



NEAR EAST UNIVERSITY
INSTITUTE OF GRADUATE STUDIES
BANKING AND FINANCE PROGRAM

**DETERMINING THE FACTORS AFFECTING THE
PROFITABILITY OF COMMERCIAL BANKS IN TURKEY**

HISHAM JAHWAR ABDULLAH

MASTER'S THESIS

NICOSIA

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2021

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DEDICATION

I dedicate this remarkable Thesis to my parents.

ABSTRACT

DETERMINING THE FACTORS AFFECTING THE PROFITABILITY OF COMMERCIAL BANKS IN TURKEY

The thesis investigated the determinants of bank performance in Turkey from 1996-2017 using the fully modified OLS and Dynamic OLS in a panel of 15 banks. The analysis proposed that bank size has a positive impact on return on asset; this means that an increase in bank size will boost the performance and profitability of banks in turkey. This relationship highlights that the Turkish banks are able to utilize their earning assets to augment their profitability. Equally, economic growth, loans and debt ratio have positive significant impact on bank profitability. Consequently, an increase in GDP, loans and debt ratio will increase the profitability of banks in Turkey correspondingly. The positive association between loans and profitability can be attributed to fact that banks make most of their profits from interest income; therefore, by increasing their loan portfolios they are able to enhance profitability. Contrarily, capital adequacy has a negative association with profitability. Thus, when the Turkish Central Bank reduces CAR, it provides banks with more liquidity to increase loan portfolio and consequently profitability.

Keywords: bank performance, profitability, ROA, FMOLS, DOLS, Turkey

ÖZ

TÜRKİYE'DE TİCARİ BANKALARIN KARLILIĞINI ETKİLEYEN FAKTÖRLERİN BELİRLENMESİ

Tez, 15 bankadan oluşan bir panelde tamamen modifiye edilmiş OLS ve Dynamic OLS kullanarak Türkiye'deki banka performansının belirleyicilerini 1996-2017 arasında araştırmıştır. Analiz, banka büyüklüğünün varlık getirisi üzerinde olumlu bir etkisi olduğunu öne sürdü; Bu, banka büyüklüğünün artması Türkiye'deki bankaların performansını ve karlılığını artıracığı anlamına geliyor. Bu ilişki, Türk bankalarının kazançlı varlıklarını karlılıklarını artırmak için kullanabildiklerinin altını çiziyor. Aynı şekilde, ekonomik büyüme, krediler ve borç oranı banka karlılığı üzerinde olumlu önemli etkiye sahiptir. Sonuç olarak, GSYİH, krediler ve borç oranındaki artış, buna bağlı olarak Türkiye'deki bankaların karlılığını artıracaktır. Krediler ve kârlılık arasındaki pozitif ilişki, bankaların kârlarının çoğunu faiz gelirlerinden elde etmelerine dayandırılabilir; bu nedenle, kredi portföylerini artırarak karlılığı artırabilirler. Aksine, sermaye yeterliliğinin karlılıkla negatif bir ilişkisi vardır. Böylece, Türkiye Merkez Bankası SYR'yi düşürdüğünde, bankalara kredi portföyünü ve dolayısıyla karlılığı artırmak için daha fazla likidite sağlar.

Anahtar Kelimeler: banka performansı, karlılık, ROA, FMOLS, DOLS, Türkiye

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CHAPTER 1

INTRODUCTION

1.1 Background

In recent years, the majority of Central and Eastern European countries have introduced structural reforms to increase the scale, stability and productivity of financial systems. The emergence of the external market and the structural reforms of the financial sector have helped the transition to a sustainable and successful financial system. Some scholars, such as Berger, consider that nationalization has a negative effect, decides a reduction in the efficiency of allocations, or takes into consideration that economic innovation also contributes to financial crises.

The global financial system is advancing quickly, with the economies and financial structures moving through stressful years. Internationalization and innovation are at a moderate pace, with new goods and services opening up to financial arenas (Seven & Yetkiner, 2016). The banking industry has been involved in an international wave of acquisitions and mergers, with the result that the divisions within financial industries and products are significantly uncertain (Hassan et al., 2016). One reality remains unchanged in this modern and brave world: and the need for countries to have sound banking structures with strong corporate governance that can reinforce and develop institutions to thrive in an increasingly open environment (Tiryaki et al., 2019). Factors influencing the financial performance of the banks are important to

stakeholders like central banks, governments, banking societies and other financial institutions, and also bank managers.

The creation of an effective and strong financial system is a core priority of the policy platform and of the transition from a controlled economy to a market in Eastern Europe. Trade liberalization, the extension of the exchange of goods, services and money, the liberalization of money system, modernization and shifts in the fiscal, social and political climate have had a significant influence on the development of the banking system in Eastern Europe. Banking systems in developed countries have experienced a variety of transformations to create some efficient, elevated financial firms designed to promote economic growth (Nguyen et al., 2017).

Often in the finance industry, banks represent commercial banks of high value, where even the standard of success has always had a major effects on the economy. In financial literature, the first banking transactions in the year 3000-2000 BC were included in the work "Code of Hamurab," published in the year 1792-1750 BC (Abdurehman & Hacilar, 2016). The Bank's performance evaluation was later carried out with the development of math and business sciences. Today, the importance of right and dynamic banking comprehension is becoming indispensable in the new world of diversity and competition. It is worth noting that, until 1933, the banks was not split on the basis of (Tsaurai, 2018).

The profitability study is significant not only for the knowledge it generates on the strength of the economy each year, but rather because income are indeed an important determinants of income and jobs in the medium to long term (Fukunaga et al., 2019). Adjustments in profitability are a significant source of economic growth through the effect of income on investment and business savings decisions (Bacha et al., 2014). This is because an improvement in

income strengthens the cash flow situation of businesses and offers greater stability in the source of corporate investment financing (e.g. by retained earnings). Smoother financial inclusion promotes higher-level investment by improving production, production capacity, competitiveness and employment.

“The life, development and survival of a business entity depends to a large extent on the profit that the organization is capable of producing. It is true that, as performance increases, the value of the investors can increase considerably. The term profitability relates to the capability of a corporation to maintain profit year after year (Joof & Jallow, 2020). The profitability of the company would undoubtedly contribute to the economic growth of the country by offering extra jobs and tax revenue to the government's treasury. In addition, it would lead to investors' profits by providing a higher dividend and thereby raising people's quality of living (Heffernan and Fu, 2008; Jorgensen, 2011). In order for a business enterprise (whether privately or publicly) to proceed to expand, its income needs to be relatively constant for its expansion and development over period. In relation to its level of income, the global climate needs to be carefully understood and accurately forecast. Businesses must ensure that fair innovation is implemented in order to achieve organizational goals”.

Income and the market environment are such severe issues that a business needs to research and appreciate in order to face its possibilities and threats with focus and determination. Consequently, perhaps this describes why there has been ongoing research by modern companies around the world to enhance their manufacturing methods required to reduce costs and produce new products or add attributes to existing products, which can offer greater fulfillment to their consumers. On the other hand, environmental and cyclical conditions are typically chaotic and complex.

This underscores a need for business companies to be capable of predicting not just their future needs or the sale of their products and services, but also other factors that directly impact them, such as their workers and potential earnings (Zubair et al., 2020).

The phase of financial liberalization aimed at raising the level of competitiveness, the efficiency of the financial intermediation process and the financial stability. In the case of developing countries, studies concentrate on the effect of liberalization, the privatization of state-owned banks, the inflow of foreign banks and the impact on bank profitability.

Studies in the sector in eastern European countries have shown systemic changes in the financial system have led to an increase in the performance of financial intermediation. Fries et al. (2005) showed, based on a performance study of a category of 289 banks from 15 transitional countries in the period 1995-2004. Financial liberalization is shown in the case of bank privatization and bank exposure loans, leading to lower banking costs and an expansion in the demand for financial products.

The involvement of international banks will benefit customers by providing better goods and services to the finance industry by enhancing the effectiveness of services as well as the economy by increasing productivity (Almfraji & Almsafir, 2014). That being said, the financial liberalization is not without danger, particularly if this entry is made without the prior consolidation of the institutional framework. Claessens et al. (1998) have also shown that availability of international banks can promote increased competition, better credit distribution and access to international capital markets. However, this often involves costs related to the introduction of international banks, which can include a rise in financial risk due to increased competition.

Particular attention has been given to the financial results of European banks. In recent years, however, there has been an increasing interest in the profitability and risk-taking of banks in emerging markets. Together with the globalization of financial markets, there is growing interest in understanding the effect and value of global difference (Abdurehman & Hacilar, 2016). For example, Hannan and Prager (2009) noted that the profitability of banks in less competitive domestic markets was positively affected when the most diversified banks entered the market. One theory could be that globally disparate banks do not follow local market rates.

It is understood that banks are now the main contributors to each country's economic development as they are still at the core of the economic system due to various their position as financial intermediaries (Bacha et al., 2014). The banking sector can be seen as a proxy of future growth and the creation of local and foreign economies (Hassan et al., 2011).

In the last two decades, the banking industry has undergone significant transformations in its operational climate around the world. Both external and internal factors have affected its structure and performance. Despite the increasing movement towards direct financial transactions seen in several nations, the position of banks directly relates to the financing of economic activity in general and in various market segments (Oh & Lee, 2004).

Banking performance evaluation is a method that needs particular attention to the different factors that affect the macro-economic and micro-economic level. In developing countries, healthy, stable and rapid economic growth is highly desirable, which can be stepped up by growing the profits of all banking firms. It is essential that every nation is very well-structured and productive banking sector, so that it is competitive and efficient. The profit earned by banks is of particular importance for the survival of this type of industry. The resilience of

the banking sector depends mostly on performance of the banking industry (Kendall, 2012).

Profitability determinants are researched empirically, although the definition of profitability varies from study to study. Regardless of the methods of calculating profitability, many financial studies has shown that the capital ratios, loan loss provisions and operating performance are by far the most key considerations of increased revenue (Lislevand, 2012). The factors to be taken into account in this study are split into 2 groups, including endogenous (internal) and exogenous (external) variables or profitability factors.

Moreover, the financial collapse seems to have had a somewhat larger impact on the banks of advanced nations relative to the developing economies. Among the reasons that minimize the effect of the current economic crisis on developing economies, the existence of less volatile assets and fewer investments in banking, and also the presence of high capital ratios and low credit ratio savings, may be considered. In addition, the effect of the current crisis is different across emerging economies. To date, few jobs have studied the effect of the recent recession on banking productivity determinants. Most researchers have examines the relation between both the global economy and banking efficiency (Purnomo, 2017)

Prior empirical study, however, appears to have indicated a potential correlation regarding bank profitability and internally and externally determinants, such as bank assets, loan loss provisions, total deposits and inflation. This research is therefore an attempt to shed lighter on this contentious topic by reviewing more empiric literature on the opposite sides of the subject.

In conclusion, literature analysis has shown that several international research on profit determinants are concentrated in developed countries, although few

studies have been performed in developing nations to analyze the profitability of banks. Although banking success in Turkey is little to no debate in finance literature, it mainly focuses on limited and pro-inclusive controversies. At a moment when Turkey's banking system has changed significantly since the reforms began. This research will therefore modestly attempt to study the profitability of the bank and its determinants in the Turkish sense, looking at the situation in a wider perspective. For this purpose, it is expected that the concept of this thesis, including its empirical findings, could contribute to some actors.

The banks mobilize, distribute and spend much of the savings made by economic agents. As a result, their success has important implications for the distribution of resources, the expansion of the sector, industrial growth and economic development. The performance and profitability of banks also are of concern mostly at the scale of single banks, but also at the broader macro-economic level (Zhang et al., 2012).

The key role of financial sector is to direct funds from savers to borrowers. If this phase is carried out successfully, the profit will rise, the flow of funds will rise and so there will be improved quality service for customers. Even so, financial intermediation defines, among many other issues, the efficient distribution of savings and the return on savings and investments (Izadi & Dehmarde, 2012). In developing countries, financial markets and the banking system are working towards achieving this main objective. By comparison, in developing economies, stock markets are typically undeveloped and limited, so in this case banks fill the gap for lenders and depositors and maintain adequate and cost-effective transference of funds.

“There are several dimensions of banks that can be studied, but this analysis will primarily concentrate on the profitability of banks. Profitability is a reflection of how banks work, considering the climate in which they work. More precisely,

it represents the standard of bank management and stakeholder conduct, bank strategic strategies, productivity and risk management skills (Agbaeze & Onwuka, 2014). Bank profits influence the cost of capital growth in both ways, as a direct reference to capital funding and as a measure of the financial power of the bank's external investor. Financial distress reduces the bank's capacity to withstand negative shocks that would potentially impair solvency. In overall, sustainable profitability is vital to maintaining the stability of the banking system and contributes to the state of play of the financial system. As a result, the bank's success determinants attracted the attention of academic scholars as well as bank management, financial markets, and bank supervisors. Profitability determinants have been empirically evaluated even if the concept of profitability differs between studies. Despite the approaches used to calculate profitability, most banking studies have shown how the internal atmosphere of the enterprise and the external environment are the most significant impacts on profitability. The key thrust of this study therefore relates to the evaluation of both types, defined as internal and external or otherwise, of profitability variables”

Internal factors of banks profitability or profitability can be described as factors that are affected by bank managerial decisions. Such vital component would certainly have an impact on the operating results of banks. While quality assurance can lead to good banking results, it is difficult, if not impossible, to measure the efficiency of management directly. In fact, it is implicitly presumed that this quality will be expressed in the output of the service. As such, it is not uncommon to look at the banking results in terms of the financial variables listed in the financial statements, such as the balance sheet and the statement of revenue (Kraakah and Ameyaw, 2010). External determinants of bank profitability are variables outside the control of banking management. They reflect events beyond the reach of the bank. Management may, however,

predict changes in the external environment and try to place the organization to profit from the expected developments. Macroeconomic and financial structure considerations are the two main components of external determinants (Kraakah and Ameyaw, 2010).

In the context of the conversation referred to above, the purpose of this study is to examine the factors affecting the financial health (profitability) of commercial banks in Turkey.

1.2 Research Problem

The financial system is commonly believed to play an important role in the country's growth and economic development (Claessens and Hore, 2012). "The value of the efficient financial sector lies in the fact that it allows for the mobilization of internal capital, the generation of savings and investment in the most key activities. In reality, it is the mechanism through which a country directs its most profitable and efficient sectors to the most economic capital that will carry development to the future. The key role of the financial system is not only to transfer funds from depositors to investors, but also to ensure that funds are allocated to sectors that are most beneficial for the growth (Lindblom, Olsson and Willeson, 2011). Banks are the most relevant financial intermediaries in most sensitive economies with a range of service packages. Economics with a profitable banking industry are better able to cope with negative shocks and lead to the stability of the financial system (Athanasoglou, Brissimis and Delis, 2008). It is therefore necessary to understand the factors that actually influence the profitability of the banking sector. The financial sector of Turkey, like most developed countries, is dominated by the banking industry. The banking sector currently accounts for 90.4% of the assets of the financial system and 91.7% of GDP of the country (Turkey Bank, 2014)"

“A large number of studies were performed in the field of profitability of banks and their determinants, considering the significance of this field at international stage. They checked that there is a clear correlation between profitability of the commercial bank industry and its internal and external determinants (Bourke, 1989; Rajan and Zingales, 1998; Eichengreen and Gibson, 2001; Meyer, 2002; Letenah, 2009; Jorgensen, 2011; Melkamu, 2012). Although several studies have conducted studies in this field, profitability determinants have been at the center of debate for a long time and are still an unsolved topic in financial literature. Indeed, the debate regarding profitability determinants is attributable to the fact that these determinants are complex from time to time and differ with the nature of the company's operations from one country to another (Flamini et al., 2009; Ommeren, 2011)”

“In summary, the results on the profitability determinants of the banking industry are not widely acknowledged. Since countries vary from one another in their economic structures, financial systems, political systems, and operating environments. Thus, the analysis will be a cautious attempt to examine empirically the primary profitability determinants of all Turkish commercial banks, taking into account relevant banking, industrial and macroeconomic factors in the period 2009-2014. The period of time 2009-2014 has been chosen because only after 2009 bank data can be considered homogeneous. To this end, consultative variables such as bank size, asset management, credit risk, asset liquidity, operating performance, equity ratio, cost of funding, concentration, economic activity, inflation and exchange rate are considered to be theoretically responsible for assessing financial performance. The scope of which also has been reinforced by the reactions of the finance directors to the interviews. While this number of empiric studies in this field is growing day by day, adding to the theory of profitability, most of them tend to examine

developed economies, and less so in developing economies such as Turkey. Thus, the gap in literature can be filled between these researches”

1.3 Objective of the Study

“There are several facets of banks that can be analysed, but this analysis focuses primarily on the profitability of banks. Profit represents the manner in which banks work, considering the climate in which they work. More precisely, it represents the standard of bank management and stakeholder conduct, the bank's strategic strategy, productivity and risk assessment capabilities (Aburime, 2007; Songul, 2013). Earnings impair the bank's capital expansion costs both as a direct contributing factor to investment capital and as a measure of the external investor's assessment of the bank's potential financial strength. Furthermore, even if profitability is high, low performance is caused by a weakening of the bank's capacity to withstand negative shocks that will ultimately impair solvency. Generally, resilient and productive advantages are essential to preserving the integrity of the banking system and contributing to the state of affairs of the financial system. Bank output determinants thus caught the attention of academic study, as well as bank management, financial markets, and bank supervisors. In this scope, the primary aim of this study is to recognize internal and external factors (specific to industry and macro-economic factors) which affect the financial performance of all listed commercial banks in Turkey”

The study has several specific objectives as follows:

1. "To assess and analyze the degree of impact of specific bank factors (internal determinants) on the profitability of the commercial banks industry in Turkey.
2. To check the effects of external determinants (both industry and macroeconomic) on the profitability of commercial banks.
3. To identify the behavior of the Turkish banking sector's market structure over the past decade.
4. To identify the significant benefit determinants of all commercial banks operating in the country through special empirical analyzes.
5. To make an empirical analysis at the bank-level level and compare with the findings as a whole.
6. Make recommendations about key profitability principals based on empirical findings"

1.3.1 Research Question

To provide answers to the broad objective of the research described above, they are adapted to the following research questions:

1. "What are the determining factors affecting the Bank's ROE and ROA in Turkey?
2. What are the internal determinants of profitability in commercial banks, in the case of Turkish banks?
3. What are the external (specific industry and macroeconomic) determinants of profitability in the case of all Turkish banks?
4. How much influence have these factors (specific banking, industry and macroeconomics) on the profitability of commercial banks"
5. How do research results appear when commercial banks are divided into groups?

1.4 Research Benefit

“Taking into consideration the main goal of this thesis, it is anticipated that it would provide empirical proof of the profitability of all commercial banks in Turkey. In addition, it is believed that modestly many parties can benefit from the results that will emerge from this study and, as a result, the following parties are:

Management: Management is involved in defining progress and deficiency measures for banks to take the appropriate steps to boost the efficiency of the financial institution and to resolve the right decisions.

Government: Government is interested in understanding which financial institutions are functioning effectively or are failing to take the appropriate steps to prevent a crisis of bankruptcy in these institutions.

Investors: shareholders are involved in these studies in order to protect their assets and steer their assets to the best possible investment”

“**Consumers:** buyers are keen to know the ability of commercial banks to deposit so even though they position their reserves on the basis of the bank's key measures. This research can play a modest role in bringing to light / better understanding what determines the profitability of financial institutions, especially commercial banks in our country. Furthermore, this research could be of significance in offering a decent foundation for financial institution managers, business professionals, business opportunities and decision makers. In addition, this related study will theoretically contribute as a move towards further studies in this field”

1.5 Study Limitations

The first drawback of the thesis is that, while there are several variables influencing the profitability of banks, the analysis will concentrate only on eleven such variables as bank size, asset management, credit risk, asset liquidity, and operating performance, capital ratio, funding costs, concentration, economic growth, inflation and exchange rate. Second, answers to unstructured interviews may be interpreted subtly by means of explanations using words rather than figures, which may lead to a subjective analysis of the results.

1.6 Structure of the Thesis

The thesis is presented in five chapters. By concentrating on the purpose of the research, the remainder of the research is structured as follows.

“Chapter One: it offers a historical view of the research, highlights the problem, describes the objectives and aims of the research and the beneficiary that can be modestly developed. Chapter Two: review of the literature, which includes conceptual work in terms of profitability, total theories of impact on financial performance, profit determinants, past studies in this field and, finally, defines the knowledge gap. Chapter Three: This chapter sets out the results, describes the tools and explains the methodology used for the analysis. It also describes and illustrates the means of calculating the gain, as well as the internal and external variables selected for the analysis. Chapter Four: The results of the different approaches used are set out in the chapter. Initially, profitability (between both the two indicators: ROA and NIM5) was calculated by considering all banks together and then, in the second quarter, the profitability of banking institutions was evaluated. CHAPTER Five: This chapter eventually discusses the findings of the study by presenting the related conclusion”

CHAPTER 2

LITERATURE REVIEW

2.1 Theoretical Profitability Analysis

According to Sanni's findings (2006), "profitability represents a situation in which income produced over a given duration exceeds expenditure incurred at the same time interval for the sole purpose of generating income. Where the necessary income and expenditures are necessary to be incurred within the same timeframe and the income is a direct consequence of the expenditure. The value of profitability is connected to the fact that it is the main objective of a company. If profit is thought to be an unattainable goal, the best option would be to get out of business. Financial performance in the banking industry is a topic that has gained a great deal of publicity in the world in recent years. However, it cannot be left without noting the fact that most of the studies have been conducted in advanced nations and very few studies have been conducted in underdeveloped nations.

Christensen, Jorgensen and Lau (1970) were the first academics to understand versatile benefit functions. However, when measuring the versatile benefit function, they used the square technique or variations of the least square method, wherein the error terms were believed to be symmetrically allocated with the mean zero (Kumbhakar and KnoxLovell, 2000). However, it can be

argued that the validity of their study has been undermined by the assumption being made about the propagation of the term of error.

Duca and McLaughlin (1990), among many other things, suggested that improvements in profitability of banks are primarily due to changes in credit risk, as increased exposure to credit risk is generally correlated with a lower profitability of the business. This triggers a debate not on the amount, but on the quality of the loans made.

Molyneux and Thornton (1992) have been the first to investigate the determinants of bank profitability in a variety of countries. During the period 1986-1989 a sample of 18 European countries was used. They have found a positive association between equity returns and interest rate levels in each region, banking consolidation and possession.

Berger (1995) investigated the relationship between the expected return on equity and the equity ratio of US banks for the period 1983-1992 and found a positive relationship between the two variables.

Angbazo (1997) analyzed the net interest margin in US banks for the period 1989 to 2003 and found that management performance and profitability were positively associated with the profitability measure.

Bourke (1989) and Jiang et al. (2003) found that their research found a negative relationship between expenditure and benefit, which indicated that profitable banks could operate at lower costs.

Miller and Noulas (1997) proposed an oblique association linking high-risk loans and profitability, concluding that the higher the accumulation of unpaid loans, and the lower the profitability.

Demirguc-Kunt and Maksimoviq (1998) suggest that perhaps the level to which distinct legal and financial factors have an influence on the earnings of the bank is closely linked to the size of the firm.

DemirgucKunt and Huizing (1998) used data from eighty-nation banks in 1988-1995 and examined how banking attributes and the commercial bank environment had an impact on interest rates and bank returns. And during analysis of the two measurements, this research presented a breakdown of the revenue impact on a large number of deciding factors influencing the actions of the depositor and the borrower, as opposed to the actions of the shareholders. The findings indicate that the macroeconomic and regulatory factors have a substantial effect on profitability. Low market concentration levels have led to margins and reduced earnings, while the impact of foreign ownership differs between developed and developing countries. In particular, international banks have higher margins and income relative to domestic banks and other financial institutions, while the reverse is true in developed nations.

Guru et al. (2002) examined the determinants of bank profitability in Malaysia. A sample of 17 commercial banks was used during the period 1986-1995. The determinants of performance were classified into two main categories: internal determinants (liquidity, capital adequacy and capital management) and external determinants (possession, ownership structure and economic conditions). The results revealed that cost-effective control was among the most significant ways to understand bank profitability. Among macro-economic indicators, the high interest rate was correlated with a low level of profitability of banks and inflation was shown to have a beneficial impact on banking efficiency.

Cooper (2003) means that greater in the credit risk can reflect changes in the health of the bank's loan portfolio that affect the performance of the institution.

Bikker and Hu (2002) and Goddard et al. (2004) connect the size of the bank to the equity ratio of the assets, arguing that larger capital ratios embodied the security and stability of the banks as well as capital growth, and that profitability increased because fairly big banks increased capital in a less costly way, making them extra profitable.

Bikker (2002) has shown, in his research that diversified banks in Hong Kong seem to be much more profitable. As banks are more diverse, they can produce revenue sources, depreciated dependency, which is easily affected by a weak macroeconomic climate.

Guru et al. (2002) and Naceur (2003), Malaysia and Tunzi respectively, established a positive relation among profitability and expenditure, arguing that banks are able to spend their total spending on borrowers and lenders at reduced deposit rates and/or higher lending assets.

Demirguc-Kunt and Huizinga (1999), Bashir (2000), and Jiang et al. (2003), in their profitability research findings, have come to an important conclusion on the connection between the rate of income tax and profitability. There is a good relationship between the variables of tax and profitability. Since the corporate tax rate is not an option for banks, the bank's management must be able to distribute its portfolio to mitigate its tax burden. Since customers identify with an inelastic demand for banking services, most banks are able to pass on the tax burden to consumers.

Abreu and Mendes (2002) examined the effect of particular banking factors on the profitability of banks in four European economies covering the period 1986-1999. They discovered that well-capitalized banks had little financial risk. Operational costs had a favorable relationship of behavior.

Jiang et al. (2003) studied the profitability of banking sector in Hong Kong throughout 1990 and 2002, with empirical findings showing that both basic

banking and macroeconomic variables are main determinants of financial performance. With respect to macroeconomic factors, real GDP growth, inflation and real interest rates have had a positive effect. On the other hand, the scale, measured by loans or deposits, had such a significant impact on the profitability, indicating that, on average, larger banks had lower RAOs than smaller banks. The output of this research has shown that a profitable banking sector is sufficient to withstand adverse economic conditions and lead to the performance of the bank.

Koeva (2003) presented recent research evidence on the effect of economic liberalisation on the financial performance of commercial banks in private banks in India. The study centered on operational examination and the cost determinants of bank intermediation with profitability during the liberalization period. Empirical findings indicated that the type of ownership had a major impact on certain performance metrics and that the growth seen in competition throughout financial liberalization was correlated with reduced intermediation efficiency and profitability of Indian private banks.

Goddard et al., (2004) research the viability of the European banking sector. The evidential study was performed in six European countries: Denmark, France, Germany, Italy, Spain and the United Kingdom (665 banks in total) and found that the relationship between the equity ratio and the performance (ROE) was positive.

Staikouras and Wood (2004) investigated the determinants of performance of 685 European banks. The research focuses on variables such as credit risk, capital adequacy, interest rate, operating performance, bank size, GDP growth rate, and gross per capita income for each EU nation. The researchers concluded that the bank's capital adequacy and scale had a positive impact on bank profit (ROA) while the credit risk had a negative impact on the profitability

of banks. As for the macro-economic variables, interest rates had a positive impact, while GDP growth had a negative effect on the profitability of the banks.

Chantapong (2005) examined the success of domestic and foreign banks in Thailand between 1995 and 2000. In both banks, they found that they had reduced their exposure to credit and during crisis years and steadily increased their earnings and during following the financial crisis period. Findings have shown that the profitability of foreign banks is higher than the average profitability of domestic banks in the post-crisis period, with the gap between the profitability of foreign banks and the profitability of domestic banks decreasing, indicating that the financial reform program has shown some beneficial outcome.

Athanasoglou et al. (2005) studied the performance of Greek banks throughout 1985 and 2001 and observed that credit risk and operational costs had a negative effect on profitability, although inflation was positively linked to financial efficiency.

Athanasoglou et al. (2006) analyzed the profitability activity of banks in south-eastern Europe during the period 1998-2002. Empirical findings indicated that growing bank profitability in those countries needed new standards of risk management and operating performance, which, descriptions given in the report, affected income. The important finding is that the market concentration effect is positive, the macroeconomic variables are mixed. Athanasoglou et al. (2006) applied a dynamic data panel model to research the performance of Greek banks over the period 1985-2001 as well as the results showed that the regulatory framework was not totally competitive. The findings also showed that Greek banks are well-capitalized, although the nature of the sector seems not to have a major effect on profitability”

2.2 Previous Empirical Studies

The goal of the research by “Athanasoglou et al. (2005) is to investigate the influence of bank-specific, industry-specific and macroeconomic determinants of bank profitability, using an analytical framework that integrates the conventional Structure-Conduct-Performance (SCP) hypothesis and to apply the GMM methodology to a panel of Greek banks covering the period 1985-2001. They used independent variables such as money, credit risk, efficiency, expenditure control, scale, ownership, intensity, inflation and the economic cycle. According to the empirical findings, capital is necessary to justify the profitability of the bank, and increased exposure to credit risk reduces profits. In addition, labor performance increase has a positive and important effect on profitability, whereas operational expenditures are negatively and closely related. The calculated size impact will not provide proof of economy of scale in the financial system. Similarly, the ownership status of banks is negligible in explaining profitability, suggesting that private banks do not usually make comparatively increased revenues, at least during the time under scrutiny. Furthermore, the SCP theory is not confirmed as the impact of the concentration of the industry on the profitability of the bank was found to be negligible.

Oh, B.S. Badola et al. (2006) attempted to recognize primary profitability determinants of banks in india. The analysis is based on a step-by - step multivariate regression model used in time data from 1991-92 to 2003-04. The research has shown that the explanatory power of some variables is relatively higher. These factors comprise non-interest income (NII), operating expenses (OE), provisioning and contingencies (P&C) and distributed. Nevertheless, certain variables, such as credit / deposit ratio, NPAs and company per employee (BPE) are found to have poor explanatory capacity. As a result, the factors non-interest profits, operating costs, provisioning and distribution have

a substantial relationship to net profit. Among such two variables, P&C and OE arc were found to have a negative relation. As a result, they suggest that control over non-performing assets, operating costs, provisioning and contingencies are main issues of focus for the management of public sector banks.

Kosmidou et al. (2006) analyzes the effect of bank-specific attributes, macroeconomic factors and financial regulatory framework on the income of UK commercial banks, calculated by the return on average assets (ROAA) and net interest margins (NIM). The unbalanced group data set of 224 observations covering the period 1995 to 2002 provided the basis for an econometric analysis. The results of the study show that capital strength, represented by the ratio of capital to assets, is the key determinant of the income of the UK banks. Other critical determinants are the cost-to - income ratio and the size of the bank, all of which have a negative effect on bank profits. Moreover, the macroeconomic factors, including GDP growth and inflation, have a positive effect on bank results.

The aim of the analysis carried out by Anna P.I. Vong et al. (2008) was to investigate the relevance of bank-specific as well as macro-economic and financial structure variables to changes in profitability across banks and over time in Macau by using bank level data for the period 1993-2007. They follow the data regression panel to define main factors for achieving high profitability using internal variables such as capital ratio, asset composition, investment source, asset quality, cost control, fee-based services, tax and profit margins, plus external variables such as GDP growth rate, real interest rate and inflation. They use ROA as a metric of profitability. Their findings indicate that the bank's capital strength has a positive impact on profitability. On either hand, the quality of the asset, as determined by the loan loss provisions, adversely affects the profitability of banks. Moreover, banks with a major retail network do not reach a higher degree of profitability than those with a smaller base. Finally, with

regard to the macro-economic factors, only the inflation rate indicates a substantial relationship with the output of the banks.

Dietrich et al. (2009) analyzed how bank-specific features, macro-economic variables and industry-specific factors had an impact on the profitability of 453 commercial banks in Switzerland over period from 1999 to 2006. However according Dietrich et al. (2009), this is the first econometric analysis to investigate the urgent matter of the determinants of profitability for the Swiss bank. In addition, this analysis involves the impact of variables previously overlooked, such as the growth of bank loans relative to the growth rate of the economy, the share of interest income relative to the total income, the effective tax rate, the bank age or the yearly change of the regional population in the regression model. They find that a well-capitalized bank tends to be more profitable. Also, if the amount of a bank's loan is increasing faster than the market, the effect on the bank's profitability is positive. Looking at the effect of the share of interest income on total income, they found that banks with a higher interest income share are less profitable. The bank age has no impact on the profitability of the bank. As far as geographic distribution is concerned, banks in the Lake Geneva region, Switzerland's second-largest banking sector, are marginally more profitable than banks in the Zurich region. Looking at the variables of ownership, international banks are evidently less efficient than Swiss banks. Likewise, privately operated institutions have a marginally higher profitability relative to state-owned banks. GDP growth has a positive impact on bank profitability and the effective tax rate and market concentration rate, all of which have a substantial negative impact on bank profitability.

Sufian et al. (2009) conducted a study to analyze the performance of 37 Bangladeshi commercial banks between 1997 and 2004 using unbalanced bank level panel results. They observed that the bank's basic characteristics, in particular lending strength, credit risk and expense, had a positive and

substantial effect on bank performance, while non-interest income showed a negative relationship to bank profitability. As far as bank size results are concerned, they suggest that it is not uniform across the various measures used. Empirical results indicate that scale has a negative effect on the return on average equity (ROAE) while the reverse is true for the return on average assets (ROAA) and the net interest margin (NIM).

With regard to the effect of the macro-economic indicators, they conclude that the variables have no major impact on bank profitability, except inflation, which has a negative relationship with the profitability of Bangladeshi banks. Kumbirai and Webb (2010) carried out a report on the output of the South African commercial banking sector for the period 2005-2009. They used financial ratios to calculate the profitability, liquidity and credit quality of the five major South African commercial banks. They found that the overall performance of the bank improved dramatically in the first two years of study. There is a major shift in the trend at the beginning of the global financial crisis in 2007, hitting its height in 2008-2009. This resulted in a decrease in profitability, low liquidity and a deterioration in the standard of credit in the South African banking sector.

The research by Gul et al. (2011) examined the relationships between bank specific and macro-economic features of financial performance using data from the top 15 Pakistani commercial banks over the period 2005-2009. They used the POLS approach to investigate the effect of assets, loans, equity, deposits, economic growth, inflation and market capitalization on key profitability metrics, i.e. return on assets (ROA), return on equity (ROE), return on capital employed (ROCE) and net interest margin (NIM) independently. Empirical studies have shown that both internal and external influences have a strong effect on profitability.

Sufian (2011) analyzed the bank's basic and macroeconomic profitability determinants by using the unbalanced panel data set of Korean banks for the period 1992-2003. He observed that Korean banks with such a low degree of liquidity appear to show greater revenue. In addition, increased diversification of bank sources of income into financial instruments and other fee-based activities has a positive impact. On the other hand, the effect of credit risk and overhead expenses is negative”

2.3.1 Economic Importance of Commercial Banks

“The critical role of commercial banks and the day-to-day participation of financial products in people's lives has been recognized earlier (Hughes, 2002). Commercial banks, through their working, impact the formation of the market structure between different functions such as financial intermediation, liquidity generation, credit rating and credit monitoring, resolution of asymmetric knowledge problems, improvement of monetary policy performance, economic stability, improvement of payment systems performance, financing of foreign trade and incentives.

The bank is called the financial institution, which is authorised under specific procedures and requirements, by the highest monetary authorities of the state, with the main aim of generating savings and free capital of individuals, companies, organisations, etc., by means of various types of monetary deposits (with a certain interest) and, on the other hand, by means of loans and loans. The Bank is an undertaking which performs the task of providing the clientele with means of payment and facilitates the market forces of capital while acting simultaneously as borrower and lender (Zanichelli, 1983; Rahman et al., 2007).

Heffernan (1996) describes banks (as independent commercial banks) as intermediaries among savers and borrowers involved in the economy. Banks are differentiated from other kinds of financial companies by providing deposits and loans. In addition to this concept, Bossone (2001) means that customers are a special intermediary because they have a special capacity to fund development, through lending to agents happy to take it. As such, banks handle their responsibilities, but they still lend money and thereby establish bank values. In general, brokering banks are involved in the provision of payment services to customers. Banks can also be described as Fama's Supply Transactions and Service Portfolio Manager (1980).

A financial intermediary is defined as an entity acting as an intermediary in financial markets (Beck, 2001). This is done by contrasting supply and demand in the stock market. For this reason, the financial intermediary is an intermediary among lenders and borrowers. It gives clarity to the market between its positions. Intermediates promote risk transfer as they are well placed to deal with dynamic financial instruments and markets (Allen and Santomero, 1997; Rose, 1999; Beck, 2001). At same time, commercial banks minimize the costs of involvement, which have been the costs of learning about while using markets on a daily basis. This is, of course, an important clarification of the changes that have occurred (Jan, 2012).

Nevertheless, Kareken (1985) paid greater attention to the importance of banks in controlling the payment method. At the same time, there is a special function of banks serving as subordinate borrowers' monitors in the final lender's order, where monitoring is expensive (Corrigan, 1982). Essentially, banks achieve a net social profit by using economies of scale in the production of information involved in the monitoring and compliance of borrower contracts. They of the costs of delegation by diversifying their portfolio of loans (Fama, 1985).

As borrowers hold deposits, banks can track cash flow movements and collect private information about borrowers that can then be used to provide new loans (Bossone, 2001). As a result, banks produce capital in the form of their debt claims and inject it into the lending system, which illustrates use of foreign exchange for the deposit commitments (Heffernan, 1996).

The convergence of loans and the charging of intensive information services separates banks from many other intermediaries, thus according Goodfriend (1991). In brief, banks are in the risk assessment company—they respect, take on and handle the risks. Risks that banks face involve liquidity risk, interest rate risk, credit risk, etc. The conventional risk management in the banking sector has also been interest rate and liquidity risk assessment, where bank's credit risk is typically handled by a different division or department (Heffernan, 1996). In addition to the role of financial intermediaries, banks also play an important role in the functioning of large economies.

Levine (1997) carried out a study and the result showed that the performance of bank financing may have an effect on economic development. Most significantly, financial intermediation influences net savings returns and gross capital growth (Demirgiic-Kunt, 1999). Many of the authors listed in the literature point out that the economic growth of the country is influenced by the efficiency of financial intermediation (e.g. Rajan and Zingales, 1998; Levin, 1997, 1998)”

2.3.2 Structure of Financial/Banking System

Banking reforms in Turkey have begun at a slow pace. “At the beginning of the 1990s, the country was marked by low levels of financial intermediation and money laundering problems. Described in the dictionary-See the comprehensive dictionary. The attempts to unify banking activity in Turkey with the changes and innovations of the modern historical process started with the change to the market economy in the 1990s and beyond. With the introduction of the Bank of Turkey Act in April 1992 and subsequently of the Banking System Act, the reform centered on the establishment and implementation of the two-tier banking system by the Bank of Turkey as the highest body responsible for the design and implementation of monetary policies, the whole financial system and financial institutions, primarily of an uniform sort (Tiryaki et al., 2019).

The Turkish banking system has been marked by major innovations. The increase in the number of banks in the system, the consolidation and privatization of state-owned banks, the creation of new domestic banks, as well as the increase in investment in foreign-owned banks, have given the Turkish banking system a competitive environment in which all banks have struggled to obtain a better market place. Banks are currently working on a complex market environment in which they face competitive experience and changes in consumer requirements, so recognizing the evolving needs and preferences of customers is a requirement for the banking industry (Isiksal et al., 2019).

The implementation of the Bank of Turkey Act and the Banking System Act in the Turkish republic represents the end from a single-level banking system to a two-level financial system. At the first level there is the Bank of Turkey or the exhibition, and at the second level there are other (commercial and specialized) banks. The following is a schematic overview of the banking and financial sector structure at the end of 2014, comprising of 16 commercial banks, 22 non

- banking entities, 356 foreign exchange offices, 113 savings and loan associations and 2 corporate savings and loan unions.

Both commercial and specialized banks have the main objective of their profit-making activities (given as the difference between active transaction income and passive transaction payments and bank operational costs) (Jermias & Yigit, 2019). Highly specialized trading banks perform two distinct categories of transactions: a) passive transactions and b) active transactions. In the first example, all acts in which the bank pays interest to third parties or makes expenditure from its own funds are considered. Both interest that the bank receives, fees and other revenue are included in successful actions (Kara, 2016)

Banks are expanding their business with other people's capital, making them more unique but more responsive to other businesses. Since the collapse of a bank will have an effect on a large number of people. World experience has shown that banking crises are a phenomenon that has followed and followed the growth of the financial system, and they are characterized by significant costs. As was the asian financial crisis of 1980-1982, which was accompanied by a 55% share of GDP (Haderi, 2006)”

“In 2014, the ratio of financial system assets to GDP, i.e. financial intermediation, increased moderately compared to 2013, where it is 101.4% in Turkey, increasing its share of the country's economic activity. The diversification of the financial system has been influenced by the modest expansion of the banking sector and by the rise of private investment funds. It is projected that the banking sector is greatly vulnerable to non - banking segments (insurance firms, savings and loans and non - financial institutions). These parts, nevertheless, do not present a direct risk to the banking industry. On the other hand, the exposure of the financial system to other parts of the

financial system (primarily in the form of loans and equity investment by non-bank financial institutions and in the form of funds raised from them) represents just 1% of the value of the assets at a negligible amount. Banks have a key role to play in the regulation of public assets”

2.3.3 Main Developments in the Performance of the Turkish Banking System

“As per the assessment of the various measures of the Bank of Turkey and the Turkish Banking Association, this report outlines a summary of the main advancements in commercial bank during 2014. Financially, the Turkish economy and its banking markets have seen improvement in 2014, growing liquidity, profitability and capital adequacy indicators. That being said, the intermediary operation of the banking sector remains poor and its balance sheets continue to endure from non-performing loans. Economic growth at the end of 2014 is projected to have risen by 2.42 per cent or 1.12 per cent relative to the third quarter of the same year, but global economy has also grown steadily, though at a lower rate than expected, with significant variations between regions. After the fall in oil prices, global economic activity is expected to increase but at slower rates. It is projected that the growth of domestic demand remains the key component of economic growth. Attributes such as improving confidence among economic agents, together with risk reduction premium costs and motivating money supply, have enhanced domestic consumption, although foreign demand has been weaker than perceptions. Annual inflation decreased to 0.7% in December 2014, reflecting low rising inflation from both the domestic and external economies. The financial policy of the Bank of Turkey has therefore remained stimulating throughout the year”

“The annual deficit is projected at about 5.1 per cent of GDP and is funded by 58.5 per cent primarily from domestic sources. FDI statistics indicate a net inflow of EUR 229 million, i.e. around 93% of the financial account. For 2014,

the unemployment rate has risen to 18 per cent from 17.1 per cent a year ago. It is expected that economic development will be improved, driven by domestic demand, low interest rates and credit rises, according to future forecasts. Contributing international demand to the industry. Interest rates has continued to decline, especially in the primary securities sector, in credit and banking products, as well as in the interbank market in financial markets, thanks to the relaxed monetary policy of the BoA and also the nominal value of the lira in exchange for the main currency basket. In particular, following developments in the foreign currency markets, the lira exchange rate was steady against the euro, however, on the other hand, it was depreciated against the US dollar and the currencies that followed it. The European currency is devalued against major currencies, especially the US dollar”

“At the end of 2014, the banking sector had a satisfactory degree of liquidity and return potential, but while the ratio of non-performing loans decreased, the credit risk was regarded as high and worrying. The general "foreign exchange" status of the banking industry has remedied the vulnerability to exchange rate depreciation. Amid lower rates, which influence the capacity of the bank to boost solvency, the risk of inflation will be taken into account again. The capitalization status of the banking system is also satisfactory, offering a safe protection against bank exposure to risks. Despite the rise in provisions to cover loan defaults, the financial result of the financial sector has risen considerably. In addition to the growth of the loan portfolio, the development of banking activities in financial instruments has also increased by around 8.2 per cent. Credit activity produced clear signs of recovery as part of the measures taken to repay government arrears and collateral execution, which could also include the effect of improving economic activity. On average, the loan portfolio consisted of 48% of total bank assets in 2012 and 2013, while it accounted for

about 45 % of total bank assets in 2014. Around 60 per cent of our government's total domestic debt is controlled by the Turkish banking sector”

“In the meantime, about 82% of the total assets of the banking sector consist of deposits (including lira and foreign currency deposits and private and company deposits), which are also the main financial contributors to banking operations. Banking sector deposits grew 4.6 per cent year-on-year and grew faster than the previous year (3.4 per cent), due to the fact that 60 per cent of deposits were made in December and half of them were the result of a large bank that is part of Group 3 banks. From which, of course, 73.4% of the total deposits in 2014 were obtained by Group 3 banks. The trend is that interest rates in financial institutions are lower than the higher rates of return for medium and small banks. Over the last quarter, the highest growth of about 10% was in the deposits of companies and organizations, while individual deposits started to climb steadily, with an average annual of around 2.6%. The transfer of savings from the stock market and short-term deposits to mature deposit products over a period of two years, which offers higher returns, has led to the success of deposits, primarily in the third quarter of 2014. In 2014, the paid-in capital of the banking sector rose by 3.2% compared to prior year. The capital structure continues to be dominated by international capital, which controls the capital structure, accounting for about 89.5% of the paid-in capital of the banking sector, compared to 2013 with a decrease of about 2.5 per cent”

Financial figures for commercial banks for 2014 indicate that overall financial sector assets rose by 4.8 per cent or ALL 59.4 billion, up from 3.9 per cent in 2013, or 1.7 per cent more than in the third quarter of 2014. Additionally, the loan portfolio increased by 28 billion, or 4.9 per cent, of Turkish lira. In the Turkish economy, the existence of the banking sector seemed dominant as the share of global assets increased to GDP, as seen in the table below, in an upward trend from year to year (2009-2014 study period). Also, the ratio of

loans to GDP is showing increasing trends due to increased overall credit growth opposed to GDP growth.

“The outstanding loans issued by banks to the private sector during 2014 showed the highest growth of about 17.9 billion Turkish lira or 3.1 per cent. The new loan allocated at the end of 2014 was 10 % higher than in the third quarter of the year, although the amount of new loans disbursed in 2014 was around 16.4% higher than that disbursed in 2013. Approximately 48% of it was allocated in Turkish lira, suggesting a change to local currency lending, although with slow development. Liquidity requirements were the primary factor for borrowing from individuals and companies. The supply level continues to increase, showing higher growth than the growth of non-performing loans. At the end of 2014, the ratio of non-performing loans to non-performing loans was 67.1%, compared to 65.2% in the prior year (2013). The outstanding loans extended by banks to the private industry during 2014 showed the highest growth of about 17.9 billion Turkish lira or 3.1 per cent. The new loan distributed at the end of 2014 was 10 % higher than in the third period of the year, while the amount of new loans disbursed in 2014 was around 16.4% higher than that disbursed in 2013, some 48 percent of which was disbursed in Turkish lira, suggesting a change to local currency lending, albeit with slow growth. Liquidity requirements were the primary factor for lending from individuals and companies. The supply level continues to increase, showing higher growth than the growth of non-performing loans. At the end of 2014, the ratio of non-performing loans to non-performing loans was 67.1%, compared to 65.2% in the prior year (2013). The banking sector posted a good financial result with a substantial increase comparison to 2013. Where, of course, the key factor was the increase in net interest income (where this increase is due to contraction due to negative lending performance and low interest rates in international financial markets) and the fall in supply”

The banking sector remains liquid and secure, with a capital adequacy ratio of 16.8 per cent at the end of December 2014 from 17.9 per cent at the end of 2013, so that the capital adequacy ratio is above the right applications level of 12 per cent, which is the minimum rate mandated by the Bank of Turkey. Where, of course, the exponential growth of risk-weighted assets has risen, growing by 8% on an annual basis, we can conclude that the level of capitalization is reasonable and that regulatory capital has also had a positive effect by improving the financial performance of the industry and growing capital.

“For 2014, the percentage of non-performing loans decreased to 22.8% from the prior year, which was 24.1%. The slight increase in portfolio quality was primarily due to the increase of the loan portfolio (approximated at 5% for 2014, primarily in foreign exchange), but also with the reality that the banks were more rational in eliminating the missing loan balance. Although if there is a strong level of contingency funds (provisions), this can have a positive effect on the reduction of credit risk. For the banking industry, the provision coverage ratio at the end of 2014 was 67.1 per cent, up from 65.2 per cent in the previous year, by 1.9 percent, suggesting that banks retained and/or raised the credit utilization rate for non-performing loans compared to the previous year. At the sector level, the ratio of non-performing loans to unpaid loans declined to 7.5% from 8.2% in the prior year (2013). The net debt / regulatory capital ratio also decreased at the end of 2014, primarily due to the expansion of regulatory capital. Reserve funds to cover loan defaults amounted to approximately 91.7 billion Turkish lira, a rise of approximately 4.1 billion Turkish lira by the end of 2013”

However, the share of loans with net equity issues decreased from 40.2 per cent in 2013 to 38.3 per cent at the end of 2014, suggesting an improvement

in the system's ability to recover capital losses that could result from the impairment of the loan.

The liquidity condition of the banking sector remains satisfactory, with the liquidity index hitting 40.4% at the end of 2014, an improvement of 5.7 percentage points compared to the end of last year. Liquid assets account for 31.9% of the total assets of the banking sector by the end of 2014, with an incalculable decrease during the first half of the year, but still 4.3 percentage points higher than in the same timeframe of the prior year (2013). Group 3 banks added more to this measure, which had an improved ratio of 10.8 percentage points compared to the previous year, at 37.8 per cent. The table below displays the Liquidity Assets metric and graphically displays how banking groups have moved over the decades.

The banking industry expects the direct effect of exchange rate and interest rate changes to be manageable, but is susceptible to adverse effects that could lead to unfavorable exchange rate fluctuations and interest rates on customers. Because the depreciation of the exchange rate or the increase in interest rates can harm the solvency of clients in the banking sector, especially in the business sector. The adjusted foreign currency index mismatches the vulnerability of banks to direct and indirect exchange rate threats.

“This index declined marginally to -10.2 per cent at the end of 2014 compared to the previous year, when the index was -11,1 per cent as a result of the highest rise in foreign-currency liabilities along with unfettered credit compared to foreign-currency assets. Group 3 banks were placed to "invest" foreign currency, further growing exposure to Turkish lira's currency value increase. In the meantime, Group 1 and Group 2 banks are less vulnerable to the exchange rate. The machine efficiency metric rose by 3.5 percentage points at the end of 2014 compared to the previous year, with operating income dropping by 1.3

billion Turkish lira or 2.9 per cent and operating costs increasing by just 0.8 billion Turkish lira or 3 per cent. Concentration indicators expressed through the Herfindahl Index, measured for the total assets, deposits and loans during 2014, stay unchanged, suggesting a low and steady concentration.

Annual domestic currency valued at about 0.4 per cent against the European currency and depreciated at about 3.9 per cent against the US dollar. During the same period, the nominal effective exchange rate decreased on average, indicating an annual lira appreciation of about 0.5 per cent. By the end of 2014, domestic currency was forecast at an average annualized rate of 1.7% in real terms. Below are some of the economic indicators that refer to the financial stability of the country. The total revenue for 2014 was positive, with a value of 11, 2 billion Turkish lira or 4, 6 billion Turkish lira greater than that for 2013. As the total revenue is optimistic and greater than last year, the performance of the key profitability metrics (ROE) and the return on equity (ROE) are rated at 0.89 per cent and 10.53 per cent respectively at the end of 2014”

2.4 Conceptual Framework

Both bank specific and macro-economic variables were considered in order to achieve the objective of this report. Various empirical evidence indicates that the performance of banks is affected by internal (specific financial services) and external (sector and macroeconomic) influences. This study used the income of commercial banks both internally and externally, including variables such as bank size, capital adequacy, lending, debt ratio, real GDP growth, and inflation. Thus, the relation between both the performance of the bank and its determinants is as follows:

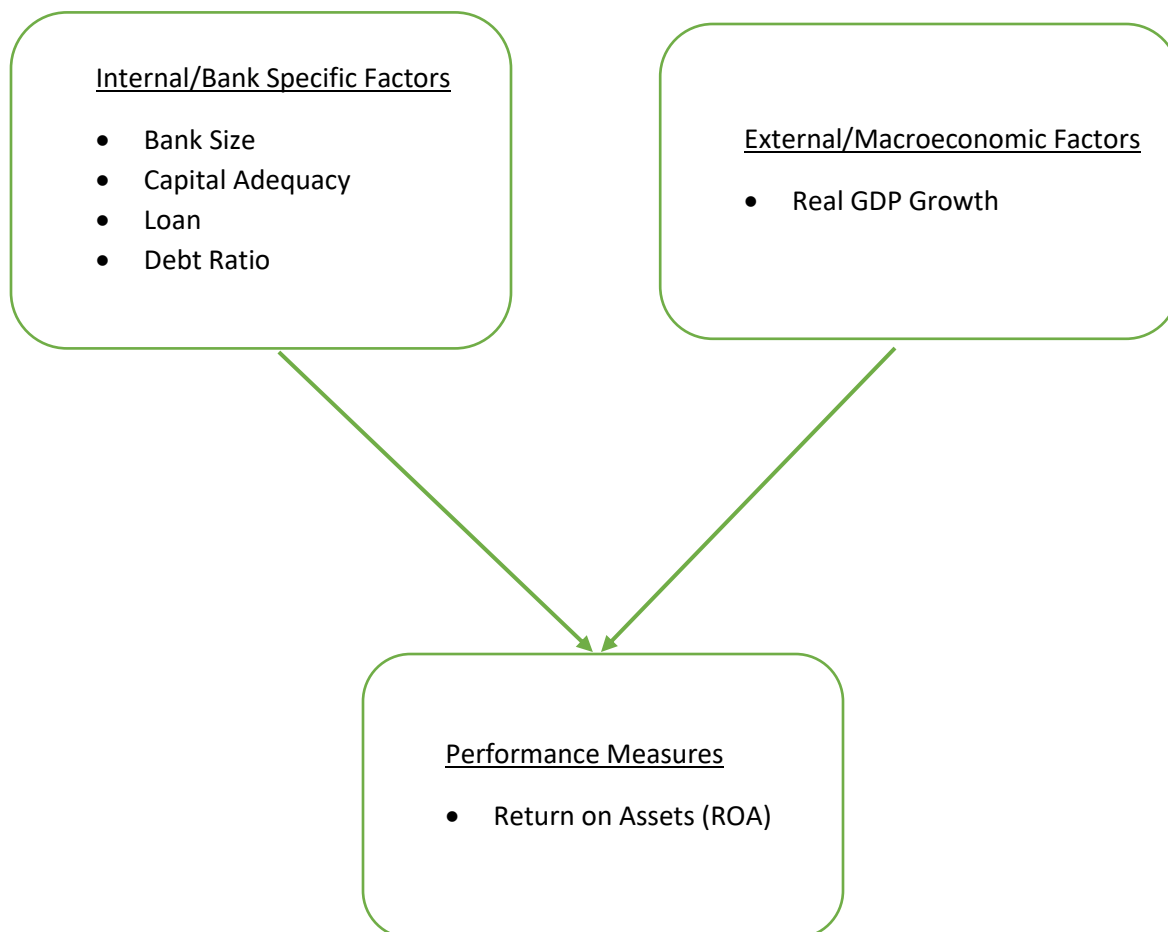


Figure 1: Conceptual Framework

1.5 Hypothesis of the Study

The following theories were also developed for examination in accordance with the general intent argument. “Hypotheses of the analysis are focused on theories related to the profitability of a bank that have been established over the years by a researcher in the banking field and past empirical studies related to the profitability of a bank. The results of the review of the literature (as set

out in the next chapter) were used to set standards for factors influencing bank profitability using the statistical cost accounting model and other macro-economic variables. Therefore, on the basis of the aim, the present thesis attempts to test the following five hypotheses:

- *HP1: There is a significant positive relationship between the assets of a bank and bank's profitability.*
- *HP2: There is a significant negative relationship between loans of a bank and bank's profitability.*
- *HP3: There is a significant positive relationship between the capital adequacy of the banking sector and bank's profitability.*
- *HP4: There is a significant positive relationship between real gross domestic product growth and bank's profitability"*

1.6 Gap from Earlier Studies

The presence of an information gap can be seen from the analysis of the related literature on the determinants of bank results. "Although studies have been conducted by Belayneh (2011), Amdemikael (2012), Birhanu (2012), Habtamu (2012) and Mohana et al. (2012) on the determinants of Turkish bank profitability, they do not all involve important variables such as capital structure and effective tax rates. Since these variables are very critical variables that can have a major effect on the success of the Turkish banking sector.

In addition to the growth and development of the Turkish banking industry in terms of number of commercial banks, total assets and resources, the branch network, growing its proximity to remote areas and continuously reporting profits of varying magnitudes, it is important to analyze the determinants of bank success in the Turkish banking sector.

In addition, a lot of research has been established to analyze the determinants of bank success, but these studies indicate different and even conflicting results” This demonstrates that there is no consensus on the determinants of bank success in the banking literature

CHAPTER 3

METHODOLOGY

In this chapter, the thesis focuses on the methodology used in this study to achieve research objectives. It involves the study design used to evaluate the financial performance determinants, the type of data used and the sampling design used to collect the data, the methodology used to analyze the data and the model specifications.

3.1 Research Design

The research used panel data from 1996 to 2017. This is because panel data has the benefit of offering more comprehensive data as it consists of both cross-section information that captures individual variability and time series information that captures dramatic shift.

3.2 Operational Definition

3.2.1 Dependent Variables

3.2.1.1 Return on Asset (ROA)

The ROA reflects the ability of the bank's management to generate profits from the assets of the bank. It indicates the income generated per birr of assets and shows how efficiently the bank's assets are used to produce revenue, although it may be skewed due to off-balance-sheet operations. This is possibly the most

significant single ratio when evaluating the efficiency and operating bank performance, as shown by the returns produced from the assets held by the bank (Ozsuca, 2012).

3.2.2 Independent Variables

The bank profitability is influenced by both internal and external influences. Internal factors are elements during which the management of banks has power, whereas external factors are factors over which the management of the bank loses control. Five independent variables are used for the purpose of this analysis. Out of these Five variables, four variables are internal, and the remaining One are external factors, assuming that they better describe the determinants of bank efficiency.

3.2.2.1 Internal Factors

The internal factor referred to as the bank's basic factors is the determinants that are primarily determined by the management and policy goals of the bank. According to Mohana et al (2012), the basic factors of the bank illustrate the difference in the policies and decisions of the management of the bank. These output determinants are the capital structure, size of the bank, diversification of sales and operating costs generated from the balance sheet and the statement of revenue.

3.2.2.2 Bank Size

Bank Size is a primary bank specific determinant of bank profitability. "In this research, the size of the bank is measured by the logarithm of total assets. Bank size is usually found to be positively linked to the profitability of the bank (Mkhaiber & Werner, 2021). One important question in the literature was that the size of the bank maximizes the profitability of the bank. In the study, almost all of the relations are related to bank size and bank profitability. Almost all of

the earlier studies provide several proofs of the size of the bank being one of the key determinants of bank profitability.

The size of the bank is the natural logarithm of total assets. It evaluates out whether size of the bank relates to the bank performance. The effect of size on banks profitability is widely discussed among scholars. Athanasoglou et al, in their analysis. (2005) and Kosmidou et al. (2006) indicates the bad impact of the size of the bank on results. The study points out that the more the size of the bank, the further challenging it is to handle. On the other side, Alkatib(2012), Yadollahzadeh et al. (2013), Weersainghe et al. (2013), Sufian et al. (2009), Hadad (2013), Masood et al. (2012) and Flamini et al (2009) found that the size of the bank had a positive effect on results. In their report, they suggest that large banks minimize costs due to the economies of scale that this brings, and that large banks may also collect capital at a lower cost.

3.2.2.3 Capital Adequacy

Is a ratio that can define the capacity of the bank to hold equity capital in adequate volume to pay financial institutions whenever they need their money and still have adequate resources to boost the bank's assets through extra credit? It calculates the location of the capital of the bank and is determined using the formula”

Capital Adequacy = Total Equity/Total Assets

3.2.2.4 External factors

External factors are variables that constitute the legal and financial context in which financial institutions work. They reflect events beyond the bank's control. Management should predict changes in the external environment and attempt to position the organization to take full advantage of the expected innovations (Anna p. I. Vong, 2008).

3.2.2.5 Real GDP Growth

GDP is among the economic expansion indicators for a nation economy calculated in terms of the monetary value of all finished goods and services produced by a country's borders around a year. Likewise, if GDP is rising faster than the population growth rate, real household incomes are projected to increase and poverty rates are decreasing, and community should increasingly have more money to invest in critical social services and infrastructure. GDP has a positive effect on bank results. According to Nassreddine and a/. (2013) a time of intense growth results in higher consumption and investment, which increases credit and thus increases the profitability of banks.

3.3 Data Source and collection Methods

Secondary data were used to analyze the determinants of bank results. However according Stewart and Kamins (1993) cited in Li Yuqi (2007), secondary sources have its own benefits. Secondary data offers higher quantity data, the viability of performing longitudinal research and the permanence of data, which means that secondary data usually provides a source of data that is both permanent and accessible in a form that can be verified reasonably easily by others. Consequently, the reliability of the data improves.

Data for bank factors involved is derived from audited financial statements, i.e. from the balance sheet and income statements of the commercial institutions. Data on bank specific factors were therefore obtained from the various banks. For external factors, however, the data was collected from the Ministry of Finance and Treasury (Berat Albayrak.

3.4 Model Specification:

3.4.1 Stationarity Test

The reason of stationarity is to certify that the achieved findings are not false. As stated by Dickey & Fuller (1979) that the when a model as a unit root it assert that the variables are nonstationary. Therefore, analyses are made to check the presence or absence of stationarity. The assessment of the FMOLS necessitates that the indicators be either serene of stationary and nonstationary variables at levels, however none of the variables should not be integrated at 2 order (Pesaran et al., 2001). Thus, we used breitung (2000) to test the order of integration. The main characteristics of these techniques are that they are primarily run at levels: 1st difference, then 2nd difference and either at constant with no trend, or at constant with trend.

3.4.2 Long-run estimation

Once the stationarity between the all the variables are confirmed the cointegration technique Kao is engaged to evade counterfeit analysis. Successively the long-run relationships between all variables are determined by means of a “single vector cointegration procedure”. The “Fully Modified OLS” of Phillips & Hansen (1990) is engaged in this thesis. The method has the feature of accomplishing asymptotic efficiency by considering the occurrence of serial correlation and to pannier the endogeneity issues amid the explanatory variables. For robustness of the analysis the Dynamic OLS established by stock and Watson (1993) is employed. Model expression:

$$ROA = \beta_{0i} + \beta_{1i}LGDP + \beta_{2i}LDR + \beta_{3i}LCAR + \beta_{4i}LSIZE + \beta_{5i}LLO + e_{it};$$

Where, LROA log return on assets, LGDP is log of economic growth, LDR is log of debt ratio, LCAR is log of capital adequacy ratio, LSIZE is log of bank size, LLO log of total loan and ϵ is the error term.

CHAPTER 4

RESULTS AND DISCUSSIONS

4.1 Empirical Results

4.1.1 Descriptive Statistic

“The descriptive statistics for the dependent and independent variables are presented below. The dependent variables are ROA. The remaining are the independent variables such as: capital adequacy ratio, loans, bank size, gross domestic product, and debt ratio. The table below present the descriptive statistics of the dependent and independent variables”

Table 1: Descriptive Statistic

	LLO	LGDP	LDR	LCAR	LSIZE	LROA
Mean	2.828504	7.587699	2.85800	6.555139	25.50373	0.552650
Median	2.832299	7.219304	2.567361	6.358163	3.783920	0.587687
Maximum	5.077323	10.54095	2.97656	9.193126	6482.000	2.293313
Minimum	-2.314992	5.346449	-1.243102	4.812745	-0.207000	-2.156755
Std. Dev.	0.747316	1.192511	0.503297	0.921418	392.4792	0.744671
Skewness	-1.453865	0.745262	-0.243937	0.990414	15.67833	-0.812993
Kurtosis	11.19399	2.904956	3.200381	3.775758	172.3344	4.556441
Jarque-Bera Probability	1004.801 0.000000	29.64965 0.000000	3.69456 0.157572	60.15114 0.000000	445965.7 0.000000	67.34005 0.000000
Sum	902.2927	2420.476	-565.3572	2091.089	11008.18	176.2952

Sum Sq. Dev.	177.5970	452.2225	81.5575	269.9858	48984692	176.3423
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Loan were highly distributed from its mean value (i.e. 2.828504) with a standard deviation of 0.747. Top and minimum values were respectively 5.0773 and 2.3149. The maximum value of Turkey's commercial bank and the minimum value were several privately held commercial banks in Turkey, such as AKBank and Ziraat Bank. Among the bank's unique independent variables, GDP was extremely distributed from its mean value (i.e. 7.5876) with a standard deviation of 1.1925. Maximum and minimum values were respectively 10.540 and 5.346.

The maximum value of Turkey's commercial bank and the minimum value were several privately held commercial banks in Turkey, such as AKBank and Ziraat Bank. As far as the scope of Turkey's commercial bank is concerned, some banks account for more than 100 percent. The mean value of the loan amount was 74.9 per cent, which indicates that the biggest chunk of the asset is funded by loans from customers with maximum and minimum values of 87.2 per cent and 52 per cent respectively.

The standard deviation for deposit volume was 7.49 per cent, revealing a high dispersion to the average by many banks in Turkey.

4.1.2 Multicollinearity

Table 2 Multicollinearity

	Correlation				
Probability	LBZ	LCAR	LDR	LGDP	LLO
LBZ	1.000000 -----				
LCAR	-0.400892 0.0000	1.000000 -----			
LDR	-0.336222 0.0000	0.078935 0.0001	1.000000 -----		
LGDP	-0.053456 0.0073	0.749311 0.0000	0.069731 0.2054	1.000000 -----	
LLO	0.736434 0.8958	-0.146614 0.6675	-0.035784 0.5469	-0.437633 0.0032	1.000000 -----

“This assumption concerns the nature of the relationship between both the independent variable. If an explanatory variable is the same linear combination of the other independent variables, then we conclude that the model struggles from complete collinearity and so can be calculated by OLS (Brooks 2008). Multicollinearity occurs in which there is a significant, but not complete, correlation between two or more independent variables (Cameron and Trivedi 2009; Wooldridge 2006). However according Churchill and Iacobucci (2005),

whenever there is multicollinearity, there may be a reduction in the amount of knowledge on the impact of explanatory variables on explanatory variable. As a result, many of the explanatory variables may be assumed not to be linked to the explanatory variable when they actually exist. This presumption makes it possible for independent variables to be correlated; they obviously cannot be completely associated. If we have not allowed any association between the independent variables, then multiple regressions would not be very useful for econometric analysis”

“However how much association induces multicollinearity is not well established. Although Masih et al, (2009) suggest that the coefficient of correlation below 0.9 does not cause serious problems with multicollinearity. Malhotra (2007) reported that there is a multicollinearity problem when the coefficient of correlation between variables is higher than 0.75. Kennedy (2008) indicates that any linear relationship above 0.7 could trigger a severe problem of multicollinearity leading to inaccurate estimate and less accurate resurrection. This suggests that there is no coherent statement regarding the degree of association that induces multicollinearity. According to Gujarati (2004), the traditional statistical approach used to assess data for multicollinearity is the study of the independent variable correlations (CC); condition index (CI) and inflation factor variance (VIF). Therefore the correlation matrix in this analysis was calculated for seven of the independent variables shown below in the table. The results of the following correlation matrix indicate that the highest correlation between gross domestic product GDP and capital accuracy ratio CAR is 0.749. Since there is no association above 0.79 according to Kennedy (2008), Malhotra (2007) and Hair et al (2006) accordingly, we can infer in this analysis that there is no issue with multicollinearity”

4.1.3 Unit Root Result

The unit root results in Table 3 of Breitung showed the variables have unit roots at $I(0)$ and are nonstationary. However, at first difference, they are stationary and hence the assumption of a unit root is abandoned. (LROA, LGDP, LDR, LCAR and LLO are all significant at 1%).

Table 3: Unit Root Test of Breitung

Variables	Level	Trend	First	
	intercept &		Difference	
	T-statistics	P Values	T-statistics	P Values
LLO	-1.06081	0.1444	-3.5619	0.0002***
LGDP	0.17162	0.5681	-4.00115	0.0000***
LDR	1.2244	0.3546	-5.78391	0.0000***
LCAR	-0.7368	0.2306	-2.0003	0.0227**
ROA	-0.8628	0.1053	-4.8743	0.0004***
LBZ	0.4682	0.3638	-4.6383	0.0005***

Table 4: Kao Cointegration

	t-Statistic	Prob.
ADF	-1.926037	0.0039
Residual variance	0.084625	
HAC variance	0.075159	

The results in table 4 suggest that there is cointegration between the series

4.1.3 Panel Dynamic Least Squares (DOLS)

Table 5: Panel Dynamic Least Squares (DOLS)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LBZ	0.082174	0.286541	0.286780	0.7760
LGDP	0.571302	0.253687	2.251997	0.0307
LCAR	-1.073562	0.333243	-3.221554	0.0028
LLO	0.785827	0.171534	4.581164	0.0001
LDR	0.277053	0.128691	2.152861	0.0383
R-squared	0.964861	Mean dependent var		0.624906
Adjusted R-squared	0.765069	S.D. dependent var		0.663955
S.E. of regression	0.321817	Sum squared resid		3.624807
Long-run variance	0.018447			

LBZ is bank size, LGDP is gross domestic product, LCAR is capital adequacy, LLO is loans, and LDR is debt ratio.

The analysis proposed that bank size has a positive impact on return on asset; this means that an increase in bank size will boost the performance and profitability of banks in turkey and that is 1 % increase in bank size will increase performance by 0.08%. This relationship highlights that the Turkish banks are able to utilize their earning assets to augment their profitability. Equally, economic growth, loans and debt ratio have positive significant impact on bank profitability. Consequently, an increase in GDP, loans and debt ratio will increase the profitability of banks in Turkey by 0.57%, 0.78% and 0.28% correspondingly. The positive association between loans and profitability can be attributed to fact that banks make most of their profits from interest income; therefore, by increasing their loan portfolios they are able to enhance profitability.

Contrarily, capital adequacy has a negative association with profitability. Thus, an increase in CAR will decrease the profitability of the banks by 1.07%.

4.1.4 Panel Fully Modified Squares (FMOLS)

Table 6: Panel Fully Modified Squares (FMOLS)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LBZ	-0.214112	0.024459	-8.753803	0.0000
LGDP	0.068553	0.014847	4.617238	0.0000
LCAR	-0.273323	0.017194	-15.89602	0.0000
LLO	0.543846	0.015750	34.52926	0.0000
LDR	3.64E-05	2.87E-05	1.269428	0.2053
R-squared	0.608925	Mean dependent var		0.578448
Adjusted R-squared	0.603568	S.D. dependent var		0.695536
S.E. of regression	0.437930	Sum squared resid		56.00046
Long-run variance	0.039487			

The analysis proposed that bank size has a positive impact on return on asset; this means that an increase in bank size will boost the performance and profitability of banks in turkey and that is 1 % decrease in bank size will increase performance by 0.2%. This relationship highlights that the Turkish banks are unable to utilize their earning assets to augment their profitability. Equally, economic growth, loans and debt ratio have positive significant impact on bank profitability. Consequently, an increase in GDP, loans and debt ratio will increase the profitability of banks in Turkey by 0.06%, 0.54% and 3.64% correspondingly. The positive association between loans and profitability can be attributed to fact that banks make most of their profits from interest income; therefore, by increasing their loan portfolios they are able to enhance profitability.

Contrarily, capital adequacy has a negative association with profitability. Thus, an increase in CAR will decrease the profitability of the banks by 0.27%.

CHAPTER 5

CONCLUSION

The thesis investigated the determinants of bank performance in Turkey from 1996-2017 using the fully modified OLS and Dynamic OLS in a panel of 15 banks. The analysis proposed that bank size has a positive impact on return on asset; this means that an increase in bank size will boost the performance and profitability of banks in turkey. This relationship highlights that the Turkish banks are able to utilize their earning assets to augment their profitability. Equally, economic growth, loans and debt ratio have positive significant impact on bank profitability. Consequently, an increase in GDP, loans and debt ratio will increase the profitability of banks in Turkey correspondingly. The positive association between loans and profitability can be attributed to the fact that banks make most of their profits from interest income; therefore, by increasing their loan portfolios they are able to enhance profitability. Contrarily, capital adequacy has a negative association with profitability. Thus, when the Turkish Central Bank reduces CAR, it provides banks with more liquidity to increase loan portfolio and consequently profitability.

5.1 Discussion and Recommendation

“The financial institutions should carefully understand the financial health of the borrower before lending and should acquire collateral of sufficient monetary value so that, in the event of default, the bank not only takes over the collateral security, but also profits from the sale of that specific transaction. This would reduce the allowance of less credit loss (bad debt) and therefore improve profitability. The scale of the bank in terms of net assets can be distributed to a certain degree, as it contributes to reduced default risk and thus lower returns, as the bank raises its reserves in two ways; debt or equity funding by the debt lending bank needs to pay interest, which is cost-effective; significantly higher assets with less earning assets tends to lower profitability. Banks may pursue the growth of the share market in order to increase their profitability, as the growth of the stock market plays a major role in the country's financial growth.

Banks should provide quality services to their clients, in particular to organizations such as, for example, the processing of payments from offices to provide the institution with a safe and risk-free atmosphere on the basis of the law-and-order situation, and to charge considerable fees, which may raise the income of banks from non-traditional operations. Banks should anticipate inflation since it gives financial institutions the opportunity to modify their interest rates correctly, leading in profits that significantly raise faster than costs, with a favorable impact on economic growth.

REFERENCE

- Abdurehman, A. A., & Hacilar, S. (2016). The relationship between exchange rate and inflation: An empirical study of Turkey. *International Journal of Economics and Financial Issues*, 6(4), 1454–1459.
<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84992398792&partnerID=40&md5=75f4094fd78f1c77b03bcb70504ee8de>
- Agbaeze, & Onwuka. (2014). Basel III and Abolition of Universal Banking Model – Implication for Nigerian Banks. *IOSR Journal of Economics and Finance*, 2(5), 01–15. <https://doi.org/10.9790/5933-0250115>
- Almfraji, M. A., & Almsafir, M. K. (2014). Foreign Direct Investment and Economic Growth Literature Review from 1994 to 2012. *Procedia - Social and Behavioral Sciences*, 129, 206–213.
<https://doi.org/10.1016/j.sbspro.2014.03.668>
- Bacha, O. I., Lahsasna, A., & Diaw, A. (2014). Public Sector Funding and Debt Management : A Case for GDP-Linked Şukūk. *Islamic Economic Studies - 8th International Conference on Islamic Economics and Finance*, 22(1), 185–216. <https://doi.org/10.12816/0004135>
- Dickey, & Fuller. (1979). Distribution of the Estimates for Autoregressive Time Series with a Unit Root. *Journal of the American Statistical Association*, 74, 427–431. <https://doi.org/https://doi.org/10.2307/2286348>
- Fukunaga, I., Komatsuzaki, T., & Matsuoka, H. (2019). Inflation and Public Debt Reversals in Advanced Economies. *IMF Working Papers*, 18(297).

<https://doi.org/10.5089/9781513521596.001>

Hassan, M. K., Sanchez, B., & Yu, J. S. (2011). Financial development and economic growth: New evidence from panel data. *Quarterly Review of Economics and Finance*, 51(1), 88–104.

<https://doi.org/10.1016/j.qref.2010.09.001>

Hassan, M. K., Unsal, O., & Emre, H. (2016). Borsa _ Istanbul Review Risk management and capital adequacy in Turkish participation and conventional banks : A comparative stress testing analysis. *Borsa Istanbul Review*, 16(2), 72–81.

<https://doi.org/10.1016/j.bir.2016.04.001>

Isiksal, A. Z., Samour, A., & Resatoglu, N. G. (2019). Monetary Policy and Exchange Rates Pre- and Post-Global Financial Crisis: The Case of Turkey. *Journal of History Culture and Art Research*, 7(5), 83.

<https://doi.org/10.7596/taksad.v7i5.1615>

Izadi, H. R., & Dehmarde. (2012). The Relationship between Money Demand Function, Performance of Monetary and Financial Policies and Forecasting the Money Demand Function in Iran. *Quarterly Journal of Applied Economics Studies in Iran*, 1(1), 165-190.

Jermias, J., & Yigit, F. (2019). Borsa _ Istanbul Review Factors affecting leverage during a financial crisis : Evidence from Turkey. *Borsa Istanbul Review*, 19(2), 171–185.

<https://doi.org/10.1016/j.bir.2018.07.002>

Johansen, S. (1988). Statistical analysis of cointegration vectors. *Journal of Economic Dynamics and Control*, 12(2–3), 231–254.

[https://doi.org/10.1016/0165-1889\(88\)90041-3](https://doi.org/10.1016/0165-1889(88)90041-3)

Joof, F., & Jallow, O. (2020). The Impact of Interest Rate and Inflation on the

Exchange Rate of The Gambia. *International Journal of Economics Commerce & Management* 8 (1), 340-349, 8(1), 340–349.

Kara, H. (2016). Central Bank Review A brief assessment of Turkey ' s macroprudential policy approach : *Central Bank Review*, 16(3), 85–92. <https://doi.org/10.1016/j.cbrev.2016.08.001>

Kendall, J. (2012). Local financial development and growth. *Journal of Banking and Finance*, 36(5), 1548–1562. <https://doi.org/10.1016/j.jbankfin.2012.01.001>

Masih, M., Al-Elg, A., & Madani, H. (2009). Causality between financial development and economic growth: An application of vector error correction and variance decomposition methods to Saudi Arabia. *Applied Economics*, 41(13), 1691–1699. <https://doi.org/10.1080/00036840701320233>

Mkhaiber, A., & Werner, R. A. (2021). The relationship between bank size and the propensity to lend to small firms : New empirical evidence from a large sample. *Journal of International Money and Finance*, 110, 102281. <https://doi.org/10.1016/j.jimonfin.2020.102281>

Nguyen, D. T. H., Sun, S., & Anwar, S. (2017). A long-run and short-run analysis of the macroeconomic interrelationships in Vietnam. *Economic Analysis and Policy*, 54, 15–25. <https://doi.org/10.1016/j.eap.2017.01.006>

Oh, W., & Lee, K. (2004). Energy consumption and economic growth in Korea: Testing the causality relation. *Journal of Policy Modeling*, 26(8–9), 973–981. <https://doi.org/10.1016/j.jpolmod.2004.06.003>

Ozsuca, E. A. (2012). *An Empirical Analysis of the Bank Lending Channel in*

Turkey. August.

- Perron, B. Y. P. (1989). The Great Crash , the Oil Price Shock , and the Unit Root Hypothesis. *Journal of The Econometric Society Stable*, 57(6), 1361–1401. <http://www.jstor.org/stable/1913712>
- Pesaran, M. H., Shin, Y., & Smith, R. J. (2001). Bounds Testing Approaches to the Analysis of Level Relationships. *Journal of Applied Econometrics*, 3, 289–326.
- Phillips, P. C. B., & Hansen, B. E. (1990). Statistical Inference in Instrumental Variables Regression with I(1) Processes. *The Review of Economic Studies*, 57(1), 99. <https://doi.org/10.2307/2297545>
- Purnomo, A. (2017). The Effect of Inflation on Foreign Exchange Rate Seen in The Islamic Finance. *Jurnal Ekonomi Dan Perbankan Syariah*, 8(1), 42–53. <http://chss.uonbi.ac.ke/sites/default/files/chss/MRP MSC FINANCE-PATRICK MUSALIA D63-65170-2013.pdf>
- Seven, Ü., & Yetkiner, H. (2016). Financial intermediation and economic growth: Does income matter? *Economic Systems*, 40(1), 39–58. <https://doi.org/10.1016/j.ecosys.2015.09.004>
- Stock, J. H., & Watson, M. W. (1993). A simple estimator of cointegrating vectors in higher order integrated systems. *Econometrica: Journal of the Econometric Society*, 42(166), 331. <https://doi.org/10.2307/2223855>
- Tiryaki, A., Ceylan, R., & Erdoğan, L. (2019). Asymmetric effects of industrial production, money supply and exchange rate changes on stock returns in Turkey. *Applied Economics*, 51(20), 2143–2154. <https://doi.org/10.1080/00036846.2018.1540850>

- Tsaurai, K. (2018). What Are the Determinants of Stock Market Development in Emerging Markets? *Academy of Accounting & Financial Studies Journal*, 22(2), 1–11. <http://ezproxy.hwr-berlin.de:2048/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=ent&AN=130914772&lang=de&site=eds-live&scope=site>
- Zhang, J., Wang, L., & Wang, S. (2012). Financial development and economic growth: Recent evidence from China. *Journal of Comparative Economics*, 40(3), 393–412. <https://doi.org/10.1016/j.jce.2012.01.001>
- Zubair, A. O., Abdul Samad, A.-R., & Dankumo, A. M. (2020). Does gross domestic income, trade integration, FDI inflows, GDP, and capital reduces CO2 emissions? An empirical evidence from Nigeria. *Current Research in Environmental Sustainability*, 2, 100009. <https://doi.org/10.1016/j.crsust.2020.100009>

APPENDIX

Appendix 1

Dependent Variable: LROA

Method: Panel Dynamic Least Squares (DOLS)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LBZ	0.082174	0.286541	0.286780	0.7760
LGDP	0.571302	0.253687	2.251997	0.0307
LCAR	-1.073562	0.333243	-3.221554	0.0028
LLO	0.785827	0.171534	4.581164	0.0001
LDR	0.277053	0.128691	2.152861	0.0383
Mean dependent				
R-squared	0.964861	var		0.624906
S.D. dependent				
Adjusted R-squared	0.765069	var		0.663955
S.E. of regression	0.321817	Sum squared resid		3.624807
Long-run variance	0.018447			

Appendix 2

Dependent Variable: LROA

Method: Panel Fully Modified Least Squares (FMOLS)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LBZ	-0.214112	0.024459	-8.753803	0.0000
LGDP	0.068553	0.014847	4.617238	0.0000
LCAR	-0.273323	0.017194	-15.89602	0.0000
LLO	0.543846	0.015750	34.52926	0.0000
LDR	3.64E-05	2.87E-05	1.269428	0.2053
Mean dependent				
R-squared	0.608925	var		0.578448

Adjusted R-squared	0.603568	S.D. dependent var	0.695536
S.E. of regression	0.437930	Sum squared resid	56.00046
Long-run variance	0.039487		

Appendix 3

Covariance Analysis: Ordinary

Date: 11/28/20 Time: 11:08

Sample: 1996 2017

Included observations: 319

Balanced sample (listwise missing value deletion)

Correlation Probability	LBZ	LCAR	LDR	LGDP	LLO
LBZ	1.000000 -----				
LCAR	-0.303368 0.0000	1.000000 -----			
LDR	-0.466148 0.0000	0.211523 0.0001	1.000000 -----		
LGDP	-0.153653 0.0060	0.749311 0.0000	0.079731 0.1554	1.000000 -----	
LLO	0.007364 0.8958	-0.016614 0.7675	-0.010490 0.8519	-0.025015 0.6562	1.000000 -----

Appendix 4

Kao Residual Cointegration Test

Series: LROA LGDP LDR LCAR LLO LBZ

Date: 11/28/20 Time: 11:03

Sample: 1996 2017

Included observations: 330

Null Hypothesis: No cointegration

Trend assumption: No deterministic trend
 User-specified lag length: 1
 Newey-West automatic bandwidth selection and Bartlett kernel

	t-Statistic	Prob.
ADF	-1.926037	0.0039
Residual variance	0.084625	
HAC variance	0.075159	

Appendix 5

Augmented Dickey-Fuller Test Equation
 Dependent Variable: D(RESID)
 Method: Least Squares
 Date: 11/28/20 Time: 11:03
 Sample (adjusted): 1998 2017
 Included observations: 277 after adjustments

Variable	Coefficien t	Std. Error	t-Statistic	Prob.
RESID(-1)	-0.247140	0.056211	-4.396675	0.0000
D(RESID(-1))	-0.077061	0.078616	-0.980223	0.3278
R-squared	0.077863	Mean dependent var		-0.026599
Adjusted R- squared	0.074510	S.D. dependent var		0.283385
S.E. of regression	0.272623	Akaike info criterion		0.245743
Sum squared resid	20.43897	Schwarz criterion		0.271909
Log likelihood	-32.03544	Hannan-Quinn criter.		0.256242
Durbin-Watson stat	0.922566			

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ETHICS COMMITTEE APPROVAL

ETHICS LETTER TO GRADUATE SCHOOL OF SOCIAL SCIENCES

1- REFERENCE: Hisham Jahwar (20193470)

I would like to inform you that the above candidate is one of our postgraduate students in the

Department of Banking and Finance. He has taken his thesis under my supervision and the thesis

titled: **DETERMINING THE FACTORS AFFECTING THE PROFITABILITY OF COMMERCIAL BANKS IN TURKEY**

• The data used in his study was obtained from World Bank Database.

Please do not hesitate to contact me if you have any further queries or questions.

Sincerely yours,

Assoc. Prof. Dr. Turgut Türsoy

Assoc Prof. Dr Turgut Türsoy

Head of Department of Banking and Finance,

Faculty of Economics and Administrative Sciences,