

THE IMPACT OF THE OWNERSHIP STRUCTURE CHANGES
ON THE PERFORMANCE OF THE DEPOSIT BANKS IN TURKEY

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THE IMPACT OF THE OWNERSHIP STRUCTURE CHANGES
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ABSTRACT

THE IMPACT OF THE OWNERSHIP STRUCTURE CHANGES ON THE PERFORMANCE OF THE DEPOSIT BANKS IN TURKEY

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This thesis investigates the impact of the ownership structure changes on the performance of Turkish deposit banks. Using the data from 31 deposit banks that has for the period 2001-2008, within the framework of risk-return analysis, the positions of those banks within the domestic banking system were determined by calculating their risk and return rates for each year. As a result of the analysis, it was observed that the positions of the banks are not constant, and vary from year to year. The study also concluded that there is a statistically significant difference in 7 of 15 performance ratios that were chosen among CAMELS ratios between the three banking groups (state-owned, privately-owned and foreign) by applying non-parametric tests.

Keywords: Ownership structure change, Deposit banks, Turkish banking system, CAMELS, non-parametric test.

ÖZET

MÜLKİYET YAPISI DEĞİŞİMLERİNİN TÜRKİYE'DEKİ MEVDUAT BANKALARININ PERFORMANSI ÜZERİNE ETKİSİ

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Bu çalışmada mülkiyet yapısı değişimlerinin Türkiye'deki mevduat bankalarının performansı üzerindeki etkisi araştırılmıştır. 2001-2008 dönemine ilişkin 31 adet mevduat bankasına ait veriler kullanılarak, risk – getiri analizi çerçevesinde bütün bankaların her yıl için risk ve getiri oranları hesaplanarak yerel bankacılık sistemi içerisindeki lokasyonları tespit edilmiştir. Analiz sonucunda bankaların sabit bir lokasyonları olmadığı; yıldan yıla değişiklik gösterdiği gözlemlenmiştir. Çalışmada ayrıca bankaların düzenli ve emin çalışmalarını teminen uzaktan gözetim ve yerinde denetimin bir aracı olarak kullanılan CAMELS rasyolarından faydalanılarak mülkiyet yapılarına göre üç ayrı grupta incelenen mevduat bankaları (kamu-özel ve yabancı) parametrik olmayan teste tabi tutulmuş ve üç banka grubu arasında analizde kullanılan 15 rasyosunun 7'sinde istatistiksel olarak anlamlı farklar olduğu sonucuna varılmıştır.

Anahtar Kelimeler: Mülkiyet yapısı değişimi, Mevduat bankaları, Türk bankacılık sistemi, CAMELS, parametrik olmayan test.

To My Parents

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Chapter I

Introduction

In concurrence with the exposure to the structural changes at various times since the establishment of the Republic, the banking system in Turkey has strived to become a more competitive structure with some adjustments and executions in the period following the 2001 crisis. During this period, the observed changes especially in banks' ownership structure may also be expected to affect the effectiveness of the performance of these banks significantly. Accordingly, this study investigates to what extent the changes in ownership structures observed in Turkish banking sector after 2001 crisis affect the banks' indicators of performance and competitiveness.

The competition among the banking sector before 2001 crisis can be said to be quite low. The lack of competition in the sector can be examined in two main areas:

1. The Oligopolistic structure of the Turkish banking system
2. The Sub-oligopolistic structure of public banks in the Turkish banking system

Prior to the 2001 crisis, despite the size of the shares of state-owned banks, operating in an ineffective and inefficient way was the major cause of these banks remaining outside the competitive sector environment. Although state-owned banks retained a portion of nearly 50% of the system under control during this period, the low rates of return of total assets was another main indicator of their ineffectiveness (Canbas and Erol, 1984). The formation of top managements by political preferences can be

shown one of the reasons that interfere public banks be governed in an effective, efficient and autonomous way. As a result, due to the oligopolistic structure prior to the 2001 crisis, created by the high market shares in the banking sector, public banks do not respond either to the international competition, and also inhibited the banking sector as a whole gaining an effective an efficient structure among the national and international markets.

There are two banking groups forcing the banking market, composed of large scale private chain banks and public banks into competition. The first is the foreign banks with an increasing number after the year 1980 and the second one is the small-scale private banks. The multi-branch banks compete with the foreign banks by minimizing variable costs (the closure of some non-productive branches), by reducing the number of their employees or by bringing new technological advances for adapting the changing conditions. However such minor changes were not be able to create the competitive environment desired. In other words, with the entry of foreign banks in the Turkish banking system, the competitive environment do not developed capably. Even just before the 2001 crisis it has been observed that some of the foreign banks leave the Turkish banking system.

The 2001 crisis can be regarded as a banking crisis basically which resulted in the termination of the existence of many banks, or merging them with others. Following to the 2001 crisis, ownership and competitive structure of the Turkish banking sector has undergone a significant change compared to the past. During this period, it also has been observed that foreign banks entered the sector in different ways.

The banking sector, which has important functions within the financial system and constitutes the most important link among financial intermediation process, has achieved a certain measure of development by focusing on problems, which has enabled it to reach the present position. It is greatly important for our country that banks are able to achieve the level of modern banking and become competitive with international banks.

a. The Development of Foreign Bank Entry in the Developing Countries

Around the world since 1960s, international banking activities have developed rapidly. The reasons for this has been the increasing volume of international trade, increased foreign direct investments (FDIs), capital market integration and liberalization of national financial markets (Lensink and Hermes, 2001).

The developments in the process of change in developing countries can be categorized as follows (TBB, Banking and Research Group, 2005);

- The increasing the role of private sector,
- The international integration effort,
- The development of the market mechanism,
- The increase in the growth and function of the financial sector,
- The opening up of banking competition,
- The approach to international rules.

According to the studies related to which bank features lead those to enter foreign activities it has been found that larger banks have a stronger tendency to open up,

banks with high market shares in their own country has shifted to other countries in terms of the distribution of risks, and banks that cooperate with multinational companies and interested in foreign trade had a much higher tendency to spread (Clarke and Sánchez, 2001).

Foreign bank entry has increased in recent years as a solution for systemic banking crises in many developing countries. The World Bank research paper published in 2001 has also stressed that foreign bank entrance by respected banks to national markets should be welcomed which would bring competition, and improve efficiency and quality (Elosegui and Pinteris, 2002).

Foreign capital is thought to be beneficial in terms of better resource allocation and can provide high efficiency, and could change the quality, quantity and price of financial services, and finally amend the country's international capital by increasing access to opportunities to bring convenience to meet the funding needs of the country (Claessens et al., 2001).

In their study, Lensink and Hermes (2001) have expressed that foreign bank presence in the system will increase the industry trend of reducing costs, and increasing market competition will also lead to raising the efficiency of local banks. Local banks will also need to make new investments in order to compete with new services and new technologies brought in by foreign banks (Lensink and Hermes, 2001).

b. Foreign Bank Presence in the Turkish Banking System

The effects of inflows of foreign banks in Turkey, as in other developing countries, show great similarities with those in other developing countries. It is a fact that foreign inflows have increased with the implementation of liberal economic policies around the world and the implementation of liberal development strategies especially in developing countries. In our country, especially after liberalization process, foreign banks have increased in numbers. In this, the liberalization of capital flows in 1989 and the increase in international trade have been particularly effective (Önal and Sevimeser, 2006). However not much success has been achieved in attracting foreign direct capital in the period between 1980 and 2000. After the implementation of the “Transition to a Strong Economy” program in the 2000s, a remarkable increase has been observed in the direct foreign capital investments flowing in to Turkey (Köse et al., 2009).

The privatization policies that were followed and the economic crisis that had occurred in Turkey in the 2000s have led foreign capital to intensify its interest in the financial services in the Turkish Capital Market. Leaving out the years 2003 and 2004, when there was a recession, in the other years, almost half of foreign investments (61% in 2007) were aimed at financial services. In particular, right after the commencement of the official EU accession talks for Turkey in 2005, foreign banks began to make important investments in the country, increasing their numbers and their shares in the system considerably (Akgüç, 2007; World Bank, 2008).

Within this scope, the content of the study will be as follows: The first chapter gives a brief introduction to the financial structure of the Turkish banking system and deals briefly with the development of foreign bank entry into developing countries, compared with the foreign bank presence in the Turkish banking system. In Chapter 2, a literature survey is conducted among the studies investigating the effects of foreign bank entry (presence) on the domestic banks' performance, most of which were also cross-country analyses. There are unfortunately a limited number of studies that examines foreign bank entry into the Turkish banking system and its effects on domestic bank performance. A detailed historical background of the Turkish banking system can be found in Chapter 3. In a discussion of ownership structure change process after the 2001 crisis in the Turkish banking system, in Chapter 4, there is a detailed description of the ownership structure change process in two main categories of banks: "Privately-owned Deposit Banks" and "Foreign Banks Leading Branch or Established in Turkey". The methodology and data is described in Chapter 5 while the following chapter introduces the empirical findings of the "Risk-Return Analysis" and "Non-parametric tests". In the conclusion part, there is an extensive summary of the study.

Chapter 2

Literature Review

A wide range of studies have been carried out to explore the increasing effects of the foreign bank presence on the domestic banking system. These studies show that the foreign bank presence in the domestic banking system is increasing the competition in the banking sector and motivating domestic banks to increase their efficiency, and thus having an effect on the performance of the domestic banking system. In addition, those studies also show that the sequence of financial liberalization and the diversity between the developed and developing countries are both important factors on the relation between the foreign bank presence and the performance of domestic banks.

In his study, Terrell (1986) uses aggregate accounting data and compares the banking sector of 14 developed countries (8 of which allow foreign bank entry) for the two years 1976 and 1977. It is interestingly observed that lower gross interest margins, pre-tax profits and operating costs (all scaled by the volume of business) have been experienced by countries that allow foreign bank entry. While foreign banks have lower interest margins, overhead expenses and profitability than domestic banks in developed countries, the opposite is observed in developing countries. This suggests that the reasons for foreign entry as well as the competitive and regulatory conditions found abroad for developed countries differ significantly from those for developing countries.

One of the most comprehensive studies on the efficiency and competition effects of foreign bank presence is conducted by Claessens et al. (2001). In the study, by using a large dataset containing 7900 deposit banks in 80 countries for the period 1988-1995, they try to find out how the foreign bank entry affects the domestic banking performance. The findings show that increased presence of foreign banks is associated with reductions of profitability, non-interest income and overall expenses of domestic banks. In addition, it is found that these efficiency effects occur as soon as foreign banks enter the market; they do not seem to depend on the market share of foreign banks. They also conclude that foreign bank presence increases efficiency and improves the functioning of domestic banks.

In the study of Lensink and Hermes (2004a), which clarifies the relation between the performance of the foreign bank presence and domestic banks, taking the development level of the financial system into account, data from 982 banks in 48 countries between 1990-1996 was used. The findings show that when the financial development level is low, the foreign bank presence causes an increase in the cost and profit margin of domestic banks, and if the level is high, causing a reduction in those margins.

Lensink and Hermes (2004b), which focus on the short-term effects of foreign bank presence on domestic bank performance, using data from 990 banks for the period 1990-1996, argues that these effects are dependent on the level of economic development of the host country, and show that at lower levels of economic development, foreign banks entry is generally associated with higher costs and margins for domestic banks. The findings prove that the presence of foreign banks is

leading to an increase in costs and interest rate spreads of domestic banks in short term at low levels of economic development. The results derived also are somewhat conflicting for the high level of economic development because the findings from the studies conducted show that the foreign bank presence either causes a decrease in the costs, profit and interest rate spreads, or has no effect on those items.

Using data from a total of 4,437 banks from 30 countries, 740 of which were foreign banks, Bayraktar and Yan (2005) investigate the relation between the foreign bank presence and the performance of domestic banks keeping the sequence of financial liberalization in view. They find that the increase in the foreign bank presence is enhancing the competition in the banking sector. Even, the sequence of financial liberalization plays a role on that relation.

In his study, Chantapong (2005) stated that the performance differences between foreign banks and domestic banks was reduced after the Asian crisis in Thailand, and it is determined that especially in profitability ratios domestic banks show a faster improvement as well. In a similar study, Kosmidou et al. (2006) compared the performance of the operating domestic and foreign banks in the United Kingdom using the financial ratios. According to the results of the comparison made using logistic regression analysis, within the framework of used financial ratios it is identified that the performance of domestic banks were higher than the performance of foreign banks.

In addition to the studies investigating foreign bank entry on domestic performance including countries worldwide by using the global data, there are also such studies

conducted consisting of the countries that lay within a specific geographical area. Pigott (1986) defines the policies that have made increased foreign bank activity possible in nine Pacific Basin countries, and some aggregate statistics on the size and scope of foreign bank activities are provided, whereas Uiboupin (2004) conducted a study using the data from 319 banks in the 10 Central and Eastern European (CEE) Countries in order to investigate the short-term effect of the foreign bank presence on the domestic banks in the CEE countries empirically for the period 1995-2001 and found that foreign bank presence increased the competition in the domestic banking system and also caused an increase in the overhead costs of domestic banks in the short term.

The study conducted by Detragiache et al. (2006) examines the impact of foreign banks, operating in low- and middle-income countries, on the financial systems of these countries. Foreign bank entry leads to the formation of two separate portfolios: less risky and more cost-effective managed clients are found in the portfolios of foreign banks, while the more risky and more cost-effective managed customers have been shifting to the domestic banks' portfolios. As a result, administration costs of domestic banks are going to increase and because of this, with increasing credit using costs by small and medium-sized companies the growth of credit in the economy is slowing down accordingly. (Aktaş and Kargın, 2007)

Another group of studies investigates whether the relation between foreign bank presence and the performance of domestic banks is valid locally or not. In his study, Cho (1990) found that foreign bank presence in Indonesia contributes to increased competition in the banking system. Likewise, Mc Fadden (1994) reclaimed foreign

bank entry in Australia and finds that foreign bank entry has led to improved domestic bank operations. The study conducted by Bhattacharya (1993) is one of the few studies that looked at the issue considering Turkey in addition to Pakistan and Korea, and found that foreign banks have been instrumental in attracting external capital to finance local projects. The cross-country nature of his study, however, did not permit a detailed analysis of the effects of foreign bank entry in Turkey on important issues such as profitability, efficiency, market structure and other qualitative impacts (Denizer, 2000).

Barajas et al. (2000) carried out a similar analysis focusing on the Colombian banking system, using individual bank accounting data for the 1985-98 period. Their study shows that foreign bank presence generally increases competition in the domestic banking system using the evidence of reduced intermediation spreads. Even foreign bank presence was associated with a deterioration of reported loan quality among domestic banks. In addition, administrative costs of domestic banks were shown to rise possibly due to the fact that these banks have to upgrade their activities because of increased competitive pressure. So that in general, foreign bank presence seems to be associated with an increase of costs for the domestic banking system in Colombia (Hermes and Lensink, 2004).

Clarke et al. (2000) have investigated the effect of foreign entry on the domestic banking sector in Argentina in the period of 1995-97. During these years, several foreign banks entered the Argentine banking market. They resulted that foreign entry conducted competitive pressure on domestic banks, but only in those markets where foreign banks have comparative advantage. Thus, domestic banks experienced

declining interest rate margins and increasing overhead costs in mortgage lending, a market segment in which foreign banks were quite active. Interest rate margins, overhead costs and profitability of domestic banks remained relatively unchanged for consumer lending, a market segment in which foreign banks were not very active.

Pastor et al. (2000) analyzed the impact of the opening up of the Spanish banking system, using data for the period 1985-98. They noted that this did not lead to large numbers of foreign banks entering the Spanish market. Nevertheless, foreign banks have contributed to improved efficiency of domestic banks through competitive pressure, since foreign banks were present in some wholesale activities and introduced new products and services. They were also potential entrants in other (retail banking) activities.

The study by Unite and Sullivan (2001) conducted on the economy of Philippines in the period 1990-1998 showed that foreign bank presence caused a decrease in the interest rate spreads and profitability of the banks owned by the groups of companies. Moreover, the foreign bank presence increased the operational efficiency of domestic banks but disrupting their credit portfolios as they turned to more risky customers; thus causing an increase in the overhead costs and a decrease in the non-interest revenues. The foreign competition leads domestic banks to concentrate on the essential operations and become more efficient.

Schäfer and Talavera (2007) investigated the effects of foreign bank presence on the Ukrainian banking sector in the period from the second quarter of 2003 to the third quarter of 2005 using the data on 160 banks. The findings showed that the foreign

bank presence decreased the profitability of domestic banks by increasing the competition in the domestic banking system. In order to determine the effects of the foreign bank presence on varying bank groups, domestic banks were grouped as large and small - scale and most profitable and least profitable by profitability. The results show a negative relation between the foreign bank presence and profitability for both groups. This relation is stronger for the small and most profitable banks, but only marginally important for the least profitable banks.

As mentioned above, although there are many studies in the literature to explore the effects of foreign bank entry on the performance of domestic banks in developed and developing countries, there is a very limited number of studies on this issue of Turkish banking sector. Denizer (1997) indicates a relation between the foreign bank presence and the net interest rate margin, overhead costs and Return on Assets (ROAs) of the domestic banks in Turkey. The findings show that the foreign bank presence creates an intense competitive effect on the banking sector, causing a decrease in the overhead costs and return on assets (ROAs) and of domestic banks as a result. At the same time, the foreign bank presence has a positive effect on the main operations such as planning, credit analysis, marketing and human resources. Denizer (2000) analyzed the effects foreign bank presence has on domestic banks in Turkey for the period 1980-97. His empirical results showed that net interest rate margins, returns on assets and overhead expenses of domestic banks decreased after foreign banks entered the market. These findings support the idea that foreign banks put competitive pressure on the domestic banks in Turkey, despite the fact that these foreign banks had a market share of only between 3.5 and 5 % during the period 1980-97.

In the study conducted by Çakar (2003), it was determined that the foreign bank presence in the Turkish banking sector was causing increasing competition in the national market and this situation also to in some extent affected the efficiency of the system. Another of the important findings of the study is that foreign banks cannot influence the oligopolistic structure and high concentration because of their low share in the whole banking sector. In a study by Aktaş and Kargın (2007), foreign banks and domestic banks in the Turkish banking sector were compared in terms of certain financial ratios. According to the results of the study, foreign banks have higher “Capital Adequacy” and “Liquidity” ratios. There are also some differences with regard to the “Income Expense Structure” ratios, and this has proved that these differences were statistically significant as well.

In his study, Ata (2009) compared the financial performances of both domestic and foreign banks in Turkish banking sector and investigated the effects of foreign bank entries on the performance of domestic banks for the period of 2002-2007. In the study, a multivariate logistic regression analysis was performed, taking into account domestic and foreign banks in terms of profitability, efficiency, liquidity and risk factors. According to the results of the study, it has been observed that domestic banks are more effective than foreign banks in terms of various performance indicators, but foreign banks were also increasing their efficiency in relation to active profitability, operating profit/total assets and non-interest expense/total assets.

Chapter 3

Historical Background of the Turkish Banking System

Turkish Banking History goes back to the last period of the Ottoman Empire. Before the Republic, between the years of 1911-1923, 21 banks were established by national capital but they were forced to continue their activities in the face of the dominating foreign banks among the credit markets. In spite of their efforts, only 18 survived to the Republican period as a result of bankruptcy and liquidation. Turkey has emphasized economic development after the proclamation of the Republic and began to develop the national banking in order to stimulate industrial and commercial life. In this context, some banks like “Türkiye İş Bankası” and “Türkiye Sanayi ve Maden Bankası” was established by government incentive. However, following the negative impact of the 1929-30 world economic crises, many of the banks went out of business. However, even during this negative economic environment, the number of the banks in the country reached 60 in 1932, but fell to 40 in 1945; the total number of branches also decreased from 483 to 411. With birth of New Republic, Turkish economic policy adopted the principle of state control banking industry after the crisis; in this period large state banks such as “Sümerbank”, “Etibank”, “Türkiye Halk Bankası” were established and dominated the banking industry in Turkey .

After World War II, between the years 1945-1959, the economic policy of state control has replaced by supporting private sector and accelerating economic development. This situation was reflected in the banking sector and the private

banking sector also became well developed in this period. But since the returns were insufficient, investments not made by private sector continued to be loaded by the state with the help of Central Bank. Deterioration of the economic balance was evidenced rapid inflation, rising trade deficits and foreign debt. With the rising inflation, a need to devalue the Turkish lira emerged, and in the framework of the stabilization program in 1958, the value of the U.S dollar was raised from 2.8 liras to 9 liras.

The early 1960s was an important period, in which many banks went out of business. Between the years of 1960-64, 15 banks had ceased to operate and those banks were liquidated. In 1960, the Liquidation Fund was established at the Central Bank; in 1983, these funds were transferred to the Savings Deposit Insurance Fund.

According to the law issued in the late 1970s, named “Borrowed Money Works Act”, some restrictions were put forward on the loan interest rates, which pushed the banks into cooperating with the agencies, the so called “bankers” working on market interest rates. This situation, arriving in 1982, caused a major crisis in the Turkish economy. When reviewing the Turkish banking system as periodically, it can be seen that until 1980 there was no evidence of a serious crisis which affect the financial system as a whole, although due to various economic reasons a number of individual banks ceased their activities and were liquidated.

With the January 24, 1980 decrees the banking sector adopted a new concept of competition compared to the early days of the Republic. The first claim taken in the way of financial liberalization has related to banks interest rates first, and then on the

release of the entire interest in 1981. With the statutory decree no.70, it became easier to access the banking sector and it was aimed to attract the unused resources and also a proportion of money from the underground economy into the sector using a new instrument. The most important factor in the formation of this structuring was greatly the increasing number of the banks, arising asset size of the banks and determining the interest rates in the market. After 1980s, by accelerating the financial system liberalization and economic growth, it is observed that financial system was enlarged, brokerage activities increased and most importantly, with the globalization effect, “crisis” in the banking system as a whole became an element which threatening the financial system.

The relaxation of rules allowing entry into the led to increase the competition in the banking sector, besides decreases the share per bank, although the share in the sector remains the same. Bankers conducted intermediary transactions mainly between banks and funds markets, rather than between those who have more funds and who demand funds as the banks did. After a while, the interest struggle between brokerage (banker) companies transformed into a Ponzi scheme (to pay for the interest on borrowed money with higher interest rate debt) and this has led to collapse the system. This event was called “Bankers’ Crisis” in 1982.

In 1985, the public attention focused on domestic debt. Rapidly released Government Debt Securities (GDS) has become an ideal investment instrument also for banks too. With the reflection of increased interest rates to lending rates, banks tend to purchase GDSs rather than providing credits, and while financing the public private sector

have been excluded from the system. Istanbul Stock Exchange became also operational in 1986.

Decisions came into force in 1989, opening the way for the convertibility for the Turkish Lira. Opening of the sector to the international markets and the liberalization of resources, especially from international markets, has become an important current issue. Money markets and foreign exchange markets have been established, and investors have begun to turn to foreign currencies instead of Turkish Lira. However, the Undersecretariat of Treasury and the Central Bank have not has sufficient regulations in place to deal with this new formation. The unprepared banking sector also failed to show an appropriate asset-liability management and the banks tended to deal with foreign currency sources in a way that ignores the basic principles of liquidity management.

This period has also experienced high levels of public sector financing deficit and as a result, especially after the year 1989, Turkey entered into a "high interest rates, high inflation" period. The need to finance a high level of rapidly growing budget deficits by the Central Bank put pressure on inflation, while meeting a substantial proportion through domestic borrowing led to an increase in public demand for financial resources. Meanwhile, despite the liberalization of capital movements, inflationary policies based on the increased domestic demand created very serious pressures on the balance of payments; these pressures also led to rising real interest rates.

1994 was a year when risks converted to a large extent into damage to the financial sector and for the banks. Despite the growing public deficit, in an environment with continued expansionary policies, because of the lowering interest rates the tension increased. Despite the pre-signals sent by the markets, the additional/new taxes admitted to the monetary expansion and the financial instruments caused both domestic and foreign investors escape from financial instruments in TL. Interest rates rose to record levels, TL depreciated against foreign currencies, the financial system shrank. Total assets in the banking system in 1994 were reduced from \$ 68.6 billion to \$ 51.6 billion; equity capital also decreased from \$ 6.6 to \$ 4.3 billion.

The rapid recovery after 1995 positively influenced the growth of all the sectors in the economy, as well as the banking system. High real interest rates attracted investment instruments in TL; currency substitution slowed but was not reversed. Closed foreign exchange positions have re-opened; borrowing abroad also began despite their higher costs. However, investors' demand concentrated on short-term investment tools. Taxes brought borrowing from abroad; the financial burden on TL and foreign debt also increased. These developments led to rapid growth in repurchase agreements and forward foreign exchange transactions. Most of the demand deposits and time deposits in the banking sector turned to daily futures and too high interest rated repurchase agreements.

In 1996, implementation of public joint account, inflation denominated debt, foreign currency borrowings, free importation, and the use of rapid advances was the principal applications used to meet increasing public borrowing requirement without increasing the interest rates. Turkey entered to the year 1997 with the discussions

related to the concept of a new currency, implementation of a balanced budget applications and initiation subject to the taxation of declared income securities for the real people. With the change of government that occurred in the middle of the year, the new government gave priority in the economy to reduce inflation and a contract basis has been trying to find with International Monetary Fund (IMF) for the purpose of to increase foreign debt. From the second half of 1998 a "monitoring agreement" was signed with the IMF. In the agreement it was stated that solutions to fundamental macro issues would be provided, financial sector supervision arrangements would be increased and tax draft would become law as well. Indeed, immediately after the deal, open positions and future transactions of the banks were set limits.

In 1999, economic activity was narrowing. Some factors have been effective in narrowing, such as the capital outflow connected with the crisis in Russia, seen in the second half of the year 1998, the Adapazarı and Düzce earthquakes, early general elections and the change of government. A series of improvements and regulations regarding facing economic problems were implemented by the new government which took office in June, 1999. With an amendment in the constitution an opportunity to make arrangements which allows international arbitration has been provided. The Capital Market Law was adopted in Parliament. The application for the assessment of government securities at market value was started. Five of the deposit banks (Egebank, Esbank, Yaşarbank, Interbank ve Yurtbank) were transferred to the savings deposit insurance system, the activity of a bank among investment and development banks group (United Investment Bank) was terminated as well. All these changes and arrangements, occurring in the final days of 1999

created infrastructure for the “Stand-by” agreement that was signed between the Government and International Monetary Fund (IMF).

Despite a significant narrowing of the economic activities and the losses in the banking sector in 1999, some positive steps were taken in order to solve structural problems of the economy. In December, 1999; the “Disinflation Program” in which these regulations were a prerequisite, was accepted and began to be implemented effectively from the beginning of the year 2000. Taking the necessary measures to strengthen the banking system also continued in that year. The “Banking Regulation and Supervision Authority” (BRSA) became operational on August, 2000, in order to adopt and implement the relevant decisions related to starting to operate banking activities, monitoring, supervision, deciding on inspection results and ending of a bank’s activity.

As of the year 2000, three more privately owned deposit banks (“Demirbank”, “Etibank”, “Bank Kapital”) were transferred to the Fund. In addition, one deposit bank (Cyprus Credit Bank) and one development and investment bank (Park Investment Bank) had their banking activities suspended. Thus, the number of the banks in the Fund increased to 11 at the end of 2000.

As a result of the slowing down of structural adjustments, growing current account deficit depending on domestic demand limits and increasing pressure on exchange rates, an economic crisis started in the financial system in February, 2001 and spread rapidly to the real sector. After the crisis, in April, 2001; "the transition to a strong economy program" was implemented in order to address structural problems in the

economy and strengthen the financial structure of the financial system. That program was revised at the beginning of 2002 in such a manner to cover the period 2002-2004. The program was aimed at increasing the resistance of the economy to external shocks, reducing inflation and public debt, provision of financial discipline, completion of structural reforms and strengthening the banking system. With the help of resolute implementation of the program's basic principles, political stability and a positive conjuncture in the world economy, there have been positive significant advances in the economy and banking system.

With the amendment on Central Bank Act, the Bank's mandate was clearly defined as price stability, and the Bank has been provided independence of tools and the Monetary Policy Committee was formed. Private Banks greatly strengthened their reserves which they lost after the crisis in 2001. State banks were restructured and were put under a common management. Duty losses of state banks were liquidated in terms of government debt securities in order to strength banks' financial structure. Related to a portion of non-performing loans in the banking sector, the "Financial Restructuring Program" (FYYP-Istanbul Approach) was applied. The concept of risk management in banks, public oversight and control authority was strengthened in the risk-based audit approach. An independent public oversight and audit function structure was attained.

In brief, following the crises in 2001 and the restructuring process, the banking sector showed a rapid growth performance in 2002-2007 periods. The total assets rose from USD 130 billion to USD 465 billion, their ratio to GDP from 57 percent to 77 percent. In this period, the financial structure of the sector also became stronger. The

shareholders' equity of the sector increased from USD 16 billion to USD 54 billion and its free equity from USD 3 billion to USD 40 billion.

When we looked at the year 2008, we can see that in the first three quarters, the banking system increased its credit supply, whereas in the last quarter a more cautious approach was adopted, due to increasing risk and the importance of liquidity. In the last quarter of the year, because of the global financial system problems and their negative repercussions on the economy, banks experienced losses, especially in foreign currency sources; foreign sources of supply became more difficult and expensive. Therefore, the banking system, especially in this period has been directed to increase their liquid assets in foreign currency and to maintain the quality of credit stock. Total assets grew at current prices, with a rate of 26 percent and reached to 706 billion TL, whereas total deposits increased by 27 percent to 453 billion TL. There was a slow but continuing growth in equity capital and free capital. The upward trend in the number of branches and employment which started in 2003 has still continued in 2008 too.

Despite the experienced steady growth in the 2002-2008 periods and the increase in credit supply, the banking system in Turkey, compared with the European Union (EU) countries, still has a relatively small scale. At the end of 2008, the market value of financial institutions fell to 45 billion dollars. Two factors have been effective in the decline in the market value. The first is that stock prices traded in the Istanbul Stock Exchange (ISE) experienced a decline, especially in the last quarter of 2008, and the second was the depreciation of the TL.

Chapter 4

Ownership Structure Change Process after 2001 Crisis in the Turkish Banking System

The financial crises in 2000 and 2001 largely resulted from the banking sector fragility. This showed that a comprehensive program to solve the structural problems in the sector should be put in place urgently. After the crisis, with the pressure from the IMF, the Banking Regulatory and Supervisory Agency (BRSA) found it in a more powerful and independent position, and became interested in structural problems in the system. But it seemed difficult for the banking sector to be restored to international norms without eliminating the weight of public banks and their burden of debts on the whole sector.

In April 2001, the first step in this direction was the management changes to ensure the autonomy of public banks. Following with the implementation of the “transition to a strong economy” program as of May, 2001 the Turkish banking sector also entered in the restructuring process. The key elements of this process were:

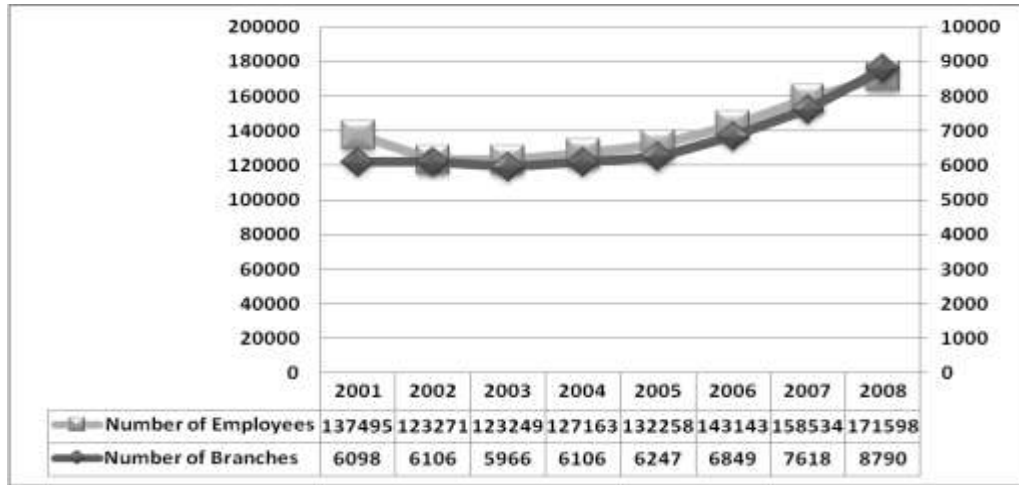
- (i) Resolving financial problems of banks within SDIF as soon as possible,
- (ii) Financial and operational restructuring of state-owned banks,
- (iii) Establishing a healthy structure for private banks which were adversely affected from previous crisis,
- (iv) Financial restructuring program,
- (v) Realization of legal and institutional arrangements to increase the

effectiveness of surveillance and control in the banking sector and to develop a more efficient and competitive industry structure.

For these purposes, the agenda concerned firstly the transfer of troubled private banks to the SDIF and the enforcement of bank mergers. In the case of public banks, the idea was to privatize or merge them with other public banks. As a result, several bank mergers following the years of 2001 and 2002 were monitored. According to Denizer (2000), with the entering of foreign banks to the Turkish banking sector, product and service quality increased, human capital became more efficient and the use of technology became widespread among the domestic financial sector. In the study conducted by Alper and Oni (2004), it was mentioned that the Turkish banking sector did not gain advantage from foreign banks as expected, and the reason for this was shown as being that domestic banks were trying to profit from the irregularities of the foreign banks entering the sector. The scarcity of foreign banks in the sector was also linked to problems such as the large share of public banks in the sector, an inadequate legal framework and also transparency.

Figure 1 depicts that during the following periods of 2001-2008, it can be said that the number of branches and employees has an upward trend parallel to the financial growth. Following the 2001 crises, branch and employee numbers decreased to 6,106 and 123,271 respectively; but by the end of 2008 increased to 8,790 and 171,598 respectively.

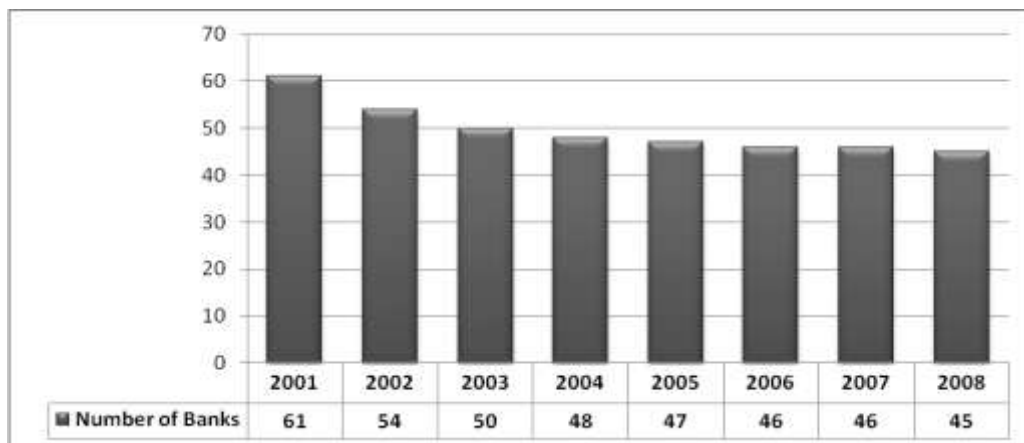
Figure 1
Number of Employees and Branches (2001-2008)



Source: The Banks Association of Turkey

Although the number of branches and employees increased in this period, because of the merger and acquisitions, banks again faced declining numbers at the end of 2008. Figure 2 indicates that the number of banks reached 45 at the end of the period, a decrease of 8 compared to 2002.

Figure 2
Number of Banks (2001-2008)



Source: The Banks Association of Turkey

While the ownership change process is continuing, the distribution among the survival deposit banks is shown in Table 1.

Table 1
Number of Deposit Banks Operating in Turkey
(based on the ownership structure)

Year	Deposit Banks			Total
	State-Owned	Privately-Owned	Foreign	
2001	3	22	15	40
2002	3	20	15	38
2003	3	18	13	34
2004	3	18	13	34
2005	3	17	13	33
2006	3	14	15	32
2007	3	11	18	32
2008	3	11	17	31

Source: The Banks Association of Turkey

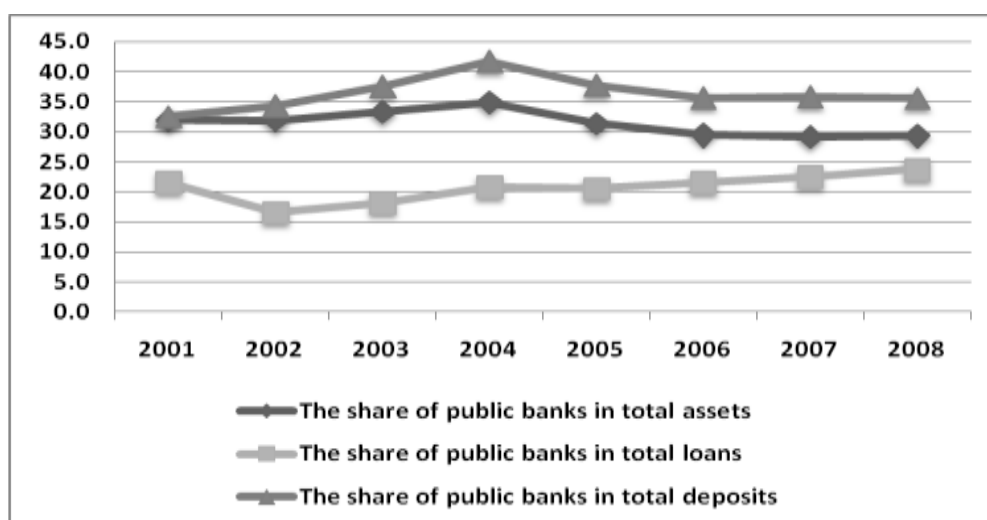
According to Table 1, we examine the Turkish banks' ownership change process in three main sub-groups namely "Privately-owned Banks", "State-owned Banks" and "Foreign Banks".

The most affected group among the three sub-groups was definitely privately-owned deposit banks. The number halved from 22 in 2001 to 11 by the end of 2008. Parallel with the increasing foreign capital inflow to Turkey, like to other developing countries in this period, the number of foreign banks showed an increasing trend and reached 17 by the end of 2008. Only the three state-owned deposit banks could stay in business; Halk Bankası, Ziraat Bankası and Vakıflar Bankası. Although they did not face an ownership change process, according to one of the main element of the transition to a strong economy program - considering the financial and operational

restructuring of state-owned banks, Vakıflar Bankası and Halk Bankası went public in 2005 and 2007 respectively.

The share of the public banks in total banking assets, loans and deposits are shown in Figure 3. According to this figure, although the share of state-owned banks in total assets, loans and deposits fell after 1980, they have still an important share in the system. State-owned banks with large branch networks had 33% of total banking assets, 18% of total loans and 38% of total deposits as of the date of 2003, but the share of public banks in total banking profits was only 10%. After the year 2004, the share of public banks in total loans followed an upward trend, but a downward trend for total assets and deposits.

Figure 3
The Share of the Public Banks in Total Banking Assets, Loans and Deposits



Source: The Banks Association of Turkey

Table 2 gives the total assets of the Turkish banking system. During the liberalization process, as of 1980, the Turkish banking system achieved a rapid growth rate concerning its total assets. The value of the total assets in the system was 166.4

million YTL in 2001, 397 million YTL in 2005, and nearly doubled to 705 million YTL in 2008 respectively.

Table 2
Total Assets of the Turkish Banking System (million YTL)

	2001	2002	2003	2004	2005	2006	2007	2008
Deposit Banks								
State-owned Banks	53,831	67,831	83,134	106,902	124,485	143,362	163,585	207,702
Privately-owned Banks	93,673	119,471	142,270	175,936	237,043	265,614	293,529	369,603
Banks taken over by SDIF	6,031	9,310	7,136	1,938	1,858	1,215	842	834
Foreign Banks	5,053	6,624	6,943	10,346	20,715	59,323	84,335	104,798
Investment and Development Banks	7,803	9,438	10,264	11,326	12,866	15,340	18,878	22,934
TOTAL ASSETS	166,392	212,675	249,749	306,451	396,970	484,857	561,171	705,871

Source: The Banks Association of Turkey

Table 3 gives the distribution of the total assets among the groups of banks and shows that the privately-owned deposit banks dominated the others. The share of total bank assets of privately-owned deposit banks was 57% as of the year 2003. The most impressive change in the distribution was related with the foreign banks. As shown in the table, the ratio of the foreign banks' total assets has multiplied nearly 5 times during the time period between 2001-2008.

Table 3
The Distribution of the Total Assets in the Turkish Banking Sector (%)

	2001	2002	2003	2004	2005	2006	2007	2008
Deposit Banks	95.3	95.6	95.9	96.3	96.8	96.8	96.6	96.8
State-owned Banks	32.0	31.9	33.3	34.9	31.4	29.6	29.2	29.4
Privately-owned Banks	56.8	56.2	57.0	57.4	59.7	54.8	52.3	52.4
Banks taken over by SDIF	3.4	4.4	2.9	0.6	0.5	0.3	0.2	0.1
Foreign Banks	3.1	3.1	2.8	3.4	5.2	12.2	15.0	14.8
Investment and Development Banks	4.7	4.4	4.1	3.7	3.2	3.2	3.4	3.2
TOTAL ASSETS	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: The Banks Association of Turkey

Although there are many privately-owned banks in the Turkish banking system only four banks (İş Bankası, Yapı ve Kredi Bankası, Akbank and Garanti Bankası) hold 50% of assets of the private deposit banks and 25% of assets of the total banking sector as well.

Table 4
Bank Concentration Ratio
(shares of the largest 5 and 10 banks in the sector) (%)

	1980	1990	1999	2000	2002	2006	2007	2008
Top 5 Banks								
Asset	63	54	46	48	58	63	62	62
Deposit	69	59	50	51	61	64	64	65
Loan	71	57	52	42	55	58	57	58
Top 10 Banks								
Asset	82	75	68	69	81	86	85	86
Deposit	88	85	69	72	86	90	89	90
Loan	90	78	73	71	74	83	83	84

Source: The Banks Association of Turkey

Table 4 depicts the concentration ratios and from this table the share of the five largest banks and ten largest banks in the system can be seen. Although there is an important concentration around a few banks in the sector, it seems that the concentration decreased until 2000, and after as a result of the banking crisis (due to the acquired and merged banks) the concentration seemed to increase again.

After 2002, it has observed that many privately-owned domestic deposit banks experienced a significant process of change of ownership and the share of foreign capital in these banks increased. In the appendices you can find the detailed process of change of ownership structure in both privately-owned deposit banks and foreign banks.

Chapter 5

Methodology and Data

The objective of this study is to analyze the differences of the financial performances and the characteristics of deposit banks including foreign banks, privately-owned and state-owned deposit banks operating in Turkey for the sample period of 2001 - 2008. The period of the study is selected because this is the period after restructuring of the banking system after the Turkish banking crisis in 2001. In the study, a total of 31 deposit banks state-owned, privately-owned and foreign banks operating in Turkey will be analyzed for the period of 2001-2008. In sample grouping, the important criterion is the ownership structure of those banks. In the Turkish banking system, there are 3 state-owned, 11 privately-owned and 17 foreign deposit banks operating in Turkey. The purpose of this grouping is to find out how and whether the ownership affects performance of these banks after restructuring of the Turkish banking system. By comparing these three groups of banks, the study will try to show whether the foreign bank presence and the ownership structure changes were played a role in the banking industry performance or not. In addition, the competition advantages and disadvantages of banks owned by state or domestic investors versus foreign banks will be analyzed for the same period.

To analyze the differences in the means of numerous financial accounting ratios for three groups of banks for the period of 2001-2008, the first model is the risk-return relationship model. To determine whether there is a large variation in riskiness, the soundness of each Turkish deposit bank was analyzed within a risk - return

framework. The variables used for the model are “risk”, “return”, “average risk” and “average return”. Return is measured by the ratio of net income to total equity for the period 2001-2008. Risk is measured by the ratio of total commercial loans to total assets for the same period. The average return is the average return for the 31 Turkish deposit banks in the system for the period 2001-2008. The average risk is the average risk for these banks for the same period as well. Data for the variables are provided by the publication entitled “Bankalarımız” for each determined year by the Banks Association of Turkey.

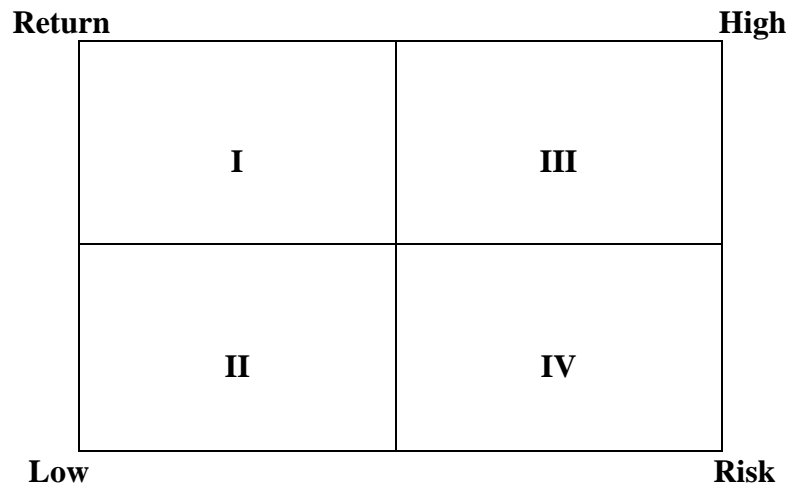
The hypotheses considered in this analysis are as follows:

H₁: Banks with different ownership structure will vary from each other in terms of their risk-return relationship.

H₂: Increase of the foreign entry among the banking sector will provide a more structured (static) risk-return relationship over the years.

A precept of modern capital market theory is that the equilibrium relationship between a security's systematic risk and its expected rate of return should be linear. To simplify the analysis, banks can be assigned to one of four risk - return categories: (I) high return - low risk, (II) low return - low risk, (III) high return - high risk and (IV) low return – high risk. Figure 4 illustrates this relationship.

Figure 4
Risk-Return Relationship Framework



Any bank located in quadrant I in Figure 4 would be a bank with above average return and below average risk, in quadrant IV, below average return and above average risk, in quadrant III, above average risk and return, in quadrant II, below average risk and return. Risk and return measures of 31 deposit banks are presented at appendices.

Banks which fall in the lower part of quadrant III can be identified as “problem banks”. Although their return is greater than average, their risk may be relatively greater as well. Banks which fall in the lower part of quadrant II may also be considered as problem banks since they have lower risk and return ratios, which let a decline in operations, could result in losses. In general, banks like to be in quadrant I or the upper levels of quadrants II and III with respect to their level of utility surface. Banks in these positions can be called as “sound banks”. Using the risk - return relationship framework, we are able to identify these sound banks and problem

banks. Sound banks need little supervision whereas problem banks need assistance as well. This assistance could be financial or managerial, or could be in the form of the purchase and assumption method, which is in common use in the USA. The Turkish Saving Deposit Insurance Fund (SDIF) would purchase part of or all of the assets of the problem banks in order to help strengthen the liquidity position of the problem banks.

From an analytical point of view, the most important contribution of this model is in analyzing banks' movements from one quadrant to another. Then we are able to detect the banks most likely to fail. Banks which move from quadrant II to quadrant IV, for example, should be encouraged to move back to quadrant II. Sometimes, as banks reach out for above average returns, they must accept above - average risk. However banks may act differently to achieve higher return while trying to minimize their risk. The quadrant analysis of the banks is also supported by the correlation coefficient analysis. This analysis yielded results similar to the quadrant analysis (see appendices).

The main motivation for using this model was the "Capital Asset Pricing Model (CAPM)". The mean variance CAPM, developed by Sharpe and Lintner, has become a focal point for finance, and used to determine a theoretically appropriate required rate of return of an asset if that asset is to be added to an already well-diversified portfolio. In other words, the CAPM is a model for pricing an individual security or a portfolio. The CAPM is important because it was the first equilibrium asset pricing model that hinges on meanvariance portfolio selection under uncertainty. It provides the relationship between the systematic risk of an investment and its expected return. (Celik et al. 2008) For individual securities, we make use of the security market line (SML)

and its relation to expected return and systematic risk (beta) to show how the market should price individual securities in relation to their security risk class. Like the SML, in our model we also have two sector trend lines that show the averages of the risk and return rates of each year. Our objective is again to determine how each bank has moved in relation to the four quadrants as a result of their risk-return combination differentiation on a yearly basis.

In the second analysis, CAMELS performance criteria which are widely implemented in the banking sector are used as performance evaluation criteria. 15 from a total of 21 ratios that were calculated for three bank groups for each determined year can be found in Table 6 and by using the non-parametric tests Kruskal-Wallis and Mann-Whitney U, it was investigated whether or not there is a statistically significant differences among the three bank groups in terms of the performance ratios. CAMELS analysis is basically a performance appraisal system and is used often in the performance analysis of banks especially by international rating agencies.

The term “CAMELS” is derived from the initial letters of the 6 performance criteria (Kaya, 2001; Sakarya, 2010). “C” represents capital adequacy, “A” represents asset quality, “M” represents management adequacy, “E” represents earnings power, “L” represents liquidity and “S” represents sensitivity to market risk. Under these six main criteria, there are 21 ratios used in the performance analysis represented in Table 5.

Table 5
Financial Ratios used in CAMELS Performance Analysis

RATIO
<p><u>C</u>apital Adequacy Capital Adequacy Ratio: Shareholders' Equity / (Amount Subject to Credit Risk + Market Risk + Operational Risk), Shareholders' Equity / Total Assets, On Balance-sheet FC Position / Shareholders' Equity</p>
<p><u>A</u>sset Quality Financial Assets (Net) / Total Assets, Loans under follow-up (gross) / Total Loans, Permanent Assets / Total Assets</p>
<p><u>M</u>anagement Quality Loans under follow-up (gross) / Total Loans, Net Income / No. of Branches, Operational Expense / Total Assets</p>
<p><u>E</u>arnings Net Profit (Losses) / Total Assets, Net Profit (Losses) / Total Shareholders' Equity, Income Before Taxes / Total Assets, Total Income / Total Expense</p>
<p><u>L</u>iquidity Liquid Assets / Total Assets, FC Liquid Assets / FC Liabilities, Net Working Capital / Total Assets</p>
<p><u>S</u>ensitivity to Market Risk Interest Income / Total Assets, FC Assets / FC Liabilities, Securities Portfolio / Total Assets, Securities Portfolio / Total Loans, Off Balance-sheet FC Position / Shareholders' Equity</p>

Using the capital adequacy ratios, the capital adequacy of banks are evaluated. Within the scope of this ratio, all the risks inside and outside balance sheet are dealt and the quality of the bank's capital structure and additional capital creating capacity against these risks are also considered.

The measure of asset quality is fundamentally assessing activities in the process of extension of loans and asset management that have the maximum weight in the asset composition of banks.

Management adequacy ratios show to what extent total management quality is reflected in the bank's performance. Within this context, quantitative criteria involve

ratios such as the adequacy of management, information and risk understanding; the functioning of the board of directors' activities and the success of controlling the related risks to these activities whereas qualitative criteria comprises the profitability of the bank's assets and the profitability ratios per branch as well.

The earnings power criterion is used to evaluate the power of the banks in terms of creating earnings from its assets and equity, and the sustainability of these earnings. Rates of return on assets (ROA) and return on equity (ROE) and revenue-expenditure ratio are used within this criterion.

Liquidity measure is the criteria used to assess banks' liquidity position and liquidity risk, and also used to determine the share of liquid assets in its total assets in terms of foreign and domestic currency, the efficiency in convertibility of these assets into money, the extent of liquid assets in comparison with demand deposits and short-term deposits, and finally, to the extent to which they are exposed to maturity risk.

The measure of sensitivity to market risk shows the impact of the changes in the bank's financial position when the fundamental indicators of money and capital markets such as interest rates, security prices and exchange rates evolved.

In this second analysis the following hypothesis was tested:

H1: When banks are grouped according to their ownership structure (as private banks, public banks and foreign banks) financial performances of these different groups of banks are also differences.

Changes in the structure of banks' ownership in the banking sector after the 2001 crisis caused differences between the banking groups in terms of performance effectiveness. Therefore performance effectiveness was examined the years 2001-2008, and the CAMELS ratio mean values, classified according to the 3 bank groups, are given in Table 6.

Table 6
CAMELS Ratios Mean Values Classified According to the Bank Groups (2001-2008)

RATIO	State-owned Banks								Privately-owned Banks								Foreign Banks							
	2008	2007	2006	2005	2004	2003	2002	2001	2008	2007	2006	2005	2004	2003	2002	2001	2008	2007	2006	2005	2004	2003	2002	2001
Shareholders' Equity / (Amount Subject to Credit Risk + Market Risk + Operational Risk)	16.4	20.1	29.1	37.7	37.1	56.3	50.2	-	16.4	17.2	17.5	17.2	22.3	23.5	19.7	-	16.7	14.5	16.0	17.4	26.9	36.2	32.6	-
Shareholders' Equity / Total Assets	8.3	10.3	10.4	10.6	9.4	11.5	9.9	8.8	11.1	12.2	10.4	12.4	15.6	14.7	12.7	7.8	12.6	13.2	12.0	15.9	20.1	24.0	21.0	22.2
On Balance-sheet FC Position / Shareholders' Equity	11.9	15.8	20.0	17.7	21.2	9.2	13.9	-	10.8	24.9	33.7	34.0	28.0	33.8	42.2	-	147.6	111.9	80.7	30.8	31.8	25.7	14.4	-
Financial Assets (Net) / Total Assets	42.5	44.9	50.6	52.0	57.8	57.4	57.9	53.4	26.3	28.5	31.7	30.0	32.1	36.2	33.3	26.4	18.7	18.9	15.9	21.2	24.4	23.3	23.5	22.8
Loans under follow-up (gross) / Total Loans	3.8	4.1	5.1	8.0	11.1	33.8	48.6	55.7	3.5	3.6	3.6	4.2	5.0	6.8	9.1	36.4	4.1	2.9	2.7	3.9	3.2	4.4	5.0	5.7
Permanent Assets / Total Assets	2.3	2.2	2.3	2.8	3.3	3.8	6.0	6.9	4.2	5.3	5.5	6.9	10.3	11.1	12.6	17.2	3.4	3.5	3.0	3.8	4.8	6.5	6.4	4.7
Net Income / No. of Branches	2	2	2	1	1	1	1	-1	2	2	1	0	1	1	1	-2	1	1	1	1	1	1	0	0

Table 6 (cont'd)
CAMELS Ratios Mean Values Classified According to the Bank Groups (2001-2008)

RATIO	State-owned Banks								Privately-owned Banks								Foreign Banks							
	2008	2007	2006	2005	2004	2003	2002	2001	2008	2007	2006	2005	2004	2003	2002	2001	2008	2007	2006	2005	2004	2003	2002	2001
Net Profit (Losses) / Total Assets	1.9	2.8	2.6	2.3	2.5	2.2	1.6	-3.0	1.8	2.4	1.8	0.6	1.6	2.1	2.0	-7.7	1.3	2.0	2.5	2.5	2.4	2.7	1.2	0.6
Net Profit (Losses) / Total Shareholders' Equity	22.5	26.8	25.1	21.6	26.6	18.7	15.7	-33.5	15.8	19.9	16.9	4.7	10.3	13.9	16.0	-103.8	10.5	15.2	20.5	15.5	11.9	11.2	5.9	3.2
Income Before Taxes / Total Assets	2.4	3.4	3.4	3.3	3.5	3.5	2.5	-0.6	2.1	3.0	2.3	1.3	2.4	2.8	2.2	-6.1	1.7	2.5	3.0	3.4	3.5	5.1	4.0	16.0
Total Income / Total Expense	129.1	135.0	137.3	138.2	142.9	133.1	123.0	111.8	132.1	138.8	132.4	130.9	141.0	129.4	125.9	87.8	126.3	127.5	136.7	133.5	142.9	147.0	160.8	174.8
Liquid Assets / Total Assets	22.3	44.6	44.3	39.2	32.8	34.0	21.9	21.2	28.3	35.2	37.7	40.8	40.2	40.8	40.0	36.2	28.5	29.8	38.4	39.9	42.0	43.3	43.4	43.9
FC Liquid Assets / FC Liabilities	39.7	59.7	63.3	58.5	59.2	57.4	44.9	-	34.5	42.7	46.7	47.1	48.2	45.2	42.6	-	24.4	26.4	43.7	44.7	38.8	42.4	44.4	-
Interest Income / Total Assets	12.8	13.6	12.8	12.2	15.1	21.4	30.1	55.8	11.2	11.7	10.5	9.9	12.1	12.0	16.2	24.1	13.5	12.8	11.1	11.9	12.2	14.5	19.2	30.4
FC Assets / FC Liabilities	95.9	92.4	91.4	91.1	92.2	96.1	96.0	-	96.9	92.1	92.0	90.2	91.1	90.6	90.9	-	56.3	62.5	78.4	88.2	85.0	87.7	94.7	-

The abbreviations of the ratios are also like this:

Table 7
Abbreviations of CAMELS Performance Ratios used in the Analysis

<u>RATIO</u>	<u>Abbreviation</u>
Capital Adequacy Ratio	
Shareholders' Equity / (Amount Subject to Credit Risk + Market Risk + Operational Risk)	CAR
Shareholders' Equity / Total Assets	SETA
On Balance-sheet FC Position / Shareholders' Equity	FCPSE
Financial Assets (Net) / Total Assets	FATA
Loans under follow-up (gross) / Total Loans	LTL
Permanent Assets / Total Assets	PATA
Net Income / No. of Branches	NINB
Net Profit (Losses) / Total Assets	ROA
Net Profit (Losses) / Total Shareholders' Equity	ROE
Income Before Taxes / Total Assets	IBTTA
Total Income / Total Expense	TITE
Liquid Assets / Total Assets	LATA
FC Liquid Assets / FC Liabilities	FCLAL
Interest Income / Total Assets	IITA
FC Assets / FC Liabilities	FCAL

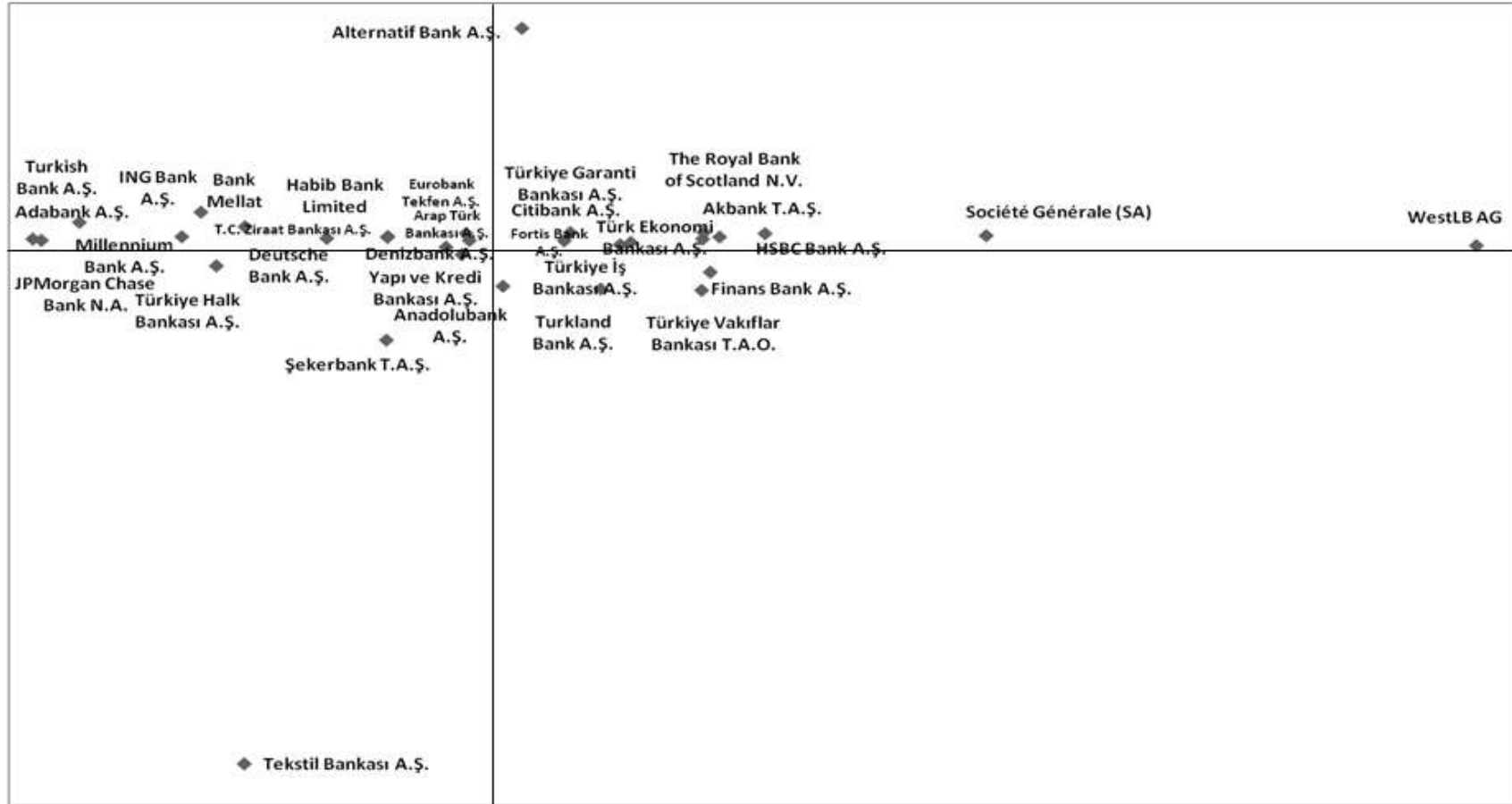
Chapter 6

Empirical Results

By applying the first model to all commercial banks in the Turkish banking system for the period 2001 - 2008, we try to determine the risk taking behavior of the individual banks and classify their behavior as risk-taker or risk-averse. According to the findings of the risk-return relationship framework model, we could say that all deposit banks in the Turkish banking system had a fluctuating positioning between the years 2001 -2008. The following paragraphs describe how deposit banks moved among the 4 quadrants from one year to another, and this is also corroborated by risk – return framework figures for each year.

In 2001, almost all of the banks experienced low or negative returns due to the banking crises in that year and the year before. The lowest return ratio was obtained by Tekstil Bankası A.Ş., whereas the highest was achieved by Alternatif Bank A.Ş. 10 of the deposit banks showed a risk taking behavior resulted in a "high risk – high return" position lying on the quadrant III. One of the state-owned banks T.C. Ziraat Bankası A.Ş., was the only bank occupying quadrant I with high return – low risk ratio among other 14 banks in the same quadrant. Türkiye Halk Bankası A.Ş., Tekstil Bankası A.Ş. and Şekerbank T.A.Ş. behaved as risk-averse banks during this year, by adopting low return – low risk rates while Turkland Bank A.Ş., Finans Bank A.Ş. and Türkiye Vakıflar Bankası T.A.O. experienced low return in terms of high risk levels.

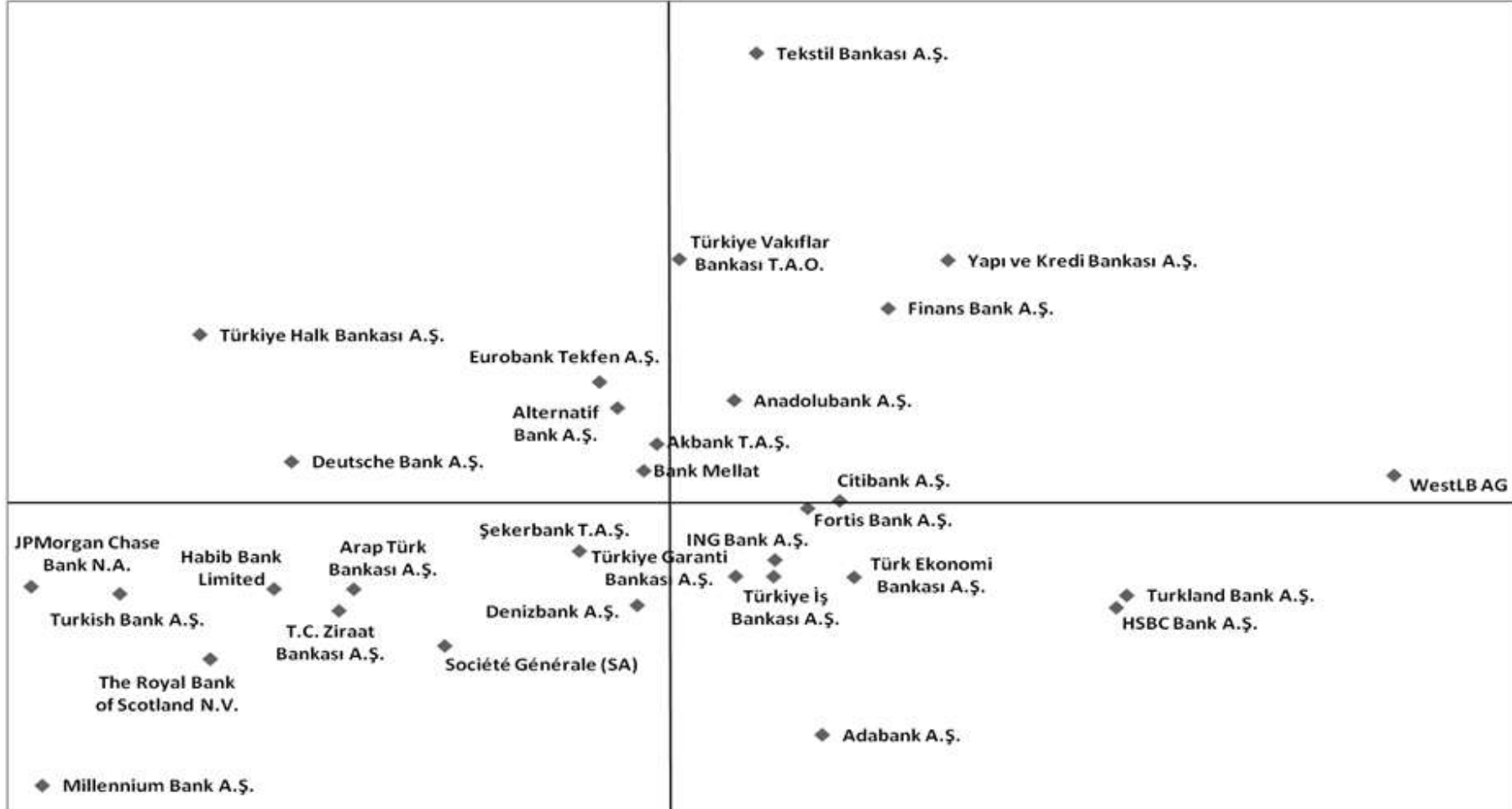
Figure 5
Risk – Return Framework in 2001



Following to the crises; two banks, Deutsche Bank A.Ş. and Eurobank Tekfen A.Ş., maintained their positions in quadrant I, while Akbank T.A.Ş. and WestLB AG remained in the same quadrant with high return – high risk ratios in 2002. During the same year, most of the banks moved from quadrant I to quadrant II including one of the public banks T.C. Ziraat Bankası A.Ş. and some foreign banks e.g. JPMorgan Chase Bank N.A., The Royal Bank of Scotland N.V. Only Turkland Bank A.Ş. remained in the group with low return – high risk (quadrant IV).

As mentioned before with the implementation of the “Financial Restructuring Program” the banking sector has grown rapidly during the period between the years of 2002-2007. One of the most important claim for this period was that the observed change of ownership structure process of privately-owned deposit banks and the increase in the share of foreign capital in these banks by merging and acquisitioning caused such banks to behave in a more efficient and effective way after 2002. But our empirical findings of the risk – return relationship model do not support this argument since the two state-owned banks T.C. Ziraat Bankası A.Ş. and Türkiye Halk Bankası A.Ş. held their position in quadrant I with high return – low risk ratios between 2003-2007, while most of the privately-owned banks with foreign capital attempted high return – high risk ratios in quadrant III as well.

Figure 6
Risk – Return Framework in 2002



In both years 2003 and 2004, the settlement of the banks hardly changed at all and the only ownership change was in Adabank A.Ş., that was acquired by the SDIF in 2003, and a new board was appointed, which resulted in the bank to maintaining its position in quadrant II with low risk – low return ratios.

After the Millenium Bank A.Ş. merged with Sitebank A.Ş. in 2002, the bank has experienced increasing return ratios for the following two years. Nearly all of the deposit banks experienced a higher return ratio from 2003 to 2004, but the most conspicuous increase was observed in Millenium Bank A.Ş. but still with a negative return as well.

Figure 7
Risk – Return Framework in 2003

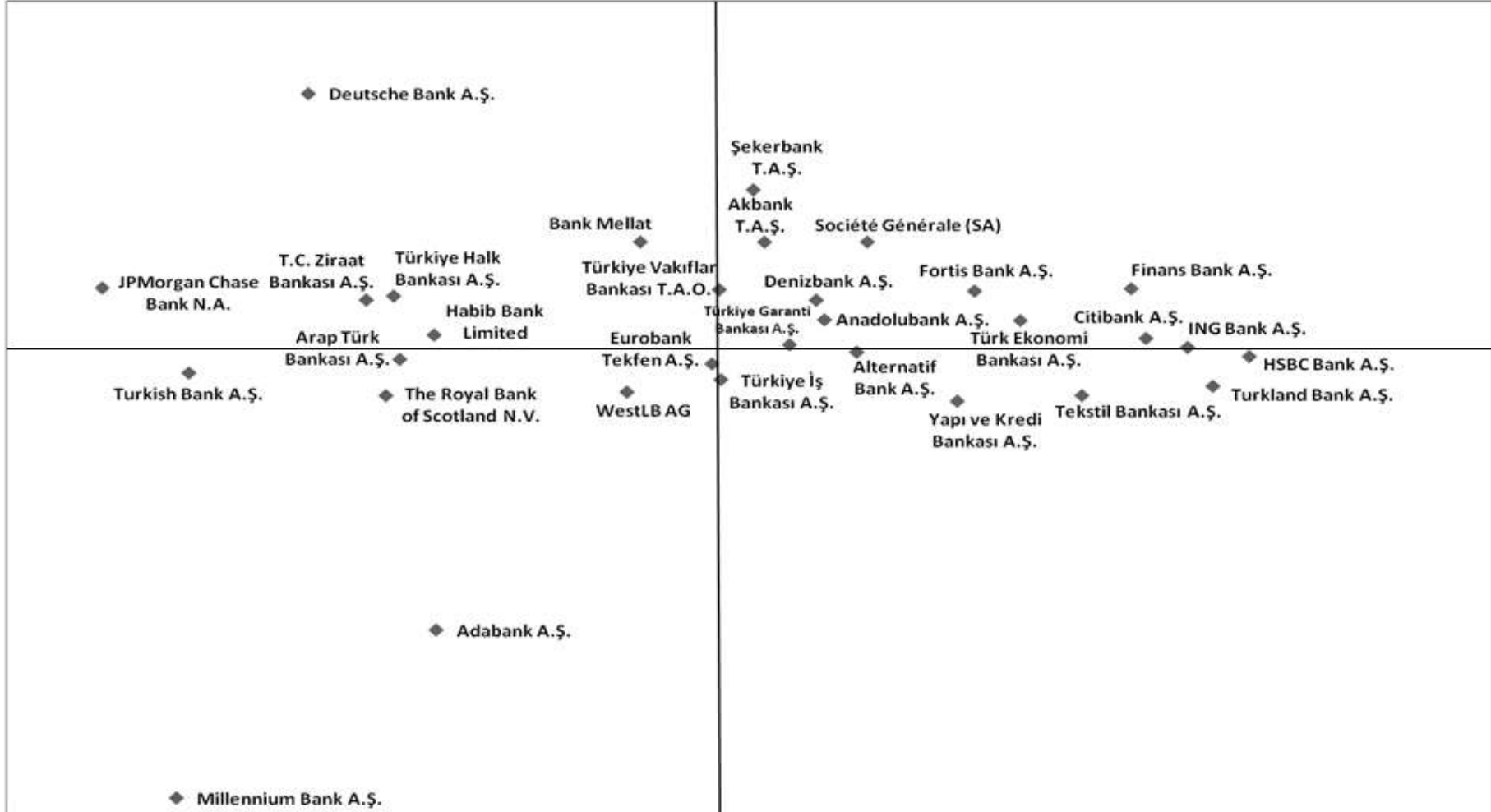
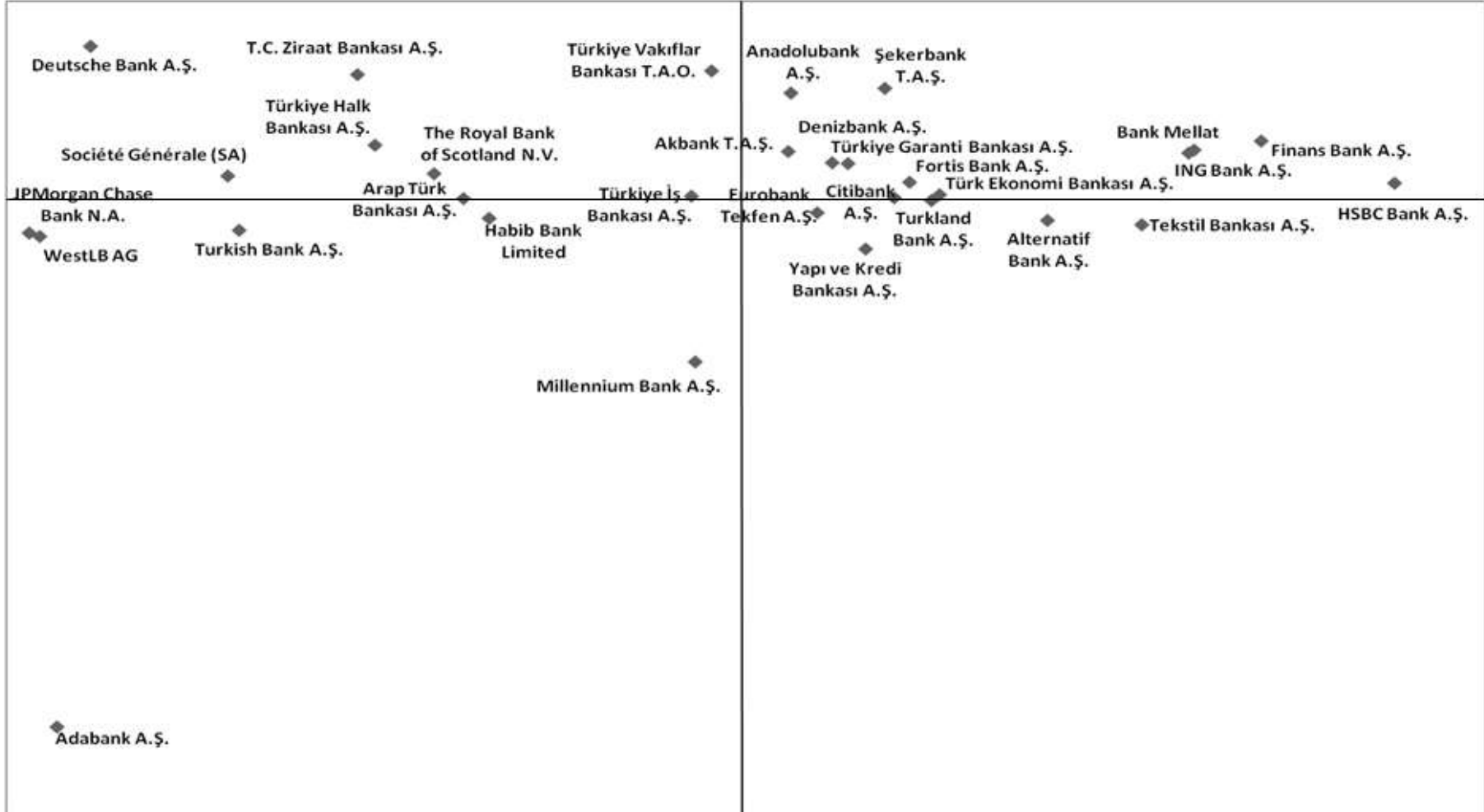
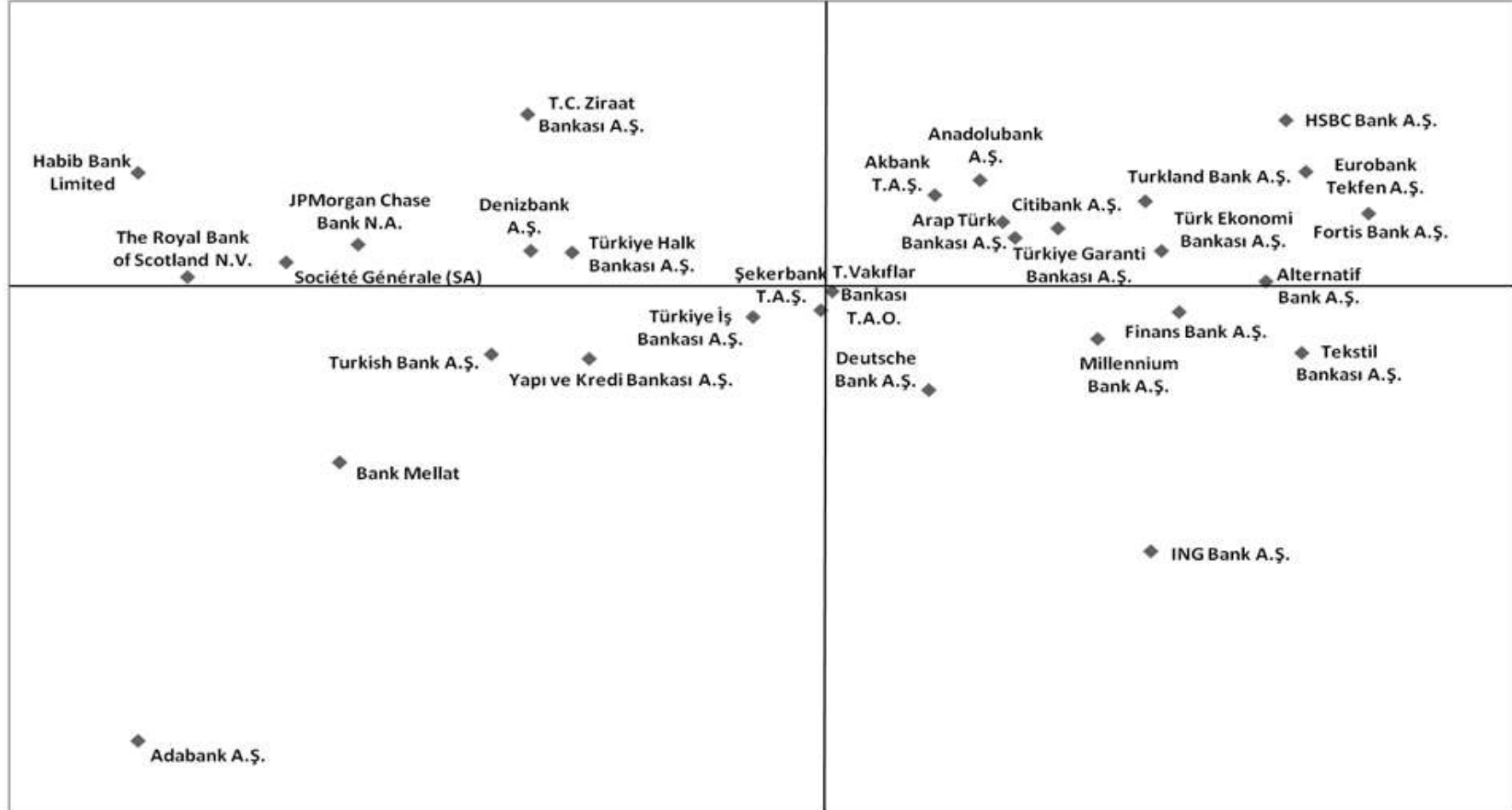


Figure 8
Risk – Return Framework in 2004



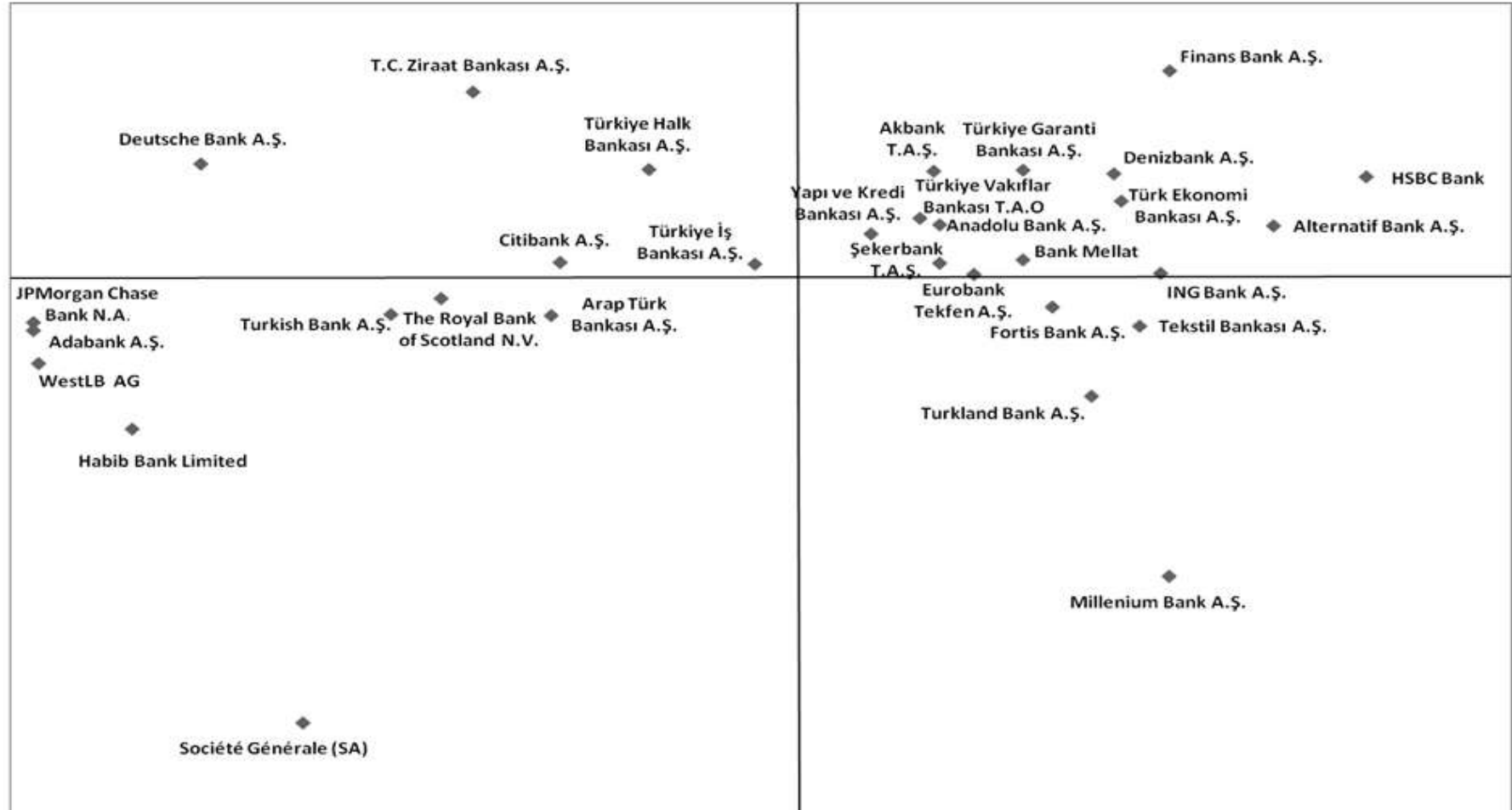
With the increasing foreign capital in the Turkish banking system, three of the privately-owned deposit banks merged in strategic partnership with different foreign groups in 2005. Türkiye Garanti Bankası A.Ş. and Türk Ekonomi Bankası A.Ş became minority-owned deposit banks with the shares of 25.5% and 42.125% accordingly. Contrary to the expectations, it was observed that in terms of risk – return framework there was no movement for either bank and they stayed in the same quadrant III, experiencing high risk – high return rates for the following period. During the same year, another privately-owned deposit bank, Türk Dış Ticaret Bankası A.Ş, became a foreign bank when Fortis Bank A.Ş. took over 89% of its shares. In the same year, the most interesting observation was that Yapı ve Kredi Bankası A.Ş. experienced a sharp decrease in terms of its return after 57.43% of its shares were acquired by Koçbank A.Ş., and thus we decided to exclude such an extreme case from our model for the year determined.

Figure 9
Risk – Return Framework in 2005



Coming to the year 2006, it has been observed again ownership change process in three privately-owned deposit banks. Denizbank A.Ş. and Finansbank A.Ş. merged with Dexia Participation Belgique S.A. and National Bank of Greece S.A., respectively and both were classified in the group of foreign banks after these mergers. While looking at the risk – return ratios of the two banks for the following years, it can be observed that, like the other banks merged with foreign capital in 2005, these two deposit banks also still continued in their position in quadrant III.

Figure 10
Risk – Return Framework in 2006



In the time period covered in this study, the last merger & acquisition activities were observed in the year 2007. After the ownership change process, the three deposit banks, ING Bank A.Ş., Turkland Bank A.Ş. and Eurobank Tekfen A.Ş. were included in the group of foreign banks instead of privately-owned deposit banks. The banks' risk – return ratios showed a stable trend; ING Bank A.Ş. and Turkland Bank A.Ş. were assigned to quadrant IV while Eurobank Tekfen A.Ş. also behaved as a risk – averse bank with low return – low risk rates.

During the last year in 2008, the picture of the deposit banks in the Turkish banking system were almost the same in terms of risk –return ratios as well.

Figure 11
Risk – Return Framework in 2007

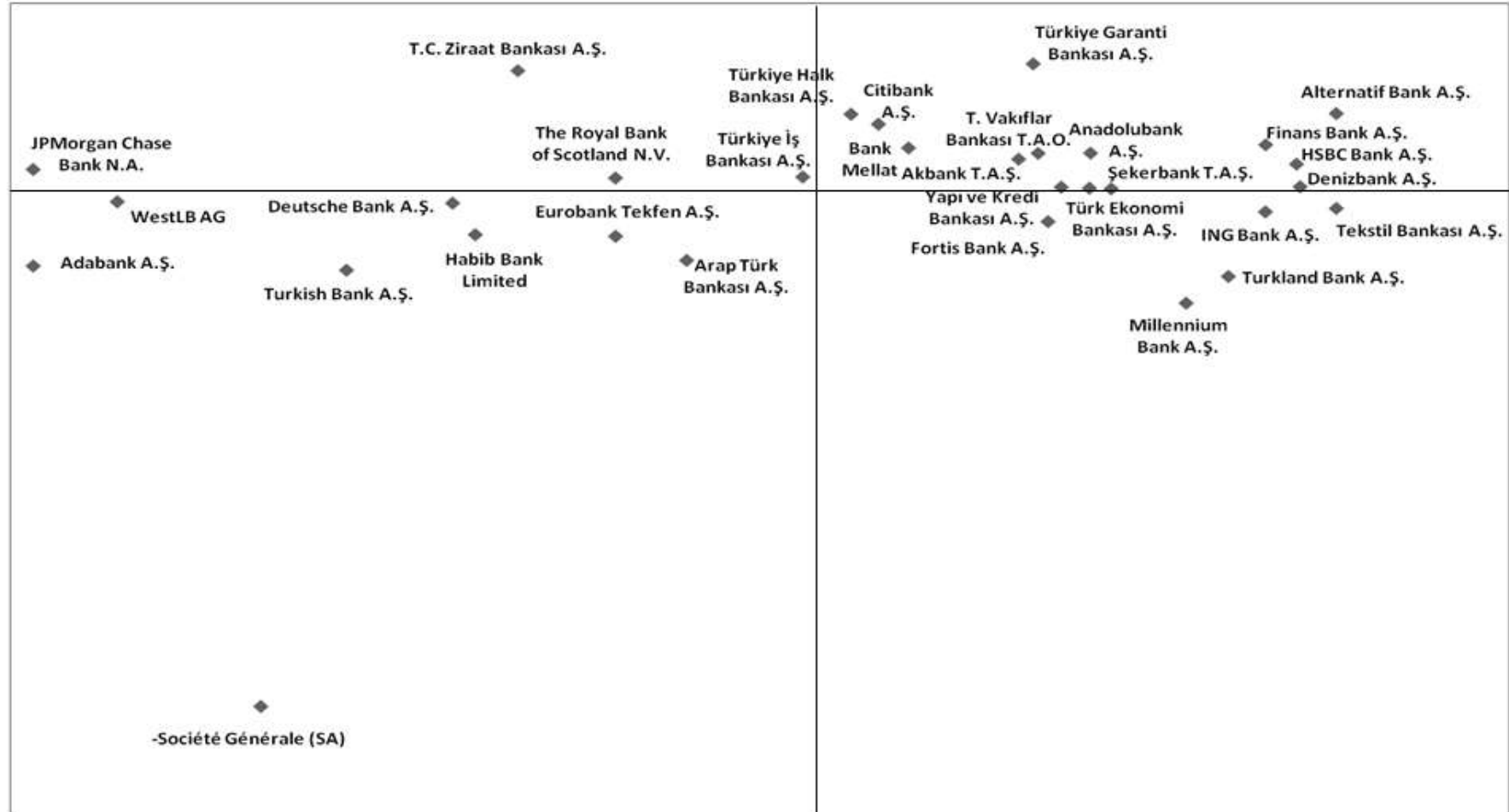
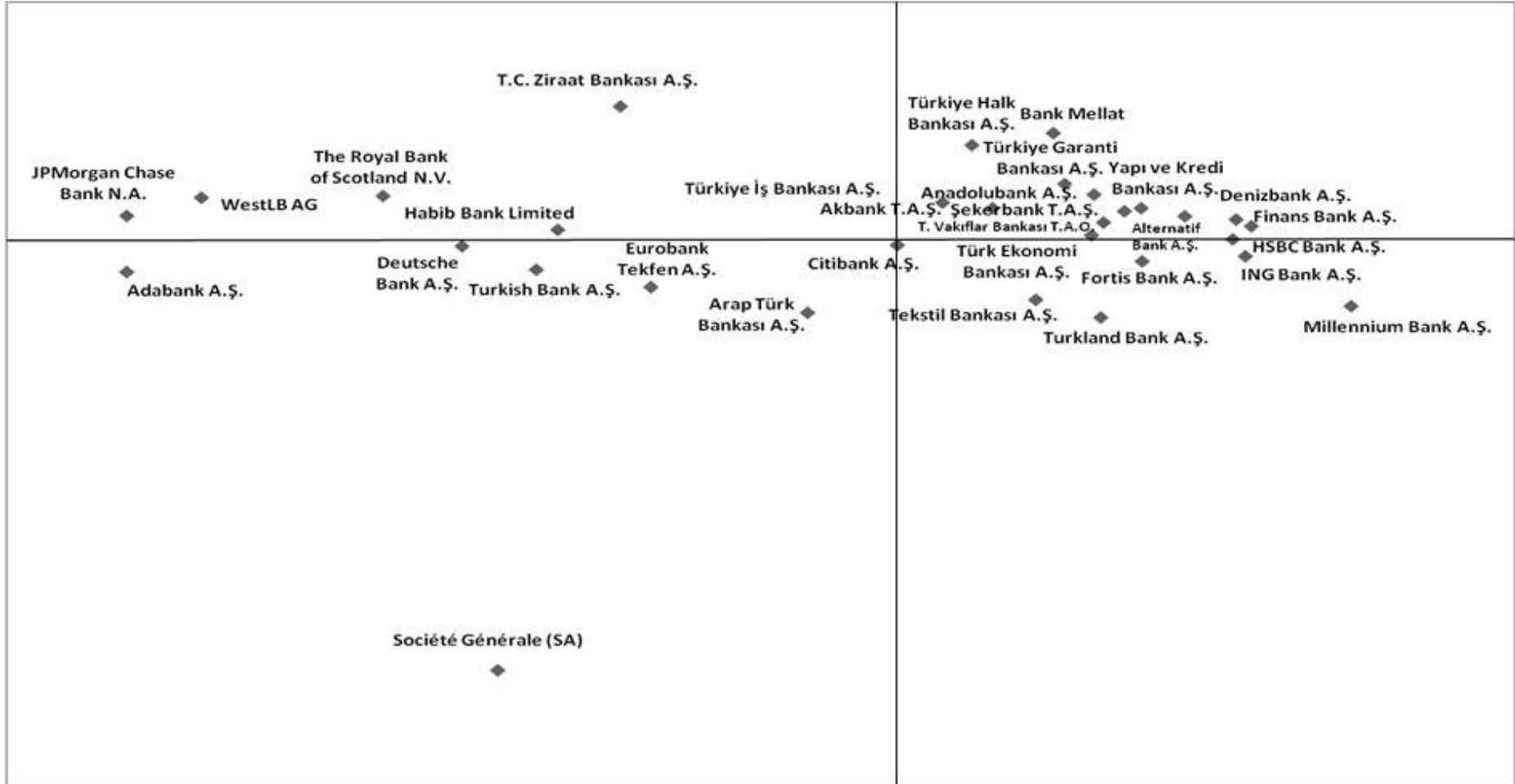


Figure 12
Risk – Return Framework in 2008



To summarize the results of the model, it was proved that, within the risk – return framework, the increase of foreign entry into the Turkish banking system during the period of 2001-2008 did not have the expected impact on the privately-owned deposit banks in terms of their risk – return ratios as a whole. In addition, in contrast to the hypothesis 2, the increase of foreign entry did not lead to a more static structure over the determined years.

Hypothesis 1 has also proved that banks with different ownership structures have shown differences in terms of their risk-return relationship. While comparing branch banks with majority ownership banks, it seems that the latter are much more aggressive than branch banks that experiencing low risk – high return ratios. It can therefore be concluded that foreign banks could invest in Turkey by engaging in branches rather than merging as majority ownership.

The empirical results of the non-parametric tests also supported the findings of the risk – return analysis. Kruskal-Wallis test results show that there is statistically significant difference between three banking groups in terms of their average risk and return ratios for each year.

Table 8
Kruskal-Wallis Test Results of Risk and Return Ratios

Test Statistics ^{a,b}		Test Statistics ^{a,b}	
	RETURN		RISK
Chi-Square	6.74	Chi-Square	8.295
df	2	df	2
Asymp. Sig.	0.034	Asymp. Sig.	0.016

a. Kruskal Wallis Test
b. Grouping Variable:
Ownership Structure

a. Kruskal Wallis Test
b. Grouping Variable:
Ownership Structure

For both ratios, the statistically significant differences are found between the two pairing-groups of banks, which are state-owned & privately-owned, and state-owned & foreign banks, by applying Mann-Whitney U tests, since the significance levels for both ratios are < 0.05.

Table 9
Mann-Whitney U Test Results of Risk Ratios

Test Statistics ^b		Test Statistics ^b		Test Statistics ^b	
	RISK		RISK		RISK
Mann-Whitney U	13	Mann-Whitney U	8	Mann-Whitney U	18
Wilcoxon W	49	Wilcoxon W	44	Wilcoxon W	54
Z	-1.995	Z	-2.521	Z	-1.47
Asymp. Sig. (2-tailed)	0.046	Asymp. Sig. (2-tailed)	0.012	Asymp. Sig. (2-tailed)	0.141
Exact Sig. [2*(1-tailed Sig.)]	.050 ^a	Exact Sig. [2*(1-tailed Sig.)]	.010 ^a	Exact Sig. [2*(1-tailed Sig.)]	.161 ^a

a. Not corrected for ties.

b. Grouping Variable: State-owned banks vs. Privately-owned banks

a. Not corrected for ties.

b. Grouping Variable: State-owned banks vs. Foreign banks

a. Not corrected for ties.

b. Grouping Variable: Privately-owned banks vs. Foreign banks

Since credit policies used by state-owned banks differ from those of privately-owned and foreign banks, the risk level of each group of bank is also expected to be different. That is why the statistical result of a comparison of the two groups cannot be considered as meaningful. The findings do not show up any statistical differences for privately-owned and foreign banks, which may be result of operating those groups of banks on the same strategic principals.

Table 10
Mann-Whitney U Test Results of Return Ratios

Test Statistics ^b		Test Statistics ^b		Test Statistics ^b	
	RETURN		RETURN		RETURN
Mann-Whitney U	12	Mann-Whitney U	10	Mann-Whitney U	28
Wilcoxon W	48	Wilcoxon W	46	Wilcoxon W	64
Z	-2.1	Z	-2.31	Z	-0.42
Asymp. Sig. (2-tailed)	0.036	Asymp. Sig. (2-tailed)	0.021	Asymp. Sig. (2-tailed)	0.674
Exact Sig. [2*(1-tailed Sig.)]	.038 ^a	Exact Sig. [2*(1-tailed Sig.)]	.021 ^a	Exact Sig. [2*(1-tailed Sig.)]	.721 ^a
a. Not corrected for ties.		a. Not corrected for ties.		a. Not corrected for ties.	
b. Grouping Variable: State-owned banks vs. Privately-owned banks		b. Grouping Variable: State-owned banks vs. Foreign banks		b. Grouping Variable: Privately-owned banks vs. Foreign banks	

The same points of view stated above can also be acceptable for the variable “return” as well.

By applying the Kruskal-Wallis test to the CAMELS performance criteria, 7 out of 15 ratios including SETA, FATA, LTL, PATA, ROE, IBTTA and FCAL were found as statistically significant while the rest 8 ratios were found as statistically insignificant.

Table 11
Kruskal-Wallis Test Results of CAMELS Ratios

	CAR	SETA	FCPSE	FATA	LTL	PATA	NINB
Chi-Square	3.877	14.192	5.925	20.48	6.602	10.217	1.939
df	2	2	2	2	2	2	2
Asymp. Sig.	0.144	0.001	0.052	0	0.037	0.006	0.379

	ROA	ROE	IBTTA	TITE	LATA	FCLAL	IITA	FCAL
Chi-Square	2.478	6.74	8.018	3.213	1.806	5.965	5.398	6.698
df	2	2	2	2	2	2	2	2
Asymp. Sig.	0.29	0.034	0.018	0.201	0.405	0.051	0.067	0.035

In the analysis, one of the most important ratios, CAR, has been found statistically insignificant among the three bank groups. This result was expected since capital level of each bank was requested according to the cook ratio level with a minimum rate of 8%. Empirical findings showed then that each group of banks has the adequate capital level.

Another insignificant ratio was PCPSE. The findings indicate that each group uses the same assets, liabilities and capital adequacy positions.

The only management adequacy measure, NINB, was also statistically insignificant for the three bank groups. This means that each group of banks yields a similar branch performance.

One of the commonly - used ratios as bank performance criteria, ROA, was also insignificant with a significance level of 0.29 meaning that there was no variation in bank management performance. All banks run by the same level professionals, each bank performance will be close to each other.

Another earning power measure TITE ratio was observed as statistically insignificant, resulting from the same level of competition.

The two liquidity ratios LATA and FCLAL showed that there is no statistically significant relationship between the three bank groups in terms of their liquidity position and liquidity risk.

The final insignificant ratio was from the group of “sensitivity to market risk” namely IITA, caused by the same banking market conditions.

The before - mentioned 7 performance criteria were also subject to Mann-Whitney U tests to determine among which bank groups a statistically significant relationship existed. Table 12 depicts the Mann-Whitney U test results for those significant ratios.

Table 12
Mann-Whitney U Test Results of 7 CAMELS Ratios

Test Statistics ^b		Test Statistics ^b		Test Statistics ^b	
	SETA		SETA		SETA
Mann-Whitney U	11.5	Mann-Whitney U	0	Mann-Whitney U	10
Wilcoxon W	47.5	Wilcoxon W	36	Wilcoxon W	46
Z	-2.155	Z	-3.361	Z	-2.31
Asymp. Sig. (2-tailed)	0.031	Asymp. Sig. (2-tailed)	0.001	Asymp. Sig. (2-tailed)	0.021
Exact Sig. [2*(1-tailed Sig.)]	.028 ^a	Exact Sig. [2*(1-tailed Sig.)]	.000 ^a	Exact Sig. [2*(1-tailed Sig.)]	.021 ^a

Test Statistics ^b		Test Statistics ^b		Test Statistics ^b	
	FATA		FATA		FATA
Mann-Whitney U	0	Mann-Whitney U	0	Mann-Whitney U	0
Wilcoxon W	36	Wilcoxon W	36	Wilcoxon W	36
Z	-3.361	Z	-3.361	Z	-3.361
Asymp. Sig. (2-tailed)	0.001	Asymp. Sig. (2-tailed)	0.001	Asymp. Sig. (2-tailed)	0.001
Exact Sig. [2*(1-tailed Sig.)]	.000 ^a	Exact Sig. [2*(1-tailed Sig.)]	.000 ^a	Exact Sig. [2*(1-tailed Sig.)]	.000 ^a

Test Statistics ^b		Test Statistics ^b		Test Statistics ^b	
	LTL		LTL		LTL
Mann-Whitney U	17	Mann-Whitney U	9.5	Mann-Whitney U	19.5
Wilcoxon W	53	Wilcoxon W	45.5	Wilcoxon W	55.5
Z	-1.576	Z	-2.365	Z	-1.315
Asymp. Sig. (2-tailed)	0.115	Asymp. Sig. (2-tailed)	0.018	Asymp. Sig. (2-tailed)	0.189
Exact Sig. [2*(1-tailed Sig.)]	.130 ^a	Exact Sig. [2*(1-tailed Sig.)]	.015 ^a	Exact Sig. [2*(1-tailed Sig.)]	.195 ^a

Test Statistics ^b		Test Statistics ^b		Test Statistics ^b	
	PATA		PATA		PATA
Mann-Whitney U	6.5	Mann-Whitney U	18.5	Mann-Whitney U	8
Wilcoxon W	42.5	Wilcoxon W	54.5	Wilcoxon W	44
Z	-2.682	Z	-1.42	Z	-2.521
Asymp. Sig. (2-tailed)	0.007	Asymp. Sig. (2-tailed)	0.156	Asymp. Sig. (2-tailed)	0.012
Exact Sig. [2*(1-tailed Sig.)]	.005 ^a	Exact Sig. [2*(1-tailed Sig.)]	.161 ^a	Exact Sig. [2*(1-tailed Sig.)]	.010 ^a

Test Statistics ^b		Test Statistics ^b		Test Statistics ^b	
	ROE		ROE		ROE
Mann-Whitney U	12	Mann-Whitney U	10	Mann-Whitney U	28
Wilcoxon W	48	Wilcoxon W	46	Wilcoxon W	64
Z	-2.1	Z	-2.31	Z	-0.42
Asymp. Sig. (2-tailed)	0.036	Asymp. Sig. (2-tailed)	0.021	Asymp. Sig. (2-tailed)	0.674
Exact Sig. [2*(1-tailed Sig.)]	.038 ^a	Exact Sig. [2*(1-tailed Sig.)]	.021 ^a	Exact Sig. [2*(1-tailed Sig.)]	.721 ^a

Test Statistics ^b		Test Statistics ^b		Test Statistics ^b	
	IBTTA		IBTTA		IBTTA
Mann-Whitney U	12	Mann-Whitney U	20.5	Mann-Whitney U	8.5
Wilcoxon W	48	Wilcoxon W	56.5	Wilcoxon W	44.5
Z	-2.105	Z	-1.214	Z	-2.47
Asymp. Sig. (2-tailed)	0.035	Asymp. Sig. (2-tailed)	0.225	Asymp. Sig. (2-tailed)	0.014
Exact Sig. [2*(1-tailed Sig.)]	.038a	Exact Sig. [2*(1-tailed Sig.)]	.234a	Exact Sig. [2*(1-tailed Sig.)]	.010a

Test Statistics ^b		Test Statistics ^b		Test Statistics ^b	
	FCAL		FCAL		FCAL
Mann-Whitney U	19	Mann-Whitney U	11.5	Mann-Whitney U	13.5
Wilcoxon W	55	Wilcoxon W	47.5	Wilcoxon W	49.5
Z	-1.367	Z	-2.155	Z	-1.944
Asymp. Sig. (2-tailed)	0.172	Asymp. Sig. (2-tailed)	0.031	Asymp. Sig. (2-tailed)	0.052
Exact Sig. [2*(1-tailed Sig.)]	.195a	Exact Sig. [2*(1-tailed Sig.)]	.028a	Exact Sig. [2*(1-tailed Sig.)]	.050a

a. Not corrected for ties.

b. Grouping Variable: State-owned banks vs. Privately-owned banks

a. Not corrected for ties.

b. Grouping Variable: State-owned banks vs. Foreign banks

a. Not corrected for ties.

b. Grouping Variable: Privately-owned banks vs. Foreign banks

The first statistically significant ratio was the only one among capital adequacy ratios, namely SETA. According to this ratio, there is also a statistically significant relationship for three banking groups. There is a statistically significant relationship between state-owned and privately-owned banks in terms of their shareholders' equity/total assets, since the two groups of banks have different capital levels. The same reasoning is valid for the other two pair-group of banks, state-owned & foreign banks, and private & foreign banks.

All of the three asset quality ratios have also showed that there is a statistically significant relationship between the three bank groups in terms of FATA, LTL and PATA ratios. While for FATA, all of the three pair-groups of banks are statistically significant, for LTL only state-owned and foreign banks have a statistically significant relationship, while for PATA ratio that group was the only statistically insignificant pair as well. The main reasoning for this outcome could be that they all have similar intensive customer loan policies.

As showed before while measuring the return ratios of the banks in the risk –return analysis, the ROE among earnings power ratios provided a statistically significant relationship between state-owned & privately-owned banks, and state-owned & foreign banks, while there was no statistically significant relationship for privately-owned & foreign banks. This should be welded from the negative equity profitability of state-owned banks while privately-owned and foreign banks are experiencing positive profits as well.

Another earnings ratio, IBTTA, resulted in statistically significant differences between state-owned & privately-owned banks, and privately-owned & foreign banks.

The last statistically significant ratio was from the group of sensitivity to market risk group; FCAL. This measure showed a statistically significant relationship only for the state-owned and foreign banks.

Chapter 7

Conclusion

Structural weaknesses accumulated throughout the years, and the three crises that Turkey experienced in the past decade increased the fragility of the Turkish banking system. Consequently, 25% of the domestic deposit banks were taken over by SDIF between 1997 and 2001. Following this period, with the implementation of the “transition to a strong economy” program as of May, 2001 the Turkish banking sector embarked on a restructuring process. That program was revised at the beginning of 2002, and continued in this way until 2004. The program aimed at greater resistance to external shocks, decreasing inflation and public debt, provision of financial discipline, completion of structural reforms, and strengthening the banking system. As a result of settled implementation of the program's main principles, which were political stability and a positive conjuncture in the world economy, there have been significant positive advances in the economy and banking system. One of most important indicators of the period of restructuring after the 2001 crisis in Turkey is the banks’ ownership structure change process. Especially in the 5 years between 2003 and 2008, the relevance of foreign-capital banks has increased dramatically, and they entered to the market intensively in terms of mergers and acquisitions or strategic partnership¹ with domestic banks.

¹ BRSA identifies the concept of “strategic partnership” when foreign banks take in partnership with domestic banks by means of sharing in domestic bank’s capital.

In this study, it was investigated whether or not there are differences between the banking groups operating in the sector in terms of their performance efficiency following to the ownership structure changes in the banking sector after the 2001 crisis. The results of the analysis using CAMELS performance evaluation criteria, frequently using for banking performance analysis, can be summarized as follows:

It was proved within the risk – return framework that the increase in foreign entry in the Turkish banking system during the period of 2001-2008 did not have the expected impact on the privately-owned deposit banks in terms of their risk – return ratios as a whole. The positions of the privately-owned deposit banks and foreign banks are more volatile than expected compared to the state-owned banks. In addition, most of the privately-owned banks experienced high risk levels in terms of high or average return ratios after their ownership structure change process, and are located generally in quadrant III, while the state-owned banks and some stable foreign banks located in quadrant I with low risk – high return as well. When the results of the analysis are evaluated in general, it can be seen that the high expectations of the influence of the entry of foreign banks into the Turkish banking sector did not provide a great benefit to domestic banks in terms of performance effectiveness.

Kruskal-Wallis and Mann-Whitney U tests, applied first to the risk and return ratios and then to 15 CAMELS performance ratios also showed that most importantly in terms of Capital Asset Ratio (CAR) and Return on Asset (ROA), there is no statistically significant relationship between the three bank groups. Although all the deposit banks use the same assets, all the asset quality ratios resulted in statistically

significant relations, which also mean that all the bank groups are using different credit policies as well. Moreover, the only statistically significant earnings ratio ROE (the same with the “risk” ratio used in the risk - return analysis) was only insignificant for privately-owned and foreign banks which could be resulted from the negative equity profitability of state-owned banks while privately-owned and foreign banks are experiencing positive profits.

Recommendations for Further Research:

If the context of the study was to be applied to other regions and countries, a ground for cross-country comparison about risk-return perception will be created. This comparison opportunity will then enable the underdeveloped and developing countries or regions (in terms of risk and return) to adopt stronger banking systems likely the more developed ones. In addition to this, the question shall be answered why foreign banks are entering to the Turkish banking system if they experienced low return ratios under the light and using the concepts of “Behavioral Finance”. Moreover, if a more advanced econometric model was to be applied to CAMELS ratios, an explanation about why there is a statistically significant relationship between three banking groups could be provided as well.

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APPENDICES

A. Risk – Return Data (2001 – 2008)

BANK	2001		2002		2003		2004	
	RISK	RETURN	RISK	RETURN	RISK	RETURN	RISK	RETURN
T.C. Ziraat Bankası A.Ş.	14.60	-2.06	12.64	3.76	11.79	18.39	16.03	30.33
Türkiye Halk Bankası A.Ş.	7.58	-95.61	6.93	32.49	13.01	18.92	16.88	17.54
Türkiye Vakıflar Bankası T.A.O.	27.49	-175.61	26.61	40.33	27.54	19.78	33.32	31.01
Adabank A.Ş.	0.40	-11.93	32.48	-9.15	14.90	-26.52	1.36	-87.82
Akbank T.A.Ş.	28.23	-0.75	25.69	21.10	29.57	26.27	37.06	16.39
Alternatif Bank A.Ş.	20.12	682.94	24.07	24.86	33.68	11.28	49.71	3.91
Anadolubank A.Ş.	19.34	-162.25	28.87	25.65	32.24	15.68	37.19	26.99
Şekerbank T.A.Ş.	14.56	-339.00	22.51	9.96	29.07	33.36	41.78	27.83
Tekstil Bankası A.Ş.	8.73	-1,727.41	29.78	61.77	43.74	5.38	54.32	3.13
Turkish Bank A.Ş.	1.96	46.86	3.64	5.52	3.87	8.46	10.25	2.12
Türk Ekonomi Bankası A.Ş.	27.53	-7.33	33.79	7.24	40.99	15.59	44.44	8.57
Türkiye Garanti Bankası A.Ş.	24.58	-18.63	28.93	7.33	30.68	12.30	39.98	14.22
Türkiye İş Bankası A.Ş.	24.15	-26.22	30.49	7.32	27.62	7.55	32.33	8.32
Yapı ve Kredi Bankası A.Ş.	17.66	-58.78	37.64	40.21	38.18	4.61	40.84	-1.27
Arap Türk Bankası A.Ş.	17.96	-12.52	13.25	6.00	13.28	10.30	21.20	7.87
Citibank A.Ş.	22.10	13.84	33.20	15.19	46.60	13.15	42.23	8.02
Denizbank A.Ş.	17.00	-34.16	24.89	4.32	31.87	18.35	39.21	14.36
Deutsche Bank A.Ş.	12.11	-5.23	10.69	19.26	9.20	46.45	2.99	35.45
Eurobank Tekfen A.Ş.	17.82	10.81	23.34	27.55	27.22	9.69	38.47	5.30
Finans Bank A.Ş.	27.85	-116.14	35.19	35.21	45.94	19.92	60.15	18.30
Fortis Bank A.Ş.	21.86	-13.33	31.88	14.40	38.94	19.60	42.98	10.84
HSBC Bank A.Ş.	30.10	9.98	44.56	4.07	51.21	10.69	66.65	10.66
ING Bank A.Ş.	6.95	80.48	30.54	9.04	48.46	11.92	56.61	16.12
Millennium Bank A.Ş.	6.16	0.00	0.45	-14.43	3.31	-49.37	32.52	-21.70
Turkland Bank A.Ş.	23.36	-171.29	44.98	5.35	49.59	6.65	44.05	7.52
Bank Mellat	8.76	32.88	25.16	18.32	24.02	26.28	56.87	16.66
Habib Bank Limited	14.62	0.82	9.97	6.02	14.82	13.61	22.45	4.29
JPMorgan Chase Bank N.A.	0.05	-7.59	0.00	6.26	0.00	20.03	0.00	1.63
Société Générale (SA)	39.17	3.50	16.98	0.10	34.15	26.29	9.69	11.96
The Royal Bank of Scotland N.V.	27.58	13.94	7.36	-1.27	12.66	5.37	19.76	12.38
WestLB AG	59.28	-29.08	55.96	17.84	23.43	5.85	0.52	1.02

APPENDICES

B. Risk – Return Data (2001 – 2008) (con't)

BANK	2005		2006		2007		2008	
	RISK	RETURN	RISK	RETURN	RISK	RETURN	RISK	RETURN
T.C. Ziraat Bankası A.Ş.	20.64	31.09	24.16	31.92	26.69	32.57	29.53	28.99
Türkiye Halk Bankası A.Ş.	22.99	16.64	33.83	22.84	45.04	25.80	50.56	23.74
Türkiye Vakıflar Bankası T.A.O.	36.76	12.56	48.72	17.15	55.34	19.72	58.44	13.28
Adabank A.Ş.	0.00	-34.50	0.00	4.03	0.00	2.19	0.00	6.56
Akbank T.A.Ş.	42.20	22.64	49.48	22.65	54.27	18.81	51.81	15.21
Alternatif Bank A.Ş.	59.73	13.59	68.15	16.26	71.76	25.91	63.30	14.13
Anadolubank A.Ş.	45.79	19.82	49.81	16.38	58.23	19.75	57.87	17.06
Şekerbank T.A.Ş.	36.16	10.58	49.80	11.90	59.37	14.21	59.69	14.80
Tekstil Bankası A.Ş.	61.63	6.11	60.79	4.54	71.77	11.16	54.39	2.80
Turkish Bank A.Ş.	18.71	5.97	19.65	5.89	17.26	1.54	24.51	6.88
Türk Ekonomi Bankası A.Ş.	54.20	16.79	59.79	19.15	58.17	14.31	57.71	11.53
Türkiye Garanti Bankası A.Ş.	46.44	18.17	54.39	22.78	55.07	33.64	56.11	18.49
Türkiye İş Bankası A.Ş.	32.57	9.87	39.65	11.79	42.38	16.05	48.81	15.97
Yapı ve Kredi Bankası A.Ş.	47.37	-178.64	46.03	15.32	56.62	14.46	60.69	15.21
Arap Türk Bankası A.Ş.	23.89	5.50	28.46	5.77	35.99	3.07	40.73	1.05
Citibank A.Ş.	44.59	24.20	28.95	11.99	46.55	24.26	46.10	10.22
Denizbank A.Ş.	48.72	19.16	59.38	22.35	69.77	14.52	66.37	13.67
Deutsche Bank A.Ş.	20.80	16.80	9.20	23.50	23.10	11.98	20.06	10.06
Eurobank Tekfen A.Ş.	41.88	2.23	51.69	10.58	32.07	6.81	31.36	4.54
Finans Bank A.Ş.	61.85	25.08	62.44	34.39	67.88	21.05	67.28	12.77
Fortis Bank A.Ş.	50.82	7.58	56.00	6.77	55.89	9.10	60.75	8.01
HSBC Bank A.Ş.	65.17	20.71	73.25	22.00	69.57	18.04	66.17	11.00
ING Bank A.Ş.	60.79	30.48	61.95	10.71	67.86	10.61	66.92	8.70
Millennium Bank A.Ş.	53.63	-14.65	62.41	-24.72	63.50	-3.58	73.25	1.95
Turkland Bank A.Ş.	55.14	10.39	58.15	-3.66	65.82	0.57	58.28	0.40
Bank Mellat	53.34	21.99	54.38	12.28	48.21	20.56	55.43	25.38
Habib Bank Limited	10.67	-5.34	5.43	-7.50	24.35	7.06	25.79	12.28
JPMorgan Chase Bank N.A.	0.00	24.98	0.00	4.96	0.00	17.21	0.00	14.16
Société Générale (SA)	7.85	15.61	14.81	-41.87	12.54	-66.31	22.20	-47.36
The Royal Bank of Scotland N.V.	11.65	17.47	22.40	7.77	32.07	15.88	15.33	16.87
WestLB AG	2.62	14.06	0.29	0.17	4.63	12.19	4.46	16.64

APPENDICES

C. Correlation Coefficient Analysis

BANK	Average Return	Average Risk	Correlation Coefficient
T.C. Ziraat Bankası A.Ş.	21.87	19.51	0.68
Türkiye Halk Bankası A.Ş.	7.80	24.60	0.41
Türkiye Vakıflar Bankası T.A.O.	-2.72	39.28	0.29
Adabank A.Ş.	-19.64	6.14	0.06
Akbank T.A.Ş.	17.79	39.79	0.19
Alternatif Bank A.Ş.	99.11	48.82	-0.57
Anadolubank A.Ş.	-2.62	41.17	0.60
Şekerbank T.A.Ş.	-27.05	39.12	0.58
Tekstil Bankası A.Ş.	-204.07	48.14	0.77
Turkish Bank A.Ş.	10.40	12.48	-0.50
Türk Ekonomi Bankası A.Ş.	10.73	47.08	0.80
Türkiye Garanti Bankası A.Ş.	13.54	42.02	0.82
Türkiye İş Bankası A.Ş.	6.33	34.75	0.71
Yapı ve Kredi Bankası A.Ş.	-18.61	43.13	0.15
Arap Türk Bankası A.Ş.	3.38	24.34	-0.10
Citibank A.Ş.	15.11	38.79	0.25
Denizbank A.Ş.	9.07	44.65	0.65
Deutsche Bank A.Ş.	19.79	13.52	-0.54
Eurobank Tekfen A.Ş.	9.69	32.98	-0.42
Finans Bank A.Ş.	6.32	53.57	0.61
Fortis Bank A.Ş.	7.87	44.89	0.37
HSBC Bank A.Ş.	13.39	58.33	0.67
ING Bank A.Ş.	22.26	50.01	-0.76
Millennium Bank A.Ş.	-15.81	36.90	0.39
Turkland Bank A.Ş.	-18.01	49.92	0.80
Bank Mellat	21.79	40.77	-0.65
Habib Bank Limited	3.90	16.01	0.66
JPMorgan Chase Bank N.A.	10.20	0.01	-0.67
Société Générale (SA)	-12.26	19.67	0.25
The Royal Bank of Scotland N.V.	11.05	18.60	0.49
WestLB AG	4.84	18.90	-0.43

APPENDICES

D. The Ownership Structure Change Process in the Privately-owned Deposit Banks (in alphabetical order)

Adabank: The bank was founded in 1985 and acquired by the SDIF in 2003, when a new board was appointed to the bank. As a result of the tender by the Fund on July 3, 2006, it was awarded to "The International Investor Company" originating in Kuwait. After BRSA's decision dated July 26, 2007, no transfer of shares was allowed. As of December 2008 the bank's main partners are Kemal Uzan, C. Cengiz Uzan and others.

Akbank: With an establishment date of 1948, after going to the public in 1990, the bank started trading in international markets with a secondary public offering in 1998. The process of becoming a strategic partner of Citigroup to the 20% share of Akbank was completed on 9th January, 2007. As of December, 2008 the bank's main shareholders are H. Omer Sabanci Holding A.Ş., Citibank Overseas Inv. Corp. and owners of publicly traded shares.

Alternatif Bank: The bank started its activities on February 24, 1992 and began trading on the Istanbul Stock Exchange on July 3, 1995. 80% of its shares were purchased to the Anatolian Group in 1996.

Anadolu Bank: As a result of the undergoing three separate process of privatization by Etibank Privatization Administration in 1997, this bank started operations in September 27, 1997 and is still a part of line Habaş Group of Companies.

Denizbank: The bank, which started its activities on August 25, 1997, in the same year purchased the shares of "Denizcilik Bankası T.A.Ş." under the contract with the Privatization Administration and acquired with Zorlu Holding as well. As of October 25, 2002 Milli Aydın Bankası T.A.Ş. was transferred to Denizbank with all its rights, debts and liabilities. After Denizbank A.Ş. shares started to be traded on the Istanbul Stock Exchange (ISE) from October 1, 2004, Zorlu Holding sold 74.9965% of its shares in Denizbank to a Belgium-France capitalized group named Dexia Participation Belgique S.A., and as of this date, the bank became a foreign capital bank established in Turkey.

Finansbank: After its establishment in Istanbul on September 23, 1987, the bank's initial public offering was on February 3, 1990 in ISE. The Bank's shares are traded on the London Stock Exchange as Global Depository Receipts since 1998. After the BRSA Decision No. 1023 dated April 3, 2003 Fiba Bank A.Ş. was incorporated into the same roof. On April 3, 2006 National Bank of Greece S.A. signed a stock purchase agreement with Fiba Group of Companies to buy 46% of the shares of Fiba Bank A.Ş. and the

transfer took place accordingly to a BRSA decision dated July 28, 2006. With this agreement, the bank joined the group of banks financed with foreign capital established in Turkey.

Garanti Bankası: The bank, a 27.54% share of which is owned by Dođuş Group, held its first public offering in 1990, and performed its first issuance of shares overseas in 1993. Today, 47% of Garanti's shares are open to the public. With the signed strategic partnership agreement within the frame of principle of equal partnership between Doguş Group and General Electric Consumer Finance (GECF) on December 23, 2005, the GECF bought 25.5% of the bank's capital for a total of U.S. \$ 1,555 billion, gaining the right to equal partnership on bank management with Dođuş Group.

Şekerbank: Bank shares were offered to the public in 1996 and began to be traded on the Istanbul Stock Exchange on April 3, 1997. After an agreement signed on June 22, 2006, 33.97% shares of Şekerbank T.A.Ş., Personnel Supplemental Social Security and Social Insurance Fund Trusts were sold to Bank TuranAlem Group. The BRSA decree dated December 21, 2006, permitted the acquisition of paid-up share capital of 33.98% by TuranAlem Securities JSC, all shares of which are owned by JSC Bank TuranAlem.

Eurobank Tekfen (Tekfenbank): BRSA decree No. 2126 dated February 23, 2007, Eurobank EFG Holding (Luxembourg) S.A. were allowed to take over 70% shares of the Tekfenbank A.Ş. is allowed to takeover by Actual transfer of shares took place on March 16, 2007. The bank, as of this date, joined the group of banks with foreign capital established in Turkey.

Tekstilbank: The shares of Tekstil Bankası A.Ş. began trading on Istanbul Stock Exchange (ISE) from May 23, 1990 and today 24.5% are open to public. 75.5% of the bank's paid-in capital belongs to GSD Holding A.Ş., and which is part of the GSD Group.

Turkish Bank: As of 27 December, 1991 the bank continued its operations with the title of “Turkish Bank A.Ş.” under a separate entity as a foreign bank established in Turkey. After 7 January, 1998 the bank became a member of the privately-owned deposit bank group.

Türk Ekonomi Bankası: The bank’s shares were offered to the public on February 21-22, 2000 and began to be traded on the Istanbul Stock Exchange on February 28, 2000. On February 10, 2005 the bank's main shareholder, TEB Financial Investments Inc. transferred 50% of the shares to BNP Paribas; as a result of this transfer, BNP Paribas became an indirect shareholder of the bank, with a 42,125% share.

Türkiye İş Bankası: "Türkiye İş Bankası A.Ş." was established on August 26, 1924. 12% of its shares, owned by the Treasury, were offered for sale to both domestic and foreign investors with an initial public offering on May 4-6, 1998. These shares today are traded on both the London Stock Exchange (LSE) and the Istanbul Stock Exchange (ISE).

Yapı ve Kredi Bankası: As of September 28, 2005, the ownership of 57.43% shares of the bank that previously owned by Çukurova Group Companies and Fund passed to Koçbank A.Ş., together with financial subsidiaries. With the BRSA decree dated September 28, 2006 No. 1990, published in the Official Gazette on October 1, 2006 No. 26306, Koçbank A.Ş. was transferred to Yapı ve Kredi Bankası A.Ş. with all rights, assets, liabilities and obligations and with the liquidation of its legal entity.

APPENDICES

E. The Ownership Structure Change Process in the Foreign Banks Established or Leading Branch in Turkey (in alphabetical order)

Citibank A.Ş.: In 1981, Citibank N.A. started its activities with the status of the leading foreign-owned banks in Turkey. On December 26, 2003 (as a complete subsidiary of Citibank N.A.), Citibank A.Ş. was established and allowed to accept deposits and to do banking transactions. All the assets (including deposits), liabilities, rights and debt of Citibank N.A. were transferred to Citibank A.Ş. Thus, the image of the bank operations in Turkey was transformed from "branch" to "joint-stock company" subsidiary as of March 31, 2004.

Fortis Bank: The paid-up share capital of 89.34% of Türk Dış Ticaret Bankası A.Ş. was transferred to Fortis Bank NV-SA on July 4, 2005. As of this date, the bank became a foreign bank established in Turkey, exiting from the group of privately-owned deposit banks. As of November 24, 2005 its commercial title changed as "Fortis Bank A.Ş.". And currently Fortis Bank NV-SA owns 93.26% of the bank's shares.

Hsbc Bank: This bank, which started with the name "Midland Bank A.Ş.", started its banking transactions and acceptance of deposits on November 5, 1990, changed to "HSBC Bank A.Ş." on April 1, 1999. With the BRSA

decree dated December 11, 2001 No. 547 and published in the Official Gazette on December 13, 2001 No. 24612 HSBC Banks incorporated “Demirbank T.A.Ş.”.

Ing Bank N.V.: The shares of Oyakbank A.Ş. corresponding to 100% of its capital, representing the investments of the Army Pension Fund, were transferred to ING Bank N.V. on December 24, 2007. The commercial title of Oyakbank A.Ş. changed to ING Bank A.Ş. as of July 7, 2008.

Millenium Bank: Sitebank A.Ş. was transferred to the Fund on July 10, 2001. On December 21, 2001 the contract for the transfer of the bank’s shares to Novabank S.A. was agreed and the sales transaction was finalized on January 24, 2002. As of this date, the banks again got involved in the group of foreign-owned banks established in Turkey. Its commercial title became "BankEuropa Bankası A.Ş." as from March 4, 2003, and it changed to “Millenium Bank A.Ş.” on November 29, 2006.

Turkland Bank: In 1997, with the passing of bank shares from Doğuş Group to the MNG Group, the commercial title of this bank changed to MNG Bank A.Ş. As of December 28, 2006, 50% of the bank’s shares were permitted to be taken over by Arap Bank plc and 41% by BankMed. The actual transfer of shares took place on January 29, 2007. As of this date, the bank became a foreign bank established in Turkey, exiting from the group of privately-

owned deposit banks. The commercial name, MNG Bank A.Ş., was amended to Turkland Bank A.Ş. on April 2, 2007 by registration in the Istanbul Commercial Registry.