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THE STRUCTURE OF THE TURKISH BANKING SECTOR

Bilkent 2005

**THE STRUCTURE OF THE TURKISH BANKING SECTOR
AFTER THE 1994-2000 AND 2001 FINANCIAL CRISES**

A Master's Thesis

by

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Ankara
December 2005

To DADDY and MUMMY

THE STRUCTURE OF THE TURKISH BANKING SECTOR
AFTER THE 1994-2000 AND 2001 FINANCIAL CRISES

The Institute of Economics and Social Sciences
of
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by

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in

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ABSTRACT

THE STRUCTURE OF THE TURKISH BANKING SECTOR AFTER THE 1994-2000 AND 2001 FINANCIAL CRISES

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This thesis analyses the structure of the Turkish banking sector which has been characterized in disinflation process after financial crises period. In this new environment, the structure of banks' balance sheets will change. While inflation based net incomes from loans will decrease, share of other income will increase, and profit margin may fall. This new competitive environment led banks to enhance their instruments and diversify their activities as a result of favorable developments in EU integration process and flourishing foreign demand to the sector

In this study, profitability of the sector during 2001-2004 period is examined by using "Panel Data Analysis". The descriptive analysis showed that, as a result of decrease in profit margins of return from public sector borrowing requirements, securities portfolio have been decreased and the turn over ratio of deposits to loans has increased. Private and foreign banking activities become more favorable and profitable as a result of competition and diversified banking activities. Consolidation within sector will be taking place as small size banks will not be able to survive

Keywords: Banking sector, stabilization program, crises and profitability.

ÖZET

1994-2000 VE 2001 FİNANSAL KRİZLERİNDEN SONRA TÜRK BANKACILIK SEKTÖRÜNÜN YAPISI

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Bu çalışma, Türk bankacılık sektörünün yapısını kriz sonrası düşük enflasyon döneminde incelemiştir. Yeni yaşam alanında bankaların bilançolarında önemli kalemlerin ağırlıkları değişmiştir. Gelir yapısında kredilerden sağlanan gelir azalırken net faiz dışı gelirlerin öneminin artması beklenmektedir. Bankaların yüksek enflasyon döneminde yararlandıkları bazı fırsatlar, düşük enflasyon ortamıyla birlikte azalmaya başlamıştır. Sektöre olan yabancı yatırımcıların ilgisi ve AB üyelik sürecindeki olumlu gelişmeler bankaları yeni enstrümanlar bulmaya veya mevcut yapılarının değiştirmeye yönlendirmiştir.

Bu çalışmada sektörün 2001-2004 dönemindeki karlılığı “Panel Data” analizi kullanılarak incelenmiştir. Çalışma sonuçlarına göre bankalarda kar marjlarının azalmasıyla, menkul değer cüzdanlarının küçülmeye başladığı ve mevduatın krediye dönüşme hızının arttığı gözlemlenmiştir. Rekabetle birlikte özel ve yabancı bankaların etkinliklerinin daha hissedilir duruma geldiği, küçük ölçekli bankaların varlığını ancak birleşme, devirlerle devam ettirebileceği anlaşılmıştır. Bankaların düşen enflasyon ortamında, net faiz gelirlerinin azalmasıyla net faiz dışı gelirlerini arttırmaya yönelik faaliyetlerde bulunduğu ortaya çıkmıştır.

Anahtar Kelimeler: Bankacılık sektörü, istikrar programı, kriz ve karlılık.

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CHAPTER 1

INTRODUCTION

The banking sector constitutes the immense part of the Turkish financial system. Many of the transactions and activities taking place in both money and capital markets are carried out by banks. Turkey's financial system and its banking sector are almost the same in consequence of the country's economic and historical development.

Turkey faced economic problems between the years of 1999-2001, when banking crisis obliged the government to take a radical policy shift. By being more than 60% (annually) from 1980 on, inflation had been a serious problem in most parts due to failure of the successive governments in achieving the fiscal control. Chronic inflation has undermined the economic performance of Turkey for over 25 years. Economic growth had been weak and volatile. Furthermore, Turkey's growth record was considerably below the average of successful emerging market economies. Persistent resource misallocation, which is the result of the financial system's shortcomings, had reduced growth of the economy. Nominal and real interest rates were high and unstable. The public debt burden was high and increasing.

The chronic fiscal imbalances of earlier years were the root cause of the persistent inflation. Bringing the fiscal situation under control was therefore essential to the success of counter-inflationary policy and macroeconomic stability that Turkey enjoys currently. The fiscal adjustment undertaken, thus far has permitted a significant decrement in the debt burden, reduced the risk premium on Turkish debts and helped restore confidence in macroeconomic policy.

The crisis of 2000-2001 was the real turning point of the economy. In large number of areas, social and economic reforms have been introduced. The financial turmoil following the abandonment of the pegged exchange rate regime has necessitated a revised disinflation program, which was likely to put an end to the poor banking practices and deficiencies in supervision by prompting a rapid consolidation and taking actions to boost profitability of the banking sector. Besides IMF policies, Turkish authorities have found themselves in a position to undertake some measures.

The three-year disinflation program, as outlined in the Letter of Intent of December 9, 1999, was essentially an exchange-rate-based stabilization program supplemented by fiscal adjustment and structural reform measures involving agricultural reform, pension reform, fiscal measurement and transparency, and tax policy and administration. There were also measures to strengthen and regulate the banking sector (Alper et al, 2001; Neyaptı and Dinçer, 2000). Following the financial crisis experienced first in November 2000, which was the result of extremely risky position of a medium-sized bank with large holdings of government securities in its portfolio, and then in February 2001, a flexible currency system was adopted and transfer to such system was realized. After the banking and currency crises that are

experienced in November 2000 and February 2001, the government initiated a comprehensive “Banking Sector Restructuring and Rehabilitation Program”. The regulatory framework has been brought closer to the international standards and the state banks have been restructured and recapitalized. Banks have also begun to restructure their portfolios away from the government paper, thus enabling the commercial and consumer lending to start growing more normally.

There were notable alterations in the economic policies pursued, which were drawn up by the early new term and implemented in May 2001 following the letter of intent submitted to the International Monetary Fund (IMF), which in turn marked the emergence of a new economic environment. Inflation was slowed down with this stability program. The annual consumer price index decreased to 33% as of February 2001, tended to increase following the crises and then increased to 73% as of January 2002. Annual increases, which took place in the consumer price index that started to decrease after this level, consistently decreased for a period of three years and later decreased to 16% as of December 2004. Growth rates indicate that Turkish economy has recovered rapidly and remarkably. The economy grew by 7.8% in 2002, 5.9% in 2003 and 9.9% in 2004.

The question of how the balance sheets of the banking sector may be affected by the tendency of the inflation rates to decrease has been the subject of various empirical studies. Many studies suggested that there would be a decrease in the income of the banks that will be brought along by the current accounts in parallel with the decrease in the inflation rate. In these studies, the reason for this was suggested to be the decreasing advantages of the demand deposit as the time value of the money decreases due to the regression in inflation.

Among these studies, IMF (1999) and Alper et al (2002) envisage that the high rate of public borrowing and inflation would decrease as long as the current stability program is successfully pursued and these two components would narrow down the high interest margins and decrease the income earned through open positions. In a process where interest limits go backwards in disinflation, banks earn additional income if the average maturity period of assets is longer than that of liabilities (Van Rijckeghem, 1999 and IMF, 1999). Furthermore, according to the implementation of 2000 program this expectation was partly realized (Inan, 2000).

Principal aim of this study is to econometrically test the effects of the disinflationary environment on the banking sector through the consolidated balance sheet analyses and bank based data. This paper attempts to define the structure of the banking sector through descriptive statistics and panel regressions. There has been an increase in the amount of empirical research on the banking sector using panel regressions on cross-country data sets recently (See for example, Demirgüç and Huizinga, 1999; Claessens et al., 1998; and Eichengreen and Rose, 1998 among others). In this framework, the findings of the study carried out by Alper et al (2000) have formed the basis of the foundation of the econometric model used in the thesis. Alper et al (2000) conducted an econometric study to measure the performance of the banking sector through panel data estimation method by using 52 bank data belonging to the banking sector in a period of high inflation (1988-1999). Further research has been performed on Turkey by Yigit (2005), but this study was mostly concentrated on the disinflation environment in the period of 1988-1999. However, perspective in the Alper's study needs to be developed by considering conditions after the crises and during EU integration process.

In this thesis, cross section and time series data of 54 banks were transformed into a panel data set in a way that will cover the disinflation periods of 2001-2004. In this study, performance of the banking sector in the period of 2001-2004 was analysed. Specifically, this study aims to emphasis that, crises and inflation has changed the balance sheet structure of the banks and Turkish banks have operated more profitably after the restructure program in the banking sector. The database is taken from the “Financial Tables Annual – According To Accounting Standards” periodicals provided by the Banks Association of Turkey. Macroeconomic data from the database of the Central Bank of the Republic of Turkey was also used.

The effect of the size and the ownership structure, with greater emphasis on ownership structure of the Turkish banking sector was observed through making use of the dummy variables. In addition, a set of macroeconomic variables, such as gross domestic product growth rate, annual consumer price index inflation rates and government security average interest rates, were included in the model in an attempt to explain the changes in macroeconomic conditions. These macro variables were multiplied with ownership dummies and included in the panel regression model. Moreover, specifically some banking sector indicators are used both in a multiplicative form or alone (See Alper et al. (2000) for the similar panel specification) Panel equation is estimated by using E-Views package program.

The organization of the following sections of the study is as follows: In Chapter 2, the structure of the Turkish banking system is analysed with regard to the historical development of the Turkish banking. Then, the effect of the new regulatory system after 2001 crisis and key changes implemented in the banking sector is summarized. The role of Savings and Deposit Insurance Fund (SDIF) and its

function after New Banking Law (No: 4491) is explained. Furthermore, state and private banking system is summarized and a brief comparison is made.

In Chapter 3, in part one (3.1), the Turkish banking sector is re-examined by regarding the 2000 and 2001 banking crises. In addition, financial crisis in the emerging market and the transition countries are briefly discussed and the comparison is made between the state owned banks and the private banks on the basis of the effects of financial crisis. Measures taken in the banking sector after the financial crises is briefly discussed. In part two (3.2), the effects of the inflation and the disinflation processes on the Turkish banking sector are examined.

In Chapter 4, emphasis is given to the EU integration and the banking sector restructuring in Turkey. Comparisons on some selected criteria are also made. In Chapter 5, we attempt to define the structure of banking sector through descriptive statistics and the estimated panel econometric model for the period of 2001-2004. Finally, in Chapter 6, the conclusion and some policy implications are provided.

CHAPTER 2

THE STRUCTURE OF THE TURKISH BANKING SYSTEM

The banking sector constitutes a great part of the Turkish financial system. Many of the transactions and activities taking place in both money and capital markets are carried out by banks. Turkey's financial system and its banking sector are virtually synonymous as a consequence of the country's economic and historical development. In the Turkish Economy, the banking sector has a prominent role; basic factors behind this role can be explained as follows.

First of all, the economic structure which is peculiar to Turkey and the choice to turn resources into long-term investments through the banks for the objectives targeted in the development plans and annual programs, and the establishment of banks by the state to finance certain sectors. Furthermore, extensive application of the continental European banking practices as a model in the legal structure of the banking system and finally the lack of a full-fledged capital market.

The Turkish Banking System is not a recent phenomenon. The development of the Turkish banking sector since the 19th century can be analysed within separate parts, which differ as to policy and method. Economic crisis, regulatory reform, and state intervention have made favorable changes in the sector (Alper and Öniş, 2003).

Prior to 1980, the Turkish banking sector was highly repressed and tightly regulated. There were ceilings on deposit and lending rates, restricted entry and high reserve requirements. The restrictions on deposit rates have resulted in banks competing for deposits by establishing large branch networks, which had resulted in excessive numbers of branches and personnel (Zaim, 1995).

The restructuring of the Turkish economy in the 1980's had a favorable impact on the financial sector. Direct effects came through legislative changes whereas indirect effects emerged from changes in economic policies and structure (Gençay and Selçuk, 2005). During this period, interest rates and exchange rates were freed, new banking and capital market laws were introduced, and all restrictions on foreign exchange trading and capital movement were removed. Moreover, some institutional reforms were introduced by the Central Bank and the Capital Market Board. The impact of restructuring the Turkish economy probably mostly on the Turkish banking sector in the 1990's was the substantial increase in the number of banks, the number of branches, employment and total assets of the sector. The number of private banks went up from 24 to 32 (BRSA: Progress Report). The surge in the total assets of the system from 1992 to 1999 stands out with an increase from USD 65 billion to USD 134 billion.

During the mid-1980's, the Central Bank organized new markets which not only facilitated the efficient flow of funds within the banking system, but also helped to obtain a powerful tool to monitor the overall reserve levels of the banking system. Upon the introduction of the new markets, banks were able to strengthen their ability to control the liquidity and maturity structures of their assets and liabilities. The Interbank Money Market for Turkish Lira was established in March 1986, and the

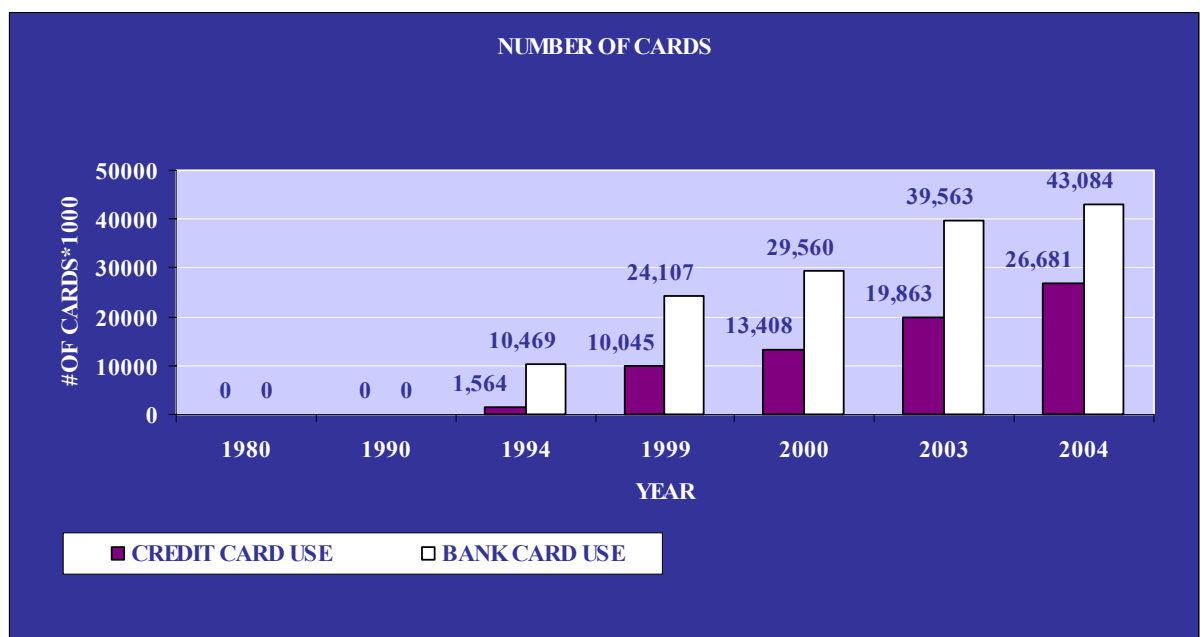
introduction of new tools for the regulation of liquidity and legal arrangements to promote the development of the capital market was enabled. Open Market Operations were started in February 1987, Foreign Banknote Markets were established in August 1988 and the Gold Market was opened in April, 1989 (Denizer, 2000). Moreover, in 1986 the Istanbul Stock Exchange was opened to promote the capital market. The Banking and Insurance School of T.C. Ziraat Bank was founded to prepare the Turkish bankers of the future. In addition, DC Gardner Turkey and several other private training firms entered the market to meet the increasing demand among bankers for learning new financial instruments and practices. These reforms enable banks to offer new services by using new instruments in addition to their regular banking activities. Turkish banks began to increase their operations in international markets, dealing with instruments like swaps and forward agreements. Reforms led to leasing and factoring to be the new financial techniques used by 1990s.

According to Isik and Hassan (2003), the budget deficit and internal debt stock had become uncontrollable by the end of 1993. At this point, the Turkish government decided to monetize the debt and cut interest rates on government securities. In this stage, the banking sector conducted transactions by utilizing new instruments in the capital market including asset backed securities, mutual funds, government papers and private sector securities. This financial instrument was intensively used by some Turkish banks during the first three quarters of 1995 (Ertuğrul and Selçuk, 2002). The amount of asset backed securities issued by banks increased by 69.9% and reached 71,850,550 million Turkish Liras by September 1995.

Between 1980-1993, the number of foreign banks in Turkey increased from 4 to 20. As a result of the competition between domestic banks with foreign banks settled to Turkey, the quality of the banking sector increased. The rapid growth of the consumer banking is a defining feature of Turkish banking in the early 1990s. Banks have put emphasis on service quality because individual and retail banking are becoming the most rapidly developing sectors of their business (Ersel, 1999). The abolishment of interest rate ceilings, reductions in the reserve and liquidity requirements, financial taxes, restrictions on foreign exchange operations as well as barriers on entry and exit have indeed provided a more liberal and contestable financial environment. Within this new environment, the bank managers, understood the significance of running their banks efficiently. Consequently, they first concentrated on computerization and automation projects to increase the speed, quality and efficiency of the banking services (TBA, 1998). Domestic banks started to modernize their operations by switching from manual methods to fully computerized systems, while highly qualified personnel were employed in order to extend the scope of professional services beyond traditional markets and in order to develop high quality of service aimed to satisfy client needs better. In addition to developments mentioned above, the banking sector has endured significant transformation in technical areas. In the beginning of 1990s, as a result of computer utilization as an on line real time system, electronic banking in Turkey has initiated. Turkish banks have invested heavily in computer processing and data transmission systems. The number of banks that provide electronic and/or Internet-banking services increases each day enabling more customers to make their transactions by direct access to terminals.

By the end of 1980s, Turkish banks started issuing credit cards. As of September 1995, a total of 2,012,207 credit cards had been issued. Of these cards, VISA and MASTERCARD dominated the sector with a 96.2% share, whereas the rest consisted of AMEX, DINERS and other credit cards. International credit cards composed the highest share when compared with national credit cards. Although Turkish banks started to issue credit cards just in August 1988, the number of credit cards in Turkey increased from 1 million in 1992 to 13.6 million in March 2001, a growth rate that is much higher than the EU average (Denizer, 1999: See Figure 1 below).

Figure 1: The Number Of The Credit Cards And Bank Cards Used Between 1980-2004

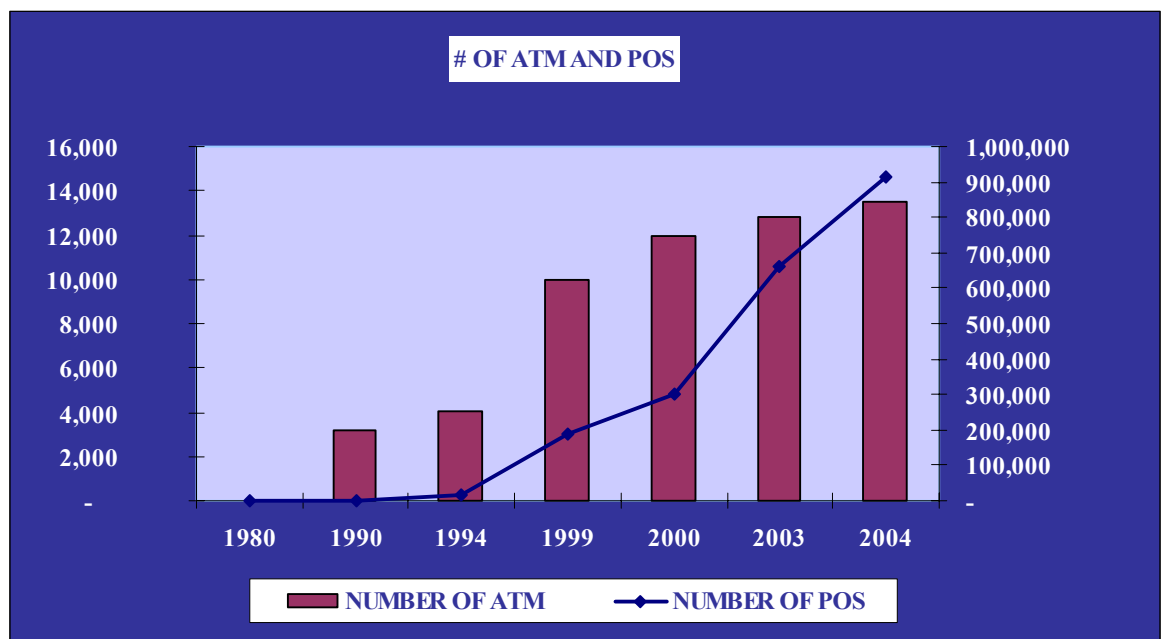


Source: Banking Regulation and Supervision Agency (BRSA) and Banks Association Of Turkey (TBA)

Turkey joined SWIFT (The Society for Worldwide Interbank Financial Telecommunication) in March 1989. Most Turkish banks- including the Central Bank - were members of SWIFT, and now Turkey has become a regional processor in Istanbul. In 1992, an electronic funds transfer system was installed for direct

crediting in the banking system. Coordinated by the Banks Association of Turkey and the Central Bank, the Turkish Interbank Clearing System (TIC) was launched in April 1992. During this period Automated Teller Machines (ATMs) and Point of Sale (POS) terminals were launched by many banks. As of the end of 2004, the number of credit cards in Turkey was 26,681,128. The number of ATMs and POS machines reached 13,544 and 912,118 respectively (See Figure 2 below).

Figure 2: The Number Of The ATM And POS Between 1980-2004



Source: Banking Regulation and Supervision Agency (BRSA) and Banks Association Of Turkey (TBA)

The banking sector reached its peak in 1999-2000 by remarkable advances in the banking sector but structural reforms did not hinder some factors that damage the system (Denizer, 2000). Large public sector borrowing requirements, the chronic high inflation, the use of tax advantages in favor of government debt, the deposit insurance that undermined market discipline, prudential regulation and supervision, and the undercapitalized state banks all contributed to the deterioration of the Turkish banking system (Alper and Öniş, 2003). Furthermore, generous deposit

insurance and a lax regulatory and supervisory environment triggered moral hazard and encouraged risk seeking. Connected lending, high exposure concentrations, large foreign exchange positions allowed banks to increase risk and lenient prudential regulations allowed these risks remain hidden (Metin-Özcan and Şimşek, 2005). In response to the severe banking crises, the government has taken a number of serious reform actions supported by the World Bank and the IMF. There was a major change in the business environment for the banking sector with the inception of the disinflation program, and more change is imminent. As a result of the disinflation program which sought to address Turkey's chronic macroeconomic instability, including a growing public debt problem, at a time when the situation had become largely unsustainable, put forward by the leading coalition government in Turkey. The program aimed at reducing inflation using an exchange-rate anchor. But it sought to balance risks associated with programs based on exchange rates by incorporating an 'exit strategy' to the peg (which entailed widening of the band 18 months into the program) and supporting it by an ambitious package of structural reforms and a sizeable fiscal adjustment. The disinflation program has been supported by the structural reforms in the banking sector.

At the heart of this transformation was the new Banking Act (No. 4389), which called for the establishment of an independent Banking Regulatory and Supervisory Agency (BRSA) to take over the supervisory and regulatory functions from the Treasury. The BRSA was established on June 23, 1999 and started its activities on August 31, 2000; the powers and responsibilities related to the supervision of the banking system, which had previously been divided between the Under Secretariat of Treasury and the Central Bank of the Republic of Turkey have been transferred to the BRSA (Neyaptı and Dinçer, 2005). With the new Banking

Law, which was prepared by taking into account the European Union directives and other generally accepted international practices, the compliance with the international standards in the field of banking supervision, which is an on-going process, was mostly achieved, in addition to increase the efficiency of supervision and surveillance of the banking system towards the main target of establishing stability, transparency and consolidated accounts. The purpose of the BRSA is to prevent all kinds of transactions and practices that might endanger the rights of the owners of savings and the regular and safe operation of banks and might cause important losses in the economy and to take and implement all decisions and measures required for ensuring the efficient operation of the credit system. The main targets of the BRSA are to increase the efficiency and the competitiveness of the banking sector, rendering permanent the confidence vested in the sector, to minimize the losses the sector might create on the economy, to improve the endurance of the sector, and to protect the rights and interests of the owners of savings.

Banking Law, defined the credit limits for banks, made internal control and risk management compulsory. “Regulation on the Savings Deposit Insurance Fund”(SDIF) introduced by the Banking Regulation and Supervision Board on August 26, 2000 defined the organizational structure, duties and responsibilities of the Fund with conditions applicable to utilization of the Fund. Banking Regulation and Supervision Agency is responsible for the management, functioning, auditing of the SDIF and for establishing the principles of savings deposits insurance. In November 2000 new disinflation program came under attack and with lira left to float in February program collapsed. As the banking sector excesses played a significant role in bringing about the center of the program, the sector was in a very weak financial position in the aftermath of the crisis. The collapse subsequently led

to a forced consolidation and a massive injection of public funds into the Turkish banking sector. The financial crisis of 2001 shifted the focus of the newly born BRSA from supervision to restructuring and rehabilitation. Within three years, the following key changes were affected in the regulatory system (Erçel, 2001).

Main alteration to the banking law: Initial change was implemented to proceed with the recap by passing a provisional article (Art. 4) as a part of comprehensive legislation (the Law on Financial Sector Restructuring, No. 4743). This legislation defined, among other things, a broad framework for corporate debt restructuring and allowed for the establishment of an Asset Management Corporation (AMC). Following alteration focuses on strengthening the onsite inspection, framework in lending to related parties and “fit and proper” criteria for bank owners.

Loan-loss reserves and provisioning: Loan loss provision has been executed since July 2001. According to this regulation detailed classifications of all loans and other receivables from borrowers have to be performed into five categories: standard, watch-list, limited collection possibility, doubtful collection possibility and write-off. Loan provisioning starts at 20% and all loans with a non-payment period of one year must be fully provisioned. The classification of one loan into a nonperforming category requires the classification of all loans to the same borrower into non-performing categories.

Capital adequacy: According to International Accounting Standards (IAS), accounting under hyperinflationary economies (IAS 29), consolidation of subsidiaries and associates (IAS 27), deferred income taxes (IAS 12) and impairment of assets and provisions for loan losses constitute the bulk differences from Turkish GAAP. Hence in line with IAS the capital adequacy ratio calculation was expanded

to include capital charges for market risks on a solo basis and monitoring of internal control and risk-management systems starting January 1, 2002, and on a consolidated basis from July 1, 2002.

Foreign exchange (F/X) exposure of bank: To limit F/X exposure further, the ratio was brought to +/- 20% of bank equity on a consolidated basis as of January 1, 2002. To identify structured finance products and to minimize risks, the BRSA established a new committee and a new set of rules.

Connected-lending practices: The amount of exposure a bank can take with each risk group was reduced from 75% of the bank's net worth to 25%.

Limits on participations in non-financial sectors: Banks can invest only 15% of their net in a non-financial subsidiary and the sum of such participations cannot exceed 60% of net worth by new regulation.

Risk-management practices: In order to improve risk measurement system and internal control.

Accounting and audit practices: In addition to internal audit; loan portfolio, market risks, risk management have been examined by external auditors since January 2002. Offshore banks that are related to Turkish banks are now covered by BRSA audits. Furthermore inflation accounting has been practicing since January 2003. However by March 2005 with new regulation since standards for inflation accounting implications have not met, inflation accounting has not been practiced anymore.

Non-bank financial institutions: Regulation and supervision of non-bank financial institutions was transferred from the Treasury to the BRSA by January 1, 2005.

Full coverage of savings deposits is one of the factors that prevent the efficient functioning of the banking systems. In the same period, there is wide acceptance on the incorporation of deposit insurance to the banking system however there is no unity in the best practice. Cull, Senbet and Sorge (2002) assert that deposit insurance will lead to financial development and growth in sound regulatory environments but results in financial instability under lax regulatory environments. Systems such as blanket guarantees greatly undermine the market discipline and destabilize the financial markets over time (Demirgüç-Kunt and Kane, 2002). Moreover, it appears as an obstacle to establishing the market discipline within the sector. Because of the full coverage of savings deposits, both banks and depositors can assume risks in order to obtain higher returns. In their efforts to obtain higher returns, savers in particular can ignore the risks to which the institutions they have preferred are exposed. As a consequence of New Banking Law (No: 4491), as part of the disinflation program, the coalition government started to phase out the full coverage, by lowering the ceiling to TL100 billion (more than USD 50,000 at the prevailing exchange rate). However, in July 2004 the insurance coverage over the saving deposits was limited to TL50 billion (approximately USD 37,250), which was expected to decrease the moral hazard effect. State Deposit Insurance Fund (SDIF) took over insolvent banks, using the authority given to it in 1994 when full deposit insurance was introduced. In the period of 1999-2003 in which the banking system underwent the restructuring, 20 banks were transferred to the SDIF due to their weakened financial structure. All liabilities of these banks were taken over by the

SDIF. On the other hand, the banking licenses of 8 banks were terminated and liquidated. In the same period, 11 bank mergers took place in the banking sector including the buying of some of the banks under the SDIF management. The total amount of resources transferred to the state-owned banks, including duty losses and to the banks transferred to the SDIF is USD 39.3 billion (26.6% of GDP). By the end of Turkish Banking Crisis, some of the banks under SDIF supervision were sold and others were put into a liquidation process. A total of 20 banks were closed, either through liquidations or mergers. The number of banks declined from 81 in 1990 to 48 as of 2004. Almost 36,000 bank employees were laid off (out of 174,000) and the initial losses of the failed banks were estimated at USD 6.2 billion. Between December 1999 and April 2003, the SDIF spent another USD 21.4 billion in an attempt to recapitalize these banks and make them attractive acquisition targets. Despite these efforts not all of these banks were sold and had to be liquidated. The Turkish Treasury spent USD 6.8 billion for eliminating short-term foreign currency positions of banks and another USD 2.4 billion were spent on recapitalizing private banks through voluntary debt swaps. The strain placed on the Turkish economy was significant and there has been great public pressure on the government to avoid a repetition, especially the widespread illegal activities. For this reason improvements have been undergone during 2003 and 2004 in terms of regulative and legislative framework of the Turkish banking system. SDIF has been separated from the administration of the BRSA and it's legislative framework has been renewed for the collection non performing loans from the debtors of SDIF banks, risk based deposit insurance system has been settled, moreover to increase intermediation costs, stamp duties and charges on loans were removed, deposit insurance premiums were decreased considerably and special transaction taxes on deposits were lifted.

Furthermore the government has eliminated the Resource Utilization Fund on commercial loans. This pressure was a possible contributor to the design and efficient implementation of the restructuring program, including charges being brought against many bank owners and managers.

Following the crises and in line with the new regulations, the mergers and acquisitions gained pace and banks' total asset size increased to around USD 27 billion. After the BRSA began to operate on August 31, 2000 (in addition to the existing eight banks) the administration of 13 banks was assumed by the SDIF according to the resolutions of the BRSA. Among these 21 banks, 13 banks were merged; five banks were sold to domestic and foreign investors and the licenses of two banks were revoked. By the end of December 2004, there was one bank which remained under the administration of the SDIF, Bayındırbank, the bridge bank for the resolution of the SDIF banks.

In the following of this chapter, in Section 2.1 types of the banks in Turkey and in Section 2.2, balance sheet structure of the Turkish banking sector will be explained.

2.1 Bank Types In Turkey

Banks can be classified under two main groups as those with the permission to collect deposits (commercial banks) and those not accepting deposits (nondepository banks). Furthermore, each group can be divided into subgroups as state-owned, privately owned foreign, investment and development and fund banks according to the source of their respective capitals.

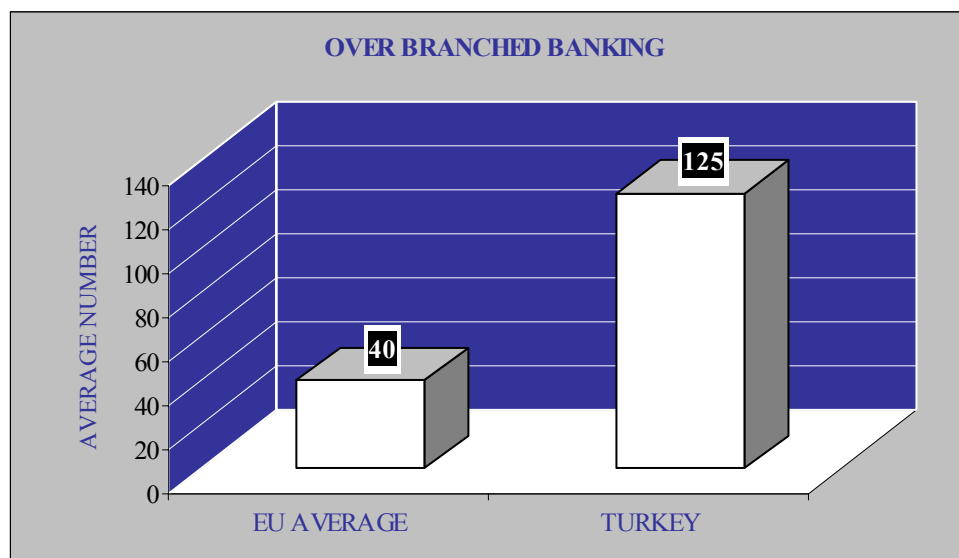
Commercial banks operate as universal banks offering a wide range of products and services using developing technology today. Besides traditional depository and lending services, they operate in the field of investment banking as well as engaging in capital market transactions. The number of commercial banks is 35; of which 3 are state-owned banks, 18 are privately owned banks and 13 are foreign banks.

Considering the commercial banks group; state-owned banks have wide networks of branches throughout the country. Although smaller in number, the state-owned commercial banks occupy a substantial share in the banking system with 45% of total assets. The state-owned banks heavily involve in quasi-fiscal activities and are reimbursed insufficiently by governments with duty losses. The Treasury failed to take full responsibility of the stock of duty losses of the public banks (Öniş 2003). Consequently, the public banks were forced to borrow from the inter-bank market to finance their day-to-day liquidity needs. Clearly, this inherent deficiency rendered the system extremely vulnerable to an exogenously generated shock. The destructive effects of this shock might display themselves in a striking fashion, if the shock leads

to a sudden stop in capital inflow or, even worse, to a sudden capital outflow. However, lack of sufficient reimbursement of government resulting from duty losses, they have inadequate capital and tight in liquidity. Besides the commercial banking transactions, they are specialized in the financing of agricultural sector and Small Medium Size Enterprises (Alper, 2003).

As a result of restructuring program state banks were reshaped and they began to make profits. Similarly, with the requirements of modern banking and international competition, significant steps have been taken within the framework of operational restructuring. Besides, number of branches of the state banks had been reduced. However, Turkish banking sector is still over-branched and at a small size when compared to the EU. Although the share of public and SDIF banks continues to decline steadily to 30%, it's still three folds more than the average of EU (See Figure 3 below).

Figure 3: The Average Number Of The Turkish Banks Compared With EU Average



Source: Oesterreichische Nationalbank (OeNB) and Banking Regulation and Supervision Agency (BRSA)

Private Banking System was also restructured as a consequence of the program. Capital structure of private banks was reshaped additionally their market risk was limited. Cash capital increases, for non-performing loans correction of provisions were set aside, valuation of securities were taken into account during the evaluations and as a consequence, three banks were determined to have capital requirements. Either shareholders or by the allocation of subordinated loans given by the SDIF upon BRSA decisions the capital requirements of these banks were provided. With the improvement observed in profitability, the average capital adequacy ratio of the private banks was recorded at 28.8 % as of December 2004.

Table 1: Total Assets, Loans And Non-Performing Loans, Securities Portfolio And Deposits Of The Turkish Banks Before And After The Restructuring Program

USD Million	BEFORE PROGRAM					AFTER PROGRAM			
	1997	1998	1999	2000	2001	12.2001**	12.2002**	12.2003**	12.2004**
Total Assets	96.645	117.767	133.535	154.955	119.974	116.661	130.120	178.880	228.332
Loans	40.349	41.997	36.891	47.404	29.090	23.899	29.967	47.442	74.060
Non-performing Loans*	1.014	3.248	4.309	5.895	6.123	9.595	6.381	6.182	4.695
Securities Portfolio	13.333	17.699	26.653	27.485	41.725	41.059	52.680	76.545	92.157
Deposits	52.552	69.630	80.316	87.680	76.686	75.938	84.413	111.268	142.363

*: Data reflecting gross non performing loans.

** : Data reflecting three-staged audit and inflation accounting results.

Following the program as can be seen from the Table 1 above, total assets after the program had declined for 2 years. However after the recovery from crisis and as a result of the program total assets have an increasing trend. Increasing trend in the non-performing loans of the system before the program turned out to have a decreasing trend after the end of 2001.

As of March 31, 2004 there were 48 banks in the banking system. 35 of them were commercial banks, the number of banks constitute by non depository banks were 13. As of the end of 2004, there were 5,987 branches in the banking system

including those abroad; 2,025 of which belong to state-owned commercial banks. The number of branches of privately owned commercial banks is 3,739. The number of people employed in the banking system is 127,163; 31% of which work for state-owned commercial banks and 60% for privately owned commercial banks.

Among privately owned banks there are large-scale commercial banks, which have nation-wide networks of branches and provide all kinds of the banking services, and there are small- and middle-scale commercial banks with activities more concentrated in main populated cities and engaging more in wholesale banking. Foreign banks are divided into two groups; those have opened branch in Turkey and those are founded in Turkey. These banks are subject to the same regulations as the other commercial banks. (See Table 2 below for the number of banks and branches classified with regard to the ownership of the banks).

Table 2: Turkish Banking Sector: Financial Indicators As of December 31, 2004

State Banks	Date	Total Assets	Total Loans	Total Deposits	Total Equity	Paid in Capital	Net Income/Loss	Number of Branch	Number of Employees
Türkiye Cumhuriyeti Ziraat Bankası A.Ş.	1863	56,994,364	9,135,149	45,382,201	5,046,776	2,221,978	2,227,807	1,146	21,763
Türkiye Halk Bankası A.Ş.	1938	25,709,322	4,340,349	19,453,294	3,008,927	1,150,000	708,615	515	7,962
Türkiye Vakıflar Bankası T.A.O.	1954	24,199,088	8,062,042	17,584,493	2,012,203	420,145	767,064	296	7,195

Private Banks	Date	Total Assets	Total Loans	Total Deposits	Total Equity	Paid in Capital	Net Income/Loss	Number of Branch	Number of Employees
Türkiye İş Bankası A.Ş.	1924	38,513,774	12,451,842	24,320,442	7,639,999	1,640,757	1,099,254	848	15,802
Akbank T.A.Ş.	1948	34,913,412	12,939,200	19,918,425	6,226,991	1,500,000	1,496,552	637	10,345
Türkiye Garanti Bankası A.Ş.	1946	26,267,917	10,501,376	17,612,241	3,169,324	1,200,000	684,049	335	8,874
Yapı ve Kredi Bankası A.Ş.	1944	24,624,008	10,055,975	14,293,241	4,639,658	752,345	(16,038)	408	10,600
Koçbank A.Ş.	1985	10,369,321	3,931,643	7,066,428	726,117	430,000	223,707	157	3,596
Finans Bank A.Ş.	1987	8,630,097	5,190,730	5,091,705	1,047,022	590,000	254,926	169	5,046
Türk Dış Ticaret Bankası A.Ş.	1964	7,140,470	3,068,875	3,467,163	988,835	363,944	100,476	167	3,909
Denizbank A.Ş.	1997	6,704,946	2,628,727	4,160,112	854,535	290,000	145,272	189	4,162
Oyak Bank A.Ş.	1984	6,154,234	3,483,776	4,640,244	714,453	224,578	115,170	291	4,105
Türk Ekonomi Bankası A.Ş.	1927	3,565,596	1,584,721	2,259,870	394,197	57,800	53,678	86	2,059
Şekerbank T.A.Ş.	1953	3,114,256	1,301,031	2,293,633	295,950	85,000	95,005	197	3,209
Alternatif Bank A.Ş.	1992	1,174,332	583,797	624,905	131,164	220,000	17,242	22	532

Table 2 (cont'd)

Private Banks	Date	Total Assets	Total Loans	Total Deposits	Total Equity	Paid in Capital	Net Income/Loss	Number of Branch	Number of Employees
Anadolubank A.Ş.	1996	1,944,231	723,076	1,238,968	159,946	66,000	51,239	50	1,044
Tekstil Bankası A.Ş.	1986	1,361,734	739,707	774,373	136,614	122,500	6,775	38	916
Tekfenbank A.Ş.	1992	602,004	231,606	391,811	94,767	50,000	828	31	572
Turkish Bank A.Ş.	1982	419,345	42,993	252,496	64,714	10,400	2,206	12	181
MNG Bank A.Ş.	1991	367,850	162,033	193,007	65,343	35,000	5,960	8	224
Adabank A.Ş.	1985	69,055	938	18,363	49,724	80,000	(43,670)	47	364

Foreign Banks	Date	Total Assets	Total Loans	Total Deposits	Total Equity	Paid in Capital	Net Income/Loss	Number of Branch	Number of Employees
HSBC Bank A.Ş.	1990	5,283,207	3,521,521	3,514,282	1,014,030	277,290	180,685	159	3,596
Citibank A.Ş.	1980	1,921,745	811,523	1,325,985	359,872	33,753	43,876	24	1,315
Bnp-Ak Dresdner Bank A.Ş.	1985	355,730	22,463	96,362	162,439	36,000	50,641	1	71
Arap Türk Bankası A.Ş.	1977	330,555	70,082	44,774	76,509	29,000	7,212	3	181
Deutsche Bank A.Ş.	1988	365,101	10,932	14,266	125,117	20,000	68,175	1	34
ABN AMRO Bank N.V.	1921	452,461	89,426	184,010	110,888	29,110	18,712	1	132
Société Générale (SA)	1989	386,983	37,508	255,565	50,391	24,933	8,952	1	50
WestLB AG	1990	239,356	1,243	160,767	37,832	6,371	2,645	1	60
BankEuropa Bankası A.Ş.	1984	277,978	90,397	179,823	57,677	77,351	(24,952)	12	205

Table 2 (cont'd)

Investment and Development Banks	Date	Total Assets	Total Loans	Total Deposits	Total Equity	Paid in Capital	Net Income/Loss	Number of Branch	Number of Employees
JPMorgan Chase Bank	1984	430,116	0	372,741	50,466	21,473	1,846	1	32
Bank Mellat	1982	178,718	101,639	30,038	18,548	4,236	3,923	3	47
Banca di Roma S.P.A.	1911	98,427	27,334	21,753	8,600	4,351	(196)	1	30
Habib Bank Limited	1983	26,507	5,952	1,562	10,513	2,833	728	1	14
Türk Eximbank	1987	4,461,136	3,473,509	0	1,716,428	657,864	209,673	2	346
İller Bankası	1933	3,035,220	2,145,384	0	2,167,705	993,064	6,535	1	2,721
Türkiye Sınai Kalkınma Bankası A.Ş.	1950	2,285,451	1,204,167	0	381,658	142,500	59,488	1	265
Türkiye Kalkınma Bankası A.Ş.	1975	517,569	213,366	0	391,856	150,000	1,298	1	743
Calyon Bank Türk A.Ş.	1990	269,564	23,948	0	13,136	13,400	327	1	40
İMKB Takas ve Saklama Bankası A.Ş.	1995	325,316	11,551	0	206,607	60,000	45,791	1	231
C Kredi ve Kalkınma Bankası A.Ş.	1999	147,489	66,380	0	78,677	47,500	10,503	3	47
Nurol Yatırım Bankası A.Ş.	1999	87,102	32,825	0	47,231	27,403	1,135	3	46
Çalık Yatırım Bankası A.Ş.	1999	72,676	39,972	0	51,271	13,500	4,594	1	31
GSD Yatırım Bankası A.Ş.	1998	71,003	53,763	0	41,281	15,000	6,533	1	29
Diler Yatırım Bankası A.Ş.	1998	46,012	0	0	39,531	14,000	(948)	1	20
Taib Yatırım Bank A.Ş.	1987	5,023	0	0	1,240	5,000	(1,824)	1	11
Tat Yatırım Bankası A.Ş.	1992	3,364	120	0	3,333	2,000	(1,368)	1	12

Table 2 (cont'd)

Fund Banks	Date	Total Assets	Total Loans	Total Deposits	Total Equity	Paid in Capital	Net Income/Loss	Number of Branch	Number of Employees
Bayındırbank A.Ş.	1958	1,938,400	26,554	154,519	1,272,563	440,522	386,341	2	428
Pamukbank T.A.Ş.	1955	0	0	0	0	472,767	0	172	3,773
		306,451,565	103,241,145	197,393,862	45,962,658	15,131,668	9,086,442	6,050	126,970

Source: Banking Regulation and Supervision Agency (BRSA)

2.2 The Asset, Loan And Deposit Structure Of The Turkish Banking Sector Balance Sheet

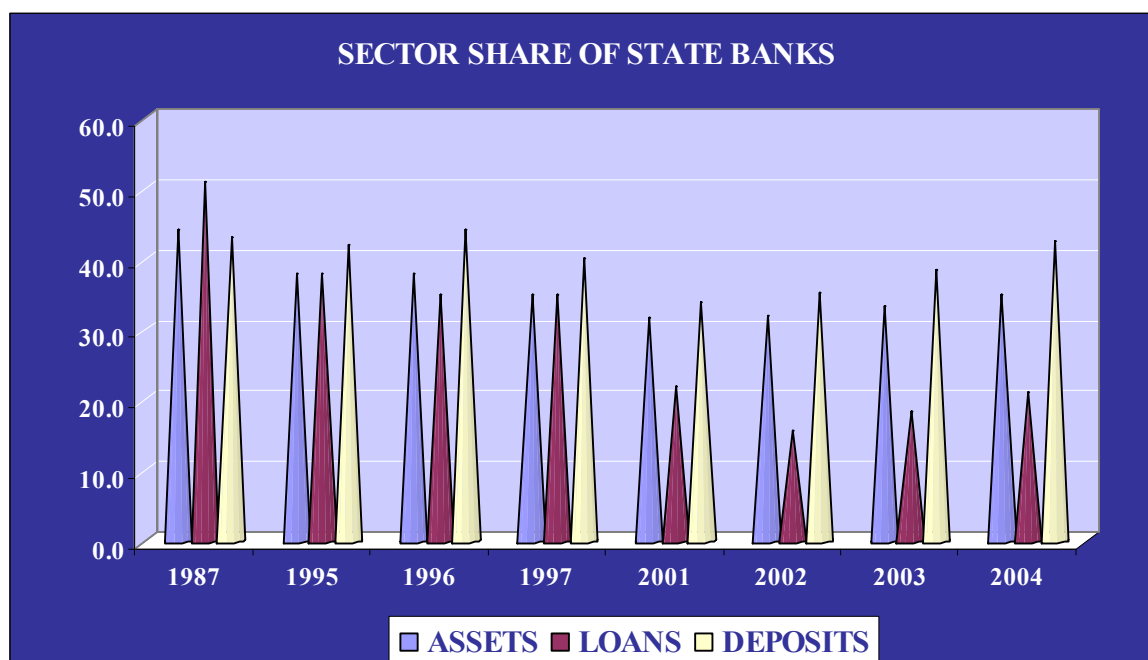
The degree of concentration in the banking system is considerably high but has followed a downward trend recently. State-owned banks share high portion of the market. There are 2 state-owned banks among the top five in terms of total assets. State banks represent 34.9% of total assets, 42.4% of total deposits and 21.1% of total loans (See Table 3 below). However, following the restructuring efforts in the sector reducing the size of the state in the economy, the share of state-owned banks in total assets declined but increased in terms of total deposits.

Table 3: Asset, Loan and Deposit of the Turkish Banking Sector Balance Sheet With Regard To Their Ownership Structure

	Share in Total				Share in Total				Share in Total			
	Assets (%)				Loans (%)				Deposits (%)			
	2001	2002	2003	2004	2001	2002	2003	2004	2001	2002	2003	2004
State-owned Banks	31.7	31.9	33.3	34.9	21.9	15.6	18.3	21.1	33.7	35.1	38.5	42.4
Private Banks	52.9	56.2	57.0	57.4	59.4	69.4	69.1	68.9	54.8	58.4	56.8	55.1
SDIF	7.7	4.4	2.8	0.6	5.2	2.0	1.1	0.0	9.5	4.2	2.0	0.0
Foreign	3.1	3.1	2.9	3.4	3.7	4.4	4.1	4.7	2.0	2.2	2.7	2.5
Inv. & Dev.Banks	4.6	4.4	4.0	3.7	9.8	8.6	7.4	5.3	-	-	-	0.0
TOTAL	100	100	100	100	100	100	100	100	100	100	100	100

Source: Banking Regulation and Supervision Agency (BRSA) and Banks Association Of Turkey (TBA)

Figure 4: Asset, Loan and Deposit of the Turkish Banking Sector Balance Sheet with regard to State Banks



Source: Banking Regulation and Supervision Agency (BRSA) and Banks Association Of Turkey (TBA)

Although number of state banks are 3, one third of the assets of the Turkish banking system are controlled by the state-owned banks. When compared with privately owned banks, the picture shows that state owned banks net profit-losses is considerably less than privately owned banks which means privately owned banks generally doing a better job despite the fact that state owned banks are supported by government. State banks' total share in the financial system as of December 2004 was 34.9 %. The two state-owned banks, Ziraat Bank (the Agricultural Bank, which has a public mission to lend to farmers) and Halk Bank (which has a public mission to lend to small- and medium-sized enterprises [SMEs]) together account for 27% of the Turkish banking sector (year-end 2002 figures, in terms of total assets) If Vakıfbank (a special-status bank owned by foundations) is included, this rises even further to 34.9%. Furthermore, they received 42.4% of total deposits by December 2004. Loans have the highest share in balance sheets of the banks. State and private

banks supply 21% and 69% of these loans respectively as of December 2004 (See Table 4 and Figure 4).

Table 4: Net Profit-Losses, Return on Assets And Returns on Equity of The Turkish Banking Sector Balance Sheet With Regard To Their Ownership Structure

	Net profit -losses (TL trillion)	Return on assets (%)	Return on equity (%)
State-owned banks	2,682	2.5%	12.2%
Privately-owned banks	2,825	1.6%	6.1%
Foreign banks	247	2.3%	1.25%
Investment banks	315	2.7%	1.61%
Non-depository banks	386	19.93%	3.49%
Sector	6,455	2.11%	5.48%

Source: Banking Regulation and Supervision Agency (BRSA) and Banks Association Of Turkey (TBA)

CHAPTER 3

THE TURKISH BANKING SYSTEM BETWEEN THE PERIOD 2001 AND 2004

The recent twin economic crises experienced by Turkey in 2000 and 2001 illustrated in a rather dramatic fashion; the strong correspondence between a poorly functioning and under-regulated banking system on the one hand and the sudden outbreak of macroeconomic crises on the other. Indeed, the Turkish experience shows that both public and private banks can contribute significantly to the outbreak of economic crises. In retrospect, it may be argued that the private commercial banks played an instrumental role in the first of the twin crises experienced in November 2000, whilst, the public banks emerged as the central actors in the context of the subsequent crisis of February 2001 (Alper, 2001).

In following subsections, in part one (3.1), we discuss the effects of the crises on the banking sector in emerging market and transition countries. Firstly, in Section 3.1.1, we analyse November 2000 and 2001 liquidity and Turkish banking crises. Secondly, in Section 3.1.2, the effects of the crises particularly is analysed with special reference to the state banks and the private banks in Turkey. Finally, in Section 3.1.3, the measures taken in the Turkish banking sector after the financial crises are described.

In the second part (3.2) of this chapter, we discuss the effects of the inflation and the disinflation processes on the Turkish banking sector. In part two, in Section

3.2.1, the effect of the inflation process on the banking sector and in Section 3.2.2, the effect of the disinflation process on the Turkish banking sector are examined.

3.1 Effects Of The Crises On The Banking Sector

The banking and financial crises of recent years in emerging market and transition countries (and even in industrialized countries such as Japan) have also demonstrated that when things go wrong with the financial system, severe economic contractions can occur (Mishkin 2000, p.511).

The most severe industrial country's banking crisis, according to JP Morgan Industry Analyse, was that of Spain (1977-85), where estimated losses reached almost 17% of GDP. Next came Finland (1991-93) at 8% of GDP, Sweden (1991) at 6% and Norway (1987-89) at 4%; the US saving and loan crisis (1984-91) cost about 3% of GDP. In the developing world, we can easily identify more than 12 episodes in which losses or resolution costs equaled or exceeded 10% of GDP. These include the other cases of Venezuela (18%), Bulgaria (14%), Mexico (12.15%) and Hungary (10%); in several cases, such as Argentina and Chile, losses were at least 25% of GDP. The most notable crises occurred following the Mexican debt crisis in 1982, the Gulf War in 1989, the Turkish financial depression in 1994, the Asian Financial crisis in 1997, the Russian default in August 1998 resulting in Turkish insolvencies in 1999, the Turkish currency crises in November 2000 and later in February 2001 (Parasiz 2000, p. 256). The causes of the Turkish crisis are not systematically different from foreign financial crises. Poor banking practices, inadequate capital, poor assessment of credit risks, lending to connected enterprises or insiders,

excessive maturity, currency mismatches; are some of the common themes for any country experiencing problems in the financial sector. In the following subsection (3.1.1) 2000 and 2001 crises will be briefly discussed. Then, the effects of the crises on the state banks and the private banks in Turkey (3.1.2) and finally, the measures taken in the Turkish banking sector after the financial crises are described (3.1.3).

3.1.1 November 2000 and 2001 Liquidity And Banking Sector Crises

Turkey experienced crises in November 2000 and February 2001, both due to the structural problems of the banking system and also international circumstances (For details of the crises see Alper, 2001; Celasun, 2002; Özatay and Sak, 2002).

The banking sector recovered rapidly from the 1994 financial crises and posted an average annual growth of 18% in the post -1995 periods (Metin-Özcan and Şimşek, 2005). Furthermore, the Governments found excuses by referring to the contagion effects of the East Asian and the Russian crises of 1997-98 and two successive dreadful earthquakes of 1999 (Selçuk and Yeldan, 2001). In December 1999, the Government established an economic reform program to stabilize the Turkish economy and bring inflation down to single figures. The inflation rate averaged 35.9-33.4% between January and September 2000, down from 80.4% in 1996 (Pls see Table 6 below for macroeconomic indicators).

Major impact of the disinflation program should be perceived especially on banks' balance sheet (Alper, 2001). The pre-announced exchange rate path and the real appreciation of the Turkish lira meant lower cost of funding for foreign currency

liabilities (Alper and Öniş, 2001). Decline in interest rates channeled banks to reduce their deposit position. In response a number of private banks borrowed in short-term foreign currency terms and lent in long term Turkish lira terms. Consequently foreign currency open position of private banks and maturity mismatches increased significantly. The ratios of assets to liabilities with matching maturities are reported in Table 5 for the period from 1995 to 2001. The figures show that the liabilities are more of a short-term nature while the maturities of assets are longer.

Table 5: Commercial Banking Sector Ratios Between 1995-2001

Ratios, commercial banking sector, (%)^a	1995	1996	1997	1998	1999	2000.6	2000.9	2001.9
Non-performing loans / Total loans	2.8	2.2	2.4	7.2	10.7	9.7	9.3	18.6
Permanent assets / Total assets	7.6	7.3	6.7	8.0	9.4	11.1	13.4	18.4
FX assets / FX liabilities ^b	90.6	93.6	89.6	84.9	79.4	73.0	71.6	81.0
FX liabilities - FX assets (billion \$)								
Excluding off-the-balance sheet	3.0	2.5	5.0	8.4	13.2	19.2	20.9	12.4
Including off-the-balance sheet	0.6	1.2	1.9	2.9	2.9	5.6	5.8	0.7
Liquid FX assets / FX liabilities	44.8	44.6	41.0	39.5	40.0	35.2	34.4	38.3
Liquid assets / Total sources ^c	46.7	44.0	41.1	39.9	42.6	41.0	38.3	51.4
Assets / Liabilities(with 3 months or shorter maturities)	n.a.	n.a.	45.8	45.7	46.3	41.8	43.9	43.9
Share of deposits with 6 months or greater maturity in total deposits	26.1	26.6	24.7	22.9	28.2	18.7	19.3	11.6
Repos / (Liabilities + repos) ^d	5.1	8.1	12.8	10.4	9.6	11.4	10.9	6.1

a: End of period figures.

b: 'FX' denotes "foreign currency denominated".

c: Total sources = deposits + non-deposit funds.

d: Repos had been recorded off-the-balance sheet since 2002.

Source: Central Bank and the Banks Association of Turkey.

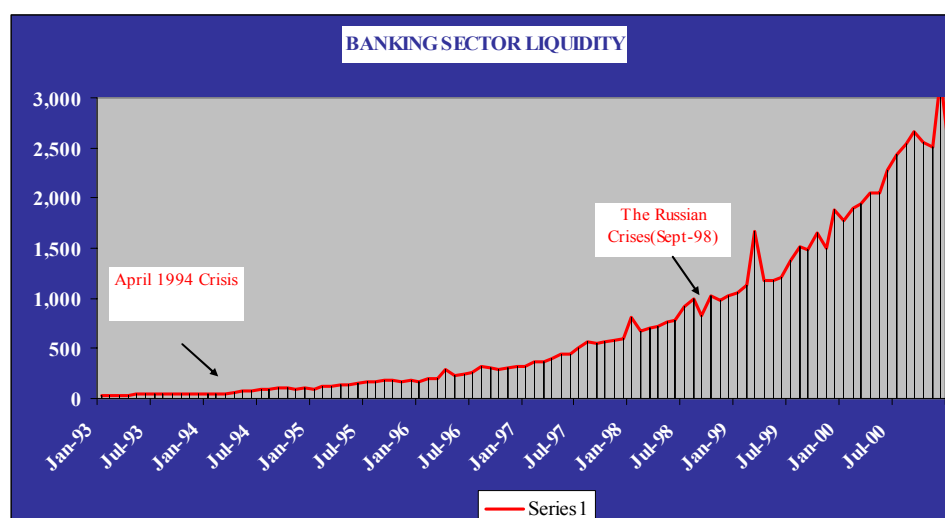
The composition of the asset structure of the banking sector changed significantly during 2000 with an increase in the share of loans and a decline in liquid assets (Alper and Öniş, 2001 and Ersel, 2001). There are two major interest-earning assets in the Turkish banking system; commercial loans and government debt instruments. The quality of the government debt instruments portfolio is directly

related with the expectations regarding debt sustainability, the sustainability of this financing mechanism was conditional on the continuation of demand for government securities; hence the vulnerability of the system to concern about the rollover of the outstanding government debt instruments increased.

The amount of Turkish government securities did not increase the minimum capital requirement of the commercial banks. Hence, any bank's asset size, theoretically, be made up of only Turkish government securities and these securities need not be backed by any capital. Therefore, the absence of regulation on capital adequacy for holding Turkish government securities led to exposure of banking sector to liquidity.

At the end of 2000, the Turkish banking system was noticeably affected by the increasing interest, exchange rate and credit risk due to open positions. Foreign investors lost their trust in the economic recovery program which bred the capital outflow from the country and the sharp increase in Treasury bill rates led to financing difficulties and erosion of the capital base of the banking sector hence led to the liquidity crisis of November 2000. The net capital flow in 2000 shows a USD 9.6 billion inflow, whereas in 2001, this figure changed to an outflow of USD 19.9 billion (See Figure 5 below for the liquidity of the sector). There was a deficit of USD 2.8 billion in 2000 and USD 2.3 billion in 2001. Thus in the 2000-2001 period, USD 5 billion net capital transfer abroad was made (Metin-Özcan and Şimşek, 2005) (See Table 6 below).

Figure 5: The Banking Sector Liquidity Between 1993-2001



Source: Central Bank Of The Republic Of Turkey

Table 6: Macroeconomic Indicators Of The January 2001-May 2002 Period

Macroeconomic indicators of the January 2001 – May 2002 period ^a							
	Average Exchange Rate (USD/TL)	Secondary Market Average Interest Rate (%)	Average Treasury Borrowing Rate (%)	Eurobond Spread (End Of Period Basis Points)	Annual Inflation Rate (CPI, %)	Expected Year-End Inflation Rate	Annual Industrial Production Growth Rate (%)
2001.01	672,240	60.1	65.0	729	35.9	n.a.	7.5
2	739,889	103.1	122.5	936	33.4	n.a.	-4.9
3	968,299	154.8	193.8	990	37.5	n.a.	-7.6
4	1,209,865	127.0	130.5	864	48.3	n.a.	-9.6
5	1,132,510	85.1	82.0	833	52.4	n.a.	-9.4
6	1,215,605	83.2	88.4	848	56.1	n.a.	-10.1
7	1,320,506	95.2	91.9	1,021	56.3	n.a.	-11.0
8	1,400,947	89.1	92.7	904	57.5	63.7	-10.8
9	1,469,858	87.9	87.6	929	61.8	64.8	-9.2
10	1,600,157	87.7	86.4	884	66.5	68.4	-13.6
11	1,521,208	77.6	79.3	755	67.3	72.0	-14.4
12	1,452,198	72.6	74.1	678	68.5	69.8	-8.1
2002.01	1,369,182	70.8	71.4	641	73.2	47.3	-2.4
2	1,349,975	69.6	70.0	640	73.1	47.5	-5.2
3	1,356,993	65.2	68.5	591	65.1	43.6	19
4	1,317,739	56.6	58.7	577	52.7	37.0	14.4
5	1,389,555	57.0	55.3	629	46.2	36.7	11.0

a: Average figures are the monthly averages of daily data. Eurobond spread is the spread between the 30-year Turkish Treasury Eurobond yield and 30-year US bond yield. Annual figures denote annualized values for the monthly data, that is they are calculated as $[(X(t)/X(t-1)) - 1] \times 100$. Expected inflation data comes from the biweekly survey of the Central Bank.

Source: Central Bank Of The Republic Of Turkey

If the major cause of November 2000 crisis was the failure to regulate private banks, then it should be claimed that “under regulation” of the public banks was the major contributor to the subsequent liquidity crisis of February 2001.

The inconsistency between the level of interest rates and the depreciation rate of the Turkish Lira emerged as problems in the aftermath of the November crisis. This was related with questions regarding debt rollover capability of the Treasury, as the major market maker of the government debt instruments was no more at the stage (Metin-Özcan and Şimşek, 2005). While the upper limit of the annual rate of depreciation of the lira against a basket of Euro and US Dollar was announced to be 12% in 2001, throughout the auctions in January 2001, the Treasury was not able to borrow below 57% in annual compounded terms. In the first auction of February the interest rate increased to 70%. That was clearly an unsustainable situation. Either the interest rate should have declined to a level compatible with the rate of depreciation or the exchange rate regime should have collapsed. February 19, 2001 was a major turning point in Turkish political and economic history (Öniş, 2003). Dispute between the Turkish Prime Minister and President devastated the financial markets and the banking sector rushed to foreign currency. A loss of USD 7.5 billion, approximately one-third of the total official reserves, was realized by CBRT. Banks were forced to sell USD 6 billion back to the CBRT. This announcement escalated the over-night rate to 2,058% on February 20, 2001, followed by 4,019% on the next day. Levels of exchange rate rose up approximately 40%. Central Bank acceptance of collapse of the crawling peg regime attributable to the exhaustion of reserves, extreme levels of interest and exchange rate in the following two days of February 19, 2001 and the dollar exchange rate jumped to 958,000 liras from a level of 685 thousand liras. (For a detailed account of crises in the Turkish economy from

different perspectives (see Alper and Öniş (2003), Ertuğrul and Selçuk (2002), Metin-Özcan and Şimşek (2005), and references therein).

3.1.2 Effects Of The Crises On The State Banks And The Private Banks In Turkey

While Turkey had experienced significant crises during mid 1990s and beginning of the new era banking system was highly vulnerable to macroeconomic crises. Underlying reasons for the vulnerability of banking system can be explained as follows; the distortions induced by the predominance of the public banks in the system; the dilemmas posed by “open positions” and politicization of new entry in the realm of private commercial banks; negligible entry of foreign banks into the sector.

Public banks have created main distortions in the banking system in the aftermath of the 1994 crisis. The distortions introduced by the presence of a large public banking sector are not unique to Turkey (La Porta et al. 2000). Public banks lending and borrowing operations have been reshaped by government which resulted in an uneven playing field in the banking sector. Directed lending at subsidized rates to favored sectors has in part heavily undermined their capitalization, liquidity and profitability. In addition, public banks have been adversely affected through their interaction with the Treasury from 1997 to 2000. On the other hand, the share of accumulated duty losses of the state banks gradually increased. The share of loans granted to the Treasury by state banks is later treated as a duty loss by the Treasury (See Table 7 below).

Table 7: Characteristic Differences Between The State and Private Banks

Characteristic Differences Between State and Private Banks								
		1997	1998	1999	2000/I	2000/II	2001/I	2001/II
Loan / Government Debt Instruments	Private	113.72	119.28	82.52	93.26	102.49	139.00	144.97
	State	86.24	87.86	66.27	n.a.	n.a.	n.a.	n.a.
REPOs / Lira deposits	Private	123.36	83.27	106.61	95.23	93.73	23.62	25.37
	State	22.49	19.07	13.64	30.29	28.67	55.36	41.52
FX / Lira deposits	Private	212.20	201.63	274.65	285.07	279.99	205.37	237.54
	State	46.37	35.61	26.49	31.66	32.42	37.12	37.12
Share of FX loans	Private	14.01	13.97	15.91	16.28	16.51	20.02	19.55
	State	3.07	3.18	2.30	2.13	2.78	3.36	2.78
Share of Accumulated Duty Losses	Private	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	State	27.07	27.59	32.01	n.a.	n.a.	n.a.	n.a.
Share of Net worth	Private	9.13	9.87	11.29	12.16	12.83	11.25	9.65
	State	5.38	3.85	3.80	3.78	3.50	3.78	3.50

Source: Central Bank Of The Republic Of Turkey

The state-owned banks were assigned to carry out certain specialized (non-banking) functions (such as advancing preferential credits to specific classes of borrowers, financing agricultural support programs etc.) that created the so-called “duty-losses”. In principle, these duty-losses should be covered by the funds from the central government’s budget. The political authorities, instead of allocating funds from the budget, choose to rely on these banks’ resources. The Central Government either accumulated huge amounts of debts owed to the state-owned banks (Atiyas and Ersel, 1994) or paid its debts with not so-liquid government debt instruments. This practice created insurmountable problems for the state-owned banks. In order to reduce the burden of the state-owned banks inflicted by the government, these banks were treated as if they were subjected to, de facto, softer regulatory constraints. This discrimination in favor of the state-owned banks led to distortions in the financial markets. Private banks rightly, from their points of view, complained about “unfair competition” stemming from the state-owned banks. The two major public banks,

namely Ziraat (state agricultural bank) and Halk (people's bank) banks have been at the center of this process. Ziraat Bank helped to channel funds towards agricultural producers, whereas Halk Bank targeted small and medium sized businesses both on a heavily subsidized basis

Regulation of State Aid for the Activities of Agricultural Co-operatives' Investments has become effective with the publication in the Official Gazette dated April 30, 1990 numbered 20504. In the framework of this regulation and in accordance with the protocol signed between the Turkish Ministry of Agriculture and Rural Affairs and the Bank, the amount transferred to the Bank to be granted to Agricultural Development Co-operatives is TL 30,045 Billion as of June 30, 2001 (TL 42,594 Billion as of December 31, 2000). As of the balance sheet date the commission receivable amount is TL 4,284 Billion (TL 4,196 Billion as of December 31, 2000).

Short term funds consist of; funds amounting to TL 143,727 Billion transferred from the Treasury for the liquidation of special duty losses of T.C. Ziraat Bank, T. Halk Bank, and T. Emlak Bank; Funds amounting to TL 151,295 Billion transferred from the Treasury for loans granted with low interest rates to producers whose economic activities are limited to running small and medium sized agricultural enterprises.

A Council of Ministers decision dated October 13, 1988 numbered 88/13384 established of a Government Incentive and Price Stabilization Fund. Loans are issued from the Government Incentive and Price Stabilization Fund by means of the Bank at 50% interest rates to Agricultural Credit Co-operatives Unions, for crop purchases to subsidize various agricultural products, to protect producers against price movements

and to develop the export of agricultural products. 4% of the accrued interest is taken by the Bank as service commission. For loans issued after July 1, 2000 the said commission has been 0.5% and collected when the loan is issued.

In the context of the new economic program started in April 2001, the Government resolved to settle the accumulated receivables from the Treasury arising from subsidized low interest rate agricultural loans and the related interest accruals. For this purpose, marketable government bonds amounting to TL 12,113 Trillion were given to the T.C Ziraat Bank and TL 10,800 Trillion were given to the T. Halk Bank by the Treasury as of April 2001, to be deducted from receivables from the Treasury (See Table 8 below).

Table 8: Resources Transferred To The State Banks

Resources Transferred to the State Banks	
	31 December 2001
Debt due to duty losses	17,400
Ziraat Bank	9,309
Halk Bank	8,060
Emlak Bank	31
Capital (non-cash)*	2,229
Ziraat Bank	1,175
Halk Bank	622
Emlak Bank	431
Capital (cash)	225
Ziraat Bank	151
Halk Bank	46
Emlak Bank	28
TOTAL	19,854

* Through issue of non cash bonds

Source: Banking Regulation and Supervision Agency (BRSA)

3.1.3 Measures Taken In the Turkish Banking Sector After The Financial Crisis

Right after the twin crises, Turkey had taken key structural reform measures. Newly implemented program was called “Transition to a Strong Economy” which aimed rehabilitation to the system in order to reach an efficient, competitive and sound banking sector by eliminating financial instability and distortions. These measures can be summarized as follows (Pazarbaşıoğlu, 2003):

The financial and operational restructuring of state banks was implemented by a dramatic change in the governance structure of state owned banks. Accumulated debts of the Treasury to these banks were paid and recapitalized.

Restructuring and resolution of SDIF banks was conducted by taking over the ‘Bad’ banks by the Savings and Deposits Insurance Funds (SDIF). The overnight borrowing of these banks was significantly reduced. They were either recapitalized or merged and some had actually been sold.

Strengthening of private banking is managed by appointing a politically independent board of directors. The mandate of the board was specified as protecting the interests of the depositors. The number of branches and employees were significantly being reduced according to an operational restructuring plan.

Strengthening of the legal and regulatory environment is achieved by changing the Central Bank law on May 2001. The law explicitly stated that the main goal of the Bank is price stability.

3.2 The Effects of The Inflation And The Disinflation Processes On The Turkish Banking Sector

In the literature it is widely argued that inflation has a positive impact on the bank balance sheets while most of the economists believed that during the disinflation process deposits earnings of the banking sector go down and therefore inflation has negative impact on bank's balance sheets. In the following part we briefly discuss, in Section 3.2.1, the effects of inflation and in Section 3.2.2, the effects of disinflation with reference to the Turkish banking sector.

3.2.1 The Effect Of The Inflation Process On The Banking Sector

After the Turkish banking sector crises in 2000 and 2001, the empirical studies analysing the performances of the Turkish banks. Among these studies, Tunay and Uzuner (2000) analysed the effects of the inflation on the banking system with consideration to the expected and unexpected inflation rates. Since the banks assets and liabilities are largely comprised of nominal instruments which are the most vulnerable ones to the unexpected inflation shocks in an inflationist environment. **Inflationist process weakens the equity capital of the banking sector and its financial structure, and prevents the growth of the financial system and the variation of the financial products.**

Inflationist process also had positive effects on the banking system. Increase in the number of banks and branches (wider geographical dissemination of the

branches). Furthermore, an increase in bank profitability and an increase in the repurchase agreement transactions are the prominent positive effects of the inflationist process on the banking system. According to (Babuşçu et al 2000), the principal positive effects of the inflationist processes on banking system include the increase in the number of banks, branches and operations. When the total of the positive and negative effects is considered, it is hard to be specific about the profitability and bank performance in terms of the profit of the capital.

3.2.2 The Effect Of The Disinflation Process On The Turkish Banking Sector

In the literature it is suggested that there would be a decrease in the income of the banks gained from the demand deposits due to the fact that inflation lowers the time value of money (Van Rijckeghem, 1999; IMF 1999 and İnan 1999).

IMF (1999) and Alper et al (2001), suggested that high level public indebtment would decrease and inflation would decrease if the current stability program succeeded and these two components would narrow down high interest margins which would cause a decrease in the income gained through open positions. Van Rijckeghem (1997) envisaged that the banks would lose the income which they earned from open position and balance this loss with the increased financial mediation services.

According to Inan (2001), during the disinflation period both earnings from the securities and income from demand deposits decrease. On the other hand, total loan demand commission and transaction income will increase. Also, Alper et al (2001) suggested that uncertainty in economy would decrease the banking sector earnings.

CHAPTER 4

EU INTEGRATION AND THE BANKING SECTOR

Economic stability has improved with the sustained recovery since the crises in 1999 and 2001. Economic growth has been strong except for two sharp output contractions in 1999 and 2001 which resulted in a relatively low average growth for the whole period of 1999-2003. One of the most important achievements has been the marked reduction in inflation, which came down from 65% in 1999 to a single-digit rate in mid-2004. Turkey has significantly improved the functioning of its market economy since the end of 1990's.

Both macroeconomic stability and structural reforms enhanced the Turkish capacity to cope with competitive pressure and market forces within the European Union. Substantial amendments were made to the Banking Law in December 2003. These are primarily intended to accelerate the collection of funds from the shareholders of insolvent banks. To accelerate the collection of funds from insolvent banks, the SDIF was legally and operationally separated from the BRSA. The BRSA's collection responsibilities were transferred to the SDIF. In addition, the BRSA adopted a decision in October 2003 which excludes all shareholders whose stake in an insolvent bank exceeds 10% and as well as bank's board members, managers and their relatives from the scope of the state guarantee on savings deposits. With this decision, the BRSA also redefined the premium payment scheme

for the deposit insurance (Alper and Öniş, 2003). A number of revisions in accounting standards for banks were adopted in December 2003 (Pazarbaşıoglu, 2003).

Recently, the Turkish banking sector in particular stands to benefit from the increasing macroeconomic stability, improving sovereign creditworthiness, higher economic growth, increasing domestic savings and EU-related institutional reforms during the EU-convergence process within the coming 10 to 15 years, and the sector is likely to experience increased consolidation and foreign competition (See Jaeger, 2005).

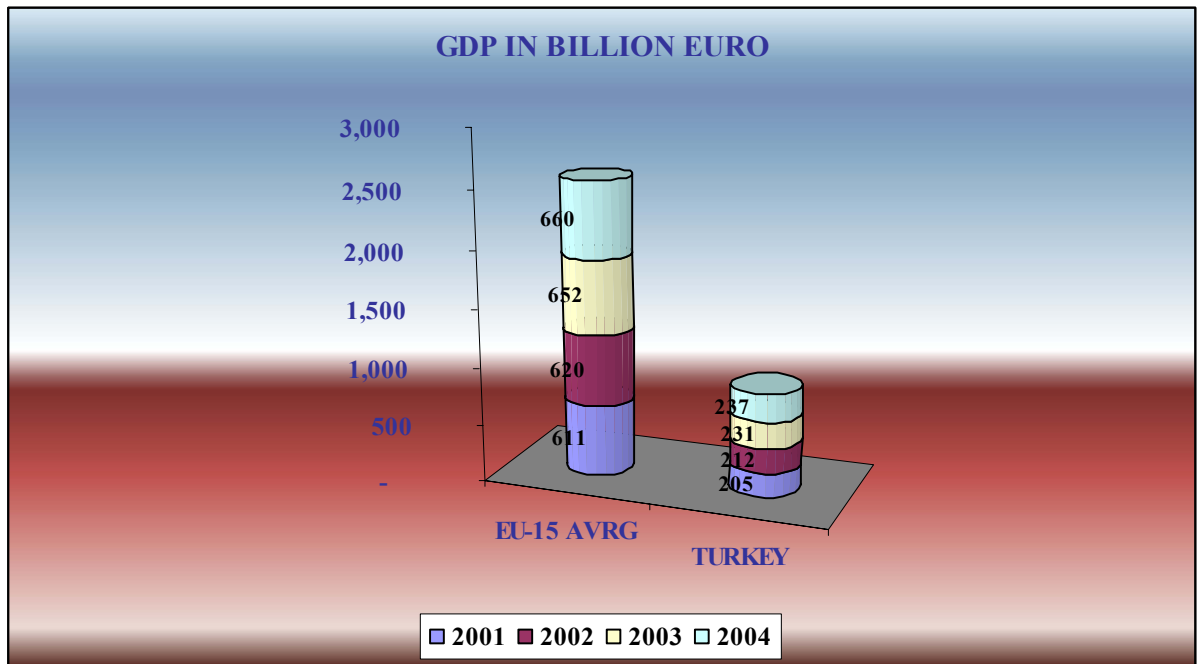
In early 2004, relative macroeconomic stability appeared to have been achieved; the sector appeared set for the next phase of consolidation and growth. In the following discussion, we will re-examine the readiness of the Turkish Banking Sector (TBS) for integration into the European Union.

This chapter, which highly depends on BRSA Working Paper 2005-7, is composed of six parts analyzing the EU-15 average and Turkey individually: The structure of the gross domestic product (4.1); the number of the banks (4.2); total assets over gross domestic product (4.3); total loans over gross domestic product (4.4); total loans over total assets (4.5) and the capital adequacy ratio (4.6).

4.1 The Gross Domestic Product Of EU-15 Average And Turkey

Statistics indicate that the level of GDP is the most important indicator. Sustainable growth of GDP has a major impact on the financial system concerning the banking sector consistency. Turkey's GDP per capita in purchasing power standards has not yet reached the EU-15 countries but an upward trend indicates that Turkey will reach this average in a short period.

Figure 6: The GDP Of EU-15 Average and Turkey

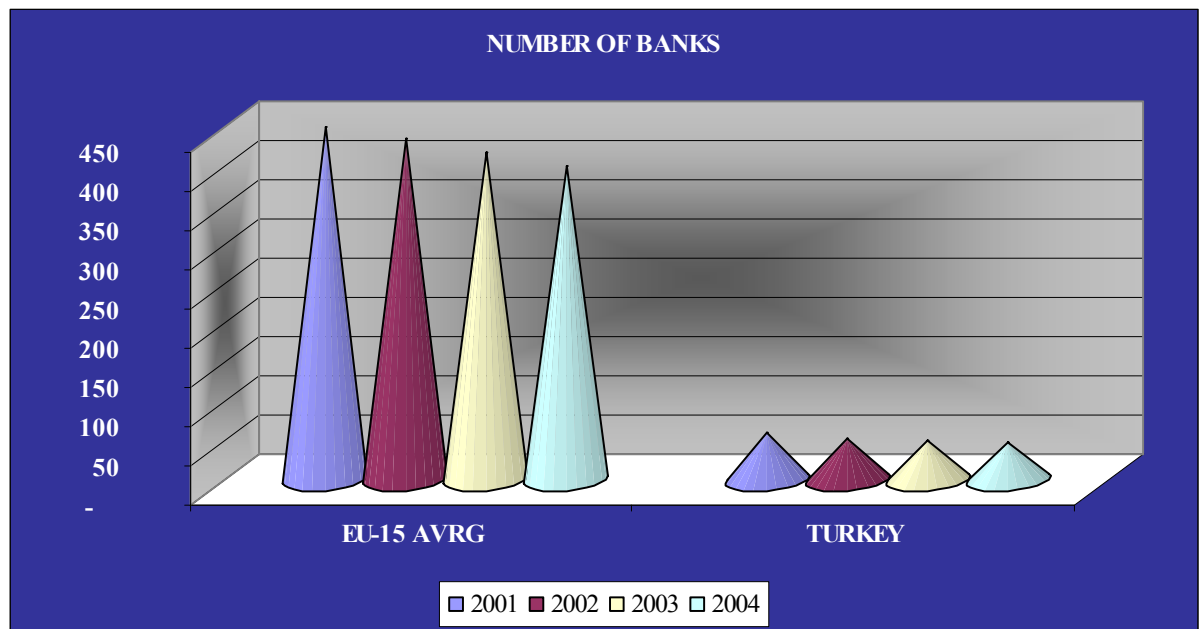


Source: European Banking Federation, Key Statistics www.fbe.be, BRSA www.bddk.org.tr.

4.2 Number Of The Banks In EU-15 Average And Turkey

Due to mergers and acquisitions in Europe Banking, the number of banks has declined as a result of unique currency and unique market. When compared with Europe, Turkey has still a limited number of banks.

Figure 7: Number Of The Banks in EU-15 Average And Turkey

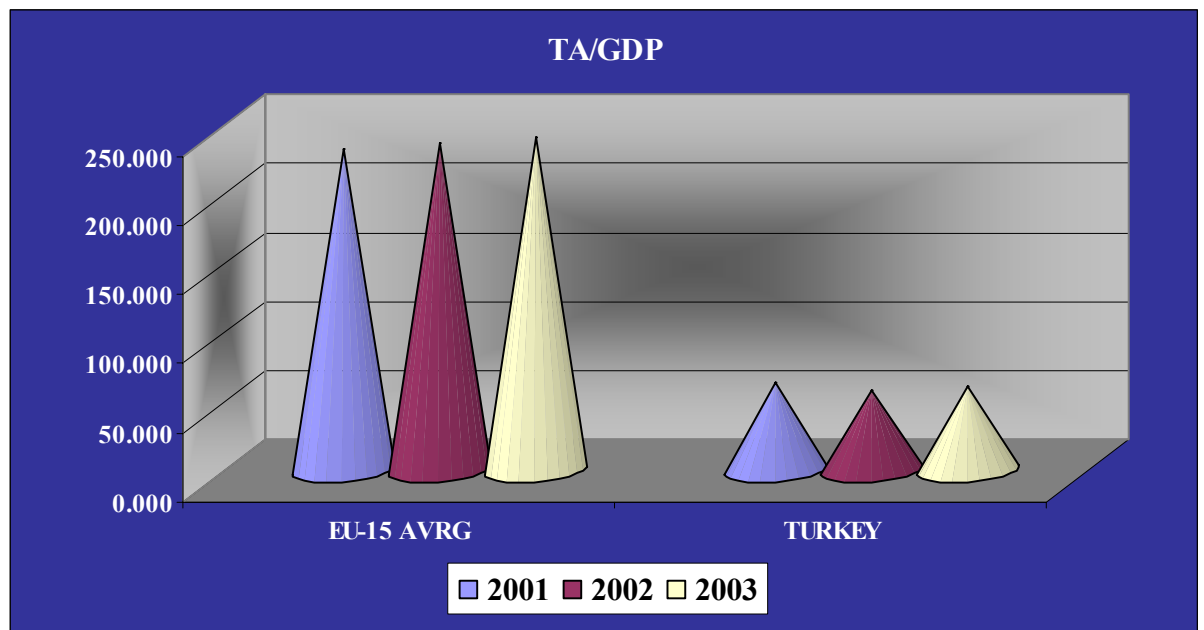


Source: European Banking Federation, Key Statistics www.fbe.be, BRSA www.bddk.org.tr.

4.3 Total Assets/ Gross Domestic Product In EU-15 Average And Turkey

When ratio of TA/GDP of Turkey is compared with EU-15 Countries, it can be argued that Turkey is below the average of EU-15 country TA/GDP ratio. According to BRSA 2004 report, this ratio has declined due to crises, however an upward trend has been achieved in recent years.

Figure 8: Total Assets/GPD in EU-15 Average and Turkey

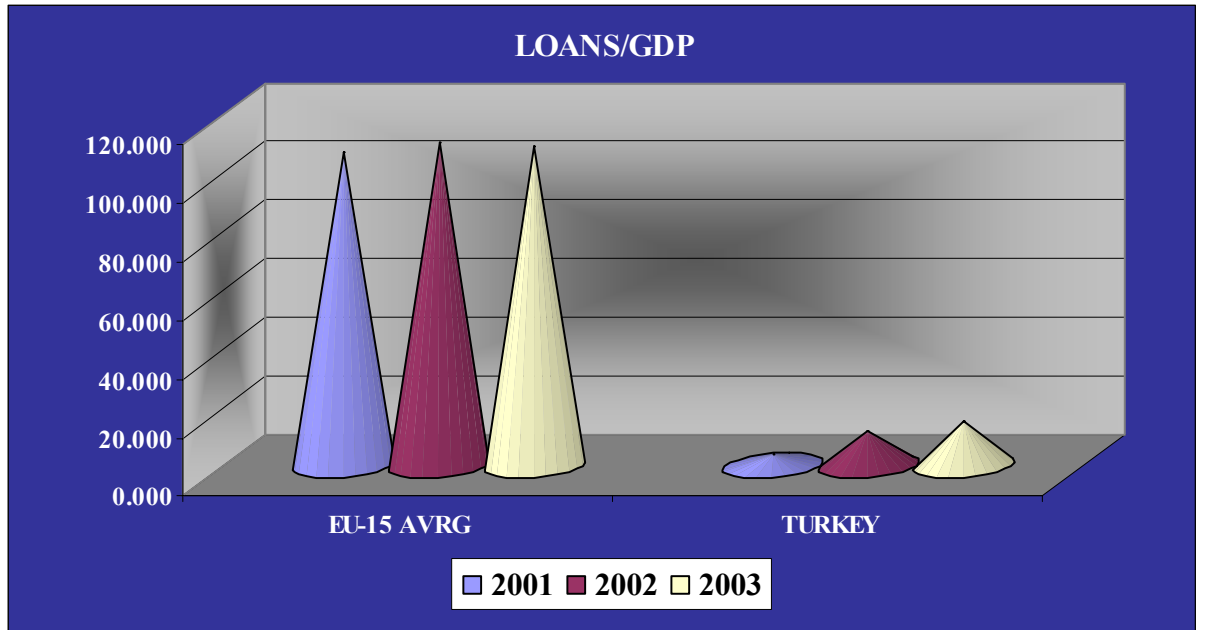


Source: European Banking Federation, Key Statistics www.fbe.be, BRSA www.bddk.org.tr.

4.4 Total Loans/Gross Domestic Product In EU-15 Average And Turkey

Efficient credit allocation is a vital issue for the development of the economy. In EU-15 Countries, the total share of loans used up in GDP is relatively very high when compared with Turkey. Sources available are directed to public securities instead of loans. This tendency is due to crises experienced after 2001. However, as a result of recovery in economy, incentive of the government and decrease in rates, the total share of loans in GDP has increased since 2004.

Figure 9: Total Loans/GPD in EU-15 Average and Turkey

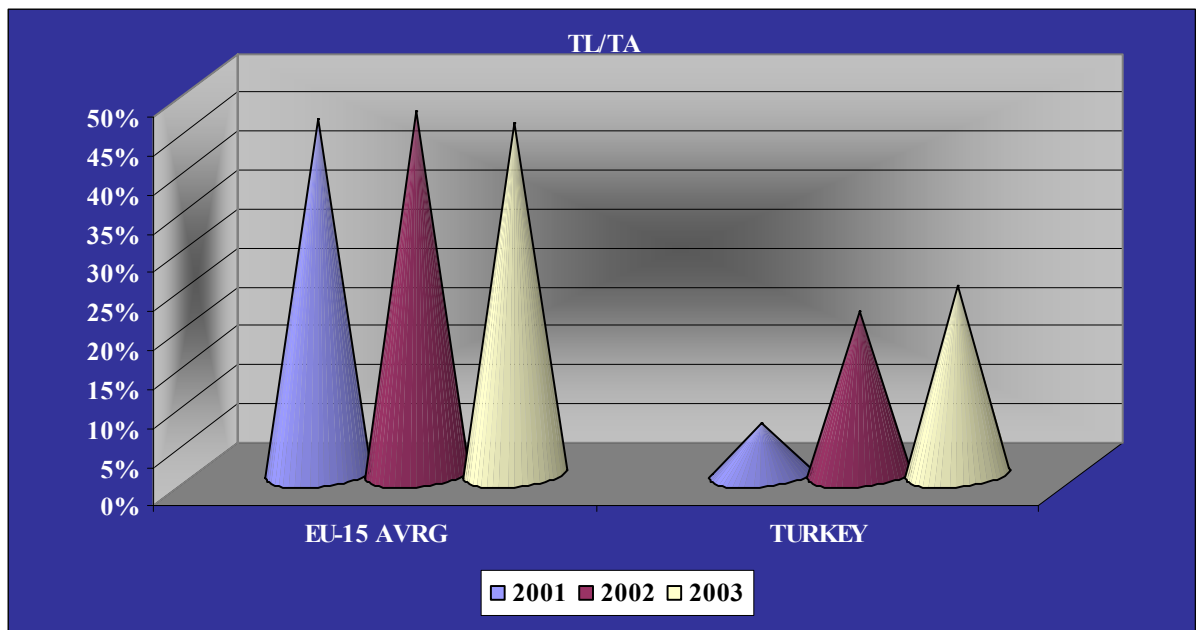


Source: European Banking Federation, Key Statistics www.fbe.be, BRSA www.bddk.org.tr.

4.5 Total Loans/Total Assets In EU-15 Average and Turkey

When assets quality of balance sheet is considered, total loans over total asset is the fundamental indicator. This ratio indicates how efficiently banks function as an intermediary. According to BRSA 2005 Report, as a result of a decline in public sector borrowing requirement and a downward trend in loan rates, the loan usage against security purchase is stimulated. This tendency indicates that Turkey will capture the EU average in a favorable future.

Figure 10: Total Loans/Total Assets in EU-15 Average and Turkey

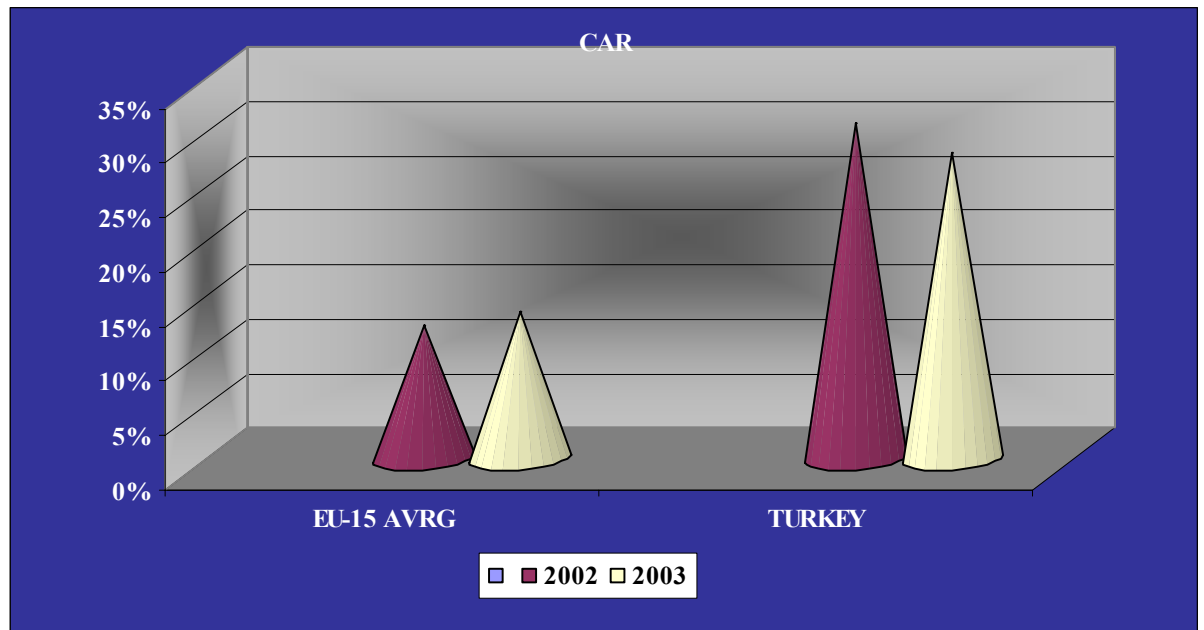


Source: European Banking Federation, Key Statistics www.fbe.be, BRSA www.bddk.org.tr.

4.6 The Capital Adequacy Ratio In EU-15 Average And Turkey

Regarding capital adequacy requirements for investment firms and credit institutions, Turkey has more conservative legislation than the EU. The scope of the investor compensation scheme fails to cover losses from instruments other than equities .It does not also cover financial instruments other than those offered by financial intermediaries.

Figure 11: Capital Adequacy Ratio in EU-15 Average and Turkey



Source: European Banking Federation, Key Statistics www.fbe.be, BRSA www.bddk.org.tr.

CHAPTER 5

EMPIRICAL MODELING

In the following Section 5.1 and 5.2 we first discuss the data and then focus on the descriptive statistics respectively. The methodology is described in 5.3 and the panel data estimates and results are presented in Section 5.4. In this chapter, the aim is to show that the balance sheet structure of the Turkish banks have distorted by the economic crises and the inflation. . It is also showed that the Turkish banks have operated more profitably after the implementation of the banking sector restructuring program.

5.1 Data

This thesis uses annual balance sheet, income statement and off-balance sheet data of the commercial banks in Turkey for the period of 2001-2004. The data is obtained from TBA web site (www.tbb.org.tr) and annual publication of TBA “Banks in Turkey”. The macroeconomic data used are obtained from the web site of the Central Bank of Republic of Turkey, Electronic Data Delivery System (EDDS). The data base covers the total of 54 Turkish banks. This yields a balanced panel of 205 observations with 54 banks.

As summarized in Alper et al., (2001) and IMF report (1998), there have been some quality issues encountered in the data related to the Turkish banking system. Problems associated with the data are that the level of profit that is recorded by the state banks do not reflect the profits resulting from performance, but reflects the amount resulting from administrative decisions. On the other hand, as the result of new audit practices according to the international accounting standards since 2001 and regular audit procedures, the security portfolio reveals the actual holdings of the banks and their valuation are performed accurately. Furthermore, foreign currency and off balance sheet transaction risks can be definitely estimated since they were prepared on the consolidated level.

In this thesis, performance of the banking sector between the years of 2001 and 2004 will be analysed despite the restrictions concerning the data set. Since efficiency and profitability of the banking sector is a useful indicator for the country's growth prospect, data is analysed according to the profitability criteria following Alper et al., (2001). Definitions of the variables of this analysis are as follows. TA_GDP is the proportion of total assets to gross domestic product, LOAN_TA is the share of loans in total assets, SEC_TA is the share of securities portfolio in total assets, LA_TA is the share of liquid assets in total assets, DEPO_TA is the share of deposits in total assets, LOAN_DEPO is the conversion rate of deposits to loans, FOO_TA is the share of over-due receivables in total assets, TLDEPO_FXDEPO is the proportion of the deposits to foreign currency deposit, IBT_TA is the share of pre-tax profit(loss) in total assets, OI_TA is the proportion of off-net interest income to total assets, NII_TA is the proportion of net interest income to total assets and NP_TA is the proportion of net profit(loss) for the period to total assets. In addition, in this analysis we use macroeconomic variables that are

common for all of 54 Turkish banks for the period 2001-2004. These are growth rate of the gross domestic product (Y), the annual inflation rate of consumer price index (INF) and government security average interest rate (DIBS).

Banks are classified according to their ownership and their size. Bank sizes are in 4 categories in our data set. Sizes of the banks are determined by their total asset magnitude. The first group includes the banks whose total assets in the GDP share are greater than 1% (Ba), the second group includes the banks whose total assets over GDP is equal to 1% and/or greater than 0.5% (Bb), the third group includes the banks whose rate equals to 0.5% and /or greater than 0.1% (Bc) and the final group includes the banks that the stated ratio equals to 0.1% and/or less than 0.1% (Bd). Ownership of the banks are analysed in five main categories as state banks (Ga), private banks (Gb), foreign banks (Gc), investment and development banks (Gd) and Fund banks (Ge).

5.2 Descriptive Statistics

In this sub section, we calculate the descriptive statistics of the Turkish bank for the period of 2001-2004, according to their size and their ownership structure and evaluate the sector under three main categories namely, asset quality, liquidity and profitability and income expense structure. Tables 9 and 10 provide the yearly and averaged data for the period 2001-2004 covering the variables of interest related to the banking sector for respective size and ownership structure respectively. This information is used to discuss the asset quality, liquidity, profitability and income-expense structure of the Turkish banking system. For asset quality, we examined the

behaviour of TA_GDP, LOAN_TA, SEC_TA, LOAN_DEPO, FOO_TA, For liquidity we looked at the behaviour of LA_TA, TLDEPO_FXDEPO. For profitability and income-expense structure we examined the variables namely, IBT_TA, OI_TA, NII_TA, NP_TA.

Table 9: The Descriptive Statistics of The Turkish Bank (2001-2004) According To Size

VARIABLES	2001				2002				2003				2004				AVERAGE			
	Ba	Bb	Bc	Bd	Ba	Bb	Bc	Bd	Ba	Bb	Bc	Bd	Ba	Bb	Bc	Bd	Ba	Bb	Bc	Bd
TA_GDP	7.26	1.02	0.25	0.03	4.57	0.68	0.15	0.02	4.23	0.54	0.11	0.02	4.65	0.55	0.10	0.02	5.17	0.69	0.15	0.02
LOAN_TA	28.82	26.76	28.47	15.11	32.10	34.05	22.55	17.17	35.22	39.71	19.88	22.42	42.70	43.09	18.33	29.83	34.71	35.90	22.30	21.13
SEC_TA	29.92	25.29	16.95	20.77	36.64	27.78	19.92	18.77	37.82	25.78	26.68	20.94	31.70	27.19	38.07	20.68	34.02	26.51	25.40	20.29
LA_TA	32.86	48.84	46.57	52.68	35.93	37.83	51.95	52.40	37.86	41.28	54.16	49.78	34.24	42.89	59.33	43.58	35.22	42.71	53.00	49.61
LOAN_DEPO	32.65	20.05	60.17	42.94	38.26	28.16	54.16	33.14	45.86	37.22	42.92	50.56	58.50	44.89	41.00	75.04	43.81	32.58	49.56	50.42
FOO_TA	6.53	3.76	6.13	2.88	5.32	2.71	2.90	1.78	3.41	2.38	2.36	4.20	2.02	2.02	2.13	7.67	4.32	2.72	3.38	4.13
TLDEPO_FXDEPO	73.98	19.81	45.78	28.00	68.49	25.76	34.50	29.70	97.05	38.24	74.60	16.16	110.61	46.54	242.11	30.25	87.53	32.58	99.24	26.02
IBT_TA	-7.02	-2.69	-0.69	-4.53	-0.34	6.08	-3.28	-0.54	2.85	4.96	7.34	-2.89	2.73	4.09	4.38	10.21	-0.45	3.11	1.93	-4.54
OI_TA	-8.88	-11.59	-8.85	-4.73	-2.78	1.40	-0.88	-5.74	0.24	0.95	3.88	7.15	-1.03	-0.42	-1.10	-11.67	-3.11	-2.42	-1.74	-3.75
NH_TA	8.52	14.50	25.32	19.21	5.47	9.46	8.57	12.64	3.96	7.54	7.38	9.94	5.80	7.75	5.54	8.42	5.94	9.81	11.70	12.55
NP_TA	-7.27	-4.67	-5.05	-9.07	-0.67	5.22	0.68	-2.32	2.14	3.86	4.04	-4.46	2.04	3.70	3.26	-10.25	-0.94	2.03	0.73	-6.50

* Ba denotes the banks with TA/GDP average over 1 %; Bb over 0.5 % but less than 1%; Bc over 0.1% but less than 0.5% during 2001-2004.

Data Source: Our calculations are based on Banking Regulation and Supervision Agency (BRSA) and Banks Association Of Turkey (TBA) data.

Table 10: The Descriptive Statistics Of The Turkish Bank (2001-2004) According To Ownership

VARIABLES	2001					2002					2003					2004					AVERAGE				
	Ga	Gb	Gc	Gd	Ge	Ga	Gb	Gc	Gd	Ge	Ga	Gb	Gc	Gd	Ge	Ga	Gb	Gc	Gd	Ge	Ga	Gb	Gc	Gd	Ge
TA GDP	13.23	3.31	0.26	0.42	3.03	8.15	2.15	0.15	0.26	1.68	7.70	2.20	0.14	0.22	0.99	8.28	2.27	0.18	0.20	0.45	9.34	2.48	0.18	0.27	1.54
LOAN TA	19.93	22.65	21.46	32.51	21.38	15.39	30.21	17.06	31.39	17.85	17.45	33.54	19.92	35.47	9.81	22.08	39.37	23.77	36.30	1.37	18.71	31.44	20.55	33.92	12.60
SEC TA	49.97	26.15	21.69	13.13	23.98	57.53	26.92	24.57	12.72	50.80	55.37	28.01	23.90	21.10	70.00	55.21	23.75	39.90	19.42	78.04	54.52	26.21	27.51	16.59	55.71
LA TA	25.61	45.70	55.33	34.86	49.15	24.51	42.03	55.95	41.12	57.61	34.61	41.54	56.87	38.32	78.76	32.68	41.77	57.14	38.08	88.19	29.35	42.76	56.32	38.10	68.43
LOAN DEPO	27.30	34.14	99.05	0.00	22.63	21.13	44.62	80.71	0.00	28.08	23.86	52.41	91.71	0.00	18.31	29.43	64.99	105.94	0.00	17.18	25.43	49.04	94.35	0.00	21.55
SOO TA 1	8.90	5.70	2.16	5.37	10.13	6.81	2.31	1.38	3.24	21.27	5.18	3.02	1.47	3.64	10.02	2.90	4.41	1.90	3.63	6.27	5.95	3.86	1.73	3.97	11.92
TLDEPO FXDEPO	171.31	58.15	20.68	0.00	25.63	173.67	55.90	33.04	0.00	57.24	234.57	71.47	69.32	0.00	62.30	255.62	76.58	2423.97	0.00	16.63	208.79	65.53	636.75	0.00	40.45
IBT TA	-3.86	-8.27	8.14	-4.55	-35.15	2.77	0.55	2.69	3.56	-12.30	3.16	1.27	5.22	2.28	6.34	3.28	-1.75	3.43	-2.55	19.93	1.34	-2.05	4.87	-0.31	-5.30
OI TA	-7.31	-16.39	3.18	-8.21	-10.41	-0.44	-2.40	-2.23	-0.88	-6.35	0.31	-1.33	1.25	-2.66	6.26	-0.64	-2.75	0.57	-8.27	8.89	-2.02	-5.72	0.69	-5.00	-0.40
NII TA	13.09	15.46	18.29	23.49	-8.22	6.28	5.40	11.79	12.62	4.56	5.48	4.67	6.58	11.82	2.90	5.46	5.68	4.60	9.84	15.34	7.58	7.80	10.32	14.44	3.64
NP TA	-4.26	-8.53	0.76	-8.91	-35.15	2.08	0.76	-0.75	1.52	-12.27	2.05	0.65	2.22	-0.01	6.34	2.44	-2.21	2.66	-3.18	19.93	0.58	-2.33	1.22	-2.65	-5.29

*Ga denotes the state banks; Gb private banks; Gc foreign; Gd investment and development banks and Ge fund banks.

Data Source: Our calculations are based on Banking Regulation and Supervision Agency (BRSA) and Banks Association Of Turkey (TBA) data.

Tables 9 and 10 may be summarized as follows;

Asset Quality

Both in terms of size and ownership criteria state, banks have the dominant role in the sector with respect to the total asset over GDP. Share of loan in the total asset has an increasing trend in in the second group banks. It is also essential to emphasize that the ratio of loan in the total asset has increased considerably for the smaller sized banks. The structure of the bank balance sheets have changed from security portfolios to loan both as a result of the disinflation process and an increase in trust to macroeconomic indicators in the economy. Furthermore, positive expectations about the economy and long run investment activities after the crises period have enabled banks to increase their loans. An increase in the share of loans over total assets indicates that banks have increased their efficiency in the economy. Due to banking facilities and ability to convert deposits to loan, private banks and foreign banks have superior power when compared with state banks within the period of 2001-2004, as seen in Table 10.

Even though there are no considerable differences in the shares of securities over total assets when considering the size of the banks, state banks have the greatest share in terms of ownership. It is mainly due to the conversion of duty losses into treasury or government securities in the state banks by the Treasury. Table 10 shows that fund banks have an increasing trend in securities share. However, this does not reflect the real world case. The underlying reason is that even though securities portfolio remain unchanged, the total asset of the fund banks has decreased whereas the ratio of securities over total assets has increased. The main point is that the

private banks have changed their balance sheet structure from securities to loans which indicate their power in banking activities.

Liquidity

Table 9 shows that medium sized banks hold more liquid assets than other banks. After the 2001 crisis and the stabilization program, medium sized banks are less risk averse. The New Banking Law increases the ratio of disponibility amount in the legal reserves. This is the main fact why medium sized banks have revised their liquidity ratios.

Profitability and Income Expense Structure

After 2001 crisis all banks revealed loss in their income statements in 2001 due to the inflation accounting practices. According to the inflation accounting monetary loss was a material balance in their income statements. Moreover, provision for loans were set in 2001 and resulted in an overall loss in the system. Apart from the smallest size banks, the banking system has an increasing net profit over assets. Furthermore, data verifies that medium size banks are more efficient in terms of net profit. As the size of the banks decreases, the share of net interest income increases. The data revealed that the total interest income of the banks has increased as the result of the prominent positive contribution of banking activities and improvement in the economy during the disinflation period.

Even though foreign banks constitute the smallest group, their share of before tax profits as well as the net interest income are the largest. On the other hand, other interest income has increased while net interest income has a downward slope during the disinflation period.

5.3 Methodology

In this study, the annual balance sheet and the income statement data of the commercial banks, which belong to 54 banks, were converted into a panel data set containing the period between 2001 and 2004. “Panel Regression” with “Fixed Effects” model was taken into consideration, and the model was estimated using the E-views package. In the following we briefly discuss the fixed effect model of the panel regression.

There are several types of panel data analytic models. There are constant coefficients models, fixed effects models, and random effects models. Fixed effects regression is the model to use when you want to control for omitted variables that differ between cases but are constant over time. This model uses the changes in the variables over time to estimate the effects of the independent variables on our dependent variables (NII_TA, LOAN_TA, SEC_TA). In our fixed effects panel regression model, intercepts and slopes both vary according to the banks. To formulate this model, dependent variables are determined [$X = \{NII_TA, LOAN_TA, SEC_TA\}$] and then we included the banks’ size and ownership intercept dummies that are used in interaction with the two types of variables, namely the macroeconomic variables [$Z = \{GDP\ Growth, Inflation, DIBS\}$]; and banking sector specific variables [$C = \{Securities, Loans, Deposits, Liquidity\ ratio\ and\ Loans\ in\ Follow-up\}$] . The regression model of the form over the course of 2001-2004 periods is,

$$X_{it} = c_i + \sum_{k=a}^c B_{ik} + \sum_{j=A}^D G_{ij} + \sum_{j=A}^D G_{ij} Z_{it} + \sum_{j=A}^D \sum_{t=2001}^{2004} G_{ijt} C_{it} + \sum_{t=2001}^{2004} C_{it} + \varepsilon_{it} \quad (EQ1)$$

Where k= a, b, c indexes size, j= a, b, c, d indexes ownership, t= 2001, 2002, 2003, 2004 indexes time. This model is estimated using E-views 5 and the result will be given in the following sub section.

5.4 Panel Data Estimates and The Results

Three panel regressions are estimated according to the three dependent variables which are; the share of net interest income in total assets (NII_TA), the share of loans in total assets (LOAN_TA) and the share of securities portfolio in total assets (SEC_TA). In these regression models, on the right side of this equation, the effects of size and ownership intercept dummies are included (according to the bank owners) as the explanatory variables. Our panel regressions contain a common constant value, three sizes and four ownership intercept dummies. In order to measure the effect of macroeconomic variables, Y, INF, and DIBS in gross domestic product are included in the model. These macro variables can enter into the panel regressions as an ownership interaction dummies. (e.g., ownership multiplied by growth of gross domestic product, inflation, DIBS rate respectively are as follows: GAY, GBY, GCY, GDY, GAINF, GBINF, GCINF, GDINF, GADI, GBDI, GCDI, and GDDI). Some additional banking sector specific explanatory variables are also included: TA_GDP, LOAN_TA, SEC_TA, DEPO_TA, FOO_TA and LA_TA and among them only securities are multiplied by the ownership dummies and used in the model as interaction dummy (GASEC, GBSEC, GCSEC and GDSEC). When

balance sheet structures are analysed with respect to the ownership, share of loan and deposit in total assets do not vary. However, share of securities in total assets differentiate considerably, that is why securities are multiplied by the ownership dummies and used as interaction dummy to identify their individual magnitudes. The econometric model we estimate is as follows, for each regression it subscripts, which indicate i^{th} bank in year t , are not shown ($i = 1, 2 \dots 54$; $t = 2001, 2002, 2003, 2004$),

$$NII_TA = c + \sum_{k=a}^c B_k + \sum_{j=A}^D G_j + \sum_{j=A}^D G_j Z + \sum_{j=A}^D \sum_{t=2001}^{2004} G_j C_t + \sum_{t=2001}^{2004} C_t + \varepsilon \quad (EQ2)$$

$$LOAN_TA = c + \sum_{k=a}^c B_k + \sum_{j=A}^D G_j + \sum_{j=a}^d G_j Z + \sum_{j=A}^D \sum_{t=2001}^{2004} G_j C_t + \sum_{t=2001}^{2004} C_t + \varepsilon \quad (EQ3)$$

$$SEC_TA = c + \sum_{k=a}^c B_k + \sum_{j=A}^D G_j + \sum_{j=a}^d G_j Z + \sum_{j=A}^D \sum_{t=2001}^{2004} G_j C_t + \sum_{t=2001}^{2004} C_t + \varepsilon \quad (EQ4)$$

The first regression seeks to find the determinants of the share of net interest income in total assets during the period of our interest and how ownership and size affect it. Remaining regressions seek to find the determinants of the share of loan and security in total assets respectively shown in equation (3) and (4) above. Based on above given specification we first estimated a general model and the results are given in Table 11 which covers all the variables that we considered in this thesis. The other results of panel regressions are given in Table 13 and 14 respectively and reported in Appendix Table 13 and 14. In Table 13 we only report the panel Regressions without

size and ownership dummies. In Table 14 we only report the panel regression with only ownership dummies. In each regression equation coefficient values respective the t-statistics and p-values of the coefficients are provided. The standard errors are obtained from White's heteroskedasticity consistent variance covariance matrix.

Table 11: Panel Regression

VARIABLE		NH_TA	LOAN_TA	SEC_TA
CONSTANT		36.24	0.35	0.71
		[139.93] (0.00)	[42.26] (0.00)	[70.49] (0.00)
SIZE DUMMIES				
Ba		-4.41	0.19	0.16
		[3.04] (0.00)	[13.65] (0.00)	[6.06] (0.00)
Bb		-1.69	0.16	0.11
		[4.32] (0.00)	[37.68] (0.00)	[8.93] (0.00)
Bc		3.09	0.06	0.05
		[1.17] (0.24)	[4.10] (0.00)	[2.38] (0.02)
OWNERSHIP DUMMIES				
Ga		-25.29	0.98	-0.32
		[16.41] (0.00)	[38.40] (0.00)	[33.49] (0.00)
Gb		-5.82	-0.03	-0.52
		[2.94] (0.00)	[2.02] (0.04)	[74.29] (0.00)
Gc		-41.56	0.20	-0.42
		[41.93] (0.00)	[13.04] (0.00)	[58.91] (0.00)
Gd		-34.88	-0.11	-0.34
		[19.64] (0.00)	[6.66] (0.00)	[26.89] (0.00)
MACRO VARIABLES				
Interactive Dummies				
GDP Growth*Ga		255.79	-5.02	2.79
		[7.58] (0.00)	[63.57] (0.00)	[25.93] (0.00)
GDP Growth*Gb		-233.02	3.39	2.23
		[35.60] (0.00)	[29.10] (0.00)	[23.91] (0.00)
GDP Growth*Gc		218.40	2.63	4.78
		[10.72] (0.00)	[19.80] (0.00)	[39.79] (0.00)
GDP Growth*Gd		314.13	5.19	0.50
		[35.65] (0.00)	[26.27] (0.00)	[2.25] (0.02)
Inflation*Ga		236.12	-3.14	3.23
		[8.25] (0.00)	[0.07] (0.00)	[35.01] (0.00)
Inflation*Gb		-179.80	1.58	2.28
		[50.18] (0.00)	[0.08] (0.00)	[22.39] (0.00)
Inflation*Gc		53.49	1.92	4.87
		[2.71] (0.01)	[0.12] (0.00)	[41.13] (0.00)
Inflation*Gd		76.17	3.27	1.82
		[8.11] (0.00)	[0.14] (0.00)	[9.57] (0.00)
DIBS*Ga		-130.22	1.14	-1.51
		[8.66] (0.00)	[19.50] (0.00)	[25.74] (0.00)
DIBS*Gb		112.98	-0.65	-0.83
		[52.34] (0.00)	[16.38] (0.00)	[12.32] (0.00)
DIBS*Gc		14.81	-1.15	-2.53
		[1.13] (0.25)	[12.75] (0.00)	[35.35] (0.00)
DIBS*Gd		-44.08	-1.60	-0.92
		[8.95] (0.00)	[21.63] (0.00)	[8.52] (0.00)
INTERACTION DUMMIES				
Securities*Ga-2001		74.76	-0.96	
		[236.73] (0.00)	[83.55] (0.00)	

Table 11 (cont'd)

Securities*Ga-2002		49.70	-1.00	
		[54.05] (0.00)	[446.28] (0.00)	
Securities*Ga-2003		48.31	-1.53	
		[24.49] (0.00)	[84.76] (0.00)	
Securities*Ga-2004		11.69	-1.22	
		[8.43] (0.00)	[117.68] (0.00)	
Securities*Gb-2001		31.38	-0.39	
		[11.49] (0.00)	[87.75] (0.00)	
Securities*Gb-2002		13.91	-0.74	
		[2.41] (0.01)	[24.62] (0.00)	
Securities*Gb-2003		-21.67	-0.56	
		[6.36] (0.00)	[24.32] (0.00)	
Securities*Gb-2004		18.15	-0.56	
		[2.15] (0.03)	[10.66] (0.00)	
Securities*Gc-2001		17.09	-0.19	
		[18.49] (0.00)	[34.73] (0.00)	
Securities*Gc-2002		-24.28	-0.48	
		[38.48] (0.00)	[106.00] (0.00)	
Securities*Gc-2003		-16.87	-0.63	
		[10.97] (0.00)	[31.00] (0.00)	
Securities*Gc-2004		-4.69	-0.46	
		[1.29] (0.20)	[18.80] (0.00)	
Securities*Gd-2001		138.14	-0.27	
		[138.72] (0.00)	[23.62] (0.00)	
Securities*Gd-2002		8.67	-0.42	
		[8.26] (0.00)	[133.97] (0.00)	
Securities*Gd-2003		-6.56	-0.13	
		[4.35] (0.00)	[13.39] (0.00)	
Securities*Gd-2004		-3.96	-0.44	
		[4.32] (0.00)	[49.96] (0.00)	
Loan-2001		3.52		-0.54
		[11.58] (0.00)		[32.36] (0.00)
Loan-2002		-0.99		-0.55
		[0.61] (0.54)		[36.46] (0.00)
Loan-2003		6.20		-0.66
		[2.14] (0.03)		[63.19] (0.00)
Loan-2004		2.46		-0.59
		[1.06] (0.29)		[158.13] (0.00)
Deposits-2001		-53.22	-0.11	
		[76.06] (0.00)	[17.44] (0.00)	
Deposits-2002		-9.98	0.01	
		[23.65] (0.00)	[2.04] (0.04)	
Deposits-2003		-16.96	-0.08	
		[13.33] (0.00)	[12.76] (0.00)	
Deposits-2004		2.63	0.01	
		[4.08] (0.00)	[2.18] (0.03)	

Table 11 (cont'd)

Liquidity-2001			-0.43	-0.18
			[38.53] (0.00)	[20.15] (0.00)
Liquidity-2002			-0.48	-0.43
			[175.74] (0.00)	[157.31] (0.00)
Liquidity-2003			-0.67	-0.31
			[48.72] (0.00)	[205.61] (0.00)
Liquidity-2004			-0.56	-0.09
			[63.70] (0.00)	[28.04] (0.00)
Followup-2001			0.58	
			[18.15] (0.00)	
Followup-2002			0.04	
			[1.86] (0.06)	
Followup-2003			-0.21	
			[19.39] (0.00)	
Followup-2004			-0.20	
			[21.64] (0.00)	
Adjusted R-squared		0.65	0.71	0.56
Durbin-Watson stat		1.11	0.61	0.75
Number Of Observations		205	205	205

Absolute value of the t-ratios using standard deviations from the White's heteroskedasticity-consistent variance covariance matrix and their p-value are provided inside square brackets and normal brackets respectively below for each coefficient. Shaded coefficients imply insignificance at 5% level.

Now we test whether the omitted variables are justified in the respective specifications which are given in Table 13 (restricted model 1) and in Table 14 (restricted model 2) with respect to general panel specification given in Table 11 (unrestricted model). This is tested by the F test given below:

$$F(n-1, nT-n-K) = \frac{(R_u^2 - R_p^2)/(n-1)}{(1 - R_u^2)/(nT-n-K)}$$

Where u indicates the unrestricted model and p indicates the restricted model, n is the number of observations, T is the time period and K is the number of coefficients (Greene, 2000). The F statistics for testing the joint significance of the models for the comparison of Table 11 and 13 is given below table 12. In this table

for each dependent variable comparisons between an unrestricted model and respective restricted models we found evidences in favor of unrestricted model.

Table 12 The F statistics For Testing The Joint Significance Of The Models For The Comparison

	11 vs 13		11 vs 14	
	F test	F critical	F test	F critical
NII_TA	$F(53,119)=2.82$	$F_{0.01,53,119}=1.66$	$F(53,119)=1.39$	$F_{0.10,53,119}=1.32$
LOAN_TA	$F(53,115)=3.29$	$F_{0.01,53,119}=1.66$	$F(53,115)=2.02$	$F_{0.01,53,119}=1.66$
SEC_TA	$F(53,135)=1.38$	$F_{0.10,53,135}=1.28$	$F(53,135)=1.45$	$F_{0.05,53,135}=1.39$

Based on the calculation given above, we found an evidence for testing the omitted variables in favor of a general model. Although we found specifications which are given more favorable we still would like to discuss the estimation results given in Table 13 in Appendix. It is found that, all variables are all statistically significant. While macroeconomic variables detected, model is arranged in order to obtain their impact separately within years. It is observed that securities portfolio has positive return on net interest income when compared with loans. When Turkish banking sector is considered from 2001 to 2004 due to follow up loans, huge amount of provision was set for them hence loans have negative impact on the net interest income. Furthermore, one may conclude that deposits have a decreasing impact on the net interest income. In equation (3) it is found that share of securities portfolio and loans in total assets are negatively related as expected. In equation (3), it is observed that the share of deposits in total assets influence share of securities in total assets negatively while in equation (4), the effect of share of deposits in total assets

on share of loans in total asset is statistically significant and positive. Furthermore, even though deposits have a negative impact on net interest margin; we expect for efficient banking activity, it is necessary to convert deposits to loans. In Table 14 with the exception of variables Gb, Gc, Loan 2003 in the first equation, all variables are statistically significant. In the second equation GDP Growth, Deposits_2003 and Followup-2003 are not statistically significant. Finally, in the third equation Ga, GDP Growth, PSBR and Liquidity_2004 are statistically insignificant. In this context, with the exception of insignificant variables, Table 14 has similar outcomes with Table 13.

As we have mentioned before, based on the results of all three equations regarding the size and ownership dummies, F tests are in favor of the model in Table 11. Furthermore, one may conclude that they are all statistically significant except Bc in the first panel equation. As the size of the banks get smaller the contribution of size dummies to the share of loan and securities in total asset also get smaller. In the first panel equation, we found that the contribution of foreign banks to the net interest income margin is much stronger than that of the state banks and investment and development banks. Private Banks have the smallest net interest income margin when results are detected; this is probably due to the loss declaration of one important private bank (Yapı Kredi Bank).

The coefficients of the interactive dummy variables are all statistically significant and have expected signs except the effect of GDP growth of private banks, inflation of private banks and DIBS of state banks for the first equation. Negative contribution of GDP growth rate of private banks is quite expected due to the provisions set for follow up loans and the balance sheet of some private banks

were deteriorated because of the soaring of the non-performing loans (Metin-Özcan and Şimşek, 2005). In addition regarding the state banks' interactive dummies, any small change in growth and inflation has the greatest impact on the net interest income.

While macroeconomic variables are detected in equation (2), it is observed that the magnitude of the state banks' securities portfolio has the greatest return on net the interest margin when compared with other banks. The reason behind this finding is that the state banks have the largest securities portfolio among other banks. With respect to years; when equation (2) is considered, the greatest return of securities portfolio to net interest margin is observed in 2001. This is due to the fact that DIBS rates were at their zenith point in 2001. Starting from 2001 to 2004, this impact has decreased gradually as inflation and DIBS have decreased as well. Therefore reduction in inflation or interest rate has a diminishing impact on net interest margin over this period. It is verified by the data that as DIBS have declined due to a decrease in the high profitability of holding government securities, structure of bank balance sheets have shifted to loans.

It is necessary to emphasize that DIBS are lower than interest rates on loans for 2001 and 2002. However, banks preferred to hold government securities in their balance sheets instead of increasing the share of loans in their total assets. This can be explained by several factors. First of all it was very risky for the banks to increase the loan share in the balance sheet because pay back ratio of loans were very low in 2001. Secondly high portion of the loans were under legal follow up. Interest accrual for follow up loans was not allowed in accordance with the bank accounting regulations. However, securities portfolio is always subject to interest accrual and

there is no risk on them due to the government commitment. As a result of these reasons, holding securities is much more favorable than loan lending for banks' balance sheet structure. As the result of macroeconomic improvement, positive expectations and long run investment activities, share of securities portfolio on the net interest margin has decreased while share of loans has increased starting from year 2002 and still continues. This fact is confirmed by the data and it is observed in equation (2). Equation (3) shows that the effects of the follow up loans on the share of loan in total assets have decreased since 2002.

CHAPTER 6

CONCLUSION

This thesis has analysed the structure of the Turkish banking sector which has been characterized in the disinflation process after year 2000-2001 banking crises. Descriptive analysis of the balance sheets of the commercial banks and the econometric model verify that 2000 and 2001 crises had an unfavorable impact on the banking system. The stabilization program which had been implemented immediately after the crises period has eliminated the uncertainty in the economic environment. Panel regression results focusing on magnitude of size and ownership reveals that the banks in Turkey have been restructuring their asset management and utilizing the advantages of competitive environment in the sector. In addition, the disinflation process in Turkey has influenced the profit margin of commercial banks operating in the period of 2001-2004.

Our analysis showed us that the macroeconomic conditions have been improved since 2001. Favorable expectations as the result of a sustainable economic growth, decreasing inflation and DIBS necessitate the efficient allocation of resources by the banking sector.

Furthermore, when the banking sector is investigated, material amounts of the loans were under legal follow up and interest accrual for follow up loans were not

allowed by the international accounting standards in the period of 2001-2002. However securities portfolio is always subject to interest accrual and therefore, there is no risk on them due to the government commitment. As the result of overall macroeconomic improvement, positive expectations and long term investment activities, the share of loans has increased over the period of our concern while share of securities portfolio in total assets has decreased. With the low inflation environment, the liquidity of the system increased and this allowed banks to expand their loan portfolios along with the deposit sources. Share of the interest income provided from loans will have a significant power in income statement. On the other hand, credit risk will become an important issue in the sector. In future, instead of securitization and maturity mismatch risk foreign currency and credit risk should be considered more deeply Furthermore, panel regression results emphasize that DIBS had a decreasing trend during the period of 2001-2004. Therefore, new economic conditions require the existing banks to compete with each other for efficient asset management. Also economies of scale will become an important issue. Competition, on the other hand, will require diversifying banking activities. In addition, intermediary function of the banks will increase.

We expect structural changes in the banking system such that total asset structures of the banks will probably change towards loan especially. Consumer and commercial loans will increase as cost of using loan decreases. Furthermore, traditional banking activities will be modified by more systematic banking activities which require scale activities such as non-interest related activities.

Empirical findings also suggest that smaller sized banks will suffer due to the inefficient asset management. On the other hand, foreign banks should grow in size

and in the form of direct investment in order to compete in retail banking system. Therefore, increasing competition in the sector and diminishing profit margins of the banks will force them to use their sources efficiently.

Considering ownership, foreign and private banks seem to do better than state banks in the non-interest income related activities. Panel data estimation reveals that share of securities portfolio and loans in total assets on net interest margin have a negative impact on foreign banks. However, the data in Table 10 shows that foreign banks have a net profit after 2002. Other banks reveal net non-interest expense in their income statement and only foreign banks have net non-interest income. This in fact proves the existence of non-interest income activities of the foreign banks. In short, heavy competition in the sector necessitates the off-balance sheet and non-interest related activities become more attractive.

To sum up, European integration process and interest of foreign investors to the sector together with the appetite of foreign banks to get power in the sector will lead mergers and acquisition with smaller sized banks. The existence of competition in the financial market creates additional spillover effects which greatly increase the potential gains from policy coordination; new acquisitions and mergers.

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APPENDIX A
REGRESSION TABLES

Table 13: Panel Regression Without Size and Ownership Dummies

VARIABLE	NIITA	KRD_TA	MDC_TA
CONSTANT	21.01 [102.06] (0.00)	0.60 [118.46] (0.00)	0.49 [140.65] (0.00)
MACRO VARIABLES			
Interactive Dummies			
GDP Growth	16.07 [3.22] (0.00)	1.25 [9.00] (0.00)	2.63 [5.16] (0.00)
Inflation	63.08 [13.43] (0.00)	1.54 [10.27] (0.00)	2.58 [4.70] (0.00)
PSBR	-27.13 [8.56] (0.00)	-0.93 [10.02] (0.00)	-1.54 [4.55] (0.00)
FIXED EFFECT			
Securities-2001	41.79 [974.67] (0.00)	-0.33 [201.90] (0.00)	
Securities-2002	2.68 [8.96] (0.00)	-0.54 [98.20] (0.00)	
Securities-2003	-2.72 [15.34] (0.00)	-0.35 [154.72] (0.00)	
Securities-2004	0.80 [8.80] (0.00)	-0.48 [268.67] (0.00)	
Loan-2001	-21.85 [382.34] (0.00)		-0.54 [499.76] (0.00)
Loan-2002	-14.96 [108.58] (0.00)		-0.59 [59.17] (0.00)
Loan-2003	-4.52 [14.87] (0.00)		-0.61 [97.76] (0.00)
Loan-2004	-2.84 [15.85] (0.00)		-0.63 [899.24] (0.00)
Deposits-2001	-19.73 [317.13] (0.00)	-0.01 [28.32] (0.00)	0.13 [59.89] (0.00)
Deposits-2002	1.39 [50.87] (0.00)	0.09 [46.24] (0.00)	0.17 [25.39] (0.00)
Deposits-2003	-1.30 [13.79] (0.00)	0.01 [24.14] (0.00)	0.11 [27.96] (0.00)
Deposits-2004	0.46 [34.63] (0.00)	0.07 [37.59] (0.00)	0.10 [75.52] (0.00)
Liquidity-2001		-0.47 [100.46] (0.00)	-0.25 [61.36] (0.00)
Liquidity-2002		-0.48 [147.45] (0.00)	-0.43 [61.82] (0.00)
Liquidity-2003		-0.54	-0.23

Table 13 (cont'd)

			[129.97] (0.00)	[21.00] (0.00)
Liquidity-2004			-0.53	-0.13
			[209.31] (0.00)	[12.58] (0.00)
Followup-2001			0.41	
			[387.80] (0.00)	
Followup-2002			0.11	
			[12.57] (0.00)	
Followup-2003			-0.42	
			[31.64] (0.00)	
Followup-2004			-0.43	
			[114.38] (0.00)	
Adjusted R-squared		0.21	0.27	0.32
Durbin-Watson stat		1.03	0.43	0.59
Number Of Observations		205	205	205

Table 14: Panel Regression With Ownership Dummies

VARIABLE	NIITA	KRD_TA	MDC_TA
CONSTANT	32.52	0.72	0.77
	[7.23] (0.00)	[18.50] (0.00)	[8.53] (0.00)
OWNERSHIP DUMMIES			
Ga	7.89	-0.18	-0.04
	[1.97] (0.04)	[4.33] (0.00)	[0.45] (0.65)
Gb	0.00	-0.09	-0.23
	[0.00] (1.00)	[2.33] (0.02)	[2.38] (0.02)
Gc	-3.99	-0.10	-0.24
	[0.88] (0.30)	[2.14] (0.03)	[2.54] (0.01)
Gd	-14.29	-0.10	-0.34
	[3.00] (0.00)	[2.94] (0.00)	[4.22] (0.00)
MACRO VARIABLES			
Interactive Dummies			
GDP Growth	15.02	0.23	0.00
	[4.50] (0.00)	[0.77] (0.44)	[0.01] (0.99)
Inflation	60.32	0.48	0.00
	[10.18] (0.00)	[4.09] (0.00)	[0.01] (0.98)
PSBR	-26.55	-0.29	-0.04
	[5.87] (0.00)	[3.53] (0.00)	[0.51] (0.60)
FIXED EFFECT			
Securities-2001	36.20	-0.28	
	[28.33] (0.00)	[95.43] (0.00)	
Securities-2002	-4.06	-0.56	
	[2.45] (0.00)	[51.06] (0.00)	
Securities-2003	-7.41	-0.34	
	[3.38] (0.00)	[22.89] (0.00)	
Securities-2004	-7.30	-0.44	
	[4.39] (0.00)	[407.96] (0.00)	
Loan-2001	-18.45		-0.46
	[13.35] (0.00)		[78.47] (0.00)
Loan-2002	-8.49		-0.45
	[1.33] (0.00)		[50.99] (0.00)
Loan-2003	-1.21		-0.50
	[1.33] (0.18)		[40.37] (0.00)
Loan-2004	-4.34		-0.52
	[7.49] (0.00)		[64.80] (0.00)
Deposits-2001	-34.02	-0.05	
	[6.97] (0.00)	[3.55] (0.00)	
Deposits-2002	-13.11	0.09	
	[2.56] (0.00)	[9.22] (0.00)	
Deposits-2003	-17.43	0.01	
	[3.07] (0.00)	[0.61] (0.54)	
Deposits-2004	-16.48	0.08	
	[2.78] (0.00)	[6.15] (0.00)	

Table 14 (cont'd)

Liquidity-2001			-0.49	-0.21
			[63.55] (0.00)	[25.80] (0.00)
Liquidity-2002			-0.52	-0.41
			[105.26] (0.00)	[42.04] (0.00)
Liquidity-2003			-0.60	-0.28
			[92.73] (0.00)	[9.71] (0.00)
Liquidity-2004			-0.54	-0.02
			[64.86] (0.00)	[0.76] (0.45)
Followup-2001			0.35	
			[8.13] (0.00)	
Followup-2002			0.00	
			[0.03] (0.97)	
Followup-2003			-0.43	
			[7.31] (0.00)	
Followup-2004			-0.47	
			[17.73] (0.00)	
Adjusted R-squared		0.43	0.44	0.31
Durbin-Watson stat		1.03	0.47	0.75
Number Of Observations		205	205	205

APPENDIX B
ABBREVIATIONS

BRSA: Banking Regulation and Supervision Agency

CBRT: Central Bank of The Republic Of Turkey

DEPO_TA: Share of deposits in total assets

DIBS: government security average interest rate

EDDS: Electronic Data Delivery System

FOO_TA: Share of over-due receivables in total assets

GAAP: Generally Accepted Accounting Procedures

GDP: Gross Domestic product

IAS: International Accounting Standards

IBT_TA: Share of pre-tax profit (loss) in total assets

IMF: International Monetary Fund

INF: Annual inflation rate of consumer price index

LA_TA: Share of liquid assets in total assets

LOAN_TA: Share of loans in total assets

LOAN_DEPO: Conversion rate of deposits to loans

NII_TA: Proportion of net interest income to total assets

NP_TA: Proportion of net profit (loss) for the period to total assets

OI_TA: Proportion of off-net interest income to total assets

SDIF: Saving Deposit Insurance Fund

SEC_TA: Share of securities portfolio in total assets

TA_GDP: Total assets to gross domestic product

TBA: Banks Association Of Turkey

TLDEPO_FXDEPO: Proportion of the deposits to foreign currency deposit

Y: Growth rate of the gross domestic product