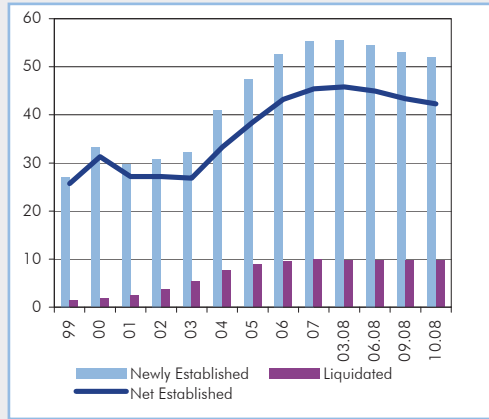
Sectors	January–October				October			
	2007	2008	Annual Chng. (%)	Share	2007	2008	Annual Chng. (%)	Share
Motor Vehic. and Rel.-Ind.	16,965,540	22,230,935	31.04	19.87	1,927,686	1,507,417	-21.8	15.82
Iron and Steel Prod.	9,510,549	17,718,394	86.30	15.84	920,943	1,216,692	32.11	12.77
Cloth. and Ready-Wear	13,144,870	13,579,589	3.31	12.14	1,296,020	1,073,738	-17.15	11.27
Chem. and Chem. Prod.	8,275,875	12,146,071	46.76	10.86	961,205	1,059,007	10.17	11.11
Electric-Electronic	7,204,775	8,403,909	16.64	7.51	905,138	898,811	-0.7	9.43
The First 5 Sectors in Total	55,101,609	74,078,898	34.44	66.23	6,010,992	5,755,665	-4.25	60.4
Grand Total	85,378,000	111,857,738	31.01	100	9,711,185	9,529,945	-1.87	100

Meanwhile, Automotive Manufacturers Association (AMA) data indicate a decline of 22 percent in total production, with 24 percent pertaining to automobiles and 15 percent pertaining to commercial vehicles as of October 2008. Given that vehicle loans extended by banks decreased by 2.8 and by 2.5 percent in the first ten months of 2008 and in the last month (September-October 2008) respectively, it is considered that the contraction in the automotive sector might become more apparent in the upcoming period due to a drop of domestic sales of automobiles in addition to the drop in sales abroad.

Moreover, the industrial production index decreased by 5.5 percent as of September 2008 in comparison to the same period of the previous year. The second manufacturing sector with the highest change (variation) in the industrial production index was "Tanning and Dressing of Leather, Luggage, etc" sector with a decline of 23.8 points. Considered along with the decrease of exports in the textile sector, this situation reveals the contraction in the sector.

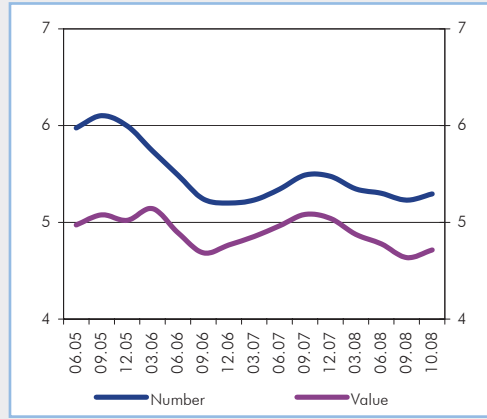
The contraction observed in the sale and production in these sectors also implies that firms have been adversely affected by recent developments in international markets. Considering that approximately 60 percent of Turkey's exports are sold to EU markets, it is possible that exports, especially in textiles and automotive sectors, will not follow a strong course in the forthcoming period due to decreasing demand in line with the slowdown of consumption in the EU arising from the global crisis.

**Chart I.41.**  
Number of Newly Established and Liquidated Companies and Cooperatives (Thousand)



Source: TURKSTAT

**Chart I.42.**  
The Ratio of Over-Drawn Cheques Presented to the ICH to the Total Cheques Presented to the ICH (%)

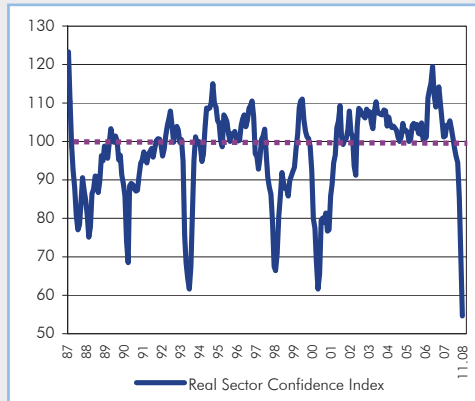


Source: CBRT

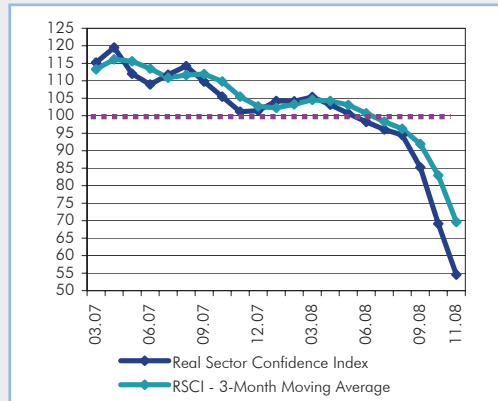
The net number of newly-established companies and cooperatives that remained flat since 2006 started to follow a downward trend and declined by 6 percent as of October 2008 in comparison to the same period of the previous year (Chart I.41).

The ratio of over-drawn cheques submitted to clearing houses to the total cheques presented has been around 5 percent in terms of number and amount since 2005 and has not displayed a significant change over the years (Chart I.42).

**Chart I.43.**  
Real Sector Confidence Index



Source: CBRT



The CBRT Business Tendency Survey and Real Sector Confidence Index prepared to determine general tendencies in cyclical developments and provide economic decision-making units with necessary information on future expectations, dropped by 46.6 points in November 2008 in comparison to the same period of the previous year and became 54.6 points. Analysis of the diffusion indices pertaining to the survey questions that made up the CBRT Business Tendency Survey and Real Sector Confidence Index suggests that all expectations, primarily those regarding the general business situation, the volume of output over the next three months, the export orders over the next three months have a decreasing effect on the index. Especially, the decline in the general business situation to 31 points with a decrease by 33.5 points within the last two-month period as of November 2008 is remarkable (Chart I.43).

### I.4.2.2. Borrowing Structure of the Corporate Sector

Corporate sector financial debt displaying an upward trend reached YTL 300 billion, approximately 57 percent of which accounted for FX denominated debt, as of August 2008.

**Table I.10. Financial Debt of the Corporate Sector (Million YTL)**

	2005 <sup>1</sup>	2006	2007	08.08 <sup>1</sup>
<b>Corporate Sector Loans</b>	<b>129,374</b>	<b>201,663</b>	<b>245,916</b>	<b>300,446</b>
<b>A. Domestic Loans</b>	<b>81,670</b>	<b>125,798</b>	<b>154,433</b>	<b>185,590</b>
a. YTL	53,766	84,174	106,894	128,312
b. FX (Including FX-indexed)	27,904	41,624	47,539	57,278
In USD terms	20,796	29,613	41,007	48,764
<b>B. External Loans</b>	<b>47,704</b>	<b>75,865</b>	<b>91,483</b>	<b>114,856</b>
1. From Foreign Branches of Banks Established in Turkey	19,416	27,644	37,012	48,058
a. YTL	1,033	954	1,175	390
b. FX	18,383	26,690	35,837	47,668
In USD terms	13,700	18,988	30,913	40,582
2. From Banks Abroad	28,288	48,221	54,471	66,798
In USD terms	21,082	34,306	46,986	56,869

Source: BRSA-CBRT

(1) As the data for financial leasing, factoring and consumer finance companies are obtained starting from 2006 the data for 2005 cannot be included. Since the data for these companies are presented quarterly, the data for June 2008 instead of August 2008 is used.

FX loans received by the corporate sector amounts to USD 146.2 billion, USD 89.3 billion of which came from domestic and foreign branches of banks established in Turkey and from the non-banking financial sector, whereas the loans received from banks abroad amounted to USD 57 billion (Table I.10). In other words, 61 percent of total FX loans of the corporate sector were extended by banks established in Turkey.

**Table I.11. Sectoral Breakdown of the Remaining Maturity Composition of Long-Term Loans Received from Abroad by Corporate Sector (Million USD)**

(As of August 2008)	1-12 Months	13-24 Months	25-36 Months	37-60 Months	61-120 Months	120+ Months	Total
<b>CORPORATE SECTOR<sup>1</sup></b>	<b>24,972</b>	<b>16,423</b>	<b>12,412</b>	<b>18,109</b>	<b>19,210</b>	<b>2,807</b>	<b>93,933</b>
<b>AGRICULTURAL SECTOR</b>	<b>104</b>	<b>51</b>	<b>40</b>	<b>51</b>	<b>47</b>	<b>0</b>	<b>293</b>
<b>INDUSTRIAL SECTOR</b>	<b>10,060</b>	<b>8,257</b>	<b>5,764</b>	<b>7,900</b>	<b>7,139</b>	<b>161</b>	<b>39,281</b>
1. Manufacturing	8,602	6,345	3,844	5,280	4,533	94	28,698
- Metal Products	1,510	971	828	1,279	1,359	52	5,999
- Food, Bev. and Tobacco Prod.	1,809	2,135	604	964	221	0	5,733
- Textiles and Wearing Apparel	1,131	655	469	661	387	0	3,303
- Motor Vehicles	842	657	267	385	661	14	2,826
- Office Mach. and Computers	584	164	155	422	582	9	1,916
- Chemical Products	692	379	313	218	342	0	1,944
- Other Non-Metal. Min. Prod.	373	223	256	531	434	0	1,817
- Mechanical Products	573	386	398	185	75	0	1,617
- Paper, Pap. Prod., Print & Publ.	375	251	191	203	114	19	1,153
- Others	713	524	363	432	358	0	2,391
2. Elect., Gas and Water Supply	858	1,325	1,477	1,536	1,457	63	6,716
3. Mining and Quarrying	600	587	443	1,084	1,149	4	3,867
<b>SERVICES SECTOR</b>	<b>14,808</b>	<b>8,115</b>	<b>6,608</b>	<b>10,158</b>	<b>12,024</b>	<b>2,646</b>	<b>54,359</b>
1. Real Est., Rent. and Bus. Serv.	4,932	3,154	2,458	2,923	1,868	945	16,280
2. Trans., Storg. And Comm.	2,029	1,351	1,460	3,451	5,603	1,273	15,167
3. Wholesale and Retail Trade	3,428	1,298	825	1,177	1,701	122	8,551
4. Construction	2,584	1,144	1,000	878	1,540	243	7,389
5. Hotels and Restaurants	803	619	361	727	570	8	3,088
6. Others	1,032	549	504	1,002	742	55	3,884

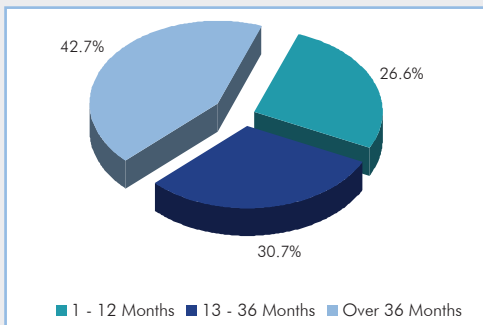
Source: CBRT

(1) As being different from the long term loans given in Table I.12, it includes YTL loans received from abroad by the corporate sector and excludes loans received from shareholders abroad of companies with foreign capital.



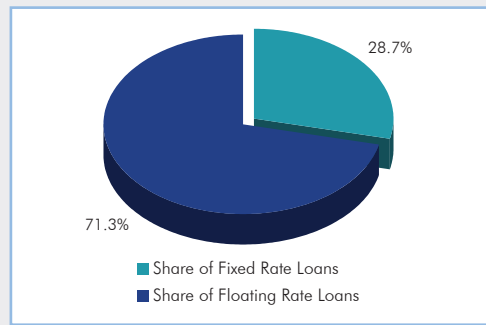
The services sector has the largest share with 57.9 percent in the long-term loans received by the corporate sector from abroad. The loans of real estate, renting and business services sector and the transportation, storage and communication sector that have a significant share in the services sector include the external loans received by a number of firms with foreign capital operating in these sectors in order to pay acquisition (including privatization) cost. The share of industrial sector loans in total loans is 41.8 percent and the majority of these loans were received by the manufacturing industry (Table I.11).

**Chart I.44.**  
Remaining Maturity Composition of Long-Term Loans Received from Abroad by Corporate Sector (%) (As of August 2008)



Source: CBRT

**Chart I.45.**  
Interest Rate Composition of Long-Term Loans Received from Abroad by Corporate Sector (%) (As of August 2008)

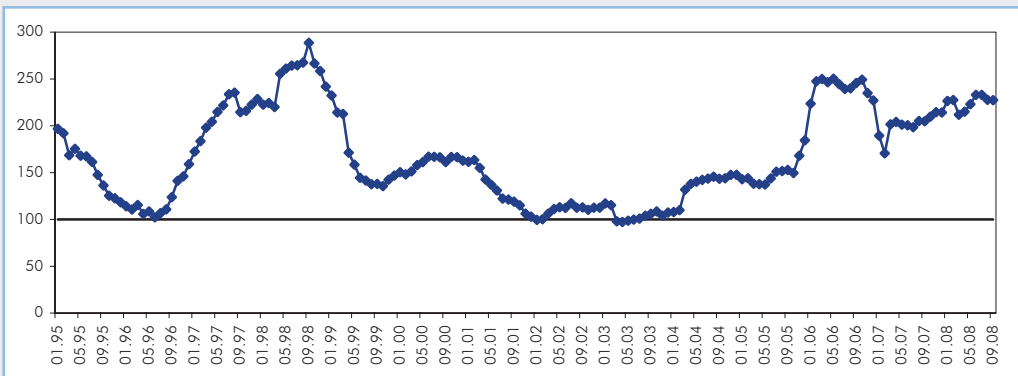


Source: CBRT

By August 2008, 26.6 percent of long-term loans received by the corporate sector from abroad were the loans with the maturity of up to one-year (Chart I.44).

By August 2008, 28.7 percent of long-term loans received by the corporate sector from abroad were fixed rate, whereas 71.3 percent were floating rate loans. 63.5, 34.8 and 1.7 percent of the said loans were denominated in USD, EURO and in other foreign currencies, respectively (Chart I.45). In August 2008, no significant change was observed in FX composition and interest rates of corporate sector debts compared to end-2007.

**Chart I.46.** Roll-over Ratio of Long-term Loans Received by the Non-banking Private Sector<sup>1</sup> (%)



Source: CBRT

(1) The roll-over ratio was calculated by dividing long-term loans received from abroad by the non-banking private sector by loan repayments in the relevant period according to annualized monthly balance of payments data.

It is seen that the roll-over ratio of external long-term loans of the non-banking private sector did not drop below 100 percent even during the 2001 crisis (Chart I.46). Nevertheless,

when trying to assess the future outlook, it should be acknowledged that the 2001 crisis was of domestic origin, whereas today, foreign borrowing facilities have shrunk due to the global crisis.

#### I.4.2.3. Foreign Exchange Position of the Corporate Sector

Foreign exchange positions of firms operating in Turkey cannot be calculated by referring to their balance sheets, since financial statements of firms are prepared in terms of the Turkish currency amount, regardless of the currency composition. However, in order to provide a general idea concerning the exchange rate risk of firms, the table of Foreign Exchange Assets and Liabilities of Non-Financial Companies prepared by CBRT is posted quarterly on our website and sheds light on the foreign exchange position of the corporate sector. Besides, the foreign currency positions of non-financial firms listed on the ISE, which constitute an important part of the corporate sector, have been calculated by referring to footnotes in their disclosed financial statement, and the exchange rate risks, as well as the cash loan risks of those firms have been examined.

The exchange rate risk of firms in the corporate sector has been analyzed and assessed from a macro perspective. Hence, considering that some firms have short positions while others have long positions, it would be more accurate to evaluate the vulnerability of the corporate sector to exchange rate risk by making individual analyses for each firm.

**Table I.12.**  
**FX Assets and Liabilities of Corporate Sector<sup>1,2</sup> (Million USD)**

	2005	2006	2007	03.08	06.08	Change 06.08-12.07 (%)
<b>Assets</b>	<b>45.702</b>	<b>63.426</b>	<b>77.862</b>	<b>80.856</b>	<b>85.811</b>	<b>10</b>
A. Deposits	30.890	45.452	54.834	55.378	58.307	6
-Domestic Banks <sup>3</sup>	12.636	18.756	24.402	24.051	26.092	7
-Banks Abroad <sup>4</sup>	18.254	26.696	30.432	31.327	32.215	6
B. Securities	1.035	933	830	898	851	3
C. Export Receivables	6.721	9.584	12.007	14.177	15.493	29
D. Foreign Dir. Invest. to Abrod.	7.056	7.457	10.191	10.403	11.160	10
<b>Liabilities</b>	<b>72.245</b>	<b>99.889</b>	<b>138.810</b>	<b>154.436</b>	<b>167.256</b>	<b>20</b>
A. Cash Loans	55.578	82.907	118.906	135.207	145.096	22
- Domestic <sup>5,6</sup>	20.796	29.613	41.007	48.139	48.252	18
Non-bank fin. institutions <sup>7</sup>	0	4.869	8.220	8.715	8.742	6
- External <sup>8</sup>	34.782	53.294	77.899	87.068	96.844	24
Long Term	33.594	51.911	76.303	85.345	94.681	24
B. Import Payables	11.034	11.791	14.606	15.693	18.584	27
C. Protocol Receiv. of SDIF	5.633	5.191	5.298	3.536	3.576	-32
<b>Net Position</b>	<b>-26.543</b>	<b>-36.463</b>	<b>-60.948</b>	<b>-73.580</b>	<b>-81.445</b>	<b>34</b>

Source: CBRT

(1) Amounts in the table may be different from those published in the preceding issues due to the updates of the data.

(2) Data on non-financial public enterprises is not included.

(3) Participation funds in participation banks are included.

(4) "Deposits-Foreign Banks" data covers the data of foreign branches of the banks established in Turkey. On the other hand, it should be taken into consideration that the deposits of real persons and non-bank financial institutions may be included in this data.

(5) Funds extended by participation banks are included.

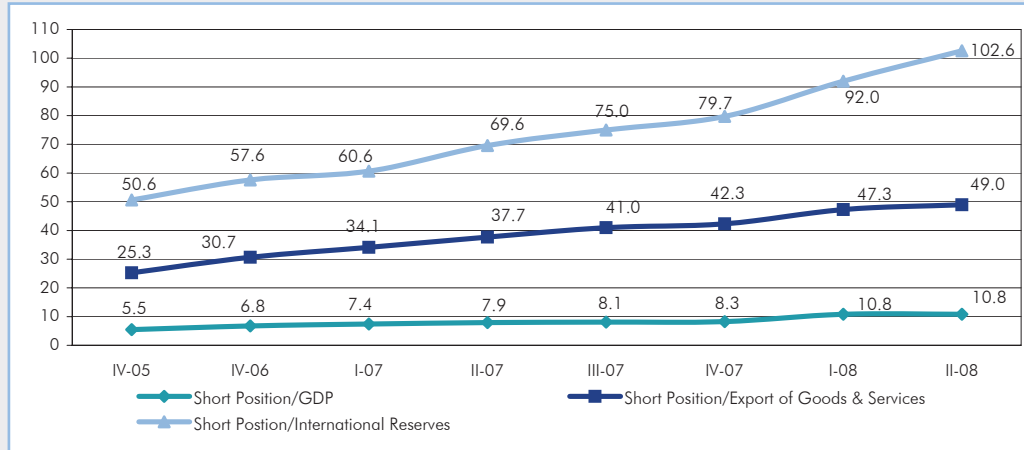
(6) FX indexed loans are included.

(7) It consists of leasing, factoring and consumer finance companies. Since the data of these companies has been started to be reported in 2006, the data of 2005 is not available.

(8) Loans extended by foreign branches of the banks established in Turkey are included.

The net short position of the corporate sector rose to USD 81.5 billion in June 2008, with a 34 percent upsurge compared to end-2007. The loans extended by foreign banks, with an increase of 24 percent over the last six months, were instrumental in this hike (Table I.12). Provisional data for August indicate that there has been no significant change in the short position of the corporate sector compared to that of June.

**Chart I.47.**  
Ratios Related to FX Position of the Corporate Sector<sup>1,2,3</sup> (%)



Source: BRSA-CBRT, TURKSTAT, Treasury, SDIF, BIS

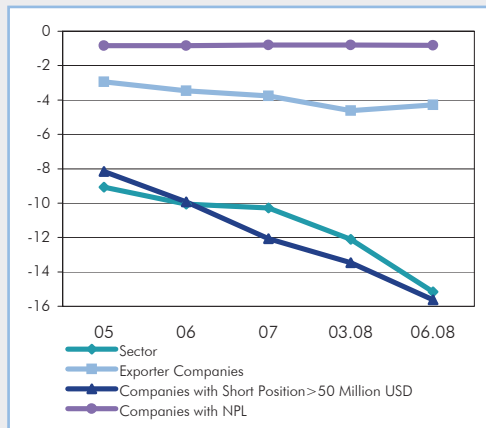
- (1) GDP and exports of goods & services are computed on a yearly basis. International reserves are outstanding amounts at the end of period.
- (2) International reserves are gross foreign exchange reserves of CBRT (including gold).
- (3) The short position is converted into YTL using the foreign exchange rate of the related period and divided by GDP.

The ratio of the corporate sector short position to GDP, exports, and international reserves rose in the first half of 2008 in line with the increase in the net short position (Chart I.47).

#### 1.4.2.3.1. Foreign Exchange Position of the Corporate Sector Firms Listed on the ISE

This section analyzes the foreign exchange positions and credit obligations of corporate sector firms listed on the ISE to the banking sector. The analysis covers 190 non-financial firms<sup>2</sup>, whose financial statements are published by the ISE and which disclose their foreign exchange positions in their balance-sheet footnotes and, do not include any financial institutions in their consolidated financial statements.

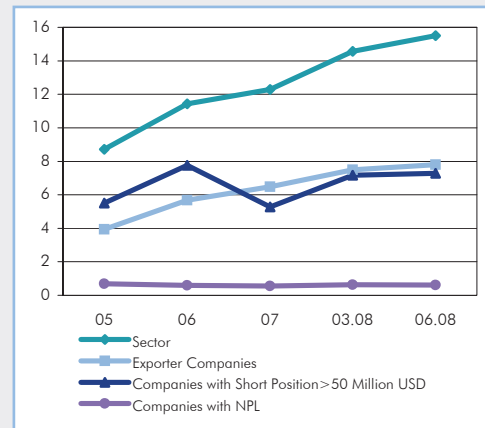
**Chart I.48.**  
FX Position of ISE Companies<sup>1</sup>  
(Billion USD)



Source: ISE

- (1) As of year-end periods, companies for which the share of exports in net sales is equal to or greater than 30 percent, are considered exporter companies.

**Chart I.49.**  
Cash Loans Extended to ISE Companies<sup>1</sup>  
(Including NPL, Billion YTL)



Source: CBRT

- (1) According to Risk Centre records, the cash loans are the loans which are extended directly by domestic banks or extended by foreign banks with guarantee or through intermediation of domestic banks.

<sup>2</sup> Firms that are consolidated under another company, the shares of which are publicly traded at ISE, have not been re-included in the analysis.

The short position of firms analyzed, which was USD 10.3 billion at the end of 2007, increased to USD 15.2 billion by June 2008 (Chart I.48). By the end of 2007, while 126 of firms analyzed had a short position of USD 13.6 billion, the number of firms with short positions rose to 133 and the total short position of these firms reached USD 17.2 billion by June 2008. The short position of the 42 firms with short positions over-50 million reached USD 15.6 billion with an increase of 29.5 percent.

The short position of non-exporting firms, which was USD 6.5 billion at end-2007, increased to USD 10.9 billion by June 2008.

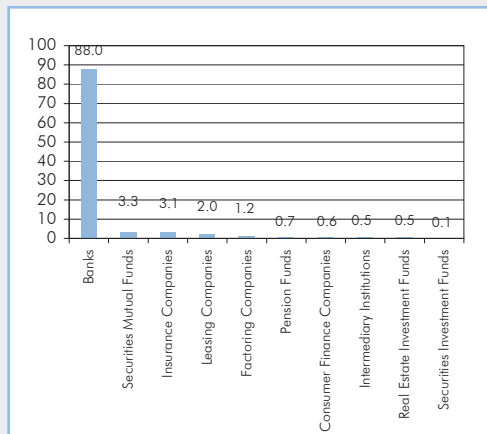
Total loans of firms analyzed, including NPL, reached YTL 15.5 billion by June 2008, with a 26.3 percent rise compared to the end of 2007. 16 of 17 firms with NPLs had short positions amounting to USD 814 million, while the amount of their cash loans became YTL 604 million, YTL 439 million of which were NPLs (Chart I.49).

In view of the fact that the number of non-exporting firms with short positions and the amount of their short positions increased in the first half of 2008, the number of firms with NPLs and their NPL amounts are expected to rise due to the depreciation of the Turkish currency.

## II. STRUCTURE OF THE FINANCIAL SECTOR

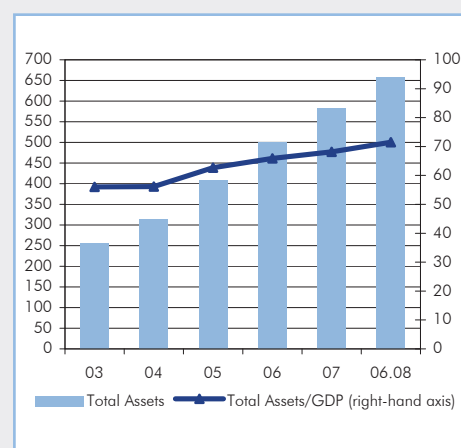
The Turkish financial sector maintained its growth trend in the first half of 2008.

**Chart II.1.**  
Composition of Balance Sheet of the Financial Sector (%)<sup>1</sup>



Source: BRSA, CBRT, Assoc. of Capital Market Intermediary Institutions, CMB  
(1) Figures are as of June 2008

**Chart II.2.**  
Balance Sheet Size of the Banking Sector (Billion YTL, %)



Source: BRSA-CBRT

The total asset size of the financial sector, which grew by 12 percent compared to end-2007, reached YTL 746 billion as of June 2008. 88 percent of financial sector assets belong to banks (Chart II.1).

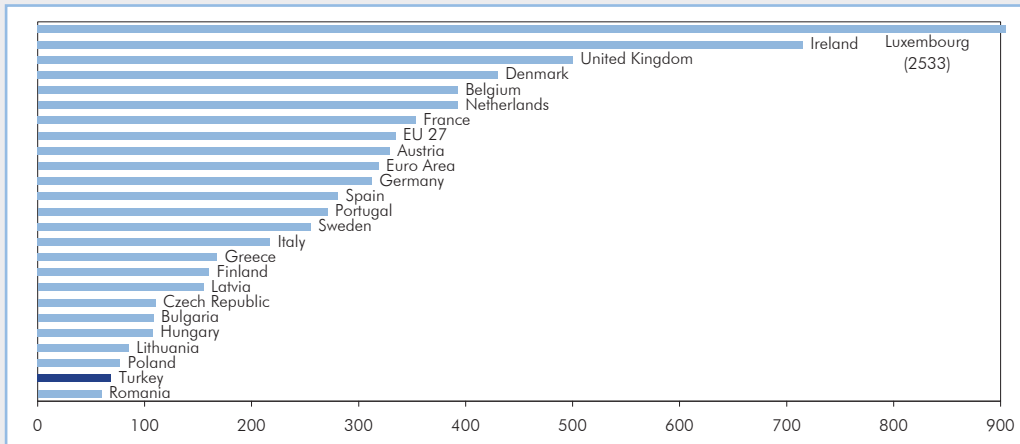
### II.1. Banking Sector

The Turkish banking sector consists of deposit banks, development and investment banks and participation banks that operate according to profit/loss sharing principles.

As of September 2008, the number of banking sector staff increased by 13,769 compared to end-2007 and reached 181,529, whereas the number of banks remained at 50.

As of September 2008, the total asset size of the banking sector grew by 9 percent in real terms compared to end-2007 and reached YTL 680 billion, while it increased to 552 billion in USD terms, with a rise of 10 percent.

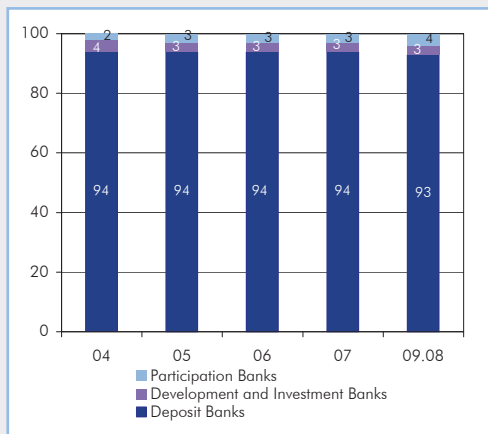
**Chart II.3.**  
Comparison of the Turkish Banking Sector Asset Size/GDP Ratio with Selected EU Countries<sup>1</sup> (%)



Source: TURKSTAT, BRSA-CBRT, ECB Report – 2008  
(1) Figures are as of 2007.

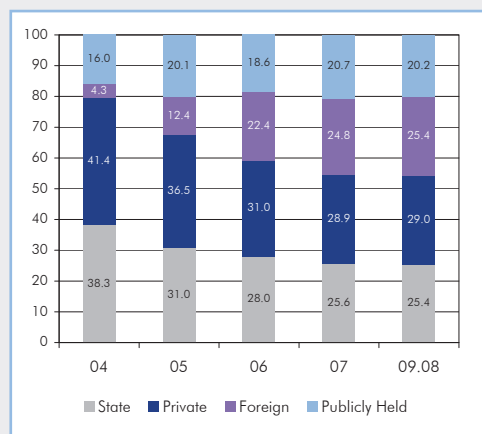
The ratio of the Turkish banking sector’s asset size to GDP increased to 71.5 percent as of June 2008 from 68.1 percent at end-2007 (Chart II.2). The share of the Turkish banking sector in the GDP is higher than that of Romania, whereas it is lower than that of other EU countries (Chart II.3).

**Chart II.4.**  
Banking Sector Assets by Groups (%)



Source: BRSA - CBRT

**Chart II.5.**  
Banking Sector Assets According to Equity Ownership<sup>1</sup> (%)



Source: BRSA - CBRT  
(1) For publicly held shares no distinction is made between domestic and foreign investors.

By September 2008, of the 50 banks in the Turkish banking sector, 33 are deposit banks, 13 are development and investment banks and 4 are participation banks. As can be seen, deposit banking prevails in the Turkish banking sector (Chart II.4).

Based on their share in paid-up capital, the share of foreign stockholders in assets, which stood at 24.8 percent at end-2007, rose to 25.4 percent in September 2008 due to faster growth of banks with foreign capital (Chart II.5). Meanwhile, according to data of the Central Registry Agency for September 2008, the share of foreign participation in publicly held shares

was 17.5 percent of the total assets of the sector. When these shares are included, the share of foreign participation in the banking sector reaches 42.9 percent.

**Table II.1 Comparison with Selected EU Countries<sup>1,2,3</sup>**

Countries	Deposits/ GDP (%)	Loans/ GDP (%)	Loans/ Deposits (%)	Tot. Assets/ Number of Banks (Million Euros)	Share of the 5 Largest Credit Institutions (%)	Number of Credit Institutions	Foreign Part. in the Banking Sector (%)
Germany	119	130	109	3,733	22	2,026	11.1
Austria	111	140	126	1,109	43	803	26.9
Belgium	155	126	81	11,798	83	110	24.8
Bulgaria	69	67	97	1,077	57	29	81.6
Czech Rep.	73	53	72	2,500	66	56	91.5
Denmark	79	221	279	5,174	64	189	19.3
Finland	56	82	146	799	81	360	65.3
France	83	114	137	8,270	52	808	12.9
Holland	157	194	123	6,437	86	341	17.6
UK	290	288	99	25,880	41	390	53.4
Ireland	175	257	147	16,511	46	81	46.7
Spain	144	177	123	8,250	41	357	11.6
Sweden	57	134	234	4,209	61	201	9.3
Italy	73	112	154	4,058	33	821	17.4
Latvia	72	104	145	994	67	31	58.0
Lithuania	42	63	152	298	81	80	83.7
Luxembourg	819	531	65	5,868	28	156	95.0
Hungary	51	65	128	527	54	206	57.4
Poland	48	43	91	329	47	718	70.5
Portugal	118	158	134	2,515	68	175	23.0
Romania	32	35	109	1,717	56	42	82.1
Greece	109	87	80	6,084	68	63	23.2
<b>Ave. Euro Area</b>	<b>112</b>	<b>136</b>	<b>121</b>	<b>4,620</b>	<b>55</b>	<b>471</b>	<b>19.5</b>
<b>Ave. EU 27</b>	<b>136</b>	<b>157</b>	<b>116</b>	<b>4,920</b>	<b>59</b>	<b>309</b>	<b>28.7</b>
<b>Turkey 2007</b>	<b>42</b>	<b>35</b>	<b>83</b>	<b>6,819</b>	<b>60</b>	<b>50</b>	<b>24.8</b>
<b>Turkey 06.2008</b>	<b>44</b>	<b>38</b>	<b>87</b>	<b>6,826</b>	<b>59</b>	<b>50</b>	<b>25.6</b>

Source: BRSA - CBRT, Eurostat, ECB Report – 2008

(1) The figures of EU countries are as of 2007. There are discrepancies in the definition of "credit institution" in EU countries and some include non-bank financial institutions. For Turkey, bank data are taken into consideration.

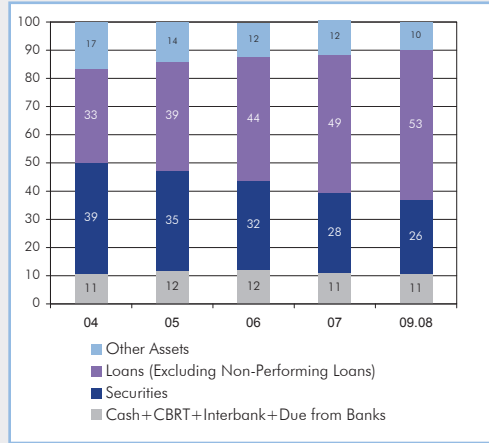
(2) For Turkey, deposit data includes participation funds, loan data includes funds extended by participation banks.

(3) In parallel to EU data, non performing loans are included in Turkey's loan data.

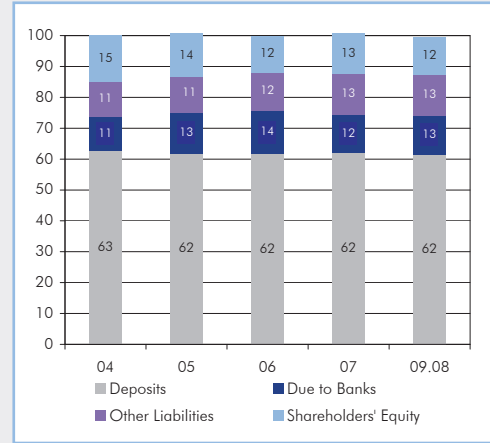
Although the ratio of deposits and loans to GDP and the ratio of loans to deposits, which reveal the financial depth and intermediation level of the banking sector, displayed an increase in June 2008 compared to end-2007, it lagged behind EU averages (Table II.1)

The number of banks in the Turkish banking sector is significantly below the EU average. The share of the first five banks in total assets is the same as the EU average (Table II.1). Meanwhile, as of September 2008, the concentration ratios of the first five banks and the first ten banks remained unchanged in comparison to the end of the year, and were realized as 60 percent and 83 percent, respectively.

By the end of 2007, the share of foreign participation in the banking sector was 20 percent in the Euro area and 29 percent in the EU27. The share of foreign participation in the Turkish banking sector, which was 25 percent as of the same date, was realized above the Euro area average, albeit below the average of not only the EU27, but also new members of the EU such as Bulgaria, the Czech Republic, Hungary, Poland and Romania (Table II.1)

**Chart II.6.**  
**Asset Structure of the Banking Sector (%)**

Source: BRSA-CBRT

**Chart II.7.**  
**Liability Structure of the Banking Sector (%)**

Source: BRSA-CBRT

The share of the loan portfolio as the largest asset item maintained its upward trend and reached 53 percent, while the share of securities declined to 26 percent as of September 2008 (Chart II.6).

As of September 2008, the share of deposits as the largest source of funds remained the same at 62 percent, whereas the share of shareholders' equity was realized as 12 percent with a 1 percentage point decrease (Chart II.7).

## II.2. Banking Sector Profitability and Capital Adequacy

### II.2.1. Profitability<sup>3,4</sup>

When the first nine months of 2008 is analyzed, it is seen that the banking sector failed to maintain the profitability performance achieved in the same period of the previous year. As of September 2008, the net profit of the sector declined by 6.4 percent compared to September 2007, and stood at YTL 10.6 billion.

**Table II.2 Net Profit and Its Components (Million YTL)**

	09.07	09.08	Change (%)
I. Operating Income (A+B)	28,020	32,327	15.4
A- Net Interest Income	18,165	21,928	20.7
B- Non-Interest Income <sup>1</sup>	9,855	10,399	5.5
II. Non-Interest Expenses(C+D)	15,053	20,019	33.0
C- Prov. for Credits and Other Receiv.	3,187	5,276	65.6
D- Other Operating Expenses	11,866	14,742	24.2
III. Net Operating Profit (I-II)	12,968	12,308	-5.1
IV. Other Income <sup>2</sup>	785	957	22.0
V. Provision for Taxes	2,434	2,674	9.8
VI. Net Profit (III+IV-V)	11,318	10,592	-6.4

Source: BRSA - CBRT

(1) Non-Interest Income = Net Fees and Commissions Income (including Banking Services Income) + Dividend Income + Net Trading Income (Loss) + Other Operating Income

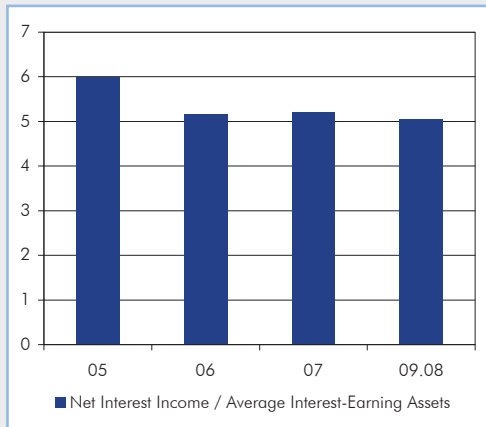
(2) Other Income = Profit Share Received Excluding Dividend Income + Extraordinary Income (Expenses).

<sup>3</sup> Participation banks are excluded as their operating principles differ from other banks.<sup>4</sup> Bank under SDIF is excluded.



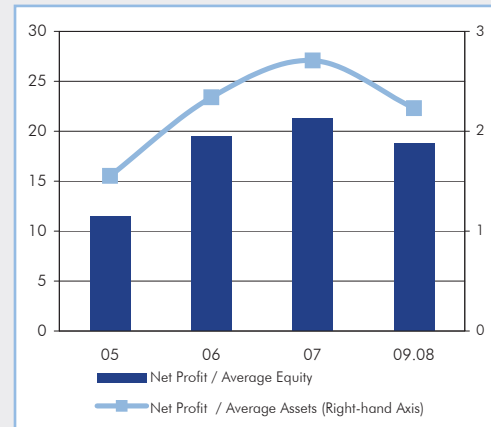
As of September 2008, the decline in the profitability of the banking sector was mainly due to the 33 percent increase in non-interest expenses despite the 15.4 percent rise in operating income. The upsurge in operating expenses, particularly personnel expenses and other non-interest expenses, together with the increase in special and general provisions for credits and other provisions, pushed up non-interest expenses (Table II.2). The rise in non-interest income remained limited, due to the fact that foreign currency gains turned into losses and income from the sale of assets as a one off income item was not realized as high as the previous year.

**Chart II.8.**  
Net Interest Margin<sup>1</sup> (%)



Source: BRSA – CBRT  
(1) Data is annualized for September 2008.

**Chart II.9.**  
Return on Assets and Return on Equity<sup>1</sup> (%)

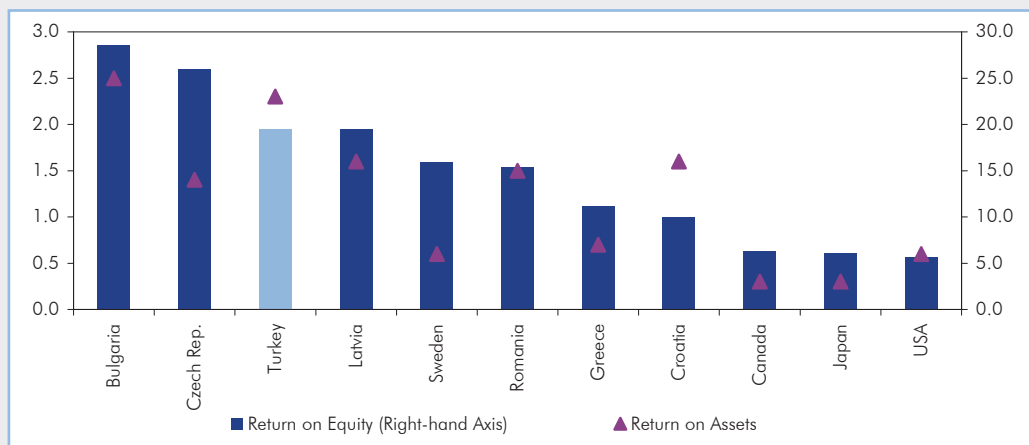


Source: BRSA - CBRT  
(1) Data is annualized for September 2008.

The ratio of net interest income to average interest-earning assets, which was 5.2 percent at end-2007, did not change significantly and stood at 5.0 percent in September 2008 (Chart II.8).

As of September 2008, the return on assets and the return on equity were 2.2 percent and 18.8 percent, respectively. Both of these ratios display a downward trend compared to end-2007 (Chart II.9).

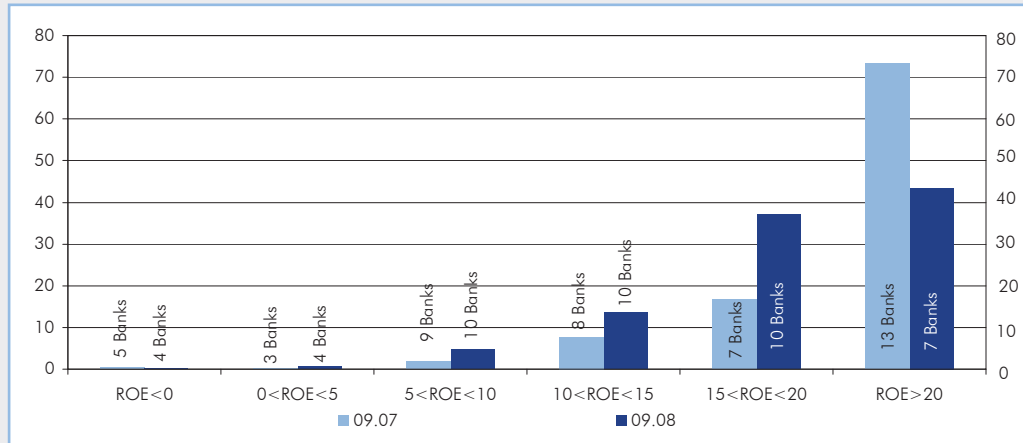
**Chart II.10.**  
Return on Assets and Equity by Selected Countries (March 2008) (%)



Source: Global Financial Stability Report, IMF-September 2008

When compared with selected countries as of March 2008, the Turkish banking sector displays a good performance, especially with regard to return on assets (Chart II.10).

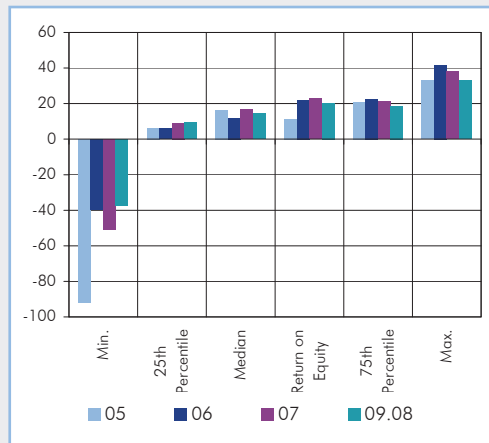
**Chart II.11.**  
Return on Equity Based on Asset Share<sup>1</sup> (%)



Source: BRSA - CBRT  
(1) ROE data is annualized.

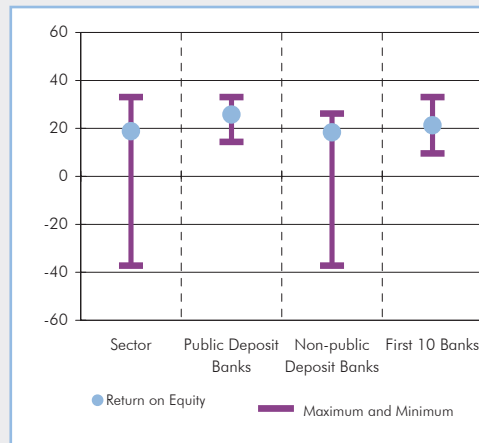
As of September 2008, the number of banks with a ROE over 15 percent dropped from 20 to 17, while their share in total assets fell from 89.9 to 80.6 percent. The number of banks declaring losses also fell from 5 to 4 (Chart II.11).

**Chart II.12.**  
Return on Equity of Deposit Banks<sup>1</sup> (%)



Source: BRSA - CBRT  
(1) Data is annualized for September 2008.

**Chart II.13.**  
Return on Equity: Maximum and Minimum (September 2008) (%)<sup>1</sup>



Source: BRSA - CBRT  
(1) ROE data is annualized.

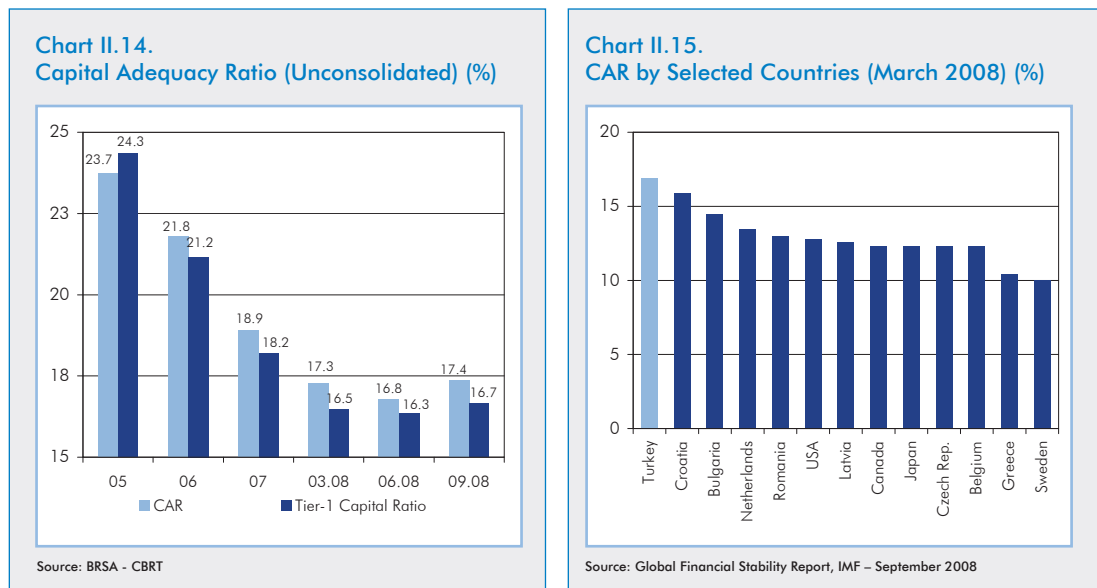
The ROE of deposit banks, which had been on the rise since 2005, declined in the last period. In September 2008, 75 percent of deposit banks had a ROE lower than 18.6 percent with a tendency to decline (Chart II.12). The asset size of deposit banks with a ROE over 18.6 percent comprises 56.1 percent of the total assets of the sector.

As of September 2008, the value range for the ROE is narrow for both public deposit banks and the largest ten banks in terms of asset size. The broader range for non-public deposit banks is due to the effect of small banks (Chart II.13).

Profitability performance of the Turkish banking sector displayed a tendency to decline in the third quarter of 2008. The increased credit risk of banks and the need to remain liquid may also unfavorably affect the profitability performance of banks in the upcoming period. However, profitability may improve as a result of amendments to Turkish Accounting Standard 39 (TMS 39) and Turkish Financial Reporting Standard 7 (TFRS 7) that allow the reclassification of financial assets measured at fair value through profit or loss.

### II.2.2. Capital Adequacy

The unconsolidated capital adequacy ratio (CAR) of the banking sector, which is the ratio of own funds to total exposure stemming from credit, market and operational risks, is above both the minimum requirement of 8 percent and the target ratio of 12 percent for all periods under review.

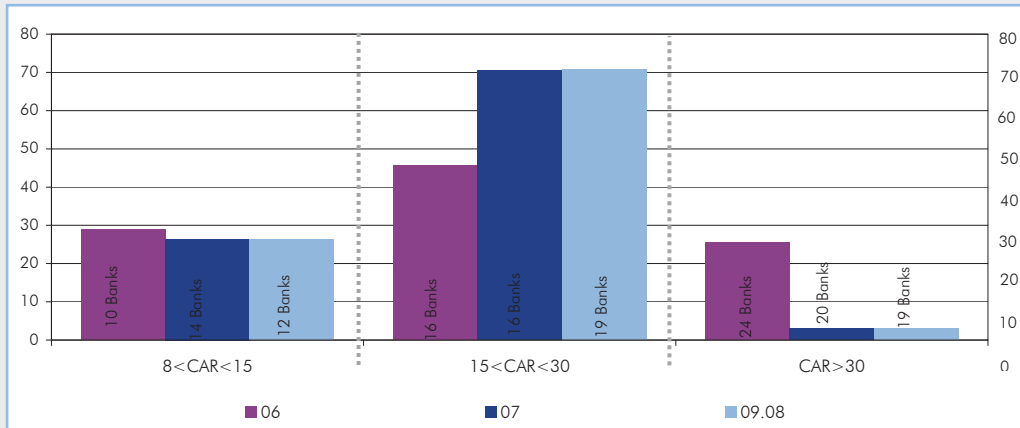


The CAR of the banking sector decreased by 2.1 percentage points as of June 2008 compared to end-2007 and became 16.8 percent (Chart II.14). This decline essentially stemmed from the increase in loans as well as the amendments to legislation changing the risk weights for letters of guarantee and letters of credit, effective from January 2008.

Meanwhile, the CAR of the sector increased by 0.6 percentage point in September 2008 compared to June and became 17.4 percent. This increase was triggered by the faster growth of own funds compared to risk-weighted assets. The tier-1 capital ratio, which is the ratio of core capital to total exposure stemming from credit, market and operational risks, also displayed a similar tendency (Chart II.14).

Compared to selected countries, the CAR of the banking sector maintained its high level as of March 2008 (Chart II.15).

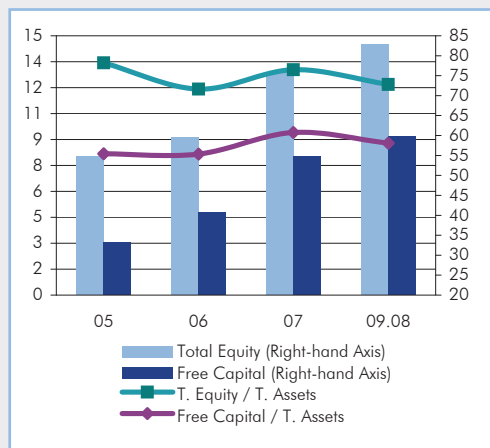
**Chart II.16.**  
Asset Share of Banks Based on Capital Adequacy Ratio (%)



Source: BRSA - CBRT

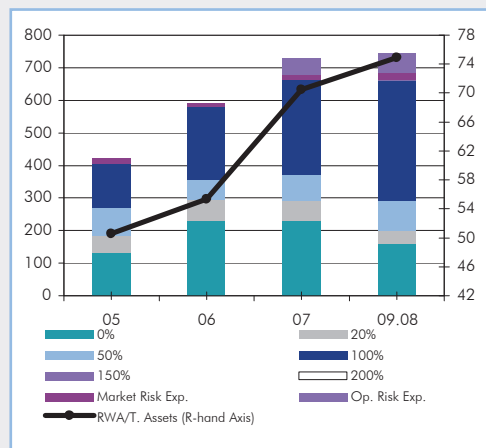
The CAR of 36 banks, which held 73.6 percent of sector assets, remained above 15 percent at end-2007, while that of 38 banks holding 73.8 percent of sector assets was realized above 15 percent in September 2008 (Chart II.16).

**Chart II.17.**  
Free Capital of the Banking Sector  
(%, Billion YTL)



Source: BRSA - CBRT

**Chart II.18.**  
Composition of Risk Exposures  
(Billion YTL, %)



Source: BRSA - CBRT

The ratios of free capital to total assets and total shareholders' equity to total assets decreased as of September 2008. This decrease was mainly driven by the fact that the rate of increase of shareholders' equity and free capital lagged behind that of assets, due to the decline in the Securities Revaluation Fund and profitability performance (Chart II.17).

The ratio of total exposure stemming from credit, market and operational risks to total assets surged to 74.9 percent in September 2008 from 70.5 percent at end-2007 (Chart II.18).

The global crisis has reinforced the significance of maintaining a strong capital structure for banks. In this respect, the decision of the BRSA to make the distribution of 2008 profits of banks subject to permission is a positive development.

**Box 6.****Delay in the Adoption of Basel II**

It was stated in the announcement of the BRSA on 25 June 2008 that in the light of recent fluctuations in global financial markets, the Basel II Accord was found to have some drawbacks especially in terms of securitization and liquidity risk, and amendment studies in the documents concerned were carried out at international level with a view to overcoming the above-mentioned drawbacks. The announcement also emphasized that in view of the fact that the Turkish Commercial Code Draft, whose implementation implications would be considerably important during the Basel II process, was not yet enacted and also in light of the comments of financial and corporate sector representatives on the timing of the adoption of Basel II, the ratings-based measurement of capital requirement for credit risk, which had been announced to be effective in Turkey as of early-2009, was postponed further.

**Box 7.****Amendments to TMS 39 and TFRS 7**

There are two main sets of standards in the world with regard to accounting and financial reporting systems. One of the most significant differences between these two standard sets used to be that the Generally Accepted Accounting Principles (GAAP) established by the Financial Accounting Standards Board (FASB) allowed the reclassification of assets in certain circumstances, whereas the International Financial Reporting Standards (IFRS) established by the International Accounting Standards Board (IASB) did not allow any such reclassification.

However, in line with the suggestions of the Financial Stability Forum (FSF) regarding the crisis in international markets and with a view to preventing the competitive inequality arising from differing accounting standards of especially European and American companies, the IASB issued amendments on 13 October 2008, allowing reclassification of certain financial assets and harmonized the GAAP and IFRS in this respect.

Within this framework, the International Accounting Standard No.39 (IAS 39) and the International Financial Reporting Standard No.7 (IFRS 7) were amended so as to allow reclassification of "financial assets at fair value through profit or loss" and "financial assets available for sale". With the Communiqués No. 105 and 106 published in the Official Gazette No. 27040 dated 31 October 2008, the Turkish Accounting Standards Board also made parallel amendments to TMS 39 and TFRS 7, to be effective as of 1 July 2008.

Communiqué No.105 permits an entity to reclassify its non-derivative financial assets held for trading, which are classified under the financial assets at fair value through profit or loss category into other categories (such as loans and receivables, financial assets available for sale and financial assets held to maturity) in certain circumstances. According to this, in the first place, a financial asset that would meet the definition of loans and receivables on the date of reclassification may be reclassified out of this category if the entity has the intention and

ability to hold the said financial assets for the foreseeable future or until maturity. In the second place, in rare circumstances such as the crisis in international markets in 2008, financial assets held for trading may be reclassified into other categories, provided the instrument meets the definition of that category.

Another amendment introduced with the said Communiqué is the permission for the reclassification of financial assets classified as available for sale into the loans and receivables category, on the condition that these assets meet the definition of loans and receivables on the date of reclassification and the entity has the intention and ability to hold the financial asset for the foreseeable future or until maturity.

Amendments in Communiqué No.106 include provisions regarding the disclosure requirements about the amendments in Communiqué No.105. In this respect, the entity will be liable to disclose in the footnotes to its balance sheet, the reason for the reclassification, change in value before and after the reclassification, along with the effective interest rate and estimated cash flows the entity expects to recover as of the date of reclassification of the financial asset.

These amendments would assist in easing the adverse effects of possible large-scale market fluctuations on balance sheets.

### III. BANKING SECTOR RISKS

#### III.1. Credit Risk and Scenario Analysis

##### III.1.1. Credit Portfolio

Favorable international liquidity conditions in the post-2002 period increased the external borrowing facilities of the banking sector, boosting credit growth. However, considering that external borrowing will be harder due to the global financial crisis, the rate of increase in credits is expected to slow down in the upcoming period.

**Chart III.1.**  
Gross Loans and Real Annual Growth Rates (Billion YTL, %)<sup>1,2,3</sup>



Source: BRSA-CBRT

(1) Expressed in real terms using CPI (1994=100).

(2) Annual percentage change as compared to the same month of the year.

(3) Figures for October 2008 are provisional.

The gross credit volume of the banking sector, whose real rate of increase has slowed down since March 2008, stood at YTL 379.3 billion by end-October (Chart III.1).

Retail loans grew more rapidly than corporate loans until the second half of 2008 and their share in total loans increased. However, the real rate of increase in corporate loans exceeded that of retail loans starting from August, which stemmed from the slowdown in retail loans due to interest rate hikes and FX loans of firms that seem higher on banks' balance sheets as a result of the rapid depreciation of YTL (Chart III.1).

Table III.1. Some Selected Credit Ratios<sup>1</sup> (Million YTL, %)

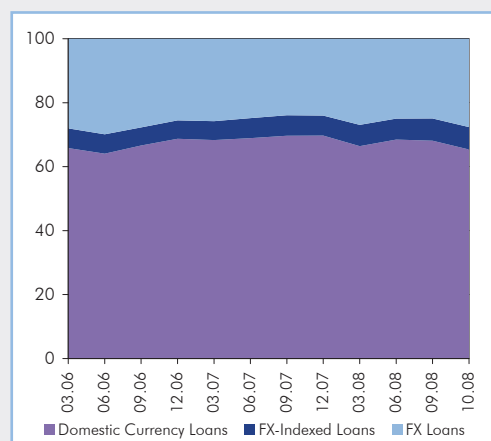
	2006	2007	09.08	10.08
<b>First 5 Banks</b>				
Total Gross Loans	127,494	162,452	204,063	209,182
Share in Total Gross Loans	58.5	57.7	57.6	58.0
NPLs / Total Gross Loans	4	3.8	3.1	3.1
Loans / Deposits	79.9	88.8	93.6	91.9
<b>First 10 Banks</b>				
Total Gross Loans	183,154	236,833	298,601	305,225
Share in Total Gross Loans	84.1	84.2	84.3	84.7
NPLs / Total Gross Loans	3.8	3.6	3.0	3.1
Loans / Deposits	68.5	77.2	82.6	82.3
<b>Sector</b>				
Total Gross Loans	227,537	295,962	372,716	379,252
NPLs / Total Gross Loans	3.8	3.5	3.1	3.2
Loans / Deposits	74.0	82.9	89.0	87.9

Source: BRSA-CBRT

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

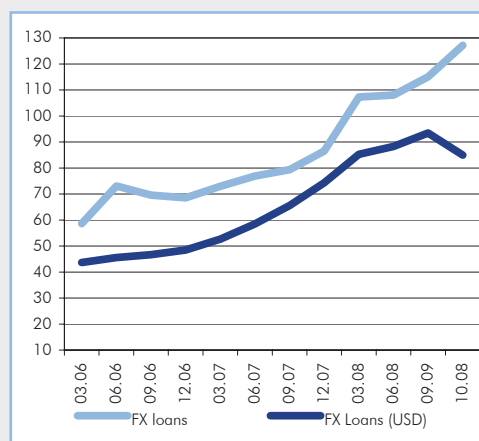
By October 2008, the share in total loans of the first five banks that extended the majority of loans increased by 0.3 percentage point compared to the end of the previous year, while the share of first ten banks rose by 0.5 percentage point.

The loans to deposits ratio of the banking sector, which is on the rise owing to the growing credit volume of the sector, fell in October. The said ratio, which reached its highest value of 89 percent in September 2008, declined to 87.9 percent in October (Table III.1).

Chart III.2.  
Currency Composition of Loans  
(%, Excluding NPLs)<sup>1</sup>

Source: BRSA-CBRT

(1) Figures for October 2008 are provisional.

Chart III.3.  
FX Loans<sup>1,2</sup>  
(Billion YTL-USD, Excluding NPLs)

Source: BRSA-CBRT

(1) Figures for October 2008 are provisional.

(2) They were converted to USD using the CBRT buying exchange rate as of month-end.

An analysis of the Domestic Currency-FX composition of loans extended and the FX loan portfolio shows that the share of FX loans<sup>5</sup> increased by 4.3 percentage points to 34.6 percent

<sup>5</sup> FX-indexed loans are considered within the scope of foreign currency loans.



in October 2008 compared to end-2007, and amounted to YTL 127.2 billion. However, the USD equivalent of FX loans decreased in October (Chart III.2 and Chart III.3).

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

	Total Loans			Number of Customers		
	2006	2007	09.08	2006	2007	09.08
Greater than 1 Million YTL	42.4	40.6	43.5	0.05	0.06	0.06
Betw. 501 Thous. YTL-1 Mil. YTL	4.9	5.0	4.8	0.05	0.06	0.06
Betw. 101-500 Thousand YTL	12.5	13.6	12.6	0.45	0.56	0.56
Betw. 51-100 Thousand YTL	6.8	7.8	7.6	0.69	0.89	0.94
Less than 51 Thousand YTL	33.5	33.1	31.5	98.77	98.43	98.38
Total	100	100	100	100	100	100

Source: BRSA-CBRT

The distribution of loans by size suggests that only the share of loans over YTL 1 million increased in September 2008, while the shares of the other loan groups declined. This development can be attributed mainly to the fact that the majority of FX loans belong to the group of loans over YTL 1 million (Table III.2).

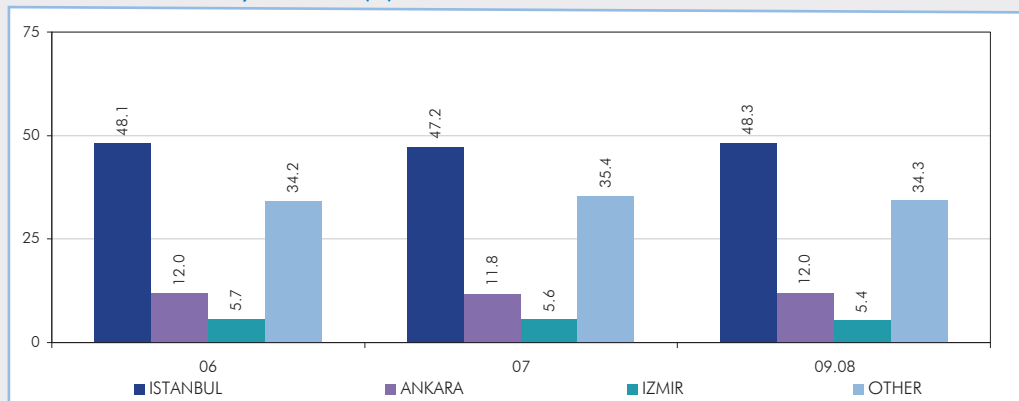
**Table III.3. Maturity Structure of the Loans (% , Excluding NPLs)**

	2006	2007	09.08
Short Term Loans	46.8	45.9	44.6
Medium and Long Term Loans	53.2	54.1	55.4

Source: BRSA-CBRT

The share of long-term loans has been increasing in recent years, especially owing to the fact that the share of retail loans in total loans increased and most of the housing and other consumer loans making up retail loans have maturities longer than 24 months. This tendency continued in September 2008, as well (Table III.3).

**Chart III.4. Distribution of Loans by Provinces (%)<sup>1</sup>**

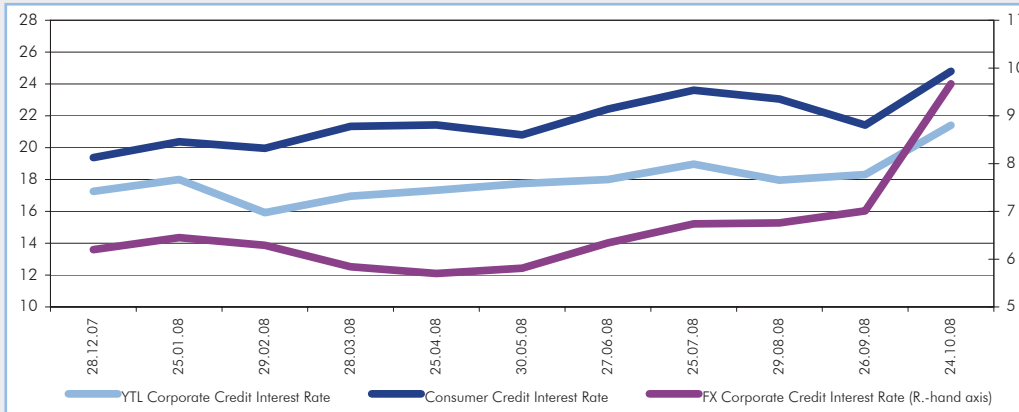


Source: CBRT

(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 New Turkish Liras (inclusive) and retail loans that are greater than 5 thousand New 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.

The geographical breakdown of loans shows that shares of Izmir and other cities in total loans decreased, whereas the share of Istanbul and Ankara increased in September 2008 compared to end-2007 (Chart III.4).

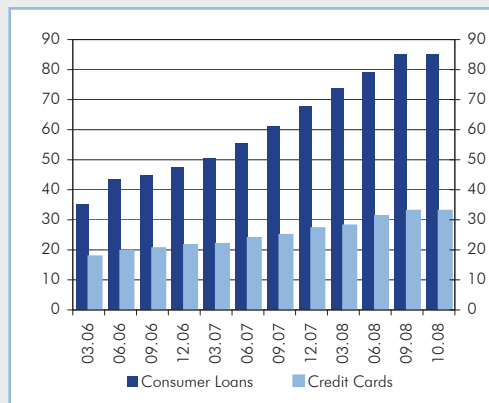
**Chart III.5.**  
Loan Interest Rates (%)<sup>1</sup>



Source: CBRT  
(1) Weighted average flow interest rates.

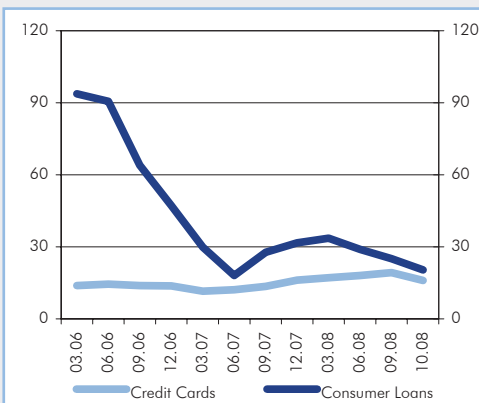
The effects of increased funding costs of the banking sector and tightened credit conditions are visible on loan rates. As a matter of fact, interest rates on both domestic currency and FX-denominated commercial loans increased in the last one-month period by 3.1 basis points and 2.7 basis points, respectively and became 21.4 and 9.7 percent by 24 October 2008. Interest rates on consumer loans were 24.8 percent by the same date (Chart III.5).

**Chart III.6.**  
Retail Loans<sup>1</sup>  
(Excluding NPLs, Billion YTL)



Source: CBRT  
(1) Figures for October 2008 are provisional.

**Chart III.7.**  
Real Annual Growth Rates of Retail Loans (%)<sup>1,2,3</sup>

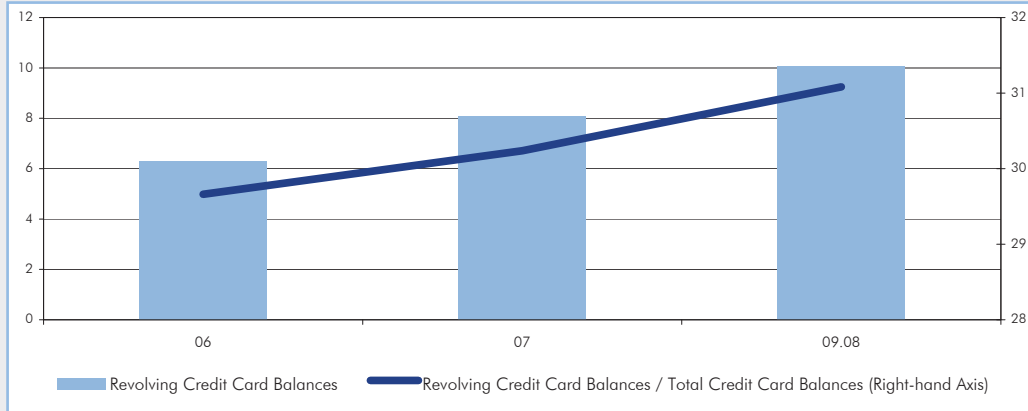


Source: CBRT  
(1) Growth rates were brought to real terms by using CPI (1994=100).  
(2) Annual percentage change as compared to the same month of the previous year.  
(3) Figures for October 2008 are provisional.

Retail loans composed of consumer loans and credit cards amounted to YTL 118 billion as of October 2008. The real rate of increase in consumer loans, which started to decelerate in March 2008, declined to 20.4 percent in October. The real rate of increase in credit cards<sup>6</sup>, which was on the rise until September, started to slow down from then on and declined to 16 percent (Chart III.6 and Chart III.7).

<sup>6</sup> 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.

**Chart III.8.**  
Credit Card Revolving Rate<sup>1</sup> (Billion YTL, %)

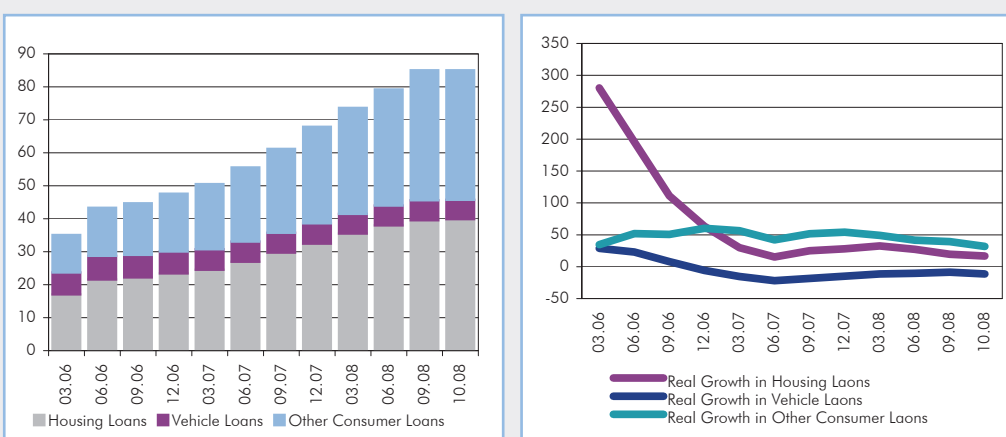


Source: CBRT  
(1) Excluding participation banks.

An analysis of the part of the credit card balance on which interest is charged shows that the related amount increased to YTL 10.1 billion as of September 2008 from YTL 8.1 billion at end-2007, making up 31.1 percent of the credit card balance. (Chart III.8).

On the other hand, it is likely that individuals will increasingly resort to credit cards as an instrument of credit in the upcoming period, as banks will apply stricter terms when providing consumer loans. This tendency of consumers to meet their credit needs with credit cards, which charge higher interest rate compared to consumer loans, will possibly lead to an increase in the number of defaulters. Therefore, being cautious of using credit cards in line with their essential function as a payment instrument is critical for maintaining the soundness of financial markets.

**Chart III.9**  
Consumer Loans by Type and Real Growth Rate (Excluding NPLs, Billion YTL, %)<sup>1,2,3</sup>



Source: CBRT  
(1) Other consumer loans are consumer loans excluding housing and vehicle loans.  
(2) They were brought to real terms by using CPI (1994=100).  
(3) Figures for October 2008 are provisional.

The share of vehicle loans in consumer loans, which has been declining in real terms since end-2006, fell to 6.9 percent in October 2008. In the same period, the share of housing loans and other consumer loans, whose real rate of increase slowed down, became 46.9 percent and 46.2 percent, respectively (Chart III.9).

**Chart III.10**  
**Consumer Loans Interest Rates (%)<sup>1,2</sup>**



Source: CBRT

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

Flow interest rates referring to interest rates on newly extended consumer loans increased in October 2008 compared to end-2007, mainly owing to political uncertainty in the first half of 2008 and the global financial crisis in the following period (Chart III.10).

**Table III.4. Housing Loans for Selected Countries (%)**

	Housing Loans / Total Loans		Housing Loans / GDP	
	2006	2007	2006	2007
Portugal	39.8	39.2	59.1	62.1
Estonia	37.4	36.5	32.1	36.0
Latvia	30.4	32.6	29.3	34.0
Greece	31.3	31.8	24.4	27.7
Germany	32.0	30.8	42.0	39.9
France	30.2	29.8	31.5	34.0
Czech Republic	26.4	28.8	12.0	15.2
Lithuania	24.4	27.5	12.7	17.3
Belgium	27.6	27.2	33.9	34.3
Ireland	27.6	25.8	63.8	66.3
Poland	21.3	24.5	7.5	10.7
Hungary	19.1	18.9	11.9	12.3
United Kingdom	22.6	18.9	60.3	54.5
Slovenia	9.1	9.1	6.4	8.0
EU 27	27.9	26.0	41.1	40.8
Turkey <sup>1</sup>	10.6	11.4	2.9	3.6

Source: EU Banking Structures, October 2008

(1) Housing Loans/ Total Loans ratio for Turkey is 11,2% and Housing Loans/GDP ratio is 4,0% in June 2008.

An analysis of the share of housing loans in total loans by selected EU countries points to a general downward tendency in 2007. The only countries with an ongoing albeit limited increase in their shares are Central and Eastern Europe countries, which had rapid credit growth especially in the recent period. The said share continues to grow in Turkey as well, albeit at a decreasing rate (Table III.4).

**Table III.5. Sectoral Composition of Corporate Loans (Excluding NPLs) (%)<sup>1,2</sup>**

		Loans			FX Loans / Total Loans		
		2006	2007	09.08	2006	2007	09.08
1	Wholesale and Ret. Trade, Brokerage, Repair of Mot. Veh.	22.9	19.7	19.0	37.5	35.6	38.5
2	Construction	6.4	8.5	9.0	50.3	51.0	55.1
3	Transport, Storage and Communication	7.9	8.5	8.3	54.7	58.3	54.9
4	Manuf. of Basic Metals and Fabr. Metal Prod.	5.5	5.8	6.1	73.5	70.6	74.3
5	Ind. of Tobacco, Beverages and Food	5.5	5.8	5.7	46.2	43.5	44.6
6	Textile and Textile Product Industry	6.5	5.9	5.3	66.7	63.9	64.3
7	Agriculture, Hunting and Forestry	4.6	5.6	5.3	17.3	24.4	23.2
8	Sources of Electricity, Gas and Water	5.2	4.1	4.2	93.4	90.3	90.2
9	Hotels and Restaurants (Tourism)	3.4	3.1	3.2	75.8	71.2	76.5
10	Manuf. of Machinery and Equipment	3.6	3.2	3.1	45.9	41.7	43.0
	Total of 10 Sectors	71.4	70.2	69.2	51.7	50.3	52.2

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 NewTurkish 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.

(2) Excluding Financial Intermediation.

According to Central Bank Risk Center data, the share of ten selected sectors in total corporate loans continued to decline and stood at 69.2 percent as of September 2008. The sector with the largest share in total corporate loans is the “Wholesale and Retail Trade, Brokerage and Motor Vehicles Maintenance and Repair Services” with 19.0 percent, albeit its share is in decline. Shares of the “Construction”, “Manufacturing of Basic Metals and Fabricated Metal Products”, “Electricity, Gas and Water Sources” and “Hotels and Restaurants (Tourism)” sectors in total corporate loans increased, while those of other sectors declined. The rise in the share of FX loans in total loans by September 2008 actually stemmed from the depreciation of the Turkish currency, rather than the increase in FX loans (Table III.5).

### III.1.2. Non-Performing Loans

Non-performing loans, which were YTL 10.3 billion at end-2007, increased by 12.4 percent in September 2008 compared to the year-end and became YTL 11.6 billion.

**Table III.6. Total NPLs (Million YTL)<sup>1</sup>**

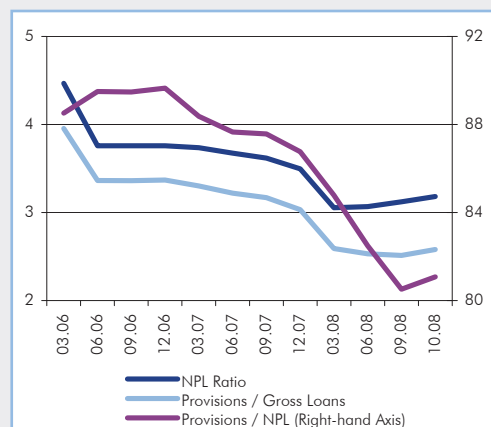
	2006	2007	09.08
Loans and Other Receivables with Limited Collectibility	1,209	1,442	2,043
Doubtful Loans and Other Receivables	880	1,814	2,543
Loans and Other Receivables Classified As Loss	6,461	7,089	7,047
Total NPLs	8,551	10,346	11,633

Source: BRSA-CBRT

(1) Excluding Iller Bank.

The increase in total NPL was moderate, mainly due to the fact that some banks sold their YTL 1.4 billion worth of non-performing loans to asset management companies within the first nine-month period of 2008. An analysis of the distribution of non-performing loans reveals that “Loans and Other Receivables with Limited Collectibility” and “Doubtful Loans and Other Receivables” increased by approximately 40 percent in the same period, while “Loans and Other Receivables Classified as Loss” declined by 0.5 percent due to the above-mentioned sale (Table III.6).

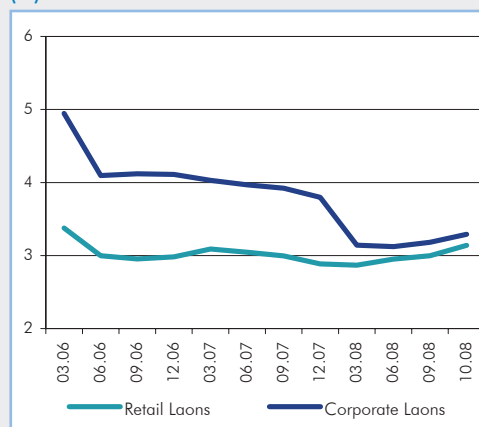
**Chart III.11.**  
NPL Ratio and Provisions to NPLs<sup>1</sup> (%)



Source: BRSA-CBRT

(1) Figures for October 2008 are provisional.

**Chart III.12.**  
NPL Ratios for Retail and Corporate Loans<sup>1,2,3</sup> (%)



Source: BRSA-CBRT

(1) Retail Loans=Consumer Loans + Credit Cards

(2) Corporate Loans=Total Loans-Retail Loans

(3) Figures for October 2008 are provisional.

Though the amount of non-performing loans increased in a limited manner in 2008, the NPL ratio<sup>7</sup> has been increasing albeit moderately since March, due to the slow down in the rate of increase in loans. The provisions to non-performing loans ratio declined to 81.1 percent in October 2008 from 86.8 percent of end-2007. The provisions to credits ratio also displayed a parallel decline. Considering the 34.6-percent share of FX loans in the loans extended by banks and the recent depreciation of YTL, non-performing loans are expected to increase in the upcoming period, possibly leading to a negative effect on the profitability of banks (Chart III.11).

The NPL ratio for retail loans increased to 3.1 percent as of October 2008 from 2.9 percent of end-2007. The NPL ratio for corporate loans, which was 3.8 percent at end-2007, declined to 3.1 percent in March 2008 as a result of the growth in total loans triggered by the increase in FX loans due to the depreciation of YTL. However, this ratio rose to 3.3 percent as of October 2008, despite the ongoing depreciation of YTL (Chart III.12).

**Table III.7.**  
NPL Ratios for Selected Countries

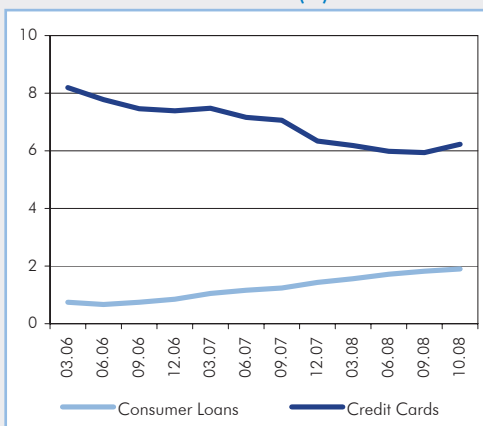
	2006	2007	2008	Last Data
Argentina	3.4	2.7	2.8	May
Brazil	3.5	3	2.9	March
Bulgaria	2.2	2.1	2.1	March
Czech Republic	3.6	2.6	2.8	March
Croatia	5.2	4.8	4.8	March
Serbia	4.1	3.8	4.8	March
Latvia	0.4	0.4	0.5	March
Poland	3.6	3.1	9.7	April
Romania	7.9	9.7	9.7	April
Russia	2.6	2.5	2.4	March
USA	0.8	1.4	1.7	March
Turkey	3.8	3.5	3.2	October

Source : IMF Global Financial Stability Report, October 2008. BRSA - CBRT

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.7).

<sup>7</sup> Non-Performing Loan Ratio = Gross Non-Performing Loans/ Gross Loans

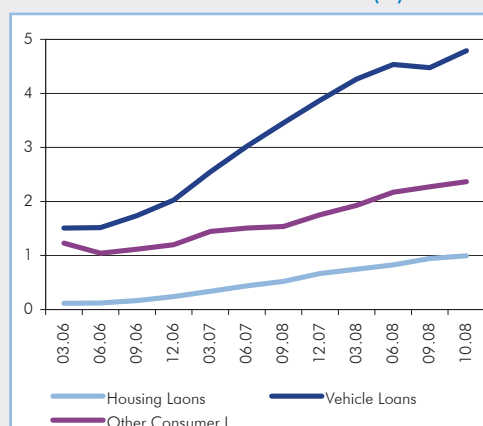
**Chart III.13.**  
NPL Ratios for Retail Loans<sup>1</sup> (%)



Source: CBRT

(1) Figures for October 2008 are provisional.

**Chart III.14.**  
NPL Ratios for Consumer Loans<sup>1,2</sup> (%)



Source: CBRT

(1) Other consumer loans are consumer loans excluding housing and vehicle loans.  
(2) Figures for October 2008 are provisional.

The NPL ratio for consumer loans maintained its upward course and rose to 1.9 percent as of October 2008. 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 and reached 6.2 percent in the same period (Chart III.13). Based on types of consumer loans, vehicle loans have the highest NPL ratio with 4.6 percent as of October 2008. In the said period, the NPL ratio for housing loans stood at 1 percent, while the NPL ratio for other consumer loans increased to 2.3 percent (Chart III.14).

**Table III.8.**  
NPL Ratio for Some Selected Sectors (%)<sup>1</sup>

	2006	2007	09.08
1 Textile and Textile Product Industry.	11.2	11.7	9.8
2 Agriculture, Hunting and Forestry	3.1	3.2	3.7
3 Wholesale and Ret. Trade, Brokerage, Repair of Motor Vehicle	2.3	3.3	3.3
4 Industry of Tobacco, Beverages and Food	3.8	4.7	3.2
5 Hotels and Restaurants (Tourism)	2.4	2.4	2.5
6 Construction	4.0	2.4	2.3
7 Manufacture of Machinery and Equipment	2.1	2.1	1.7
8 Transport, Storage and Communication	1.3	1.2	1.4
9 Manufacture of Basic Metals and Fabricated Metal Prod.	0.9	1.1	0.9
10 Sources of Electricity, Gas and Water	0.2	0.1	0.1
Total of 10 Sectors	3.1	3.2	3.0

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 New Turkish Liras (inclusive) and retail loans that are greater than 5 thousand New 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 Central Bank Risk Center data, by September 2008, the NPL ratios of "Transportation, Storage and Communication", "Agriculture, Hunting and Forestry" and "Hotels and Restaurants (Tourism)" sectors showed an upward trend, while the NPL ratios of "Wholesale and Retail Trade, Commissions, Motor Vehicles Services" and "Sources of Electricity, Gas and Water" sectors remained unchanged. Those of other sectors declined compared to end-2007 (Table III.8).

**Table III.9.**  
**Default Rates for Some Selected Sectors (Item. %) <sup>1,2</sup>**

		10.07	12.07	09.08
1	Wholesale and Ret. Trade, Brokerage, Repair of Motor Vehicle	14.2	12.2	10.0
2	Transport, Storage and Communication	2.4	2.5	3.2
3	Textile and Textile Product Industry.	6.5	6.5	7.6
4	Construction	5.1	4.7	5.7
5	Industry of Tobacco, Beverages and Food	5.9	5.9	6.1
6	Manufacture of Basic Metals and Fabricated Metal Prod.	2.7	2.8	3.6
7	Sources of Electricity, Gas and Water	3.1	3.5	4.7
8	Agriculture, Hunting and Forestry	8.3	8.6	8.8
9	Manufacture of Machinery and Equipment	2.7	3.1	3.9
10	Hotels and Restaurants (Tourism)	4.5	4.7	5.3
Total of 10 Sectors		5.5	5.4	5.9
Total Corporate Sector		5.9	6.1	6.7

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 New Turkish Liras (inclusive) and retail loans that are greater than 5 thousand New 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.

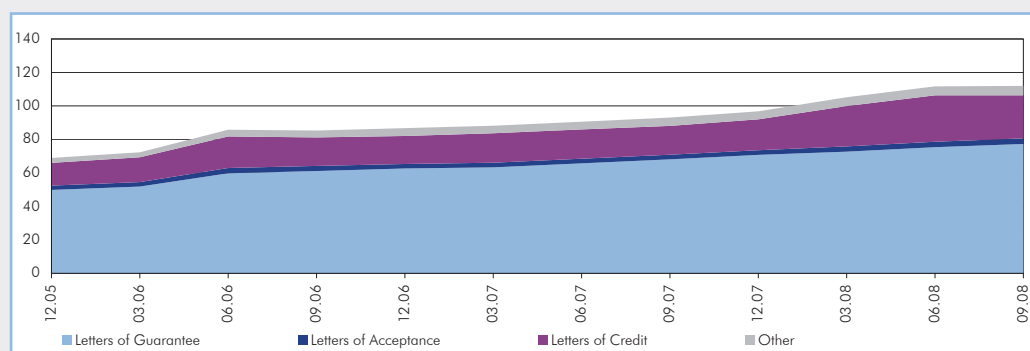
(2) Excluding Financial Intermediation.

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 6.7 percent as of September 2008 (Table III.9).

The default rates of “Wholesale and Retail Trade, Commissions and Motor Vehicles Services”, “Textile and Textile Products Industry”, “Food, Beverages and Tobacco Industry” and “Agriculture, Hunting and Forestry” remained above the average default rate of the selected 10 sectors as of September 2008 (Table III.9).

### III.1.3. Non-Cash Loans

**Chart III.15**  
**Non-Cash Loans by Type (Billion YTL)**



Source: BRSA - CBRT

The ratio of off-balance sheet liabilities, comprising of banks’ non-cash loans and commitments, to total assets dropped from 16.6 percent of year-end 2007 to 16.5 percent in September 2008.

The ratio of non-cash loans, which are composed chiefly of letters of guarantee and letters of credit, to cash loans decreased from 33.9 percent at year-end 2007 to 31 percent as of September 2008 (Chart III.15).



### III.1.4. Credit Risk Scenario Analysis

With the aim of assessing credit risk, which 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 September 2008.

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

i) The total credit amount of banks remains unchanged.

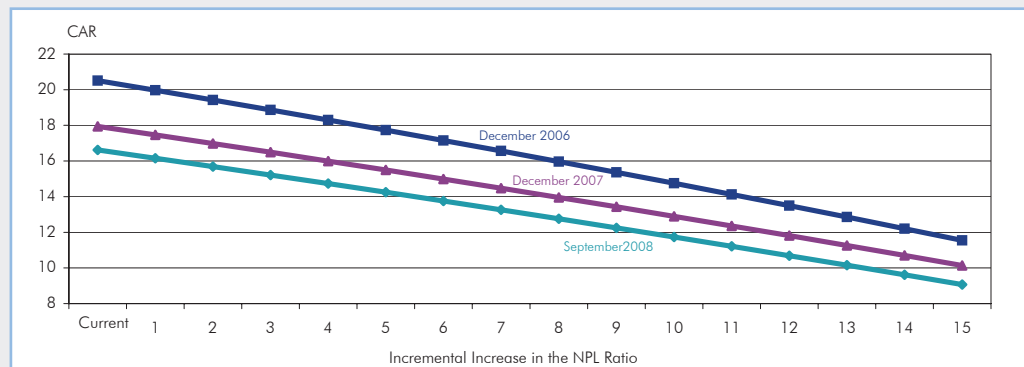
ii) NPLs resulting from shocks have the same composition as the existing NPLs of banks. For banks, which did not have any NPLs before the shocks, in the event of a shock, their post-shock NPLs are classified as “loans and other receivables with limited collectibility”, setting aside a 20 percent provision.

iii) Post-shock NPLs are accounted in the 100 percent risk weight category for the calculation of pre-shock CARs.

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.16.**  
Effects of Credit Shocks on the CAR of the Sector (%)<sup>1</sup>



Source: BRSA - CBRT

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

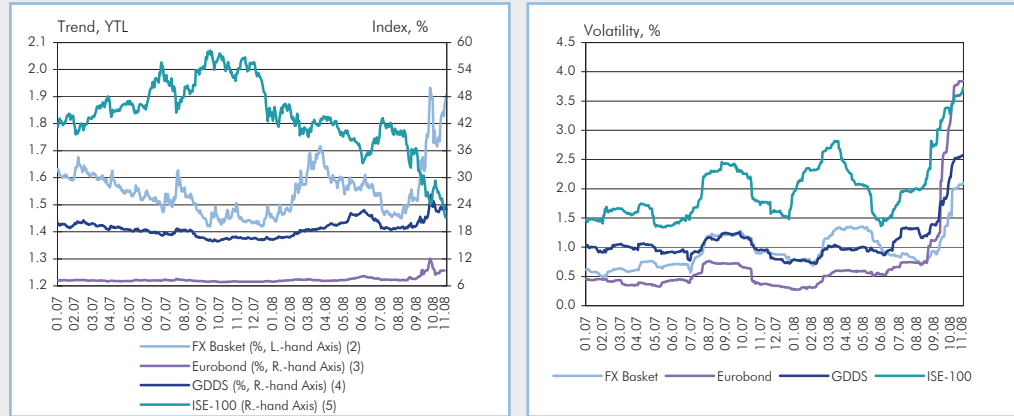
The scenario analysis focuses on the effects of 1-15 point-incremental increases in the NPL ratio of the CAR of the banking sector. Accordingly, the 15-point increase in the NPL ratio of the banking sector reduced the CAR of the sector by 7.8 percentage points as of December 2007 and by 7.6 percentage points as of September 2008. As a result of the maximum shock, the CAR of the sector remained above the legal limit of 8 percent but remained below the target ratio of 12 percent. As a result of the shocks up to 9 percentage points, the CAR of the sector remained above the target ratio (Chart III.16).

### 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 analyzed.

### III.2.1. Market Risk

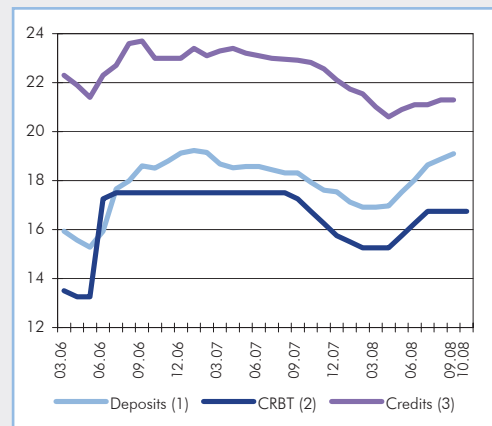
**Chart III.17.**  
Foreign Exchange Rates, Interest Rates and Equity Prices<sup>1</sup>



Source: CBRT  
 (1) For volatility calculations, standard deviation of daily logarithmic yield of the related market instrument (60 day 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 GDDS with the largest transaction volume in the secondary market.  
 (5) Calculated by dividing ISE-100 by 1,000.

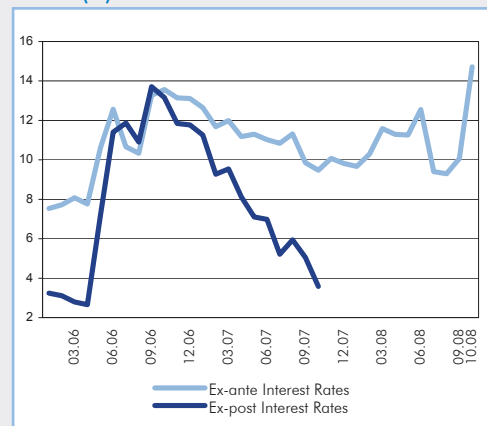
The financial crisis, which has emerged in developed markets and then spread to all markets, started to influence Turkish financial markets as well. Starting in September 2008, the ISE index declined; interest rates on GDDS rose; YTL depreciated as did all currencies of other emerging market economies; and the volatility in financial markets intensified significantly from September 2008 onwards (Chart III.17).

**Chart III.18.**  
Interest Rates (%)



Source: ISE, CBRT  
 (1) Banking sector 3-month weighted "stock YTL deposit" interest rate.  
 (2) CBRT overnight (O/N) borrowing rate.  
 (3) Banking sector weighted "stock YTL credit" interest rate.

**Chart III.19.**  
Ex-ante<sup>1</sup> and Ex-post<sup>2</sup> Real Interest Rates of GDDS (%)



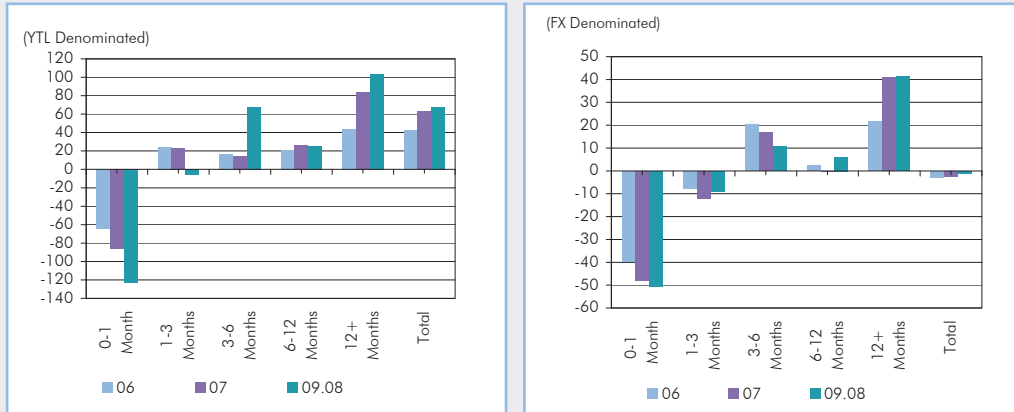
Source: Calculated by using the data of CBRT, ISE and TURKSTAT.  
 (1) Ex-ante interest rate= $\frac{1 + \text{nominal interest rate}}{1 + \text{expected inflation rate}} - 1$  \* 100  
 (2) Ex-post interest rate= $\frac{1 + \text{last year's nominal interest rate}}{1 + \text{realized inflation rate}} - 1$  \* 100  
 As expected inflation rate, yearly ex-ante CPI figures in the bi-weekly Survey of Expectations published by the CBRT are used.

The Central Bank raised overnight borrowing rate by 0.5 percentage point in both June and July 2008. While interest rates remained unchanged in the following two months, the Central Bank cut lending rates by 0.5 percentage point in October in order to ease the potential volatility in short term interest rates. In November, the Central Bank cut overnight borrowing and lending rates by 0.5 percentage point and 1 percentage point, respectively.

Interest rates on deposits and loans, which had displayed a downward trend since the third quarter of 2007, started to increase as of the second quarter of 2008 at first due to political uncertainties and then due to the global crisis (Chart III.18).

The expected real interest rate was realized as 14.7 percent as of October 2008 owing to the increase in interest rates (Chart III.19).

**Chart III.20. Interest Rate Sensitivity Gap of the Banking Sector (Billion YTL)<sup>1,2</sup>**

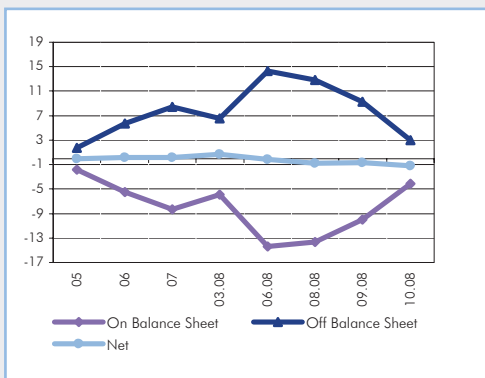


Source: BRSA-CBRT  
 (1) Time to re-pricing is used.  
 (2) Excluding SDFI bank.

In terms of days to re-pricing period of the banking sector, it is observed that the negative interest-sensitive YTL and FX gaps were mainly concentrated in the 0-1 month maturity bracket similar to previous periods, and by September 2008, the gap widened compared to previous years (Chart III.20).

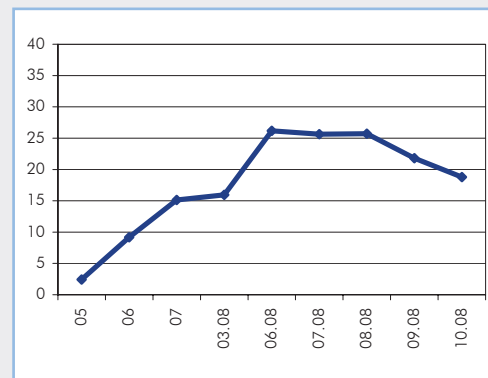
As of September 2008, the sector, which displays short position in the 0-1 and 1-3 month maturity brackets for YTL and FX, holds long position in the long term. In terms of overall position, the tendency to hold positive interest-rate sensitive total YTL gap and negative interest-rate sensitive total FX gap continues (Chart III.20).

**Chart III.21. Foreign Exchange Position of the Banking Sector<sup>1</sup> (Billion USD)**



Source: BRSA  
 (1) Participation Banks are included.

**Chart III.22. Swaps Transacted in YTL/FX<sup>1</sup> (Billion USD)**



Source: BRSA-CBRT  
 (1) Participation Banks are excluded.

The course of net overall FX position of the banking sector, which was almost balanced, turned into a short position as of June 2008 and the amount of short position was realized as USD 1,147 million by October 2008 (Chart III.21).

The banking sector, which tended to invest its foreign currency funds in Turkish currency loans through derivatives, especially through swap operations and, therefore had an on-balance sheet short position and an off-balance sheet long position, changed its stance in recent months. Thus, the off-balance sheet long position decreased parallel to the decline in the on-balance sheet short position. The main determinants of this development has been the liquidity conditions in international markets (Chart III.22).

### III.2.2. Scenario Analyses

#### III.2.2.1. Interest Rate and Exchange Rate Increases

Analyzing interest rate and exchange rate developments since September 2008, it is observed that the interest rates on GDDS increased by approximately 4 percentage points due to the crisis in international markets; Turkish lira depreciated by 25 percent against the US dollar and other leading currencies; Eurobond prices dropped by 14 percent.

In line with these developments, taking into consideration that the shocks that were given in the previous reports were partially realized, the magnitude of shocks, which are given in order to measure the resistance of the banking sector, was slightly increased. In this scope, the individual and collective effects of interest rate increases and appreciation of exchange rates on the banking sector are analyzed under two new scenarios assuming that the shocks occur independently.

**Table III.10. Interest and FX Rate Increase Scenarios**

	SCENARIO A	SCENARIO B
A. Depreciation of YTL	30 percent depreciation of YTL against other currencies	40 percent depreciation of YTL against other currencies
B. Interest Rate Increase-YTL	Re-pricing of YTL interest sensitive assets and liabilities falling in 0-1 and 1-3 month maturity brackets at 6 points higher	Re-pricing of YTL interest sensitive assets and liabilities falling in 0-1, 1-3, 3-6 month maturity brackets at 12 points higher, respectively.
C. Interest Rate Increase-FX	Re-pricing of YTL interest sensitive assets and liabilities falling in 0-1 and 1-3 month maturity brackets at 5 points higher	Re-pricing of YTL interest sensitive assets and liabilities falling in 0-1, 1-3, 3-6 month maturity brackets at 10 points higher, respectively.
D. Trading Portfolio-YTL <sup>1</sup>	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 YTL 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

Source: CBRT

(1) BRSA defines the trading portfolio as "Fin. Assets at Fair Value through Profit or Loss" and "Securities available for sale" in accordance with the description of the Basel Committee.

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.

FXNGP data was used to calculate the effects of exchange rate appreciation on the sector. When calculating the impacts 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 fixed income securities within the trading portfolio and the Eurobond portfolio stemming from the rise in interest rates has also been calculated.

**Table III.11. Results of Market Risk Scenarios<sup>1</sup> (Million YTL)**

	Scenario A			Scenario B		
	2006	2007	09.08	2006	2007	09.08
<b>A. YTL Depreciation</b>						
a. Total	80.3	7.3	-325.5	107.1	9.7	-434.0
Profit (Loss)/Equity (%)	0.2	0.0	-0.4	0.2	0.0	-0.6
b. Banks Gaining Profits	269.7	226.5	155.7	359.7	302.0	207.5
c. Banks Suffering Losses	-189.4	-219.2	-481.1	-252.5	-292.3	-641.5
Losses of Banks Suffering Loss/Equity (%)	-1.4	-0.1	-1.2	-1.9	-0.7	-1.6
<b>B. Interest Rate Increase</b>						
a. YTL	-172.2	-466.0	-1,393.6	289.2	-1,002.8	-1,532.4
b. FX	-290.2	-425.7	-466.6	-151.8	-818.6	-1,345.3
Profit (Loss) due to Interest Rate Incr. (a+b)	-462.4	-891.7	-1,860.1	137.3	-1,821.4	-2,877.7
Profit (Loss) due to Interest Rate Incr./Equity (%)	-0.9	-1.3	-2.4	0.3	-2.7	-3.8
<b>C. YTL Trading Portfolio</b>						
Loss in Value due to Interest Rate Increase	-1,549.0	-2,342.0	-2,557.2	-2,899.8	-4,379.7	-4,796.0
Loss in Value due to Interest Rate Incr./Equity (%)	-3.0	-3.5	-3.4	-5.6	-6.5	-6.3
<b>D. Eurobond Portfolio</b>						
Loss in Value	-1,891.4	-2,088.0	-2,627.6	-3,152.3	-3,480.0	-4,379.3
Loss in Value/Equity (%)	-3.7	-3.1	-3.5	-6.1	5.2	-6.3
<b>E. Total Impact</b>						
Profit/Loss	-3,822.5	-5,314.4	-7,370.4	-5,807.7	-9,671.4	-12,486.9
(Profit/Loss)/Equity (%)	-7.3	-7.9	-9.7	-11.2	-14.4	-16.4
<b>Current CAR of the Sector (%)</b>	<b>19.8</b>	<b>17.4</b>	<b>16.0</b>	<b>19.8</b>	<b>17.4</b>	<b>16.0</b>
<b>After-Shock CAR of the Sector<sup>2</sup> (%)</b>	<b>18.3</b>	<b>16.1</b>	<b>14.5</b>	<b>17.6</b>	<b>14.9</b>	<b>13.4</b>

Source: CBRT

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

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

### III.2.2.1.1. Depreciation of YTL

As a result of Scenarios A and B, the banking sector incurs losses amounting to YTL 325.5 million and YTL 434 million, respectively, as of September 2008 owing to its short position. Besides, the share of losses of banks arising from their open positions in equity caused by shocks, are realized as 1.2 percent and 1.6 percent, respectively, as of September 2008 (Table III.11).

### III.2.2.1.2. Interest Rate Increases and Loss in Value

i) As a result of Scenarios A and B, the YTL denominated interest income declines as of September 2008. Under Scenario A, the amount of decline in interest income increases compared to December 2007, owing to the increasing short position in the 0-1 month maturity bracket and long position in the 1-3 months maturity bracket turning into a short position. As for Scenario B, based on the assumption that the shock will last for 6 months, although the decline in interest income is higher compared to end-2007, it is rather limited by the increase in the long position in the 3-6 month maturity bracket.

As for foreign currency, under Scenario A, the level of decline in interest income does not display a remarkable change as of September 2008 compared to end-2007, while it increases in the same periods due to the decline in the amount of long position in the 3-6 month maturity bracket under Scenario B.

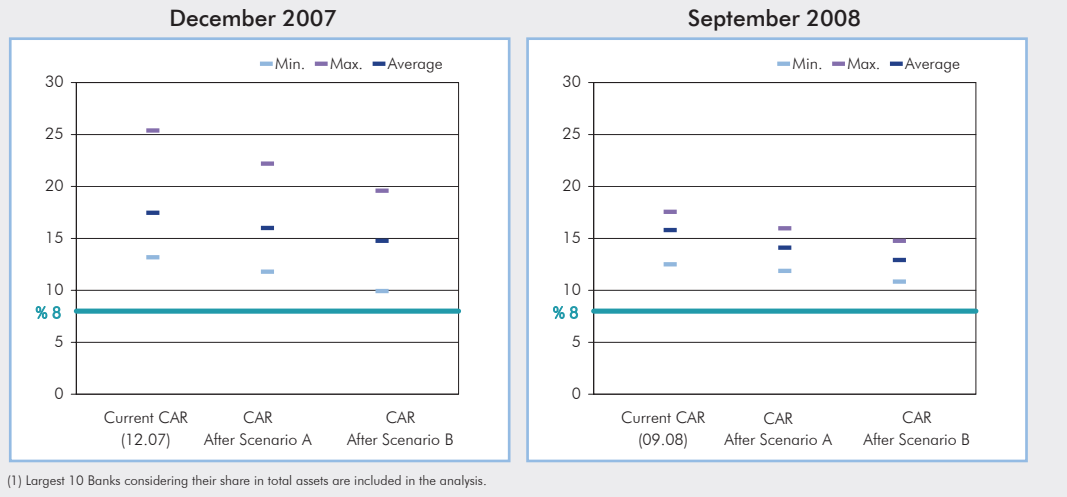
ii) The loss in the market value of Turkish currency denominated fixed income securities arising from interest rate increases rose slightly in September 2008 compared to end-2007. Nevertheless, the ratio of these losses to equity does not mark a noteworthy change.

Meanwhile, the Communiqués No. 105 and No. 106 promulgated by the Turkish Accounting Standards Board in the Official Gazette No. 27040 dated 31 October 2008, and the amendment made to TMS 39 and TFRS 7 to enter into force from 1 July 2008 onwards, with the aim of easing the negative impacts of possible high market fluctuations on balance sheets, 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". Therefore, if banks use this opportunity, the loss that may occur in their trading portfolio due to increases in interest rates will diminish, and the negative impact on banks' CARs will be reduced.

iii) The loss of value in Eurobond portfolio increases compared to end-2007 under both scenarios.

In conclusion, as of September 2008, losses resulted from Scenario A and Scenario B both increase compared to end-2007. The CAR of the sector declined by 1.5 percentage points under Scenario A and by 2.6 percentage points under Scenario B, whereas the CAR of the sector stands above the legal ratio of 8 percent and target ratio of 12 percent.

**Chart III.23.**  
Impacts of the Scenarios on the 10 Largest Banks of the Sector<sup>1</sup>



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

### III.3. Liquidity Risk

Taking the international conjuncture into account, liquidity risk stands out as one of the most important risks of this period. The Central Bank of the Republic of Turkey conducts its liquidity management operations in a very flexible manner<sup>1</sup> in order to assist banks.

#### Box 8.

#### Liquidity Management Operations of the Central Bank of the Republic of Turkey

Banks, which are authorized to operate in the markets within the Central Bank of the Republic of Turkey, can obtain liquidity from the CBRT in the following ways:

- Banks may borrow in the Interbank Money Market at the overnight borrowing quotations announced by the CBRT, within their existing limits and against collateral.
- Banks may borrow in the Foreign Exchange and Banknotes Market at one month- FX deposit quotation announced by the CBRT, within their existing limits and against collateral.
- Within the framework of “the lender of last resort” function of the CBRT, banks may borrow overnight in the Interbank Money Market from the Late Liquidity Window at the offer quotation of the CBRT, without any limit and against collateral.
- Primary dealer banks may also obtain liquidity from the CBRT via overnight and weekly repo transactions within their existing limits.

Meanwhile, due to the liquidity squeeze in the market, liquidity management operations are mainly being carried out via repo auctions. The CBRT announces the amounts of the auctions to be held on the days of liquidity squeeze and provides liquidity with 1-week maturity to banks via repo auctions.

Furthermore, with an aim to enhance the flexibility of banks’ liquidity management operations, the CBRT enables banks to maintain an amount corresponding to three percentage points of the FX reserve requirement ratio and the total amount of TL required reserves on an average basis.

The CBRT has also taken new measures regarding FX liquidity in order to enhance banks' FX liquidity management.

#### Box 9.

#### Measures Taken by the Central Bank of the Republic of Turkey regarding FX Liquidity Management Operations Against the Fluctuations in Global Financial Markets

In order to ease the effects of recent problems pertaining to global money markets on local financial markets and to prevent any decline in FX liquidity flow despite the fact that there exists no FX liquidity problem in the Turkish banking system, the CBRT resumed its intermediary role in its Foreign Exchange Deposit Market on 9 October 2008. Furthermore, banks' transaction limits in Foreign Exchange and Banknotes Market were increased to USD 5.4 billion in total as of 14 October 2008 and then these limits were doubled for each institution to a total of USD 10.8 billion as of 24 October 2008. The intermediary role of the CBRT in the Foreign Exchange Deposit Market will continue until the uncertainties observed in international markets and their impacts vanish.

In order to ensure orderly liquidity flow in the financial system and efficient functioning of credit markets by stimulating increased foreign exchange liquidity flow in the interbank foreign exchange market, the CBRT made certain decisions to be effective as of 21 November 2008. Within this context, the maturity of the FX deposits, obtainable by the banks from the CBRT in terms of USD and Euro within the predetermined borrowing limits, has been extended from one week to one month and the lending rate that was previously set as 10 percent was reduced to 7 percent for USD and 9 percent for Euro.

Meanwhile, foreign exchange buying auctions were suspended beginning from 16 October 2008 in order to further enhance the liquidity conditions of Turkish banks and to keep the liquidity in the system.

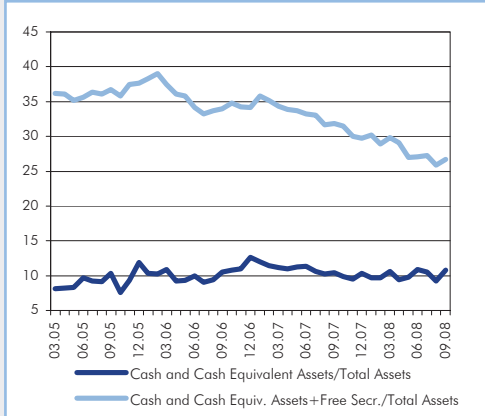
As unhealthy price formations have recently been witnessed in the foreign exchange market due to a decrease in the depth of the market, the CBRT started to hold daily foreign exchange selling auctions amounting to USD 50 million beginning from 24 October 2008, consistent with the basic principles of the floating exchange rate regime. The CBRT decided to suspend the foreign exchange selling auctions on 30 October 2008 after observing that favorable developments in global markets had eased concerns regarding the depth of the foreign exchange market.

The ratio of liquid assets of the sector comprising cash and cash equivalent assets to total assets has maintained a rather horizontal course in 2008 and stood at 10.8 percent by September 2008 indicating a slight increase (Chart III.24).

When the free securities not used as collateral or for repo transactions are taken into consideration, this ratio, which has been displaying a tendency to decline since the beginning of 2007, increased and stood at 26.7 percent as of September 2008 (Chart III.24).

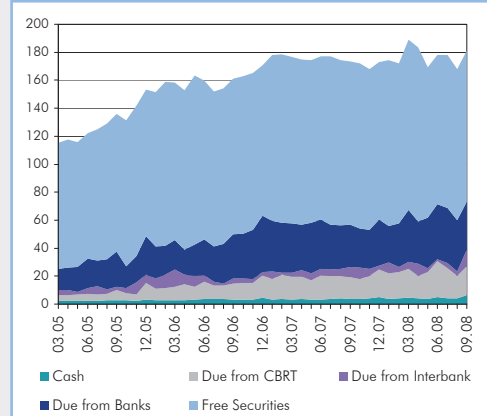


**Chart III.24.**  
Liquidity Ratios (%)<sup>1,2</sup>



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.25.**  
Liquid Assets (Billion YTL)



Source: BRSA-CBRT

Within the cash and cash equivalent assets, the “due from banks” item has the largest share. Moreover, in September, the “due from Money Markets” item reached its highest level in the last two years. This development can be attributed to the fact that banks with excess liquidity tend to sell it to the CBRT instead of lending to banks with insufficient liquidity at the Over-The-Counter Market, as the CBRT efficiently injects liquidity to banks with insufficient liquidity at the rates close to CBRT’s borrowing rate within the framework of its Turkish currency liquidity policy (Chart III.25).

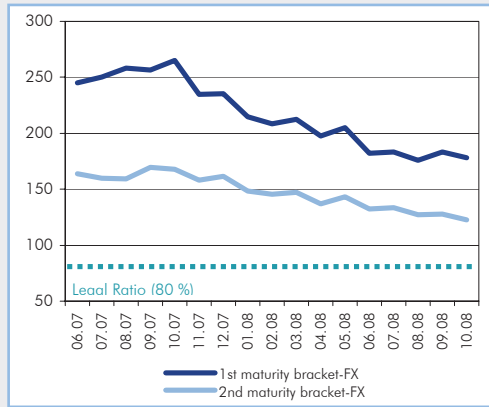
**Chart III.26.**  
Free Securities and Liabilities<sup>1</sup> (Billion YTL, %)



Source: BRSA-CBRT  
 (1) Participation banks are not included in this calculation.

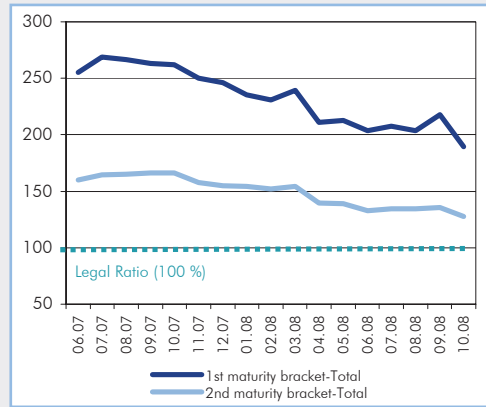
The ratio of free securities, which can be accepted as collateral by the Central Bank to provide liquidity to banks in case of a temporary liquidity shortage, to liabilities was 18.7 percent in September 2008. The free securities portfolio/deposits ratio was 26.9 percent as of the same date (Chart III.26).

**Chart III.27.**  
FX Liquidity Adequacy Ratio (%)



Source: BRSA-CBRT

**Chart III.28.**  
Total Liquidity Adequacy Ratio (%)

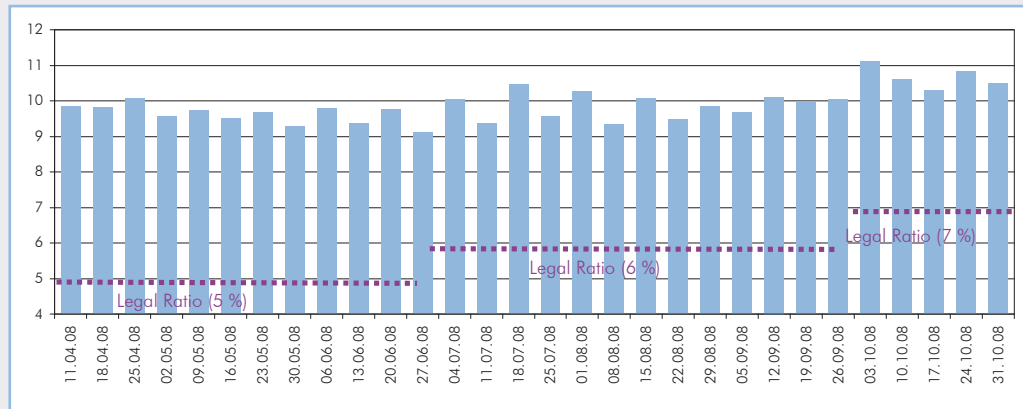


Source: BRSA-CBRT

The liquidity adequacy ratios of the banking sector, calculated pursuant to the “Regulation Relating to the Measurement and Assessment of Liquidity Adequacy of Banks”, are well above the legal limits for both total and foreign currency and for the 1st and 2nd maturity brackets<sup>8</sup> despite their downward trend since the last quarter of 2007 (Chart III.27 and Chart III.28).

The liquidity adequacy ratio, which was introduced with the amendment to the said Regulation on 5 April 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.29).

**Chart III.29.**  
Liquidity Ratio of the Banking Sector Calculated By Using Stock Values of Selected Assets and Liabilities (%)



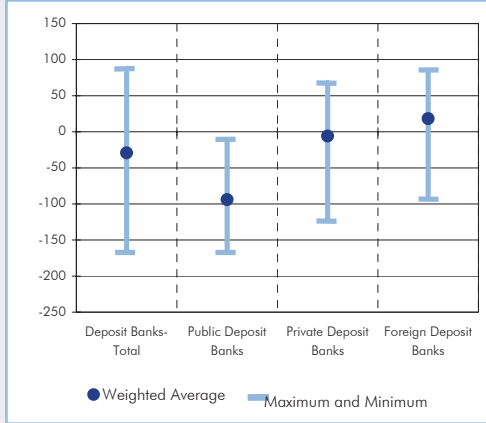
Source: BRSA-CBRT

The recent global crisis indicated how fragile the financial structures of banks that obtain liquidity from wholesale markets could be. Although retail deposits, being the most important source of the Turkish banking system, restrain this vulnerability, it is observed that deposit banks’ negative funding gap, which reached YTL 57.5 million in September 2008, continues to decline.

<sup>8</sup> For both maturity brackets, these limits are defined as 100 percent for total liquidity and 80 percent for FX liquidity.

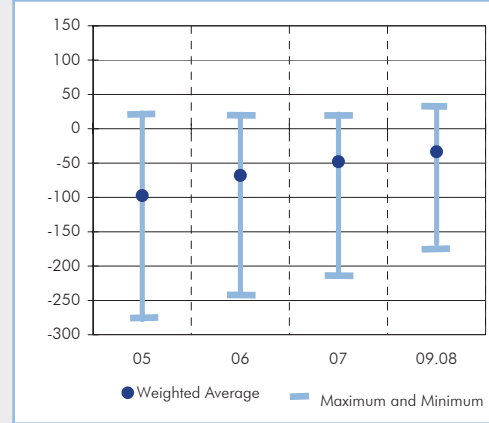
<sup>9</sup> Assets and liabilities with a remaining maturity of 0 to 7 days are included in the 1st maturity and those between 0 and 31 days are included in the 2nd.

**Chart III.30.**  
Funding Gap (%)<sup>1,2</sup>



Source: BRSA-CBRT, SPO  
 (1) Funding Gap = (Credits-Deposits)/Credits  
 (2) Birleşik Fon Bankası (Bank under SDIF) is excluded.

**Chart III.31.**  
Funding Gap for the 10 Largest Banks With Respect to their Asset Size<sup>1</sup> (%)



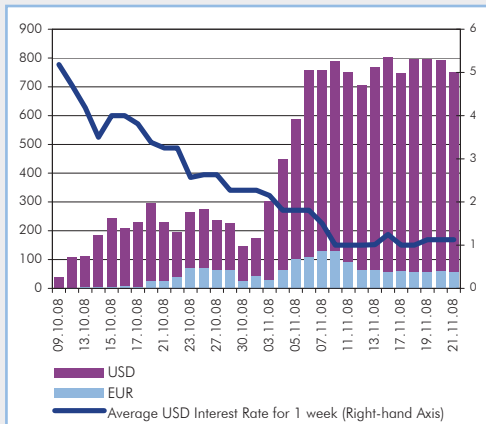
Source: BRSA-CBRT  
 (1) Funding Gap = (Credits-Deposits)/Credits

As of September 2008, it is observed that public deposit banks have a negative funding gap, whereas foreign deposit banks have a positive gap due to being funded by their parent company. Analyzing the first 10 banks in terms of asset size for each period from 2005 onwards, it is observed that the difference among banks diminishes but the negative funding gap tends to decline (Chart III.30 and Chart III.31).

Even though the transaction volume in the Central Bank Foreign Exchange and Banknotes Market-Foreign Exchange Deposit Market that re-started to operate on 9 October 2008 increased, it is observed that the interest rates decreased. The decline in interest rates indicates that the banking sector has an adequate amount of FX liquidity (Chart III.32).

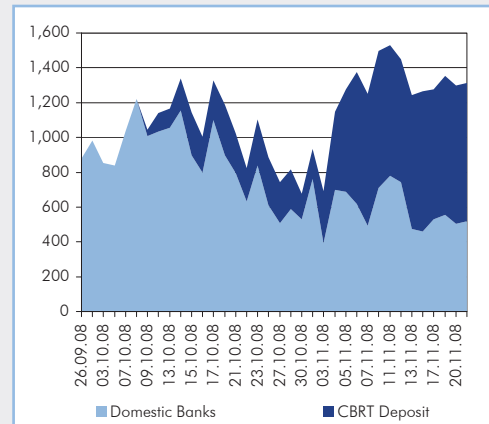
Meanwhile, it is observed that interbank operations shifted to this market from Over-the-Counter-Markets (Chart III.33).

**Chart III.32.**  
Total Foreign Exchange and Banknotes Market-Foreign Exchange Deposit Market Operations and Interest Rates (Million USD, %)



Source: CBRT

**Chart III.33.**  
FX Interbank Operations (Million USD)



Source: BRSA-CBRT

Developments in global liquidity conditions increase the importance of banks' liquidity management. In this framework, the Central Bank will continue to take the necessary measures in order to get through this tough period with minimal negative impact and to ensure continued functioning of the payments system. Moreover, it is necessary for banks to maintain the efficiency of their own liquidity management for Central Bank's measures to be effective.

**Box 10.****Amendment to the Regulation Relating to the Measurement and Assessment of Liquidity Adequacy of Banks**

As it is known, pursuant to the "Regulation Relating to the Measurement and Assessment of Liquidity Adequacy of Banks", the consideration rates for the stock value of the "securities to be held until maturity" are kept lower than the rates for the securities classified as "securities in the trading portfolio" and "securities available for sale." However, pursuant to the decision of the Banking Regulation and Supervision Agency published in the Official Gazette dated 1 November 2008, if the financial assets classified as "securities in the trading portfolio" and "securities available for sale" by banks are reclassified under "securities to be held until maturity" in the framework of the amendments made to TMS 39 and TFRS 7, the consideration rates equivalent to former classifications shall be applicable to these financial assets in the implementation of the liquidity regulation.

**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.12 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 <sup>1</sup>	Negative	0.33
Liquidity	Liquid Assets / Total Assets <sup>2</sup>	Positive	1.00
Exchange Rate Risk	On-Balance Sheet FX Position / Own Funds <sup>3</sup>	Negative	0.50
	FX Net General Position / Own Funds <sup>3,4</sup>	Negative	0.50
Interest Rate Risk	(Interest Sensitive YTL Assets with a Maturity up to 1 Month–Int. Sensitive YTL Liabilities with a Maturity up to 1 Month)/Equity <sup>5</sup>	Negative	0.50
	(Interest Sensitive FX Assets with a Maturity up to 1 Month–Int. Sensitive FX Liabilities with a maturity up to 1 Month)/Equity <sup>5</sup>	Negative	0.50
Profitability	Net Profit / Total Assets	Positive	0.50
	Net Profit / Shareholders Equity	Positive	0.50
Capital Adequacy	Free Capital / Total Assets <sup>6</sup>	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.

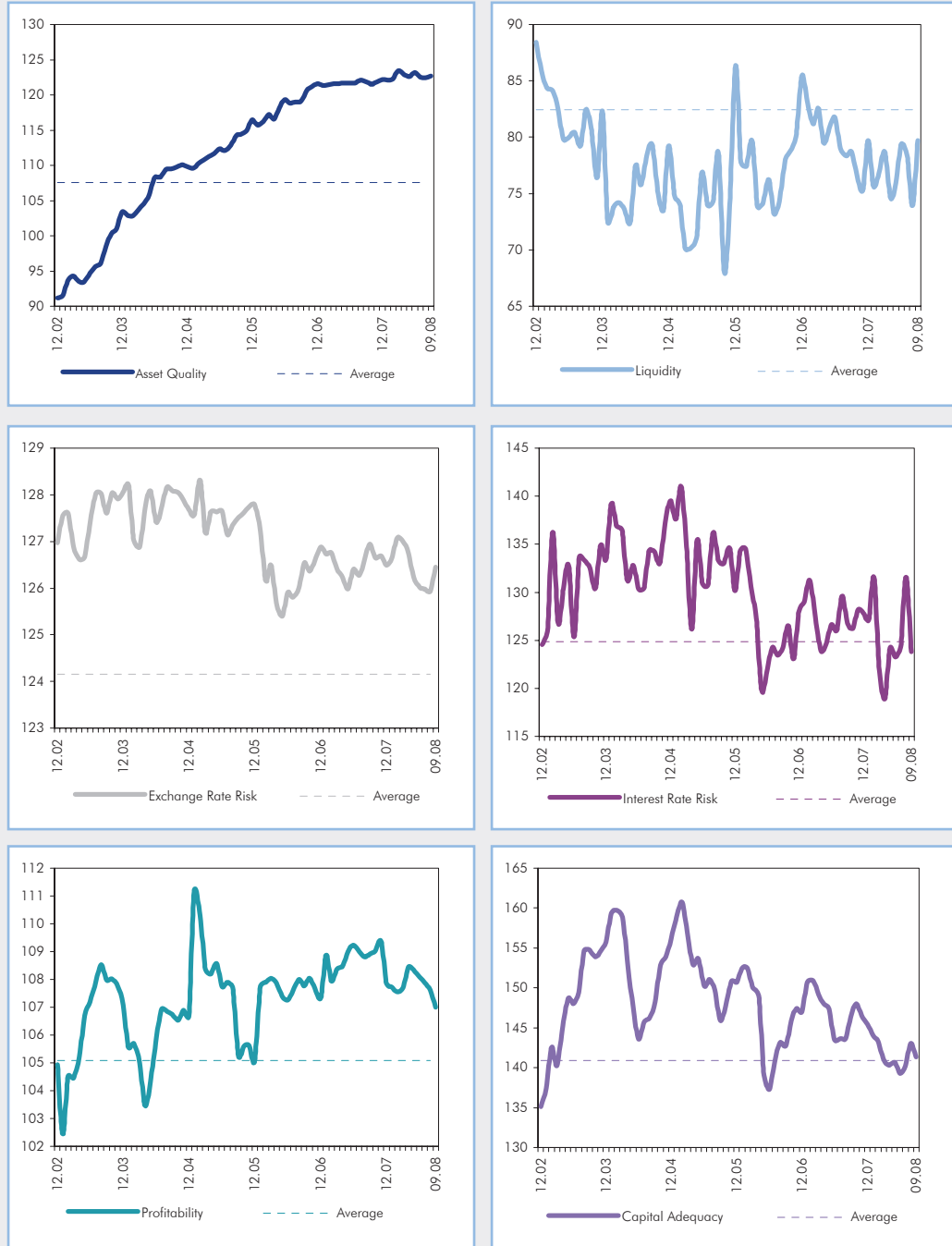
(3) Own funds is the regulatory capital, and it is different from the equity in the balance sheet. The calculation is in absolute values.

(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.34.  
Financial Strength Sub-Indices<sup>1</sup> (1999=100)



Source: BRSA-CBRT

(1) The averages used are the averages of related sub-indices between December 1999 and September 2008.

The assessment of the sub-indices comprising the FSI is as follows (Chart III.34);

i. Asset Quality Index: The Asset Quality Index, which was 122.2 at end-2007, rose to 122.7 in September 2008, mainly due to the decline in the share of fixed assets in total assets and the decrease in the NPL ratio.

ii. Liquidity Index: The Liquidity Index, which was 79.7 at end-2007, remained unchanged in September 2008, as the share of liquid assets in total assets did not change.

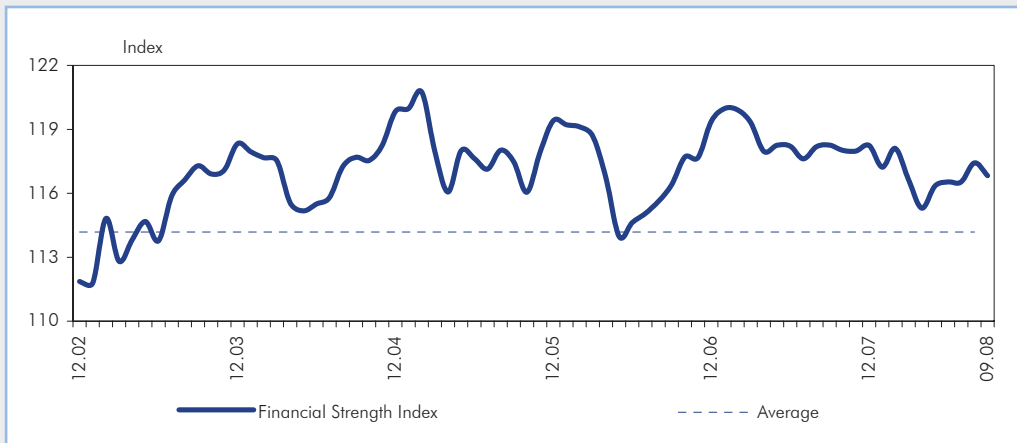
iii. Exchange Rate Risk Index: The Exchange Rate Risk Index, which was 126.5 at end-2007, remained unchanged in September 2008. This index follows a rather stable course due to the declined on-balance sheet open position and limited net general FX position of the banking sector.

iv. Interest Rate Risk Index: The Interest Rate Risk Index, which was 127.8 in December 2007, fell to 123.8 in September 2008. The increase in the ratio of the difference between YTL-denominated interest-sensitive assets up to 1 month and interest sensitive liabilities up to 1 month to equity, which resulted from the shortened maturity of banks' liabilities, was instrumental in this decline of the interest rate risk index.

v. Profitability Index: The Profitability Index, which was 107.9 at end-2007, declined to 107 in September 2008, due to the decrease in the return on equity and return on assets of the banking sector.

vi. Capital Adequacy Index: The index, which stood at 145.4 at end-2007, fell to 141.4 in September 2008, due to the decline in the capital adequacy ratio and the ratio of free capital to total assets.

**Chart III.35.**  
**Financial Strength Index<sup>1</sup> (1999=100)**



Source: BRSA-CBRT

(1) The average used is the average of financial strength index between December 1999 and September 2008.

In April 2008, the Financial Strength Index that is monitored as an indicator of the soundness of the banking sector dropped by 2.9 points to 115.3 compared to end-2007 due to the decline in the Liquidity, Capital Adequacy and Interest Rate Risk Indices. The Financial Strength Index, started to go up afterwards and reached 116.8 in September, indicating that the banking sector remains robust (Chart III.35).

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## ABBREVIATIONS

AMA	: Automobile Manufacturers Association
BIS	: Bank for International Settlements
BoE	: Bank of England
BoJ	: Bank of Japan
BRSA	: Banking Regulation and Supervision Agency
CAR	: Capital Adequacy Ratio
CBRT	: Central Bank of the Republic of Turkey
CDS	: Credit Default Swap
CMB	: Capital Markets Board
CPI	: Consumer Price Index
CRA	: Central Registry Agency
ECB	: European Central Bank
EMBI	: Emerging Markets Bond Index
EU	: European Union
FASB	: Financial Accounting Standards Board
FDIC	: Federal Deposit Insurance Corporation
Fed	: Federal Reserve System
FHFA	: Federal Housing Finance Agency
FSE	: Financial Strength Index
FSF	: Financial Stability Forum
G-20	: Group of 20
G-8	: Group of 8
GAAP	: Generally Accepted Accounting Principles
GAP	: Southeastern Anatolian Project
GDDS	: Government Domestic Debt Security
GDP	: Gross Domestic Product
IASB	: International Accounting Standards Board
IFRS	: International Financial Reporting Standards
IFS	: International Financial Statistics
IMF	: International Monetary Fund
ISE	: Istanbul Stock Exchange
MBS	: Mortgage Backed Securities
MPC	: Monetary Policy Committee
NPL	: Non Performing Loans

PPI	: Producer Price Index
ROA	: Return on Assets
ROE	: Return on Equity
RSCI	: CBRT Real Sector Confidence Index
SCT	: Special Consumption Tax
SDIF	: Savings Deposit Insurance Fund
SEE	: State Economic Enterprise
SLF	: Short-term Liquidity Facility
SLS	: Special Liquidity Scheme
SPO	: State Planning Organization
TAF	: Term Auction Facility
TFRS	: Turkish Financial Reporting Standard
TİM	: Turkish Exporters Assembly
TMS	: Turkish Accounting Standard
TSLF	: Term Securities Lending Facility
USA	: United States of America
VAT	: Value Added Tax
VIX	: Chicago Board of Exchange Volatility Index
WEO	: World Economic Outlook