

**THE CAUSES AND IMPACTS OF 2007-2008 GLOBAL FINANCIAL CRISIS ON THE BANKING
SECTORS OF TURKEY AND UNITED KINGDOM**

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Supervisor Declaration Form

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I acknowledge that the above named student has regularly attended the planned meetings and **actively engaged** in the dissertation supervision process. They have provided regular timely draft chapters of the dissertation and followed given guidance.

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ABSTRACT

The purpose of this study is to identify the causes and impacts of the 2007-2008 Global Financial Crisis on the Banking Sectors of United Kingdom and Turkey by identifying and analysing the mortgage lending practices, securitization and structured financial instruments, financial regulation and supervision together with the measures taken against the crisis and, the main financial indicators in banking sectors of both countries. Also, in order to test the hypothesis that Turkish banking sector may not be affected as badly as the UK banking sector from the global financial crisis of 2007-2008, exploratory analysis based on quantitative data and accordingly charts and tables to display the main financial indicators are used. The sources of data are of secondary nature, which are mainly obtained from the publicly available press releases, especially reports of financial authorities of both countries, annual reports of selected banks, statistics, online newspaper and e-journal articles considering the fact that the topic is quite recent and therefore requires up-to-date information. Furthermore, according to the purpose, logic, outcome of the study; analytical/explanatory, inductive and deductive, basic and, quantitative research types are chosen respectively. As a result of the findings based on the analysis of indicators of total asset growth, losses and profitability; liquidity, leverage, loan/deposit and capital adequacy ratios; credit ratings along with the growth in mortgage lending and the costs of state support, the Turkish banking sector is proven to be less vulnerable and more resilient than the banking sector of UK.

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ABBREVIATIONS

ABS-Asset Backed Securities
BRSA- The Banking Regulation and Supervision Agency (Turkey)
BIS- Bank for International Settlements
CBRT- Central Bank of Republic of Turkey
CDO- Collateralized Debt Obligation
CDS- Credit Default Swaps
GDP- Gross Domestic Product
FSA – Financial Services Authority
FTSE – Financial Times Stock Exchange.
IMF – International Monetary Fund.
LIBOR- London Interbank Offered Rate
MBS- Mortgage-Backed Security
OECD – Organisation for Economic Co-operation and Development
OFC – other financial corporation
ONS – Office for National Statistics.
PNFC – private non-financial corporation
RBS – Royal Bank of Scotland.
RBSG- Royal Bank of Scotland Group.
RMBS- Residential Mortgage-Backed Security
RWA – risk-weighted asset.
SDIF- Saving Deposit Insurance Fund
SIV-Structured Investment Vehicle
S&P – Standard & Poor's.
UK- United Kingdom

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CHAPTER 1

INTRODUCTION

1.0 Introduction to the Research

Banks are integral part of every economy. The banks make the system of payments work, they are the principal institutions providing large amounts of credit for the economic activity, and, in general, they keep the funds of the depositors secure. The depositors' excess of resources is reallocated to the borrowers who are in need of funds by the banking system. If banks act efficiently as a mediator between the borrowers and lenders and provide both parties with services at low cost, they can contribute significantly to the economic development. However, the recent financial crisis of 2007-2008 hampered the role and performance of the banks as an intermediary a great deal. In that respect, this research deals with the causes and impacts of the 2007-2008 global financial crisis on the banking sectors of Turkey and UK in order to find out why and how differently and to what extent the banking sectors of these two countries were affected by the crisis.

1.1 Background of the Study

Bank failures and financial crises were not very common until 1980s according to Mishkin (n.d, p.205). The reason, Mishkin puts forth is the 'globalization of international capital markets' and the growing 'liberalization of financial systems', which gave the financial institutions the chance of taking more risks. Moreover, financial institutions feeling themselves protected by the safety-net of their governments, further engaged themselves in moral hazard behaviour.

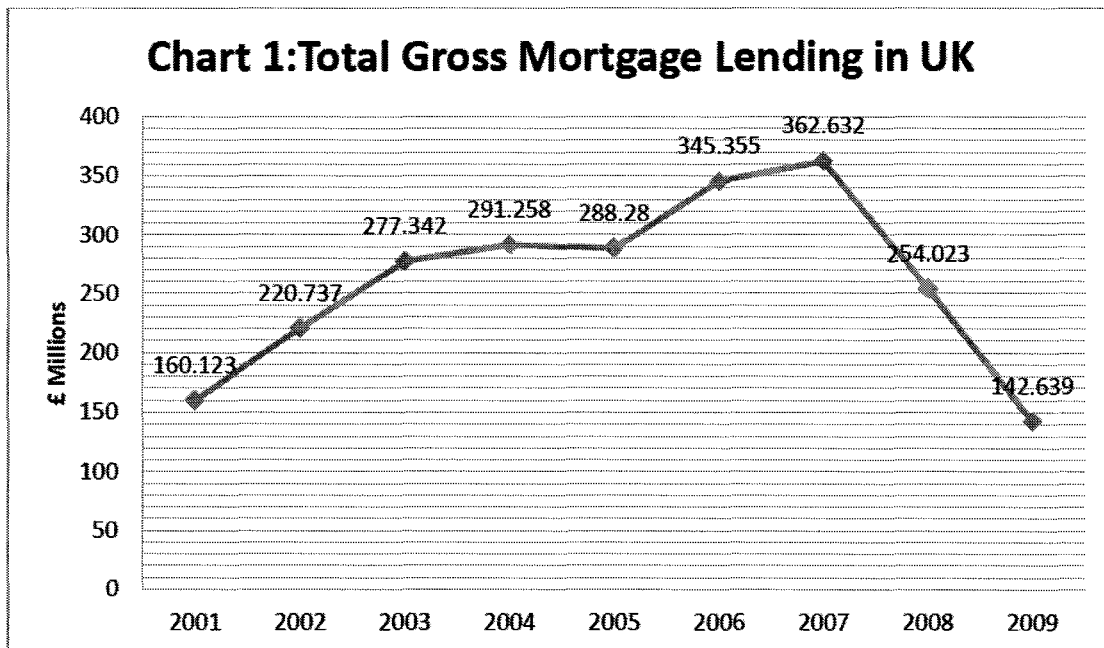
It is a very well-known fact that the trigger of the recent global financial crisis of 2007-2008 was a catastrophic liquidity squeeze in banking system resulting from the failure of the sub-prime mortgage market in the U.S. Low interest rates in U.S. enabled cheap credit for the banks, which in turn supplied huge amounts of credit to the borrowers who wanted to be homeowners especially when the house prices seemed to keep rising forever.

And the assets obtained from the homeowners was pooled together and sold to investors as securities, who shared the risk. In time standards of qualification of credit to homeowners lowered in order to make more money out of this booming mortgage sector. And 'the creation and trade in securitized assets backed by subprime mortgages ensured that when this bubble finally burst in 2007, the repercussions of mortgage delinquencies spread far and wide throughout the global financial system' (Goddard, Molyneux & Wilson, 2009, p. 277).

1.1.1 Banking Sector of UK

The financial crisis also deeply affected UK economy and financial system, and according to Turner Review of Financial Services Authority, 'UK was significantly influenced both by the growth of the

securitised credit model and shadow banking activities and therefore highly vulnerable to their collapse' (2009, p.29). The report also states that as UK was selling notable amount of securitized credits to the holders of U.S. mutual funds and SIVs, which dried up with the crisis in U.S. and so did the significant resource of funds of UK banks for credits. Moreover the housing market flourished up until 2007; similarly UK mortgage loans peaked in 2007 to a total of £362.632 million, which slumped almost 40 per cent with £142.639 million- an amount lower than 2001 figures (Chart 1).



Source: Author's work based on the data from Council of Mortgage Lenders (CML), *Gross Mortgage Lending Table*, 2010.

Consequently, the high leverage ratios and aggressive strategies of UK banks in mortgage lending, which they financed by borrowing from the wholesale market increased their loan-to-deposit ratios. Their capital buffer, on the other hand, was barely enough to protect them from losses when the liquidity in the financial markets dried up, which required recapitalization of UK banks after the crisis, together with the liquidity injections through the Special Liquidity Scheme of Bank of England. Furthermore, Northern Rock experienced a huge bank-run, which drained its reserves and could not avoid being nationalized, while the capitalizations of major UK banks continued to deteriorate throughout the crisis. Hence, downsizing and consolidation through acquisitions and mergers in UK banking sector was inevitable.

1.1.2 Banking Sector of Turkey

After the financial crisis of 2001, Turkish banking sector, going through many structural reforms, resisted the negative impacts of recent global crisis and remained strong. And according to the report released by Deloitte (2010, p. 8), international accounting and consulting firm, as the Turkish Banking Sector was not involved in risky investments such as subprime mortgage credit derivatives, which were the origin of the global crisis and thanks to its strong asset quality, liquidity structure, capital adequacy, risk management and internal control systems, Turkish financial sector remained resilient in the global financial crisis of 2007-2008.

In the meantime, the size of the total assets in banking sector increased despite the economic recession, the capital adequacy ratios were highly above the minimum requirements due to restructuring and recapitalization of Turkish banking sector after the 2001 crisis, the loan-to-deposit ratio was quite high and there was no serious liquidity problem as the banks did not rely heavily on wholesale markets for funding, which prevented the sector from losses, bailouts and huge amounts of liquidity injections in the recent global financial crisis.

1.2 Statement of the Problem

The main reason behind the problems of banking sectors throughout the world is mainly due to a huge growth in global macro-economic imbalances, which lies at the heart of the global financial crisis of 2007-2008 basically between the developed western countries, particularly U.S. and UK with growing deficits and the developing eastern countries such as China along with oil exporting countries and Japan with high savings, which are invested in risk-free government bonds in the western world. This led to a decrease in risk-free interest rates, which in turn;

- increased the **supply of cheap credit** and eventually with the lowered standards of lending practices housing market with a significant increase in demand, boomed especially in U.S. followed by UK and other European countries.
- enabled financial intermediaries to obtain funds from the **wholesale markets**. 'The wholesale markets are where banks lend to one another, and although it was not alone among UK banks in funding its mortgage lending in this way, Northern Rock was unique in how heavily it relied on it' (Brummer, 2008, p.13). And according to Brummer, 75 per cent of Northern Rock's funding was borrowed from the wholesale market, which the bank lent to its customers who wanted to get a mortgage credit.
- led to the introduction of **complex securitized credit instruments and credit derivatives** by the financial intermediaries for the investors who wanted to invest in bond-like instruments in order to obtain higher yields than the low risk-free rate of government bonds. Before the crisis, securitization was believed to disperse the credit risk and to reinforce the stability of financial system by reducing default rates of borrowers. Nevertheless, with the outbreak of the crisis, lots of banks with high leverage ratios ended up holding those toxic debts related to securitized credits and as a result suffered from credit impairment related huge losses when

the investors wanted to dispose of and liquidize the possibly risky investments. Furthermore, the impaired credits led to loss of confidence in the financial markets credit lending between the banks and to the customers tightened which dried up the liquidity in the market. However, as the banks with high leverage ratios also had high loan-to-deposit ratios, which means they lent out more than they had relying upon the wholesale markets, combined with low capital adequacy ratios, they faced with the risk of insolvency, which brought discredit to the banks' leading role as an intermediary.

1.3 Objectives of the Study

The main objectives of this research are to find out, identify and analyse;

- 1- The causes and effects of the crisis in terms of mortgage market, mortgage lending and securitization and structured financial instruments in UK and Turkey.
- 2- Impacts of global financial crisis on Turkish and UK Banks
- 3- Financial Regulations and Supervision in UK and Turkey
- 4- The main financial indicators of banking sectors of Turkey and UK with respect to;
 - Total Asset Growth
 - Losses and Profitability
 - Leverage
 - Loan-to-deposit ratio
 - Liquidity
 - Capital adequacy ratio (and state support in UK for recapitalization and liquidity injections)
 - Credit ratings

1.4 Research Questions

- 1- What are the causes and effects of the crisis in terms of mortgage market, mortgage lending and securitization and structured financial instruments in UK and Turkey?
- 2- What are the impacts of global financial crisis on Turkish and UK Banks
- 3- What kind of financial measures were taken by UK and Turkey?
- 4- What are the differences between the financial indicators of banking sectors of Turkey and UK in terms of total asset growth, losses and profitability, leverage, loan-to-deposit ratios, liquidity, capital adequacy ratios, and credit ratings?

1.5 Rationale of the Research

The recent global financial crisis of 2007-2008 is distinct from the previous crisis in terms of its scope and systemic nature. It affected the financial systems and economies of countries throughout the world. However, the impact of the crisis on some countries was deeper than the others. Although UK and Turkey are not equal in terms of the scope and scales of their financial systems, the former being one of the financial centres of the world with a strong economy, the latter having an unstable economy with a developing financial system, Turkish banking system remained resilient and

continued to grow due to the banking sector restructuring in the crisis of 2000-2001, while UK banking sector turned out to be more vulnerable to the crisis and needed a great deal of state support with significant amounts of liquidity injections and recapitalization measures. Therefore it is worth analysing the differences between the two countries by looking at the main financial indicators with which I am going to test the hypothesis of Turkish banking sector may not be affected as badly as the UK banking sector from the global financial crisis of 2007-2008.

1.6 Purpose of the Study

The banking systems are the backbone of financial systems, which keep the economies brisk as long as they operate in a healthy manner. However, the recent financial crisis of 2007-2008, which started as a banking crisis in U.S., is distinctive in terms of its global scope as it hit the financial systems and the economies of all the nations throughout the world, the impacts of which are still deeply felt and the recovery seems to take a lot more time to come.

The credit crunch caused the defects of the global financial system surface and made the problems related to its regulation, supervision and operation visible. It was mainly the monetary policies in the economies of the developed nations that mounted up the crisis, due to the build-up of risks underneath the growth of economies with flourishing businesses and profitable banks which took advantage of low interest rates, cheap credit and various instruments of finance, especially related to the secondary mortgage market, which turned out to be a disaster.

Although, the impacts of the global crisis were felt worldwide, the banks of some countries seemed to be less vulnerable and more resistant to these impacts. The purpose of this study, therefore, is to find out why and how differently the banking sectors of Turkey and UK were affected by the global financial crisis of 2007-2008 and whether Turkish banking sector was more resilient than the banking sector of the UK.

1.7 Structure of the Study

Chapter 1- The first chapter of this research is the introduction part, giving an overview of the background, problem, objectives, questions, rationale and purpose of the study.

Chapter 2- In the second chapter, the causes and effects of the crisis in terms of mortgage market, mortgage lending and securitization and structured financial instruments in UK and Turkey are identified with an insight to;

- General overview of the causes of the crisis
- Mortgage lending UK and Turkey
- Securitization and structured financial instruments in UK and Turkey.

Chapter 3- The third chapter is about the impacts of global financial crisis on Turkish and UK Banks, which are identified in mainly two parts;

- Impacts on Turkish Banks

- Impacts on UK Banks

Chapter 4- In chapter 4, financial regulation and supervision of Turkish and UK banking sector is presented, the first part of which covers the financial regulations in Turkish banking sector in terms of;

- restructuring of Turkish banking sector after the crisis of 2001
- the Measures Taken by CBRT, BRSA and the Government in the Recent Crisis.

And in the second part, the financial regulatory framework of UK is identified in terms of financial measures taken by the authorities.

Chapter 5- In this chapter, the methodology of research is presented, further divided into following sections;

- Types of research are classified according to the purpose, process, logic and outcome of the research and the most appropriate types used in this study is explained together with their reasons.
- Type of data used is explained
- Type of analysis is explained
- Sources of data explained
- The hypothesis of this research is presented

Chapter 6- The hypothesis presented in the previous chapter is tested according to the main financial indicators of banking sectors of Turkey and UK with respect to;

- Total Asset Growth
- Losses and Profitability
- Leverage
- Loan-to-deposit ratio
- Liquidity
- Capital adequacy ratio (and state support in United Kingdom for recapitalization and liquidity injections)
- Credit ratings

And the banking sectors of the two countries are compared and contrasted according to these indicators.

Chapter 7- Conclusions and recommendations are stated in this chapter.

Finally in Reflections section, my personal experiences and challenges in the process of writing this research is recounted.

CHAPTER 2
CAUSES AND EFFECTS OF THE CRISIS ON TERMS OF MORTGAGE MARKET, CREDIT
LENDING CONDITIONS AND, SECURITIZATION AND STRUCTURED FINANCIAL
INSTRUMENTS IN UK AND TURKEY

2.1 A General Overview of the Causes of the Crisis

After 1980, the notion of collecting deposits and giving loans which is the basis for banking, has gone through a major transformation and therefore banks have started to opt for borrowing instead of deposit collection. Since 1990s the intensive use of new financial instruments in global markets especially by banks such as securitization and credit derivatives which provide the opportunity of high leverage, yielded high profits when the markets were functioning well. However, the tendency of financial institutions using high leverage led to a decrease in capital adequacy ratios, to inability of banks to renew their debts and finally to liquidity crisis and crisis of confidence in the markets triggered by the banks which were in need of funds.

In traditional banking loan/deposit ratio is below 100 per cent, which ensures that the banks have enough money to pay depositors when necessary. However, in modern banking, the financial instruments of securitization, derivatives, hedge funds and financial leverage allowed banks to lend more than the deposits they took in. In the period leading up to the crisis, 'banks were "borrowing on the international markets" and lending money they did not have but assuming to have in the future. Likewise, "international markets" were doing exactly the same' (Pytel, 2009).

Therefore, the banking sector, though not being the main cause of crises by itself, is seen as an important factor in deepening them. At times of crisis, if the liquidity problems can be solved either by the system or by other banks, the growth of the problem may be prevented. Otherwise, bank runs is likely to happen, although this possibility seemed very low before the recent global financial crisis, as the all the depositors are likely to rush to withdraw their money in those banks at the same time because of loss of confidence.

To meet the collective demands of the depositors owing to this insecurity, banks put their assets to sale, which are sold under their actual value as the equilibrium price is not possible under these circumstances. The savings withdrawn from the troubled banks are then either directed to other reliable banks or markets. However, if there is distrust of all banks in the system, there might be a tendency to keep cash funds. At this stage there are three possibilities: savings can be invested in government securities as a refuge, kept in the form of foreign currency or deposited in foreign banks, which could be prevented if the banks offer guarantee scheme for these savings. Furthermore, if Central Bank intervention falls short, many small and medium-sized banks can go bankrupt, from which the banks who are able to survive the crisis are further effected negatively as the increase in

interest rates will impair the the balance of the loans and receivables in economy along with the loan portfolios of the banks.

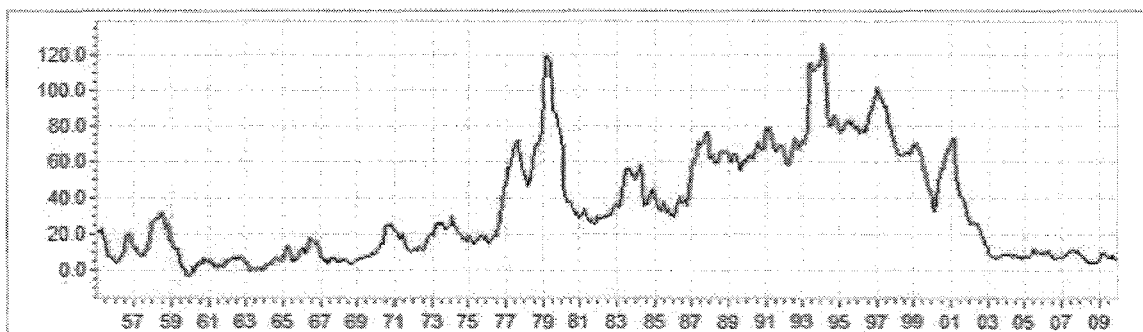
Many countries, as a result of crisis, resorts to restructuring of the banking sector undertaking significant costs. Depending upon the nature of the crisis, banks are either being liquidated and confiscated or forced for a merger, or else subsidized with capital injections. Indeed, according to Sak (2001, pp.1-18) the best solution to failure to address the liquidity inadequacy triggered by crises is considered to be improving the capital adequacy ratio of banks and, the desire to making use of external resources is one of the main factors of bank mergers at the global level.

2.2 Mortgage Lending: UK and Turkey

2.2.1 Mortgage Sector in Turkey

Historically, housing finance has never been attainable by the households in Turkey due to the weakness in economic conditions, high rates of interest and high inflation (Chart 2) as well as lack of availability of long term bond market since in countries with long-term inflation, long-term funding and long-term loan are impossible to find. Furthermore, the quantity of loans for housing has been insignificant compared to the size of the financial sector. 'Housing loans accounted for only 0.2 per cent of the total assets of all banks in Turkey. However, recent trends, after 2002, have displayed extensive growth between 2002 and 2007' (Altunbaş, Kara & Olgu, 2009,pp.176-177) and at the beginning of 2007, the first Mortgage Law of Turkey was introduced with the anticipation of continued growth. However, towards the end of the same year the housing market in the United States has collapsed which affected the other countries worldwide.

Chart 2: Historic CPI Inflation Turkey (yearly basis) - full term



Source: Inflation.eu, n.d

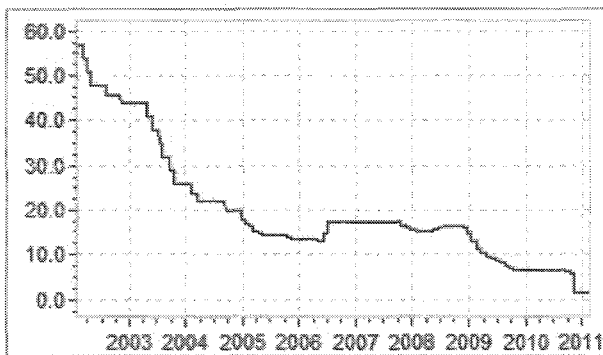
2.2.1.1 Development in Housing Loans in Turkey

After 1989, commercial banks in Turkey started to offer mortgage loans in order to disperse the risk in consumer loans and to raise new funds. These loans granted by commercial banks were of short-term nature, repayment of which were monthly and their interest rates were subject to the wages of public sector employees or to changes in foreign currency. As a result of the instability in the country's economy during the 1990s and early 2000s and accordingly the rise in interest rates and exchange rates many debtors had difficulty in repaying their loans and the opening of new loans became limited.

Therefore, the housing market in Turkey is still pretty undeveloped, lending is relatively short-term and there is no secondary market for securitized mortgage loans which actually prevented Turkish banking sector from contamination caused by bad-debts.

Yet still, the mortgage lending in Turkish banking sector started to improve after November 2000 and February 2001 crises. Due to the stabilization in Turkey's economy after this period, declines in interest rates (Chart 3) and inflation helped the realization of deferred consumption, increased the supply of and the demand in the products the banking sector offered to households, therefore there was a significant increase the volume of mortgage loans.

Chart 3: Central Bank of Republic of Turkey Interest Rates



Source: global-rates.com, n.d.

According to The Association of Real Estate Investment Companies' Real Estate Sector Turkey and The World 2009 Third Quarter Report (2009, p.16) 'there has been a strong increase in the number of the housing loans used at the third quarter period of the year among the quarter periods. The fourth quarter of the year 2008 became the year when the least number of housing loans used with the number of 27.441 and 1.58 billion TL by the effects of the crisis. At the following period, housing credits expanded in terms of number and volume and they have shown a strong increase with the number of 96.808 and 6 billion TL at the third quarter. Decreasing interest rates, increase in the consumer demand and the appetite of the banks for providing loan had a role in the strong increase.'

Although there is an increase of 2.1 per cent during 2007-2009 in bank non-performing loans (Table 1) Turkey is still better off compared to other emerging and developing economies. The main reason for this is subprime mortgages which means housing loans given to low income citizen with the possibility of higher default rates is non-existent in Turkey as the regulators carefully checks the 'real payment capacity of home buyers' financial soundness of creditors, and proper appraisal and credit rating' (Erol, 2007, p.3). Furthermore Banking Regulation and Supervision Agency (BRSA) made an extremely important decision for limiting the lending rates in housing loans, according to which as of 1 January 2011 maximum loan amount cannot exceed 75 per cent of collateral real estate value with the aim of limiting credit risk. Such a restriction is believed to create a more healthy and robust housing market financing in the coming years.

Table 1 : Bank Nonperforming Loans to Total Loans

(in percent)	2004	2005	2006	2007	2008	2009	Latest
Advanced economies							
Australia ⁴⁰	0.2	0.2	0.2	0.2	0.8	1.1	September
Austria ^{32,33}	2.7	2.6	2.7	2.2	1.9	2.3	September
Belgium ¹³	3.3	2.0	1.7	1.1	1.7	2.7	December
Canada	0.7	0.5	0.4	0.7	1.1	1.2	September
Czech Republic	4.0	3.9	3.7	2.8	3.3	5.3	December
Denmark	0.7	0.4	0.3	0.3	...	...	December
Finland ¹⁹	0.4	0.3	0.3	0.3	0.4	...	June
France ^{15,21}	4.2	3.5	3.0	2.7	2.8	...	December
Germany	4.9	4.0	3.4	2.6	2.8	...	December
Greece	7.0	6.3	5.4	4.5	5.0	7.2	September
Hong Kong SAR ²⁴	2.3	1.4	1.1	0.8	1.2	7.5	September
Iceland ⁶	0.9	1.1	0.8	...	...	...	December
Ireland ¹⁸	0.8	0.7	0.7	0.8	2.6	7.5	September
Israel	2.5	2.3	1.9	1.4	1.5	1.5	June
Italy ¹⁷	6.6	5.3	4.9	4.6	4.9	6.2	June
Japan ⁴¹	2.9	1.8	1.5	1.4	1.6	1.8	September
Korea ²⁴	1.9	1.2	0.8	0.7	1.1	1.5	September
Luxembourg ¹⁸	0.3	0.2	0.1	0.2	...	1.0	March
Malta	6.5	3.9	2.8	1.8	1.6	...	December
Netherlands	1.5	1.2	0.8	...	...	...	December
Norway	1.0	0.7	0.6	0.5	0.8	1.1	September
Portugal ¹⁸	2.0	1.5	1.3	1.5	1.9	2.8	June
Singapore	5.0	3.8	2.8	1.5	1.7	2.3	September
Slovak Republic ²²	2.6	5.0	3.2	2.5	3.2	4.3	October
Slovenia	3.0	2.5	2.5	1.8	1.8	2.3	November
Spain ²¹	0.8	0.8	0.7	0.9	3.4	5.1	December
Sweden ²²	1.1	0.8	0.8	0.6	1.0	2.0	December
Switzerland	0.9	0.5	0.3	0.3	0.5	...	December
United Kingdom	1.9	1.0	0.9	0.9	1.6	3.3	June
United States ²⁴	0.8	0.7	0.8	1.4	2.9	5.4	December
Emerging and developing economies							
Central and Eastern Europe							
Albania	4.2	2.3	3.1	3.4	6.6	9.7	September
Bosnia and Herzegovina	6.1	5.3	4.0	3.0	3.1	4.8	September
Bulgaria ⁴⁷	2.0	2.2	2.2	2.1	2.5	6.0	September
Croatia	7.3	6.2	5.2	4.8	4.9	6.4	September
Estonia	0.3	0.2	0.2	0.4	1.9	5.2	December
Hungary	1.8	2.3	2.6	2.3	3.0	5.9	September
Latvia ⁴⁴	1.1	0.7	0.5	0.8	3.6	16.4	December
Lithuania ⁶	2.2	0.6	1.0	1.0	4.6	19.4	December
Macedonia, FYR ¹	17.0	15.0	11.2	7.5	6.8	9.5	September
Montenegro ⁸	5.2	5.3	2.9	3.2	7.2	12.4	November
Poland ^{7,23}	14.9	11.0	7.4	5.2	4.4	7.0	September
Romania	8.1	2.6	2.8	4.0	6.5	14.8	October
Serbia ¹²	...	...	...	...	11.3	15.5	December
Turkey ⁴²	6.5	5.1	3.9	3.6	3.8	5.7	November

Source: International Monetary Fund (IMF), Global Financial Stability Report, April 2010 p.213

2.2.2 Mortgage Sector in UK

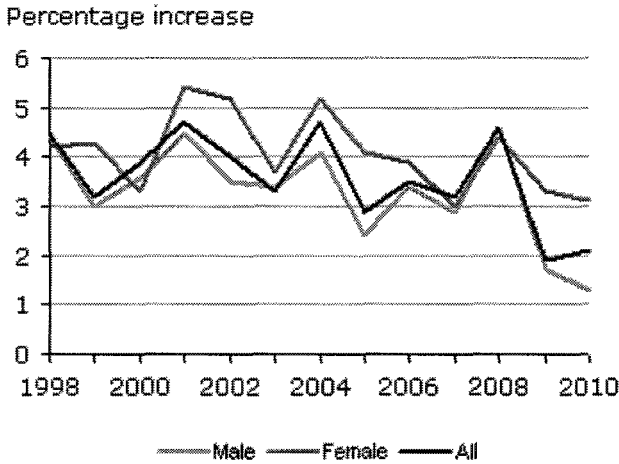
Growth in UK housing market due to the financial deregulation and liberalization measures (Table 2) as well as many years of stable economic growth and low inflation rates slowed down after, a sudden decline in economic and financial conditions with the outbreak of global crisis in 2007-2008. The earnings ratio fell down (Chart 4), inflation surged (Chart 5) and GDP deteriorated (Chart 6) and the house prices fell down sharply (Chart 7) after a long time. The growth of mortgage lending went through a downfall (Chart 8) as of 2007 due to tightening of credit conditions and economic downturn.

Table 2: Selected Financial Deregulation and Liberalisation Measures Affecting the Housing Market

United Kingdom	Credit controls, "the curbs", eliminated in 1980 Bank of England's minimum lending rate abolished in 1981 Banks allowed to compete with building societies for housing finance after 1981 Building societies allowed to expand their lending business after 1986 Government withdrew guidelines on mortgage lending in 1986 Securitisation introduced in 1987 Implementation of Second Banking Directive (89/646/EEC) into national law in 1993
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Source: Organisation for Economic Co-operation and Development (OECD), 2008, p.173.

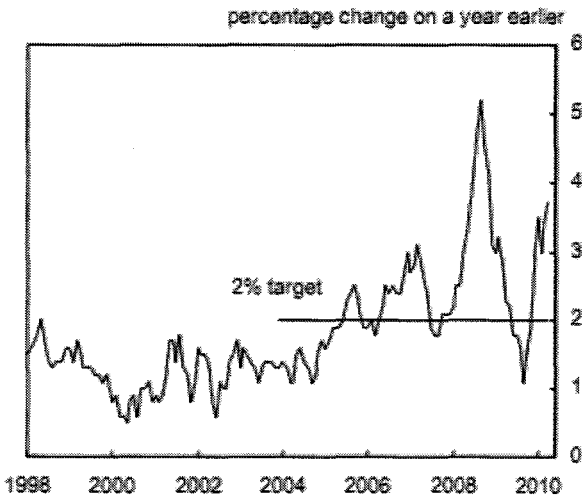
Chart 4: Earnings Ratio in UK



Growth in median gross weekly earnings of full-time employees by sex, United Kingdom

Source: Office for National Statistics, 2010.

Chart 5: CPI Inflation^(a) UK

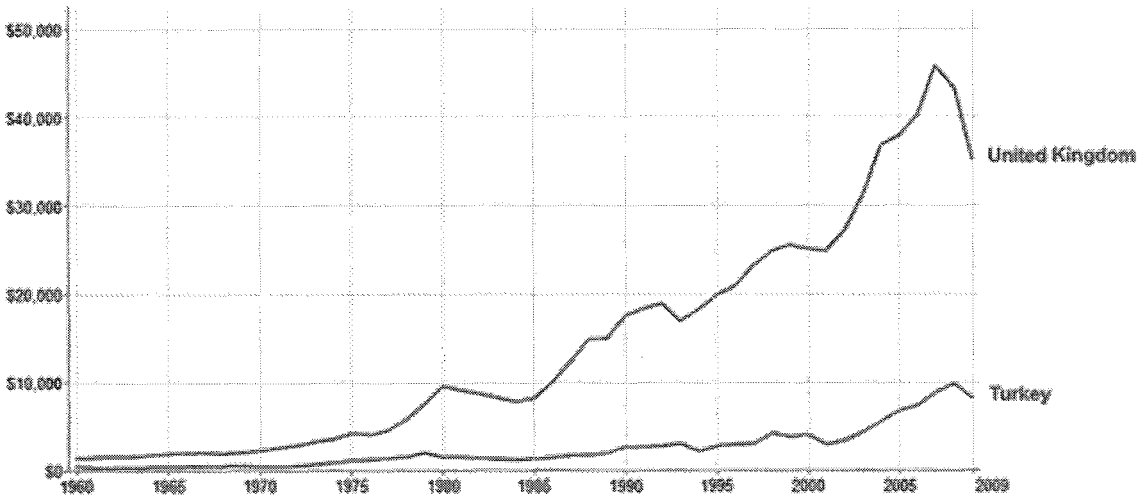


(a) Includes data up to April 2010.

Source: Fisher, 2010.

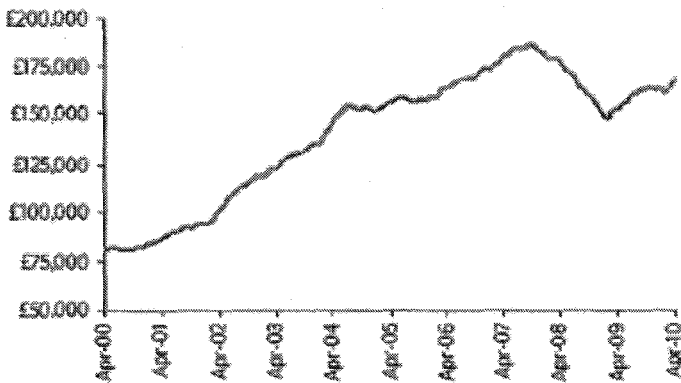
Chart 6: GDP per Capita at Current Prices- UK and Turkey

Gross Domestic Product per capita at current prices. Not adjusted for inflation and converted to US dollars applying market exchange rates.



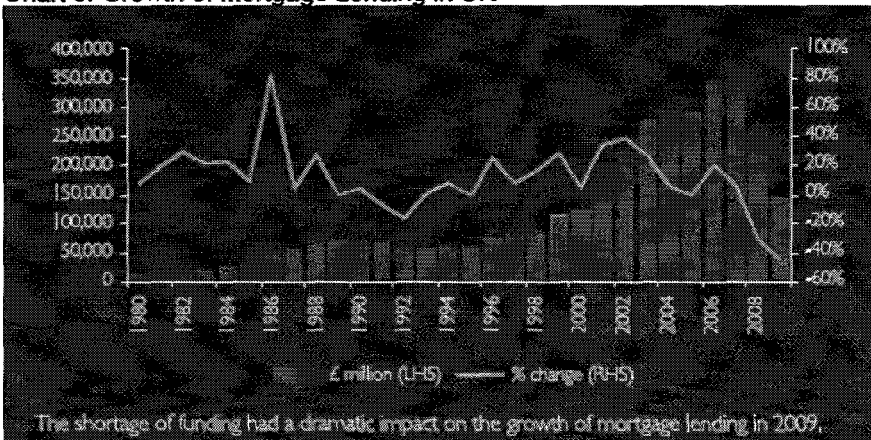
Source: google.com Public Data, 2011.

Chart 7: Average UK House Price



Source: Nationwide, 2010.

Chart 8: Growth of Mortgage Lending in UK

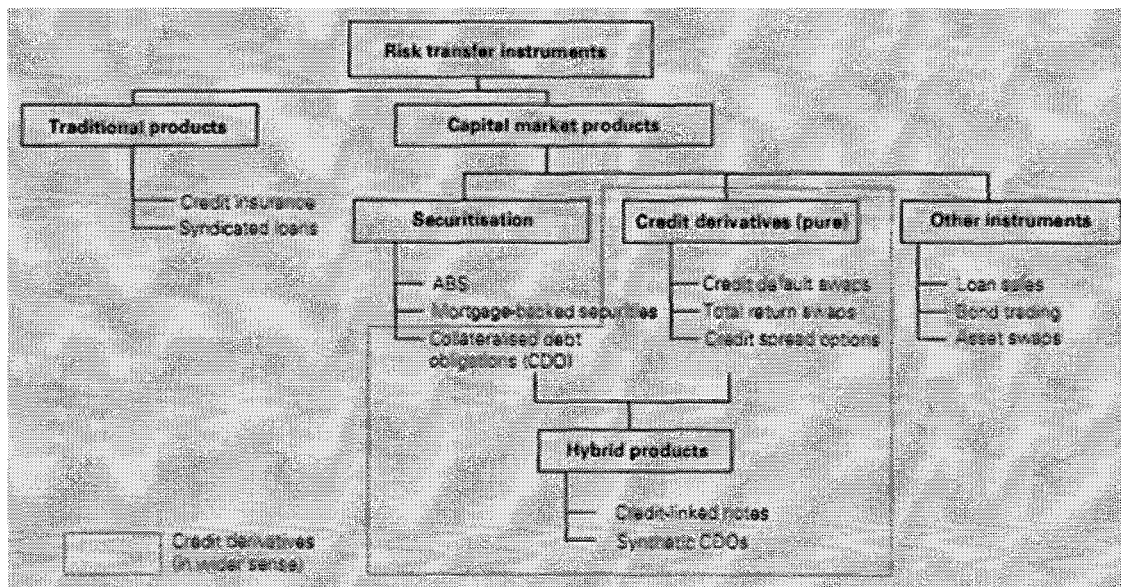


Source: Council of Mortgage Lenders (CML), 2009, p.17.

2.3 The Role of the Securitization and Structured Financial Instruments in Global Financial Crisis

Macro-economic imbalances between the economies of the east and the west resulted in the decrease of risk-free interest rate, which enabled an increased supply of cheap credits, dependence on wholesale funding. And due to the financial innovation of the financial intermediaries complex securitized credit instruments and credit derivatives for the investors who wanted to invest in bond-like instruments in order to obtain higher yields than the low risk-free rate of government bonds were introduced. 'The old view (prevalent before outbreak of the credit crisis of 2007/8) emphasized the positive role played by securitisation in dispersing credit risk, thereby enhancing the resilience of the financial system to defaults by borrowers' (Shin, 2009, p.309), as well as reducing the costs of intermediation of credits. Therefore, diversifying the risks (Figure 1) was supposed to reduce the risks of the entire banking system. However, 'when the crisis broke it became apparent that this diversification of risk holding had not actually been achieved. Instead most of the holdings of the securitized credit, and the vast majority of the losses which arose, were not in the books of end investors intending to hold the assets to maturity, but on the books of highly leveraged banks and bank-like institutions' (FSA, 2009, p.16).

Figure 1: Structured Finance Instruments



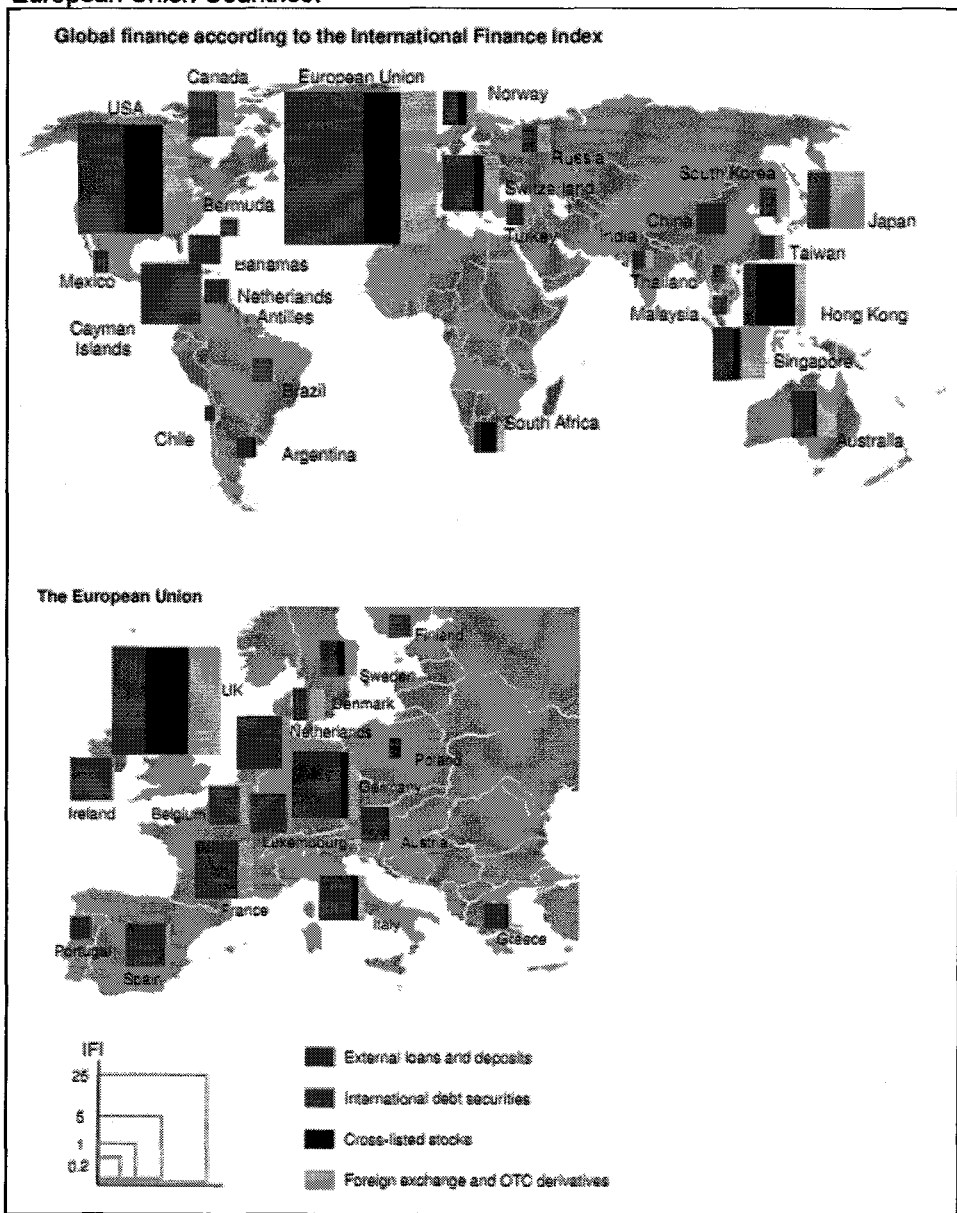
Source: Deutsche Bank Research, 2003, p.5.

'In normal market parlance, the term "securitization" has had two primary meanings: Initially, the term was applied to the process of disintermediation, or the substitution of security issues for bank lending. More recently, the term has been used to refer to so-called "structured finance", the process by which (relatively) homogeneous, but illiquid, assets are pooled and repackaged, with security interests representing claims to the incoming cash flows and other economic benefits generated by the loan pool sold as securities to third-party investors' (Lumpkin, 1999, p.25).

Through structured finance instruments these cash flows of the same transaction are further divided into senior, mezzanine and equity tranches, from the least risky to the least in order, and sold to investors whose return depends on the risk taken.

By means of securitization the risks were managed more effectively, lending activities were leveraged as the banks were no longer bound to hold the credit risk on an ongoing basis. Furthermore, the credit rating agencies' generosity in overrating these securities and the worn off Basel I rules due to capital arbitrage which 'refers to strategies that reduce a bank's regulatory capital requirements without a commensurate reduction in the bank's risk exposure' (Meyer, 2001) led to the rapid and unrestrained growth of securities and derivatives market.

Chart 9: Global Finance According to the International Finance Index (IFI) and the Finance in European Union Countries.



Source: Wójcik, 2007, p. 9.

Chart 10: International Finance Location Quotient (IFLQ) and International Finance Diversity Index (IFDI)



Note: Axes X and Y are scaled according to the ranking of countries based on the IFLQ and the IFDI respectively.

Source: Wójcik, 2007, p. 10.

2.3.1 Securitization and Structured Finance in Turkey

In Turkey, the history of securitization is not so long as in developed countries. According to Erol (2006, p.3), the former vice-president of Capital Markets Board of Turkey, in the period between the years 1992-1997 the ratio of the issuance of asset backed securities (ABS) to the total securities issuance was 55 per cent, while its ratio to the total transaction volume of second-hand market was 0.4 per cent. In other words, the desired achievement in the secondary market of could not be obtained. The main causes of this situation are short-term nature of issuance of ABS and that they are not traded in an organized market. Due to the investors' desire to hold short-term securities and the fact that secondary market transactions are made by the bank which issues the securities, the secondary market operations has been limited. Therefore, due to the incompetency of investment banking, banks in Turkey did not invest in highly risky financial instruments.

Turkish financial sector is underdeveloped (Chart 10) and lags behind the developed countries in terms of diversity of financial instruments (Chart 9) however; ironically it is this traditional structure that protected the banking system from the contagion of the toxic assets which spreads through highly

complex, opaque, risky and structured instruments. If we look at Table 3 we can see that even the ABS were non-existent after 1999.

Table 3: Securities Issues Registered with the Capital Markets Board of Turkey (TL Thousand)

Years	Stocks*	Mutual Funds Part. Cert.**	Asset Backed Sec.	Pension Funds Shares*	Govt. Bills & Bank Guaranteed Secs.	Other	Total
1985	102	0	0	0	60	112	274
1987	187	45	0	0	76	374	682
1988	364	53	0	0	238	482	1,137
1989	872	162	0	0	98	1,072	2,304
1990	4,107	855	0	0	330	981	6,273
1991	4,444	65	0	0	726	1,496	6,131
1992	6,323	92	14,461	0	770	1,864	22,530
1993	9,573	5,355	52,756	0	2,368	1,921	71,993
1994	37,553	2,203	42,299	0	2,025	648	84,728
1995	51,333	4,249	113,928	0	1,300	3,716	174,526
1996	102,202	8,945	41,629	0	2,362	6,823	161,961
1997	305,732	34,330	23,000	0	9,835	5,453	378,450
1998	596,822	131,423	11,000	0	0	2,933	841,778
1999	676,671	176,674	0	0	0	0	853,345
2000	3,007,974	2,767,908	0	0	12,471	3,943	5,792,296
2001	1,684,458	3,833,879	0	0	147,697	67,321	5,730,395
2002	1,597,317	2,405,346	0	0	83,614	107,041	4,193,318
2003	1,749,597	6,078,693	0	40,000	0	13,437	7,881,727
2004	3,826,540	6,572,431	0	297,920	0	0	10,696,891
2005	3,991,870	2,390,989	0	329,187	0	13,000	7,065,059
2006	10,880,574	3,356,209	0	5,900,000	0	150,000	17,058,317
2007	7,863,757	1,848,305	0	450,000	0	380,210	10,542,282
2008	11,596,190	2,370,162	0	12,639,377	0	643,956	27,349,685
2009***	4,453,067	23,205,100	0	14,400,000	100,000	240,400	42,398,587

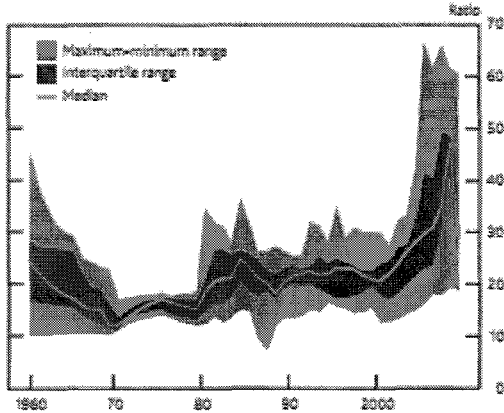
* Market value of the issue of capital increases 11 times
** Per value of TL 22, market value for 1999 is TL 1 afterwords
*** Total value of all capital increases TL 9.1 billion

Source: Capital Markets Board of Turkey, 2009, p.26.

2.3.2. Securitization and Structured Finance in UK

Banking sector of UK is at the center of international finance therefore, the financial crisis had a deep impact on UK banks as they were exposed to securities related to subprime lending and the credit and funding conditions were getting worse. The underlying reason was UK banks' very high risk taking due to extremely high leverage (Chart 11) and increasing volume of complex financial instruments. Since interbank lending tightened, the financial market liquidity slumped (Chart 12) and UK banks also tightened their credit lending to households and businesses (Chart 13). Hence, 'the UK was the largest European issuer in 2009 but funding of banks was much reduced and the UK's share of the European market therefore dropped to 21% from 38%' (The City UK, 2010, p.2).

Chart 11: Leverage, UK Banks^{(a)(b)}

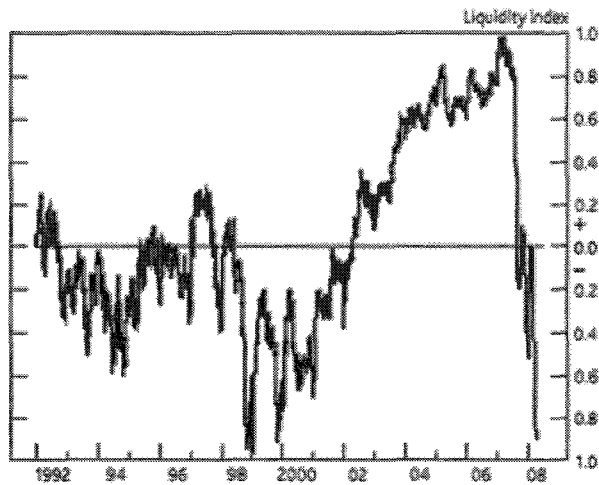


Source: Published accounts.

(a) Ratio of total assets to shareholders' claims.
 (b) See footnote (a) to Chart 6.

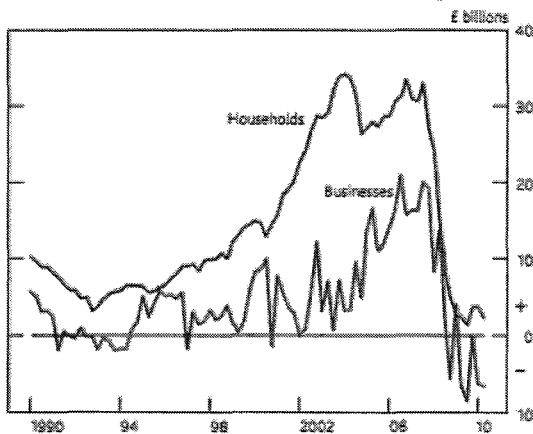
Source: Bank of England, Quarterly Bulletin, 2010 Q4, p.329

Chart 12: UK Financial Market Liquidity



Source: Bank of England, 2008, p.6.

Chart 13: Quarterly Flow of Net Lending to UK Households and Businesses^(a)



(a) Lending to individuals and M4 lending (excluding securitisations) to private non-financial corporations (PNFCs).

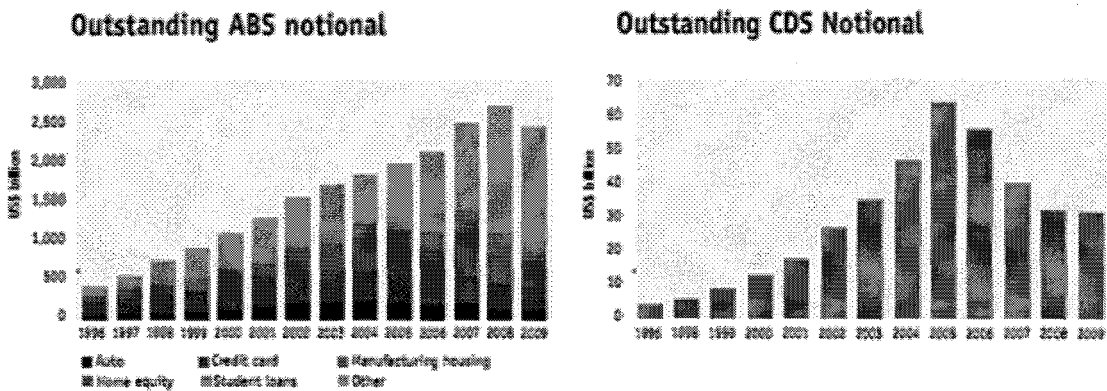
Source: Bank of England, Quarterly Bulletin, 2010 Q4, p.311.

In the whole European Union Region, UK has the highest diversity of international finance instruments (Chart 7). According to Financial Services Authority FSA (2010, p.29) in UK there is:

- a 'rapid growth in the value of the total stock of credit securities;
- a significant increase in the complexity of, and in some cases embedded leverage within, the structured finance securities sold (particularly Asset Backed Securities (ABS)); and
- a related explosion in the volume of credit derivatives, enabling investors and traders to hedge underlying credit exposures, or to create synthetic credit exposures.'

However, there is a significant fall in volumes of Credit Default Swaps, on the other hand ABS' volume is relatively high due to Special Liquidity Scheme which operated between April 2008-January 2009 and which enabled banks to exchange their illiquid assets such as mortgage backed securities with UK Treasury Bills (Chart 14).

Chart 14: UK Outstanding ABS and CDS Notional



Source: Financial Services Authority (FSA), *The Prudential Regime for Trading Activities: A Fundamental Review*, 2010, p.29.

CHAPTER 3

IMPACTS OF GLOBAL FINANCIAL CRISIS ON TURKISH AND UK BANKS

3.1 Impacts on Turkish Banks

Turkish financial system and banking almost became the least affected from 2007 mortgage crisis. Especially Europeans started to examine Turkish banking system which got stronger by learning from previous crises. Because Turkish banking system acknowledged its mistakes from previous crises, purged of them and the system became more resistant to crises. So it is possible to say that "Impact that doesn't kill makes you stronger" (Yardımcıoğlu & Genc, 2009, p.1).

In the face of the effects of global crisis, the Turkish banking sector had two important advantages:

- First of all it has a much higher capital adequacy ratio (around 18-20%- see Table 6) between 2007-2010 compared to the minimum Basel II capital requirement of 8 per cent (Bank for International Settlements, 2004, p.12) and was unaffected by the liquidity problems after a difficult and long-term restructuring process after the 2001 Turkish financial crisis.
- Secondly, unlike the developed countries at the heart of the crisis, Turkish banking system was not holding highly risky toxic assets.

3.1.1 General Outlook in the Turkish Banking Sector

The banking sector plays a major role in the financial system of Turkey as banks execute most of the transactions in money and capital markets. According to Selçuk (2010, p.23) the general opinion is in the direction of Turkish banking sector being much more stronger and healthier than the other countries negatively affected by the global crisis. The countries which have a leading role in the crisis, the financial systems of which required government intervention implemented extensive restructuring packages, none of which was necessary in Turkey.

When we look at the big picture, we can see that:

- The asset size of banks kept increasing despite the crisis (Table 4)

Table 4: Asset Size of Financial Sector in Turkey

(TL Billion)	2002	2003	2004	2005	2006	2007	2008	2009	2010/03	± Dis.2010/03
CBRT	74,1	76,5	76,7	80,1	104,4	108,6	113,5	110	112,0	7,8
Banks	212,7	243,7	305,4	408,9	499,7	581,6	732,5	894	860,5	59,8
Financial Leasing Companies	3,8	5	6,7	6,1	10	15,7	17,1	14,6	14,3	1,0
Factoring Companies	3,1	3,9	4,1	5,3	6,3	7,4	7,8	10,4	11,1	0,8
Consumer Financing Companies	0,5	0,8	1,5	2,5	3,4	3,9	4,7	4,5	4,5	0,3
Asset Management Companies	v.y.	v.y.	v.y.	v.y.	v.y.	0,2	0,4	0,4	0,4	0,0
Insurance Companies	5,4	7,5	9,8	14,4	17,4	22,1	26,5	33,3	32,6	2,3
Pension Companies	0	3,3	4,2	5,7	7,2	9,5	12,2	15,7	16,5	1,1
Securities Intermediation Ins. (1)	1	1,3	1	2,6	2,7	3,8	4,2	5,2	5,2	0,4
Investment Trust	0,1	0,2	0,3	0,5	0,5	0,7	0,8	0,7	0,7	0,0
Securities Investment Funds	9,3	19,8	24,4	29,4	22	26,4	24	25,6	28,9	2,0
ISE Tot. Market Capitalization (2)	56,4	96,1	132,6	218,3	230,0	335,1	182,0	330,8	347,4	24,1
Real Estates Investment Trusts	1,1	1,2	1,4	2,2	2,5	4,1	4,3	4,7	4,7	0,3
Venture Capital Trusts	0	0	0,1	0,1	0,1	0,2	0,1	0,2	0,2	0,0
Total	386,5	464,4	567,2	784,1	905,2	1.118,3	1.529,9	1.414,1	1.439,0	100,0

Data of March 2010 is not published yet(1), so the data of December 2009 (2) and the data of February 2010 is used.

Source: Banking Regulation and Supervision Agency, *Financial Markets Report*, 2010, p.14.

- The number of banks (Table 5) which were 50 in 2007 dropped to 49 in the following year, which has remained the same so far. No bank is sold, merged or changed hands due to any restructuring in the system.
- There is an increase in the number of branches and in the number of personnel in spite of the global crisis. Furthermore, according to Alp (2011) in Turkey, banks will open 1000 more branches and will recruit 10 thousand people in 2011.
- There is also an overall increase in the number of POS machines, ATMs and the number of internet banking customers according to the Banking Regulation and Supervision Agency (2010, p.15).
- The Loan/Deposit ratio in Turkish banks is below 100 per cent (Chart 15), which indicates the soundness of Turkish Banking system in terms of its ability to pay the depositors whenever necessary and, its traditional structure.

Table 5: Indicators of Access to Banking Services (Turkey)

(Number)	2005	2006	2007	2008	2009/03	2009/06	2009/09	2009/12	2010/03	Variation ²
Number of Banks	51	50	50	49*	49*	49*	49*	49*	49*	0
Public Deposit Banks	3	3	3	3	3	3	3	3	3	0
Private Deposit Banks	17	14	12	11	11	11	11	11	11	0
SDIF Banks	1	1	1	1	1	1	1	1	1	0
Global Deposit Banks (1)	13	15	17	17	17	17	17	17	17	0
Development and Investment Banks	13	13	13	13	13	13	13	13	13	0
Participation Banks	4	4	4	4	4	4	4	4	4	0
Number of Branches	6,568	7,302	8,122	9,304	9,344	9,374	9,428	9,581	9,601	20
Deposit Banks	6,241	6,904	7,658	8,724	8,758	8,783	8,832	8,988	8,986	18
Development and Investment Banks	35	42	42	44	46	50	46	44	42	-2
Participation Banks	292	356	422	536	540	541	550	569	573	4
Number of Personnel	198,724	150,986	167,760	182,667	182,120	182,468	182,226	184,216	186,619	2,403
Deposit Banks	127,851	138,999	133,212	166,328	165,768	165,957	165,483	167,074	169,117	2,043
Development and Investment Banks	5,126	5,355	5,361	5,307	5,279	5,296	5,275	5,340	5,377	37
Participation Banks	5,747	7,112	9,187	11,032	11,073	11,215	11,468	11,802	12,125	323
Number of ATMs	14,836	16,313	18,785	21,953	22,291	22,733	23,284	23,952	24,593	641
Number of POS Machines (Thousand)	1,141	1,283	1,629	1,888	1,891	1,975	2,007	2,048	2,067	19
Nr. Of Intern. Bank Active Customers (Th.)	3,177	3,368	4,274	5,169	5,419	5,593	5,753	5,974	6,006	32

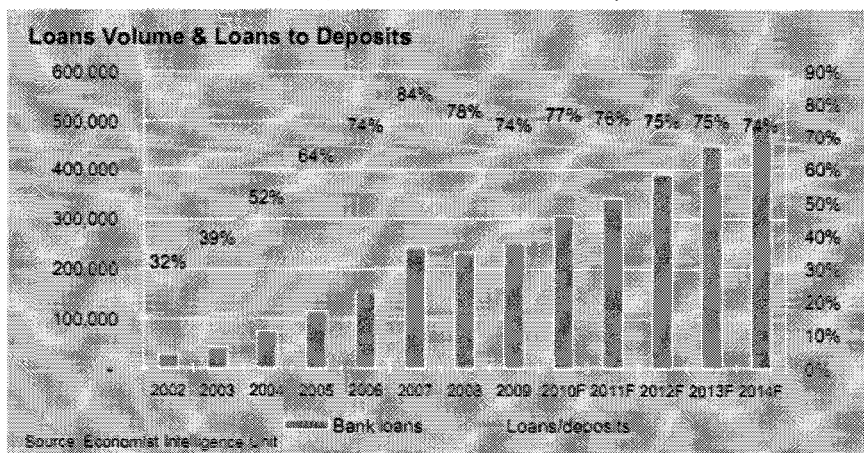
Source: BRSA, ICC, BAT

* A bank in liquidation is not included in the total.

[1] Banks of which 50% and more of capital belongs to foreigners. [2] Variation comparing to previous period.

Source: Banking Regulation and Supervision Agency, *Financial Markets Report*, 2010, p.15.

Chart 15: Loans Volume & Loans/Deposit Ratio of Turkish Corporate Banks



Source: Deloitte & Republic of Turkey Prime Ministry Investment Support and Promotion Agency of Turkey, 2010, p.21.

- Capital adequacy ratio of Turkish banking sector has been well above the Tier 1 standard of 8 per cent (Table 6).

Table 6: Banking Sector Financial Soundness Indicators (Turkey)

(%)	2005	2006	2007	2008	01.09	06.09	09.09	12.09	03.10
Capital Adequacy Standard Ratio	23,7	22,3	18,5	8,0	18,5	19,2	20,0	20,5	20,5
Free Capital/Total Own Funds	65,7	71,6	75,3	77,0	78,5	78,9	79,4	79,6	80,5
Total Own Funds/Total For. Resources (1)	15,5	13,5	15,0	13,4	13,9	14,6	15,2	15,3	15,7
Total Own Funds/Total Assets	13,4	11,9	13,0	11,8	12,2	12,7	13,2	13,3	13,6
Loans/Total Own Funds	286,0	387,8	376,6	425,7	399,2	376,4	356,4	354,5	357,0
Liquidity Indicators (2)	51,8	50,3	47,0	34,4	37,7	39,0	41,5	41,0	43,0
PX Net General Position/Own Funds	-0,2	0,5	-0,3	0,0	0,0	0,5	0,6	0,0	-0,6
Non-Sale Since Sheet Transactions/Total Assets	55,5	66,3	66,3	64,9	70,1	67,2	78,8	99,5	73,8
NPLs/Gross Loans	4,8	3,8	3,5	3,6	4,5	4,9	5,3	5,3	4,9
NPL Provisions/NPLs	88,7	89,7	86,8	79,9	77,5	79,6	80,4	83,5	82,9
Individual Loans/Total Loans	31,1	32,3	33,2	32,1	31,8	33,0	33,0	33,3	33,0
Nr. Of Profiting Banks/Total Nr. Of Banks	45/51	41/50	46/50	45/49	46/49	46/49	43/49	46/49	46/49
Assets of Profiting Banks/Total Assets	93,9	98,4	99,3	99,9	99,8	99,8	99,8	99,8	99,6
After-Tax Return on Assets (ROA)	1,7	2,5	2,8	3,0	3,1	2,2	2,4	2,6	2,6
After-Tax Return on Equities (ROE)	10,9	19,2	17,7	16,8	17,7	8,2	19,0	20,7	19,9
After-Prrov. Net Interest Incomes/Total Gross Incomes (3)	30,8	28,9	26,7	24,8	25,3	27,9	29,3	30,6	30,6
Interest Expenses/Total Expenses	55,8	65,3	67,7	67,3	66,2	64,3	63,0	60,9	54,5
Interest Incomes/Interest Expenses	176,3	160,9	158,0	156,5	173,8	83,7	180,0	195,7	218,3
Non-Interest Incomes/Non-Interest Expenses	52,0	79,3	72,3	65,5	75,0	73,5	70,7	68,7	78,2

(1) Total Foreign Liabilities/Total Liabilities-Total Own Funds (2) Liquidity Indicator* (Cash Values+ Receivables from Banks (including receivables from Central Bank and Monetary Markets +Marketable Securities +Securities Ready to Sale +Required Reserves)/(Deposit+ Debts to Banks (including debts to Central Bank and Monetary Markets) (3) Total Gross Incomes = Interest incomes +Non-Interest Incomes

Source: Banking Regulation and Supervision Agency, *Financial Markets Report*, 2010, p.16.

All in all, if we look at the indicators of access to banking services (Table 5), the overall picture shows us that the impact of the global financial crisis is not very influential in a negative way on the Turkish banking sector which continues to grow with the confidence of the restructuring process it went through after 2001.

3.2 Impacts on UK Banks

3.2.1 British Casualties

'The global financial crisis has intensified over the past month, with the UK particularly badly affected. In many ways the UK is more exposed to the pressures that have triggered the global downturn than other economies, with the possible exception of the US, and these pressures have arrived at the same time as a significant slowdown in the real economy' (Economic Outlook, 2008, p.6).

Northern Rock was the first British casualty in the face of the crisis which could not refinance itself and it 'asked for and been granted emergency financial support from the Bank of England' on 13 September 2007 and the next day the bank experienced 'the biggest run on a British bank for more than a century' (BBC News, 2009) with the withdrawals amounting up to £1 billion. Therefore, on 17 September the government had to guarantee the savings to calm down the alarmed depositors. The main reasons for the collapse of Northern Rock are:

- its aggressive strategy in mortgage lending
- its heavy reliance on wholesale market for funding its mortgage lending insomuch as 'borrowing 75 per cent of its money from the wholesale market and lending it out in the form of mortgages' (Brummer, 2008, p.12).
- its extremely high loan/deposit ratios (Table 7) which also shows its dependence on wholesale market and not on deposits of customers.

Table 7: Loan/Deposit Ratios of UK Banks

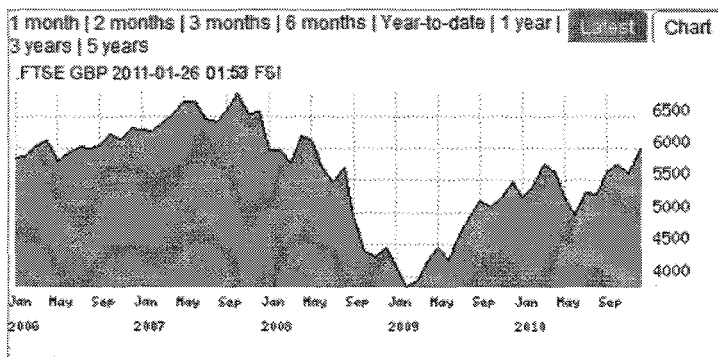
<i>BANK</i>	<i>LOAN/DEPOSIT RATIOS</i>	<i>MARKET SHARE</i>
HSBC	90%	2.8%
RBS	112.3%	6.2%
Barclays	123.45%	6.3%
Lloyds TSB	140.84%	8.1%
Alliance & Leicester	172.41%	3.6%
Bradford & Bingley	172.41%	3.9%
HBOS	175.43%	20.1%
Northern Rock	322.58%	8.1%
Weighted average LOAN/DEPOSIT RATIO = 174.26%		

Source: Pytel, 2009.

In the rest of the year, although there were no other disasters similar to that of Northern Rock, concerns were growing over magnitude of the losses resulting from the write-downs in securitized assets as well as non-performing loans.

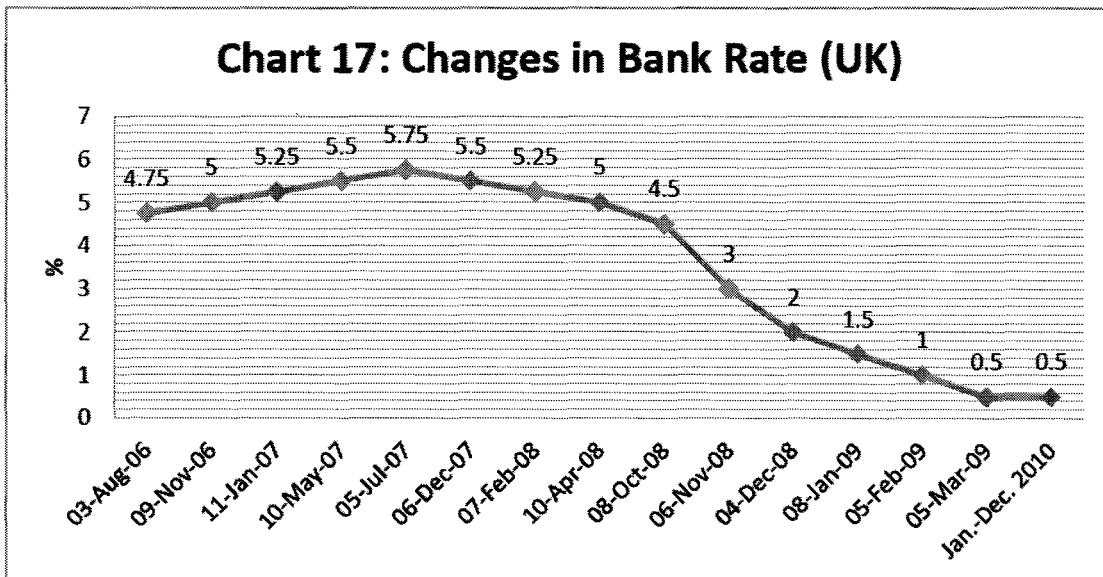
Towards the end of December 2007 UK's FTSE 100 index slumped (see Chart 16), fuelling the fears over losses arising from the subprime loans and the recession in US. In the meantime, the recession in UK economy, and the contraction in housing sector and mortgage market were deepening. The number of mortgage loans fell more than 50 per cent in 2008 (Chart 8) and the prices fell significantly (Chart 7) compared to the previous year.

Chart 16: FTSE 100 Index



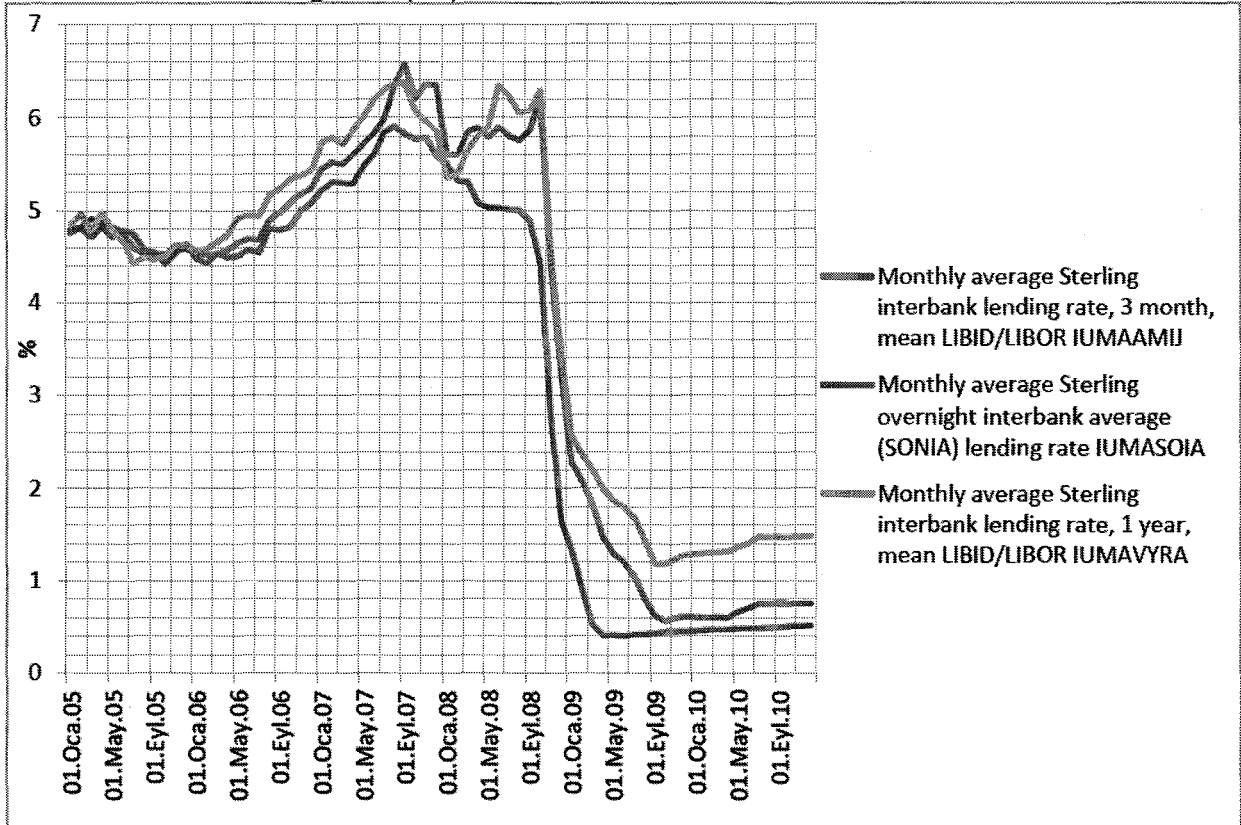
Source: guardian.co.uk, 2011.

'There are now greater linkages between financial services and the rest of the economy than in the early nineties so any multiplier impact of weakening financial services on the rest of the economy are likely to be bigger this time around' (Economic Outlook, 2008, p.7). Due to the global crisis, the growth rate fell significantly and the rate of unemployment increased in UK which also led to an increase in lending rate. Meanwhile the fall in house prices (Chart 7) reduced the value collaterals, which caused the financial positions of the banks to deteriorate and the credit lending terms to tighten. Despite the Bank of England's base rate cuts (Chart 17), 1 year mean and 3-month mean interbank lending rates kept increasing in 2008. When the London Interbank Offered Rate (LIBOR), which sets the interest rate for the wholesale money market, increased (Chart 18), the households and firms in UK faced higher costs of borrowing.



Source: Author's work based on the data from Bank of England, *Monetary Policy Committee Decisions: Official Bank Rate History*, 2011.

Chart 18: Interbank Lending Rates (UK)



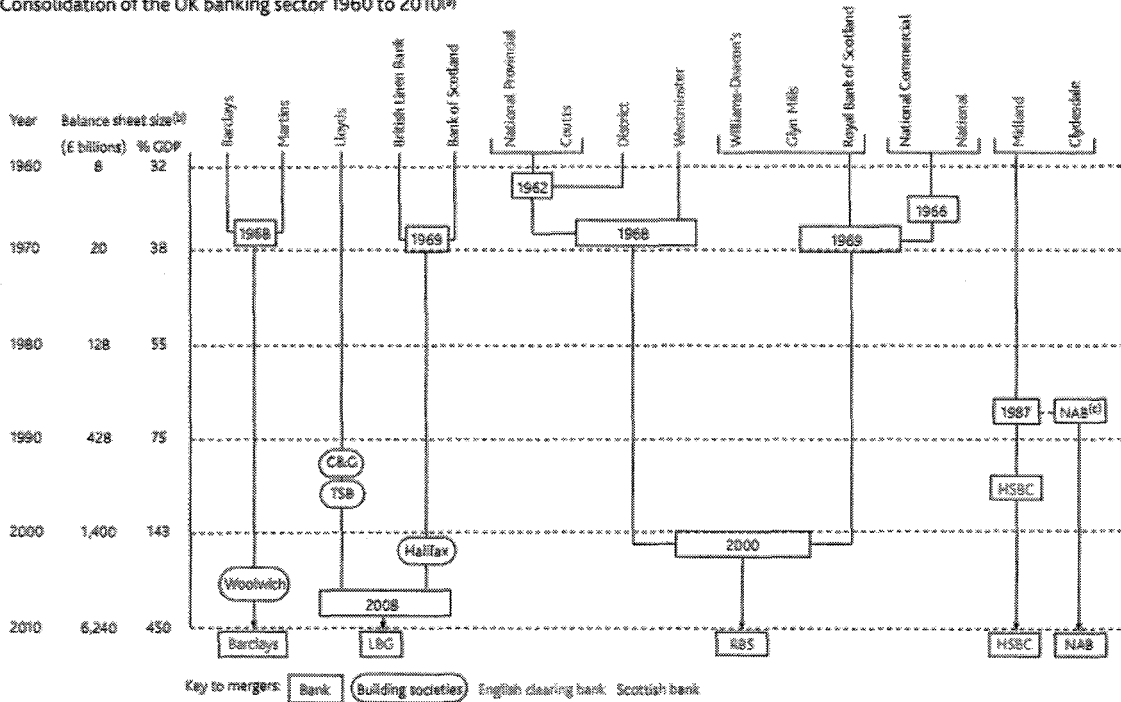
Source: Author's work based on the data from Bank of England, n.d.

Although continuous liquidity injections were made by the financial authorities into the banking system market capitalization of largest UK banks continued to deteriorate (Table 8). In April 2008 Royal Bank of Scotland (RBS) announced to raise £12bn new capital through rights issue which was 'one of the largest seen in UK corporate history' (BBC News, 2008). A few months later Barclays attempted to raise £4.5bn funds via a rights issue however shareholders 'took up only 19 per cent of new shares' (Kollewe, 2008). This was followed by acquisition of its shares by foreign investors. Likewise, HBOS set off for a rights issue with a worth £4 billion however shareholders did not take up more than 90 per cent of its shares. Therefore, the shareholders' rejection of taking up rights issues was an indication of worse days were yet to come.

One of the most significant impacts of the crisis on the financial markets is its consolidation (Figure 2) and downsizing. As a matter of fact, the nationalization of Northern Rock, takeover of Bradford & Bingley and Alliance & Leicester by the Spanish bank Santander, Nationwide's acquisition of takeover two smaller building societies and merger of Lloyds TSB and Halifax Bank of Scotland (HBOS), one of the biggest mortgage lenders of UK, brought about downsizing and monopolization in the sector. Furthermore, as a result of the acquisition of Halifax by Lloyds TSB which means a merger of the mortgage and deposit activities of the two banks, a giant corporate structure which 'hold close to one-third of the UK's savings and mortgage market' (BBC News, 2008).

Figure 2: Consolidation and Monopolization of UK Banking Sector

Consolidation of the UK banking sector 1960 to 2010^(a)



Sources: Bankers Magazine, Collins (1968), published accounts and RBS Archives.

(a) The figure shows bank mergers involving the 16 London and Scottish clearing banks present in 1960, together with their acquisitions of building societies and demutualized building societies.

(b) The balance sheets of institutions are included from the point of merging or acquisition.

(c) Clydesdale was owned by Midland Bank until 1987 when it was sold to National Australia Bank.

Source: Bank of England, Quarterly Bulletin, 2010 Q4, p.323.

Table 8: Market Capitalisation of Banks in FTSE-100 (£ billion)

Banks in FTSE-100	02 April 2007	07 April 2008	06 April 2009
Alliance and Leicester	5.0	2.2	..
Barclays	47.1	32.1	14.3
Bradford & Bingley	2.9	..	..
HBOS	39.3	21.5	..
HSBC	103.1	100.9	74.8
Lloyds-TSB/ Lloyds Banking Group	31.6	25.8	12.9
Northern Rock	4.8	..	..
RBS	62.8	37.1	17.2
Standard Chartered	20.3	25.5	18.9
Total	316.9	245.1	138.1

Source: House of Commons Treasury Committee, 2009, p.7.

CHAPTER 4

FINANCIAL REGULATIONS AND SUPERVISION

After experiencing a financial crisis countries have to face with the shortfalls in their banking systems. At this point, it is necessary to identify the deficiencies in the banking systems so as to strengthen them by restructuring, which may result in supporting and enhancing some banks with capital injection and in liquidation and sales of some others.

4.1 Financial Regulations in Turkish Banking Sector

The Turkish financial sector was also affected by the global economic crisis to a great extent. Deposit and investment banks suffered balance sheet risks more and more, difficulty in obtaining external funding increased and especially towards the end of 2008 and the beginning of 2009, the need for liquidity was felt with all its intensity. 'However, besides sound balance sheets, successful risk diversification and risk management by banks, due to the measures taken by the relevant authorities and the effective public supervision the banking sector in Turkey stayed safe and sound in 2009, without creating any burden on the public. The banking sector continued to support the financing of economic activities' (The Banks Association of Turkey, 2010, p.1-6). However, in order to mitigate the effects of the recent crisis, some measures were taken by Central Bank of Republic of Turkey (CBRT) and Banking Regulation and Supervision Agency (BRSA).

4.1.1 Restructuring of Turkish Banking Sector

From late 1999 on, with the disinflation program, the start signal for the for the restructuring of Turkish banking system was given, subsequent to which a comprehensive Bank Restructuring Program was put into effect in 2001, according to The Banks Association of Turkey (2009, p.6). The first attempts were aimed at creating major transformations in banking law such as passing the responsibilities and authority of the Treasury and the Turkish Central Bank in terms of bank supervision and regulation onto a new established financially and administratively autonomous party, BRSA, which took command in 2000. During this period, for saving deposits an unlimited guarantee was brought in. And below are the steps taken for the process of restructuring the Turkish banking sector:

1- *The control of the Saving Deposit Insurance Fund (SDIF):* The first step taken was to resolve the twenty troubled banks transferred to the SDIF during 1997-2002 by sales and liquidation of some banks, merging some others under the roof of United Fund Bank, owned by the SDIF. In order to restructure these banks under the control of SDIF financially and operationally, 'short term liabilities of SDIF Banks have been liquidated and a portion of deposit and FX liabilities have been transferred to the other banks' (Banking Regulation and Supervision Agency, 2002, p.1). Furthermore the number of employees and the branches were downsized significantly during the process.

2) *The restructuring of banks which are the property of state:* At the second step of the process of restructuring, in order to reinforce the banks which were growing worse in terms of their financial structures due to the delayed repayments of the funds lent to the Treasury for financing the budget, to poor management and to ineffectual utilization of their resources resulting from political intervention, publicly owned resources were used. 'In this framework, a total of USD 21.9 billion (TL 28.7 billion) as of the end of 2001 was transferred to the state-owned banks, including capital support and settlement of the "duty losses", which had reached 50 per cent of their balance-sheets at the end of 2000' (BRSA, 2009, p.6). The banks which are the property of state were merged then and, they were turned into private banks eventually.

3) *Bank Capital Strengthening Program:* At the third step, Bank Capital Strengthening Program, which especially focused on private banks was put into effect where actions to limit market risk was taken and triple-phased audits which were grounded on norms of accounting of the inflation, in contrast to previous periods was made compulsory for private banks whose quality and quantity of equity assets were getting worse due to the crisis, so that they could get the necessary support and funds to strengthen their equity capital. According to BRSA (2002, p.2) after going through these audits, the transfer of Pamukbank, one of the Turkish banks, to SDIF took place at the end of 2001 because of its capital shortage of \$2 billion

4) *Legal arrangements:* The measures the BRSA taken was to make the legal regulatory arrangements so as to enable the banking system to be better audited and supervised; to alter the risk management mechanisms and procedures and lower the risks taken; and to reinforce the infrastructure of the banking system in consequence of which the banking regulations were adjusted to the international norms in line with the best practices in European Union. Therefore, in 2002 Turkey's efforts to implement to Basel II Capital Accord Directives started in order to make the banks' balance sheets transparent, to reinforce the banks structures financially and to meet the requirements of standards of international accounting.

5) *Restructuring the debts owed by the companies to the financial sector:* Besides the banking sector, many companies were affected by the financial crisis of 2001 in Turkey. They were going through insolvency as their activities and productivity dwindled and, investments declined. Therefore they were having difficulties in the repayments of their loans, and in 2002 with the introduction of the Istanbul Approach Program, 'following the completion of necessary regulatory and institutional infrastructures, 169 firms applied for financial restructuring of their debts amounting approximately to USD 2,9 billion as of October 2002 and a total amount of USD 406 billion debt of 28 firms was restructured' (BRSA, 2002, p.2).

4.1.2 The Measures Taken by CBRT, BRSA and the Government in the Recent Crisis

According to the Banks Association of Turkey (2009, pp.2-3)

CBRT;

'* resumed its activities as an intermediary in the foreign exchange deposit market until the removal of uncertainties in international markets (9 October 2008);

- raised its transaction limits by twofold to USD 10.8 billion (23 October 2008) and extended the lending maturity to 1 month from 1 week in the foreign exchange deposit market (21 November 2008);
- adopted a strategy to use foreign exchange reserves to primarily support the foreign exchange liquidity need of the banking system. The reserve requirement ratio was unchanged at 6 per cent in TL liabilities, but it was lowered to 9 per cent from 11 per cent in foreign exchange liabilities (28 November 2008). With this measure, the Bank provided an additional liquidity of USD 2.5 billion to the banking system;
- increased the exports rediscount credit limit by USD 500 million to USD 1 billion in order to contain the effects of the global crisis on industry sectors. Additionally, the rules and principles applicable to the exports rediscount loan limit were rearranged for rendering the use of these loans easier' and BRSA;
- required banks to get permission for distribution of the 2008 earnings;
- allowed banks to reclassify the securities in their balance sheet from trading portfolio to investment portfolio for once only;
- allowed banks to restructure the loans apparently posing no problems in order to ensure smooth functioning of the loan relations between banks and non-financial institutions.

And the Government sought authorization from the Parliament for increasing and determining for a period of two years the deposit insurance coverage, which was TL 50,000.' Furthermore, 'The Central Bank cut its interest rates and extended the maturity in foreign exchange deposit market in order to prevent a possible foreign exchange squeeze in the financial market' (2009,p.4)

4.2 Financial Regulatory Framework in UK

4.2.1 Financial Measures in UK

According to Goddard, Molyneux & Wilson (2009, pp.277-284);

- 'On 17 September 2007 the UK government announced a full guarantee of depositors' savings.
- On 1 October 2007, the UK authorities strengthened the deposit guarantee scheme, by eliminating a provision whereby deposits between £2,000 and £35,000 were only 90% guaranteed, which had contributed to the loss of depositor confidence in Northern Rock.
- Concerns about the possibility of a major slowdown in the UK economy after the collapse of failure of Northern Rock led the Bank of England to implement a base rate cut, on 6 December 2007, to 5.5%. This was the first of a series of cuts which saw the base rate reduced to a historically unprecedented 0.5% by March 2009.
- On 12 December 2007, the Bank of England participated in a co-ordinated international effort to increase liquidity in the interbank markets, by increasing the size of its next two auctions of short-term funds, in December 2007 and January 2008, from £2.85 billion to £11.35 billion each.
- On January 21 2008 as the UK stock market FTSE 100 plummeted The Federal Reserve implemented an emergency 0.75% cut in the federal funds rate on 22 January, and the UK

Monetary Policy Committee followed with a further 0.25% cut in the base rate on 7 February 2008.

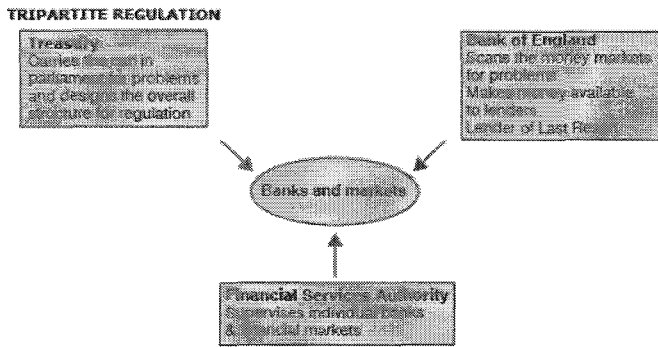
- On 17 February 2008, the UK government announced the remedy of full-scale nationalization (of Northern Rock). On 21 February 2008 the Banking (Special Provisions) Act introduced new provisions for faster intervention and resolution of bank failures, in recognition that authorities' powers to intervene had been inadequate as the crisis at Northern Rock first broke and escalated. The new powers allowed for intervention at a stage before corporate bankruptcy procedures would be triggered. Permissible types of intervention would include transfer of assets and liabilities to a third party bank, transfer of assets to a 'bridge bank', temporary nationalization or liquidation.
- On 21 April the Bank of England announced a Special Liquidity Scheme, to allow banks to swap temporarily high-quality, illiquid mortgage-backed and other securities for Treasury bills (T-bills). Swaps would be available on demand, throughout the following six months. The swaps were initially for a period of one year, but were renewable for periods of up to three years. An estimated £50 billion in liquid assets would be made available through the scheme. The banks would receive liquid assets of lower value than the illiquid securities being exchanged. The swaps were available only for assets existing at the end of 2007.
- Growing concerns about the stalling of the housing market prompted a UK government announcement on 2 September of a temporary (one-year) rise in stamp duty exemption from £125,000 to £175,000.
- On 29 September 2008, after several months of uncertainty, the UK government announced that it was acquiring the mortgage-lending arm of Bradford & Bingley, and selling the still-viable depositor base and branch network to the Spanish Santander banking group.
- On 6 October 2008, the UK government had lifted the ceiling on the deposit guarantee scheme from £35,000 to £50,000.
- Principal features of the UK government's immediate response to the crisis, announced on 8 October 2008, were:
 - The allocation of £50 billion for recapitalization of ailing banks. The mechanism would be government purchase of (non-voting) preference shares.
 - An extension of the Special Liquidity Scheme, making available on demand T-bills to the value of at least £200 billion, to be swapped for illiquid high-quality securitized assets.
 - Treasury guarantees would be provided on commercial terms for up to £250 billion of wholesale funding.
- On 13 October 2008, capital injections were announced for RBS (£20 billion), and Lloyds TSB and HBOS (£17 billion combined), increasing the government stakes in their ownership to around 60% and 40%, respectively.
- On 14 October 2008, the US authorities unveiled a \$250 billion plan to take ownership stakes in a number of banks. In return for government capital injections, the UK banks were required to make commitments to lend at competitive rates to homeowners and small businesses; reschedule mortgage payments for homeowners facing difficulties; and exercise restraint over

executive compensation. Meanwhile Barclays announced that it planned to raise £6.5 billion by private means, avoiding the need for partial nationalization.

- On 14 January 2009, the UK government announced that it would guarantee up to £20 billion of loans to small- and medium-sized firms.
- On 19 January a comprehensive plan was announced to restore confidence to the UK financial markets. Building on the measures implemented in October 2008, the principal features included:
 - Extension of the drawdown window for new debt under the Credit Guarantee Scheme (CGS), intended to reduce the risks on interbank lending.
 - A new facility for asset backed securities to be used as collateral for banks seeking to raise additional funds to support mortgage lending.
 - Extension of the maturity date for the Bank of England's Discount Window Facility, providing liquidity by allowing banks to swap illiquid assets for T-bills. This provision replaced the Special Liquidity Scheme.
 - A new Bank of England facility for purchasing high-quality assets. The Treasury will authorize initial purchases of up to £50 billion, financed by the issue of T-bills.
 - Subject to Treasury assessment on a case-by-case basis, certain bank assets to be eligible for inclusion in a new capital and asset protection scheme.'

Furthermore, with the financial reform on financial framework of UK in 1997, tripartite regulation came into place which is composed of the Treasury, Bank of England and Financial Services Authority (Figure 3). However, the division of powers between these regulatory bodies were blamed for failing to maintain financial stability as their responsibilities were not clear and none of the parties knew what exactly they should do when the crisis broke out. In his speech on 16 June 2010, The Chancellor of the Exchequer states that 'The Bank of England was mandated to focus on consumer price inflation to the exclusion of other things. The Treasury saw its financial policy division drift into a backwater. The FSA became a narrow regulator, almost entirely focussed on rules based regulation. No-one was controlling levels of debt, and when the crunch came no one knew who was in charge' (Osborne, 2010).

Figure 3: Tripartite Regulation in UK



Source: BBC News, 2009.

Therefore he confirmed the abolishment the Tripartite regime and the dismantling of The Financial Services Authority, which will no longer exist in its current form.

CHAPTER 5 RESEARCH METHODOLOGY

5.1 Types of Research

Types of research can be sorted out according to the purpose, process, logic and outcome of the research undertaken. The categories of main types of research according to Collis and Hussey are shown below in Table 9:

Table 9: Classification of Main Types of Research

Type of Research	Basis of Classification
Exploratory, descriptive, analytical (explanatory) or predictive research	Purpose of the research
Quantitative or qualitative research	Process of the research
Deductive or inductive research	Logic of the research
Applied or basic (fundamental or pure) research	Outcome of the research

Source: Collis and Hussey, 2003, p.10.

5.1.1 Types of Research According to the Purpose

- **'Exploratory research** is conducted into a research problem or issue when there are very few or no earlier studies to which we can refer for information about the issue or problem' (Collis and Hussey, 2003, p.10). Instead of a hypothesis being tested or confirmed, ideas, patterns or hypotheses are looked for in this type of research.
- **'Descriptive research** is research which describes phenomena as they exist' (Collis and Hussey, 2003, p.11). In this type of research the characteristics of a specific issue or problem are identified and data is gathered accordingly, which can be summarized afterwards using quantitative and statistical techniques.
- **Analytical or explanatory research** is an extension of descriptive research where 'the researcher goes beyond merely describing the characteristics, to analysing and explaining why or how it is happening.' (Collis and Hussey, 2003, p.11). Its purpose is to find out the explanations and causes of the phenomena.
- **Predictive research** carries the study one step further and by making predictions and generalizations based on the analysis of the phenomena.

5.1.2 Types of Research According to the Process

- **'Quantitative research** is based on the measurement of quantity or amount. It is applicable to phenomena that can be expressed in terms of quantity.
- **Qualitative research**, on the other hand, is concerned with qualitative phenomenon, i.e., phenomena relating to or involving quality or kind' (Kumar, 2008, p. 8).

While the quantitative approach is more objective as it is related to the collection and analysis of the data which is of numerical and statistical nature, qualitative approach is more subjective as it is based on the reflections and perceptions of the researcher rather than the hard and solid data.

5.1.3 Types of Research According to the Logic

- **Deductive Research** is a 'research aimed at testing theories and hypotheses through empirical observation' while,
- **Inductive research** is a 'research aimed at developing theories and explanations based on observations from the empirical world' (Crowther and Lancaster, 2008, p.40).

5.1.4 Types of Research According to the Outcome

- **Basic, fundamental or pure research** is used when the research problem is of a less specific nature, and the research is being conducted primarily to improve our understanding of general issues, without emphasis on its immediate application' whereas,
- **Applied research** is 'designed to apply its findings to solving a specific, existing problem' (Collis and Hussey, 2003, p.13).

5.1.5 Types of Research of This Study

- I have chosen to use *analytical or explanatory research* type according to the purpose of the research, since I have critically evaluated publicly available information so as to explain the causes and impacts of the recent global economic crisis on the banking sectors of Turkey and UK which is quite complex. The phenomenon was already known and there were studies on the banking systems of both countries therefore, it is not exploratory in that sense. And since I have not merely described the issue but also discovered the reasons behind the differences of Turkish and UK banking system, my study is more than a descriptive research. However, since I did not make generalizations out of my analysis or a forecast regarding the solution of a problem related to my study, it is not a predictive research, either.
- According to the logic of the research, I used a combination of both deductive and inductive research types. It is because I happened to arrive at the possibility that Turkish banking sector may not be affected as badly as the UK banking sector from the global crisis relative to their sizes while I was trying to find out how differently they were affected and the underlying causes. Thereby, it is inductive in that sense since I induced general inferences out of particular instances. Accordingly, in my data analysis, I tested this hypothesis by analysing the numerical and statistical data of financial indicators in banking sectors of the two countries to prove it right or wrong.
- According to the outcome, my research type is *basic research* rather than applied research as I did not intend to apply my findings to solve a specific problem. The main purpose of my research was just to improve my understanding of the differences between the Turkish and UK banking sectors and the reasons why Turkish banking sector may be more resilient than UK banking sector in the face of global financial crisis so, basic research seems to be more appropriate.
- And finally, according to the process, the type I have chosen to use is *quantitative approach* instead of qualitative as my subject is based on numerical and statistical data consisting of main financial indicators related to the banking sector such as loan-to-

deposit, liquidity and profitability, and capital adequacy ratios. Whereas, qualitative approach is based on examinations and reflections on perceptions and this makes it subjective unlike my study which uses objective, hard data.

5.2 Type of Data Used in This Study: Qualitative vs. Quantitative

Types of data are categorized into two groups which are *qualitative and quantitative*. While the former refers to the qualities and descriptions of observations of non-numerical materials, the latter 'is data which can be expressed numerically or classified by some numerical value' (Crowther and Lancaster, 2008, p.75). As I have adopted a quantitative approach in my study and the data I have collected is mainly of numerical character, data type of my study is quantitative data.

5.3 Type of Analysis of This Study based on the Analysis of Quantitative Data

In relation to the quantitative approach adopted in this study, the type of analysis used in this study is *exploratory analysis* which 'is useful for summarising and presenting the data in tables, charts, graphs and other diagrammatical forms, which enable patterns and relationships to be discerned which are not apparent in the raw data' (Collis and Hussey, 2003, p.198). In this respect, I have chosen to use *charts and graphs* which 'are suitable for both presenting and summarizing frequency data and, like tables, can be constructed to convey information precisely' (Collis and Hussey, 2003, p.202).

5.4 Sources of Data of This Study: Primary vs. Secondary

According to Crowther and Lancaster, '*primary data* does not actually exist until and unless it is generated through the research process as a part of the consultancy or dissertation or project' (2008, p.74). It is the original data which can be obtained by observations, surveys, experimentations and interviews. And '*secondary data* is data which already exists, such as books, documents' (Collis and Hussey, 2003, p.161).

I only used publicly available secondary data in my research including annual reports of selected banks, statistics, financial stability reports of Bank of England, financial markets reports of Banking Regulation and Supervision Agency of Turkey and other various reports as well as speeches, e-journals, books and online newspaper articles. Since all the data I need was readily available on various sources, obtaining primary data was unnecessary.

5.5 Hypothesis

According to Collis and Hussey, 'a hypothesis is an idea or proposition which can be tested for association or causality by deducing logical consequences which can be tested against empirical evidence' (2003, p.10).

The hypothesis of this research is Turkish banking sector may not be affected as badly as the UK banking sector from the global financial crisis of 2007-2008. In this framework, I am intending to test this hypothesis based on exploratory analysis of quantitative data making use of charts and tables displaying the main financial indicators of the banking systems of both countries. Moreover, comparing and contrasting the two banking sectors, I am planning to prove it right or wrong depending on my findings.

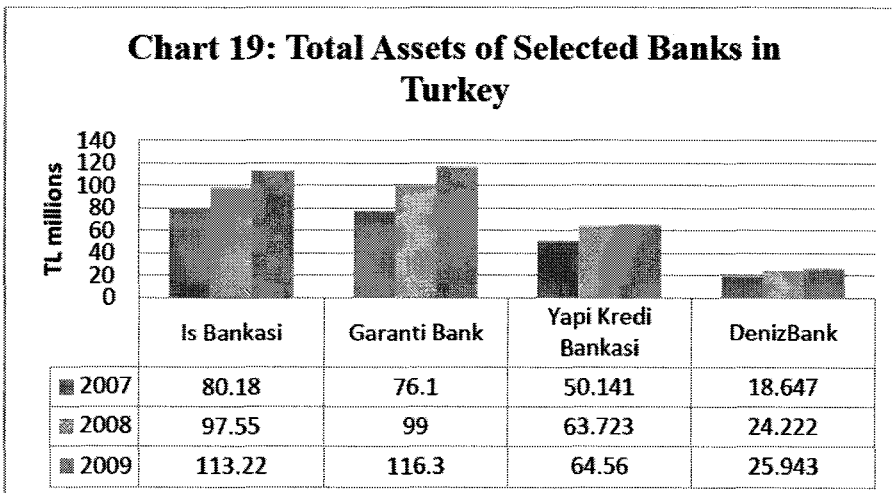
**CHAPTER 6
DATA ANALYSIS**

6.1 Analysis of Main Financial Indicators Showing the Impacts of the Global Crisis on Banking Sectors of Turkey and UK

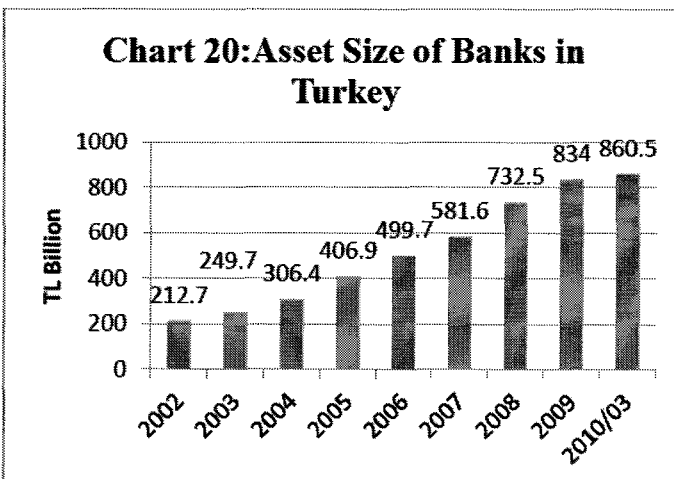
6.1.1 Analysis of Main Financial Indicators of Turkish Banking Sector

6.1.1.1 Total Asset Growth

Turkish banking sector is experiencing a steady growth lately, despite the global crisis. Average total assets of four selected banks of Turkey (Chart 19) demonstrates this steady growth with an average increase of TL23.733 million from 2007 to 2009. And overall, the total asset size of banking sector in Turkey (Chart 20) went up from TL 581.6 in 2007 to TL 834 billion in 2009 with an increase of over 43 per cent in 2009 compared to 2007. Other than total assets, the loans, deposits and especially securities portfolio have been growing steadily (Table 10) with the growth rate of 37.5%, 44.2% and 59.6% respectively in 2009 compared to 2007 figures. However, deposits had been still the most remarkable borrowed capital of the Turkish banking sector.



Source: Author's work based on the data from 2009 Annual Reports of Banks above.



Source: Author's work based on the data from Banking Regulation and Supervision Agency, *Financial Markets Report*, 2010, p.14.

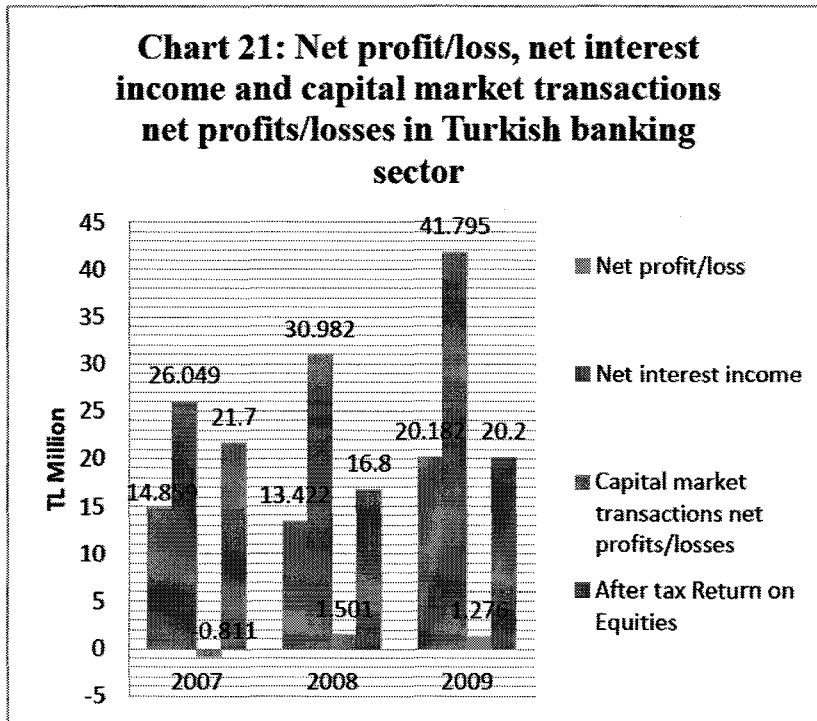
Table 10: Some of the Main Financial Indicators of the Banking Sector in Turkey

TL Billion	2007	2008	2009
Loans	285.616	367.445	392.621
Securities Portfolio	164.7	194.0	262.9
Deposits	356.9	454.6	514.6

Source: Author's work based on the data from BRSA, Financial Markets Reports of 2009 and 2010.

6.1.1.2 Losses and Profitability in Turkish Banking Sector

Although profitability of Turkish banking sector slightly deteriorated in 2008 with a 9.7% fall compared to the previous year, in 2009 the net profits increased by 50.4 per cent, which was mainly due to the increase of 34.9 % in net interest incomes in 2009 compared to 2008. The only loss the sector experienced is that of capital market transactions in 2007, which recovered significantly and turned out to be profitable in 2008 although the profits declined by 15 per cent in 2009. And although return on equity (ROE) of the banking sector decreased by 22.5% in 2008 with the impact of the crisis, in 2009 it recovered and increased by 20.3% in 2009 (Chart 21).



Source: Author's work based on the data from BRSA, Financial Markets Reports of 2009 and 2010.

6.1.1.3 Leverage

As leverage ratios indicate the growth of the banking sector with regards to its resources, on order to find out the extent of leverage, ratios of borrowed capital/total assets and borrowed capital/total own funds are used for the banking sector of Turkey, whose average were 0.875 and 7.1 respectively during the 2007 and 2008 (Table 11). Compared to some of the banks in UK such as RBS and Barclays, leverage ratios of Turkish banks are quite low.

Table 11: Leverage Ratios of Global Banks

Liabilities / Own Funds	2004	2005	2006	2007	2008	Liabilities / Assets	2004	2005	2006	2007	2008
The Royal Bank of Scotland	17,3	15,7	18,2	19,1	25,8	The Royal Bank of Scotland	0,95	0,95	0,95	0,95	0,97
Deutsche Bank	31,4	32,1	45,3	48,0	68,0	Deutsche Bank	0,97	0,97	0,98	0,98	0,99
Barclays Bank	31,1	30,8	35,4	36,8	41,3	Barclays Bank	0,97	0,97	0,97	0,97	0,98
BNP Paribas	34,6	30,3	35,3	27,5	34,2	BNP Paribas	0,97	0,97	0,98	0,98	0,97
Crédit Agricole	34,9	33,2	31,5	29,4	33,9	Crédit Agricole	0,97	0,97	0,97	0,97	0,97
JP Morgan Chase Bank	12,6	11,5	11,3	10,7	11,0	JP Morgan Chase Bank	0,93	0,93	0,93	0,91	0,92
HSBC Bank	43,7	23,9	20,1	18,7	16,4	HSBC Bank	0,98	0,96	0,95	0,95	0,94
Citibank	13,4	11,6	10,9	11,6	11,8	Citibank	0,93	0,92	0,93	0,92	0,92
Fortis Bank	31,7	31,7	38,0	40,9	45,7	Fortis Bank	0,97	0,95	0,97	0,98	0,98
The Bank of Tokyo	26,4	21,9	19,0	22,7	25,1	The Bank of Tokyo	0,96	0,95	0,95	0,96	0,97
The Bank of America	10,0	11,1	9,9	9,5	13,2	The Bank of America	0,91	0,93	0,91	0,91	0,93
Banking Sector	77	74	74	77	75	Turkish Banking Sector	0,94	0,97	0,95	0,97	0,95

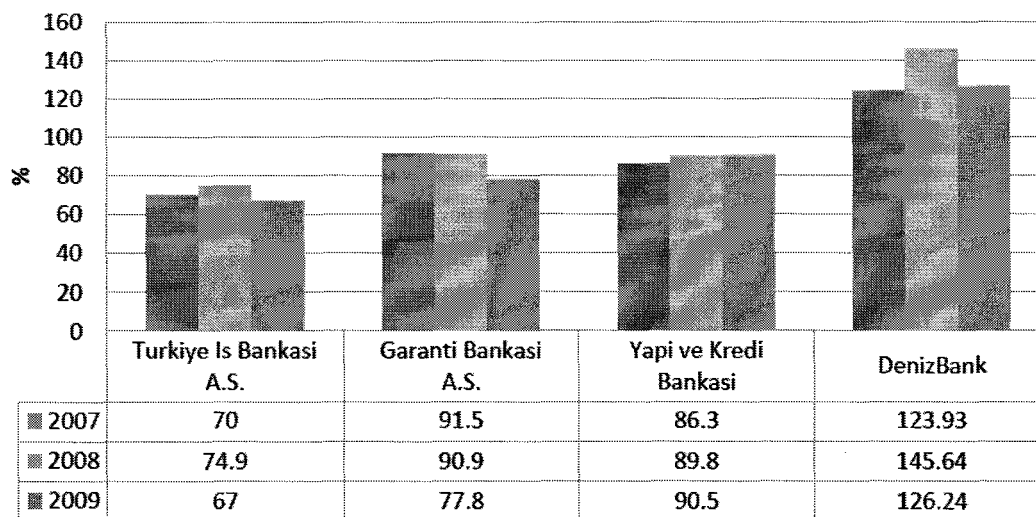
Source: BRSA, Financial Markets Report, 2009, p.46.

6.1.1.4 Loan-to-Deposit Ratio

According to Pytel (2009) 'the deposit creation process is at the heart of the banking system servicing the public and stimulating economic growth. The modern banking instruments of securitization, hedging, leveraging, derivatives and so on turned this process on its head. They enabled banks to lend more out than they took in deposits.' Loan-to-deposit ratio here is of great importance as it implies how much of deposit withdrawals can be covered by the bank, which has to have a certain amount of liquidity supply to continue its day-to-day operations. If the ratio is high that means, the bank does not have enough supply of its own and borrows from more costly wholesale markets in order to lend to its customers.

The loan-to-deposit ratio of banking sector of Turkey was 80, 80.8 and 76.3 per cent in 2007, 2008 and 2009 respectively (Chart 15, see page 20). The average of three years is 79 per cent which means, for every average TL 100 deposited in, Turkish banks were lending TL 79 which shows banks' reserves are sufficient, does not depend on wholesale markets and therefore was not exposed to the liquidity inadequacy resulting from tightened interbank lending. It also indicates that as the bank lent out TL79, the remaining TL21 was retained in the banks' reserves, which further contributed to their solvency. And if we look at the loan-to-deposit ratios of selected banks in Turkey (Char 22), the average ratio of four banks in three years is 94.54 per cent, DenizBank having the highest ratio among the other three.

Chart 22: Loan/Deposit Ratios of Selected Banks in Turkey

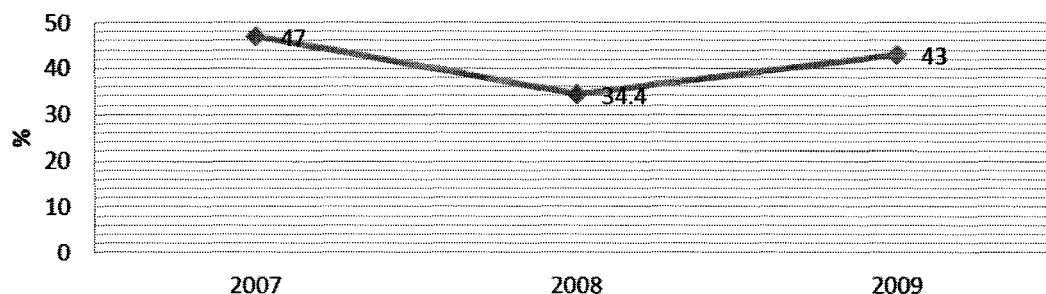


Source: Author's work based on the data from 2009 Annual Reports of Banks above.

6.1.1.5 Liquidity

Overall liquidity level of Turkish banking sector is quite high (Chart 23) although, it fell by 26.8% in 2008 as the liquidity in global financial markets dried up in 2008. Yet in 2009, with an increase of 25% in liquidity ratio, Turkish banking sector maintained its high solvency, therefore did not experience any bank runs or collapse of any financial institutions.

Chart 23: Liquidity⁽¹⁾ in Turkish Banking Sector



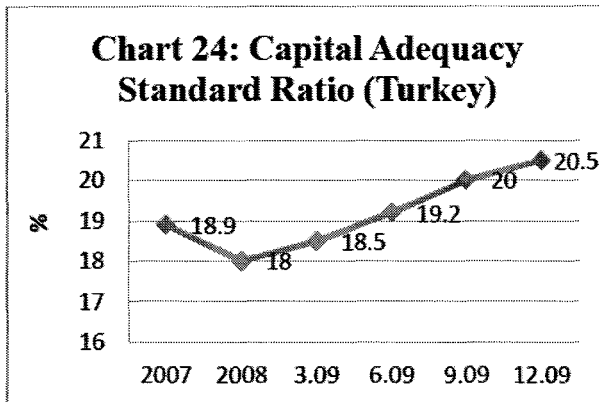
(1)Liquidity = (Cash Values+ Receivables from Banks (including receivables from Central Bank and Monetary Markets +Marketable Securities +Securities Ready to Sale +Required Reserves)/(Deposit+ Debts to Banks (including debts to Central Bank and Monetary Markets)

Source: Author's work based on the data from BRSA, Financial Markets Report, 2009, p.38.

6.1.1.6 Capital Adequacy Ratio

The capital of a bank 'is considered as the unique safety cushion capable of absorbing losses' (Bessis, 2010, p.7) and Basel I and II accords aimed at ensuring that banks have sufficient capital. The standard Capital Adequacy Ratio (CAR) of banks in Turkey (Char 24) is much above the minimum international total capital requirement of 8 per cent with the average of over 19 per cent during 2007-2009. According to The Economist (2010) it is due to the transformation of banks after

the economic crisis Turkey went through in 2000-2001 with the strict regulatory process that 'lifted the capital ratio to a dizzying 19% and pushed down the loan-leverage ratio to below the EU's or America's.'



Source: Author's work based on the data from BRSA, Financial Markets Report, 2009, p.iv.

6.1.1.7 Credit Ratings

Although Turkey is rated by the international rating agencies as sub-investment grade country (Table 12), Turkey's long-term foreign currency rating was upgraded to BB and local currency sovereign credit to BB+ by Standard & Poor's, which is an indicator of the increasing stability and the declining levels of debt of the country. Frank Gill, the credit analyst of Standard & Poor's said 'The upgrade reflects our view of the Turkish government's improving economic policy flexibility as a result of its strong track record in steadily reducing the debt burden over the past decade. It also reflects our opinion of the success of Turkey's regulatory institutions in preserving the solidity of the financial sector, despite external adversity. Standard & Poor's believes Turkey's banking system will be one of the strongest and least-leveraged in Eastern Europe' (Invest in Turkey, 2010).

Table 12: Current Credit Ratings of Emerging Markets

As of 21 May 2010

	Moody's		Standard & Poor's		Fitch	
Investment grade countries	A2	Bahrain, Poland	A	Bahrain, Czech Republic, Israel, Malta, South Korea	A	Bahrain, Chile, Israel
	A3	Malaysia, South Africa, Greece	A-	Malaysia, Estonia, Poland, Portugal	A-	Malaysia, Poland
	Baa1	Mexico, Montenegro, Lithuania, Russia, Thailand, Hungary	BBB+	South Africa, Thailand	BBB+	Estonia, South Africa
	Baa2	Azerbaijan, Kazakhstan, Tunisia	BBB	Bulgaria, Croatia, Mexico, Russia, Tunisia, Lithuania	BBB	Hungary, Lithuania, Mexico, Russia, Tunisia, Thailand
	Baa3	Armenia, Bulgaria, Croatia, India, Iceland, Latvia, Romania, Brazil, Peru	BBB-	Brazil, Colombia, Iceland, India, Kazakhstan, Macedonia, Morocco, Peru, Hungary	BBB-	Azerbaijan, Brazil, Bulgaria, Croatia, Greece, India, Morocco, Panama, Peru, Kazakhstan
Sub-investment grade countries	Ba1	Albania, Colombia, Costa Rica, Egypt, El Salvador, Morocco, Panama	BB+	Azerbaijan, Egypt, Greece, Panama, Romania	BB+	Turkey (stable), Colombia, Egypt, Guatemala, Latvia, Macedonia, Romania, Iceland
	Ba2	Turkey (stable), Belarus, Guatemala, Jordan, Indonesia, Papua New Guinea, Suriname	BB	Turkey (positive), Cook Islands, Costa Rica, Indonesia, Guatemala, Jordan, Viet Nam, El Salvador, Uruguay, Latvia, Macedonia	BB	Costa Rica, Indonesia, Philippines, El Salvador
	Ba3	Philippines, Uruguay, Viet Nam	BB-	Gabon, Mongolia, Philippines, Serbia, Venezuela	BB-	Gabon, Lesotho, Nigeria, Serbia, Viet Nam, Uruguay, Armenia
	B1	Fiji, Lebanon, Mongolia	B+	Bosnia and Herzegovina, Georgia, Ghana, Mozambique, Nigeria, Suriname	B+	Georgia, Iran, Sri Lanka, Venezuela, Ghana
	B2	Bosnia and Herzegovina, Bolivia, Venezuela, Turkmenistan, Ukraine	B	Belize, Bolivia, Kenya, Paraguay, Sri Lanka, Lebanon, Ukraine	B	Bolivia, Lebanon, Mongolia, Mozambique, Suriname
B3	Argentina, Belize, Jamaica, Pakistan, Paraguay	B-	Argentina, Fiji, Jamaica, Madagascar, Pakistan	B-	Argentina, Ukraine, Ecuador, Jamaica	

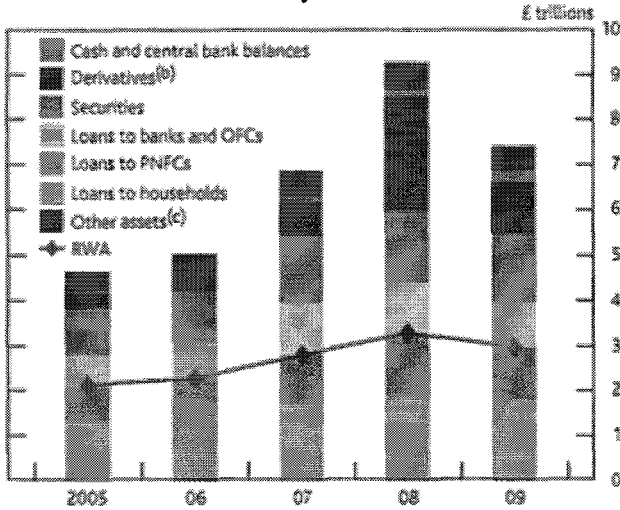
Source: Gonenc, Sahinoz & Tuncel, 2010, p.18.

6.1.2 Analysis of Main Financial Indicators of UK Banking Sector

6.1.2.1 Total Asset Growth

First of all, Total assets of the UK banks decreased (Chart 25 and Chart 26) from £9.4 trillion to £7.4 trillion with a total fall of £1.9 trillion between 2008 and 2009, £1.4 of which is resulted from the reductions in derivatives portfolios. According to the June 2010 Financial Stability Report 'overall, exposures within the financial sector (derivatives exposures, loans to banks and holdings of securities) declined by £1.6 trillion. Customer lending was also reduced. UK bank lending to non-UK customers fell by £270 billion (14%) and to UK PNFs and households by £34 billion (3%). Foreign banks' cross-border lending to the UK also fell by 11% (or US\$557 billion) between 2008 Q4 and 2009 Q4. This reflected a generalized scaling back of cross-border credit provision by internationally active banks. This global retrenchment means that economies, including the UK, are highly dependent on the stability of their home institutions for the provision of credit' (Bank of England, 2010, p.46).

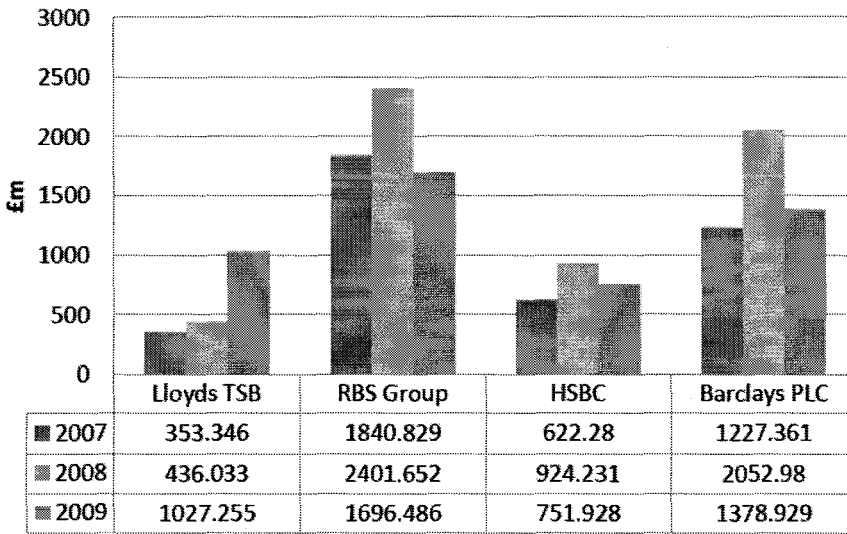
Chart 25: Total Assets of Major UK Banks^(a)



(a) Assets converted at year-end exchange rates.
 (b) Derivatives are presented on a gross basis.
 (c) Includes intangible property, investment and tax assets.

Source: Bank of England, Financial Stability Report, 2010, p.47.

Chart 26: Total Assets of the Selected Banks in UK



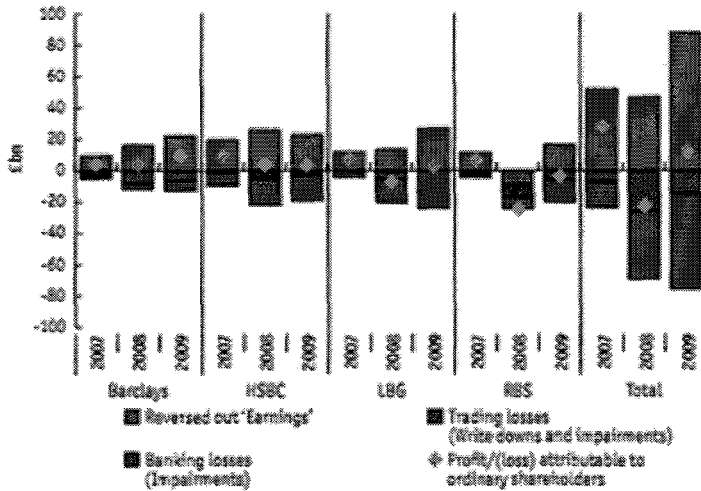
Source: Author's work based on the data from 2009 Annual Reports of Banks above.

6.1.2.2 Losses and Profitability of UK Banks

Nevertheless, the building societies and banks in UK had heavy losses during the crisis as a result of write-downs and impairments in trading securities. While the total banking and trading losses of Barclays, HSBC, LBG and RBS were around £30 billion in 2007, the losses more than doubled in 2008 and went up to around £80 billion in 2009 (Chart 27). The reason behind the significant losses especially in 2008 was mainly due to the fact that the investors sold out the risky assets they were holding for the fear of a further market downturn. Banks in turn, which used extreme leverage, had to

go through fire sales of their assets in order to reduce their financial debts which was over collateralized as 'the collateral is made of securities of which value varies with market movements' (Bessis, 2010, p.6). Therefore, the value of the banks' assets declined and so did their equity. The fear of further losses triggered the fear of banks' insolvency due to inadequacy of their capital.

Chart 27: Losses of the Four Largest Banks in UK (2007-2009)

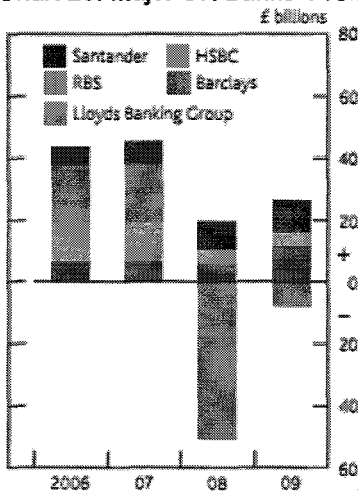


Note: Reversed out 'Earnings' is a notional balancing item. LBG is pro-forma Lloyds + HBOS for 2007/08, combined business for 2009 impairments and statutory for 2009 profit. RBS is pro-forma/proportional throughout.

Source: FSA, *Financial Risk Outlook*, 2010, p.22.

And the profitability of major banks had a sharp decline in 2008, RBS and Lloyds Banking Group having heavier losses than the others (Chart 28). However, in 2009 there is a recovery in profitability, return on equity of median UK bank with a 2 per cent increase and with a 30 per cent increase in revenues.

Chart 28: Major UK Banks' Profits



Source: Bank of England, *Financial Stability Report*, 2010, p.45.

6.1.2.3 Leverage

'Leverage allows a financial institution to increase the potential gains or losses on a position or investment beyond what would be possible through a direct investment of its own funds' (D'Hulster, 2009). Chart 11 (see page 17) shows the upsurge of the leverage in UK banks as of 2000, the median of which goes up from around 20 per cent to around 50 per cent during the period of pre-crisis, which is an indicator of UK banks' dependence on debt funding. This reflects reductions in assets which 'were predominantly falls in intrafinancial sector exposures, including derivatives, rather than lending to the real UK economy' (Bank of England, 2010, p. 8).

6.1.2.4 Loan-to-Deposit Ratio

Moreover the loan-to-deposit ratios of UK banks were much above 100 per cent, which also shows the reliance of UK banks on wholesale funding. 'According to Morgan Stanley Research, in 2007 UK banks loan-deposit ratio was 137%.... Another conservative estimate shows that this indicator for major UK banks was at least 174%. For others like Northern Rock it was a massive 322%' (Pytel, 2009). An average 137% loan-to-deposit ratio means UK banks had an average of 63 pence in deposits for every £1 they lent. Therefore, 'anything beyond 100 per cent has to be funded on the still jittery wholesale markets or via emergency liquidity measures from the Bank of England' (Jenkins & Goff, 2010).

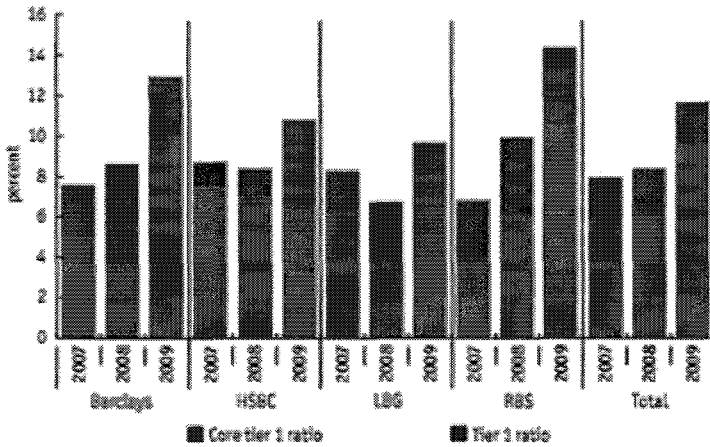
6.1.2.5 Liquidity

Up until the crisis the building societies and the banks in UK more and more heavily relied on highly risky and cross-border funding resources increasingly dependent on potentially risky sources of funding and on funding from abroad therefore, UK financial market liquidity kept increasing till the last quarter of 2007 (Chart 12, see page 17), when the crisis broke out. After 2008, this funding liquidity dried up rapidly and the UK banks which were dependent on wholesale markets were having difficulty as the interbank lending tightened and their own reserves were not sufficient because of their high loan-to-deposit ratios and low capital adequacy.

6.1.2.6 Capital Adequacy Ratio and State Support: Recapitalization and Liquidity Injections

Recapitalization of and liquidity injections to banks were inevitable as the credit standing and solvency of banks were at stake which cost around £134 billion according to the Financial Risk Outlook 2010 of (2010, p.22) since the trading and credit losses of the big-four banks in UK amounted up to £168 billion between 2007 and 2009. Moreover, in terms of recapitalization, the total capital adequacy ratio of four major UK banks which was around 8 per cent in 2007 was increased up to 12 per cent average (Chart 29) in order to strengthen the capital buffer against possible losses in periods of economic turbulence.

Chart 29 : Capital Ratio Evolution of 'Big Four' UK Banks

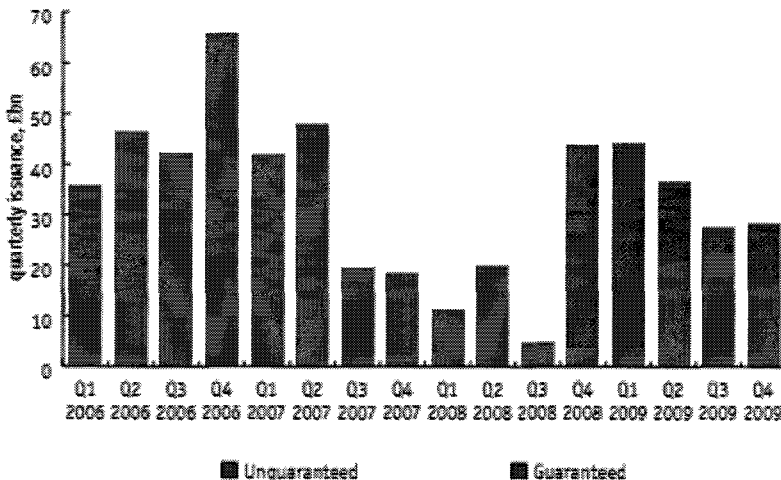


Note: LBG is pro-forma Lloyds + HBOS for 2007/08, statutory for 2009. RBS is pro-forma/proportional throughout.

Source: FSA, *Financial Risk Outlook*, 2010. p.22.

In this respect, medium and long-term debt issuances of banks were guaranteed by the Credit Guarantee Scheme (CGS) of HM Treasury. As a consequence, in the last quarter of 2008 and first quarter of 2009 guaranteed issuance of debt securities is significantly predominant (Chart 30) Furthermore, the introduction of Special Liquidity Scheme (SLS) provided the banks with the opportunity to exchange their collateral of securities, especially the UK Residential Mortgage Backed Securities with the Treasury bills of Bank of England. 'Together the CGS and SLS provide over £300 billion of funding and liquidity support which equates to over 10% of the liabilities of the top six UK banks' according to the *Financial Risk Outlook 2010* of Financial Services Authority (2010, p.33).

Chart 30: Public issuance of Debt Securities by UK-owned Banks



Note: Issuance data converted at Bank of England average quarterly spot rate. Excludes debt classified as 'retained' by Dealogic.

Source: FSA, *Financial Risk Outlook*, 2010. p.32.

6.1.2.7 Credit Ratings

The state support, UK banks depended upon along with the financial instability during the period of crisis resulted in the possibility of downgrading of the banks' credit ratings by credit rating agencies. Hence, 'S&P cut the outlook on Britain's 'AAA' rating to negative in May 2009, a move that typically carries a one in three chance of a downgrade' (Reuters, 2010). The lowering of credit scores brings along the threat of increase in the costs of borrowing in UK.

Furthermore, while the 2009-2010 total credit upgrades related to credit quality of UK by Fitch is 59, total credit downgrades are 791. Moody's upgrades for the same period is 40, while downgrades are 424 and the upgrades of Standard & Poor's is 57 while the downgrades are 1420 (Table 13).

Table 13: Credit Quality – Rating Changes (UK)

Upgrades/Downgrades by Country¹

3.1. Fitch Ratings

	2010:Q1	2010:Q2	2010:Q3	2010:Q4	TOTAL
France	0/0	0/3			0/3
Germany	0/78	10/26			10/104
Italy	3/10	0/7			3/17
Netherlands	4/10	0/1			4/11
Spain	3/58	6/31			7/69
UK	23/70	8/91			31/161
Multinational ²	7/41	3/67			10/108
European Total	38/267	27/226			65/493
US	55/3455	68/4739			65/3455

	2009:Q1	2009:Q2	2009:Q3	2009:Q4	TOTAL
France	0/0	0/5	0/18	0/17	0/40
Germany	4/65	5/28	6/65	2/248	17/404
Italy	1/17	1/12	1/7	1/21	4/47
Netherlands	1/1	0/0	0/6	1/21	2/28
Spain	0/97	2/58	3/17	1/97	6/269
UK	4/123	5/149	2/125	17/233	28/630
Multinational ²	3/354	4/340	11/62	1/34	19/791
European Total	13/657	27/582	23/320	23/659	66/2208
US	49/4001	22/4586	20/21258	108/4356	196/44183

3.2. Moody's Investors Service

	2010:Q1	2010:Q2	2010:Q3	2010:Q4	TOTAL
France	0/0	0/1			0/1
Germany	0/1	0/14			0/15
Italy	0/2	1/0			1/2
Netherlands	0/15	4/0			4/15
Spain	0/20	0/3			0/23
UK	26/58	4/24			33/82
Multinational ²	4/63	22/95			26/178
European Total	33/179	31/137			64/316
US	115/1104	378/1411			493/2515

	2009:Q1	2009:Q2	2009:Q3	2009:Q4	TOTAL
France	1/0	0/0	0/1	0/0	1/1
Germany	0/5	10/36	0/4	0/14	10/59
Italy	1/3	0/7	1/1	0/14	2/25
Netherlands	0/2	0/11	4/23	0/6	4/42
Spain	0/19	0/26	0/16	2/73	2/134
UK	5/80	0/65	1/121	1/76	7/342
Multinational ²	4/1460	7/501	30/487	12/876	53/3326
European Total	11/1589	17/646	36/653	15/1061	79/3929
US	110/33536	68/12115	213/6075	171/1817	560/53543

3.3. Standard & Poor's

	2010:Q1	2010:Q2	2010:Q3	2010:Q4	TOTAL
France	1/1	0/0			1/1
Germany	2/33	17/48			19/81
Italy	5/4	0/9			5/13
Netherlands	2/16	0/0			2/16
Spain	0/46	0/30			0/76
UK	30/207	23/190			53/395
Multinational ²	92/780	172/626			264/1415
European Total	132/1087	212/903			344/1997
US	28/10610	22/3727			150/14325

	2009:Q1	2009:Q2	2009:Q3	2009:Q4	TOTAL
France	2/10	0/10	0/1	0/7	2/28
Germany	1/13	1/15	0/48	0/130	2/206
Italy	5/5	5/9	8/8	2/4	20/26
Netherlands	10/18	8/1	9/1	0/12	27/32
Spain	11/33	4/63	0/61	0/35	15/192
UK	23/253	3/240	3/228	5/304	34/1028
Multinational ²	19/864	24/669	10/840	10/654	63/3547
European Total	71/1216	45/1307	30/1187	17/1346	183/5056
US	63/6206	105/7807	126/44255	40/9671	354/37939

Source: Fitch Ratings, Moody's Investors Service, Standard & Poor's

¹ Each box contains two numbers: Upgrades followed by Downgrades. Because the three credit rating agencies track different securities and apply slightly different rating criteria, these numbers are not directly comparable.

² Pricer's "Multinational" classification includes cross-jurisdictional CMBS issues as well as the aggregated sum of rating actions in other EMEA countries, namely Austria, Belgium, Greece, Ireland, Portugal, and the Russian Federation. Fitch assigns CDO issues to the country in which the majority of the underlying assets are located.

³ "Multinational" for Standard & Poor's and Moody's ratings is defined as all issues with collateral located in multiple countries. All CDOs are also included in this category.

Source: Association for Financial Markets in Europe (AFME/ESF), 2010, p.9.

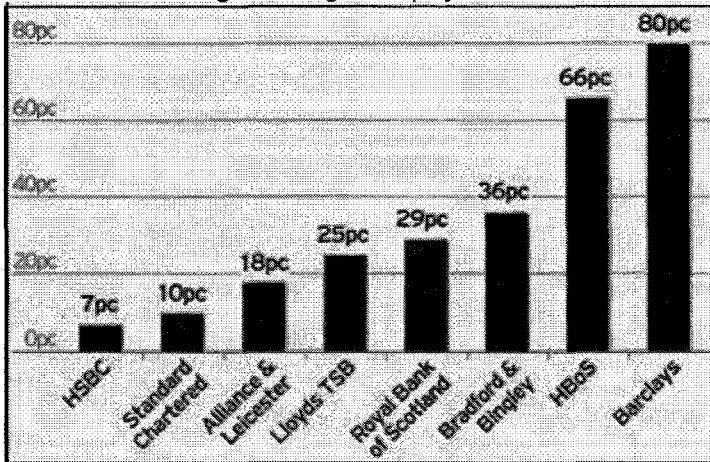
6.1.3 Comparison of the Financial Indicators of Banking Sector of Turkey and UK

6.1.3.1 Total Asset Growth

Although total asset size of banking sector in UK is much larger than that of Turkey, during the crisis, while the total assets of the former fell by £1.9 trillion in 2009 compared to the previous year because

of the reductions in derivatives portfolio, the latter's assets continued to grow by 43% in 2009 compared to 2007. This is mainly due to fact that Turkish banking sector was not exposed to toxic assets consisting of complex derivative products unlike the banks in UK (Chart 31).

Chart 31: Percentage of Tangible Equity in Toxic Debt in UK



Source: Aldrick, 2008.

6.1.3.2 Losses and Profitability

Despite the fall in net profits and after tax return on equities in 2008 when the global crisis deepened, Turkish banking sector did not suffer from any significant losses unlike the banks of UK had. The only loss Turkish banking sector was that of capital market transactions in 2007 by TL811 million due to the turbulence in global capital markets. Furthermore, Turkish banks were not holding any ABS or RMBSs since the primary and the secondary mortgage market is hardly developed in the country unlike UK, which protected the former from heavy losses from those transactions in capital markets.

The UK banks, on the other hand, had many write-downs and impairments in trading securities and therefore the total banking and trading losses of major banks in the country went up from around £30 billion in 2007 to around £80 billion in 2009 as the highly risky assets were sold out by the investors because of the opacity of the complex assets, uncertainty and possible further downturn of the market. Therefore fire sales of assets started with the aim of reducing their over-collateralized financial debts which led to a decrease in the value of assets and banks' equity. Moreover, Northern Rock went through a bank run where customer withdrawals amounted up to £1 billion, the bank collapsed unable to refinance itself and was nationalized in 2007. In the meantime, the remaining banks had to have funding and liquidity support over the Special Liquidity Scheme and Credit Guarantee Scheme of £300 billion.

6.1.3.3 Leverage

While the median leverage ratio of UK banks, which were after gains through debt funding soared in the period before the crisis up to 50% and which yielded high profits when the markets were well-functioning, leverage ratio of the Turkish banking sector was pretty low with an average ratio of 6.6%

in the years 2004 to 2007. Although the Turkish banking sector did not grow as much as UK did, its deposits and capital adequacy ratios were high enough to sustain itself when the crisis broke out. UK, on the other hand, through its complex financial instruments and extreme leverage had high profits before the crisis and big losses afterwards. As a result, the leverage ratio of the UK banking sector slumped.

6.1.3.4 Loan-to-Deposit Ratio, Capital Adequacy and Liquidity

The loan-to-deposit ratio shows how much deposit supply the banks have compared to the amount they lend to their customers, which should be below 100% in traditional banking, ensuring that the banks have enough reserves to pay their customers. UK banks seemed to have infinite amount of money supply borrowed from the global wholesale markets, from which Northern Rock borrowed insomuch as 75% of its funds. Hence, lending more than their own deposits, UK banks' loan-to-deposit ratios were much above 100%. Nevertheless, 'after Northern Rock's problems, a high loan-to-deposit ratio is not popular. At 177pc, HBOS has the highest in the sector. To put it in context, though, Northern Rock was on 345pc' (Aldrick, 2008). Whereas, since the deposits are the most notable borrowed capital for Turkish banks rather than the wholesale markets, the average ratio in the years 2002 to 2009 was 62.13%. For this reason, Turkish banks did not have any liquidity problems when interbank lending tightened after the crisis unlike UK banks. While the liquidity ratio of the former was quite stable during the crisis, the latter had a sharp fall towards the end of 2007.

Apart from not lending more than they have and not relying on wholesale funding, Turkish banks' capital adequacy ratio was brought up to an average of 19% after the restructuring and recapitalization process in 2001-02. For that reason, banks had enough capital to absorb any possible losses during the recent crisis. Nevertheless, UK banks were hardly above the minimum capital adequacy ratio set by the international capital accords. As a consequence, huge amounts of liquidity injections and recapitalization programs were indispensable, unlike the Turkish banking sector, solvency of which was high.

6.1.3.5 Credit Ratings

Despite the fact that UK has the highest quality ratings by credit rating agencies, the instability in financial markets and the state support UK banks had threatened the outstanding ratings of UK and caused Standard & Poor's to change its outlook to negative, with the possibility of a future downgrade. Furthermore, the total credit downgrades of three major credit rating agencies, especially that of Standard & Poor's' is quite high. Turkey, on the other has sub-investment ratings which shows its proneness to the changes in the economy and instability, Standard & Poor's upgrade of some of Turkey's ratings is promising and also a noteworthy indicator of increasing financial stability of Turkey and its resilience in the face of crisis.

CHAPTER 7 CONCLUSION AND RECOMMENDATIONS

7.1 Conclusion

7.1.1 The Causes and Effects of the Crisis in Terms of Mortgage Market, Mortgage Lending and, Securitization and Structured Financial Instruments

The liberalization and deregulation of banking sector along with the globalization of the financial and capital markets enabled banks to lend more than the deposits they are holding and to borrow from the international wholesale markets as the lowered risk-free interest rates boosted the supply of cheap credit. After 1990s the popularity of new financial instruments such as securities, derivatives and hedge funds increased with the belief that they disperse the credit risks and provide higher profits for investors. Similarly, banks' appetite for higher profits encouraged them to increase the amount of debt used in their capital structures. Moreover, depending upon the principle of 'too big to fail', according to which big institutions are prevented by the safety-net of their governments from failure in apprehension of contagion to many other institutions, banks took more and more risk with a sense of safety.

Assuming that they are free from holding the credit risks on an ongoing basis and hence feeling free to use high leverage, together with high credit ratings by credit rating agencies and the capital arbitrage eroding the Basel rules, which resulted in declined capital adequacy ratios, banks enjoyed the growth in mortgage lending and benefited from the rapid growth of securities and derivatives market related to especially to mortgage lending up until the crisis triggered by the collapse of sub-prime mortgage lending in United States due to high default rates of sub-prime mortgage borrowers.

Nevertheless, when the crisis broke out, highly leveraged banks turned out to be holding most of these securitized credits in their books and to have made huge losses related to those credits not the end investors thereof, the risk diversification that is believed to be ensured by securitization could not actually be attained.

Even though the recent global financial crisis stood out with its systemic nature, with its domino-effect, the failure of some financial institutions sparking the failure of many others who were exposed to contagion, through lending to those troubled institutions for instance, some countries seemed to be less vulnerable than the others.

7.1.2 Why Turkish Banks were More Resilient and Less Vulnerable?

7.1.2.1 Leverage, Structured Financial Instruments and Mortgage Market in Turkey

Turkey is one of those countries, ironically not being able to take the opportunity to generate huge revenues during the using high leverage and structured financial instruments, as it lagged behind the developed countries with its traditional and conservative structure. Furthermore, banks could not enjoy a supply of cheap credit as the interest rates of Central Bank of Republic of Turkey were quite high with a rate of around 15 per cent during the period prior to the crisis, although it decreased a great deal after the restructuring and recapitalization measures after 2001 crisis,.

Also, as the long-term bond market, long-term funding and long-term loans was unavailable in Turkey since the economy was unstable and the inflation was quite high until 2001, which also fell significantly after 2001 and became more stable yet still around 15 per cent after 2003, housing finance was unattainable for the Turkish households. However, there was a growth in housing loans between 2002 and 2007 owing to the sharp decline in interest rates and inflation, and in 2007 the first mortgage law was introduced. Owing to the fact that the primary mortgage market is underdeveloped in Turkey, the securitization of residential assets are non-existent in the secondary market and the diversity of complex financial instruments is very little, which protected the banks from the global contagion spread by those instruments.

7.1.2.2 High Solvency of Turkish Banks

Additionally, the reason that protected Turkish banking sector from the effects of global crisis and provided the sector with a strong buffer against possible losses and helped remain its solvency is its strong capital structure and high capital adequacy ratios which were reinforced by the Banks Restructuring Program in 2001. Furthermore, the loan/deposit ratios were quite below 100% and banks were not very dependant on wholesale funding, which also contributed to high solvency. Thus, no Turkish bank needed a bailout due to liquidity problems. High loan-to-deposit ratios of the banks also contributed to their solvency.

7.1.2.3 Growth in Banking Sector and Upgrade in Credit Ratings

For all these reasons along with the CBRT's macroeconomic policies and BRSA's effectual regulations and supervision, the growth of banking sector of Turkey only paused for while if we look at the profitability of the sector. However, the total asset size continued to grow, the number of branches and personnel continued to increase while the number of banks remained the same despite the crisis. Furthermore, Standard & Poor's gave Turkey a credit upgrade with regards to their belief in improvements of government's economic policy flexibility and expressed their positive outlook that the banking system of Turkey is taking firm steps forward on the way to being one of the strongest and least-leveraged systems compared to those in Eastern Europe.

7.1.3 UK: Too Big to Fail?

7.1.3.1 Financial Deregulation, Liberalization and Highly Leveraged Banks

UK, on the other hand, is one of the developed countries with one of the largest economies of the world, top notch financial institutions and its share in global capital markets. Yet, likewise some of the financial institutions which were assumed to be too big to fail, UK financial system, one of the big, leading financial centres of the world, also failed to a certain extent. Banks of UK has been highly profitable owing to their use of high leverage and diverse structured financial instruments. This was mainly the result of financial deregulation and liberalization of financial system which affected the housing market. According to OECD (2000, p.173), after 1980, the credit controls and minimum lending rate of Bank of England were abolished, banks were enabled with the opportunity to compete with building societies for housing finance, building societies were able to expand their lending, mortgage lending guidelines of government was withdrawn and towards the end of the decade securitization was introduced.

7.1.3.2 Rapid Growth in Mortgage Market, Growth in Mortgage Lending and Securitization

The primary mortgage market, thanks to the deregulation, liberalization, economic stability, high GDP growth, high income of the households and low levels of inflation, has already been developed, and further flourished with the supply of cheap credit. As the demand for mortgage credit increased, so did the mortgage lending. Therefore UK banks started to rely more and more on wholesale funding and started lending more than they had.

And in terms of the secondary market, UK has been the largest issuer of securities among European countries till 2009 and the leading centre of derivatives market throughout the world. Hence, the losses related to mortgage related securitization was unavoidable as the banks ended up holding toxic assets in their books. And since the level of risk of the securitized assets they were holding could not be anticipated due to their complex structure and opacity, investors wanted to dispose them off and their value came down and the credit ratings related to asset quality were downgraded, with which banks ended up in further losses. Prior to the outbreak of crisis, the leverage ratio of UK banks increased, especially of Northern Rock, which were selling significant amount of securitized credit to SIV and mutual funds holders in United States, with the dry-up of which a considerable proportion of UK banks' resources for credits were cut-off. The tightening liquidity in the global markets also made it harder for the banks to refinance themselves and brought along the problem of insolvency.

7.1.3.3 Insolvency of UK Banks Due to High Loan/Deposit Ratios and Low Capital Adequacy

Another reason of insolvency of UK banks was their high loan-to-deposit ratios. Packard (n.d.) as cited in Wachman (2008) says: 'If you go back to the 1960s, average loan-to-deposit ratios at British

banks were at around half, which means institutions were lending only 50 per cent more than they held in deposits. Compare that with the 170 per cent ratio currently maintained by HBOS' and Wachman further adds; 'The ratio was even higher at Northern Rock and Bear Stearns, making them particularly vulnerable to the credit squeeze.' This means, UK banks, especially Northern Rock was lending much more than they had. Furthermore, UK banks had low capital adequacy ratios, barely above the minimum levels determined by the Basel Capital accords which added up to insolvency and credit squeeze as banks were unwilling to lend to each other. Regardless of the fact that Bank of England cut base rates continuously, the interbank lending rates (wholesale money market interest rates) remained quite high till the end of 2008, which caused the costs of borrowing to be high, resulting in further credit squeeze.

7.1.3.4 UK Banks in Deep Water

Northern Rock, with its extremely high loan-to-deposit ratios, high reliance of wholesale funding, aggressive mortgage lending strategies and low solvency, experienced a bank-run, withdrawals amounting up to £1 billion hence, was unable to pull through the global crisis and nationalized. Furthermore, the number of mortgage loans in UK fell due to high costs of borrowing and liquidity squeeze; the total asset size of major UK banks, except Lloyds TSB declined in 2009 compared to the previous year; banking losses related to credit impairments and, credit losses resulting from write-downs and impairments increased, while the profitability declined; major banks of UK raised funds through rights issue, some of which was rejected to be taken up by shareholders and; UK banking sector went through a consolidation, monopolization and downsizing process through mergers, acquisitions and takeovers.

7.1.3.5 The Costs of State Support

Moreover, £134 billion of liquidity injection was made to the UK banking system as the four major banks' trading and credit losses ran up to around £168 billion during 2007-2009. Accordingly, HM Treasury guaranteed banks' debt issuances by the Credit Guarantee Scheme and, with the Special Liquidity Scheme, banks were enabled to swap their collateral of securities, especially the UK RMBS with Bank of England's T-bills. Both of the schemes subsidized the UK banking system with over £300 billion.

Overall, the analysis of all the financial indicators related to profitability, liquidity, leverage, loan/deposit, total asset growth, capital adequacy and credit ratings together with the growth in mortgage lending and the costs of state support in both countries prove that the Turkish banking sector was less vulnerable and more resilient than the banking sector of UK, which is much bigger in size than that of Turkey but this does not prevent the too the too-big 'to fail'.

7.2 Recommendations

The global financial crisis of 2007-2008 was a consequence of many different factors that built-up for a long time prior to crisis which resulted in a global credit crunch, deterioration in financial and capital markets and recessions in macroeconomic perspective. Therefore, taking necessary measures is in the responsibility regulators, governments and the participators of the market, which is vital to minimize the impacts of a possible future crisis. Whether there will be a conceptual revolution related to the banking structures is not known for the time being. No matter what, the fact that banks are in need of rearranging their established structures and strategies is indisputable, including;

- *Increase of capital* - First of all, it is necessary to make hay while the sun shines which implies the increase of capital while the security prices are rising in the financial markets in order to be protected by any losses incurred during the period when the prices are falling.
- *Better management of liquidity risks* - Prior to crisis, banks did not give much consideration to the necessity of diversifying their sources of funding when the bank liquidity and did not seem to be as important as it is now. As liquidity is the heart's blood for banks, an efficient liquidity risk management is vital. In this respect, the regulators should make sure that banks are more self-sufficient and further diversify their funding resources. Moreover, the average length of time until the banks' liabilities are due should be extended and the liquidity buffer, comprised of assets or investments that can be liquidized in no time should be expanded.
- *Higher capital adequacy ratios* – International and national regulators are already working on increasing banks' capital adequacy requirements.
- *Lower leverage ratios* – the regulators can delimit the leverage ratios of the banks and also banks may avoid shooting their leverage position up for instance 40-50 times their capital base since investments yielding high returns could be the result and award of high risk taking yet highly risky investments do not guarantee high returns and, what is more, they may cause the banks ending up in impairments and write-downs on their balance sheets, which was the case in this recent global crisis.
- *Lower loan-to-deposit ratios* – Banks could be more conservative in that respect and lower the ratio around 100 per cent, so that they will not lend a lot more than they have in their deposits.
- *Limited size of banks* – The size of banks which are too-big-to-fail, counting on the safety-net of their governments as a lender of last resort should be limited for the good of the society which might be imperilled when they fail, since the value of their balance sheets are almost as much as the Gross Domestic Product of their country and their downfall may also pull the whole financial system down.

All in all, tighter regulation and supervision of banks without preventing them from operating properly is necessary however; too much pressure may result in resistance, for instance HSBC threatened the government with moving its headquarters outside UK as the government wanted to break up the banks so as to limit their size. Therefore, it should be handled with great care and banks should act more responsibly and also co-operate with the regulators for the good of the public, soundness of the financial system and economy of not just their own country but that of the world since they are all tied up in a globalized world.

REFLECTION

Every kind of business needs efficient administration, including the private school I worked. Therefore, although I only had a teaching background and, the only management experience I had was class management, I felt the need to have a Master of Business Administration Programme, so as to improve my business administration skills, to be better equipped against the increasing competitiveness in job market, to expand my knowledge on business world and to contribute to my personal development. I believe that all the modules in this programme I have completed successfully so far enabled me to attain these goals.

The reason I have chosen finance was to have a better understanding in how things work in the world of finance, especially when the financial crises are getting more frequent and crisis stricken world is experiencing a deeper recession. Moreover, my home country, Turkey, has been in and out of economic turbulences for many years and although its financial system and banking sector lags behind the developing countries, I wanted to find out how come the vulnerability to the recent crisis was deemed to be less and the resilience to be higher. Therefore, I decided to do my research by comparing the banking sector of my home country, Turkey and that of UK, where I have been living for a while.

Reflection on the methodology: Although, in the process of writing my dissertation, it sounded ridiculous at times to compare and contrast a developed and a developing country as they are alike as much as an apple and a pear, The further I investigated the differences of the banking sectors of the two countries, the more I realized that maybe Turkish banking sector has turned its weaknesses into strengths and in the face of this crisis hence, the type of research in that sense was inductive as I came up with a hypothesis that Turkish banking sector may not be as affected as badly as UK by the crisis. Afterwards I used deductive approach, and tested my hypothesis, analysing the quantitative data of the financial indicators. To test my hypothesis, I used exploratory analysis which I found quite useful in presenting and summarising quantitative data in the form of tables and charts. As they represent all the raw data graphically, the data is visualized and conveyed to the reader in a very simple way. Therefore, I am quite happy with the methodologies I used and in the meanwhile I have learnt how to read and analyse the data given in those charts and tables.

Reflection on the structure: Since I had to investigate the banking sectors of two countries, I decided to present their differences in the literature review part in terms of mortgage market and mortgage lending; securitization and structured financial instruments and impacts of the crisis in separate sections for Turkey and UK. After coming up with a hypothesis, I also analysed the main financial indicators of the banking sectors of two countries, which gives an insight on their financial soundness, separately and finally I compared and contrasted the two in the final section of data analysis. I believe that my arguments are quite convincing as I based them all in objective quantitative data. Furthermore, my recommendations are quite brief and relevant. Also I am quite happy with the

structure of my study as everything is quite clear and organized, with all my work is divided into many sub-sections so that it could be followed more easily.

Reflection on my personal learning: As I only had the basic knowledge on the financial terminology, it was quite difficult to gather all the relevant data, analyse them and incorporate them in a meaningful whole. In order to see the big picture, I had to figure out and comprehend the terminology, about which now I have a better knowledge. Other than the two countries, I also had to identify the financial practices in the United States which had the leading role in this crisis and hence I have realized the increasing interconnectedness of the financial markets of the world and that the importance of the risk management together with the need for an efficient regulation and supervision to prevent the possible future crises.

Meta-reflection: The research I have done while doing my assignment on UK housing market for Strategic and Innovative Marketing class I have taken in MBA-2 and, Corporate Finance and Investment Management and Capital Markets lectures has been very useful to me in doing my research as they familiarized me with the terminology, the housing market and the financial markets. This research further deepened my knowledge on banking systems and their leading role as the major financial intermediaries and, on structured investment vehicles. Now that I can read and understand the economy pages of the newspapers, which seemed quite complex and incomprehensible to me before I started my MBA.

However, writing this dissertation has been the most challenging work I have done throughout the whole MBA programme since it required a deeper research compared to my previous assignments which I now realize that were quite superficial and simple. Since my subject is a current one, there are unlimited articles and reports on the internet related to it and it was quite hard to pick and choose the data that might be useful in my dissertation among all those complex financial terms and indicators. Furthermore, since the banking systems of the two countries are not alike, it was quite hard to find similar indicators that I can compare.

Now that I have put so much effort in this research and in the process of writing and quite confident and proud of the work I have done, I hope my endeavours will be appreciated as much as I think it will be.

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