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FACTORS AFFECTING PROFITABILITY IN THE TURKISH BANKING SYSTEM

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PREFACE

I am profoundly grateful to my advisor Professor. Dr. Cenktan ÖZYILDIRIM, who contributed to my academic development during my graduate education with his knowledge, suggestions and aids at every stage of my research, and who helped increase the quality of the thesis with his valuable advices and opinions.

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LIST OF ABBREVIATIONS

SDIF: Savings Deposits Insurance Fund

TL: Turkish Lira

IMF: International Monetary Fund

BRSA: Banking Regulation and Supervision Board

CBT: Central Bank of the Turkish Republic

TSEP: Transition to the Strong Economy Program

USA: United States of America

BAT: The Banks Association of Turkey

CMB: Capital Markets Board

GNP: Gross National Product

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ABSTRACT

This study was conducted so as to determine the factors affecting the profitability of banks operating in Turkey, by taking into account the data received from all public sector banks, private sector banks, banks whose savings deposits have been transferred to the insurance fund, foreign-owned banks and development and investment banks operating in Turkey.

Data of all banks connected to the Banks Association of Turkey were obtained from the web pages open to the public in order to get more reliable results about the banks' profitability.

As a result of the study, it is understood that liquidity ratios do not have a positive effect on return on equity and net interest margin, but have a negative effect on return on assets. It is oberved that an increase in the cost / income ratio has a negative effect on all three profitability rates. An increase in asset size, which is another independent variable of the research, only increases the return on equity, but has a negative effect on the return on assets and net interest margin. On the other hand, while the size of equity increases the return on assets and net interest margin, it does not have an effect on the return on equity. The capital adequacy ratio, the last independent variable of the research, has a negative effect on return on equity and return on assets, while it has a positive effect on the net interest margin.

Keywords: Bank, Profitability, Profitability Factors

ÖZET

Bu çalışma Türkiye'de faaliyet gösteren bankaların karlılık oranlarına etki eden faktörlere yönelik yapılmıştır. Çalışmada Türkiye'de faaliyet gösteren tüm kamu bankaları, özel sektör bankaları, tasarruf mevduatı sigorta fonuna devredilen bankalar, yabancı sermayeli bankalar ve kalkınma ve yatırım bankalarına ait veriler kullanılmıştır.

Bankaların karlılık oranlarına bakılırken daha güvenilir sonuçlar alabilmek için Türkiye Bankalar Birliğine bağlı olan tüm bankaların verileri kamuya açık olan web sayfalarından alınarak kullanılmıştır.

Çalışma sonucunda likidite oranlarının özsermaye karlılığı ve net faiz marjı üzerinde pozitif etkisinin olmadduğu buna karşın fakat aktif karlılığı üzerinde negatif bir etkiye sahip olduğu anlaşılmaktadır. Cost/income oranında meydana gelen bir artışın her üç karlılık oranına da negatif yönde bir etkiye sahip olduğu görülmektedir. araştırmanın bir diğer bağımsız değişkeni olan aktif büyüklüğünde meydana gelen bir artış sadece özkaynak karlılığını artırırken aktif karlılığı ve net faiz marjına olumsuz etki etmektedir. Buna karşın özkaynak büyüklüğü aktif karlılığını ve net faiz marjını artırıken özkaynak karlılığı üzerinde bir etkiye sahip değildir. araştırmanın son bağımsız değişkeni olan sermaye yeterlilik oranı ise özkaynak karlılığı ve aktif karlılığı üzerinde negatif bir etkiye sahipken net faiz marjı üzerinde pozitif bir etkiye sahiptir.

Anahtar Kelimeler: Banka, Karlılık, Karlılık Faktörleri

INTRODUCTION

The banking industry has the largest contribution in the financial system, both in our country and in developed countries. Growth and development of the industry has a huge significance for Turkey's economy. The Turkish banking system has been affected by the political, social and economic developments from past to the present, and has gained a better infrastructure, especially with the measures taken after the financial crisis in 2001. Today, the Turkish banking system is regarded as having a relatively more stable structure. The banking industry is particularly influential in the economic development and financial systems of countries and is a force that acts as a locomotive. In this context, as the contribution of banks in the financial system increases, its role in macroeconomic balance and economic growth is expected to gain more importance.

Globalization activities, which have been influencive all over the world, especially after 1990, have caused instable conditions to increase in the world markets, resulting in large-scale financial uncertainties compared to the past. The main reason for the increase in financial uncertainties can also be explained by the increase of uncertainty in the market, which is interpreted as the increase of instability in international markets and as a fluctuating trend in the market prices. Such developments on a global basis have further increased the importance of fund management in the banking sector.

The main purpose of banks in fund management is in line with the subject of the research. The profitability rates of the banks operating in Turkey are examined separately in the study with respect to private sector and public sector by making a detailed comparison between them. With the increase of technology and digitalization, it can be argued that fund management has also promoted financial inclusion in social terms. Through the assistance provided by professional investment companies or organizations engaged in consultancy activities, individuals get the opportunity of managing their investment or funds individually with the availability of financial services. Frankly speaking, the banks in Turkey have deficiency in offering access to useful and affordable financial products and services that meet customers' needs, which can be compensated by raising awareness on the concept of financial literacy and individual fund management. Thanks to this study and similar researches, individuals will be able to choose the appropriate funding tools or banks that best fit with their investment types.

The purpose of this study is to examine the factors that determine the profitability in the banking industry and to check whether this sector works effectively and efficiently. In this context, the concepts of bank and banking are explained in the first part of the study, as the factors affecting the profitability of banking activities are examined in the second part. In the last part, the results are interpreted by collecting data on the subject and by analyzing profitability in the banking sector.

PART 1: THE CONCEPTS OF BANK AND BANKING

Banks carry out financial intermediation activities. In addition, by facilitating the idle funds in the economic system, creating an appropriate capital unit, they enable the increase in productivity, the development of the economic system and accordingly the increase in the welfare level accordingly. Apart from this, with the function of creating deposit money, they can affect the price system by affecting the amount of money in the market and can issue debt or liabilities by means of payment instruments such as check and deed that are easy to convert (Yüksel at-al. 2004, s. 3-4).

Banks are the most important and indispensable components of the financial market and especially the money market as they operate within the economic structure by determining customer value and credit policies. The fact that they are one of the components of financial development and they exist in every area of both financial and private life has promoted the banks to a more specific position. In this respect, although the banks are private and autonomous in their structure, the special mission they undertake always keeps them in a semi-public position. In today’s world, the bank has become a very different and distinguished institution unlikely the banks of the classical periods due to its complexity and number of transactions.The effectiveness and management of bank tools in the general economic system have also been major factors in this regard.

1.1.Definition of the Bank Concept

The Bank is the name given to the organizations, natural and legal persons that perform all kinds of transactions (capital, cash money, credit) of any commercial or non-commercial organizations and states' value which can be measured with money, and fulfill their needs when necessary (Takan, 2001, p. 2).

The concept of the bank has been used in many different meanings since its first introduction and has reached its known meaning today. It is estimated that the origin of the word bank is derived from the Italian word 'banco' (Yazıcı, 2013, p. 1), which means desk, table or bench, as a reference to the goldsmiths that perform their activities at a counter or table. The word banko in Turkish means the cashier or transaction offices where bank employees and bank customers perform their banking transactions.

The word “bank”, which has been used in different meanings since its introduction, has been defined by many authors and institutions. According to a definition, banks are economic units that deal with all kinds of needs of private and public individuals and businesses in this field, which carry out and regulate all kinds of transactions related to money, credit and capital (Gündoğdu, 2014, p. 31).

Banks can be considered as institutions evaluating the financial amounts that natural and legal persons do not spend in a certain period of time by evaluating them through loans and investments (Yılmaz, 2013:p.16). The bank is also an economic unit that takes deposits from abroad, uses them in different credit transactions in the most efficient way, and carry out activities such as supplying regular credit (Kaya, 2012, p. 3). According to Uzunoğlu, (2011, p. 39) the bank is “defined as an institution that offers different financial services by trading money and everything related to money”. According to another definition; banks are “Private or public enterprises that supply payment instruments such as banknotes and deposit money to the economy, carry on trade in security rights representing cash capital and equity as a customary profession, and especially perform other financial services and payment transactions done without using cash” (Yüksel vd., 2002, p. 1).

Covering the same or similar functions, banking can also be evaluated as broad and narrow meaning. In a narrow sense, “although the bank is an institution that generates income from the difference arising from selling and lending money with interest, it is not the only business relationship between loans and deposits. Banking has expanded and covered different activities with the increase in financialization and the adaptation of global markets.” (Gündoğdu, 2014, p. 27).

In short, banks offer payment services to economic units, and they have a major influence on the current and future performance of the system of economic relations. Therefore, an ineffectiveness that may occur in the banking sector will greatly affect stability both at the national and international level. Banks affect not only the economic activities but also the social life of the society. Social supports such as cultural publications, art venues, exhibitions, sports organizations and sponsorship are among the other services provided to the society (Doğan, 2013, p. 4).

1.2.The Importance of Banking Activities

Banks supply payment and collection services to the economic units and have a significant impact on the current and future performance of the whole economic structure and relations. Therefore, any trend of inefficiency and non-productiveness that may arise in the banking industry will greatly affect financial stability at both national and international levels. A healthy and strong banking system is one of the basic conditions of sustainable economic growth. The most prominent activities of institutions engaged in banking are to bring together savings owners and investors, in other words, financiers and entrepreneurs. Seperation of bank enterprises from service enterprises, which should be evaluated independently from institutions engaged in trade, industry and agricultural activities, requires a special background knowledge. The majority of banks operating in Turkey are the commercial banks. In these institutions, the case is not only the supply and demand of the bank and its customers, but also the transfer or loading of active and passive values (Berk, 2001, p. 24).

Commercial banks are the only financial institutions that can open demand deposits or, in other words, a check account. Commercial banks use the deposits they collect to meet the credit needs of institutions, they become the most valuable assets of the country's economy with the deposit money they supply, and they all contribute greatly to the development of a country's economic life (Takan and Boyacıoğlu, 2011, p. 44).

Commercial banks guide the monetary policy implemented in a country and increase its effectiveness on the system. A modern and advanced banking system is required to have an effective monetary policy within the financial system in the country. If there is an advanced banking system, the central bank, the financial locomotive of the country will be able to use monetary policy tools more effectively in the economic system. The institution that provides this effectiveness is the commercial banks operating in the system (Güney, 2012, p. 33).

Commercial banks may also effect the distribution of income and assets in the economic system with their credit policies. For example; they can grant consumer loans to citizens who do not deal with trade, or affect the income level of society by promoting credit card use (Takan and Boyacıoğlu, 2011, p. 45).

1.3.Historical Development of Banking Activities in Turkey

Banking activities in our country first appeared in the Ottoman Period, though not developed sufficiently in this period. Banking operations in Turkey in the modern sense is seen in the period after the Republic. Therefore, it is possible to examine the historical framework of banking in our country under two titles: Pre-Republic period and Post-Republic period.

1.3.1.Pre-Republic Period

There are reasons why the banking system did not develop much in the Ottoman Empire. These are caused from the failure of the Ottoman Empire not to follow the industrialization in Western Europe and opening out process. For this reason, it is not possible to come across a bank in the Ottoman Empire until the middle of the 19th century. Banking transactions were performed by bankers and goldsmiths at that time. The reason for Ottoman Empire to need for the bank is to facilitate the internal and external borrowing of the Treasury. The first bank in the Ottoman Empire was the Istanbul Bank which was founded in 1847 by goldsmiths. However, the bank's entry into transactions and speculation that jeopardized its ability to pay caused its closure in 1852 (Sağlam, 1976, p. 247).

Afterwards, the Ottoman Bank was established in 1856. In 1863, Homeland Funds, which form the basis of Ziraat Bank, which is active today, were established to finance agriculture. The banks established in this period mediated between the Ottoman Empire and foreign capital, and supplied foreign debt in a period when the state expenditures were higher than their income. However, most of the banks established with domestic capital did not last long in this period and had to close. The reason for this is that banks established with domestic capital cannot compete with banks with strong foreign capital (Uyar, 2003, p. 95).

1.3.2.Post-Republic Period

When we examine the historical development of the banking sector, negative effects on the banking sector can be seen in many different events from the Republic to the present day. It is possible to examine these periods as the period of the Republic period - the Second World War period (1923-1939), the Second World War period - the Planned Period (1939-1980) and the Planned Period - the present period (1980-2017).

Period of 1923-1939

İşBank, the first bank established in Turkey, is one of the indicators of economic independence of the Republic period in Turkey. İşbank's foundation date is 1924 and is the first financial institution with private equity established in this period whose task is to buy and sell immovable property, deal with all industrial and commercial activities and supply loans to institutions operating in this field (Şahin, 2009, p. 35).

Ziraat Bank underwent a big change in 1924. The bank has been turned into a joint-stock company and it is aimed to supply the credit needs of the people engaged in agriculture. Industry and Mines Bank, which was accepted as the first development bank in 1925 depending on the decisions in the Izmir Economic Congress, was established and started its operations.

Established under the name of Emlak and Eytam Bank in 1926, the bank contributed to the development of the banking sector during the republic period. World economic balances and systems were negatively affected with the Great Depression that started in 1929 at a global level. After the Great Depression, the world witnessed an increase in production related to agriculture and raw materials. This situation led to a decrease in the income of Turkish farmers. Finally, following results can be declared about the period for the economy in Turkey (Koçtürk at-al. 2010, p. 56).

* The country's external debt has been delayed due to difficulties in payment. Then, accordingly, imports decreased.

* Too much production of agricultural products all over the world that were being produced in Turkey, resulted in falling prices thus exports decreased.

* Turkey began to experience difficulties in importation or providing finance to similar import needs.

* Turkey's foreign trade deficit has increased. The Great Depression, which has an impact on the international level, has caused great difficulties globally, especially in the banking industry (İnce, 2008, p. 293). This situation has also adversely affected the newly developed financial market.

The Turkish government have made legal arrangements through various studies on the subject and the Central Bank of the Republic of Turkey was established in 1930 in order to solve the problems related to this issue. It was during the Economic Congress that the thought of the establishment of a national public bank emerged and realized later in 1930. The primary purpose of the Central Bank is to ensure the economic development at the macro level in the country and to carry out some further duties. Powers granted to the Central Bank were as follows: to determine the rediscount rates, to make decisions regulating the money market in a macro sense, to carry out the activities of the treasury and to take the necessary measures to ensure the stability of the Turkish currency (Cesur, 2013, p. 142-143).

Municipalities Bank was established in 1933. The high cost of loans to be used in local infrastructure investments made it crucial to establish a bank with public resources.

Halkbank is another important public bank established in this period. It was founded in 1933 in order to eliminate financial problems of tradesmen and industrial organizations and to supply affordable credit opportunities. In the period after the declaration of the Republic, incentives were made for the development of the private sector for 10 years and the private sector was prioritized in industrialization. In this period, the state planned its industrial investments by implementing the First Five-Year Industrial Plan in 1934 (Zarakolu, 1993, p. 38).

1934 First Five-Year Industrial Plan was seen as an opportunity for the development of the Turkish economy, however it left out a large part of the economy sector because it had just comprised of industrial sector. Since the implementation and management of the First Five-Year Industrial Plan was successful, the Second Five-Year Industrial Plan, which included areas not covered by the former plan, was launched in 1936. With the implementation of the First Plan, great innovations were brought to the field of industry and the foundations of many fields such as future-oriented industry, railway and mining were laid in this period.

Period of 1940-1982

Following the end of the Second World War in 1945, the economy entered the process of recovery at the macro level. The need for banks in financial terms also increased with the increasing population, new investments, the increase in the number of commercial enterprises and the industrial sector started to be strengthened again. Some of the private banks established during this period were:

Yapi Kredi Bank in 1944, Garanti Bank in 1946, Akbank in 1948, the Turkey Sınai Kalkınma Bank (Industrial Development Bank of Turkey) in 1950, Vakıf Bank in 1955 and Pamuk Bank in 1954.

The Banks Association of Turkey was founded in 1958 in order to stabilize the development of banking that oprerates within a system and ensure justice between banks opened after 1950, when the economy was in the stationary state. In the same period, the Banking Law was enacted and a regulation in which all banks had to comply was introduced. As the number of private banks increased, 24 new banks were established in 1950-1960, 3 of which were by private laws (Başar and Coşkun, 2006, p. 28).

By the 1960s, the planned period started and a restriction was imposed on the establishment of public institutions. The establishment of development and investment banks was supported with the increase in the number of branches of banks despite the restriction on the establishment of new banks.

By the end of the 1970s, with the foreign currency crisis caused by an inward growth, the economic system had undergone hard times and a new accumulation of capital was tried to be adopted. Development and investment banks established during this period were as follows. T.C. Tourism Bank in 1962, Industrial Investment and Credit Bank in 1963, the State Investment Bank in 1964, the Mining Bank of Turkey in 1968 and the Workers' State Industrial and Investment Bank in 1976 (Altay, 2010, p. 343).

The Period After 1980

In the period of 1980, an import substitution policy was replaced by the administration with a foreign expansion policy. The release of interest limits and the domestic and foreign banks entering the country created a highly competitive market and an increase in competition in all sectors tohether with an extensive revival.

Financial liberalization resulting in uncontrolled competition in the 1970s and 1980s resulted in a severe vulnerability in developed and developing countries. The resulting uncontrolled increase in competition caused a foreign currency crisis in 1982 and the crisis ended with bankruptcy at that time. As a result of this crisis, the Savings Deposit Insurance Fund (SDIF) was established to secure investors and protect their interests. In the same period, it was decided to ban keeping foreign currency in commercial banks in order to increase foreign currency exchange in the banking industry and prevent investors from taking their funds abroad.

In 1983, The Central Bank took the control of interest rates. A restriction was imposed on this situation, but in 1988 interest rates were released once more under the jurisdiction of the Central Bank. During the economic crisis that took place in 1994 and resulted in devaluation, the Central Bank took control of the interest rates again.

In 1980, while 44 banks were actively operating in Turkey, this number reached 71 at the end of 1992. In addition, 16 foreign banks opened branches in our country (Sönmez, 2014, p. 22).

The attempt to finance the budget deficits that occurred at the public level in the 1990s with the resources of commercial banks would be the main basis of the economic crisis that would occur in the next period.

Despite the increase in budget deficits at the public level in 1994, it created an inevitable crisis environment when the expansionary monetary policy was favoured to be implemented and interest rates were lowered. As a result of investors' preferrence to use TL as their investment tool, interest rates increased and TL was devalued.

The growth in the markets at the macro level starting from 1995 also showed its effect in the banking industry with an increase in TL investments. In 1998, Turkey signed the Close Monitoring Agreement with the International Monetary Fund (IMF). According to this agreement, Turkey would not enter into any loan-making process from any country or institution. Turkey was supported to implement the economic program. Afterwards, banks were imposed restrictions on future deliveries and short positions, so banks also tried to do short covering (Yetiz, 2016, p. 9).

The 18th stand-by agreement was signed after the agreement with the IMF in 1999. This agreement was aimed to bring down the rate of inflation to the appropriate levels, to ensure the continuity of the created public finance system and to increase the level of economic growth.

A number of reasons such as troubles in the functioning of banks, financial problems in public banks, insufficient equity and negative effects of public deficits on the functioning of the financial system revealed the need for an audit and discipline in the banking system. Finally, The BRSA (banking regulation and supervision agency) was established on December 19, 1999 (Gediz 2002,p, 55).

In 2000, the banking industry experienced a major collapse across the country. Due to the fact that monetary policy implemented by the Central Bank did not succeed, the negative atmosphere in the economy deeply affected the sector. Because domestic and foreign banks showed excessive demand for foreign currency, the exchange rate-based stabilization program was abandoned in February 2001 and the floating rate policy was introduced (CBT, 2008, p. 12). The main reasons for this crisis were borrowing, which reached extreme levels in the public sector, insufficient banking sector in terms of supervision, and constantly increasing current deficit.

With the “Transition to Strong Economy Program” (TSEP), which started to be implemented after the 2001 crisis, it was aimed to prevent events affecting the economy such as increasing exchange rates, decreases in credit transactions, decreasing expenditures as a result of savings measures and hesitation in foreign trade. Firstly, Turkey's public debt were covered by the program. Afterwards, it was tried to prevent the country from being a foreign dependent country in terms of economic borrowing.

The banking industry started to develop with the increase in the inflow of foreign capital. In addition to this, the banking industry gained global features. New rules had to be formed and enforced for the global position of the banking sector.

With the Basel I Criteria, which was first published in 1988, the demands in the banking sector were identified and addressed. In addition, the risk factors assumed by the banks were taken into consideration. Basel II Criteria were added to the agenda in 2004, since the desired banking development could not be achieved and faults could not be prevented.

The basic feature of Basel II is to determine the risk profiles within each bank, to make a separate risk distribution for each customer group, to analyze and explain the financial statements in detail and to direct the sector. Economic instabilities and financial weaknesses in macro terms can make the economic system fragile at macro level. Even these economic risks can be understood from the functioning of the banking system and sectoral data (Çan and Okur, 2016, p. 200-209).

The effects of the crisis that emerged in the USA in 2007 started to be felt at the global level the following year. The occurrence of the mortgage crisis was caused by the irregularity in the market structure, the lack of market supervisions and the techniques applied in the ongoing policies.

Turkey's economy witnessed a very rapid growth rate of 8,9% in 2010, and an increase of 8,5% was observed in 2011. After the crisis, the country entered a recovery process and interest rates decreased. The liquidity problem experienced was minimized and the creditworthiness situation in the real sector increased. An increase was observed in the total assets of banks. Imports and exports increased compared to 2009. Declining current account deficit increased significantly in 2010 and 2011 due to higher imports than exports. Exports were around $ 107,3 billion in 2007 and around $ 135 billion in 2011.

The globalization process and the crises occurring at the international level have gradually increased the importance of the banking sector in the financial system (Duğru and Dinçsoy 2014, p. 48). Today, according to the data of 2019, there are 33 deposits, 13 development and investment banks, 5 participation banks and 3 public banks in the banking sector.

1.4.Banks by Activity Areas

When banks are analyzed according to their fields of activity, they can be classified as deposit banks, development and investment banks, and participation banks, especially central banks.

1.4.1.Central Banks

Central banks, known as the most prestigious and state-owned banks, are among the most valuable institutions in the banking industry. Behaviors and practices of central banks have tremendous power over concepts such as interest rates, loans, money supply and exchange rates because they are responsible for the monetary policies of the countries (Günal, 2012, p. 76).

In general, the main target of all central banks is to ensure price stability and to maintain the financial system effectively in order to benefit the growth of the country's economy.

Duties such as implementing monetary policies in line with the economic needs of countries, mediating banks' activities and international payments, protecting and managing banks' cash reserves and countries' gold reserves and foreign exchange reserves can be listed among the main functions of the central banks.

Central Bank of Turkey was established as an incorporated company on June 11, 1930 following the publication of the Central Bank of the Republic of Turkey law in the Official Gazette on June 30, 1930 at the Grand National Assembly of Turkey with the adopted Law No. 1715.

The most important objective of the Central Bank of Turkey with a public entity which began its operations in 3th October 1931, established with special law, is to ensure price stability in the macro sense. Nowadays the main activities of the Central Bank of Turkey are; managing monetary policy, managing market transactions, managing Treasury transactions, determining and implementing exchange rate policy, printing bank notes in reserve directions, and organizing payment systems channels.

The main duties and powers of the Central Bank of Republic of Turkey are as follows: printing and floating bank notes, making certain decisions regarding money and credit, and advising the government when needed. Its aim is also to monitor monetary policies of the government regarding the economic system, to carry out monetary policies and to control the compliance of banks according to the Central Bank policies (Erol and Erol, 2013, p. 122).

1.4.2.Deposit Banks

Deposit banks collect the deposits obtained from bank customers and goes to the method of using deposits collected by credit to individuals or institutions that need deposits (Durmuş and Ayaydın, 2015, p. 155). Deposit banks that perform transactions in order to meet the fund needs are institutions that collect the monetary funds they collected in time or demand accounts and make them available to individuals who request funds through loans (Canbaş and Doğukanlı, 2007, p. 131).

Deposit banks transfer funds obtained from savers to those in need of funds. The profit of banks is the difference between the income they earn from the funds they supply and the expenses they pay to the funds (Erdem, 2010, p. 271).

Deposit banks offer depositors the opportunity to make a profit while offering the opportunity to meet the resource request of individuals or organizations who would like to invest. Deposit banks, also known as commercial banks, increase the effectiveness of the monetary policies preferred in the macro economic system throughout the country. In general, deposit banks that use short-term, medium-term and long-term loans in all areas and are interested in almost all kinds of banking transactions make up the majority of the banks in the financial sector.

1.4.3.Development and Investment Banks

These type of banks are established for a specific target and specialized in their field with a limited range of services. These banks operate as "wholesale banks" operating in a single sector. They were established to supply funds to meet the financial needs of large organizations.

Development and investment banks generally carry out their transactions from a single center with their specialized staff. It is aimed to meet medium and long term funding needs of investment banks and institutions (Alptekin, 2012, p. 17). Development banks, on the other hand, are the types of banks that undertake the support of the funding requirement of investment capital in developing countries and the support of especially the enterprises engaged in entrepreneurship in the industry, in order to ensure the development of the country.

1.4.4.Participation Banks

Participation banks are financial institutions established in order to meet the financing needs of individuals who want to carry out interest-free banking activities by going beyond the traditional banking approach and evaluate their savings. Funds are allocated with the accounts created under the name of "Private Current Account" and "Participation Accounts" among participation banks. They use these funds in individuals' financing needs, profit-loss partnership or financial leasing activities (Göçmen and Yağcılar, 2011, p. 13 - 14).

Participation banking or in other words 'Islamic banking', operates according to the principles of interest-free banking. Participation banking is the name given to institutions that carry out all banking activities in compliance with these principles. In the system created within the bank, it is the banking system that collects funds on the basis of participation in profit or loss, and makes these funds available to people through commercial activities or financial leasing. Unlike deposit banks and development and investment banks, Participation banks does not guarantee a fixed income to its customers (Vurucu and Arı, 2014, p. 46 – 49).

1.5.Banks by Ownership Structures

Banks by ownership structures can be named as banks by capital structure. These are described as public, private, mixed and foreign capital banks.

1.5.1.Public Banks

In case the bank capital is entirely state-owned or more than half of the capital is state-owned, the banks are called public banks. When the history of public banks is analyzed, it is seen that these banks were established to realize the economic activities that should be carried out by the public authority (Çondur, 2000, p. 138).

Public banks are mostly established in the economic system, during periods when the statism policy is dominant, as a state economic enterprise or by the expropriation of some private and foreign banks. In Turkey, establishment of public banks gained weight in the first years of the Republic when private equity was inadequate for establishing the banks and in the Planned Development Period between the years 1960-1980 when import substitution economic policy had been followed.

1.5.2.Private Banks

Banks owned by private individuals or institutions are defined as private banks. Since the primary purpose of these banks is to make profit, they are generally established as trade (deposit) banks. Private deposit banks are the type of bank that makes the fund transfer transaction the most functional.

The main activity of the private banks is to collect deposits and to make a profit by providing credit facilities. Other banking activities are generally performed by the execution of the main activity. For example, while providing housing credits, life insurance to customers, natural disaster insurance, it also enables the regulation of insurance policies, furthermore such services are effective in increasing the profitability of banks.

Activities and initiatives of the public sector in the field of banking industry in Turkey, has opened the way for private equity to establish banks for banking activities (Çondur, 2000, p. 136). Most of the private banks have been actively operating in our country since they were established and these banks have an important proportion in the sector today.

1.5.3.Mixed Banks

A mixed bank is a type of bank where some of its capital is created by private individuals and some by public. For this reason, mixed banks are banks where public institutions also have shares of natural and legal persons. In mixed banks, all capital can be turned into a mixed bank by transferring some of the shares of public banks to the private sector. It can be said that the active structure of private capital, along with the important experiences and support of the public, is also effective in the establishment of mixed banks (Kaya, 2012: p, 73).

1.5.4.Foreign Banks

These are the banks which the capital of it is created by foreign individuals or institutions. Foreign banks can enter the sector in a country by establishing capital with foreign individuals' capital and organizations, or by opening a bank branch in a country. However, it can also occur with the purchase of a private bank in the country by foreign capital.

Top management and headquarters of banks with foreign capital are located outside the country. When analyzed from this point of view, foreign banks can be considered as the branch of a bank belonging to another country where it operates (Köse, 2008, p. 15). Banks with foreign capital can operate their banking activities by obtaining a special permission from the authorized institutions or organizations in the country where they will be established.

Turkey is situated in the category of developing countries. Although it frequently faces economic, political and social problems, it has become a country that has attracted the attention of foreign capital due to its dynamic structure. Following the restructuring economic system and banking sector in the country in the macro level, the interest of foreign capital in our country has increased day by day. As of 2018, half of the banks operating in the banking sector are formed by foreign banks.

1.6.Activity Fields of Banks

Banks can be analyzed in 3 main groups based on their activities.

1.6.1.Deposit Transactions

It is an operation through which natural or legal persons deposit money in a bank and earn interest in return, and these transactions are arranged in accordance with a certain framework. Deposits are of great importance for banks. There are multiple types of deposit accounts. Also, such accounts have certain rules. The main purpose of the deposit is to keep the savings of individuals and gain interest income from these savings. As banks supply fund flow with these funds, deposits are an important source of funding.

In order to separate their deposit accounts, banks have to apply the maturity and type classification determined by the Central Bank. It is possible to divide deposits into 4 when classified according to their maturity; namely time deposits, demand deposits, notice deposits and cumulative deposits.

In time deposit accounts, the depositor receives interest from the bank, while in demand deposit he/she does not earn too much interest income. While a certain date is taken into consideration in time deposits, there is no date in demand deposits. Notice deposit is a deposit that can be withdrawn on condition that the date on which the money will be withdrawn should be notified in advance.

Cumulative deposit is a deposit with a maturity of at least 5 years and can be deposited into the account with monthly or quarterly maturities.

1.6.2.Credit Transactions

Credit transactions are among the elements that form the basis of banking activities. Banks make more profit by using their financial resources as credits. Credit in banks is defined as the limit provided by the bank for the bank customer secured or unsecured after obtaining the necessary information about the natural or legal person who applied.

Banks have the opportunity to collect detailed information about any creditworthy customers (Mishkin, 2003, p. 95). With this feature, banks can more efficiently make regulations regarding long-term customer relations and credit lines. In addition, banks are advantageous against the risks that they will take in case of lending because they have the opportunity to review their customers' check account balances etc.

1.6.3.Banking Services

The basic function of banks is to collect saving deposits and give credit to investors. In contrast, banking activities may differ from country to country. For example, in the universal banking system in Europe, broader scope of activity is allowed (Mercan at-al, 2003, p. 186).

Diversifying the existing portfolio and expanding the trading area may result in risk reduction. On the other hand, reverting towards national banking has created new sources of risks. Banks aim to maximize their income by providing some services other than acceptance of deposits and loans in order to provide a competitive environment with developing technology and economy, but also to improve international banking relations.

Depending on the purposes of their establishment, banks earn income from the services they provide to their customers and thus increase their competitiveness (Pehlivan, 2010, p. 21).

1.7.Regulatory Institutions in The Banking System in Turkey

The framework of a country's economy, which has the banks where the people in the society can entrust their savings without worrying while at the same time can borrow securely when cash is needed will be strong in this way,

There will also be minimal exposure to adverse events and risky environments. The formation of such a system has also required public authorities to establish some institutions for regulation and supervision.

There are necessary sector organizations in Turkey in order to bring about all these requirements. These organizations are; Central Bank, the Savings Deposit Insurance Fund, Banking Regulation and Supervision Agency, the Banks Association of Turkey and the Capital Markets Board.

1.7.1.Central Bank of the Republic of Turkey (CBT)

When mentioning about the economic policy of a country, it is meant the monetary, revenue and incomes policy in general. The objectives of the economic policy are determined as ensuring economic growth, increasing employment, ensuring price stability and external balance. Monetary and financial policies are implemented in a coordinated manner to achieve these goals (Uzunoğlu, 2011, p. 80)

The Central Bank of Turkey is an institution fundamentally responsible for regulating exchange rate policies and ensuring circulation of banknotes both in globally and in Turkey. The most important goal of the Central Bank which began its activities as a joint stock company in 1930 is to achieve price balance.

In addition, it is also responsible for taking regulatory measures for the stability of the financial system and the money / foreign currency markets. The Central Bank aims to control blanket financial risks, especially arising from global instability.

Responsible for protecting gold and foreign currency reserves and managing these resources in our country, the Central Bank provides confidence in monetary / exchange rate policy and supports policies in this direction. In addition, it has reserves to keep the foreign currency flow required for the Treasury's foreign currency domestic / foreign debt services in cash, to reduce the level of vulnerability against domestic / foreign shocks and to raise the confidence in the macroeconomic system in the country in international markets. The interests of the country also have priority in reserve management. The policies implemented are generally shaped around the main objectives set by the public authority.

Central banks, which have shown significant changes in terms of their objectives, functions and institutional structures since they were founded, have operated in an independent framework that have aimed at many purposes together including issues such as growth, employment increase, financing of public expenditures and solution of balance of payment problems.

1.7.2.Savings Deposits Insurance Fund (SDIF)

The SDIF is an institution that carries out insurance, deposit management, financial structures and restructuring, transferring, and consolidation of deposit banks and subsidiaries to protect the rights and interests of depositors within the scope of the powers granted by law 5411 and other related legislation. Apart from this, it has been established with the aim of maintaining retail and liquidation situations, legal preceedings of creditors and factoring activities, managing fund assets and resources, and fulfilling other powers, duties and responsibilities ascribed by law. It also has public entity and is an institution with administrative and financial independence.

The Savings Deposits Insurance Fund (SDIF) and the Banking Regulation and Supervision Agency (BRSA) have been the main actors in overcoming the financial crises in the 2000s and recovery of the banking industry. In the process of restructuring the banking sector, the SDIF assumed the administration and powers of the banks taken over and determined the future of these banks. SDIF continues its efforts to protect savings deposits with full capacity to ensure an environment of trust and stability in the banking industry.

1.7.3.Banking Regulation and Supervision Agency (BRSA)

When the financial crises experienced in the world are analyzed, the causes are generally linked by the financial structure disorders in the banking industry and not handling the early warning signals correctly as aresult of insufficient and ineffective supervision.

For this reason, strong legal authorities have been created to closely monitor the financial sector and make necessary monitoring and arrangements in all advanced financial systems. The aim is to ensure that financial markets, which have a vital role in terms of the economic system, have a faster and more complex system outside the country's borders over time and reach a volume exceeding the national product by enabling savings to be directed to investments.

In addition, institutions that are responsible for the regulation and supervision of the sector are also required to continue their activities in a more effective, functional, autonomous and flexible structure with their specialization in their respective fields. The necessity of quickly responding to the sensitive areas of social life and producing solutions in the face of crises that create extremely serious problems in the financial markets also played an important role in its establishment (Kirmanoğlu, 2007, p. 67).

Moreover, the obligation of European Union candidate countries to comply with the basic principles of Basel banking surveillance created by global regulatory agencies, in order to ensure stability in the financial system, accelerated this development (Uyar, 2003, p. 84).

Negative developments in the banking sector in recent years, more clearly, the result of the vacancies of the institutions operating in this sector to be used by their partners or their owners in the axis of their own interests is: The state took this situation in hand and enacted the Banking Law No. 4389 of 18.06.1999 in order to ensure the efficient operation of the sector and to determine the principles of establishment, management, operation and supervision of banks (Kaya, 2004, p. 107).

Thus, banking regulation in Turkish law was regulated for the first time in 1999 with the Banking Law No. 4389. In this context; The BRSA was established to carry out banking regulation at the point of the provisions of the above-mentioned law.

BRSA, in the further development of the financial sector, carries out activities to increase the competitiveness in the financial system, to increase the coordination and dialogue between the parties in the financial sector by evaluating the efficiency of transaction and intermediary costs in a timely manner, to support joint projects among institutions in the field of audit, and to increase the strength of the financial sector (BRSA, 2013, p. 5-6).

1.7.4.Banks Association of Turkey (BAT)

The establishment purpose of BAT is to defend the rights and interests of banks in accordance with the principles of free market economy and perfect competition market, in line with the rules of banking regulation and to ensure that the banking system advancingly operates in a healthy manner.

In addition, another aim is to carry out studies to improve the competitiveness of the banking profession by developing it, to ensure and implement the necessary decisions to create a competitive environment and prevent unfair competition (BAT, https://www.tbb.org.tr/).

The Banks Association of Turkey has established a comprehensive data bank containing detailed and previous data, consolidating reporting data which the institutions in the banking industry ensures to BRSA alongside all the tasks, defined in the legislation. This way, it is aimed to protect the digital data better in parallel with the technological developments and transfer the manually held data to the digital system.

1.7.5.Capital Markets Board (CMB)

The first bank supervisory authority established in Turkey is Capital Markets Board (CMB), established in 1981 with the Capital Market Law No. 2499 (www.mevzuat.gov.tr) as the first example of independent administrative authorities within the Turkish Public Administration organization.

CMB is a public legal entity with administrative and financial independence that uses its own powers independently under its responsibility. In addition, The Capital Markets Board (CMB) aims to ensure that financial markets operate fairly, effectively and efficiently for market stakeholders, and that the companies using funds from the market make the best use under certain rules (CMB, http://HYPERLINK "http://www.spk.gov.tr/"www.spk.gov.tr).

PART 2: DETERMINANTS OF PROFITABILITY IN THE BANKING SECTOR

2.1. The Concept of Profitability in Banking

The word profit is, by definition, the primary financial resource for an organization or institution to continue its activities. For this reason, as organizations try to minimize their costs, they try to get the highest profit from sales, or explore ways to achieve this (Sabuncuoğlu and Tokol, 2001, p. 22).

While the word profit expresses an absolute magnitude, profitability is a relative concept. Profitability, in general, is the ratio of profit made in an organization in a certain period to the capital used in that organization. Profitability is a measure of the financial results of an institution's activity. In addition, based on the capital the institution imposes, it specifies the profit that shareholders want to make. In modern business theory, it is essential that this gain is generally above the sector average. But this return may decrease in some problematic periods (Ülgen and Mirze, 2004, p. 187).

Banks carry out transactions aimed at obtaining sufficient financial income to fulfill their costs and liabilities in order to continue their transactions like all other commercial institutions asw ell as obtaining some profit. Therefore, they have to determine the price to make profit as desired by calculating the cost of all the services they provide. Increasing competition among banks raises the importance of pricing services.

Looking at the course of the concepts of profit and profitability, it changes according to macro and micro environmental factors, not only for banking activities but also for all economic units. All the performances of an organization within itself and with its own activities are defined as micro factors. On the other hand, the sectoral and current general economic structure occurring outside the enterprise itself is considered as macro factors. Profitability develops depending on the productive and effective efforts of each organization as a result of the performances it displays during its activities.

2.2. Techniques Used in Measuring Profitability of Banks

The methods used in the analysis of the statements of other institutions are also used in the analysis of banks' financial reports. Various indicators, measures, comparisons provide ideas for evaluating the financial status, profitability and efficiency of the business. Techniques used in the analysis of financial statements are divided into four main groups as comparative analysis, vertical analysis, trend percentages (trend analysis) and rate analysis. (Akgüç, 2008, p. 368) Brief explanations of these analyzes are given below.

2.2.1. Comparative Analysis

This type of analysis enables decision-making by analysis of the bank by shedding light on the present and the future by analyzing it with historical data. In order for horizontal analysis to be performed in a healthy way, the statements must contain the same periods and have the same length.

Comparative analysis is the examination and evaluation of the changes in the account items in the financial statements prepared on different dates. Increases or decreases in the financial items over time are examined in comparative analysis (Akgüç, 2008, p. 369).

The biggest advantage of the comparative analysis is that it provides financial data to give an opinion about the development direction of the institution under examination. In addition, comparative analysis is useful for making predictions about the future development of the institution (Akgüç, 2008,p. 369).

Comparative financial statements can be arranged in two different ways. These cover two periods or more. If the financial statements are prepared in two periods, the data of the current period and the data of the previous period are compared. Afterwards, increases and decreases between items are expressed as amount and percentage.

If the comparison is made between more than two periods, the current period and multiple past periods are compared. There are two alternatives for this comparison. The first option is to take the previous year as the base year and base all comparisons on this. The second alternative is to compare each year with the year before (Kahiloğulları, 2012, p. 34).

2.2.2. Vertical Percentages Analysis

It is also called analysis with percentage method. Vertical analysis is carried out by calculating the financial statement accounts of the company for one year both with the amounts belonging to each other and within the group (Sayılgan, 2013, p. 174).

The current assets within the total assets are considered as 100 in order to calculate the percentage values of the account items in an organization's one-year balance sheet, and each account item in these assets is proportioned to the total of current assets. Thus, the percentage value of each item in the group total is reached. While calculating the percentage values in the grand total, the total asset is accepted as 100 and other items are proportioned to the total asset. Net sales are taken as 100 in the income statement and other income statement items are proportioned to the net sales, by doing their vertical analysis.

This analysis method has two important superiorities over other techniques (Akgüç, 2008, p. 369):

1- While other analysis techniques do not exhibit the relative importance of the account items in the financial statements, this method takes the percentage of each item in the total, that is, it clearly reveals its share as percentage.
2- Financial statements and the changes in the items in these tables, only when shown numerically, do not give the opportunity to make meaningful comparisons between similar organizations operating in the same industry.

For example; giving the stock amounts of X and Y companies as individual units does not mean much, however, the ratio of stocks of X and Y companies to total assets represents much more meaningful values.

2.2.3. Trend Percentages Analysis

Trend percentages analysis method analyzes the changes in financial statements over time. Based on the selected main year, the ratios of the statement items to this year are analyzed. The base year to be used in the analysis must be choosen carefully. An unusual situation that has not happened so far should not be addressed. Apart from this, not experiencing an economic event that affect the bank negatively is very important in order to reflect the reality of the analysis. Otherwise, the result will not be efficient.

In the analysis method of the percentages of trends, the financial statements are accepted on a yearly basis, and the amount for the year in question is considered as 100 and the percentage changes of the similar types of values related to the following periods are calculated in comparison with the base year. In the trend analysis, the periodic increases or decreases presented by the items in the financial statements of the enterprise are determined and the development direction of the enterprise is investigated by demonstrating the importance of the proportion of these changes according to the base year (Akdoğan and Tenker, 2007, p. 609).

While making trend analysis, some issues should be considered as follows:

- The year taken as a base should be a normal year in all respects; it should not have been affected by the extraordinary factors. For example, it should not be based on a period of national or global economic contraction or economic crisis. Also this year should be a year in which the company is neither very successful nor very unsuccessful.

- The period examined must be long.

- Before this analysis is made, the effects of these changes on the items in the financial statement should be eliminated by taking the changes at the global level.

The purpose of this analysis is; to investigate the long-term interactions of trends in the financial statement items that are related, and their relationships with each other. In this way, holistic information is provided regarding the financial situation and efficiency results by analyzing the dynamics of the enterprise (Enginyurt, 2006, p. 77).

2.2.4. Ratio Analysis

The rates show specific relationships between the multiplicities of the asset and resource structure in the bank's various financial statements. In other words, the rates determine the proportional relationships between the values that are meaningful in terms of bank management. Ratio is simply the ratio of values to each other. (Tevfik and Tevfik, 1997: 213).

The financial analysis made by the numerical values of the figures in the financial statements and the relationships between these numbers are called ratio analysis, the most widely used financial analysis technique to measure and interpret banks' financial performance.

Showing mathematical relationships between the account items in the financial statements and calculating the rates are not applied as a purpose but a tool. What is important for the analyst is the interpretation and evaluation of these rates. Therefore, the points to be considered in ratio analysis are listed as follows (Teker, 1998, 32):

- Pointless proportions should not be used during the analysis. Countless ratios can be calculated based on the financial statements. However, only the ratios that will serve to reveal the financial position of the enterprise and make sense should be calculated and interpreted.

- Ratios should not be interpreted incorrectly. For example, net working capital and increase in turnover rate are generally welcomed. However, it should not be interpreted as a positive indicator if this increase is due to the lack of transaction balance.

- When evaluating the rates, seasonal and cyclical effects should also be taken into account. Seasonal fluctuations affect the rates of the enterprise with the development and stagnation cycles in the economy.

- A change in the value of a ratio may come from the increase or decrease of the figures in the numerator and denominator. The change in rate value from which account item originated should be investigated Not only changes in the numerator and the denominator may affect the rate, but also changing the numerator and denominator values together affects the ratio.

- Ratios should be interpreted under the light of additional information from various sources. It should be taken into consideration whether the financial statements are adjusted according to the changes in the price level when interpreting the rates.

- While evaluating enterprise performance, the proportions of similar enterprises within the sector should be used and sectoral trends should be taken into consideration.

- Calculated rates demonstrates the performance of previous periods. What is important is to make predictions about the future of the enterprise.

The purpose of ratio analysis is to explain the relationships between the account items in the financial statements mathematically by proportioning the items with each other. In this way, both easily interpreted and comparable information can be gained about the economic and financial structure of banks, profitability and working status (Çabuk, Lazol, 1998, 185).

2.3. Profitability Indicators in Banking Industry

In our study, the profitability indicators in the banking sector are analyzed under 3 main headings as floows: Return on Equity, Return on Assets, Return on Net Margin.

2.3.1. Return on Equity

Return on equity refers to ratios dividing revenues from pre-tax profits by total equity and return rates from funds deposited to banks by shareholders (Taşkın, 2011, p. 293).

Bank shareholders are able to estimate return rates corresponding to return on equity and capital they invested in the bank (Awdeh, 2005, p. 10)

Return on equity is calculated by dividing the net profit obtained by banks by the capital within the bank. The formula of return on equity is as follows:

Return on Equity = Net Income / Shareholders's Equity

Return on equity is an important indicator in determining how efficiently banks use their equities and the degree of success or profitability of bank performance that will result from the transactions (Çolak and Öcal, 1999, p. 52).

Banks use the financial leverage ratio to bring the current capital adequacy ratio to an acceptable level. Financial leverage ratio is a factor that affects banks' return on equity. It is the risk measure that the bank is exposed due to the debts taken to finance the assets of banks. The high leverage ratios that occur in this case depend on the debts taken to finance the assets of banks in order to continue their transactions. This situation causes capital risk to increase (Khrawish vd, 2011, p. 50).

2.3.2. Return on Asset

Another rate used in measuring bank profitability is the return on asset, an indicator of how effectively the assets are used according to the fields in which banks operate. The Banks and shareholders use the return on assets to be able to find out how the bank management is administered and make determinations (İskenderoğlu at-al., 2012, p. 294).

Return on asset ratio is obtained by dividing profits earned before by total active account items. This ratio indicates how the banks made the profits through the assets (Taşkın, 2011, p. 293).

Return on asset refers to the extent to which the active assets within the bank make profit over each asset. Return on asset is calculated by the formula below.

Return on Asset = Net Income/ Average Total Assets

The banks' return on asset ratios not only depends on the performance of bank management, but also depends on changes in economic indicators or the decisions taken by the political authority in the country.

2.3.3. Net Interest Margin

The Net Interest Margin is one of the monitored performance criteria due to the importance of the mediation function undertaken by the banks. The Net Interest Margin from banking transactions is accepted as the main criterion indicating mediation costs. The Net Interest Margin is also a leading indicator in measuring efficiency in the system (Kaya, 2001, p. 1).

Since the high Net Interest Margin affects the profitability of the bank positively, it also expresses the success of the bank management. For this reason, it is considered as a criterion for both profitability and efficiency (Şıklar, 2010, p. 269).

The Net Interest Margin is the ratio of net interest income to return on total assets; however, if the bank's return assets cannot be determined in a healthy way, the Net Interest Margin can be calculated as follows (Akgüç, 2007, p. 149):

Net Interest Margin = (Interest Income / Average Assets) - (Interest Expenses/Average Assets)

Net Interest Margin = Net Interest Income / Average Assets

Banks' net interest margins are actually summary statistics of bank net interest income. Besides the fact that net interest income is the most important determinant of bank profits, the stability and continuity of net interest income ensures that banks exist in a macro level financial system (Erol, 2007, p. 1).

2.4. Studies on the Factors Affecting the Banks' Profitability

Studies investigating the factors which affect the profitability of banks have been conducted in many countries. The banking industry, which is one of the biggest elements of macroeconomics, is a source of inspiration for scientific studies. In our study, we will examine the issue under two headings. At first, we will examine the relevant studies carried out around the globe so far. Secondly, we will discuss the studies conducted in Turkey.

2.4.1. Studies around the Globe

In their study, Miller and Noulas (1997) examined the factors affecting the profitability of 201 banks in the United States, whose asset magnitude is over 1 billion dollars. Their work covered the years 1984-1990, and the bank data obtained were annually added in the study. Miller and Noulas based their studies on return on assets as an indicator of bank profitability. As a result, the size, non-performing loans and non-interest expenses are inversely related to the bank profitability. It is also concluded that the ratio of securities, loans, non-interest incomes, deposit rate, personnel expenses and the ratio of consumer loans to total loans affected in the same direction.

In their study, Jeon and Miller (2004) investigated the factors affecting the performance of Korean banks in the period covering shortly before and after the effects of the financial crisis in Asia. The study data cover 1991-1999. The balance sheet and income statement data of 16 domestic and foreign banks in total were analyzed annually. Considering the results, the ratio of capital to total assets, number of personnel and non-interest incomes are significant and effective in the same direction with both equity and reurn on assets. It has been suggested that non-interest expenses and loan provisions are adversely affected by both equity and return on asset.

Athanasoglou, Brissimis and Delis (2008) investigated the profitability of commercial banks operating in Greece between 1985 and 2001 and how macroeconomic, sectoral and bank-specific factors affect bank profitability. In this study, bank profitability is expressed as asset and equity profitability. As a result, the study reveals how the bank profitability is predominantly shaped by macroeconomic and bank-specific factors.

Tregenna (2009) investigated the effects of concentration, market share, bank magnitude and managerial efficiency on banks' performance in the United States between 1994 and 2005. The data obtained from a total of 644 commercial banks were analyzed quarterly with one of the panel estimation methods, the generalised moments technique. In regression method, five variables, which are indicators of profitability, explaining equity and return on asset were used. According to the results it is observed that concentration, market share and magnitude have a strong relationship in the same direction with both indicators of profitability.

Sufian and Chong (2008) conducted a research to find the factors that determine the profitability of commercial banks operating in the Philippines and analyzed the annual data of banks ranging from nine to twenty four. This study was conducted between 1990-2005 using the multivariate linear regression model as the analysis method. As for the results of the research, magnitude, non-performing loans, general administrative expenses and finally inflation are inversely related to profitability. On the other hand, non-interest incomes and equity ratio have a positive effect on bank profitability. Therefore, it is likely that all of the bank-specific variables used in the analysis are descriptive of profitability; however, it has been suggested that external factors are not statistically sufficient as much as inflation in determining bank profitability.

Vong and Chan (2009) investigated the effect of micro and macro variables of 5 banks in Macao, which hold 75% of the banking sector in terms of both asset magnitude and loans obtained on bank profitability in their study. The study was carried out during a period of fifteen years from 1993 to 2007, and based on annual audits. According to the results of the regression analysis; it is asserted that only the capital ratio and inflation are in the same direction and significantly related to bank profitability, while the ratio of loans and non-performing loans to total loans adversely affects profitability.

Sufian (2009) gathered the factors affecting profitability in two main groups in the study done between 2000-2004 in Malaysia and dealt with active profitability of domestic and foreign commercial banks through annual observations. In the research, the first group of variables under the control of bank management were determined as the ratio of loans to total assets, the logarithm of total assets, the ratio of non-performing loans to total loans, the ratio of non-interest incomes to total assets, the ratio of non-interest expenses to total assets, the ratio of general administrative expenses to total assets and the ratio of equity to total assets. The second group of variables of the study were the logarithm of GNP and the inflation rates which include economic conditions. The variables of a total of twenty-three banks were analyzed by constant-effect panel data regression analysis and it was concluded that loans, non-performing loans, and the logarithm of GNP adversely affect banks' asset profitability while non-interest incomes, general administrative expenses, capital ratio and inflation rate positively affect the profitability of banks.

Kosak and Cok (2008) tried to determine in their studies carried out in the Balkan countries whether the factors affecting the profitability of domestic and foreign banks differ from each other. In this study conducted between 1995-2004; they estimated the data of all banks operating in Croatia, Bulgaria, Romania, Serbia, Macedonia and Albania based on annual observation frequency with panel data analysis method. The results reveal that magnitude is not an important factor which affects profitability for banks. On the other hand, the ratio of capital is found to have positive effect on active profitability; and a negative impact on equity profitability. The ratio of expenses considered as cost effective to incomes was inversely related with all profitability rates. The loan provisions reserved for non-performing loans are inversely related to all profitability criteria and direcly related to the net interest margin. Among the factors affecting the profitability of foreign banks and local banks, the only rate that leads to different results is the interest margin. While the interest margin affects the profitability negatively in local banks, it affects foreign banks positively. While the concentration rate is only inversely related to the profitability rates of local banks, market share is related only to the net interest margin of foreign banks. In macroeconomic terms, the growth in the GNP and the increase in the exchange rate affect the equity and asset profitability of foreign banks in particular.

2.4.2. Studies in Turkey

Through his studies between 1990 and 1999, Özkul (2001) tried to estimate the factors that determine the profitability of domestic and foreign commercial banks operating in Turkey within the framework of structure-behavior-performance model. Considering the results of the research, the ratio of non-performing loans and non-interest expenses to total assets was found to affect bank profitability negatively; whereas the ratio of equity to total assets affected profitability positively. However, the traditional structure-behavior-performance hypothesis was supported by the restriction in the regression equation used in the analysis, thus it is spotted that there is a relationship in the same direction between profitability and market concentration in Turkey.

Kaya (2002) examined variables releasing the profitability of 44 public and private banks operating in Turkey in his study between 1997-2000. The data of this study were collected quarterly and analyzed with panel data technique. As a result, as the bank's market share increased, it was observed that net interest margin and return on equity increased, and that the banks were under public ownership only increased the return on equity. Finally, as a result of the analysis of macro variables, it is seen that banks increase their profitability with increasing inflation and periodic budget deficit.

Dincer (2006), in his research, investigated macroeconomic factors that affect the profitability of deposit banks, which operated between 2002-2004 in Turkey. Results reveal that macroeconomic factors are able to explain the return on assets of public and private banks in Turkey by 60 % and equity assets by 85 %. According to return on assets of banks, the direction of the effects of inflation, industrial production index, domestic debt and interest rate variables is linear, as the direction of the effects of foreign debt, exchange rate and GNP is reversed. In addition, although the external debt factor is adversely affected in the results of the analysis for equity profitability, it is the most important descriptor. Considering other factors affecting the return on equity; GNP and exchange rate are adversely effective, as domestic debt, inflation interest rate and industrial production are variables effective in the same direction.

In the research conducted by Atasoy (2007), the determinants of the active profitability and net interest margin of the Turkish banking sector were analyzed using the panel data method and multiple linear regression method. The data of the deposit bank that was active between 1990-2005 constitute the data of the study. As a result of the model estimated by the generalized least squares method, a relationship in the same direction between the ratio of equity to assets and profitability indicators was obtained. An inverse relationship was detected between the ratio of fixed assets to total assets and profitability indicators. Net interest margin had the relationship in the same direction with the ratio of special provision expenses to total loans and the ratio of non-interest expenses to assets, however, return on assets had a negative relationship. While the ratio of deposits to assets and inflation rate did not have a negative relationship with return on asset, they were found to have relationship with the net interest margin in the same direction. Besides, the growth rate of GNP was only adversely affected by the net interest margin. Concentration ratio and the ratio of sector total assets, which are among the financial structure variables, to GNP was inversely related to return on assets. In the last study, it was observed that as the market capitalization increased, the net interest margin narrowed accordingly.

The extent of the relationship between bank profitability and macroeconomic data was tried to be determined by Şerbetli (2008) in his research. Serbetli tried to determine the net income, return on assets and return on equity of commercial banks operating between 2000-2006 by using 23 independent variables in practice. Checking on the results of the research; it is concluded that the return on assets is the dependent variable, which macroeconomic factors can best presume. The most effective variables on return on assets are overnight interest rates followed by public expenditures, exports and gold reserves.

Yıldırım(2008), has tried to identify the factors that determine the profitability of the banking industry in Turkey in 2002-2007 by multiple regression method in his research. Looking at the results of the econometric practice; budget balance, monthly industrial production index and the ratio of equity to total assets effects profitability ratios positively; The ratio of off-balance sheet transactions to assets and monthly consumer inflation rate negatively affect bank profitability.

In their study, Sayılgan and Yıldırım (2009) aimed to identify micro and macro factors that determine the profitability of the Turkish Banking Sector between 2002-2007. In the practice part of this research, monthly data of deposit banks and development and investment banks were analyzed using the multivariate regression method. According to the results of these analyzes, Sayılgan and Yıldırım argued that return on assets was affected by capital adequacy in the same direction and effected by off-balance sheet assets in the opposite direction. When macro variables are analyzed, as the bank profitability is positively effected by the improvement of industrial production index and budget balance, it is negatively affected by inflation rates.

Demirhan (2010) aimed to determine the effects of the financial structure decisions taken by banks and their unique factors on their profitability in his study. A total of 32 banks operating in Turkey are investigated and analyzed in two separate groups, including those in the domestic and foreign ownership. Considering the results, it is seen that the effects of financial structure variables on banks' profitability are different for domestic and foreign banks. It is determined that the financial structure variable that affects the profitability rates of domestic banks the most is the ratio of loans received. The ratio affecting the profitability of foreign banks was found to be the equity ratio. On the other hand, all financial structure variables affected the net interest income in domestic banks, though that of in foreign banks was not affected by any of these variables. Looking at the factors specific to the bank; the magnitude of both domestic and foreign banks is in the same direction with profitability rates and non-interest expenses have an opposite relationship with profitability rates. Considering that one of the important items of non-interest expenses is personnel expenses, the fact that this item is high may indicate that the bank wants to open branches and therefore has a demand to collect excess deposits. In banks with excess deposits as a source, if the deposit to loan ratio is not high, it may not be possible to obtain high interest income from loans in exchange for interest paid to deposits. This may have a decreasing impact on the banks' net interest margins.

PART 3: AN APPLICATION ON BANKS OPERATING IN TURKEY

3.1. The Purpose, Importance and Period of the Research

The purpose of this study is to determine the factors affecting the profitability of banks operating in Turkey. In this context, when the literature is examined, it is the first scientific research that investigates the effect of liquidity ratio, cost / income ratio, asset size, equity size and capital adequacy ratio on bank profitability. This study examined 22 banks whose data can be accessed via the BAT website, while the banks with missing data were excluded. The data used in the research belong to the years 2015-2019 and are received from the website of each bank, from the annual reports and from the web page of BAT in order to calculate the profitability rates. The study provides information about the profitability of banks operating in Turkey.

3.2. Scope and Boundaries of the Research

The research was conducted with the data of balance sheet obtained from the banks operating in Turkey, as necessary calculations were made for only internal variables belonging to banks. Exogenous variables were not included in the study. Among the internal variables in the study, liquidity ratio and cost / income ratio, asset size, equity size and capital adequacy ratio were also included in the calculations.

3.3. Research Method and Methodology

Data for calculating the profitability rates from 2015 to 2019 were collected for the research as the study population consisted of all the banks, the main mass of all banks operating in Turkey, and the sample are all the banks operating within the BAT.

Collected data were first explained in tables with Microsoft Excel package program, then multiple regression analysis was performed using SPSS package program. The independent Liquidity ratio (ILR) of the research are the cost / income ratio (CIR), asset size (AS), equity size (ES) and capital adequacy ratio (CAR). The dependent variables of the study are: Return on equity (ROE), return on assets (ROA) and net interest margin (NIM). Thanks to the multiple regression analysis, it is first calculated whether there is a relationship between the variables in the correlation table and then whether the independent variables have an effect on the dependent variables. The equations to be predicted are given below.

$$ROA = \beta_0 + \beta_1 * LIQ + \beta_2 * CIR + \beta_3 * TA + \beta_4 * EQ + \beta_5 * CAR$$

$$ROE = \beta_0 + \beta_1 * LIQ + \beta_2 * CIR + \beta_3 * TA + \beta_4 * EQ + \beta_5 * CAR$$

$$NIM = \beta_0 + \beta_1 * LIQ + \beta_2 * CIR + \beta_3 * TA + \beta_4 * EQ + \beta_5 * CAR$$

Before mentioning the findings of the research, an evaluation on the expectations about the profitability indicators of the banks could be made as follows. Return on equity (ROA), which is the first indicator of profitability, can be positively affected by banks' liquidity ratios, asset sizes, equity sizes and capital adequacy ratios because the increase in assets and resources may cause an increase in financial resources in the banking sector. On the other hand, since the cost / income ratio is more related to expenses, it can be expected that an increase in the rate will affect profitability negatively. Return on assets (ROE), another profitability indicator included in the study, can be expected to increase especially depending on asset size. Again, the increase in the liquidity ratio and the increase in equity size can increase the return on assets because assets are the most dynamically used assets for banks. The variable that is expected to positively affect the net interest margin ratio (RIM), subject to the study, is the size of the equity size which with large equities can have higher net interest margins. The rate that is expected to have a negative effect on this ratio is the liquidity ratio which with a high level may cause interest income to decrease.

3.4. Findings

3.4.1. Descriptive statistical results of the study

Table 1 shows the arithmetic mean and standard deviations of the variables of return on equity, return on assets, net interest margin, liquidity ratio cost / income ratio, asset size, equity size and capital adequacy ratio.

Table 1: Descriptive Statistics Table

Descriptive Statistics

	Mean	Std. Deviation	N
Return on equity	9,5324	7,44113	100
Return on assets	,9767	,71265	100
Net interest margin	3,7546	,79420	100
Liquidity	,6257	,08837	100
Cost Income	,6806	,18553	100
Active size	157088,5300	1,70100E5	100
Equity size	19188,2800	20975,47043	100
Capital adequacy ratio	16,0228	2,78193	100

3.4.2. Correlation analysis results of the research

Table 2 shows the correlation among variables.

Table 2: Correlation Table

Correlations

		Liquidity	CostIncome	Active size	Equity size	Capital adequacy ratio
Pearson Correlation	Return on equity	-0,063	-0,579	0,35	0,341	0,038
	Return on assets	-,225	-,666	,340	,348	,091
	Net interest margin	,043	-,154	-,043	,018	,225

As seen in Table 2, return on equity has only a positive relationship with asset size, equity size and capital adequacy ratio. There is a negative correlation among other rates. Return on assets has a positive relationship with asset size, equity size and capital adequacy ratio. It also has a negative relationship with the liquidity ratio and the cost / income ratio. There is a positive relationship between net interest margin and liquidity ratio, equity size and capital adequacy ratio.

3.4.3. The Effect of Liquidity Ratio Cost / Income ratio, asset size, equity size and capital adequacy ratio on Equity Profitability

Table 3 shows whether the model is meaningful as a whole. The F value 11,116 (Sig. =, 000) in the table indicates that the model as a whole is significant at all levels.

Table 3: Anova Table

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2036,802	5	407,360	11,116	,000[a]*
	Residual	3444,869	94	36,648		
	Total	5481,671	99			

a. Predictors: (Constant), Capital adequacy ratio, Equity Size, Liquidity, CostIncome, Asset Size

b. Dependent Variable: Return on equity

*p<0,05

Table 4: Coefficients Table

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			95,0% Confidence Interval for B		Correlations			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	21,685	8,016		2,705	**,008***	5,769	37,601					
	Liquidity	10,640	7,950	,126	1,338	,184	-5,144	26,424	-,063	,137	,109	,750	1,333
	CostIncome	-25,265	4,426	-,630	-5,709	**,000***	-34,053	-16,478	-,579	-,507	-,467	,549	1,821
	Active size,	2,539E-5	,000	,580	,968	,336	,000	,000	,350	,099	,079	,019	53,827
	Equity size	,000	,000	-,548	-,937	,351	-,001	,000	,341	-,096	-,077	,020	51,114
	Capital adequacy ratio.	-,117	,283	-,044	-,413	,681	-,679	,446	,038	-,043	-,034	,596	1,678
Model Summary: R=0,610; R^2 = 0,372; Adj. R^2 =0,338; F= 11,116; p=0,000													

a. Dependent Variable: Equity size

*p<0,05

Table 4 shows the parameter values obtained from the estimated result of the model and the related t values. Of the t statistics values of the parameters, only the cost / income ratio (at the 5% significance level) included in the model is significant (p <0.05). Also, the constant term was found to be 21,685,which means that even if the independent variables are zero, the firm achieves a return on equity of 21,685 units. When Table 4 is analyzed, it is understood that only the cost / income ratio has a negative effect on the return on equity. In other words, an increase of 1 unit in the cost / income ratio decreases the return on equity by 25,265 units. In this case, a bank that wants to increase its equity profitability should keep its cost / income ratio at a minimum. When other independent variables are examined, it is concluded that these factors do not affect the return on equity because the significance value in table 4 is above 0.05 for the other four variables.

3.4.4. The Effect of Liquidity Ratio, Cost / Income ratio, asset size, equity size and capital adequacy ratio on Return on Assets

Table 5: shows whether the model is meaningful as a whole. The F value 15,629 (Sig. =, 000) in the table indicates that the model as a whole is significant at all levels.

Table 5: Anova Table

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	22,824	5	4,565	15,629	,000[a]*
	Residual	27,455	94	,292		
	Total	50,279	99			

a. Predictors: (Constant), Capital adequacy ratio, Equity Size, Liquidity, CostIncome, Asset Size

b. Dependent Variable: Return on Assets

*p<0,05

Table 6: Coefficients Table

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			95,0% Confidence Interval for B		Correlations			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	3,378	,716		4,721	**,000***	1,957	4,799					
	Liquidity	-,208	,710	-,026	-,293	,060	-1,617	1,201	-,225	-,030	-,022	,750	1,333
	CostIncome	-2,623	,395	-,683	-6,639	**,000***	-3,408	-1,839	-,666	-,565	-,506	,549	1,821
	Active Size	-7,605E-7	,000	-,182	-,325	**,046***	,000	,000	,340	-,033	-,025	,019	53,827
	Equity Size	6,452E-6	,000	,190	,348	**,028***	,000	,000	,348	,036	,027	,020	51,114
	Capital Adequacy Ratio	-,031	,025	-,120	-1,211	**,029***	-,081	,020	,091	-,124	-,092	,596	1,678
Model Summary: R=0,674; R^2 = 0,454; Adj. R^2 =0,425; F= 15,629; p=0,000													

a. Dependent Variable: Return on Assets

*p<0,05

Table 7 shows the parameter values obtained from the estimated result of the model and the related t values. The t statistical values of the parameters, reveal that the cost / income ratio, asset size, equity size and capital adequacy ratio (5% significance level) included in the model are significant (p <0.05). The constant term was found to be 3,378, which means that even if the independent variables are zero, the bank achieves a return on assets of 3,378 units. Since the significance value of the liquidity ratio is p> 0.05, it is concluded that the liquidity ratio has no effect on the return on assets. An increase in asset size, capital adequacy ratio and cost / income ratio has a negative effect on asset profitability. On the other hand, an increase of 1 unit in the size of equity increases the return on assets. As a result, a bank that wants to increase its return on assets should pay more attention to equity size. Therefore, in order to increase the return on assets of the bank, more equity should be increased and the asset size should be kept in balance. In addition, according to the model summary in Table 8, the R Square value shows what percentage of the dependent variable is explained by the independent variables. In the example, 45.4% of change in the dependent variable is explained by the independent variables in the model.

3.4.5. Liquidity Ratio The Effect of Cost / Income ratio, asset size, equity size and capital adequacy ratio on Net Interest Margin Profitability

The Anova table shows whether the model is meaningful as a whole. The F value 4,727 (Sig. =, 001), in the table indicates that the model as a whole is significant at all levels.

Table 7: Anova Table

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	12,547	5	2,509	4,727	,001[a*]
	Residual	49,898	94	,531		
	Total	62,445	99			

a. Predictors: (Constant), Capital Adequacy Ratio, Equity Size, Liquidity, CostIncome, Asset Size

b. Dependent Variable: Net Interest Margin

*p<0,05

Table 8: Coefficients Table

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95,0% Confidence Interval for B		Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	3,255	,965		3,374	**,001***	1,340	5,171					
	Liquidity	1,884	,957	,210	1,969	,052	-,016	3,783	,043	,199	,182	,750	1,333
	CostIncome	-1,049	,533	-,245	-1,970	,052	-2,107	,008	-,154	-,199	-,182	,549	1,821
	Active Size	-1,146E-5	,000	-2,454	-3,628	**,000***	,000	,000	-,043	-,350	-,334	,019	53,827
	Equity Size	8,749E-5	,000	2,311	3,505	**,001***	,000	,000	,018	,340	,323	,020	51,114
	Capital Adequacy Ratio	,010	,034	,034	,285	,776	-,058	,077	,225	,029	,026	,596	1,678
Model Summary: R=0,448; R^2 = 0,201; Adj. R^2 =0,158; F= 4,727; p=0,001													

a. Dependent Variable: Net Interest Margin

*p<0,05

Table 10 shows the parameter values obtained from the estimated result of the model and the related t values. The t statistics values of the parameters reveal that the size of the assets and equity included in the model (at the 5% significance level) are significant. The constant term was found to be 3,255, which means that even if the independent variable values are zero, the firm achieves a net interest margin of 3,255 units. When Table 10 is examined, since the liquidity ratio, capital adequacy ratio and cost / income ratio are p> 0.05, there is no effect of profitability indicators on the net interest margin ratio, while the equity size has a positive effect on the net interest margin ratio. On the other hand, an increase in asset size may negatively affect the net interest margin.

3.4.6. Evaluation of Hypothesis Results

The first independent variable of the research is the liquidity ratio, which is calculated with the formula (Loans and Receivables / Total Assets). The fact that banks have more loans and receivables actually creates the expectation that their profitability will be high. For this reason, the effect of liquidity ratio on the profitability of banks was tested with Hypothesis 1, Hypothesis 2 and Hypothesis 3. According to the results of the research, the liquidity ratio does not affect all three profitability ratios considered as dependent variables within the scope of the research. Therefore, Hypothesis 1, Hypothesis 2 and Hypothesis 3 were rejected in the study.

-Hypothesis 1: Banks' liquidity ratios affect their return on equity (rejected)

-Hypothesis 2: Banks' liquidity ratios affect their return on assets (rejected)

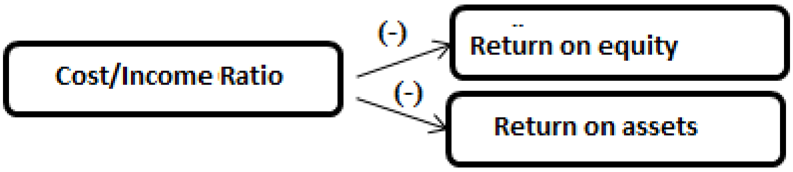
-Hypothesis 3: Banks' liquidity ratios affect the net interest margin (rejected)

The cost / income ratio, which is accepted as the second independent variable, was also used in the research,. This ratio is calculated with the formula (Operating Gross Profit - Net Operating Profit / Loss + Personnel Expense) / (Operating Gross Profit + Personnel Expense). As a result of this high ratio, it can be expected that the profitability rates of the bank will be low because the increase in costs can naturally cause a decrease in profitability. As a result of the research, findings were found to be parallel with the expectations. According to research findings, cost / income ratio has a negative effect on banks' return on equity and return on assets. However, the net interest margin has no effect on the cost / income ratio. As a result, Hypothesis 4 and Hypothesis 5 were accepted and Hypothesis 6 was rejected.

-Hypothesis 4: Banks' Cost / Income ratios affect their return on equity (Accepted)

-Hypothesis 5: Banks' Cost / Income ratios affect their return on assets (Accepted)

-Hypothesis 6: Banks' Cost / Income ratios affect the net interest margin (Rejected)

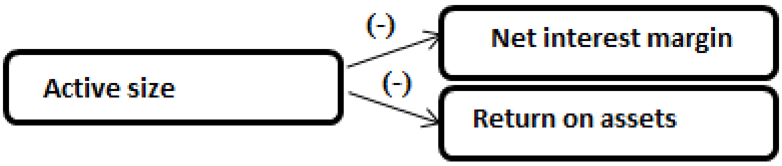


Another variable used in the research is the asset size of the bank. Considering the functioning of banking activities, it can be expected that the growth of asset assets will positively affect the profitability of the bank. Considering the research findings, it is concluded that an increase in the asset size of the bank negatively affects the asset profitability and the net interest margin, contrary to expectations. On the other hand, it was found that asset size has no effect in terms of return on equity. As a result, Hypothesis 7 was rejected, while Hypothesis 8 and Hypothesis 9 were accepted.

-Hypothesis 7: Banks' asset size affects their return on equity (Rejected)

-Hypothesis 8: Banks' asset size affects their return on assets (Accepted)

-Hypothesis 9: Banks' asset size affects the net interest margin (Accepted)

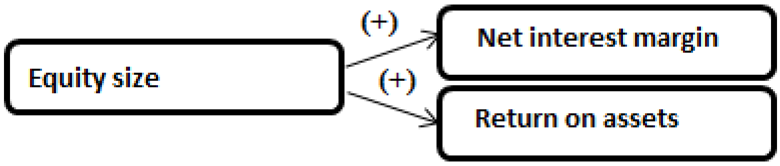


Another variable that can affect profitability examined within the scope of the research is the equity size of banks. As a result of the increase in the equity of banks, it can be expected that their profitability will also be positively affected. According to the findings obtained within the scope of the research, an increase in banks' equity size does not affect the return on equity of banks. On the other hand, an increase in banks' equity size positively affects both the return on assets and the net interest margin as expected. Therefore, Hypothesis 10 was rejected, while Hypothesis 11 and Hypothesis 12 were accepted.

-Hypothesis 10: Banks' equity size affects their return on equity (Rejected)

-Hypothesis 11: Banks' equity size affects their return on assets (Accepted)

-Hypothesis 12: Banks' equity size affects the net interest margin (Accepted)

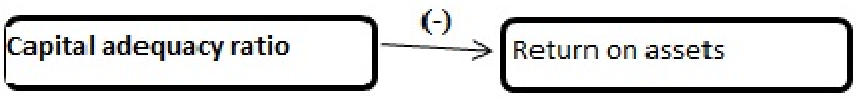


The fifth independent variable considered in the research is the capital adequacy ratios of banks. It can be expected that the increase in capital adequacy ratio will have a positive effect on banks' profitability. According to the findings of the research, the increase in the capital adequacy ratios of the banks does not affect the return on equity and the net interest margin statistically. On the other hand, an increase in the capital adequacy ratio of banks affects the return on assets negatively. As a result, Hypothesis 13 and Hypothesis 15 were rejected and Hypothesis 14 was accepted.

-Hypothesis 13: Banks' capital adequacy ratio affects the return on equity (Rejected)

-Hypothesis 14: Banks' capital adequacy ratio affects their return on assets (Accepted)

-Hypothesis 15: Banks' capital adequacy ratio affects the net interest margin(Rejected)



When the hypotheses are examined from a different perspective, the variable that affects the profitability of banks is detected to be the cost / income ratio, which has a negative effect on the return on equity of the banks. However, the other four variables do not have any effect on return on equity. The results in terms of return on assets reveal that all independent variables except the liquidity ratio affect the return on assets. When the results are examined, it is understood that the only independent variable that positively affects the return on assets is the size of the equity. On the other hand, an increase in cost / income ratio, asset size and capital adequacy ratio negatively affects the return on assets. When the results are analyzed in terms of net interest margin, it is seen that asset size and equity size affect this ratio. An increase in the bank's equity may increase the net interest margin. On the other hand, an increase in asset size may have a negative effect on the net interest margin.

CONCLUSION

Today, considering the macroeconomic system, the number of institutions belonging to the financial world is quite high and this number is increasing day by day. However, banking activities and banking transactions are still of great importance in the financial system.

In our country, banking activities constitute a large part of the financial sector. Therefore, experiencing a problem related to the banking industry may result in the entire country's economy and financial system to be effected. The fact that the economic crises experienced are directly related to the banking industry is an indicator of this situation.

The banking sector in Turkey experienced major crises in 2001 and earlier. The fact that banks' equity ratios were very low before this period triggered the crisis. With the measures taken after the crisis in 2001, the shareholders' equity ratio was increased, the transition to strong economy program came into effect and made it more resilient to financial risks.

The main purpose of banking activities is to meet all kinds of needs of individuals or institutions dependent on money, and also to try to keep the financial system in the country afloat. In short, profitability in banks is one of the reasons for the existence of banks.

In this thesis, 5-year (between 2014-2018) profitability rates of the public and private banks that operate in Turkey were discussed and these rates were assessed in different aspects.

Three profitability rates of public and private banks were investigated while examining banks' profits operating in Turkey. These are; return on equity, return on assets and net interest rate.

The three ratios mentioned above were reviewed within the scope of 3 public banks and 6 private sector banks and evaluated individually. If a general evaluation and comparison of profitability ratios are to be made, the rate at which all banks achieve the highest rate of profitability, without discriminating between public and private banks, is return on equity.

This situation shows us that banks' equity structures are working stronger and more efficiently.

Another point is about the results regarding the net profit margin. In banks, the factor of higher productiveness following return on equity is the net profit margin rate. This rate takes the second place after the return on equity in all banks.

The third and final profitability indicator of the banks is the return on assets. Considering these rates, the lowest profitability rate in both public and private banks is seen at this rate. This shows that banks cannot use their active assets efficiently and profitably compared to their equity.

Considering the profitability rates of the public banks in the 5-year period, we can deduce that two of the three public banks reached the peak in the return on equity in 2017. Again, it is observed that most of the private banks peaked in return on equity in 2017. On the other hand, profitability rates were in decline in 2018.

When the profitability ratios of banks between 2014-2018 are analyzed, another remarkable point is that; banks' equity ratios differ significantly over the years compared to their active profitability ratios and net interest margin rates and create a more unstable graphic. However, the other two rates in the 5-year period do not differ much and are more stable.

When the profitability ratios of public and private banks were compared in the period between 2014 and 2018, there was no statistically significant difference between them. In other words, neither public banks made significant profits compared to private banks, nor vice versa.

In the thesis study, the profitability rates of 3 public banks, handled in the 5-year period of 2014-2018, were compared statistically among themselves. As a result; it has been determined that there is a statistically significant difference between public banks in terms of return on equity. However, no statistically significant difference was found between return on assets and net profit margin rates.

There are statistically significant differences between return on equity, return on assets and net profit margin rate when the profitability ratios of private banks are compared between 2014-2018.

It is not acceptable that there are statistically significant differences in all profitability rates of private banks. Therefore, individuals or institutions that will perform banking activities in private banks should compare the profitability rates and take actions accordingly.

As a result, banks are organizations that operate to make profit. In this study, an evaluation was made on the profitability rates of public and private banks by considering those who want to do banking activity. Evaluation results are transparently explained.

Individuals or institutions that will perform banking activities should consider risk-bearing activities like any financial activity. Before performing the banking activity, a research should be done to determine which one to choose among the institutions. Different profitability rates of banks should be examined and a common conclusion should be reached.

The information provided in this study does not qualify as investment advice for individuals and organizations. The scientific study conducted is only the result of evaluating the data of the past years and making a due diligence.

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