Ç.Ü. Sosyal Bilimler Enstitüsü Dergisi, Cilt 18, Sayı 2, 2009, Sayfa 89-103

2008 GLOBAL FINANCIAL CRISIS AND THE TURKISH FINANCIAL SYSTEM

Assist.Prof.Dr. Eyup BASTI
Fatih University
Department of Management
ebasti@fatih.edu.tr

ÖZET

ABD'de 2007 ortasında patlayan gayrimenkul balonu 2008 yılında global bir finansal krize yol açmıştır. Krizin oluşumunda etkili olan faktörler finansal piyasaların liberalleştirilmesi, ABD'de hane halklarının borçluluğunun aşırı derecede artması, düşük kredi değerliliğine sahip mortgage kredilerinde çok büyük artışlar yaşanması, mortgage kredisi alacaklarının yaygın bir şekilde menkul kıymetleştirilmesi, kredi derecelendirme kuruluşlarının mortgage kredisi alacaklarına dayalı menkul kıymetlere yanlış kredi notları vermeleri, global olarak tasarruf fazlası oluşması, ABD merkez bankası Fed'in genişletici para politikası izlemesidir.

Türkiye de krizden negatif olarak etkilenmiştir. Fakat, krizin Türkiye'ye etkileri sınırlı olmuştur. Böylesine büyük bir krizde Türkiye finansal sistemi sağlam kalabilmiştir. Türkiye bankacılık sektörünün likiditesi ve kârlılığı limitlerin oldukça üzerindedir. Türkiye bankacılık sektörünün 1994 ve 2001 krizleri sırasındaki performansı göz önüne alındığında, bankacılık sektörünün böylesi bir krizde ayakta kalabilmesi oldukça ilginç bir durumdur.

Çalışmanın ilk bölümünde mortgage krizinin ortaya çıkış süreci ele alınmaktadır. İkinci bölümde krizin sebepleri açıklanmaktadır. Üçüncü bölümde mortgage krizinin Türkiye ekonomisine etkileri değerlendirilmektedir. Bu bölümde ayrıca, Türkiye finans sisteminin böylesi bir krizde ayakta kalabilmesinin nedenleri açıklanmaya çalışılmaktadır.

Anahtar Kelimeler: Mortgage krizi, Türkiye ekonomisi, Türk finansal sistemi

ABSTRACT

Price bubble in the US mortgage market exploded in the middle of 2007 and caused a global financial crisis in 2008. Factors effective in the evolution of the crisis are deregulation of financial markets, heavy indebtedness of US citizens, vast extension of sub-prime mortgage loans, securitization of mortgage credit receivables, wrong credit ratings assigned to mortgage backed securities by credit rating agencies, global excess saving and excessive liquidity creation by the Fed.

Turkey was also negatively affected from the crisis. However, effects of the crisis on Turkish financial markets are limited. Turkish financial system did not collapse during such a serious crisis. Turkish banking sector's solvency and profitability level is very high. Turkish banking sector's soundness in such a deep crisis is a quite interesting phenomenon, when we take into account its past performance during 1994 and 2001 crises of Turkey.

This paper addresses the evolution of the US mortgage crisis in the first section. In the second section, causes of the US mortgage crisis are explained. In the

third section, effects of the crisis to the Turkish economy are taken into account. Third section also tries to explain the factors behind the Turkish financial system's survival during global crisis.

Key words: mortgage crisis, the Turkish economy, the Turkish financial system

1. Introduction: Evolution of the US Mortgage Crisis

There was a slight stagnation in the US at the beginning of 2000s. Therefore, central bank Fed started to decrease interest rates in order to stimulate economic growth. Credit demand of the corporate sector was weak because of the stagnation, therefore banks focused on mortgage loans. Banks initiated mortgage loans and sold their mortgage based receivables to mortgage firms which securitized those receivables afterwards. This procedure is described as initiate and distribute system. Banks used these early retired funds again in the extension of new mortgage loans.

Fed decreased interest rates from 6.5% to 1%, gradually in the period of 2000 – 2003 (Thorntorn, 2007, p. 4). Huge amounts of fund flows from China, Japan and oil exporting Middle East Countries to US in this period helped US authorities to keep interest rates at low levels. Low interest rates kept mortgage loan demands high. High mortgage credit demand and the ability to transfer mortgage loan based receivables to other investors motivated banks to concentrate more heavily on mortgage loans. Continuous demand in housing sector caused house prices to increase on a permanent basis in this period. This continuous upward trend in the house prices caused people to think that the house prices would increase indefinitely. Therefore, low or no income people also purchased houses by taking mortgage loans. Because they thought that this was a one way game: If they could not pay installments in the future, they would sell the house at a higher price and they would even have a profit after paying their mortgage liability. As banks have the ability to transfer their mortgage based receivables to mortgage firms, they did not consider whether mortgage loan applicants have income or repayment capacity. In other words, initiate and distribute system led to moral hazard problem. Mortgage loans extended to people who are evaluated as having relatively low repayment capacity are called as sub-prime mortgage loans. Banks also extended floating rate mortgage loans in order to hedge against the interest rate risk.

Because of the process summarized above, total amount of continuing mortgage loans reached to $ 10.2 trillion as of the end of 2006. 25% of these loans were floating rate mortgage loans (Norges Bank, 2007). Volume of the mortgage loan business could be understood more clearly when it is evaluated with US's $ 13.24 trillion GDP as of the end of 2006 (U.S. Census Bureau, 2006).

Fed started to increase interest rates at the middle of 2004 and interest rates were increased 17 times from mid 2004 to 2006 (Henderson, 2006). As the interest rates were at very high levels as of the end of 2006, floating rate mortgage loans' monthly installments increased to very high levels and floating rate mortgage users started to default. Banks began to foreclose the houses of defaulted mortgage loan users. Because of high interest rates and additional house supply because of foreclosed houses, house prices started decrease rapidly.

Sharp decrease of the house prices caused also solvent borrowers not to pay their mortgage loan installments, but deliver the key of the house to the bank. Decrease of the house prices below the unpaid balance of the loan made this alternative less costly (Krugman, 2008). This development increased default rates in mortgage loan repayments rapidly. Ability to take just the house in case of a default intensified banks' mortgage loan based problems.[1] As a result, banks and other lenders reported 2.2 million foreclosure filings during 2007 (Hampell et all., 2008, p. 3). Because of defaults in mortgage loans, banks and other finance companies that invested heavily in mortgage based bonds entered into financial distress and encountered with bankruptcy. Some of these firms were merged with other finance sector firms, some of them were nationalized, and some of them were left to bankruptcy like Lehman Brothers.

As the market participants did not know which banks and finance companies were infected, no firm wanted to extend credit to other finance companies and liquidity dried up (Udell, 2009, p. 120). Therefore, mortgage crisis transformed into a liquidity crisis. This problem also spread to other countries whose financial firms invested heavily in mortgage based bonds of US. Central banks injected huge amounts of liquidity and applied rescue plans to solve the crisis. Demand and growth rates decreased in all of the developed countries.

Exports of the developing countries to these countries were affected. Capital flows to developing countries stopped or slowed down. National currencies depreciated seriously. As a result, all of the countries that are linked to global economic system somehow were affected negatively from the crisis. Therefore, US mortgage crisis transformed into global financial crisis in the second half of 2008.

2. Causes of the US Mortgage Crisis

At the root of the mortgage crisis there is the belief that it is not possible to encounter a financial crisis in US and other developed countries (Lerner, 2008, p. 4). Before the mortgage crisis, it was generally thought that financial crises erupt in developing countries because of those countries' own faults. Not having a serious financial crisis in the developed world in the last 15 years strengthened this belief. Moreover, it is believed that if the symptoms of a financial crisis emerge in a developed country, it would be prevented before it erupts in the light of the previous experiences.

For example, it was believed that the existence of Alan Greenspan, who managed Fed for 18 years until the middle of 2006 and who is among the people blamed for the crisis now, was the guarantee of not having a crisis in US.[2] It was also believed that the existence of complex financial instruments or derivative securities was serving as insurance for not having a financial crisis. There would be always capital inflows from China, Japan and oil exporting Gulf countries to those complex

[1] If households default in their mortgage loan payments in Turkey, they are fully responsible from their liabilities with all of their assets.

[2] The book titled as "Greenspan Effect" addresses the belief that the existence of Fed president Alan Greenspan was the guarantee of not having any problem in US financial markets.

instruments and therefore there would not be any problem in the US financial system (Reinhart and Rogoff, 2008, p. 3-4). In summary, there is the excessive trust of the US authorities to their financial system and therefore not needing to take any precautions when the crisis conditions were accumulating. Factors that contributed to the accumulation of the mortgage crisis conditions are explained below.

2.1. Microeconomic Systemic Failures

Deregulation: Gramm-Leach-Bliley (GLB) act of 1999 eliminated the distinction between commercial banking, investment banking and insurance industry in US. Deregulation increased competition, decreased profit margin and caused introduction of unusual new investment banking practices by commercial banks (TEPAV, 2008, p. 4). In addition, intersection of insurance and banking industries became detrimental to the sound risk management of the banks. For example, a financial services conglomerate could be a mortgage provider and insurer of the same mortgage issuance at the same time. However, such an application meant inexistence of insurance in reality because one part of the conglomerate was guaranteeing the repayment of the debt of the other part of the same conglomerate (Lerner, 2008, p. 5). Therefore, GLB act increased risks in mortgage industry.

Encouragement of house sales with mortgage loans and therefore heavy indebtedness of US citizens: Indebtedness was encouraged in the period before the crisis. Government directed mortgage firms Freddie and Fannie to provide mortgage financing to borrowers with low income. Continuously increasing house prices also caused households who do not have regular income to purchase houses with mortgage loans. In 2001 - 2006 period, 14 million new mortgage loans were originated and total amount of home mortgages outstanding crossed $ 10 trillion (Bardhan, 2008, p. 8). GDP of US for 2006 was $ 13.24 trillion.

Huge increase in the floating rate and sub-prime mortgage loans: Different types of mortgage loans, such as sub-prime, adjustable rate, interest only mortgages, were extended to households whose creditworthiness is not high enough. In 2006, the share of sub-prime mortgages in total mortgage originations reached 20% compared to only 6% in 2002 (Bardhan, 2008, p. 7). Approximately 25% of outstanding mortgage loans were adjustable rate mortgages.

Widespread securitization: Widespread securitization of mortgage loan receivables by banks caused several problems. First, it allowed banks to liquidate their mortgage loan receivables immediately after the extension of loans and then to use those funds for extending new mortgage loans. Therefore, securitization ability of mortgage loans helped to the increase of outstanding mortgage loans to very high amounts. Second, it allowed a kind of moral hazard problem. As banks would transfer mortgage loan receivables to other investors through mortgage firms, they did not consider the repayment ability of mortgage loan applicants, but just extended loans and earn their commission revenue. Third, securitization broke the link between the borrower and the ultimate investor who provided funds. Therefore, investors could not evaluate borrowers' risk properly.

Fundamental flaws in the rating agencies' business model: Rating agencies had several mistakes. First, rating agencies rated instruments that they did not really know. Banks extended mortgage loans and sold their receivables to mortgage firms. Then, mortgage firms combined mortgage loan receivables that they purchased from several banks, sliced these receivables into smaller amounts and issued bonds based on these mortgage receivables. Therefore, rating agencies actually did not have sufficient information about mortgage borrowers, but they rated bonds based on mortgage receivables from these borrowers. Second, rating agencies are subject to several potential conflicts of interest. a) They are paid by sellers of mortgage based loans. b) They are multi product firms. They sell advisory and consulting services to the same client to whom they sell ratings.

2.2. Macroeconomic Pathologies That Contributed to the US Mortgage Crisis

Global Excess Saving: Wealth and income redistributed towards commodity exporting countries, namely China, Japan and Gulf countries, in the period before the crisis. These countries had higher propensities to save than the losers from the global increase in commodity prices. Global excess saving brought by the entry of these commodity exporter high-saving countries into the global economy is one of the main macroeconomic causes of the mortgage crisis (Buiter, 2007, p. 1).

Excessive Liquidity Creation by the Fed: The Fed created excessive liquidity and kept interest rates low for a considerable length of time in the period before the crisis. Low interest rates kept mortgage loan demands high. Continuous demand in housing sector caused house prices to increase on a permanent basis in this period. This continuous upward trend in the house prices caused people to think that the house prices would increase indefinitely. Because of this belief, low or no income people also purchased houses by taking mortgage loans. Therefore, excessive liquidity creation by the Fed is another macroeconomic cause of the mortgage crisis.

3. Effects of Mortgage Crisis to Turkish Economy

US based 2008 global financial crisis also affected Turkey negatively. ISE – 100 index decreased by 52.6% in 2008. Interest rate and foreign exchange rate fluctuations intensified for a while after every bad news from US and other countries in the last quarter of 2008 and in the first quarter of 2009. Treasury bills' interest rates have seen 27% (in October 2008) (Istanbul Stock Exchange, Monthly Bulletin) as the highest and US dollar rates returned from 1.8045 TL (in March 2009) (Central Bank of the Republic of Turkey) during these fluctuations. However, contrary to 1994 and 2001 financial crises, this time Turkish financial system did not collapse because Turkish economy was caught to the 2008 global financial crisis in a relatively good condition.

Negative effects of the 2008 global financial crisis to Turkish real sector have been more severe. Turkey's exports decreased dramatically. Sectors that rely on exports heavily had to stop production for a week or more from time to time. Besides, households and firms decreased their spending and investments in crisis conditions. Therefore, internal demand also decreased. Fortunately, there are not extraordinary bankruptcies in these sectors. As a result of all these developments, Turkish economy contracted 6.2% in the last quarter of 2008 (Turkish Statistical Institute), industrial capacity usage ratio decreased very much and thousands of workers lost their jobs.

Because of the soundness of the financial system, Turkish economy is expected to start recovering in the last quarter of 2009. Reasons behind the survival of Turkish financial system are tried to be explained in the following sections.

3.1. Factors behind the Resistance of Turkish Financial System to 2008 Global Financial Crisis

3.1.1. Development of Current Account Balance

Turkish economy has been producing current account deficits structurally in normal economic conditions. This structure reverses during financial crises. However the same picture arouses shortly after the recovery from the crises (Table 1).

Table 1. Countries That Have the Highest Current Account Deficit (in billion $)

	2001	2002	2003	2004	2005	2006	2007	2008*
US	-384.7	-461.3	-523.4	-625.0	-729.0	-788.1	-731.2	-551.7
Spain	-24.1	-22.2	-30.9	-54.9	-83.4	-110.1	-145.4	-154.5
UK	-31.4	-24.6	-24.5	-35.2	-55.0	-93.6	-119.2	-71.5
Italy	-0.7	-9.4	-19.4	-16.5	-29.7	-48.0	-51.0	-69.2
France	26.2	19.7	14.8	12.4	-13.6	-15.5	-31.3	-56.0
Turkey	3.8	-0.6	-7.5	-14.4	-22.1	-31.9	-37.7	-47.1
Australia	-7.4	-15.8	-28.7	-38.9	-41.0	-41.5	-56.8	-43.8
Greece	-7.3	-9.7	-12.5	-13.0	-17.9	-29.7	-44.4	-36.3
Portugal	-11.4	-10.3	-9.6	-13.6	-17.6	-19.6	-22.1	-24.0
South Africa	0.3	0.9	-1.9	-7.0	-9.7	-16.5	-20.6	-17.6

* Estimate

Source: Financial Markets Report, Issue 11, Banking Regulation and Supervision Agency, September 2008, p. 12.

Turkey's current account deficit for 2008 was estimated as $ 47.1 billion. Turkey was in the sixth order based on current account deficit in the world and all of the first five were developed countries. This structure of the Turkish economy turned international financial market participants' attention to Turkey during the spread of mortgages crisis outside of US. Fortunately, current account deficits of Turkey were mainly caused by non-financial real sectors and financial and public sectors were quite robust. Therefore, current account deficit did not cause a financial melt down.

3.1.2. Development of Governmental Budget Balance

Turkey performed very well in its budget realizations in 2000s. Budget deficit could be decreased from 40.1 to 5.8 billion TL from 2002 to 2006. Although budget deficit increased slightly in 2007 and 2008, it was still very low and at sustainable levels. Budget deficits as a percentage of GDP also showed the same pattern in 2000s. Because of the excellent budget discipline, Turkey could limit its debt increases in 2000s. As a result, financial strength of the public sector is one of the factors that helped the survival of the Turkish financial system during the global financial crisis.

Table 2. Development of Governmental Budget Balance (Billion TL and %)

	2001	2002	2003	2004	2005	2006	2007	2008
Budget Balance	-29.0	-40.1	-39.8	-30.3	-9.6	-5.8	-14.7	-17.6
GDP	240.2	350.5	454.8	559.0	648.9	758.4	843.2	950.1
Budget Balance / GDP	-12.1	-11.4	-8.8	-5.4	-1.5	-0.8	-1.7	-1.9

Source: Central Bank of Turkish Republic, http://evds.tcmb.gov.tr/; Banks in Turkey, Different Issues, Banking Association of Turkey, http://www.tbb.org.tr/

3.1.3. Development of Internal Debt Stock

Internal debt stock of Turkey more than doubled in 2001 – 2008 period because of the negative effects of 2001 financial crisis (Table 3). However, growth rate of internal debt stock slowed down very much and decreased below 10% after 2004. Government's success in limiting budget deficits was the main reason behind the slowing down of growth rate of the internal debt stock. Turkey could decrease ratio of internal debts to GDP on a continuous basis 2001 through 2008 as a result of excellent economic growth performance in 2000s. Decreased internal debt ratio facilitated public sector finance and helped the survival of the Turkish financial system during the global financial crisis.

Table 3. Development of Internal Debt Stock in Turkey in 2000s

	2000	2001	2002	2003	2004	2005	2006	2007	2008
Billion TL	36.4	122.2	149.9	194.4	224.5	244.8	251.5	255.3	274.8
% Increase	-	235.7	22.7	29.7	15.5	9.0	2.7	1.5	7.6
GDP	166.7	240.2	350.5	454.8	559.0	648.9	758.4	843.2	950.1
% of GDP	21.8	50.9	42.8	42.7	40.2	37.7	33.2	30.3	28.9

Source: Central Bank of Turkish Republic, http://evds.tcmb.gov.tr/

3.1.4. Development of External Debt Stock

Development of external debt stocks in Turkey is provided in Table 4. Gross external debt stock of the public sector increased by only %43 from 2000 to 2008. Public sector has $ 91.7 billion external debt as of the end of 2008, only $ 5.1 billion of which is short term. On the other hand, private sector's external debt stock, most of which belongs to non-financial sector, increased by 240% in the same period. Private sector has $ 185.1 billion external debt, $45.6 billion of which is short term. Although Turkish non-financial private sector has considerable amount of external debt, Turkey's total external debt to GDP ratio have been decreasing since 2001 because of high GDP increases accomplished in this period.

Table 4. Development of External Debt Stock in Turkey (in Billion $ and %)

	2000	2001	2002	2003	2004	2005	2006	2007	2008
External Debt – Public + CBRT	64.2	71.5	86.5	95.2	97.1	85.8	87.3	89.3	91.7
Short Term	3.1	1.8	2.6	4.2	5.1	4.9	4.3	4.4	5.1
Long Term	61.1	69.7	84.0	91.0	92.0	80.9	82.9	84.8	86.6
External Debt –/ GDP	24.0	36.5	37.2	31.3	24.7	17.7	16.5	13.6	-
External Debt - Private	54.4	42.1	43.0	48.9	63.8	83.7	120.1	159.7	185.1
Short Term	25.2	14.6	13.9	18.8	27.1	33.4	38.3	38.7	45.6
a. Financial Sector	15.4	7.0	5.5	8.3	13.1	17.2	20.7	16.6	21.9
b. Non-Financial Sector	9.8	7.7	8.4	10.5	14.0	16.2	17.6	22.1	23.7
Long Term	29.2	27.5	29.1	30.1	36.8	50.3	81.7	120.9	139.5
a. Financial Sector	7.6	4.8	4.8	5.3	8.6	15.9	28.3	41.7	40.8
b. Non-Financial Sector	21.6	22.7	24.3	24.8	28.2	34.4	53.4	79.2	98.7
External Debt - Total	118.6	113.6	129.5	144.1	160.9	169.5	207.3	249.0	276.8
Total External Debt / GDP	44.4	58.0	55.7	47.3	40.9	35.0	39.1	38.0	-

Source: Central Bank of Republic of Turkey, http://evds.tcmb.gov.tr/; World Bank, World Development Indicators, http://ddp-ext.worldbank.org/ext/DDPQQ/member.do?method=getMembers&userid=1&queryId=6

Table 5. Development of External Debt Stock in Selected Countries (% of GNI)

	2000	2001	2002	2003	2004	2005	2006	2007
Argentina	51	57	153	132	113	71	56	50
Brazil	39	43	47	44	34	22	19	19
Bulgaria	91	77	72	66	63	58	68	84
China	12	14	13	13	13	13	12	12
India	22	21	21	19	18	15	19	19
Latvia	62	64	73	79	95	92	118	150
Poland	38	35	39	44	43	36	42	48
Romania	30	32	37	38	40	40	45	52
Russian Fed	63	50	43	42	34	31	26	29
Turkey	44	59	57	48	41	35	40	39
Ukraine	40	55	52	48	47	39	47	53

Source: World Bank, World Development Indicators, http://ddp-ext.worldbank.org/ext/DDPQQ/member.do?method=getMembers&userid=1&queryId=6

External debt stock to Gross National Income ratios of selected countries in 2000s are listed in Table 5. Turkey is in a quite good condition based on this measure when it is compared with other countries. Therefore, Turkey's indebtedness is not so serious and especially public sector became very successful in limiting external debt increase. As a result, low external indebtedness of the Turkish public and private financial sectors and Turkey's moderate external indebtedness in general are among the factors that helped the survival of Turkish financial system during the global financial crisis.

3.2. Turkish Financial Sector's Performance in the 2008 Global Financial Crisis Environment

Turkish financial system was very sound before the 2008 global financial crisis. Insolvent banks closed and were taken out of the banking system after the 2001 crisis. Banking Regulation and Supervision Agency fulfilled its regulation and supervision responsibilities very well in 2000s. New banking law which came into force on November 1, 2005 increased effectiveness of regulation and supervision of the banking sector. Banking sector took lessons from the 2001 financial crisis and act prudently. For example, Turkish banks limited their foreign exchange net general position. As a result of these precautions, Turkish banking sector was in a very good state before the 2008 global financial crisis.

Table 6 shows the development of total assets of the Turkish financial sector and its sub sectors around the 2008 global financial crisis period. Financial sector as a whole and banking sector grew faster than the general economy in 2008. Total assets of Turkish financial sector and banking sector grew 23% and 26%, respectively. Total assets of Turkish financial sector reached to 945.4 billion Turkish Liras (TL) in 2008. Although total assets of mutual funds and investment trusts decreased, total assets of banking, leasing, consumer finance and insurance sectors contributed positively to Turkey's general economic growth.

Table 6. Total Assets Development of Turkish Financial Sector and Its' Sub Sectors

Bil. TL	Banks	Fin. Leas. Firms	Fact. Firms	Con. Fin. Firms	Ins. Firms	Pen Funds	Sec. Inter. Inst.	Inv. Trusts	Mut. Fund	Real Est. Inv. Trust	Cent. Bank	Total
2006	499.5	10	6.3	3.4	17.4	7.2	2.7	0.5	22	2.5	104.4	668.6
2007	581.6	13.7	7.4	3.9	20.5	9.9	3.8	0.7	26.4	3.9	106.6	768.6
Sept. 08	679.9	15.4	9.2	4.5	25.0	11.3	4.3	0.6	24.9	4.1	111.1	890.3
Dec. 08	732.8	17.2	7.8	4.7	25.0	11.3	4.3	0.6	24.0	4.3	113.4	945.4
% Dist. Dec. 2008	77.5	1.8	0.8	0.5	2.6	1.2	0.5	0.1	2.5	0.5	12.0	100

Source: Finansal Piyasalar Raporu, No: 12, Bankacılık Düzenleme ve Denetleme Kurumu, December 2008, http://www.bddk.org.tr/websitesi/turkce/Raporlar/Finansal_Piyasalar_Raporlari/Finansal_Piyasalar_Raporlari.aspx, p. 17.

Table 6 also indicates weights of sub sectors in the Turkish financial system. Banking sub sector has an overwhelming and increasing share in the Turkish financial sector. Banking sub sector's weight in financial sector has increased to %77.5 by the end of 2008. Central Bank is in the second order based on total assets with a 12% share in the Turkish financial sector. Insurance firms are in the third order with a 2.6% share, and mutual funds are in the fourth order with a 2.5% share in the Turkish financial sector. Remaining sub sectors have less than %2 shares in the Turkish financial sector. Banking sector's dominant share in the Turkish financial sector shows its crucial role in financing Turkish private and public sectors.

3.2.1. A Brief Balance Sheet Analysis of the Banking Sector

Total assets of the banking sector grew by 26% and reached to 732.8 billion TL in 2008. Loans constitute 50.2% of the banking sector's total assets. Financial assets have the second highest share (26.5%) in total assets. Receivables from banks, central bank, and money markets component has 12.1% weight in total assets of the banking sector. The highest increase (60.7%) was realized in receivables from banks, central bank, and money markets component of the balance sheet in 2008. Loans and financial assets grew by 28.7% and 17.8%, respectively, in 2008.

Share of deposits in total liabilities and shareholders' equity is 62%. Liabilities to banks, central bank and money markets has a weight of 12.7%. Shareholders' equity's weight is 11.8%. Liabilities to banks, central bank and money markets increased by 30%, deposits increased by 27.4% and stockholders' equity increased by 13.7% in 2008.

Table 7. Selected Balance Sheet Figures of the Turkish Banking Sector (Billion TL and %)

	2007	03.08	06.08	09.08	2008	% of Assets	% Change (2007-2008)
Receivables from Banks, CBRT and Money Markets	55.2	62.5	66.5	67.1	88.7	12.1	60.7
Financial Assets	164.7	136.4	173.0	179.8	194.0	26.5	17.8
Loans	285.6	319.6	342.7	361.1	367.6	50.2	28.7
Total Assets	581.6	634.0	656.9	679.9	732.8	100	26.0
Deposits	356.9	389.8	405.8	418.6	454.6	62.0	27.4
Liabilities to Banks, CBRT and Money Markets	71.6	85.1	82.3	86.2	93.1	12.7	30.0
Stockholders' Equity	75.9	76.0	77.2	83.1	86.3	11.8	13.7
Total Liabilities and Stockholders' Equity	581.6	634.0	656.9	679.9	732.8	100	26.0

Source: Finansal Piyasalar Raporu, No: 12, Bankacılık Düzenleme ve Denetleme Kurumu, December 2008, http://www.bddk.org.tr/websitesi/turkce/Raporlar/Finansal_Piyasalar_Raporlari/Finansal_Piyasalar_Raporlari.aspx, p. 22.

3.2.2. Performance Indicators of the Banking Sector

Performance indicators of the banking sector were generally positive in 2008 (Table 8). Capital adequacy ratio of the sector is well above the legal limits. There is a small deterioration in solvency and leverage ratios, but debt repayment capacity of banking sector is still quite high. Loans to equity ratio reached to the highest level in June and decreased slightly through the year end. However, loans to equity ratio is still

50% higher when it is compared to end of 2007. Banking sector's foreign exchange denominated assets and liabilities are balanced, therefore foreign exchange risk of the sector is very low. Stagnation in the economy felt through the end of 2008 caused non performing loans to gross loans ratio to increase to 3.6%. Profitability ratios of the sector also dropped gradually, in the last 3 quarters. However, profitability of the sector is still quite high by the end of 2008. As a result, it is possible to conclude that banking sector performed quite well in the global crisis environment and capital adequacy and liquidity of the sector helped the survival of the sector.

Table 8. Financial Soundness Indicators of the Banking Sector

	2005	2006	2007	Mar. 08	Jun. 08	Sep. 08	Dec. 08
Capital Adequacy Ratio	23.7	22.3	18.7	17.2	16.8	17.5	18.0
Liquidity Indicator	51.8	50.3	47.0	46.3	44.7	38.3	34.4
Equity / Liabilities	15.5	13.5	15.0	13.6	13.3	13.9	13.4
Loans / Equity	286.0	367.8	376.6	420.7	444.1	434.8	425.7
For. Ex Net Position / Equity	-0.2	0.5	-0.3	1.2	0.2	-0.8	0.0
Non Performing Loans / Total Loans	4.8	3.8	3.5	3.1	3.1	3.1	3.6
ROA	1.7	2.5	2.8	2.8	2.5	2.2	2.0
ROE	10.9	19.2	21.8	21.9	20.0	18.2	16.5

Source: Finansal Piyasalar Raporu, No: 12, Bankacılık Düzenleme ve Denetleme Kurumu, December 2008, http://www.bddk.org.tr/websitesi/turkce/Raporlar/Finansal_Piyasalar_Raporlari/Finansal_Piyasalar_Raporlari.aspx, p. 19.

3.2.3. Non-bank Financial Sector

Turkish economy is a bank based economy and non-bank financial sector's weight in Turkish financial system is only 10.5% as of the end of 2008. Most sub sectors of non-bank financial sector performed positively in 2008. Total assets decreased only in two sub sectors, namely in mutual funds and investment trusts sectors, in 2008. Decrease of total assets value in these sectors is normal because these two sub sectors invest mainly in financial assets which lost very much value in the 2008 global financial crisis conditions.

Conclusion

Mortgage crisis erupted in US at the middle of 2007. At the root of the mortgage crisis there is the belief that it is not possible to encounter a financial crisis in US and other developed countries. Factors that contributed to the accumulation of the US mortgage crisis conditions are deregulation, encouragement of house sales with mortgage loans and therefore heavy indebtedness of us citizens, huge increase in the floating rate and sub-prime mortgage loans, widespread securitization, fundamental flaws in the rating agencies' business model, global excess saving and excessive liquidity creation by the Fed. US based mortgage crisis spread outside of US and transformed into a global financial crisis in the second half of 2008.

Contrary to many developed financial systems, Turkish financial system did not collapse in such a serious global financial crisis. Causes of the survival of the Turkish financial system during the 2008 global financial crisis may be summarized as follows.

Turkish banking sector was very sound before the crisis. Insolvent banks closed and were taken out of the banking system after the 2001 crisis. Banking Regulation and Supervision Agency fulfilled its regulation and supervision responsibilities very well in 2000s. New banking law which came into force on November 1, 2005 increased effectiveness of regulation and supervision of the banking sector. Banking sector took lessons from the 2001 financial crisis and act prudently. For example, Turkish banks limited their foreign exchange net general position. As a result of these precautions, Turkish banking sector was in a very good state before the crisis. Therefore, Turkish banking system, which collapsed during Turkish made crisis in 1994 and 2001, could survive in such a serious global crisis. If Turkey has been still discussing whether to make or not to make a new agreement with IMF starting from September 2008 till now, this is because of the soundness of Turkish financial and banking system. If Turkish financial sector was not so strong, domestic and foreign market participants would run to financial system to withdraw their money and rush to purchase foreign exchange, TL would lose much of its value, banking sector would face collapsing and Turkish authorities would already sign a new IMF agreement much before the end of 2008.

Turkish financial sector did not have mortgage based assets. Therefore, the sector was not affected from mortgage based losses.

Turkish government decreased budget deficits and limited internal and external debt increases. On the other hand, GDP of the country could be increased at very high rates in each year after 2001 crisis. Therefore, ratio of internal and external debts to GDP could be kept at moderate levels. Budget performance also helped government to increase maturity of its debts.

References

Banks in Turkey, Banking Association of Turkey, http://www.tbb.org.tr/.

Finansal Piyasalar Raporu, No: 12, Bankacılık Düzenleme ve Denetleme Kurumu, December 2008, http://www.bddk.org.tr/websitesi/turkce/Raporlar/Finansal_Piyasalar_Raporlari/Finansal_Piyasalar_Raporlari.aspx.

Bardhan, A.D., (2008), "Of Subrime and Subsidies: The Political Economy of the Financial Crisis", http:/ssrn.com/abstract=1270196.

Buiter, W., (2007), "Lessons from the 2007 Financial Crisis", Centre for Economic Policy Research, Policy Insight, No. 18, www.cepr.org.

Central Bank of the Republic of Turkey, http://evds.tcmb.gov.tr/.

Hampell, B., Schenk, M. and Rick, S. (2008), "The U.S. Mortgage Crisis", Credit Union National Association, www.cuna.org.

Henderson, N., (2006), "Key Fed Rate Raised to 5.25%, A 5-Year High", http://www.washingtonpost.com/wp-dyn/content/article/2006/06/29/AR2006062900304.html.

Istanbul Stock Exchange, Monthly Bulletin, October 2008, http://www.imkb.gov.tr/veri.htm#bultenler.

Krugman, P., "Fannie, Freddie and You", New York Times, July 14, 2008.

Küresel Kriz Çalışma Grubu, (2008), "2007 – 2008 Küresel Finans Krizi ve Türkiye: Etkiler ve Öneriler", Türkiye Ekonomi Politikaları Araştırma Vakfı (TEPAV), Politika Notu, http://www.tepav.org.tr/tur/admin/dosyabul/upload/2007_08_Kuresel_Finans_Krizi_ve_Turkiye.pdf.

Lerner, P., (2008), "Alternative View of the Current (2008) Crisis in the US Financial System, http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1150512.

Norges Bank Financial Stability, (2007), Problems in the US Residential Mortgage Market, http://findarticles.com/p/articles/mi_qa5463/is_200712/ai_n21302314.

Reinhart, C.M. and Rogoff, K.S., (2008), "Is the 2007 U.S. Sub-Prime Financial Crisis So Different? An International Historical Comparison", http://www.economics.harvard.edu/faculty/rogoff/files/Is_The_US_Subprime_Crisis_So_Different.pdf.

Thorntorn, M., (2007), "We Told You So", http://www.lewrockwell.com/thornton/thornton33.html.

Turkish Statistical Institute, National Accounts, Gross National Product by Production Approach, http://www.tuik.gov.tr/PreHaberBultenleri.do?id=4026.

Udell, G.F., (2009), "Wall Street, Main Street, and a credit crunch: Thoughts on the current financial crisis", Business Horizons, 52:117-125.

U.S. Census Bureau, http://www.census.gov/compendia/statab/tables/08s0645.xls.

World Bank, World Development Indicators, http://ddp-ext.worldbank.org/ext/DDPQQ/member.do?method=getMembers&userid=1&queryId=6.