PERFORMANCE ANALYSIS IN TURKISH BANKING SECTOR. CAMELS APPLICATION

CANER KOÇ

IŞIK UNIVERSITY

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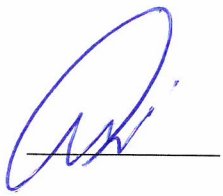
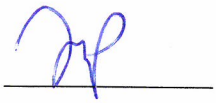
ONAYLAYANLAR

Prof. Dr. Dilek Teker (Tez Danışmanı)	Işık Üniversitesi	
Doç. Dr. İlker Kıymetli Şen	İstanbul Ticaret Üniversitesi	
Dr. Levent Polat	Işık Üniversitesi	

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PERFORMANCE ANALYSIS IN TURKISH BANKING SECTOR. CAMELS APPLICATION

ABSTRACT

After funds suppliers and funds demanders Banks are 3rd actors in the financial system. The banking sector accounts for most financial intermediaries. Fund transfer, money supply, economic and financial policies support is some of the main activities. In addition to all its duties within the financial system, it also makes a huge contribution to the employment of the country as a sector. Thus, it has importance and responsibility for all kinds of structures in households, from small to medium-sized enterprises, commercial and corporate companies, to public institutions. All structures will be affected in case of possible crisis that banks will experience. These effects lead to many crises in the country, especially the economic crisis, and may result in serious chaos environments. In order not to experience these situations, the banking sector must be under audit and observation. One of the most important actions to be taken for this audit and observation is the regular measurement of financial performance analysis of banks. CAMELS analysis is a globally accepted system for this performance analysis. Camels analysis measures banks with components of capital adequacy, asset quality, management quality, profitability, liquidity and sensitivity to market risks.

In this study, a total of 16 banks, 2 separate bank groups operating in the Turkish banking sector, 13 of which are private capital banks, 3 of which are Public Banks, were subjected to CAMELS analysis for 16 separate periods taking into account the balance sheets at the end of 2003 and 2018. According to the results of the study, among the banks, Türkiye Cumhuriyeti Ziraat Bankası A.Ş., Akbank T.A.Ş. ve Türkiye Garanti Bankası A.Ş. among the groups, it was observed that the group of Public Banks had stronger performance than other banks and groups.

Keywords: banking, finance, banking sector, financial sector, financial analysis, CAMELS, performance, performance analysis.

TÜRK BANKACILIK SEKTÖRÜNDE PERFORMANS ANALİZİ. CAMELS UYGULAMASI

ÖZET

Bankalar, finansal sistem içerisindeki fon arz edenler ve fon talep edenlerden sonra 3. Ana aktör olan finansal aracı kurumlardır. Finansal aracı kurumların büyük bir çoğunluğunu bankacılık sektörü oluşturmaktadır. Fon transferi, kayıtlı para arzı, ekonomik ve ekonomik, mali politikalara destek olmak başlıca faaliyetlerindendir. Finansal sistem içerisindeki, tüm görevlerinin yanısıra, ülke istihdamına da sektör olarak büyük bir katkı yaratmaktadır. Bu sebeple, hane halkında, küçük orta boy işletmelere, ticari ve kurumsal şirketlere, kamu kurumlarına kadar her türlü yapı için önem ve sorumluluk taşımaktadır. Bankaların yaşayacağı olası kriz durumlarında tüm yapılar etkilenir. Bu etkiler ülkede ekonomik kriz başta olmak üzere bir çok kriz doğurur ve sonucunda ciddi kaos ortamları yaşanabilir. Bu durumları yaşamamak adına bankacılık sektörünün mutlaka denetim ve gözlem altında olması gerekir. Bu denetim ve gözlem için yapılacak en önemli aksiyonlardan biri bankaların mali performans analiz ölçümlerinin düzenli olarak yapılmasıdır. CAMELS analizi bu performans analizleri için global anlamda kabul görmüş bir sistemdir. CAMELS analizi bankaları, sermaye yeterlilik, varlık kalitesi, yönetim kalitesi, karlılık, likidite ve piyasa risklerine karşı hassasiyeti bileşenleri ile ölçümlemektedir.

Bu çalışmada, Türk bankacılık sektöründe faaliyet gösteren 13'ü özel sermayeli, 3'ü kamu sermayeli toplam 16 banka ve 2 ayrı banka grubu, 2003 ve 2018 yıl sonu bilançoları dikkate alınarak 16 ayrı dönem için CAMELS analizine tabi tutulmuştur. Çalışma sonucuna göre, bankalar arasında, Türkiye Cumhuriyeti Ziraat Bankası A.Ş., Akbank T.A.Ş. ve Türkiye Garanti Bankası A.Ş., gruplar arasında da kamu sermayeli bankalar grubu diğer banka ve gruba göre daha güçlü performansa sahip olduğu izlenmiştir.

Anahtar kelimeler: bankacılık, finans, bankacılık sektörü, finans sektörü, mali analiz, CAMELS, performans, performans analizi.

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Table of Contents

List of Tables

List of Figures

ABBREVIATIONS

ATM: Automatic Teller Machine

BAT: The Bank Association of Turkey

BCC1: Banker, Charnes ve Cooper

BIS: Bank of International Settlements

BIST: Borsa İstanbul

BSA: Banking Supervision Authority

BSRA: Banking Regulation and Supervision Agency

BSRP: Banking Sector Restructuring Programmed

CB: Central Bank

CBRT: Central Bank of the Republic of Turkey

CCR: Charnes, Cooper and Rhodes

CEO: Chief Executive Officer

CMB: Capital Markets Board

CPI: Consumer Price Index

DIBS: Government Domestic Debt Securities

EBITDA: Earnings Before Interest, Taxes, Depreciation, and Amortization

EU: European Union

G-10: Group of Ten

G-20: Group of Twenty

GDP: Gross Domestic Product

IMF: International Monetary Fund

LC: Letter of Credit

TL: Turkish Lira

OECD: Organization for Economic Cooperation and Development

SDIF: Saving Deposit Insurance Fund

UFIRS: Uniform Financial Institutions Rating System

US: United States

USA: United States of America

USD: United States of Dollar

1. INTRODUCTION

In order to transfer funds, to eliminate the perception of risk for this transfer and to minimize financial risks, banks play an active role as financial intermediaries within the financial system. In the Turkish financial sector, banks have a very large share. With this share, Turkish banks are the determinant of financial policies and economy in the financial system. The periodic successes or failures experienced by the banking sector within the financial system are reflected directly to the real sector. The success or failure of the real sector directly affects the economy of the country. Therefore, it is essential that banks operating in the banking sector have strong financial performance. In order to ensure the continuity of this strong performance in the banks, an audit and analysis of their current situation must be carried out on a continuous basis.

The capital size of the banks and the strength of their financial performance are in proportion to each other. One of the main functions of banks is that they are lenders companies. As a requirement of the sector, the high rate of increase in credit balances relative to their capital negatively affects asset quality. It is inevitable that the bank, whose asset quality is falling, will be dragged into crisis within the sector. The bank, which is in an economic crisis, begins to create a problem of trust. As a result of the trust issue, savers start asking for their deposits back from the bank. Thus, banks that have a shortage of resources will be driven into bankruptcy. For this reason, supervisory institutions apply capital adequacy ratio criteria for banks operating in the sector.

The current positions of the banks must be analyzed in many ways. Timely measures and action must be taken to address potential crises. Of the analysis methods, the most important is the CAMELS model. The Model was first created in the USA in

the 1970s. In Turkey too, it is an accepted performance analysis rating system for evaluating the financial performance of banks.

1st chapter, Information about the financial system is given in the section. Definition of financial system, structure, elements of financial system and structure of financial system in Turkey are explained. In addition, the structure and types of banks forming the financial system in Turkey and the world are explained.

2nd chapter, describes the history of the Turkish banking sector. Financial regulations in the Turkish banking sector, 2000 and 2001 economic crisis periods and macroeconomic developments in Turkey are described.

3rd chapter, provides brief information on Basel capital agreements and as clauses for decisions taken in the agreement processes. However, comparisons have been made for decisions taken in BASEL committees. Finally, the results of the BASEL decisions and their impact on the financial sectors are described in this section.

4th chapter, CAMELS analysis is described. Information about the components of CAMELS analysis is given. How each component valuation is calculated is indicated which ratios are used.

5th chapter, information about literature review is given.

6th chapter, the subject, method, data and elements used are explained. The data obtained from the study were interpreted.

2. FINANCIAL SYSTEM

2.1. Definition of the Financial System

The financial system aims to make the fund offerings and demands available in the world we live in with factors such as location, quantity, maturity. This goal is most simply to bring savings together with the investor. Banks are at the top of the structures that make up the system. Other institutions that provide the existence of the structure can be described as non-bank financial institutions.

In order to create the system in this direction, it is necessary to reach the saving itself and the saving person in concrete terms. Savers can be households, legal persons, pension funds, public legal persons, etc. In relation, for the existence of the system, real or legal persons, public institutions and organizations demanding the savings of the savers are needed.

These structures bring are together the savers and demanders in time and area. Financial intermediaries aim to ensure that demand and supply work harmoniously. The structure without financial intermediaries cannot stand, economic activities, commercial activities stop, resulting in the massing of trade. Therefore, the financial system is unimaginable without financial intermediaries.

Primarily the state, local and international institutions, protect financial intermediaries and encourage them to conduct a healthy way of working. In times of crisis, central banks and other institutions make the utmost efforts to ensure that this system works effectively and healthily.

The financial system can provide the necessary funds for investments in the economy and increase the volume and effectiveness of these funds over time. The financial system has various functions in order to function effectively and healthily in the financial markets. (Erdogan, 2018: 1)

We can define the functions of the financial system that;

1- The function of being a means of payment, during the buying and selling of goods and services it provides ease of payment with assets such as money, credit cards and checks.

2- Fund to increase savings volume, less savers ' funds it allows them to achieve more savings by directing them to risky areas.

3- A non-payment instrument for the owner thanks to the liquidity provision function it makes it easier to liquidate the asset through financial intermediaries.

4- Credit utilization function, credit provided by financial intermediaries financing of various investments and needs is provided by means of its facilities.

5- Wealth accumulation function of funds in the hands of savers their investments by converting them into various financial assets, such as bonds and stocks so it allows their fortunes to increase.

6- Policymaking function to achieve the aims of the state when the economy is needed, with variables such as exchange rates and interest rates; legal to the financial system such as capital market law, banking law it is the ability to intervene with regulations and make policy.

Entrepreneurs are involved in the trading system with their capital. Every entrepreneur in the trading system is also part of the financial system. Over time, its commercial activities and business volumes continue to grow. This growth also naturally creates demand for funds. Those who will meet this emerging demand for funds are the ones who supply funds. Those who are in the supply of funds want to feel confident about themselves and their savings. The trust environment is created by intermediary institutions and organizations. In this structure, which has certain norms, those who are short of funds can continue their activities by reaching the fund they demand.

Fund surpluses are expected to be collected in areas where commercial activities are intense. Similarly, resource shortages may occur in areas where there are no profitable or intensive commercial activities.

The financial system is coming into play again in this congestion. It transfers funding from regions where there is a surplus of funds to regions where there is a deficit of funds.

The system provides financial investors with a variety of financial instruments to manage the process. Hedging, diversification and insuring are the main products of these financial instruments. Although derivative instruments have gained importance in recent years, they benefit investors, entrepreneurs and even intermediaries in the decision-making process.

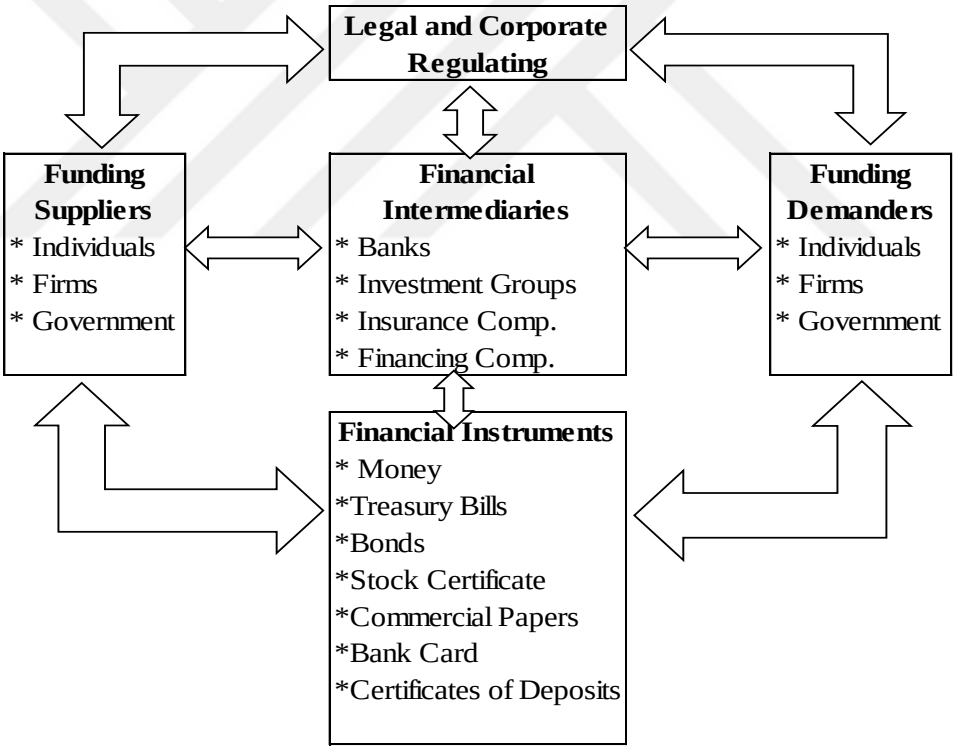


Figure 2:1 Financial System Structure

We can define the system with a sentence; financial system can help to changing savings to the investments.

2.2. Financial System for Turkey

The financial system in Turkey consists of credit institutions and financial institutions. Credit institutions include deposit and participation banks. The financial institutions include these;

1- Insurance, organizations engaged in private pension or capital market activities
2- At least one of the activities mentioned in the banking law organizations established to execute one
3- Development and investment banks
4- Financial holding companies

The institutions regulating and supervising the system are the Central Bank of the Republic of Turkey (CBRT), the banking supervision and regulation authority (BSRA) and the Capital Markets Board (CMB)

In the CBRT law, the bank's main tasks were to ensure stability in the financial system and to take regulatory measures related to money and foreign exchange markets and to monitor financial markets. On the other hand, credit institutions and development and investment banks which are considered financial institutions and financial leasing, factoring and consumer financing companies are controlled by the BRSA. Finally, the main task of the CMB, which is authorized to conduct the related regulation and supervision of securities transactions, is to ensure the healthy functioning of the capital market and the protection of the rights and benefits of investors. The weight of the banking sector within the financial system in Turkey is quite high. Accordingly, as of the end of 2012, the banking sector accounted for about 87% of the financial system. (Figure 2:2) (tcmb.gov.tr: 1)

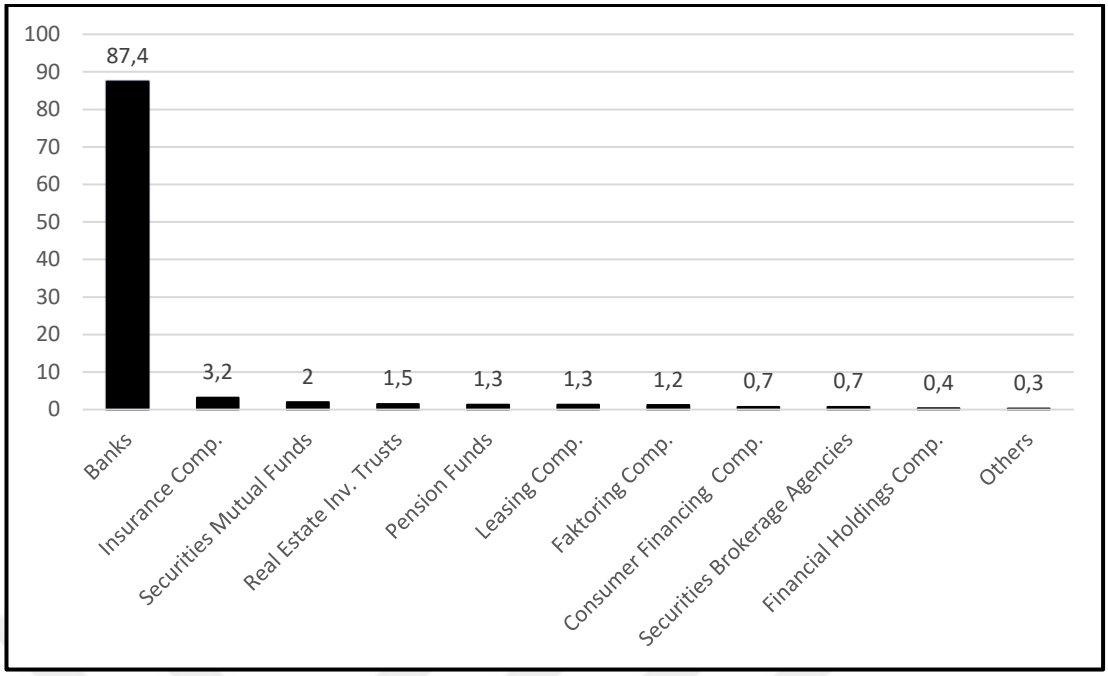


Figure 2:2 Distribution of the Balance Sheet Size of the Financial Sector

2.3. Definition of The Banking

It's coming from the Italians from the history. They call him banco, waiting turn also sailor and oarsman's loom. Origins of the word of bank, coming from these types of situation. After that, dealing on these desks, citizen calling them the banker. Firstly, Italians calling, after the Italians, the Europeans calling the dealers bankers. The bankers change the root of the trading life the citizens and the new name of these sector. Nowadays, the bank name is in the similar proximity in the different language and pronounced.

When the Jews being fired from the Spain, they met with the Italian grain merchant at the center of the Italian trading center. These community offering the newest financial solutions. When the newest application coming with Italian economy, being born the terms that; interest, stocks and insurance etc.

Bankruptcy, bills, interest, etc. banking terms first started in banks that were borrowed and loaned in the Italian Trade Centre. It is derived from the Italian words "banca rotta," meaning "bank broken", meaning bankruptcy (English, banking, broke). Because if a banker's business goes bad and his investors lose their money, the aggrieved people would break the bench where that banker made his transactions. So,

the conclusion in practical life to say that a bank is bankrupt is that the phrase “bank is broken” has been moved.

Although the statement that the word bank is derived from early examples of banking on benches is widely accepted, we cannot be certain of its accuracy. 12, admittedly. it is also possible to go further back than these descriptions, which date back to Century Italy. Another theory with the origin of the word bank is that the word comes from the Italian word “monte”. Monte means hill, stack. In the old Norse language, bankiz also meant hillock, elevation, set in front of rivers.

2.4. Basic Services and Objectives of Banking

The basic meaning of the banking is the brokerage firm for the fund demanders and fund suppliers. We can expand descript; banks are the center of the trading firms and individuals the system. The main purpose of the banks is the collecting the deposits of the cash or cash equivalents, make somebody use cash or non-cash credit, also doing other financial operations for the customers. Financial other operations are creating the side-business operations. Usually, these actions or operations are financial and social nature.

Banks get the income from these services. Although, the banks can do it at loss for the competition areas. Honestly, banks are doing that the collecting the deposits. Basically, banks want to enlarge the equities on their balance. Therefore, banks can provide different initiatives in the competitive environment for the outmaneuver. Every day, new products can provide from the banks, all of others must keep up.

Banks services and goods may present for the legal and real persons.

In the literature, explaining the sum the services and operations as follows:

1- Banks are accepting the escrows; in the return of the commission can keep the jewelry, cash, golds, negotiable instruments.
2- Collects the stocks, cheque etc. Customers which have the trade receivables give it banks.
3- Banks trade securities on behalf of their customers. (As we explained they are the intermediaries.)

4- Banks pay coupons on behalf of their customers. Banks can charge dividend vouchers of stocks issued by the state, treasury or partnerships, or interest on bonds to account for their customers.
5- Banks make coupon payments on behalf of their customers; banks may pay interest and dividend coupons, or talons of bonds, bonds or stocks issued by the government, treasury, or partnerships.
6- Also, banks have rental safety box for the customers. Store the precious goods against the commission.
7- Banks are centers of the transferring the money for the customers. They can move from one place to another.
8- Banks are the intermediaries for the cheque collect and cheque payments. So, banks bring provide the power of registered and accounted buying with the cheque.
9- Banks mediate the foreign trade transactions of their customers. Letter of credit can be counted as an example product for these operations.
10- Banks are the advisor financial subject for the customers. (use of credits, cashflows, cash injections for the firms or personal needs)
11- Banks are finding the intelligence and information for the businessmen, other relating customers and firms.
12- Banks are the provide, intermediate to the newest financial instruments which are useful for the investors.

BSRA did not go to the block or limited, they explained in a subject simply “banking services” etc. Already, economic life brought with a wide range of definitions to this issue. No clarity has been created as to which titles will be included in this definition.

Financial transactions of banks usually involve transactions on their customers and financial events on their customers.

The transactions that banks conduct on their behalf are aimed at generating direct revenue. Banks in there and customers behalf of the name,

1-Stocks, bonds, treasury bills, etc. Securities trading transactions,

2-Treasury bills, government bonds, etc. sold with a commitment to buy back after a certain period. Repurchase or reverse repurchase transactions involving public debt securities,

3-Derivative transactions involving Forward, future, option, swap and other futures are described as “financial transactions”.

It is also possible to include exchange transactions in financial transactions. However, in our opinion, it is more appropriate to classify foreign exchange transactions within the specific banking transactions.

There are many banks in World and Turkey. Each has different services with different names. It is absolute that all legal and real persons work with these banks. There is a lack of information about which bank is more advantageous for which transactions. The basic services of these banks differ from each other. If you need to examine some of these banks as titles;

2.4.1. Central Bank;

The bank of the banks. Central Bank has different structure and undertaking the tasks for the country. If you go to the web site to the CBRT can see the "maintaining and ensuring price stability”. Central banks have independent structure. They can avoid from the political factors, commentary and orientations. Thus, they have a say with sanctions and enforcements. Although, central bank of the Turkey main ensuring price stability but they have different mission have too. Initially, bank of the government. With this duty, they can borrow and collect payments on the behalf of the statement. Also, it can provide the financing to banks. Other duty coins the money, so create the own money of the country. Last duty is the controlling the supplying money, monetary policy and intervention to the market. All these duties’ correlation with others, when they change the condition one of the statics, others inevitable that he will be affected.

If we are to gather the operations and objectives of the central bank, it will try to control the money supply and achieve its objectives with the many options it uses. It tries to maintain price stability and makes various attempts to establish order in economic terms. Therefore, the Central Bank is very important for the country and

should not be interfered with. Because political considerations and the goals of the central bank may contradict each other and, when intervened, may not achieve their goals. In this case, the Central Bank, which is the Bank of the country and provides economic order, is left to its own free will to make its policies more comfortable.

2.4.2. Deposit Banking;

Their first goal is to make a profit against the services provided by trading i.e. deposit banks. Their names are called trading banks because they overlap with the profit-making situation found in trading. They are also called deposit banks. The reason for this is that it collects deposits from its customers in order to perform its services and provides financial resources to other customers in need with certain fees. This is usually done on a short-and medium-term basis.

The fact that the banks give the deposits they collect as resources to those in need also causes them to create money that is saved within the economy. Therefore, the change in credit volumes in banks causes the economy to change over the money supply. The central bank also tries to ensure the establishment of economic order by using banks for the policies it will implement. Therefore, as with all banks, commercial banks reserve the funds they collect at the rate determined by the Central Bank as a reserve for deposits. The rest of the fund also provides its clients with a variety of services.

Since the deposits they collect are owned by savers, they have a tight relationship with their customers. At the same time, the purpose of commercial banks to profit leads to competition and continuous campaigns, applications in the form of advertising. This situation paves the way for the emergence of advantageous services. If we examine the options offered by commercial banks, we can see that there are various types of money transfers, bond and stock issuance, foreign exchange transactions, safe deposit box service, cash and non-cash credit transactions, insurance products.

2.4.3. Investment Banking;

The primary objective of the type of investment banking is to provide long-term resources to the private and public sectors. That's why their preferences are high by commercial operating companies. There are different methods of collecting the required deposits of a long-term loan. One of these is by issuing long-term bonds and obtaining long-term deposits as a result, or by using equity capital. They provide loans to joint stock and corporate companies, while allowing investors to buy stocks and bonds owned by the institutions themselves. Thus, they carry out their operations such as the task of the intermediary institution.

In this case, it is the creation of capital markets that is given priority in its installation. In this way, they can market securities such as bonds and shares of equal companies in order to create deposits for them. They also offer the deposits created in the long run, accompanied by various services such as loans, to customers who wish to invest. In such initiatives, they also carry out their secondary purpose of profit making by projecting various fees and commissions. The values that institutions place importance on in terms of reputation when performing their operations are confidence and guarantee.

If we look at the services offered by investment banks, we see that they provide the options that are necessary for commercial companies to carry out their business. So institutions that perform import and export operations to companies that trade internationally which gives particular importance to the services of investment banks; and non-cash cash loan, documents, counter-guarantee, letters of credit, letters of guarantee, various insurances, bulk payment systems, DBS, is shaped like a letter of reference. Of course, there are also services such as credit card, money transfer, currency exchange.

2.4.4. Development Banking;

Every country in the world has development processes. Development banking is also used severely in developing countries, even if it is at a significant level in developing countries. Because the country has a serious role in the development phase.

Development banks support all small- and large-scale enterprises from beginning to end. They give priority to the industrial sector while carrying out their support and have many contributions to its development. Its primary objective is to provide long-term resources to all large and small companies in the industrial trade.

One of the issues that development banks pay attention to when fulfilling their roles is ensuring that resources are transferred from markets where there will be no effective use to industry. The goal here is to contribute to the development of the industry. Development banks are also very active in the capital markets. Because they also use the issuance of securities in their funds. One of its tasks is to find new sectors to invest in. It is quite difficult to enter a market that is new across sectors. Because the risk is huge, and the future is unclear. Therefore, it takes the lead by giving the necessary incentives to these areas and following protectionist policies.

Informs the customers about the new market by doing the necessary research and analysis. The investment banks ' Technical Support Service also appears here. In addition to their analysis, they provide necessary training or guidance in order to contribute to the management. Thus, while helping investors to move forward within the sector, they also guarantee themselves with their support. Because they make their customers more conscious and they get rid of their future concerns. They also support various projects, standing behind new ideas. In this case, we can say that investment banks contribute to economic volume by directing new entrepreneurs to new sectors.

In addition, investment banks operate in many different areas as well as supporting the development and investment of companies. It also provides services in the form of company acquisition, marriage, privatization, foreign exchange buying and selling, trust in investments in securities and guarantees. Therefore, investment banks generally concern the owners of the company, and although they are outnumbered in our country, they are not very visible. Because the number of branch and ATM options is less than other types of banks.

2.4.5. Participation (Interest-Free) Banking;

Participation banking has an important place in our country, although it does not have many branches. Moreover, it has gained importance not only in Turkey but also

in many countries that have accepted Islam like Turkey. The reason for this is the sensitivity of the Islamic religion to interest. When this was the case, a financial market was necessary for clients and investors with sensitivity to interest. As a result, the first example is Mit Ghamr Savings Bank, which was established in 1963 in Egypt. With this bank, it has spread to all countries that are sensitive to interest.

You will never find interest payments or income in these banks. This is because participation banks perform their operations by participating in a specific project or property. In this system, where interest is not valid, the earnings of the banks are possible by taking a share of the profit or loss obtained by the project from which they provide the source of financing. They receive these transactions as deposits from customers who want to save their savings and provide financial resources as support for projects. They provide their income from the participation share they receive from these projects. They give 20% of their share of participation to themselves and 80% to their savers.(Figure 2:3)

Because they do not use interest rate practices in their transactions, they do not include various risks. As a priority, the risks involved in interest rate change are not applicable to these banks. They can also provide various services with foreign exchange. They have also avoided various risks in this regard. That is, because they use the same currencies in foreign exchange transactions, they do not face risks such as exchange rate differences. Because they take many risks in their services, they attract the attention not only of their customers who are sensitive about interest, but also of their other customers. When we look at the breadth of services, we can see many transactions performed by other banks such as money transfers, foreign exchange purchases and sales, invoices and tax payments.

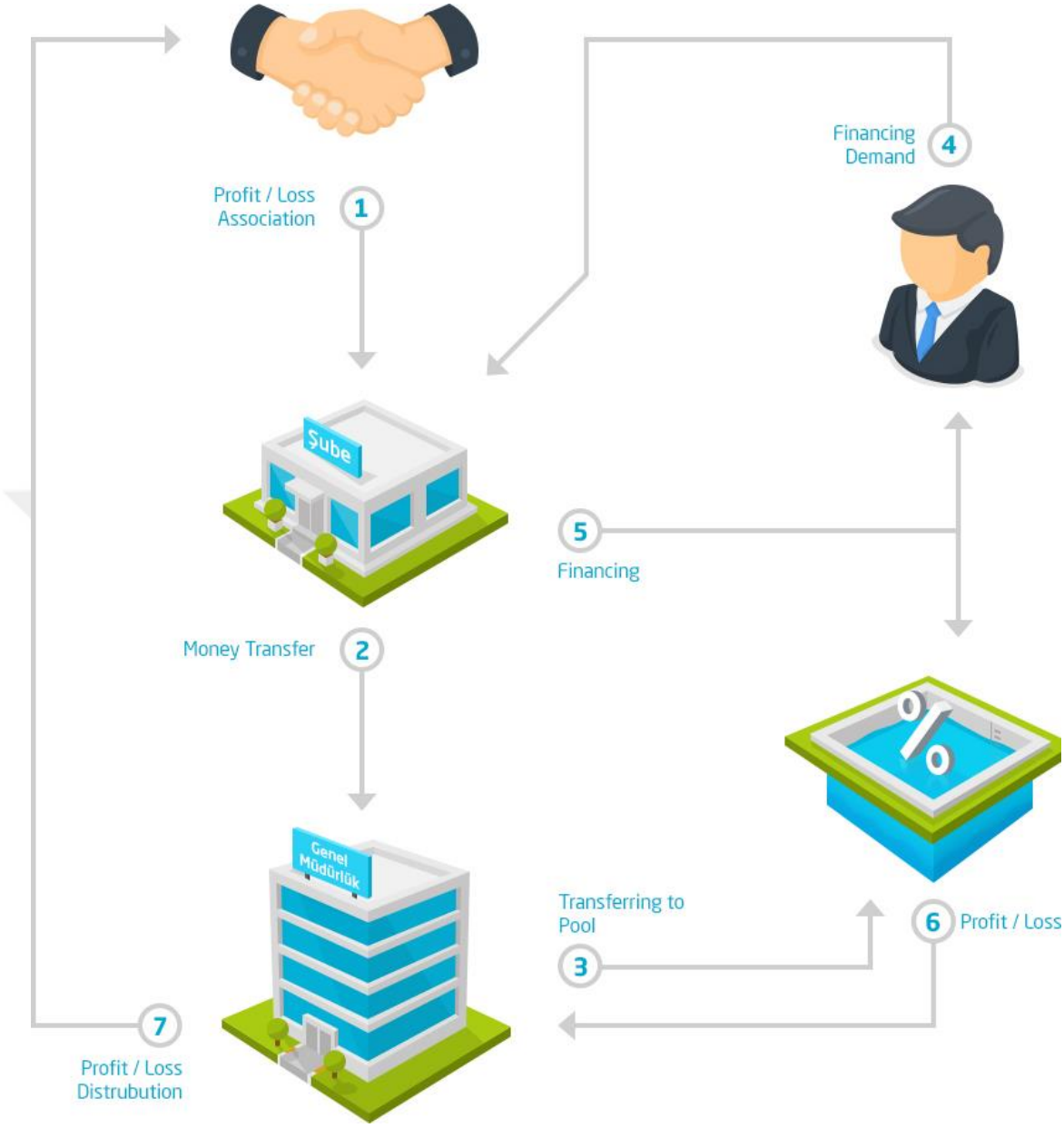


Figure 2:3 Diagram of the Operating the Participation Banking Operational Structure

(Source: turkiyefinans.com.tr)

2.4.6. Off-Shore (Coastal) Banking;

Coastal banking, also called Off – shore banking, has many advantages. We have many citizens who use this type of banking that is not available in Turkey. Coastal banking, which is used by commercial institutions, offers a lot of options that are not available to other banks. Coastal banks are types of banks established where rules such

as taxes, laws and legal regulations are loose. In general, the established centers; Bahrain, Bahama Islands, Cayman Islands, Aruba, Dublin, Malta, Singapore and Uruguay come across as.

Coastal or off – shore banks are often referred to as free zones. In free zones, it is easier for coastal banks to maintain their services as there are no options such as Customs Enforcement and taxes. I mean free zones, which are within the borders of a country, but not subject to any application. As an example of free zones for better understanding, we can say post-customs areas at airports. It enters the free zone around here and there are all the applications that are valid.

When we look at the transactions of coastal banks, most of the transactions in the banks in our country are done. It provides many services such as money transfers, cash loans, investments, deposits, bonds, leasing, factoring, forfaiting. It also has syndicated loans at Coastal banks. If we examine the property provided by these loans, the outstanding situation is that the interest rate is not fixed but fluctuated. Likewise, trust contracts are available. In other words, they perform operations such as evaluating, storing and managing the real estate and real estate owned by the customer. Looking at all this, coastal banks provide serious advantages. Especially with the careful and informed use of these banks, which are of great commercial importance, many advantages can be gained.

3. CHAPTER: HISTORY OF THE TURKISH BANKING SECTOR

Turkey, history 19. it has a well-established banking tradition dating back to the century. In recent years, the banking sector has played a leading role in the Turkish financial sector and has made significant progress by contributing to structural changes to the financial liberalization of the Turkish economy. Looking at the development of the Turkish economy, it is seen that the State plays a dominant and leading role in the construction of the financial system. After the establishment of the republic, within the framework of the establishment of a national banking sector, banks with the weight of public capital were established and these banks formed the Turkish banking sector together with existing foreign-owned banks and later established private banks. (YILDIRIM, O. (2004))

When we look at the history of Turkish banking, the development process dates to The Last periods of the Ottoman Empire. Before the Republic, 21 banks with national capital were established between 1911-1923, but they had difficulty continuing their activities in the face of the dominance of foreign banks in the sector in the credit market. As a result of the bankruptcy and liquidation of these banks, only 18 of them were able to move to the Republican period. After the proclamation of the republic, our country gave importance to economic development and started to develop national banking in order to revive industrial and commercial life. In this context, banks such as Türkiye İş Bankası A.Ş. and industrial and Maadin Bank of Turkey were established with government incentives.

Due to the negative effects of the world economic crisis of 1929-1930 on Banking, many banks had to stop their activities. The number of banks in our country fell from 60 in 1932 to 40 in 1945 and the number of branches decreased from 483 to 411. Turkey adopted the principle of status after this crisis; Sümerbank, Etibank, He established large state banks such as the people's Bank during this period.

After the Second World War, between 1945 and 1959, economic statehood was replaced by the promotion of the private sector and the acceleration of economic development. This was reflected in the banking sector and private sector banking developed considerably during this period. However, investments not made by the private sector continued to be loaded by the state with the help of the central bank's resources, as the return was not much. Deteriorating economic balances manifested themselves after 1953 as rapid inflation, foreign trade deficits and increased external debts. The need to devalue the Turkish lira arose due to rising inflation and the dollar was increased from 2.8 liras to 9 liras within the framework of the stabilization program in 1958.

The early 1960s were an important period when many banks ceased operations. Between 1960 and 1964, 15 banks ceased operations and these banks were liquidated. 1960 T.C. A bank liquidation fund was established by the Central Bank and this fund was transferred to the Savings Deposit Insurance Fund in 1983.

The restrictions imposed on banks ' loan interest rates by the “lending money works law” enacted in the late 1970s pushed banks to cooperate with institutions called “bankers” that operate on market interest rates. This situation caused a major crisis in the Turkish economy by 1982. When we examine the Turkish banking system periodically, it is seen that there was no crisis affecting the financial system until the 1980s, but instead the banks ceased their activities and were liquidated due to various economic reasons.

The banking sector was confronted with the concept of competition, which it had not encountered since the establishment of the Republic, with the decisions of 24 January 1980. The first decisions on the path of financial liberalization were related to the release of First Bank interest rates and then all interest rates in 1981. As the entry into the banking sector was facilitated by the Decree Law No. 70, it was aimed to attract some of the idle resources and the money in the informal economy to the sector through a new tool in terms of the sector. The most important factor in the formation

of this structure is the increase in the number of banks, the increase in the asset size of banks and the determination of interest rates in the market. After the 1980s, it is observed that the financial system expanded with the liberalization of the financial system and the acceleration of economic growth, the activities of intermediary institutions increased, and most importantly, the crisis in the banking system with the effect of globalization emerged as a threat to the financial system.

Liberalization of entry into the system increases competition in the banking sector and reduces the share per bank, although the share in the sector remains the same. Bankers have conducted brokerage operations between banks and fund markets rather than mediating between those who have a surplus and those who demand funds, as banks do. After a period of interest war between the banking institutions, the shift to the form of Ponzi financing (borrowing with higher interest to pay interest on borrowed money) was inevitable, which led to the collapse of the system. In 1982, this event was dubbed the "bankers ' crisis". As a result of the combination of free interest rate policy and banker bankruptcies with the practices of individual banks and their management styles, there has been weakness in the financial structure of many banks. In 1985, the public paid attention to domestic borrowing. Government Domestic Debt Securities (DIBS), which have been rapidly introduced into the market, have also been an ideal investment vehicle for banks. Due to the reflection of the rising interest rates on credit, banks instead of giving loans, turned to the purchase of DIBS and the private sector was excluded from the system while the public was financed. With the decisions that came into force in 1989, the road to convertibility to the Turkish lira was opened. The opening of the sector to international markets and especially the liberalization of the acquisition of resources from international markets has come to the agenda.

"Money markets and foreign exchange markets were established, and investors started to move out of the Turkish lira and towards the foreign currency. However, the Treasury and the CBRT were insufficient in the arrangements to complete this new formation. Caught off guard, the banking sector failed to show a regulated asset-liability management and the banks turned to foreign currency sources in a way that ignored the basic principles of liquidity management." (KUCUKKOCAOGLU, G,(2004) :18:1)

3.1. Regulations in Turkish Banking Sector

3.1.1. Regulation Meaning;

Can be described as a different form of state-economy relations regulations have the power to define not only the functions of regulation but also the functions of supervision and even orientation. Basic concepts of state and economy considering that the regulations are legal, social, economic and political different qualities are emerging to be.

Regulation term in terms of economic science; public policy or legal form of state-society-economy relations in a broad framework it is expressed as. Individuals or firms; to maintain the specified prices, not to enter the specified markets, determined production using techniques, applying determined wage policies, it means that they produce the specified goods and services, and if they fail to comply, they will be faced with the specified sanctions.

These elements, which can be defined as common characteristics of the regulations, are also used as a measure in the classification of the regulations at the same time. Structural regulations include elements such as determining the qualities of goods and services, regulating market entrances and exits and market structures, while behavioral regulations include:; they are grouped as initiatives to regulate firm behavior in the market process in areas such as price controls, advertising and quality standards.

As a result, regulation practices or regimes are defined as a setoff policy created by the state from regulatory elements and instruments and are characterized as a term with legal-institutional-sanction characteristics. Therefore, it is possible for the regulations to carry different characteristics on a sectoral, historical and country basis. Furthermore, the regulations differ in terms of their political objectives. For example, the effectiveness and equality objectives of the regulations in the field of telecommunications are heavy printing, the purpose of the regulations in the banking sector; effectiveness, security and it stands out as stability.

3.1.2. Financial Regulation Meaning;

In the definition of financial regulations, regulation-supervision-guidance functions and legal forms along with the sanction element must be considered at the sectoral level. Therefore, in its most basic form the financial regulations in the finance sector activities and processes, to be created by any authority or mechanism that has the possibility of creating sanctions rules, suggestions, or incentives to be controlled through constraints, can be defined as shaping or directing. However, when the sectoral weight of the definition is considered, the financial sector should be introduced first.

In general, financial systems are formed as banks, leasing companies, consumer finance companies and insurance companies. The concept of financial markets or the financial sector is defined as an economic term created by banks and non-bank financial units and other actors (State-individuals or households).

As a matter of fact, Banking Regulation is the determination of the appropriate criteria or ratios for banks for both structural and behavioral regulation by the regulator units. While structural banking regulations are defined as determining the characteristics of banking services, monitoring market concentration rates, regulating market entry and exit, behavioral banking regulations include regulations for determining bank behavior, service pricing, advertising and quality standards in the market process. The loosening or softening of regulation restrictions on the banking sector, especially in developed economies, is increasingly common, but the necessity of lax banking regulations for developing countries is controversial. Xie states that the negative effects of interest rates on economic growth are the main topic of discussion determining the economic policies to be followed for developing countries. However, it is argued that the regulation limitations on banking activities do not cause any problems in relation to economic growth in terms of countries that have achieved institutional development, and which are strongly protected by investors.

Financial regulations of commercial banks according to different theoretical expansions it is cited as an important factor that increases the appetite for risk-taking. Hendrickson and Nichols suggest that banking regulations will lead to dynamic macro-economic instability, hence deregulation or the removal of banking restrictions will provide increased sectoral stability.

3.2. 2000-2001 Financial Crisis and Regulation Politics in Turkey:

3.2.1. 2000 November Crisis

The November 22 crisis is a financial system-related crisis and the main reason is the banking sector. This interaction in the financial markets turned into a crisis when the acting banking sector fired the trigger. Banks ' attempts to close their open positions have caused public and private banks to engage in a flurry of borrowing. Turkey's risk premiums on borrowing interest in the external (euro) markets have started to rise, causing banks ' external borrowing to become difficult. While the demand for foreign currency increased as a result of the rapidly rising liquid needs of the banks and their pursuit of liquid with high interest rates, foreign banks began to exit Turkey by selling their Treasury papers rapidly.

In addition to the problems of the banking sector, the failure of the stabilization programmed, which was implemented under the stand by treaty signed with the IMF in 1999 and whose main goal was to lower inflation, to achieve the desired targets has shaken confidence in the programmed and accelerated the process leading to the November crisis.

3.2.2. 2001 February Crisis

February 2001 November crisis the foreign exchange crisis began as the markets, which were already vulnerable due to the November crisis, were upset by the speculative effects of the political crisis between the president and the Prime Minister. The pressure on the exchange rate increased as a result of the people who kept their TL positions in the November crisis attacked the currency in February, and in the first 10 days of the crisis, the dollar rate of the TL rose by 40%. During the two days following the crisis, the central bank intervened in the market at the expense of dissolving its reserves, but on 22 February 2001, it was forced to declare that the exchange rate index had been abolished and the floating rate was changed. In this process, Turkey faced the most important economic and financial crisis in its history due to the problems of its banking system and the translation of debt. In particular, the payments system collapsed due to the failure of state-owned banks to meet their

obligations in the money markets, and transactions in the Securities and money markets ceased.

Foreign exchange crisis 21 February 2001 crisis, basically current account high rate increases in the deficit have been caused. 2000 – 2001. Factors preparing their crisis, overvalued TL, financial sector lacking capital, open positions (Bank –Real Sector – public) , the mandate of public banks losses and the profits carried by the financial sector as a result of all these, and there has been an increase in interest rate risk.

3.2.3. Regulation Politics;

During the management process of this crisis in February 2001, a three-stage strategy was followed. In the first phase of this strategy, with the floating exchange rate regime, the top priority for the CBRT was to ensure the continuous operation of the payments system as soon as possible and to restore stability in the Securities and money markets.

In the second stage, the banks in question to eliminate the pressure on money markets and deposit interest rates, in order to find a permanent solution to the problem, Treasury, CBRT with in a coordinated manner, the duty losses of public banks with capital deficits of SDIF banks in exchange for government bonds has given. The third stage of crisis management was the Treasury's internal debt clearing process.

The November February 2000 and February 2001 crises increased the problems in the banking sector and caused some new problems in the sector. The November February crisis negatively affected the banks ' interest rate increases, and the February crisis, both interest rates and the devaluation of the TL suffered large losses. This situation necessitated the restructuring of the banking system by taking urgent measures and strengthening the capital structures of the banks. As a result of these developments, a new program called the transition to a Strong Economy Program came into force on 15 May 2001. This program primarily envisages reforms in the banking sector. In this context, the Banking Sector Restructuring Programmed (BSRP), whose main aim is to ensure the transition to an effective international competitive and robust banking system, has been announced to the public and put into practice.3

The restructuring programmed is based on four main blocks to address fundamental weaknesses in the banking sector.

- Financial and operational restructuring of public banks,
- Settlement of banks within SDIF as soon as possible,
- Providing a healthy structure of private banks that have been adversely affected by the crises.,
- The realization of legal and institutional arrangements that will increase the effectiveness of supervision and supervision in the banking sector and bring the sector to a more effective and competitive structure.

With BSRP, the restructuring of the state-owned banks was achieved, the losses accumulated over the years were liquidated and the capital structures strengthened. Some short-term debts of banks within the Savings Deposit Insurance Fund have been reset, foreign currency open positions have been closed and the resolution process has been started. As part of the financial restructuring of private banks, a domestic debt swap was carried out to close foreign currency open positions and a "bank capital strengthening program" was implemented to improve capital structures.

3.3. Macroeconomic Developments in Turkey

If we look at the first 6 months of 2019, Turkey is being followed in a phased positive period in terms of economic and financial activities. Although the domestic demand for financing increased in this period, the volume increase in exports contributed positively to the growth of the country's economy.

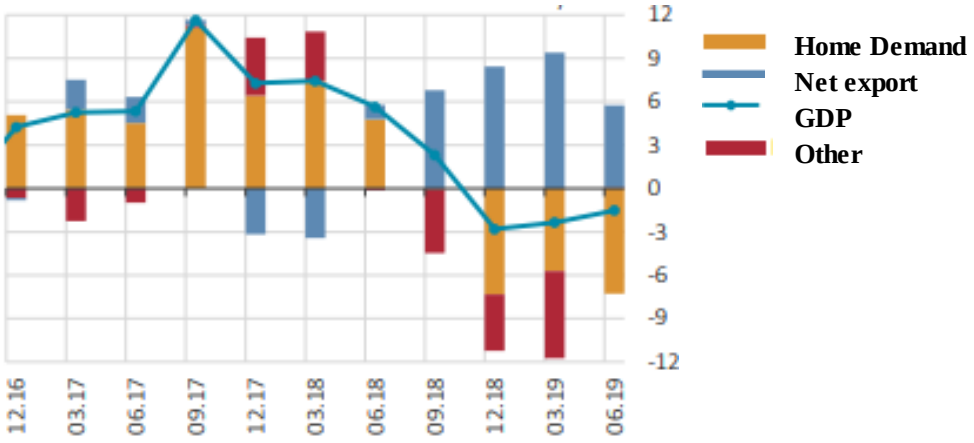


Figure 3:1 Contributions to Annual Growth in Terms of Spending

Looking at the current situation, in the remaining 6 months of 2019, progressive continued positive progress continues. The recovery in the financial environment, fiscal policies in public institutions and institutions, the downward trend in inflation and the disappearance of the perception of political and economic uncertainty are the most important factors supporting this moderate progress. On the other hand, the global economic stagnation process and political fluctuations keep the potential negative risks at home alive.

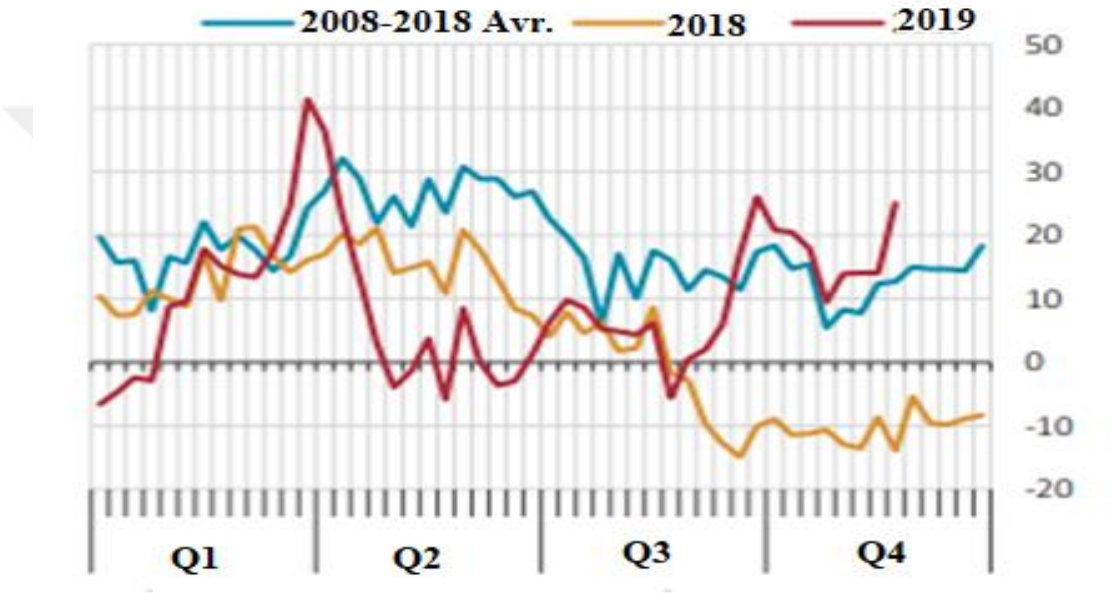


Figure 3:2 Total Weekly Loan Developments

Source: (tcmb.gov.tr).

With the moderate economic and financial progress in the country, the decline in loan interest rates, the expected improvement and the increase in loan demands in the period entered the last quarter are observed. Increased TL liquidity has supported the supply of loans to the sectors that have created capital needs. According to the weekly credit growth report published by the CBRT, credit growth has been increasing in line with historical averages since the end of the third quarter.

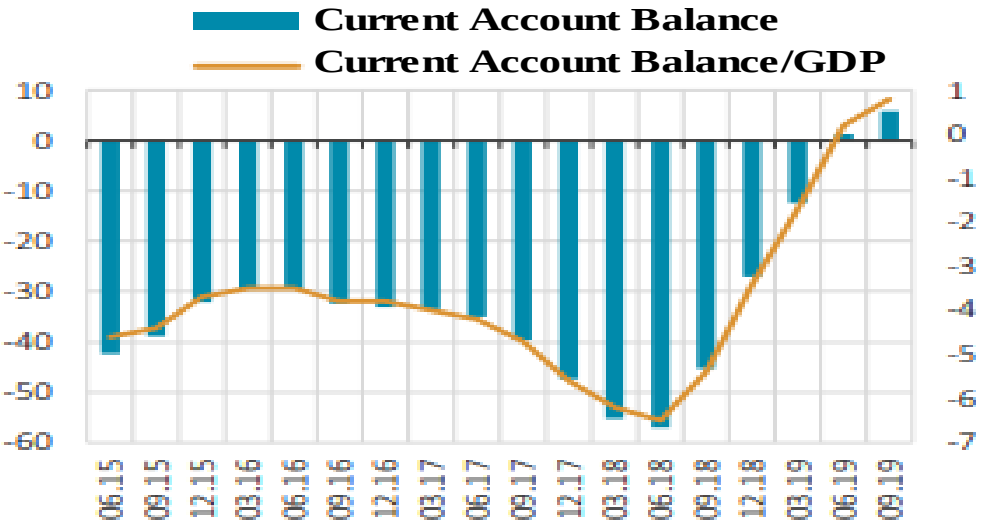


Figure 3:3 Current Account Balance for 12 Month (Billion USD, %)

Source: (tcmb.gov.tr).

During the growth trend, the fact that net exports were the most important factor in the growth caused a noticeable positive reflection in the current account balance for the last period. (Table: 3.3) despite the slowdown in growth globally, Turkey continues to maintain its actions in foreign trade. For the financing of the current account deficit, there are no additional large volume or quantity transactions in which direct investments contributed greatly in the 12-month period. With these effects, it is seen that the growth trend continues.

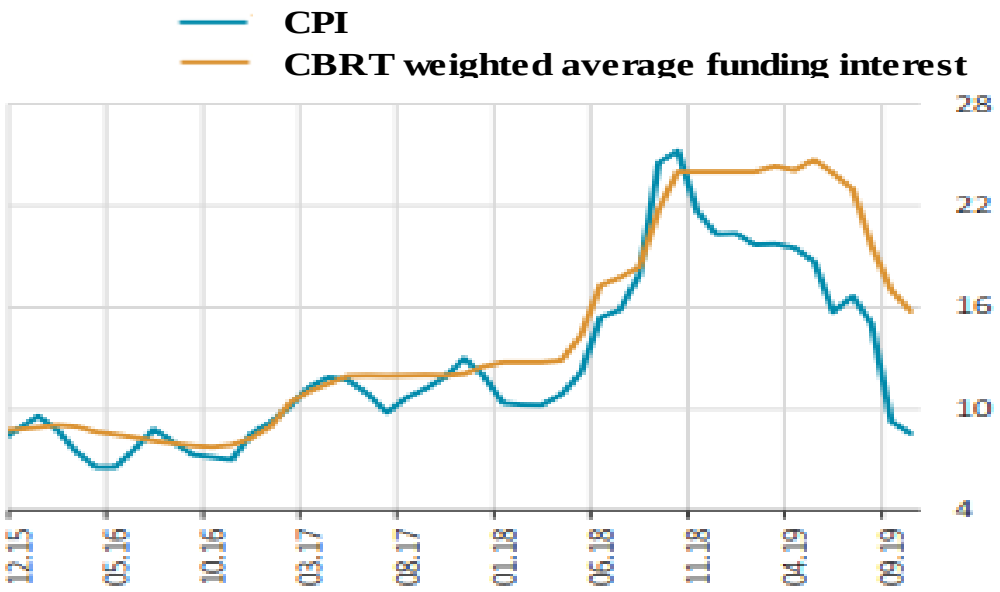


Figure 3:4 Inflation and policy interest developments

Source: (tcmb.gov.tr).

Based on the current CBRT report, the positive process in inflation continued. Consumer inflation has fallen to 8.55 percent as of October 2019. This decline in inflation, base effects from the previous year to meet domestic demand with monetary policy actions, exchange rate fluctuations, price developments in food and petroleum products has experienced a decline in expectations. In parallel with this decline in inflation, the CBRT has gradually reduced its policy interest rate since July. Reference interest has fallen from 24 percent to 12 percent since July.

With the loosening of monetary policies in financial markets globally, the financial system is showing a more positive image. With this view, the demand for the financial assets of developing countries has increased and the risk level has progressed in parallel. Still, Brexit have uncertainty of the process, trade in the financial world to be full of confidence in global financial markets and geopolitical developments like the impact of the net political win for the process of their orientation in developing countries with investors causes it to be choppy. In the last quarter, Turkey's credit rating was stable, and the exchange rate fluctuation declined. The most important reason for this is the cautious approach in monetary policy, the macroeconomic process and the improvement in expectations.

4. BASEL CAPITAL ACCORDS

Bank for International Settlements-BS, based in Basel, Switzerland, is the name of the capital compromises formed by the banking supervision authorities and central banks authorities of developed countries, called G10, formed under the Coordination of the barter bank and proposed to be made an international standard in 1988.
We can define the purposes of the committee on 3 topics,

- Ensure international cooperation of banks
- To go to common regulations and ensure security in the international banking system
- Improve auditing techniques of banks

The members of this committee are Belgium, Canada, France, Germany, Italy, Japan, Luxembourg, the Netherlands, Spain, Sweden, Switzerland, the United Kingdom and the United States. Turkey joined this committee on 1 January 2002. The two basic principles of this committee, which does not officially have a legal status, are as follows:

- No banking institution escapes from audit
- Adequate inspections

4.1. Basel-I

Facilitate the understanding of an important aspect of banking supervision across the globe with the aim of improving the quality of banking supervision and bank for International Settlement (BIS), which was created in 1974 and operates under the Basel banking supervision committee members: Belgium, Canada, France, Germany, Italy, Japan, Luxembourg, the Netherlands, Spain, Sweden, Switzerland, the United

Kingdom and 13 countries, including the United States consists of officials of central banks and Banking Supervision Authority. The committee published the capital adequacy consensus, called Basel - 1, in 1988, in order to harmonize national capital adequacy calculation methods with each other and to establish a minimum standard on this subject.

The capital adequacy regulation announced to the international platform by the Basel Committee has uniformized the systems implemented with different norms in many countries and the calculation of market risk was included in this regulation in 1996. The so - called Basel-1 regulation has been adopted by the supervisory authorities of many countries, especially the G-10 countries, and is currently in practice in more than 100 countries. The Basel-1 (capital adequacy accord) has helped strengthen the stability and robustness of the international banking system and enhance competition among internationally active banks. However, financial markets have improved significantly over time, and the world financial system has been subject to considerable economic turbulence.

In addition, Basel-1 was insufficient to fully reflect the risk levels of the banks, to prevent arbitrage due to the differences created by the regulation, to include certain risks such as operational risk, and to ensure adequate capital and risk Management in the banks or to ensure the confidence and soundness of the banking system due to the competitive disparity caused by the OECD country.

4.1.1. Basel – I Principles

The basic principle of the Basel - 1 criteria is to determine the capital obligation of the client to whom the loan is to be given in terms of credit risk according to the criteria of whether he is an OECD country. In lending, the principle of providing credit facilities in favor of those from OECD countries was valid.

With the Basel-1 criteria, the basic criteria that banks must meet to improve their resilience to crises and financial fragility and to ensure financial stability have been determined. The Basel-1 criteria recommend that banks apply certain principles when lending and that their risk-taking coefficients should not be above a certain value. At the same time, international standards have been set in the capital adequacy of banks

to provide them. Accordingly, a lower limit of 8% was placed on the ratio of capital to risk-weighted assets. The bank is obliged to hold 8 units of capital for the 100 units it creates while allocating cash and non-cash risk when allocating a resource to a specific use. In other words, the bank or credit institution that will give the loan will be able to take risks up to 12.5 times its capital. In this case, the banks or credit institutions that must allocate new loans will have to increase their capital if they have completed the risk coefficient. This obligation will naturally be reflected in the customer as the cost of the new loan. In this sense, the Basel - 1 criteria have linked risk measurement to a single measure. This situation soon became inadequate and its replacement was inevitable. The Basel-1 criteria are basically the ones stated above. It has not been possible to apply these basic principles for a long time due to the adherence to a single measure in risk management, the fact that they are predominantly capital oriented, and the lack of diversity in the classification and lending of enterprises. As a matter of fact, the Basel - 1 criteria adopted in 1988 were replaced by the Basel - 2 criteria in 2004.

Table 4:1 Capital Adequacy formula for the Basel-I

Capital Adequacy Ratio	**=**	**Equity**	**/**	**(Risk-Weighted Assets + Non-Cash Credits)**	**≥**	**8%**

4.2. Basel-II

Basel - 2 accord, risk, equity better matched with the needs of legal, risk measurement and management a more comprehensive approach by considering developments in build, and promote safety and soundness in the financial system, and to facilitate continued competition and equality of a variety of levels of complexity, especially international banks is focused on. The Basel-2 text was published in 2004 after five years of consultation, with issues relating to trading activities and the effects of double default, and an updated and comprehensive version in 2005, published in June 2006. Basel-2 envisages national practice preferences left to countries ' initiatives, rather than the one-size-fits-all approach. Thus, the effectiveness of Basel - 2 applications will be ensured by the ability of countries to determine their preferences in accordance with their national requirements. The Basel Committee is an

organization in which the public institutions of the countries concerned are members, although they do not officially have a legal status or authority. The standards and principles set forth by the committee are largely soft-law recommendations and are accepted worldwide. Most of the Basel Committee recommendations have been considered in regulatory work by the European Parliament and the Council.

"The European Parliament and by the Council of the EU on 14 June 2006, approved and published in the official journal on 30 June 2006 2006/48/EC and 2006/49/EC directives, the new member countries of the Basel Accord are applied in parallel arrangements and equity that determines how Requirements Directive (CRD) is called. The equity requirement directives contain preferences left to the national initiatives of the competent authorities of the member states, as in the text Basel – 2." (ARSLAN, 2007, ISSN 1302-1796)

4.2.1. Basel –II Principles

Mainly, the criteria of the BASEL-II gathering with 3 topics, these are

1. Meeting the minimum capital requirement,
2. Principles of review by the supervisory authority and
3. Compliance with the principle of public disclosure.

4.2.1.1. **Meeting the Minimum Capital Requirement**

In crediting a project, the Basel - 1 criteria consider three concepts and envisages the evaluation of loan demand according to their formulation. Accordingly, the concepts to be considered in a bank's lending are equity, credit risk and market risk. In order to respond positively to the customer's credit request, the value generated by dividing the equity by the total credit risk and market risk must be equal to or greater than eight percent of the bank's capital. Otherwise, the demand for credit must be met negatively. The Basel-2 criteria include a fourth clutch in addition to three grips. According to Basel - 2 criteria, credit risk and operational risk should be added to market risk. Thus, banks or credit institutions will have to be more selective during the

allocation of loans, and they will have to strengthen their own capital structures. Therefore, if these criteria are fully implemented, it will be inevitable that banks or credit institutions will increase their power or merge. Indeed, the repercussions of this are seen in our country.

4.2.1.2.**Principles of Review by the Supervisory Authority**

The Basel Committee has redefined the scope of surveillance procedures more broadly with the new regulation. The main purpose of the Basel Committee's innovation in oversight procedures is to ensure that banks carry enough capital to meet their risks and to encourage them to develop and use more advanced techniques for monitoring and managing their own risks. The regulation specifically stresses that capital is not a substitute for inappropriate risk control mechanisms, and that it is essential to strengthen risk management through methods such as implementing internal limits, raising provision levels and increasing internal controls. The committee expects local oversight and audit authorities to conduct investigations into the extent to which banks can assess their own capital needs and to intervene where they see fit.

4.2.1.3.**Compliance with the Principle of Public Disclosure**

By expanding the principles of public disclosure, the Basel Committee aimed to provide market participants with more detailed information about banks ' risk liabilities, risk assessment processes and capital adequacy.

Table 4:2 Capital Adequacy formula for the Basel-I

$$\frac{\text{Main Capital + Contrubuting Capital}}{\text{Credit Risk + Market Risk + Operational Risk}} \geq 8\%$$

Table 4:3 Comparing the Basel-I and Basel-II

Basel-I and II Comparing	
Old type editing Basel-I	**New type editing Basel-II**
It is focused on uniform risk measurement.	Internal risk management of banks requires a structure based on their methodologies, audits and market discipline.
Uniform model is applied for all organizations.	It provides a more flexible application. (Capital incentives can be applied for better risk management).
Capital requirement structure based on Risk	It is more sensitive to risk.

* Kaan Akyel," Yeni Basel Antlaşması Basel II" Active Bankacılık ve Finans Dergisi, Sayı 23, 2002, s.48

4.3. Basel-III

To address the shortcomings of Basel I and Basel II, Basel III was raised. The biggest innovations brought about by this arrangement are capital regulations, leverage ratios limitations and mandatory liquidity ratios. The publication of the amendments mentioned by the BIS under the title "Basel III" has led the public to the impression that Basel II has been completely repealed and that Basel III rules have been replaced (Cangürel, Güngör, Sevinç, and Kayci, 2010; Çelikdemir, 2011). However, Basel III does not eliminate Basel II and aims to complete its missing aspects. Accepted 12 September 2010 and started to be implemented gradually until 2019 Basel III to be implemented in 2013 and the criteria aimed at eliminating the shortcomings of Basel II the financial crisis emerging as an effective arrangement. The Basel regulations limited the risks that banks could take and imposed certain limitations on lending conditions. As a result of this, while banks aimed to keep risks under control, on the other hand, the Basel treaty affected credit channels and increased transaction costs (Arun, 2013: 51). The goals that are desired editing changes called Basel III (Cangurel, Güngör, Sevinç, and Kayci, 2010); regardless of the source, improving the durability of the banking system against financial and economic shocks, corporate governance and risk management practices, the development of the capabilities of banks, increasing transparency and providing information to the public, to increase the resilience of individual banks on the basis of regulations made by Micro, Macro shocks

to the financial system on the basis of increasing the resistance in the form of regulations was counted. The following studies have been carried out within the framework of Basel III in order to achieve the stated goals (Cangürel, Güngör, Sevinç, and Kayci, 2010); The minimum quantity of capital that is currently used to increase the quality in addition to the application and changes be made in existing Risk-Based, Non -, in other words, accounting-based minimum capital requirement, the introduction of the standard, the need for capital cycle of the economy that must be kept periods (cyclical) can be increased or decreased according to the Minimum arrangements to be made for the liquidity ratio, capital adequacy calculations to be made in relation to changes in trading accounts, relating to the calculation of counterparty credit risk Amendment.

Basel III's innovations include liquidity leverage ratio, net stable funding, additional measures to strengthen capital (such as capital buffers and leverage ratio) (Bulut, no date).

4.3.1. Liquidity Leverage Ratio

At this rate, the intended Bank will provide all liquidity needs in accordance with the liquidity stress scenario to be determined by the local authority in accordance with the time period. With this ratio, the ratio to be determined by dividing the bank's liquid assets into 2 numbers of cash outflows that are expected to occur within the 30-day period is called the liquidity meet ratio and this ratio is aimed to be at least 100% (Sahin, 2013: 156). If a Financial Group is unable to refinance its assets at the end of a certain period of time, or if it is unable to meet additional money outflow demands, and if at liquidity risk the group is forced to borrow at rates above acceptable rates, or to sell assets at a loss to meet its payment obligations, the relevant group may mention the existence of liquidity risk (SEB Financial Group, 2013).

4.3.2. Net Stable Funding Rate

A second rate was established under the name net Stable Funding Rate (Sahin, 2013: 157) in order to support the liquidity fulfillment rate, limit structural liquidity mismatches and keep core funding above a certain level. The proportion of the bank's current stable funding divided by the amount of stable funding needed is called The

Net Stable Funding Ratio. In this case, it is intended to be at least 100%, just like the liquidity fulfillment rate.

4.3.3. Additional Measures to Strengthen Capital

Another of the aims with Basel III is to make capital stronger. In this context, the core capital was strengthened in Basel II and a new arrangement was made in discount items (cloud, no date). The minimum core capital ratio and minimum first-generation capital ratio were gradually increased from 2% to 4.5% and the minimum first-generation capital ratio from 4% to 6% in the periods 2013 to 2015.

Table 4:4 Strengthened capital framework: from BASEL II to BASEL III

Source: (bis.org).

Percentage Of Risk-Weighted Assets	Capital Requirements							Macro-Level Discreet Surveillance	
	Core Capital			1st. generational (Tier) Capital		Total Capital		Cyclical Buffer	Additional loss response capacity for SIFI*
	Minimum	Protection Buffer	Needed	Minimum	Needed	Minimum	Needed	Time Space	
Basel II	2			4		8			
NOTE	Equivalent to about 1% for an average international bank under the new definition			2% for an average international bank under the new definition					
Basel III New Definition and Calibration	4,5	2,5	7	6	8,5	8	10,5	0-2,5	Capital overhead for SIFI*

4.4. Results and Effects of the Basel Criteria I-II-III

The Basel Committee on Banking Supervision and supervision was established in 1974 by the heads of the central banks of the G - 10 countries within the Bank of International Settlements (BIS), headquartered in Basel, Switzerland. The Basel I capital consensus, published in 1988, aimed to strengthen the capital structure of banks and required banks to have a minimum capital adequacy ratio of 8%.

Basel I criteria; risks other than credit and market risk capital adequacy ratio to be taken into account when calculating risk-based capital approach used in the concept of capital, the bank's ability to meet expected or unexpected losses he can't express enough, the OECD country with club membership rules, however, the credit risk is actually higher to be advantageous in terms of countries, in contrast, non-OECD, however, create a disadvantage for countries with high credit worthiness, the criticisms of banks ' arbitrage practices to their statutory capital adequacy and their use of the differences between measured risk and real risk have raised the need for a new capital compromise. The standard, called the Basel II capital compromise, was published in 2004, while the revised comprehensive version was published in 2006. The Basel II capital consensus stipulated that banking risks should be measured under three headings: credit risk, market risk and operational risk, and that enough economic capital should be retained to meet these risks. However, it has also enabled banks to use their own internal models in their risk measurements. The crisis that began to take place in the world in 2007 and continues to show its effects in 2008 has brought the question of the Basel II criteria to the agenda. Therefore, in December 2010, the Basel III documents were published by the Basel Committee. Basel III, Basel II criteria and making the necessary modifications was created by improving quality and quantity of capital, and expanding and increasing risk weights, risk-based, non-establishment of a leverage ratio, liquidity risk measurement mechanisms and the creation of reverse-cyclical capital structure in the establishment of new innovations has brought. The most important innovation introduced with Basel III has been the “capital buffer” and “capital protection buffer” applications. In this respect, advanced economy banks with Tier II weighted capital structure may not distribute dividends by leaving their profits in their bodies to maintain capital adequacy ratios or may distribute dividends at a low rate, reduce the interest rates they pay on deposits and raise the interest rates they apply on loans, direct their investments to government bonds with low risk weight or without risk, These practices negatively affect the economies of the country in which they operate, although they increase the capital adequacy ratios of banks as they will lower the market value of banks and adversely affect investments and savings. Although it is thought that the Tier I-dominated Turkish banking sector will be minimally affected by these negative effects, the borrowing costs of our banking sector, which has close relations with international banks, will increase during the Basel III alignment process.

Turkish banking sector overview published by BRSA according to the December 2013 report; December July 2012, the capital adequacy ratio of the Turkish banking sector (SYR), with Basel II provisions applied, was 15.3%, well above the legal and target ratio in December 2013. The fact that the capital adequacy ratio of the Turkish banking sector is well above the rate targeted by the Basel Committee on Banking Supervision and supervision is an indication of the sector's strength. Although it is thought that the Basel III criteria will negatively affect the equity reserves of banks in the short term due to the need for additional capital, it is obvious that in the medium term the conversion of savings acquired through the banking system to investment will therefore contribute positively to the economic growth of countries on a global basis.

Although the Basel criteria are the basic regulation of financial institutions, they also significantly affect businesses that are credit customers of financial institutions. The Basel Committee has indirectly imposed certain criteria on the borrowing requirements of transactions from financial institutions with the criteria set out. In this context, enterprises are required to ensure their equity and liquidity competencies and to present them with their respective financial statements. Therefore, it is vital that businesses establish a transparent, impartial and sustainable structure by implementing corporate governance practices within their bodies, as well as finding funds from financial institutions and the cost of the fund they find will be closely related. Businesses need to solve their equity problems and capital shortage problems and strengthen their capital structures. This will enable businesses to have a higher external credit rating and be able to borrow at lower cost and longer term than financial institutions. When the Basel regulations are considered in general, it can be said that it is a structure that draws lessons from the problems experienced in the financial markets and offers solutions to the problems with a common mind. This framework adopted, published in Basel I, II and III, and the new regulations, the needs of both markets on the one hand, while he was working on a more reliable structure to the sector on the one hand, the necessary arrangements of unpredictable side effects that may arise in both markets are expected to continue to new solutions to new problems.

5. CAMELS ANALYSIS

Since the beginning of the 1970s, the CAMEL rating system has been the most important calculation method used by the audit authorities in the financial sector. In 1979the Uniform Financial Institutions Rating System (UFIRS) was adopted by the US banking system.

The system, known as the CAMEL rating system, evaluates 5 different main components. These were Capital Adequacy, Assets Quality, Management, Earnings and Liquidity. The supervisory authorities have also considered the risks associated with changing market conditions. For this reason, Sensitivity for the market risk has changed camel to CAMELS. At the Basel Committee in 1988, the Basel Committee on Banking Supervision of the Bank of International Settlements recommended that the CAMELS rating system be used in the evaluation of banks ' financial structures. After that, the CAMELS system was used in many performance measurements researches. With this research, the existing financial structures of the banks were examined and made predictions for the future years.

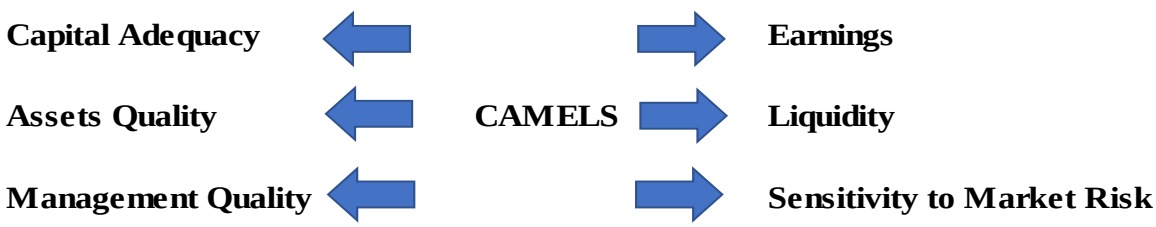


Figure 5:1 Components of CAMELS

5.1. Capital Adequacy

Capital adequacy is the definition that means that banks in international and Turkish banking are protected against these risks by having a basic source of losses that may arise in return for the risks they take. Capital adequacy is calculated based on the Basel-II criterion with the condition that this ratio is not less than 8% for now, this ration is expected to be 12% according to Basel 3 criteria in the following period. This ratio specifies the amount that banks can use from their capital. In this way, banks are targeted to be able to secure their capital. This can be defined as determining the minimum capital obligation of banks to maintain a robust and strong structure by measuring factors such as credit risks, market risks and interest risks that may have negative effects on their capital. Financial ratios and capital adequacy components are measured when evaluating banks ' capital amounts and quality criteria. More than one alternative method is available for calculating capital adequacy. In recent years, the current market, crises etc. Mathematical and statistical measurements are preferred in order to perform more precise calculations with factors. For these measurements, it brings with its sub-arrangements and elaborations. In this way, the current process will be handled analytically and will help create faster solution proposals, even if possible, considerations for the future process are unpredictable. It stipulates that the issues related to the calculation of capital adequacy ratio, meeting the appropriate value, ensuring continuity and reporting facilities shall be determined by the regulation to be prepared by the institution. If we look at it by the bank, the credibility of the institution is in the correct proportion with its capital. Banks that are strong in terms of capital can receive high credit ratings from audit and evaluation institutions. It can borrow at an affordable cost in local or international markets. This is a situation that positively affects the overall situation of the bank. The fact that the capital adequacy of all banks in the country is above a reasonable level reduces the risk of crisis systemically. The capital adequacy ratio ensures financial stability and creates an equal competitive environment for financial institutions. The capital adequacy ratio for banks is seen as insufficient to cover only large volume losses. It must be able to carry out its banking and financial activities with the capital remaining after these losses. The capital adequacy ratio is the component used in the performance valuation of the parties for

the performance of the banks, as well as the legal basis of the regulatory and supervisory institutions on behalf of the banking sector.

Some balance sheet values reflecting the capital adequacy measurements decided by The Banks Association of Turkey are as follows;

Table 5:1 Capital Adequacy Ratios and Formulas

- $$\textbf{Capital Adequacy} = \frac{\textbf{Equity}}{\textbf{(Risky Assets + (Market Risks + Operational Risks) * 12.5)}}$$
- $$= \frac{\textbf{Equity}}{\textbf{Total Assets}}$$
- $$= \frac{\textbf{Ebitda}}{\textbf{Total Assets}}$$
- $$= \frac{\textbf{Net Profit (Loss)}}{\textbf{Paid in Capital}}$$

5.2. Assets Quality

In assessing the asset quality of banks, asset diversity and the importance of their live loans stand out. Loans are the largest share of the assets of the banks. Therefore, when evaluating the asset quality of the banks, it is of absolute benefit to examine detailed concepts such as sectoral distribution of the credit portfolio, creditworthiness of the sector and the collection power of the loans. Action plans are restricted for negative results if credits experience sectoral intensification. As seen in the mortgage crisis of 2008, many banks in the United States made their loans available to real estate for retail and real estate companies for corporate and commercial. In order to avoid such similar situations, it must diversify the existing credit stock sector.

In asset quality assessment, the quality of banks ' tangible and intangible assets, the credit risk level of their investment portfolios, also affect the quality of other assets. It is desirable to evaluate the savings collected in the funds that will achieve the highest

return. In the distribution of savings, funding options and the risk levels of these options and the amount of their returns are considered. The National Audit companies specify the criteria they use to assess the quality of their assets as follows (Kaya, 2001: 3; Solak, 2010: 63):

- The effectiveness of the applications in the lending process, the management's assessment, the risk assessment that is required when lending has been made
- Monitoring, evaluation of the credits and the status of the provisions allocated
- Analyzing and examining risk levels of loans and guarantees given for off-balance sheet activities, derivatives and upper limits of loans
- Assessment of investment and loan portfolio situations
- Analysis of current asset intensity
- Managers ' timely identification of problematic assets and their success in collection management
- Competence status in internal control and information management systems
- Volume of special qualified loans
- Ratio of loans made available to various sectors to total assets
- Risk level of securities

Banks must also specify their resources in exchange for their current assets on their balance sheets. The concentration of foreign resources creates an interest burden on the banks. In order to fulfill the obligation to pay interest, it is essential that it returns on its assets in absolute terms.

Some balance sheet values reflecting the assets quality measurements decided by The Banks Association of Turkey are as follows;

Table 5:2 Asset Quality Ratios and Formulas

- $= \frac{\textbf{Total Loans}}{\textbf{Total Assets}}$

- $= \frac{\textbf{Total Loans}}{\textbf{Total Deposits}}$

- $= \frac{\textbf{Non-Current Assets}}{\textbf{Total Assets}}$

- $= \frac{\textbf{Dull Receivables}}{\textbf{Total Loans}}$

5.3. Management Quality

In assessing banks from a managerial perspective, the board of directors, board decisions, attitudes to risks and experiences are an important consideration regarding financial quality. Every individual working in the banking sector must have experience and orientation in taking and managing risks. Otherwise, it is inevitable to experience problems with snowball effect from an administrative point of view. For example, DenizBank A.Ş. CEO Hakan Ateş, one of the names that can be cited as doyen in the Turkish banking sector, said, “banking is to wear a shirt with fire." He gave an important example in this regard.

The compliance of the working principles of the board of directors individually and as the board is important for the efficient and effective management of the bank. The ability of the board of directors to identify, measure, operate the monitoring and control mechanism and manage risks in the activities of the company in accordance

with existing laws and regulations is determined along with its own duties and responsibilities. Managers should be guided by an acceptable risk limit.

The quality of personnel at the bank and the manner of management of these personnel play an important role in the success. This component is measured at various rates in terms of the profitability of the institution and the market reputation of the institution.

National Audit companies specify the criteria they use in assessing management quality as follows (Kaya, 2001: 3-4):

- The bank's willingness to consider the assessments and warnings made by the auditors and to establish a banking system that works well and efficiently in accordance with the legislation,
- The success of both the board of directors and senior management in controlling the risks related to the activities carried out and their ability to follow the developments in the sector and to guide the employees in compliance with new goods and services
- Internal audit system competencies for the areas they serve and the levels of the most appropriate policies for this system can be produced
- The size and adequacy of the bank's Management Information System and risk system structures
- The board of directors must support all decisions taken by the bank.
- Work in accordance with laws and regulations
- Effectiveness and success of bank management
- The bank's overall performance outlook and its success in its activities
- Success status of the bank relative to its competitors in the sector, presence of qualified personnel and optimal programs

Some balance sheet values reflecting the management quality measurements decided by The Banks Association of Turkey are as follows;

Table 5:3 Management Quality Ratios and Formulas

- = **Net Profit For Per Branch**
- $= \frac{\textbf{Other Operating Expenses}}{\textbf{Total Assets}}$
- $= \frac{\textbf{Dull Receivables}}{\textbf{Total Loans}}$

5.4. Earnings

Under the heading of earnings, earnings amount or orientations as well as criteria that affect the quality of earnings and the continuity of earnings can be monitored. The decrease in earnings, taxes, non-recurring situations and the confidence created to meet the unsatisfactory earnings can be effective. If earnings are negatively affected during future forecasting, factors such as lack of realistic estimates of financing and operating expenditures or out of control of such expenditures and negative progress of management strategies may be cited.

It is used based on profitability to check if earning is enough. It is an indication that the assets and resources on the balance sheet are not mismanaged. The profitability ratio provides the result of whether debt, equity, fixed and current assets are managed well and efficiently.

Banks have been adding profits to their capital over the years rather than handing out dividends. In this way, it aims to make its financial structures strong. Profitability provides an insight into the current state of the bank in the market.

In addition to these, it also indirectly affects components such as management success and capital adequacy. The bank should keep its capital strong in order to carry

its activities to future periods and this capital is expected to generate profitability in a strong state. In addition to its profitable operations, the profitability ratio also helps in cost analysis. It also considers keeping expenditures and expenses to a minimum level. National Audit companies specify the criteria that banks use to evaluate their profitability as follows (Kaya, 2001: 3-4):

- Evaluation of profitability based on their trend
- Whether enough capital level is created in the bank using non-distributed profits
- The quality of the resources that the bank is profiting from
- Analysis of budget systems and Management Information Systems of banks
- Sensitivity of earnings to market risks
- State of the provision system and revaluation

Some balance sheet values reflecting the earnings measurements decided by The Banks Association of Turkey are as follows;

Table 5:4 Earnings Ratios and Formulas

- $= \dfrac{\textbf{Net Operating Profit (Loss)}}{\textbf{Total Assets}}$
- $= \dfrac{\textbf{Net Balance Sheet Position}}{\textbf{Equity}}$
- $= \dfrac{\textbf{Ebitda}}{\textbf{Total Assets}}$
- $= \dfrac{\textbf{Total Revenues}}{\textbf{Total Expenses}}$

5.5. Liquidity

Liquidity is the ability to convert assets in businesses into cash in the short term without any problems or losses.

Businesses must ensure that the inputs and outputs of their cash are adjusted correctly. Failure to make this adjustment correctly may cause it to fail to perform its activities and to be unable to pay debts at maturity. It is important that this situation does not provide continuity; in case of continuity, the business may be in danger of stopping its activities.

In banking, the use of cash shows liquidity and the proper adjustment of cash inflows and outflows shows liquidity management. The liquidity of the banks is strong and above reasonable levels and it is necessary for them to continue their activities during the crisis processes. Rather than being unable to afford debt services, banks are going through a bankruptcy process if they are unable to be liquid for their debts. (Steel, 2004 p.106) banks make maximum efforts to keep liquidity risk to a minimum level. Liquidity risk is one of the main reasons why banks are unable to perform their basic duties. The inability of banks to meet depositors ' deposit demands and the negative response to loan demands shows the lack of liquidity. On the other hand, excess cash and cash equivalents representing liquidity on the balance sheet can create high costs for banks. This may also reflect negatively on the profitability ratio of the banks. In case the banks must pay depositors, it is essential to keep liquid values if all the loans have been used. Liquid assets are divided into 2 in banks;

- First degree liquid values; cash in the vault, central bank deposits, receivables from other financial institutions.

- Second degree liquid assets are securities, subsidiaries with easy sales opportunities and related securities.

It is called asset management for banks to sell their assets within a short period of time, create a credit limit by showing them as collateral or to meet their liquidity needs by having them discounted. The ability of banks to meet liquidity without having to hold excess reserves with high opportunity costs is called passive management. Liquidity risk can only occur as a result of the inability of financial liabilities to be met

at maturity in terms of assets, as well as the imbalance of cash inflows and outflows. The National Audit companies specify the criteria that banks use to evaluate their liquidity status as follows. (Kaya, 2001: 3-4):

- Evaluating liquidity resources for both future and present time and eliminating the liquidity needed by the bank without allowing it to adversely affect its activities and status
- Opportunities for access to money, capital and other markets
- Differentiation of banks ' funding sources such as balance sheet and off-balance sheet
- Dependence on short-term moving funds
- Development course and stability of deposits
- The speed at which assets can be converted into securities and the opportunities to be sold easily if needed
- Evaluation of liquidity policies in banks including effectiveness in managing their resources, ability to determine liquidity strategies in the most appropriate way, and management information systems

Some balance sheet values reflecting the earnings measurements decided by The Banks Association of Turkey are as follows;

Table 5:5 Liquidity Ratios and Formulas

- $$= \frac{\textbf{Liqiud Assets}}{\textbf{Total Assets}}$$
- $$= \frac{\textbf{Foreign Currency Liquid Assets}}{\textbf{Foreign Currency Passives}}$$
- $$= \frac{\textbf{Liqiud Assets}}{\textbf{Shor-Term Liabilities}}$$

5.6. Sensitivity to Market Risk

Previously, this ratio was not included in the CAMELS system. At the Basel Committee meeting in 1997, it was transformed into the CAMELS system with the addition of market risk to the system. In the sensitivity to market risk component, it assesses the risk that the financial structure of the banks will be affected by the variability of interest rates in current market conditions, the change in the price of shares and the variability in exchange rates. Although this risk does not fit within a specific framework of order, it may be affected by events at the political, economic, financial, legal, local or international level, or even by geopolitical reasons.

The argument that matters most among these risks comes from changing interest rates. Banks can suffer losses with endless variation in the face of an increase or decrease in interest rates. The most important source of income and expense of banks is the interest item, which can have positive and negative effects on the balance sheet as it varies. After interest rate risk, the most common factor is exchange rate risk. Changes in the exchange rate may have a positive/negative effect on the bank's assets or liabilities. The situation that banks will experience in the face of foreign exchange assets and liabilities and currency fluctuations is called exchange rate risk. National Audit companies specify the criteria that banks use to assess their sensitivity to market risks as follows. (Kaya, 2001: 3-4):

- The gains and capital values of banks in market conditions negative sensitivity to changes
- Timely market risks faced by the bank's Board of directors' detection and control success
- The structure of interest rate risk faced by banks against non-commercial transactions
- Market risk status of banks arising from trade and foreign currency transactions

Some balance sheet values reflecting the sensitivity to market risks measurements decided by The Banks Association of Turkey are as follows;

Table 5:6 Sensitivity to Market Risks Ratios and Formulas

- $= \dfrac{\textbf{Foreign Currency Assets}}{\textbf{Foreign Currency Debts}}$

- $= \dfrac{\textbf{Interest Income}}{\textbf{Total Assets}}$

- $= \dfrac{\textbf{In-Balance Sheet Foreign Exchange Position}}{\textbf{Equity}}$

6. LITERATURE REWIEW

KIRKIC (2018), the aim of the study is to examine the factors affecting bank performance in the Turkish banking system. The study examined year-end balance sheet data of selected banks operating in Turkey between 2002 and 2016. Components were created from financial data and those components were examined separately and as a group. Return on equity, capital adequacy, the ratio of total deposits to total assets total loans to total assets ratio of interest income to total assets ratio personnel expenses to total assets ratio of the sum of severance pay and gross domestic product (GDP) year sari exchange, the benchmark interest rate, the rates of reserve requirements, the Consumer Price Index and the exchange rate benefited from the change of showing the variations of the component. Panel data analysis model was used for data analysis.

As a result of the study, variables that positively affect the specified components are deposits, total loans, interest income, and net non-interest income. The negative variables are capital adequacy ratio, mandatory provision ratios and other operating expenses.

SOLAK (2010) worked on CAMELS performance analysis for the Turkish banking sector before and after the 2001 crisis. The study examined the periods between 1995 and 2008. However, the thesis is based on the 2001 banking crisis. The study showed that the Turkish banking sector suffered a serious wreck during the 2001 crisis. After this wreck, the provision of political stability and the macro-treatment of economic policies strengthened the structures of the banks and positively affected their

performance. In addition, CAMELS ratings began to deteriorate in the last data year as a prediction of the 2008 crisis has been interpreted as the reason.

KILIÇKIRAN (2010) was examined according to the BCC criteria of 22 different commercial banks according to the results obtained, 15 banks were active in 2007, 15 in 2008 and 17 in 2009. According to the CCR criteria, 11 banks were effectively followed in 2007, 15 in 2008 and 14 in 2009. In addition, 10 banks have been observed as effective every 3 years.

HASÇELİK (2019), the study includes measurement and analysis of the financial structures of banks traded in Borsa İstanbul through the CAMELS rating system. The data set was obtained from BAT considering the balance sheets at the end of the period 2008-2018. During the periods studied, the capital adequacy ratios of banks were evaluated at a strong level. However, the average indexation result value of CAMELS components is indicated as 3. This value has also been described as alarming.

ABDULLAYEV (2013), the camels assessment system, generally used for on-site inspection purposes, is one of the important tools of remote surveillance, especially in the United States. This composite performance value, which is used as a means of remote surveillance and on-site supervision to ensure the regular and assured work of banks, is included in this study various analyses made through the CAMELS system created for Turkey. The data set of the study is provided from the BAT website. In this way, a study using even a "public" data set could provide important clues. The study used 2005 and 2008 as observation years.

ASLAN (2017), in this study, the activities of the first seven banks in the Turkish banking sector based on their asset size in the 2003-2015 period range were compared with the rate analysis method. Looking at 2015 data, three of the first seven banks surveyed were public-owned banks, three were private-owned banks and one was a foreign-owned bank. The asset size of the first seven banks in the Turkish banking sector was observed to be 74% of the banking sector in 2015. In the study, the rate analysis method was preferred because it can show comparisons as an understandable and common technique. The comparison was made with the previous year data and the sector average. As a result of the study, the same public bank ranked first in all of the rates when the banks examined were ranked according to their sector share. In terms

of profitability, the Public Bank ranked first in two of the other four. In one of the two ratios, a private-owned bank was ranked first and the other a foreign-owned bank was ranked first. In productivity rates, three out of the four surveyed ranked a private-owned bank in the first place, while one ranked a foreign-owned bank in the first place.

As a result of the study, it can be stated that this composite indicator approach, which is based on the camels performance evaluation system and is called the banking sector activity index, will provide important information to all professional market players, investors, risk managers and researchers interested in the performance of both the banking sector and individual banks. In addition, it is thought that it can be used effectively by the auditing authorities in order to determine the problems of banks without growing up and to enable more intensive and frequent supervision.

ERDOĞAN (2018), measured the financial performances of 11 separate Turkish deposit banks registered to BIST through the CAMELS rating system. It used data from year-end balance sheets of 8 years covering the range of 2009-2016 for evaluation. In his study, group and Bank-based assessments were made separately. By results,

Public Banks, capital adequacy, management quality, profitability, market risk sensitivity components,

Private capital banks in asset quality component,

Foreign capital deposit banks have been identified as the groups with the best performance values in the liquidity component. In the analysis among the banks, Akbank T.A.Ş., had the strongest performance in the CAMELS valuation of the sector, while ICBC Turkey had the lowest performance in the CAMELS valuation.

ILGIN (2013), In his study, analyzed Turkish deposit banks among themselves and with different groupings based on CAMELS valuation. It studied its analysis using its data on year-end balance sheets for 12 years from 2002-2012. As a result of the analysis, it was determined that foreign capital deposit banks performed best compared to other group banks, whereas private capital deposit banks were the lowest performing group.

In addition, deposit banks have generally achieved their best performance in the capital adequacy and liquidity components with the rapid measures taken after the

2001 crisis. It has been observed that the global economic crisis of 2008 survived with problems at a level that is proportional to the sector.

ARICELIK (2010), addressed the basic concepts of analysis in the first part of his study. He has also covered financial performance measurement and evaluation issues. After the statements, he worked on the methods of measurement in the banking sector.

In the ongoing section, he gave information about the functioning of the system and the structure of the banks in the Turkish banking sector. During the financial crises, he provided information.

In the last chapter, he has given his work on the techniques of CAMELS analysis, the subcomponents and the details of the ratios that make up their components. The bank or group that had the strongest or lowest performance value in its study did not make a valuation. Basically, 13 separate banks operating in the sector conducted year-end balance sheet assessments and interpretations between 2002 and 2009.

UYSAL (2010), selected ratios for the components of CAMELS valuation are used in the calculation of the performance index of deposit banking in Turkey. In place between of the 1-5 measurement valuation, which is the traditional method of his system in CAMELS analysis, the author has converted his chosen ratios to index primarily in the component. In addition, weighted averages of the indices were taken, and composite indices were calculated. The evaluation of the balance sheet performance of each of the CAMELS components between 2005 and 2008 through composite indices was carried out between the deposit banks and on a group basis. It is due to the end of the restructuring program in the banking sector that was implemented after the 2001 economic crisis during the elections of 2005-2008. The positive and negative effects of the restructuring process on the sector the outlook created by these effects was intended to be presented. In the study, the differences between the CAMELS performance indices of public, private, domestic and foreign capital banks and these indices were evaluated after the restructuring process.

As a result, CAMELS analysis has been able to explain the overall development of the deposit banking sector and the development of each bank group separately by this approach, which is called the Turkish banking sector Performance Index in the

valuation system. The CAMELS system provides insight into the work of all banks in the sector.

KAYA (2001), although there is no legal basis or officially accepted work, the work is featured on the official site of the BAT. The data set of the study was obtained via BAT as in other studies. Between 1997 and 2000, banks were grouped together. Which banks were involved in the study was not specified based on name.

The results of the study showed that, basically, the sector had a worse performance in 2000 than in 1997. The grouping was based on the asset sizes of the banks. Banks, which qualified as smaller than their asset size in 1997, have a stronger performance structure. In 2000, this situation was reversed.

It is understood that the system can be used in predictive studies. Only 17% of the banks that were successful in the CAMELS 1997 system were monitored as belonging to the Savings Deposit Insurance Fund. It was determined that it would be appropriate for Turkey to use the CAMELS valuation analysis for early warning purposes, as in other countries.

In addition, the study found that banks were not within the SDIF as their CAMELS grades deteriorated in 1997.

OBA (2019), conducted its study through Turkish participation banks. Attention was paid to the performance measurement of the interest-free banking system that emerged in the 1980s. For performance measurement, CAMELS is based on performance valuation analysis. The study included data from Albaraka Türk, Kuveyt Türk, Türkiye Finans, Agriculture participation and Foundation participation banks between 2013 and 2017. As a result of the study, it was determined that Albaraka Türk experienced a decline in the value of each of the CAMELS components as of 2014. Kuveyt Turk experienced a decline in management quality, CAMELS average indexation in 2015, Liquidity Ratio as of 2014, profitability ratio in 2017 and sensitivity components to market risks. Türkiye Finans experienced a decline in capital adequacy in 2015, asset quality as of 2013, management quality, liquidity ratio, and profitability components in 2014 and 2017. Agriculture participation has been the bank that has experienced the most sensitive changes in the process, although its capital has been strong. The capital adequacy ratio as of 2015, the liquidity ratio in 2017, and the

market risk sensitivity components from 2015 experienced a decline. The participation of the foundation also stood out as other banks with strong capital structure, such as Türkiye Cumhuriyeti Ziraat Bankası A.Ş. In 2017, it experienced a decline in the capital adequacy ratio and liquidity ratio.

KUSOGLU (2016), conducted camels valuation analysis on Turkish participation banking in his study. The performance of 4 separate participation banks (Bank Asya, Kuveyt Türk, Albaraka Türk, Türkiye Finans) between 2010 and 2014 was investigated. In the scope of the study, a total of 21 different ratios of 6 different CAMELS components were determined. The results were analyzed primarily by statistical analysis. The data were examined separately on a year-by-year basis. After that, the performance improvements/decreases over the years were monitored with dynamic analysis.

As a result of the study, the performance of Kuwaiti Turks was observed as the strongest. Second place was followed by Albarak Türk, Türkiye Finans and Banka Asya. Bank Asya, as the bank with the lowest performance, also noted that the CAMELS rating was displayed as negative.

During the periods studied, its performance in 2014 was more fluctuating than in other years. Bank Asya's loss statement can be cited as the reason for this. In 2014, Bank Asya's component values were very low compared to other participation banks.

GHAVAZI-BAYRAKTAR (2018), the study analyzed CAMELS valuation of 6 separate banks in the Turkish banking sector between 2005 and 2016. Of the 6 banks in the study, 3ü are private-owned banks, 1i are foreign-owned banks and 2si are public banks. The review examined banks as having equal performance in analysis results for the years 2014-2015 to 2016. Türkiye Cumhuriyeti Ziraat Bankası A.Ş. is the bank with the best performance in CAMELS consolidated operation. Türkiye Halk Bankası A.Ş. is next. Finally, the comparison of CAMELS ratings to ratings within the institutions themselves shows that the latter delays the financial indicators of the companies and even does not reflect the current financial situation of the company. On the other hand, trends in corporate ratings and financial indicators are consistent over a long period of time.

KARACOR - MANGIR - SUREYYA - KODAZ - KARTAL (2018), in the study, the performance of the banks active in Turkey in the period 2003-2015 with the help of CAMELS performance measurement model to make a comparative analysis. There are total of 12 banks operating in Turkey, including 3 banks with public capital and 9 banks with private capital. At the point of evaluating the results of the study, private equity banks have a better outlook than other banks in terms of capital adequacy, management quality and asset quality. Again, private equity banks have a negative outlook in terms of liquidity. On the other hand, public-owned banks are more sensitive to market risks than private-owned banks.

HAZAR (2019), the study is aimed at estimating the capacity of businesses operating in the banking sector to pay debt by creating a new econometric model. The first part of the study is aimed at the global role of financial markets and the concepts of ratings. Application areas and application criteria are mentioned in the following sections. In the application area of the last section, year-end balance sheet data of Turkish deposit banks in the 2004-2007 period ranges were used. A total of 10 banks were included in the study. In the study, the author evaluated a new econometric model. For the same period, 6 different banks used high-awareness financial valuation methods. With the matches seen, it was concluded that the new model could be estimated at a low deviation in terms of the dates examined for the credit rating ratings of the depository banks operating in the Turkish banking sector.

7. PERFORMANCE ANALYSIS IN TURKISH BANKING SECTOR. CAMELS APPLICATION

Until this chapter, the financial system and its elements, the term global banking and the crisis and regulations of Turkish banking have been taken into consideration. The measures taken in the face of crises and regulations in the banking system and the process of taking these measures by a board are detailed in the scope of the BASEL committees. CAMELS analysis of financial analysis methods in the banking sector, analysis components and formulas of the ratios that make up the components are presented. The performance analysis of 16 banks active in the Turkish banking sector between 2003 and 2018 will be examined in the study.

7.1. Purpose of The Study

Banks are the most important structures in the financial system. The results of the economic policies of the banks operating in the sector should be followed, their financial performance should be measured, analyzed and possible action plans should be determined against potential risks in the sector. The most systematic way to do this is to monitor financial data continuously at certain period intervals. The current performance of the banks is monitored by analysis based on these financial data. In this way, the negativity that may occur in the future can be predicted and the risks that may negatively affect the financial position can be eliminated with certain action plans. It is essential to construct these plans to improve the bank's performance. CAMELS performance valuation analysis is one of the most important methods by which banks measure the quality of their economic policies in order to maintain their establishment

and maintenance objectives, such as fund-raising, service and record money creation functions.

As of 30 September 2019, the Turkish banking sector continues to operate with 53 banks. These banks consist of 21 foreign-owned banks, 13 development and investment banks, 9 of them private-owned banks, 6 of them participation banks, 3 of which are public banks, and 1 of which is transferred to the savings deposit insurance fund. It contributes directly to employment with a total number of 11,442 branches and 205,413 staff. However, the sector has 11,575 branches and 208,052 staff last year. (BAT-webpage, 2019)

The negative situations experienced by the sector, which has such large numbers and volumes in the Turkish economy, are reflected directly to the public and the economy. In order to avoid these reflections, regular inspection and performance measurement analyses are carried out.

With the arrangements made in line with the decisions taken in the BASEL committees, positive actions were experienced, especially in the ratio of capital adequacy.

As a result of the actions taken towards the analysis of the past, the continuous supervision and supervision of the banks in this way will be taken in line with the economic policies that can positively guide the structure of the bank when faced with potential problems.

In this study, 16 separate banks were examined in one group, a separate group as public-owned banks, and 3 separate groups as private-owned banks. The review covers 16 years from 2003-2018, consisting of period-end data. The data set needed for CAMELS analysis of the banks studied was obtained from the Web page of the Association of banks of Turkey.

7.2. Constraint of the Study

This study had to introduce some restrictions. Participation, investment and development banks were not included in the study due to differences in the functioning of lack of financial data during the periods subject to analysis. The data obtained as a

result of the analyses show the performance conditions of the banks in the study period. It does not provide insight into banks, groups or systems that are excluded from the study.

7.3. Data and Methodology

In this study used 16 separate periods between 2003 and 2018. For 16 separate periods, 16 separate banks were analyzed in different groups. Banks are divided into 3 groups, 1. Group Public Banks, 2. Group private equity Banks, 3. The group is all banks in operation. The raw data set used in the study was taken from the statistical reporting of the Banks Association of Turkey under the name of "Selected Ratios" in certain periods.

The analyzed banks and groups are shown in table 7:1.

Table 7:1 The analyzed banks and groups in study

All Banks in Study	Public Capital Banks	Private Equity Banks
Türkiye Cumhuriyeti Ziraat Bankası A.Ş.	Türkiye Cumhuriyeti Ziraat Bankası A.Ş.	Akbank T.A.Ş.
Türkiye Halk Bankası A.Ş.	Türkiye Halk Bankası A.Ş.	Anadolubank A.Ş.
Türkiye Vakıflar Bankası T.A.O.	Türkiye Vakıflar Bankası T.A.O.	Fibabanka A.Ş.
Akbank T.A.Ş.		Şekerbank T.A.Ş.
Anadolubank A.Ş.		Turkish Bank A.Ş.
Fibabanka A.Ş.		Türk Ekonomi Bankası A.Ş.
Şekerbank T.A.Ş.		Türkiye İş Bankası A.Ş.
Turkish Bank A.Ş.		Yapı ve Kredi Bankası A.Ş.
Türk Ekonomi Bankası A.Ş.		Alternatifbank A.Ş.
Türkiye İş Bankası A.Ş.		Denizbank A.Ş.
Yapı ve Kredi Bankası A.Ş.		ING Bank A.Ş.
Alternatifbank A.Ş.		QNB Finansbank A.Ş.
Denizbank A.Ş.		Türkiye Garanti Bankası A.Ş.
ING Bank A.Ş.		
QNB Finansbank A.Ş.		
Türkiye Garanti Bankası A.Ş.		

In this study, used 21 separate ratios that make up each component. These ratios are chosen based on personal evaluations of authors and subjective evaluations in literature studies. In the weighting of the components, the weighting of the components

was done by considering the weighting of the same basis in the literature survey. Accordingly, capital adequacy ratio, asset quality and liquidity are weighted at 20%, earnings and market risk sensitivity components are weighted at 15% and management competence is weighted at 10%. The ratios that make up the components of CAMELS are shown in Table: 7.2. Relationship aspects where the lower ratios positively and negatively affect the components are stated. These relationship aspects are determined by whether the component is affected in a positive or negative direction. For example, equity/total assets increase the capital adequacy ratio. The relationship aspect is positive. Dull receivables / total loans reduce the ratio of assets. The relationship aspect is negative.

Table 7:2 The CAMELS Components, Ratios of Components, Weights and Relations Direction

Components and Ratios	Abbreviation	Component Weight	Ratio Weight	Relation Direction
C – Capital Adequacy	**C**	**20%**		
Capital Adequacy Ratio	C1		40%	+
Equity / Total Assets	C2		30%	+
Ebitda / Total Assets	C3		20%	+
Net Profit (Loss) / Paid in Capital	C4		10%	+
A – Assets Quality	**A**	**20%**		
Total Loans / Total Assets	A1		25%	-
Total Loans / Total Deposits	A2		30%	+
Non-current Assets / Total Assets	A3		25%	-
Dull Receivable / Total Loans	A4		20%	-
M – Management Quilty	**M**	**10%**		
Net Profit for per Branch	M1		40%	+
Other Operating Expenses / Total Assets	M2		35%	-
Dull Receivable / Total Loans	M3		25%	-
E – Earnings	**E**	**15%**		
Net Operating Profit (Loss) / Total Assets	E1		30%	+
Net Balance Sheet Position / Equity	E2		30%	+
Ebitda / Total Assets	E3		20%	+
Total Revenues / Total Expenses	E4		20%	+
L – Liquidty	**L**	**20%**		
Liquid Assets / Total Assets	L1		35%	+
Foreign Currency Liquid Assets / Foreign Currency Passives	L2		30%	+
Liquid Assets / Short-term Liabilities	L3		35%	+
S – Sensitivity to Market Risks	**S**	**15%**		
Foreign Currency Assets / Foreign Currency Debts	S1		35%	+
Interest Income / Total Assets	S2		35%	-
In-Balance Sheet Foreign Exchange Position / Equity	S3		30%	-

In the study, CAMELS notes made for the subject banks and groups between 2003 and 2018, the formula and calculation systems used in the creation phase, respectively, are stated below;

Table 7:3 Steps the calculation of the CAMELS

Reference Values	Index Value	Deviance Value	Weighting of the deviation value of the ration within the component	Collection of weight deviation values	Weighting of total weighted deviation values on component basis	CAMELS
The arithmetic mean of all bank and group values for the year analyzed was taken.	The value of each bank was multiplied by 100, divided by that year's reference value.	It was calculated over the index value by 100 basis points depending on the direction of the ration's relationship with the component.	The weight of the ration is multiplied by the deviation value.	The ratios that make up the components have been collected.	The sum of weighted values is multiplied by the weights of the components.	Calculation of CAMELS score

1. Collection of raw data set: a total of 21 separate financial ratios were obtained for 6 different components of the 16 banks examined between 2003 and 2018.

2. Reference value creation: for the examination of 21 different rations for 16 different year-end data for 16 banks, the bank rates for each group were taken as an arithmetic average. Example: the capital adequacy ratio of 16 separate banks was collected and divided into 16. (shows on table 12)

Table 7:4 Reference values of 16 banks for the years on 2003-2018

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
C																
C1	34,2	25,9	21,4	21,1	17,4	17,7	18,9	17,1	16,3	17,4	14,6	15,1	15,1	15,1	16,3	17,3
C2	13,6	13,1	11,0	10,5	11,2	11,1	12,4	12,4	11,2	12,6	10,5	10,7	10,6	10,4	10,4	10,6
C3	1,3	1,7	1,5	2,2	2,4	1,9	2,3	2,0	1,6	2,0	1,4	1,4	1,1	1,4	1,5	1,6
C4	42,8	44,5	27,1	46,3	44,5	34,5	50,6	50,2	46,2	56,0	55,6	56,7	49,8	65,2	83,3	82,4
A																
A1	28,0	36,8	43,0	49,4	54,3	55,8	54,3	59,4	60,8	62,8	64,3	66,8	66,9	67,2	68,2	64,2
A2	41,0	57,5	69,6	75,8	83,4	85,9	82,7	93,5	97,4	101,7	107,2	112,6	114,7	110,9	112,5	104,5
A3	9,4	7,1	4,5	3,5	3,6	4,8	5,8	5,0	4,4	4,6	4,3	4,7	5,3	5,3	5,3	3,7
A4	11,1	5,6	5,3	3,5	2,9	3,5	5,4	4,0	3,2	3,0	2,9	3,1	3,5	3,7	3,6	5,2
M																
M1	0,6	0,7	0,5	1,1	1,4	1,1	1,5	1,6	1,4	1,8	1,6	1,7	1,7	2,4	3,2	3,8
M2	5,9	4,6	4,5	3,5	3,4	3,4	3,3	3,2	2,8	2,8	2,6	2,6	2,6	2,3	2,2	2,2
M3	11,1	5,6	5,3	3,5	2,9	3,5	5,4	4,0	3,2	3,0	2,9	3,1	3,5	3,7	3,6	5,2
E																
E1	1,7	2,2	1,3	2,2	2,4	1,9	2,3	2,0	1,6	2,0	1,4	1,4	1,1	1,4	1,4	1,4
E2	- 18,0	- 8,2	- 19,0	- 43,7	- 42,3	- 19,0	- 32,9	- 29,6	- 15,2	- 22,1	- 33,6	- 47,1	- 52,2	- 33,5	- 71,9	- 57,1
E3	1,3	1,7	1,5	2,2	2,4	1,9	2,3	2,0	1,6	2,0	1,4	1,4	1,1	1,4	1,5	1,6
E4	121,0	131,6	130,5	129,9	130,1	127,7	146,4	141,6	134,3	142,9	141,7	136,4	132,6	139,6	136,7	152,7
L																
L1	39,9	40,1	39,4	38,3	34,9	27,1	30,4	28,9	28,9	28,7	26,8	25,1	25,1	24,7	23,6	15,5
L2	47,7	47,0	44,4	47,7	39,7	34,8	30,4	26,1	32,2	38,1	38,5	34,4	34,7	34,6	32,1	26,6
L3	84,6	77,0	73,1	60,0	57,1	44,8	49,2	47,4	49,1	49,7	50,4	53,8	49,4	45,8	42,4	34,8
S																
S1	98,5	82,9	80,5	80,4	75,6	77,9	73,1	73,3	83,7	80,3	81,1	80,0	80,8	84,5	77,8	85,1
S2	13,8	13,1	10,8	11,0	12,4	12,2	10,9	8,2	7,8	9,0	7,0	7,9	7,8	7,9	8,3	11,1
S3	65,7	58,4	92,6	101,8	112,6	90,4	86,6	82,3	59,5	55,3	77,7	82,9	85,7	65,7	103,8	72,7

3. Index Value Creation: on behalf of each group, the Bank value of the relevant year is divided by the reference value, multiplied by 100. Example: Türkiye Cumhuriyeti Ziraat Bankası A.Ş. 2018 capital adequacy ratio is 14.8, 2018 capital adequacy ratio 2018 all banks group reference value is 17.3.
   (14.8/17.3) *100=85.5. This value is the index value of Türkiye Cumhuriyeti Ziraat Bankası A.Ş.'s capital adequacy ratio for 2018.
4. Deviance value finding: 21 different rations used in the analysis also have relationship aspects. This relationship aspect is expressed as (+) and (-). The relationship aspect (-) of the ration is subtracted from the index value 100. If the inverse relation direction (+) is 100, the index is subtracted from the value. Example: Türkiye Cumhuriyeti Ziraat Bankası A.Ş.'s capital adequacy ratio index value for 2018 is 85.5. The relationship aspect is (+), as the effect of the capital adequacy ratio on the capital adequacy component is positive. 85.5-100=-14.5. The deviation of Türkiye Cumhuriyeti Ziraat Bankası A.Ş.'s capital adequacy ratio for 2018 is -14.5.
5. Weighting of the deviation value of the ration within the component: component weighting of the ratios that comprise the components of the 16 different banks examined was done. In this weighting, works in the literature have been utilized. The deviation value obtained in the previous step is multiplied by the ratio weight and the weight in the component is reached. Example: the deviation of Türkiye Cumhuriyeti Ziraat Bankası A.Ş.'s capital adequacy ratio for 2018 is -14.5. At the same time, the weight of the capital adequacy ratio in the capital adequacy component is 40%. -14.5 * 40%= -5.8. The weight of the capital adequacy ratio of Türkiye Cumhuriyeti Ziraat Bankası A.Ş. under the capital adequacy component for 2018 is -5.8.
6. Collection of weight deviation values: the deviation values calculated in the previous step were collected individually in attained under the ratios in the component. Example: the weight of Türkiye Cumhuriyeti Ziraat Bankası A.Ş.'s 2018 capital adequacy ratio (5.8), shareholders ' equity / total assets weight (0.1), ebitda / total assets weight (3.9), net profit (loss) / paid-in capital weight (0.7) were collected separately. 5.8+0.1+3.9+0.7= -0.2.
7. Weighting of total weighted deviation values on component basis: sum of weighted deviation values of the ratios obtained in the previous step, diameter of each

component with its own weight value. Example: Türkiye Cumhuriyeti Ziraat Bankası A.Ş.'s capital value for 2018 is -0.2. This value is multiplied by 20%, which is the weight of the capital adequacy component, resulting in a weighted value for the capital adequacy component. -0.2 * 20%=-0.04. -0.04 Türkiye Cumhuriyeti Ziraat Bankası A.Ş.'s capital adequacy component weighted value is -0.04.

8. Calculation of CAMELS value. 7th ed. The weighted component values calculated in the step were collected based on each component and the bank's CAMELS value in that year was calculated. Example: Türkiye Cumhuriyeti Ziraat Bankası A.Ş.: for each weighted component the total for 2018 is 0.4. (Capital adequacy + asset quality + management quality + profitability + liquidity + sensitivity to market risks)
9. Camels grading: camels values calculated based on 16 years for 16 banks are rated between 1-5.
   9.1. Banks with strong performance in all aspects.
   9.2. They are generally strong banks, with weaknesses in only a few elements.
   9.3. It is the banks that have problems with their performance.
   9.4. They are generally non-performing banks, with financial and / or managerial problems.
   9.5. It is the banks that are experiencing serious problems both financially and administratively, and it is likely that they will suffer financial collapse in the short term.

It is observed that the results of the analysis which examined the studies in the literature did not yield the results in accordance with the values between 1-5. The most important reason behind this is the uncertainty and subjectivity created by the failure to share with the public the variables of the analysis method used by the World Bank for many years. Analysis variables are modified by researchers, so different applications are found in the literature.

7.4. Component Values for Each Bank and Bank Group in Camels Analysis

Table 7:5 Capital Adequacy components values for the 16 banks on 2003-2018

BANKS	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Türkiye Cumhuriyeti Ziraat Bankası A.Ş.	20,0	9,6	14,3	8,0	3,5	-1,1	1,5	0,6	-2,7	-0,7	-0,3	3,8	2,5	2,7	2,3	-0,2
Türkiye Halk Bankası A.Ş.	22,2	10,5	13,0	5,0	1,8	-3,1	-1,5	0,8	1,0	1,4	2,6	0,1	0,4	-0,3	0,8	-4,1
Türkiye Vakıflar Bankası T.A.O.	-8,8	-1,9	3,4	-0,2	-0,9	-3,7	-3,3	-3,3	-2,9	-2,8	-2,4	-2,6	-1,6	-1,0	-0,4	-0,6
Akbank T.A.Ş.	19,9	10,2	6,0	1,8	3,7	0,7	3,7	4,1	1,7	1,0	1,5	1,3	0,6	1,9	4,5	3,7
Anadolubank A.Ş.	-9,5	-4,7	-1,9	-3,6	-1,5	3,4	3,6	3,7	1,1	4,9	0,9	0,8	0,6	-0,1	-2,3	5,6
Fibabanka A.Ş.	-45,7	-21,1	-14,8	-10,9	-7,9	-3,1	-9,9	-10,7	-5,7	-5,5	-5,9	-5,4	-4,0	-4,9	-5,0	-4,1
Şekerbank T.A.Ş.	-5,3	-2,9	-1,1	-3,5	-0,2	-1,8	-2,2	-3,5	-5,2	-2,8	-2,1	-2,0	-5,6	-5,1	-6,1	-7,8
Turkish Bank A.Ş.	10,4	1,1	2,2	9,8	2,2	8,1	-0,4	-0,3	5,1	3,1	-0,4	-2,2	0,7	-2,6	-4,4	-2,4
Türk Ekonomi Bankası A.Ş.	-2,1	-6,4	-4,1	-6,5	-6,5	-3,9	-4,0	-5,4	-5,1	-4,5	-2,6	-3,5	-2,9	-1,9	-1,2	-2,4
Türkiye İş Bankası A.Ş.	-0,3	5,2	5,1	0,6	1,5	-3,7	-1,2	0,4	-1,4	-0,7	0,2	1,3	0,4	1,6	1,8	1,6
Yapı ve Kredi Bankası A.Ş.	-5,7	-6,0	-52,2	-8,6	-5,4	-2,5	-1,3	-0,2	-1,0	-1,4	1,0	-1,9	-2,5	-1,4	-1,7	-1,1
Alternatifbank A.Ş.	-7,2	-6,5	-2,0	-5,8	-3,5	-4,3	-4,9	-6,0	-7,6	-7,6	-5,9	-2,6	-5,1	-5,9	-5,1	-5,6
Denizbank A.Ş.	-2,3	-2,8	-0,6	-2,2	-5,0	-2,7	0,3	-2,0	-0,8	-2,0	-4,6	-4,5	-1,9	0,4	1,5	0,7
ING Bank A.Ş.	-6,5	-4,6	1,5	-7,8	-6,2	-6,1	-4,0	-5,6	-5,5	-4,7	-5,3	-5,4	-5,3	-0,5	1,8	3,6
QNB Finansbank A.Ş.	1,4	-2,7	2,7	2,9	-1,7	-2,8	-2,5	0,7	1,6	-0,2	0,2	0,0	-2,0	-1,8	-2,0	-1,5
Türkiye Garanti Bankası A.Ş.	-6,6	-2,7	-1,3	-4,0	0,5	-1,6	2,1	2,7	2,2	0,5	0,9	0,9	1,6	4,0	5,6	4,4

If we look at the main reason that Fibabanka A.Ş. capital adequacy component in 2003 was worse than other banks, the ratio of pre-tax profit to total assets is monitored. This value was 1.3 as reference value in all banks in 2003 and -17.6 for Fibabanka A.Ş.

When we follow up Fibabanka A.Ş.'s solo balance sheet at the end of 2002, the pre-tax profit item shows a loss of TL -1.9 billion.

In addition, if we look at the main reason that the capital adequacy component of Yapı ve Kredi Bankası A.Ş. in 2005 was worse than other banks, as in Fibabanka A.Ş., the pre-tax profit ratio is monitored based on the ratio of total assets. This ratio was 1.5 as reference value in all other sectors in 2005 and is monitored as -13.3 for Yapı ve Kredi Bankası A.Ş.

When we follow the solo balance sheet of Yapı ve Kredi Bankası A.Ş. at the end of 2005, the pre-tax profit item shows a loss of TL -3.2 billion.

Table 7:6 Asset Quality components values for the 16 banks on 2003-2018

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Türkiye Cumhuriyeti Ziraat Bankası A.Ş.	-8,6	3,5	4,2	3,5	3,4	3,6	4,6	4,6	4,8	1,5	2,4	2,2	3,2	3,0	3,6	3,9
Türkiye Halk Bankası A.Ş.	-9,5	-14,3	-10,0	-6,3	-3,6	-3,0	0,0	-0,8	-0,2	-0,9	-0,4	-1,5	0,2	0,7	1,5	3,0
Türkiye Vakıflar Bankası T.A.O.	-1,9	-3,5	-3,8	-2,6	-2,6	-3,0	-1,1	-2,0	-1,5	-1,9	-2,1	-0,6	-0,5	-0,5	0,1	3,1
Akbank T.A.Ş.	7,2	6,4	5,5	3,0	2,7	2,8	2,8	3,9	4,4	6,0	4,9	4,7	3,7	3,7	2,7	1,9
Anadolubank A.Ş.	7,2	6,5	6,0	6,4	4,6	2,6	2,7	2,1	0,1	-0,9	-0,6	-1,5	-1,3	-0,2	-0,5	-9,1
Fibabanka A.Ş.	-12,1	-0,7	2,0	3,5	4,9	4,6	3,1	0,6	4,6	5,7	4,9	3,6	3,3	4,4	2,1	3,0
Şekerbank T.A.Ş.	-0,1	-0,4	-11,4	-12,6	-2,9	-4,0	-4,5	-5,1	-5,7	-3,6	-7,4	-8,4	-6,7	-7,6	-4,1	-4,2
Turkish Bank A.Ş.	3,1	3,7	3,7	3,7	0,5	-2,0	0,0	-1,0	-5,5	0,4	3,0	3,4	1,1	2,2	-1,8	-2,8
Türk Ekonomi Bankası A.Ş.	5,2	4,4	4,3	3,7	2,9	2,8	1,6	2,9	1,1	1,9	1,4	1,9	3,2	2,2	2,0	3,8
Türkiye İş Bankası A.Ş.	-4,5	-10,0	-6,2	-7,7	-8,6	-4,1	-2,7	-3,2	-0,8	-0,6	0,4	1,0	0,8	0,6	0,6	-1,7
Yapı ve Kredi Bankası A.Ş.	-3,7	-9,0	-9,2	-10,1	-10,6	-5,7	-4,8	-1,6	-1,0	-2,6	-2,4	-0,9	-1,9	-3,1	-1,7	0,1
Alternatifbank A.Ş.	3,6	4,7	4,4	4,3	1,2	-2,9	-2,7	0,2	-1,6	-0,1	0,7	-2,3	-0,5	-0,6	0,0	2,1
Denizbank A.Ş.	3,8	2,3	2,8	2,4	1,1	1,8	-0,2	-1,2	-0,2	-2,8	-2,7	-2,1	-4,9	-5,4	-5,6	-7,9
ING Bank A.Ş.	4,4	4,6	5,0	5,0	3,6	3,7	2,7	3,1	3,6	2,9	3,6	3,4	4,0	2,2	1,1	3,7
QNB Finansbank A.Ş.	4,9	4,3	4,2	1,9	0,8	0,0	-3,7	-4,9	-5,5	-7,5	-7,9	-4,8	-5,2	-3,2	-1,7	0,7
Türkiye Garanti Bankası A.Ş.	0,7	-2,3	-1,4	1,7	2,5	2,9	2,4	2,3	3,2	2,5	2,3	2,2	1,4	1,4	1,7	0,3

If we look at the main reason why the asset quality of the Türkiye Halk Bankası A.Ş. in 2004 was worse than that of other banks, the bank's dull receivables balance in 2004 is monitored as its share of the total loans. This value was 5.6 for all banks in 2004 and 28.1 for Türkiye Halk Bankası A.Ş. of Turkey.

If we look at the main reason why Fibabanka A.Ş. asset quality in 2003 was worse than other banks, the bank's dull receivables balance in 2003 is monitored as its share of total loans. This value was 9.4 for all banks in 2003 and 38.1 for Fibabanka A.Ş.

If we look at the main reason why Şekerbank T.A.Ş. asset quality in 2005 and 2006 was worse than the other banks, the bank's dull receivables balance in the years 2005 and 2006 is monitored as the size of its share in total loans. This value is 19.1 for Şekerbank T.A.Ş., which was 5.3 as reference value in all banks in 2005, and 12.3 as reference value in all banks in 2006.

Asset quality of Yapı ve Kredi Bankası A.Ş. in 2006 and 2007 if we look at the main reason that the component is worse than other banks, the share of the bank's fixed assets in 2006 and the amount of its dull receivables balance in total loans are monitored as the size of its share of fixed assets in 2006.the ratio of fixed assets to total assets in 2006 Another reason for the year 2006 is the size of the balance of dull receivables in total loans. This value was 5.3 as reference value for all banks in 2006 and 7.6 for Yapı ve Kredi Bankası A.Ş. If we look at the ratio detail in 2007 in the same bank, it is possible to make the proportional highlights in the same ratios. In 2007, the reference value for the ratio of fixed assets to total assets was followed by 3.6, while for Yapı ve Kredi Bankası A.Ş. this ratio was 8.3. In the same year, the ratio of dull receivables to total loans is recorded as 6.1 for Yapı ve Kredi Bankası A.Ş., while the reference value of all other banks is 2.9.

In addition, the fact that the ratio of dull receivables to total loans, which is one of the ratios that constitute the asset quality component, is of great value can be interpreted as meaning that the collection of the loans that constitute the assets of the bank cannot be done.

Table 7:7 Management Quality components values for the 16 banks on 2003-2018

	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003
Türkiye Cumhuriyeti Ziraat Bankası A.Ş.	3,5	4,0	4,6	5,3	4,0	2,9	1,5	3,2	6,2	6,3	5,0	4,0	4,9	13,2	6,3	-3,1
Türkiye Halk Bankası A.Ş.	0,8	2,3	1,7	3,0	2,4	5,1	4,4	5,0	4,5	3,9	2,5	0,5	-1,3	-1,2	-7,7	-3,6
Türkiye Vakıflar Bankası T.A.O.	1,5	1,5	1,2	1,5	1,0	0,6	0,5	1,5	1,0	2,7	1,2	3,7	4,6	11,7	7,8	1,4
Akbank T.A.Ş.	5,0	7,4	6,8	5,8	5,8	5,8	5,6	5,8	6,2	5,7	4,7	5,2	6,4	18,5	8,3	14,2
Anadolubank A.Ş.	-3,0	-1,9	-0,9	-0,8	-1,3	-2,8	-0,8	-1,4	-0,2	0,1	0,4	-0,6	0,2	3,3	3,7	1,7
Fibabanka A.Ş.	-0,7	-0,6	0,5	0,8	-0,4	-0,3	1,9	-1,2	-7,7	-6,9	-2,6	-3,1	-9,8	-8,4	-15,1	-22,6
Şekerbank T.A.Ş.	-6,0	-6,0	-7,0	-6,3	-6,0	-5,8	-4,3	-6,2	-5,2	-5,3	-4,9	-5,5	-12,3	-11,7	-4,3	-2,6
Turkish Bank A.Ş.	-7,3	-5,6	-3,1	-3,6	-1,8	-2,7	-4,0	-6,5	-3,2	-3,6	-3,0	-1,4	0,2	1,8	-0,5	1,6
Türk Ekonomi Bankası A.Ş.	-2,2	-2,0	-1,5	0,3	-1,5	-1,7	-1,9	-3,6	-2,1	-3,6	-2,8	-2,2	0,1	4,7	0,3	3,4
Türkiye İş Bankası A.Ş.	2,2	2,0	2,9	2,8	3,5	3,6	3,3	4,0	3,7	2,5	1,0	0,7	1,3	7,2	-0,6	-0,3
Yapı ve Kredi Bankası A.Ş.	2,1	1,0	0,8	0,5	0,7	4,4	0,9	2,4	2,7	-0,7	-0,6	-5,8	-4,4	-78,8	-5,3	0,0
Alternatifbank A.Ş.	1,9	-2,0	-4,7	-3,5	-1,0	-1,6	-2,3	-3,7	-4,7	-0,9	-1,1	0,7	0,4	4,0	-2,6	-1,6
Denizbank A.Ş.	-1,6	-1,8	-2,0	-3,0	-3,5	-3,5	-2,2	-0,5	-2,6	-1,9	-1,5	-2,1	0,1	5,0	0,4	2,3
ING Bank A.Ş.	-0,3	-1,6	-1,7	-3,4	-3,5	-3,0	-3,4	-4,1	-3,6	-3,1	-2,1	-2,1	-0,9	6,9	0,2	-0,6
QNB Finansbank A.Ş.	0,2	-2,0	-3,1	-4,5	-3,3	-5,9	-4,2	-2,4	-1,7	-2,4	-2,1	-0,9	5,0	12,2	4,4	4,4
Türkiye Garanti Bankası A.Ş.	3,8	5,4	5,6	5,2	4,8	4,9	4,9	7,6	6,8	7,2	6,0	8,7	5,6	11,5	4,7	5,4

If we look at the main reason why Fibabanka A.Ş. management quality in 2003 was worse than other banks, the bank's net profit ratio per branch in 2003 is viewed as the main reason. This value was 0.58 as reference value in all banks in 2003 and is -1.51 for Fibabanka A.Ş.

Additionally, the ratio of other operating expenses to total assets from the ratios that constitute the management quality component of Fibabanka A.Ş. in 2003 also adversely affects this component. In 2003, the reference value of all banks was 5.87 for this ratio and 23.5 for Fibabanka A.Ş.

In the capital adequacy component that we have examined before, it is useful to note that Fibabanka A.Ş. pre-tax profit item wrote negative balance in the balance sheet in 2003.

Table 7:8 Management Quality components values for the 16 banks on 2003-2018

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Türkiye Cumhuriyeti Ziraat Bankası A.Ş.	10,1	3,4	10,4	1,1	-0,3	-1,8	-0,2	1,1	-1,2	-2,2	1,4	-0,1	3,2	-2,1	1,7	0,2
Türkiye Halk Bankası A.Ş.	13,4	1,0	3,1	1,7	1,9	4,8	2,7	3,4	7,4	1,8	4,9	-2,4	-1,0	-3,7	-4,0	-8,4
Türkiye Vakıflar Bankası T.A.O.	-7,4	-4,0	1,2	-2,8	-3,1	-5,6	-3,6	-4,4	-9,4	-5,2	-5,3	-3,4	-3,0	-4,6	-2,6	-2,5
Akbank T.A.Ş.	27,7	9,0	10,4	-0,3	-0,1	-1,9	0,3	3,9	18,0	2,8	9,7	3,1	2,3	1,9	3,5	3,0
Anadolubank A.Ş.	33,2	-4,8	1,5	6,3	3,9	-3,9	7,7	7,4	7,2	2,3	-3,8	-1,3	1,1	-2,0	-5,1	1,0
Fibabanka A.Ş.	-98,3	-42,7	-5,2	-5,0	1,3	-20,1	-24,3	-30,8	-112,5	-23,8	-26,1	-4,5	-4,1	-10,4	-2,7	7,7
Şekerbank T.A.Ş.	35,8	4,1	-2,7	-4,3	2,0	17,3	5,5	-1,4	-6,2	0,9	-0,2	3,0	-1,3	4,6	-1,7	-5,9
Turkish Bank A.Ş.	1,9	-4,7	-8,7	-8,7	-11,8	-6,2	-13,1	-4,2	-2,5	-2,4	-12,5	-10,0	-10,6	-9,4	-5,7	-9,9
Türk Ekonomi Bankası A.Ş.	6,0	2,4	16,2	4,1	0,2	-15,0	-2,5	-4,3	3,4	2,4	0,4	1,8	3,2	13,2	2,9	2,4
Türkiye İş Bankası A.Ş.	-3,1	4,3	3,6	-4,2	-4,9	-14,0	-2,1	-1,0	-3,1	-3,7	0,3	0,4	1,8	3,8	1,5	0,1
Yapı ve Kredi Bankası A.Ş.	-10,3	-7,1	-86,0	-7,2	-5,7	-9,7	-2,7	-0,5	12,5	-1,5	5,5	-3,0	-2,3	-1,2	0,7	2,3
Alternatifbank A.Ş.	-5,4	4,3	12,6	2,1	2,3	-5,5	3,2	1,0	17,3	5,9	1,7	-0,8	-2,7	-20,2	-5,6	-9,1
Denizbank A.Ş.	-1,7	3,7	0,4	-0,9	-2,1	20,7	13,0	14,6	25,0	7,3	14,7	5,3	1,1	1,0	-1,5	-4,5
ING Bank A.Ş.	-2,3	2,7	4,9	-1,3	0,5	11,2	2,2	6,4	19,4	5,0	5,3	5,0	3,8	8,5	7,4	9,9
QNB Finansbank A.Ş.	4,2	20,3	33,1	15,9	12,7	36,2	13,0	11,2	27,2	12,7	5,7	5,9	7,3	14,2	7,3	10,6
Türkiye Garanti Bankası A.Ş.	-3,8	8,1	5,0	3,4	3,2	-6,5	1,1	-2,5	-2,7	-2,5	-1,6	1,2	1,2	6,3	4,0	3,0

If we look at the main reason that Fibabanka A.Ş.'s earning in 2003 and 2001 was worse than other banks, the ratio of the bank's net operating profit in 2003 to total assets is the main reason. This value was 1.7 as reference value in all banks in 2003 and -16.7 for Fibabanka A.Ş.

In addition, Fibabanka A.Ş. is the ratio of pre-tax profit item to total assets at ratios that constitute the profitability component in 2003. We have previously examined this ratio under the capital adequacy component in the same period.

In the capital adequacy component that we have examined before, it is useful to note that Fibabanka A.Ş.'s pre-tax profit item wrote negative balance in the balance sheet in 2003.

If we look at the negative in 2011, the ratio of the net balance sheet position to equity can be stated as the ratio. This ratio was -15.2 as reference value in all banks in 2001 and 343.7 for Fibabanka A.Ş.

If we look at the main reason why Yapı ve Kredi Bankası A.Ş.'s profitability in 2005 was worse than other banks, the ratio of the bank's net operating profit in 2005 to total assets is the main reason. This value was 1.3 as reference value in all banks in 2005 and is monitored as -13.3 for Yapı ve Kredi Bankası A.Ş.

Table 7:9 Liquidity components values for the 16 banks on 2003-2018

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Türkiye Cumhuriyeti Ziraat Bankası A.Ş.	3,3	5,5	2,9	9,0	14,0	1,0	6,1	7,1	3,7	6,6	5,5	5,6	4,0	2,9	1,9	-9,1
Türkiye Halk Bankası A.Ş.	-11,1	-12,5	-6,8	-4,5	-0,2	-7,6	-8,7	-6,3	-5,5	-2,4	-2,1	-3,1	-2,9	-2,9	-0,3	-5,8
Türkiye Vakıflar Bankası T.A.O.	4,3	12,8	18,8	6,2	4,0	3,0	4,7	1,1	-1,2	0,7	2,5	0,6	0,3	-1,1	-0,7	-5,3
Akbank T.A.Ş.	6,2	6,8	4,7	5,7	5,1	-5,4	2,4	8,6	5,9	6,4	2,7	3,8	5,5	5,7	4,6	-1,7
Anadolubank A.Ş.	11,9	-4,3	-6,9	-6,2	-4,2	-4,0	-8,0	-8,4	-3,6	3,4	3,2	-3,4	7,7	2,4	3,2	21,9
Fibabanka A.Ş.	7,7	-0,8	-3,4	-3,8	-0,9	-3,6	-0,2	-2,8	-5,7	-5,8	-2,5	-2,1	-1,2	1,9	3,6	-2,6
Şekerbank T.A.Ş.	-8,3	-1,8	1,7	1,4	-3,2	-7,4	-5,5	-3,8	1,9	-4,7	-5,7	-5,7	-4,9	-10,5	-3,3	-5,7
Turkish Bank A.Ş.	16,9	17,0	14,0	14,4	18,6	26,8	25,6	13,0	19,6	8,8	12,7	16,6	0,9	1,4	-4,9	13,7
Türk Ekonomi Bankası A.Ş.	1,2	1,6	-3,7	-3,1	-1,2	3,7	-0,4	3,8	-1,5	-1,4	-2,5	-2,7	-2,6	-0,7	-1,4	4,8
Türkiye İş Bankası A.Ş.	2,5	4,1	8,1	9,0	10,1	13,5	9,1	6,0	0,7	-1,6	-1,8	-0,2	0,6	-0,3	-0,4	-6,0
Yapı ve Kredi Bankası A.Ş.	-4,7	-3,4	-8,0	-12,7	-14,1	-9,7	-10,2	-8,6	-7,1	-0,3	-0,8	-0,3	-1,8	-3,7	-0,4	-1,4
Alternatifbank A.Ş.	-12,3	-10,6	-11,7	-4,9	-6,6	2,0	-13,4	-11,5	-8,4	-7,9	-5,2	-2,2	1,2	8,5	1,2	-3,1
Denizbank A.Ş.	4,4	3,6	2,5	-0,4	-7,3	-3,5	-4,4	-2,4	-0,3	0,5	-2,0	0,9	1,3	1,9	0,5	-3,8
ING Bank A.Ş.	-11,1	-6,6	-4,9	-2,9	-6,3	-1,1	-5,0	-2,7	-4,4	-5,6	-3,9	-3,7	-2,6	-0,9	-0,8	6,2
QNB Finansbank A.Ş.	-8,0	-6,6	-5,0	-3,0	-6,5	-7,8	2,4	0,7	1,5	-0,4	-1,0	-3,5	-3,7	-0,6	-1,2	-4,3
Türkiye Garanti Bankası A.Ş.	-2,9	-4,6	-2,3	-4,1	-1,2	0,2	5,4	6,2	4,5	3,9	1,0	-0,7	-1,9	-4,0	-1,6	2,0

If we look at the main reason why the liquidity component of the Türkiye Halk Bankası A.Ş. in 2003 and 2004 was worse than other banks, the ratio of the bank's total liquid assets rate to the total assets in 2003 and 2004 is viewed as the main reason. This value was 39.9 as the reference value for all banks in 2003 and is 16 for the Turkish people's Bank. Likewise, in 2004, the reference value of all banks for this ratio was 40.1 and for the people's Bank of Turkey was 9.6.

Another ratio affecting the component value of Türkiye Halk Bankası A.Ş. is the ratio of liquid assets to short-term liabilities. This value was 84.6 as reference value in all banks in 2003 and 28.5 for Türkiye Halk Bankası A.Ş. Likewise, the reference value of all banks for this ratio was 77 in 2004 and 29.9 for Türkiye Halk Bankası A.Ş.

If we look at the main reason that the liquidity component of Yapı ve Kredi Bankası A.Ş. in 2006 and 2007 was worse than other banks, the share ratio of the bank's liquid assets in 2006 and 2007 in total assets is viewed as the main reason. This value was 38.3 as the reference value for all banks in 2006 and 13.6 for Yapı ve Kredi Bankası A.Ş. Likewise, in 2007, the reference value of all banks for this ratio was 34.9 and 9.8 for Türkiye Halk Bankası A.Ş.

Another ratio that affects the component value of Yapı ve Kredi Bankası A.Ş. is the ratio of liquid assets to short-term liabilities. This value was 60 for all banks in 2006 and 19.3 for Yapı ve Kredi Bankası A.Ş. Likewise, the reference value of all banks for this ratio was 57.1 in 2007 and 14 for Yapı ve Kredi Bankası A.Ş.

Alternatifbank A.Ş.'s liquidity component from 2003 to 2005 and 2009-2010 performed worse on rates than other banks. To explain the bad course of liquidity component value in these years, we also look at 3 different ratios that make up the component value, a negative view away from current reference values.

Table 7:10 Comparing Reference Values and Ratios of the Liquidity components for Alternatifbank A.Ş.

	2003		2004		2005		2009		2010	
	Referance	Alternatifbank A.Ş.	Referance	Alternatifbank A.Ş.	Referance	Alternatifbank A.Ş.	Referance	Alternatifbank A.Ş.	Referance	Alternatifbank A.Ş.
Liquid Assets / Total Assets	39,9	21,9	40,1	23,0	39,4	19,7	30,4	8,6	28,9	10,8
Foreign Currency Liquid Assets / Foreign Currency Passives	47,7	11,2	47,0	16,9	44,4	13,3	30,4	12,2	26,1	12,5
Liquid Assets / Short-term Liabilities	84,6	30,2	77,0	35,6	73,1	31,9	49,2	15,8	47,4	20,2

If we look at the main reason that ING Bank's liquidity component in 2003 was worse than other banks, the ratio of the bank's share of liquid assets in short-term liabilities in 2003 is seen as the main reason. This value was 84.6 for all banks in 2003 and 30.7 for ING Bank.

Table 7:11 Sensitivity to Market Risks components values for the 16 banks on 2003-2018

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Türkiye Cumhuriyeti Ziraat Bankası A.Ş.	1,3	3,0	2,9	2,5	2,7	3,1	2,8	2,0	2,3	2,3	2,5	2,9	3,3	5,8	2,0	2,0
Türkiye Halk Bankası A.Ş.	-0,5	-3,3	-1,7	-2,2	-1,0	-0,1	1,0	1,8	2,5	3,1	1,6	3,2	2,9	3,2	3,2	3,7
Türkiye Vakıflar Bankası T.A.O.	-1,2	1,1	2,2	2,7	3,0	3,3	3,1	2,6	4,3	2,0	2,8	1,7	2,4	2,5	2,0	1,9
Akbank T.A.Ş.	1,7	2,3	2,4	2,9	2,7	3,0	3,0	1,2	-2,2	0,8	-2,1	0,1	1,7	2,1	0,2	-0,3
Anadolubank A.Ş.	-5,8	-4,8	-4,0	-5,0	-3,7	-1,4	-4,1	-4,0	-4,3	-2,6	-0,7	-0,2	-1,8	-1,1	-0,5	0,4
Fibabanka A.Ş.	15,2	-8,5	-20,1	-20,7	-24,0	-20,0	-18,4	-18,1	17,2	0,8	3,2	-2,0	0,5	3,4	-2,0	-10,0
Şekerbank T.A.Ş.	-7,7	-3,3	-2,0	0,8	-3,5	-7,5	-6,5	-2,3	-2,0	-3,8	-3,3	-6,4	-6,4	-9,9	-6,6	-4,9
Turkish Bank A.Ş.	4,1	3,3	4,7	4,5	5,0	4,7	6,1	1,9	1,9	-0,9	3,4	3,1	0,9	0,0	-5,3	2,6
Türk Ekonomi Bankası A.Ş.	2,2	-0,2	-3,6	-5,6	-3,8	0,8	-1,6	-0,7	-4,9	-4,7	-3,2	-4,7	-5,3	-10,0	-5,0	-4,6
Türkiye İş Bankası A.Ş.	2,8	1,8	3,3	3,2	3,9	5,1	2,8	2,3	3,1	2,9	1,5	1,0	-0,2	-0,5	-0,7	-0,6
Yapı ve Kredi Bankası A.Ş.	4,1	2,6	1,8	2,5	1,4	3,4	1,6	2,4	-2,3	0,3	-2,1	1,0	-0,1	-0,4	-2,0	-2,3
Alternatifbank A.Ş.	-26,0	-18,9	-14,4	-9,3	-8,7	-6,9	-9,7	-9,6	-16,9	-14,2	-11,3	-6,9	-5,5	3,4	-3,7	2,1
Denizbank A.Ş.	3,4	0,5	0,9	-0,4	-1,5	-8,1	-7,2	-8,2	-9,1	-4,9	-10,4	-7,9	-5,3	-2,9	-1,6	0,5
ING Bank A.Ş.	0,9	-0,6	0,0	-2,5	-4,8	-5,7	-5,2	-7,8	-10,1	-6,3	-8,1	-9,7	-9,2	-8,2	-5,8	-6,0
QNB Finansbank A.Ş.	-1,9	-4,0	-5,4	-3,7	-5,6	-10,2	-8,8	-5,7	-8,6	-7,2	-5,1	-6,1	-8,4	-10,1	-7,1	-7,8
Türkiye Garanti Bankası A.Ş.	4,9	2,5	3,4	0,7	2,0	3,4	2,0	3,5	3,7	2,5	2,5	0,5	1,4	-1,3	-0,4	0,0

If we look at the main reason that Fibabanka A.Ş. was worse than other banks for the sensitivity component to market risks in 2007, it can be interpreted as the ratio of in-balance sheet foreign exchange position to equity. The reference value for this ratio was 112.2 in all banks in 2007, while for Fibabanka A.Ş. it was 623.2 in the same year.

If we look at the main reason why Alternatifbank A.Ş. was worse than other banks for its market risk sensitive component in 2003, it can be interpreted as the ratio of the on-balance sheet foreign exchange position to equity. For this ratio, the reference value in all banks was 65.7 in 2003 and for Alternatifbank A.Ş. it was 9 in the same year.

For every 2 banks, in the following years, the values in these ratios approached the reference value and the banks changed their poorly interpretable performance in this component in a positive way.

Table 7:12 Capital Adequacy components values for the Banking Groups on 2003-2018

	Public Capital Banks	**Private Capital Banks**
2018	-0,4	0,1
2017	2,4	-0,5
2016	2,6	-0,6
2015	4,1	-0,9
2014	3,7	-0,9
2013	3,4	-0,8
2012	2,3	-0,5
2011	1,8	-0,4
2010	2,9	-0,7
2009	2,1	-0,5
2008	0,7	-0,2
2007	4,2	-1,0
2006	6,5	-1,5
2005	14,1	-3,3
2004	9,3	-2,1
2003	13,2	-3,1

When the capital adequacy component comparison is made, Private Capital Banks have underperformed Public Banks over the years. But this shows not the poor performance of private capital banks, but the good performance of Public Banks. The capital adequacy component of Public Banks was much better in 2003. Here, the difference between the groups of capital adequacy ratio is clearly observed. The reference value of the capital adequacy ratio for 2003 was 34.2 for Public Banks and 42.3 for private capital banks and 26 for private capital banks.

Table 7:13 Assets Quality components values for the Banking Groups on 2003-2018

	Public Capital Banks	**Private Capital Banks**
2018	3,4	-0,9
2017	1,7	-0,4
2016	1,1	-0,3
2015	1,0	-0,3
2014	0,0	0,0
2013	0,0	0,0
2012	-0,5	0,1
2011	1,1	-0,3
2010	0,6	-0,2
2009	1,2	-0,3
2008	-0,8	0,2
2007	-0,9	0,3
2006	-1,8	0,5
2005	-3,2	0,9
2004	-4,8	1,5
2003	-6,6	2,0

In case of comparison between 2 groups according to asset quality component, it is observed that 2 groups started to capture values close to each other in the process since 2003. However, going back as far as the periods examined, Public Banks in 2003 showed that it had a lower asset quality than the other group. When we look at the ratios that form the component for this situation, it is the high value in the ratio of non-performing receivables to total loans in 2003 that first stands out. The reference value in the ratio of non-performing receivables / total loans in 2003 was 11.1, while for

Public Banks it was 35.1. This situation can be interpreted as the intensity of loans after the 2001 crisis with a subjective valuation.

Table 7:14 Management Quality components values for the Banking Groups on 2003-2018

	Public Capital Banks	Private Capital Banks
2018	1,9	-0,4
2017	2,6	-0,6
2016	2,5	-0,6
2015	3,3	-0,8
2014	2,5	-0,6
2013	2,9	-0,7
2012	2,1	-0,5
2011	3,2	-0,7
2010	3,9	-0,9
2009	4,3	-1,0
2008	2,9	-0,7
2007	2,7	-0,6
2006	2,7	-0,6
2005	7,9	-1,8
2004	2,1	-0,5
2003	-1,8	0,4

When we look at the management quality component, it is seen that over the years, Public Banks have performed more strongly than any other group. However, it is difficult to say that there is a very large performance difference between this good performance and the 2 groups, because the nominal values of the components are close to the other group values.

To be looked at in the 2005 specially, Public Banks are clearly being viewed as outperforming. If we look at the details of the ratios that make up the component for this situation, the reference value for profit per branch rate was 0.5 in 2005 and Public Banks performed approximately 3 times as much as 1.4.

Table 7:15 Earning components values for the Banking Groups on 2003-2018

	Public Capital Banks	Private Capital Banks
2018	-3,6	0,8
2017	-1,6	0,4
2016	-3,5	0,8
2015	-0,3	0,1
2014	-2,0	0,5
2013	0,3	-0,1
2012	-1,9	0,4
2011	-1,0	0,2
2010	0,0	0,0
2009	-0,4	0,1
2008	-0,9	0,2
2007	-0,5	0,1
2006	0,0	0,0
2005	4,9	-1,1
2004	0,1	0,0
2003	5,4	-1,2

The profitability component has continued over the years at a reasonable performance level for 2 groups, even at a level that can be strongly interpreted in most of year. Although Public Banks have performed slightly more negatively in recent years, this does not mean that all the banks in the group have weak performance for this component.

In order to assess the declining performance in 2016 and 2018, when we look at the ratios that comprise the component, the ratio of net balance sheet position to equity, the Public Banks Group is in a position that is far from the reference value. The reference value for 2016 is -33.5 while the group's value is 10.7. In 2018, the reference value is -57.1 and for Public Banks this ratio is -20.2.

This ratio shows the level at which the difference between the bank's foreign currency assets and its resources, defined as its net balance sheet position, is covered by equity. The high ratio is a sign that the bank is at risk of open positions.

Table 7:16 Liquidity components values for the Banking Groups on 2003-2018

	Public Capital Banks	Private Capital Banks
2018	-6,7	1,6
2017	0,3	-0,1
2016	-0,3	0,1
2015	0,5	-0,1
2014	1,0	-0,2
2013	2,0	-0,5
2012	1,6	-0,4
2011	-1,0	0,2
2010	0,6	-0,1
2009	0,7	-0,2
2008	-1,2	0,3
2007	5,9	-1,4
2006	3,6	-0,8
2005	5,0	-1,1
2004	1,9	-0,4
2003	-1,2	0,3

Over the years, the liquidity component has advanced in a strong position that can be considered close together for the Public Banks and private capital banks groups.

To examine the underperformance of the Public Banks Group in the liquidity component in 2018, we can show the obvious difference in the ratio of liquid assets to short-term liabilities from the component's ratios. In 2018, the reference value for the liquid assets / short-term liabilities ratio was 34.8, while the value of the Public Banks group was 18.

This can be interpreted as the liquid assets of the Public Banks group being higher in proportion to the banks in the private capital banks group.

Table 7:17 Sensitivity to market risks components values for the Banking Groups on 2003-2018

	Public Capital Banks	Private Capital Banks
2018	4,2	-1,0
2017	4,9	-1,1
2016	5,6	-1,3
2015	5,0	-1,2
2014	4,8	-1,1
2013	4,4	-1,0
2012	4,7	-1,1
2011	4,9	-1,1
2010	5,2	-1,2
2009	5,5	-1,3
2008	4,6	-1,1
2007	4,3	-1,0
2006	3,0	-0,7
2005	3,1	-0,7
2004	2,1	-0,5
2003	0,0	0,0

It would be wrong to interpret sensitivity to market risks as poor performance for 2 groups in its component over the years. The Public Banks group has displayed a stronger image than the private capital banks Group over the years. But as we have said, it cannot be considered right that Private capital banks Group banks qualify as underpowered performance for this component.

From another perspective, in 2016, the sensitivity of the Public Banks group to market risks is viewed as stronger than that of the other group. The main reason for this is that Public Banks can be defined as the difference in the ratio of the in-balance sheet foreign exchange position to equity. The reference value of the in-balance sheet foreign exchange position in 2016 was 65.7, while the value of the Public Banks Group is 1.1.

As a subjective comment, the capital for Turkish banking is covered in Turkish lira. Although capital is evaluated in Turkish lira, the lower level of the balance sheet's foreign exchange position to equity can be interpreted as the same currency to meet capital and as facilitating action against possible risky processes

7.5. CAMELS Values Analysis

Table 7:18 CAMELS Values for Solo Banks and Groups (2003-2018)

BANKS	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Türkiye Cumhuriyeti Ziraat Bankası A.Ş.	23,1	31,4	47,9	29,1	27,3	9,9	21,1	21,6	10,1	8,9	14,4	18,4	21,6	17,0	15,5	0,4
Türkiye Halk Bankası A.Ş.	10,9	-26,3	-3,5	-7,6	-0,5	-6,6	-2,5	3,5	10,3	7,4	11,8	-1,2	2,6	-1,3	3,4	-10,8
Türkiye Vakıflar Bankası T.A.O.	-13,5	12,3	33,5	7,9	4,0	-4,8	2,6	-5,0	-9,1	-6,8	-3,9	-3,3	-1,0	-3,4	0,0	-1,9
Akbank T.A.Ş.	76,9	43,0	47,5	19,5	19,3	4,0	17,8	27,9	33,6	22,7	22,5	18,7	19,6	22,1	23,0	11,6
Anadolubank A.Ş.	38,8	-8,4	-2,0	-2,0	-1,5	-3,0	2,0	0,6	-0,7	6,3	-3,8	-6,9	5,5	-2,0	-7,2	16,9
Fibabanka A.Ş.	-155,8	-88,9	-49,8	-46,7	-29,8	-44,8	-56,6	-69,4	-103,3	-26,7	-26,7	-10,7	-4,8	-5,2	-4,5	-6,8
Şekerbank T.A.Ş.	11,8	-8,5	-27,2	-30,6	-13,3	-8,3	-18,5	-21,3	-23,3	-18,4	-24,5	-25,6	-31,2	-35,5	-27,8	-34,4
Turkish Bank A.Ş.	38,1	19,8	17,7	23,9	13,1	28,4	14,5	6,2	12,1	5,1	3,5	9,1	-10,6	-11,5	-27,7	-6,0
Türk Ekonomi Bankası A.Ş.	15,9	2,1	13,9	-7,4	-10,6	-14,4	-10,4	-5,9	-10,5	-8,2	-8,3	-8,6	-4,1	1,4	-4,7	1,8
Türkiye İş Bankası A.Ş.	-2,9	4,7	21,1	2,2	2,8	-2,2	8,4	8,3	2,6	-0,4	4,1	7,0	6,1	8,2	4,7	-4,3
Yapı ve Kredi Bankası A.Ş.	-20,4	-28,2	-232,3	-40,4	-40,2	-24,9	-18,2	-5,9	3,5	-4,5	5,7	-4,5	-8,0	-8,9	-4,1	-0,2
Alternatifbank A.Ş.	-48,9	-29,6	-7,1	-13,2	-14,4	-18,8	-28,4	-30,7	-20,9	-26,1	-21,6	-15,8	-16,0	-19,5	-15,2	-11,6
Denizbank A.Ş.	10,0	7,6	11,0	-1,3	-17,0	6,7	-0,5	-1,8	14,2	-4,2	-8,5	-11,8	-12,6	-7,0	-8,4	-16,5
ING Bank A.Ş.	-15,3	-4,2	13,4	-10,5	-15,3	-0,1	-12,3	-10,2	-1,2	-12,1	-11,4	-13,8	-12,7	-0,5	2,0	17,0
QNB Finansbank A.Ş.	5,0	15,6	41,8	19,0	-1,3	13,2	-1,9	0,3	13,9	-6,8	-14,0	-11,8	-16,4	-4,6	-6,7	-2,1
Türkiye Garanti Bankası A.Ş.	-2,2	5,6	15,1	3,2	15,7	4,4	20,2	19,0	18,4	11,9	10,0	8,9	8,9	12,0	14,7	13,5
Average for the Banks	**-1,8**	**-3,2**	**-3,7**	**-3,4**	**-3,9**	**-3,8**	**-3,9**	**-3,9**	**-3,1**	**-3,2**	**-3,2**	**-3,2**	**-3,3**	**-2,4**	**-2,7**	**-2,1**

GROUPS	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Public Capital Banks	9,0	10,7	31,8	14,1	15,7	5,4	13,4	13,4	9,0	8,5	13,0	10,1	13,6	8,0	10,3	-1,2
Private Capital Banks	-1,6	-2,1	-7,1	-3,1	-3,5	-1,2	-3,1	-3,1	-2,1	-1,9	-3,0	-2,3	-3,2	-1,9	-2,4	0,2
Average for the Banks	**3,7**	**4,3**	**12,3**	**5,5**	**6,1**	**2,1**	**5,1**	**5,1**	**3,4**	**3,3**	**5,0**	**3,9**	**5,2**	**3,0**	**3,9**	**-0,5**

Table 25 provides analysis scores for the CAMELS values of all banks and groups. The banks and groups that can be interpreted as low performance under the headings for attention are indicated in red, better values which are close to the average in white, values better than the averages in green color groups.

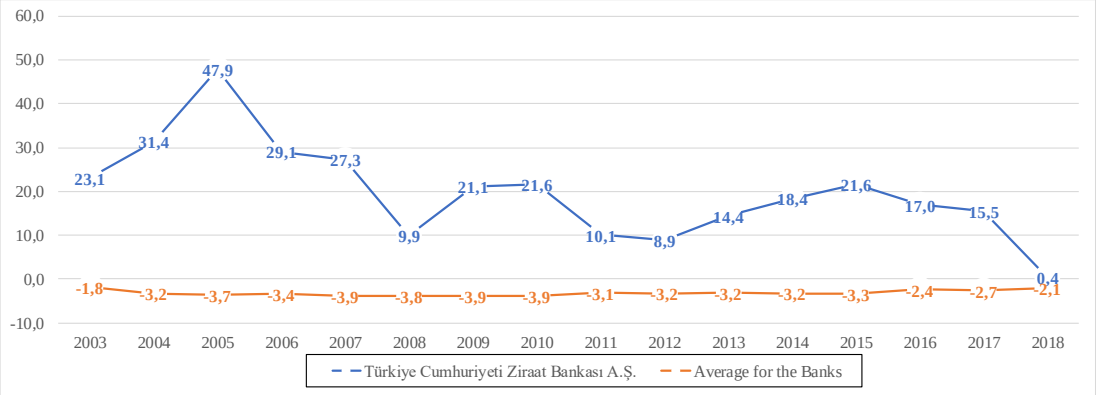
The reasons for the low values will be stated in the bank and group-based review in the next section.

7.6. Analysis and Interpretation of CAMELS Values for Banks

In the evaluation of CAMELS values on behalf of banks over the years, it would be correct to interpret them by looking at the weighted values of the components that make up the value. It can be misleading to interpret CAMELS directly by looking at the values of the ratios that make up the components. Because the ratios have not yet been weighted to form the value of CAMELS and to show their effect in the value. As a matter of fact, the direct reference of the ratio values for the component-based evaluation we did earlier provided more realistic interpretations.

7.6.1. Comparing Türkiye Cumhuriyeti Ziraat Bankası A.Ş. Values and Average Values

Table 7:19 Türkiye Cumhuriyeti Ziraat Bankası A.Ş. and average value comparison chart



BANKS	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Türkiye Cumhuriyeti Ziraat Bankası A.Ş.	23,1	31,4	47,9	29,1	27,3	9,9	21,1	21,6	10,1	8,9	14,4	18,4	21,6	17,0	15,5	0,4
Average for the Banks	-1,8	-3,2	-3,7	-3,4	-3,9	-3,8	-3,9	-3,9	-3,1	-3,2	-3,2	-3,2	-3,3	-2,4	-2,7	-2,1

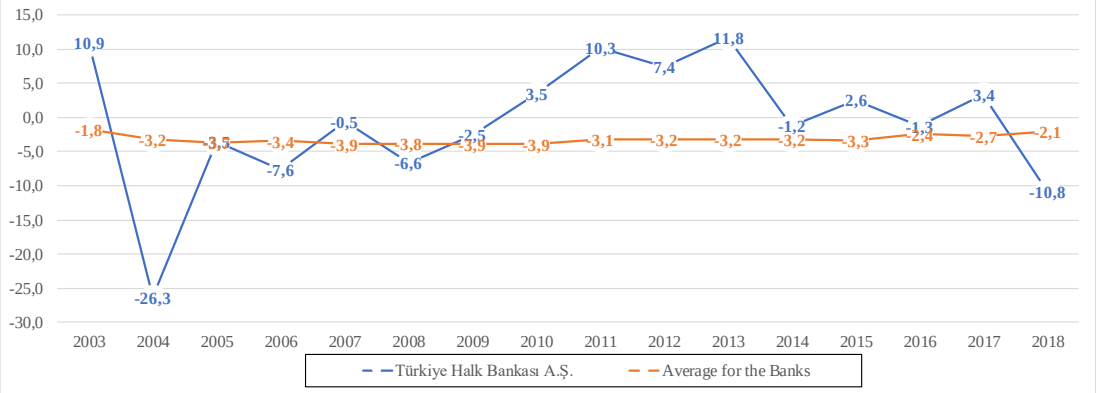
Türkiye Cumhuriyeti Ziraat Bankası A.Ş., has been performing well above the average value since 2003 until today. This increase reached the maximum level in 2005. However, in 2018, position has come to close to average value. To briefly explain the reasons for these situations;

There are 2 different components that caused the camels to increase in value in 2005. The first of these is the earnings component in 2005. This value increased from 3.4 in 2004 to 10.4 in 2005. The other component value is management quality. This component was again followed by a 100% increase in 2005. The management quality value, which was 6.3 in 2004, was 13.2 in 2005.

The value of CAMELS in 2018 is closest to average and the biggest reason for the bank's underperformance can be interpreted as the fall in the liquidity component. Its liquidity value has a value of 1.9 in 2017, falling to -9.1 in 2018.

7.6.2. Comparing Türkiye Halk Bankası A.Ş. Values and Average Values

Table 7:20 Türkiye Halk Bankası A.Ş. and average value comparison chart



BANKS	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Türkiye Halk Bankası A.Ş.	10,9	-26,3	-3,5	-7,6	-0,5	-6,6	-2,5	3,5	10,3	7,4	11,8	-1,2	2,6	-1,3	3,4	-10,8
Average for the Banks	-1,8	-3,2	-3,7	-3,4	-3,9	-3,8	-3,9	-3,9	-3,1	-3,2	-3,2	-3,2	-3,3	-2,4	-2,7	-2,1

Türkiye Halk Bankası A.Ş. has performed below average in 2004 and 2018. In contrast, it performed far above average during 2011-2013. In short, if we go down to the reasons for these performance fluctuations,

For underperformance in 2004, the capital adequacy component may be demonstrated. While the capital adequacy component was 22.2 in 2003, it fell by half to 10.5 in 2004. Another component is profitability, which has decreased significantly from 2003 to 2004. The component value of profitability, which was 13.4 in 2003, is monitored as 1 in 2004.

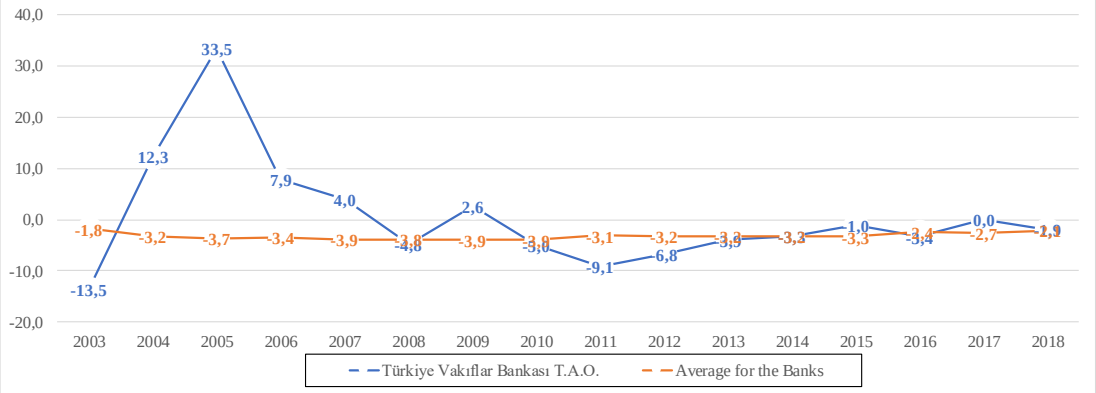
The capital adequacy component also stands out for underperformance in 2018. The value decreased from 0.8 in 2017 to 4.1 in 2018.

If we look at performance losses as well as the strong performance in 2011-2013 compared to the average, the year-over-year increase in the profitability component is open to interpretation. The value of this component increased almost 2-fold from 3.4 in 2010 to 7.4 in 2011. The component value continues with 1.8 in 2012 and 4.9 in 2013. In the following years it has been declining and progressing.

The declines and increases in the component values mentioned above help us to interpret the fluctuating appearance of the CAMELS analysis chart of Türkiye Halk Bankası A.Ş.

7.6.3. Comparing Türkiye Vakıflar Bankası T.A.O. Values and Average Values

Table 7:21 Türkiye Vakıflar Bankası T.A.O. and average value comparison chart



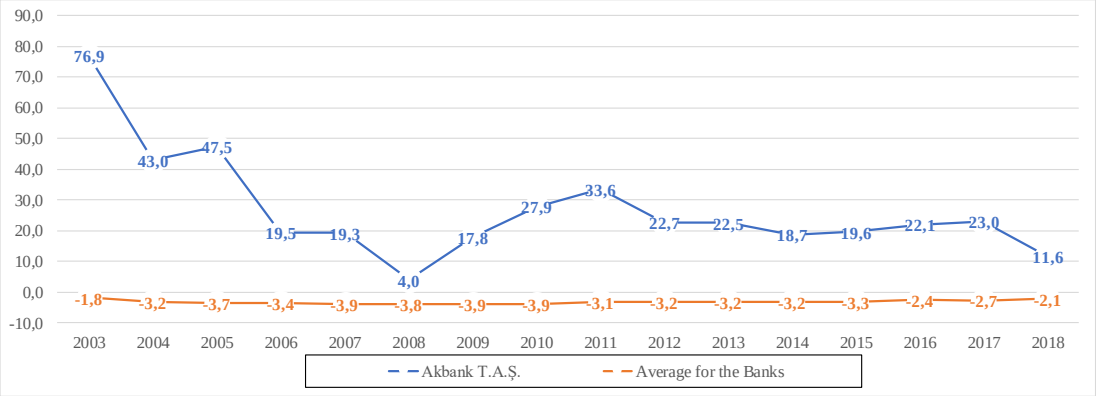
BANKS	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Türkiye Vakıflar Bankası T.A.O.	-13,5	12,3	33,5	7,9	4,0	-4,8	2,6	-5,0	-9,1	-6,8	-3,9	-3,3	-1,0	-3,4	0,0	-1,9
Average for the Banks	-1,8	-3,2	-3,7	-3,4	-3,9	-3,8	-3,9	-3,9	-3,1	-3,2	-3,2	-3,2	-3,3	-2,4	-2,7	-2,1

Türkiye Vakıflar Bankası T.A.O, has performed close to average value for most periods as of the periods studied. In 2003 alone, it completely underperformed, but then for 3 years, on the contrary, it performed much stronger than the average value. If you need to look at the detail of the components that make up the value of CAMELS for these periods,

Following poor performance in 2003, strong performance was observed as of 2004 and 2005, completely changing course. The most notable component value for these periods is management quality. The management quality value was 1.4 in 2003, compared to 7.8 in 2004 and 11.7 in 2005.

7.6.4. Comparing Akbank T.A.Ş. Values and Average Values

Table 7:22 Akbank T.A.Ş. and average value comparison chart



BANKS	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Akbank T.A.Ş.	76,9	43,0	47,5	19,5	19,3	4,0	17,8	27,9	33,6	22,7	22,5	18,7	19,6	22,1	23,0	11,6
Average for the Banks	-1,8	-3,2	-3,7	-3,4	-3,9	-3,8	-3,9	-3,9	-3,1	-3,2	-3,2	-3,2	-3,3	-2,4	-2,7	-2,1

Akbank T.A.Ş performed well above the average value in all periods examined. 2003-2005 is the highest performance period. Although it only performed close to average in 2008, this should not be characterized as underperforming. To briefly explain these years when the surge was high;

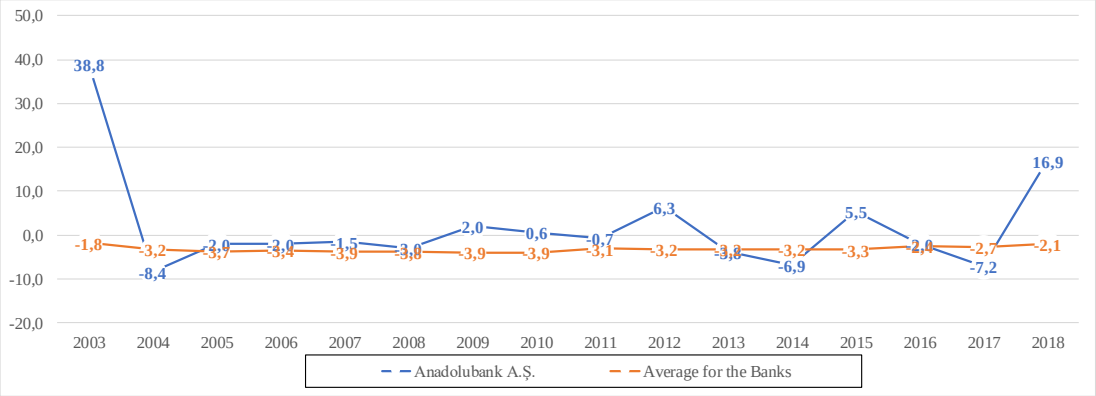
In 2003, for the period in which the observed are noted value of CAMELS was most strong values in 2 separate components. The first of these is the capital adequacy ratio. It was 19.9 in 2003, 10.2 in 2004 and 6 in 2005. Other component profitability also shows a value as high as 27.7 in 2003. The same component was paralleled to the CAMELS score, followed by 9 in 2004, and 10.4 in 2005.

In 2008, average performance was observed to be the closest to the value for the bank. Mainly reason, can be interpreted as the liquidity component. The liquidity component decreased to 5.4 in 2007 and -5.4 in 2008. In the following years, it has progressed from negative to having a fluctuating positive value.

Decreases and increases in the component values mentioned above Akbank T.A.Ş CAMELS for s help us interpret the wavy appearance of the analysis graph.

7.6.5. Comparing Anadolubank A.Ş. Values and Average Values

Table 7:23 Anadolubank A.Ş and average value comparison chart



BANKS	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Anadolubank A.Ş.	38,8	-8,4	-2,0	-2,0	-1,5	-3,0	2,0	0,6	-0,7	6,3	-3,8	-6,9	5,5	-2,0	-7,2	16,9
Average for the Banks	**-1,8**	**-3,2**	**-3,7**	**-3,4**	**-3,9**	**-3,8**	**-3,9**	**-3,9**	**-3,1**	**-3,2**	**-3,2**	**-3,2**	**-3,3**	**-2,4**	**-2,7**	**-2,1**

Anadolubank A.Ş. performed parallel to average value in most of the periods studied. The bank's performance for CAMELS analysis is monitored as having the highest performance in 2003, among the periods examined. Although it only performed below average in 2014 and 2017, it appears to be showing its strong performance again as of 2018. If we need to interpret the component values that make up the CAMELS value for the periods that we specify,

It is observed that the values in profitability and liquidity components performed much higher in 2003 than in the following years. The profitability component had a value as high as 33.2 in 2003, while it declined to 4.8 in 2004. Again, the liquidity component had a value of 11.9 in 2003, while it declined to 4.3 in 2004. This led to a much higher performance than the average value of camels in 2003.

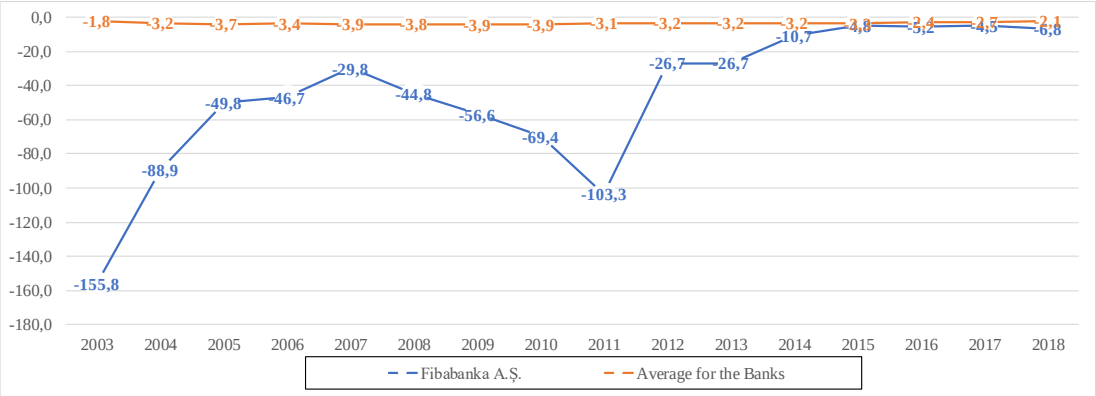
When examined in 2014, the CAMELS score declined below average value. The component value that can explain this situation is liquidity. The liquidity component has down close to 100%, value was 3.2 in 2013, but has declined to -3.4 in 2014. In 2015, this value increased to a more reasonable level of 7.7.

In 2018, it showed a strong CAMELS performance separate from the average, creating a CAMELS value of 16.9 versus an average value of 2.1. Here, 2 separate components stand out again. As a priority, the most volatile component in the process for

Anadolubank A.Ş. is the increase in liquidity from -2.3 to 5.6 in 2018. The capital adequacy component, however, increased from -2.3 to 5.6 in 2017.

7.6.6. Comparing Fibabanka A.Ş. Values and Average Values

Table 7:24 Fibabanka A.Ş. and average value comparison chart



BANKS	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Fibabanka A.Ş.	-155,8	-88,9	-49,8	-46,7	-29,8	-44,8	-56,6	-69,4	-103,3	-26,7	-26,7	-10,7	-4,8	-5,2	-4,5	-6,8
Average for the Banks	-1,8	-3,2	-3,7	-3,4	-3,9	-3,8	-3,9	-3,9	-3,1	-3,2	-3,2	-3,2	-3,3	-2,4	-2,7	-2,1

Fibabanka A.Ş. all the periods used in the study showed a performance that could be described as weak. Camels performance-based analysis is well below average. From 2003 to 2013 this cruise continued as undulating. After 2015, we can say that while average has failed to capture its value again, average value has performed closer. Especially, in the years 2003-2004 and 2011 with the lowest performance to explain;

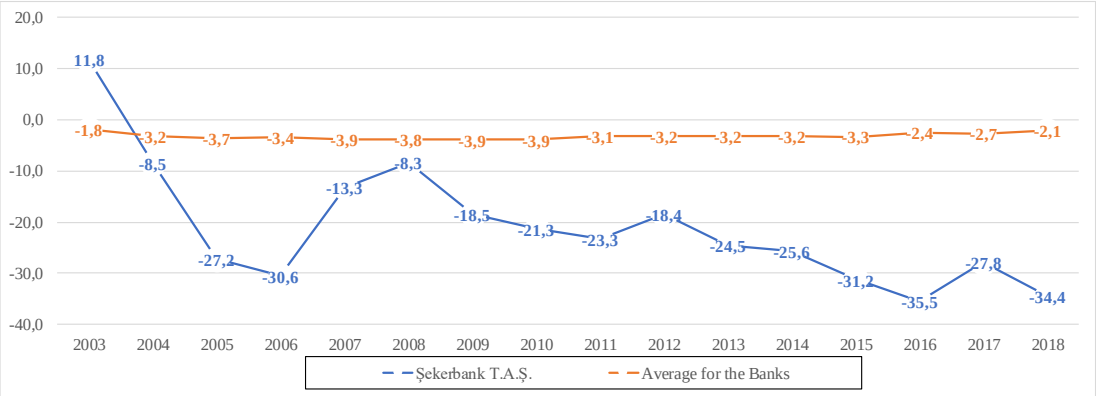
It would be correct to look at the poor performance of multiple components for the years 2003-2004. The value of the capital adequacy component was -45.7 in 2003 and was monitored at -21.1 in 2004. The other component, management qualification is -22.6 and -15.1, respectively. In 2005, it increased to -8,4. Finally, the earning component has values of -98.3 and -42.7. In 2005, this value increased to -5.2. The increase in these values directly affects the performance improvement of the CAMELS analysis value on the chart.

In 2011, the direct profitability component can be looked at in the year. The value of this component has decreased according to its own averages in the same year compared to other components. It has values of -112.5 in 2011, -30.8 in 2010

and -23.8 in 2012. The decrease in this value over 1 period also directly affects the weak performance wave of the CAMELS chart value on the chart.

7.6.7. Comparing Şekerbank T.A.Ş. Values and Average Values

Table 7:25 Şekerbank T.A.Ş and average value comparison chart



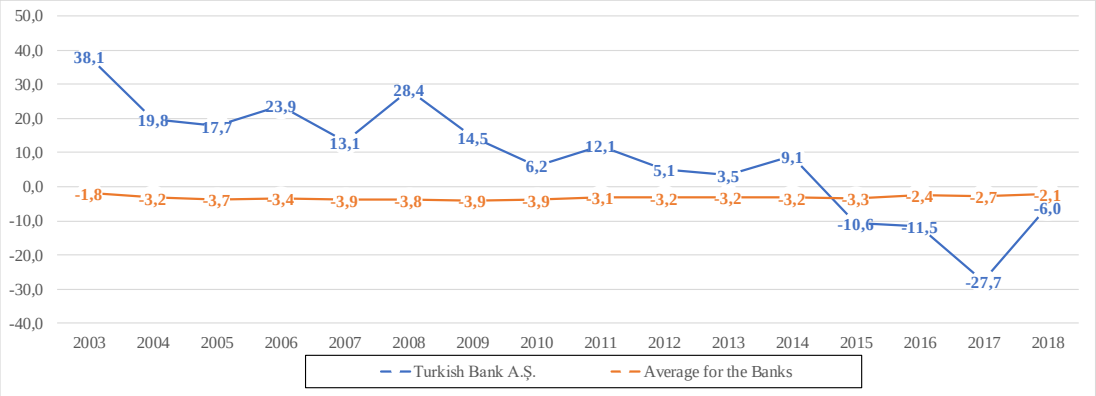
BANKS	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Şekerbank T.A.Ş.	11,8	-8,5	-27,2	-30,6	-13,3	-8,3	-18,5	-21,3	-23,3	-18,4	-24,5	-25,6	-31,2	-35,5	-27,8	-34,4
Average for the Banks	-1,8	-3,2	-3,7	-3,4	-3,9	-3,8	-3,9	-3,9	-3,1	-3,2	-3,2	-3,2	-3,3	-2,4	-2,7	-2,1

Şekerbank T.A.Ş CAMELS values performed below average in most of the periods studied, which can be described as weak performance. Only in 2003 CAN its performance be shown as strong. The following years have produced a fluctuating performance by falling below average value. Especially over the years, this fluctuation has shown an increasingly weak performance in the long term. We can explain its strong performance in 2003 and its performance value in 2018, which can be interpreted as the lowest,

In 2003, the profitability component had the highest value among the periods studied. The value of 35.8 carried the bank's performance directly up. In subsequent periods, it declined to 4.1 in 2004. Looking at 2018, it is quite difficult to discern the component that experienced a high fluctuation. Because in general, the bank has performed poorly since previous years. To offer reasons, though, the profitability component was valued at -1.7 in 2017, down from -5.9 in 2018.

7.6.8. Comparing Turkish Bank A.Ş Values and Average Values

Table 7:26 Turkish Bank A.Ş and average value comparison chart



BANKS	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Turkish Bank A.Ş.	38,1	19,8	17,7	23,9	13,1	28,4	14,5	6,2	12,1	5,1	3,5	9,1	-10,6	-11,5	-27,7	-6,0
Average for the Banks	-1,8	-3,2	-3,7	-3,4	-3,9	-3,8	-3,9	-3,9	-3,1	-3,2	-3,2	-3,2	-3,3	-2,4	-2,7	-2,1

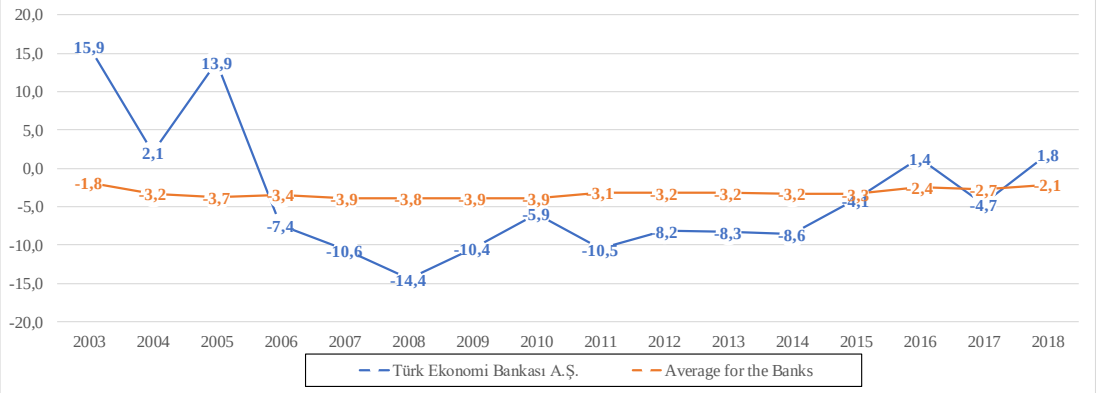
Turkish Bank A.Ş has performed strongly overall during the periods examined. It has a chart above average value until 2014. It is a peak process, especially for the bank's performance in 2003. In 2015 and afterwards, it performed much lower than the average, especially in 2017. If you need to examine these periods,

The key component reflecting the bank's strong performance on the value of CAMELS in 2003 is capital adequacy. The bank's capital adequacy component value in 2003 was 10.4. This value declined sharply to 1.1 in 2004. However, CAMELS was able to balance this decline with strong performance in other components.

Additionally, the lowest performance in 2017 can be cited as being due to the poor value in the liquidity component. The component value, which was 1.4 in 2016, declined to 4.9 in 2017. In 2018, however, this value increased to 13.7. In this way, the value of CAMELS has been able to have a closer look at the average value in 2018.

7.6.9. Comparing Türkiye Ekonomi Bankası A.Ş Values and Average Values

Table 7:27 Türkiye Ekonomi Bankası A.Ş and average value comparison chart



BANKS	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Türk Ekonomi Bankası A.Ş.	15,9	2,1	13,9	-7,4	-10,6	-14,4	-10,4	-5,9	-10,5	-8,2	-8,3	-8,6	-4,1	1,4	-4,7	1,8
Average for the Banks	-1,8	-3,2	-3,7	-3,4	-3,9	-3,8	-3,9	-3,9	-3,1	-3,2	-3,2	-3,2	-3,3	-2,4	-2,7	-2,1

Türkiye Ekonomi Bankası A.Ş has performed CAMELS values which are generally considered to be fluctuating. As of the periods studied, the strong value of the first 3 periods subsequently lost for the long term. As of 2015, average has reached strong position with a performance closer to value. Especially the strong performance in between 2003 and 2005, and the lowest performance in 2008 the periods examined,

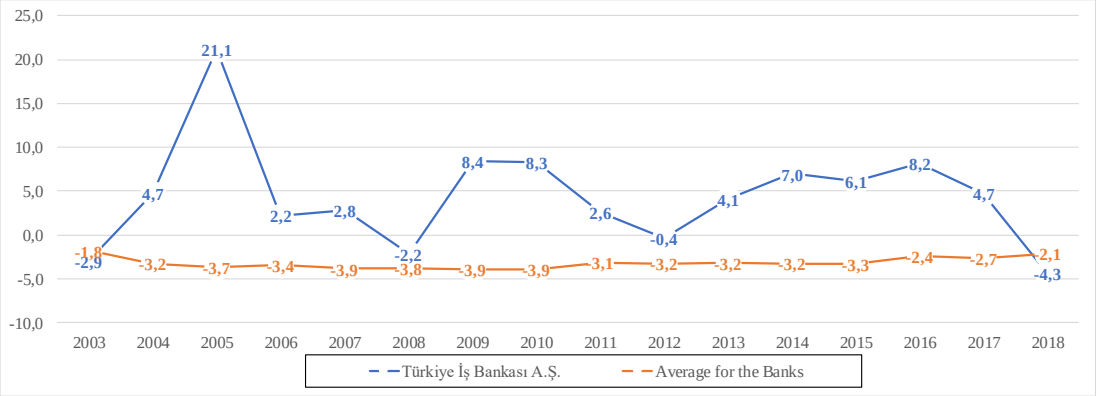
We can say that the strong but fluctuating outlook for 2003-2005 was due to volatility in the profitability component. The profitability component was at 6 levels in 2003 and 2.4 levels in 2004, and by 2005, it was 16.2 levels, the highest level in the period examined. In addition, the capital adequacy component declined from -2.1 in 2003 to -60.4 in 2004. In 2005, he continued with the 4.1.

In addition to the capital adequacy component, the ratio values that make up this component of the bank remained below the ratio weight in all periods examined.

By 2008, the most important and effective reason for the low CAMELS value was the low value of the profitability component in this period. The value, which was -15 in 2008, ascended to -2.5 in 2009.

7.6.10. Comparing Türkiye İş Bankası A.Ş. Values and Average Values

Table 7:28 Türkiye İş Bankası A.Ş. and average value comparison chart



BANKS	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Türkiye İş Bankası A.Ş.	-2,9	4,7	21,1	2,2	2,8	-2,2	8,4	8,3	2,6	-0,4	4,1	7,0	6,1	8,2	4,7	-4,3
Average for the Banks	**-1,8**	**-3,2**	**-3,7**	**-3,4**	**-3,9**	**-3,8**	**-3,9**	**-3,9**	**-3,1**	**-3,2**	**-3,2**	**-3,2**	**-3,3**	**-2,4**	**-2,7**	**-2,1**

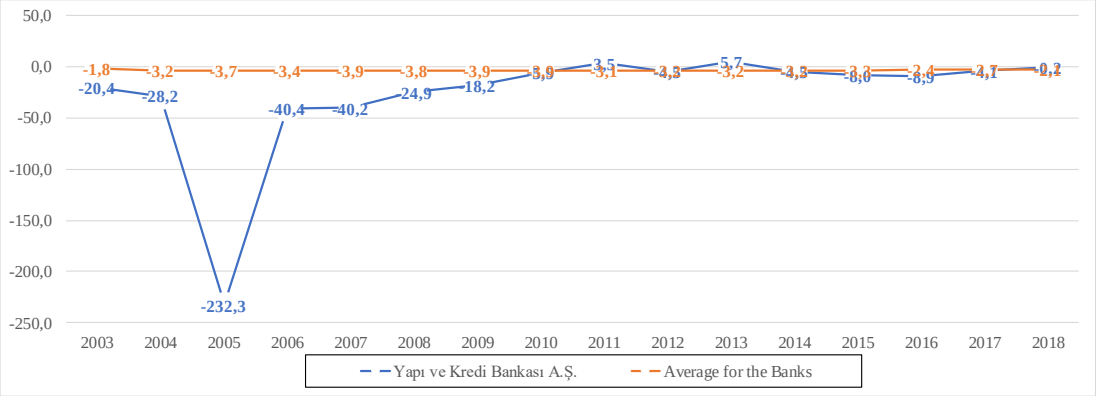
Türkiye İş Bankası A.Ş., as of the periods examined, it is often viewed as having a performance that can be characterized as strong. While it only had below-average performance in 2003 and 2018, it is not right to consider this as a powerless position. In 2005, however, it has a much stronger value than in other years. To interpret the years with the lowest and highest value,

In 2003, the low value in 2 of the components that make up the value of CAMELS stood out. The first of these is the capital adequacy component. It had a value of -0.3 in 2003, rising to 5.2 in 2004.

In 2005, a value of 7.2 in the management quality component directly affected the CAMELS component. The value of this component is -0.6 the year before and 1.3 the year after. CAMELS value has shown a high performance directly due to the impact of the management quality component. This value showed the best performance the bank the periods examined.

7.6.11. Comparing Yapı ve Kredi Bankası A.Ş. Values and Average Values

Table 7:29 Yapı ve Kredi Bankası A.Ş.and average value comparison chart



BANKS	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Yapı ve Kredi Bankası A.Ş.	-20,4	-28,2	-232,3	-40,4	-40,2	-24,9	-18,2	-5,9	3,5	-4,5	5,7	-4,5	-8,0	-8,9	-4,1	-0,2
Average for the Banks	-1,8	-3,2	-3,7	-3,4	-3,9	-3,8	-3,9	-3,9	-3,1	-3,2	-3,2	-3,2	-3,3	-2,4	-2,7	-2,1

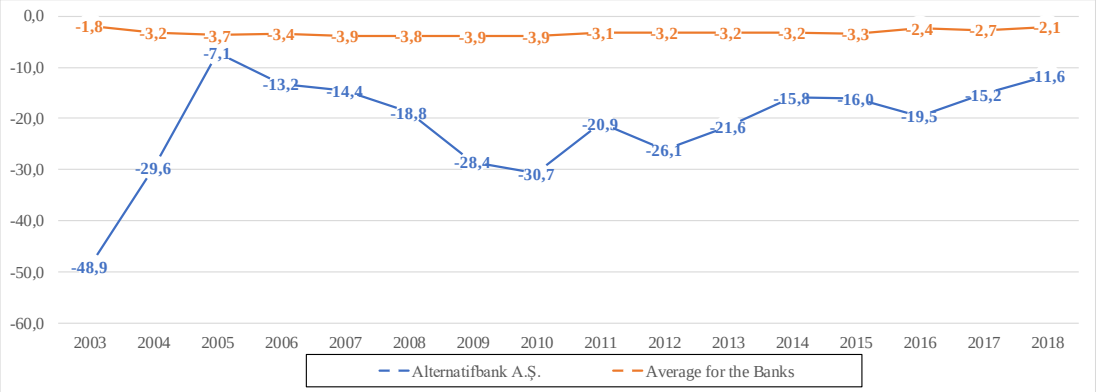
Yapı ve Kredi Bankası A.Ş, as of the periods studied, it has shown near-average performance in 2010 and beyond. CAMELS values in recent years have kept the bank at a reasonable performance level. However, it has shown a fluctuating and away from averaged performance before 2010. Especially in 2005, the bank showed its lowest performance in years. In fact, it is the lowest CAMELS value among all banks and groups in all periods examined.

The main reason for this situation is the low values of the 3 different components that make up the CAMELS rating in 2005. As a priority, the capital adequacy value decreased from -6 in 2004 to -52.2 in 2005. The management quality component was -78.8 in 2005 and -5.3 in the previous year. Other component profitability declined from -7.1 in 2004 to -86 in 2005.

The bank's CAMELS rating was directly affected by the maximum decline in the value of this component in 2005, and performance that could be described as very poor.

7.6.12. Comparing Alternatifbank A.Ş Values and Average Values

Table 7:30 Alternatifbank A.Ş and average value comparison chart



BANKS	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Alternatifbank A.Ş.	-48,9	-29,6	-7,1	-13,2	-14,4	-18,8	-28,4	-30,7	-20,9	-26,1	-21,6	-15,8	-16,0	-19,5	-15,2	-11,6
Average for the Banks	**-1,8**	**-3,2**	**-3,7**	**-3,4**	**-3,9**	**-3,8**	**-3,9**	**-3,9**	**-3,1**	**-3,2**	**-3,2**	**-3,2**	**-3,3**	**-2,4**	**-2,7**	**-2,1**

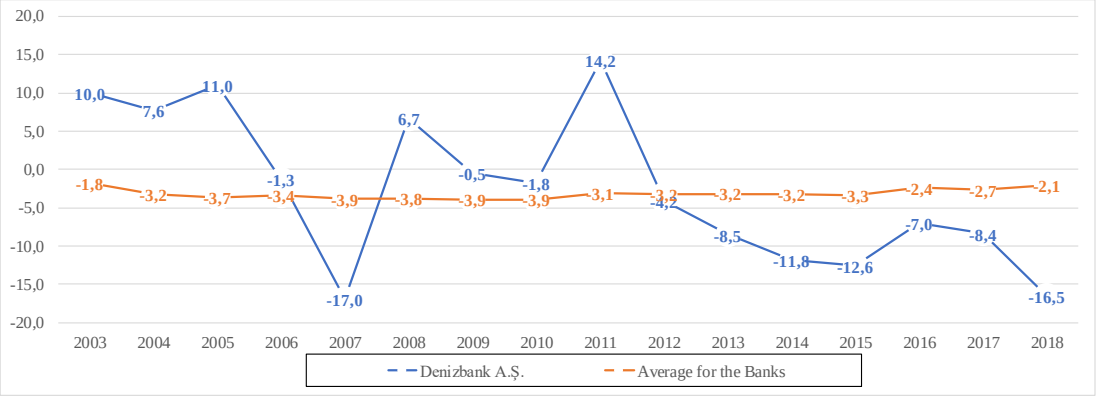
Alternatifbank A.Ş performed below average in all periods examined. Considering this situation, we can evaluate as having poor performance for CAMELS analysis in general terms. It was observed to have the lowest value in 2003. Alternatifbank A.Ş has the closest position of average value is in 2005. If we look at the detail of the periods in which the graph curve has the lowest and highest values,

In 2003, CAMELS score with low value in multiple components was negatively impacted. Looking at the capital adequacy component as a priority, it was -7,2 in 2003, one of the lowest values in all periods. Another low-value component is liquidity. This value is one of the lowest between the periods studied, with -12,3 in 2003. The last significant value for 2003 is the component value of sensitivity to market risks. This value was -26 in 2003. In 2004, it increased to -18,9.

2005 is the closest period to average value. The high value in the profitability component may briefly explain this situation. In 2005, the value of the profitability component was 12,6. In 2006, this value declined to 2,1.

7.6.13. Comparing DenizBank A.Ş Values and Average Values

Table 7:31 DenizBank A.Ş and average value comparison chart



BANKS	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Denizbank A.Ş.	10,0	7,6	11,0	-1,3	-17,0	6,7	-0,5	-1,8	14,2	-4,2	-8,5	-11,8	-12,6	-7,0	-8,4	-16,5
Average for the Banks	-1,8	-3,2	-3,7	-3,4	-3,9	-3,8	-3,9	-3,9	-3,1	-3,2	-3,2	-3,2	-3,3	-2,4	-2,7	-2,1

DenizBank A.Ş., as of the periods examined in the study, it displayed a completely fluctuating CAMELS performance. While some periods were above the average value, some periods fell considerably below. However, it has also experienced periods that can be considered close to the average value. When we look at the first three periods, the bank's performance can be interpreted as quite strong. In subsequent periods, it performed quite poorly in 2007. Its performance continued to be above average until 2013. From 2013 to the present, it has performed fluctuating below average. DenizBank A.Ş., If we look at the reasons for the strongest and lowest performance of,

Liquidity is the most important component of the bank's CAMELS performance in 2003-2005. While the liquidity component has a positive value of 4,4 , 3,6 , 2,5 respectively, in 2006, it has a value of -0,4.

Looking at 2007, the liquidity component reached its lowest value in the periods studied. The liquidity component value for 2007 is -7.3. This value directly brought the CAMELS value to the lowest value among the periods examined for the bank.

However, it has had a much stronger performance value in 2008. This is because, in return for liquidity and other component effects, profitability increases the

component value to a very good level. The value, which was -2.1 in 2007, increased to 20.7 in 2008. This value is secondary where the bank has the highest profitability value for the study periods.

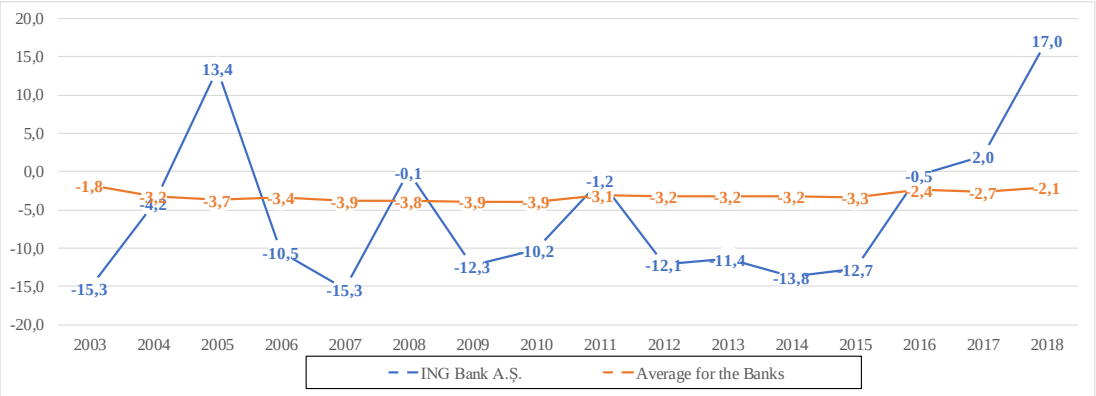
In 2011, DenizBank A.Ş., CAMELS is in its strongest period in terms of performance. The profitability component has the highest value in 2011 among all periods examined. The profitability component value increased to 25 in 2011. This in turn had a direct impact on the bank's CAMELS performance value.

After 2011, the bank had a close value to the average value, but continued to perform below average value. CAMELS performance has had downward momentum, especially in 2012 and 2013. In 2013, the sensitivity component to market risks was -10.4, while in 2012 it was -4.9.

There is also an important political reason affecting the performance of CAMELS in this period special. DenizBank A.Ş, which underwent a shareholder change in 2011, bought by Russian state bank Sberbank. U.S.A sanctions against Ukraine and Russia in 2011 prevented the bank from funding from internationally syndicated loans.

7.6.14. Comparing ING Bank A.Ş Values and Average Values

Table 7:32 ING Bank A.Ş and average value comparison chart



BANKS	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
ING Bank A.Ş.	-15,3	-4,2	13,4	-10,5	-15,3	-0,1	-12,3	-10,2	-1,2	-12,1	-11,4	-13,8	-12,7	-0,5	2,0	17,0
Average for the Banks	-1,8	-3,2	-3,7	-3,4	-3,9	-3,8	-3,9	-3,9	-3,1	-3,2	-3,2	-3,2	-3,3	-2,4	-2,7	-2,1

ING Bank A.Ş., it has a completely undulating CAMELS performance as of the periods studied. When we look at all periods after the beginning, we see a performance

below and above the average value respectively and close to the average value in some periods. The performance value, which was low in the first period of the study, it has peak value after 2 years. It has poor performance in 2003 and 2007. In the following periods, it continued with a fluctuating position, again near or below the average value. 2018 is seen as the period when bank performance value peaked. If we look at the component values in these periods,

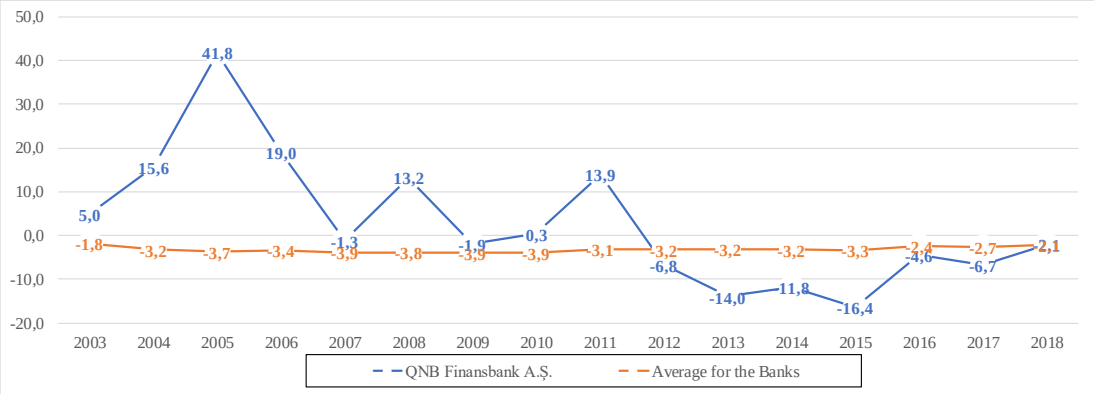
In 2003, liquidity and profitability components stand out. The liquidity component was -11.1 in 2003. Increasing to -6,6 in 2004. Similarly, the value of the profitability component, which is -2.3, improved to 2.7 in 2004.

2007 was the period when the bank had its lowest CAMELS performance. Again, the liquidity component shows a high decline compared to the previous period. It declined from -2.3 in 2006 to -6.3 in 2007 the performance of underpowered CAMELS had a slightly better outlook in 2008, with the rise in the earnings component. The profitability component increased from 0.5 in 2007 to 19.4 in 2008. This value is the highest value for the profitability component among the periods studied.

In 2018, the rise in 3 different components led to the strong performance of CAMELS. The first of these is the liquidity component. The liquidity component increased from -0.8 in 2007 to 6.2 in 2018. Asset quality increased from 1.1 in 2017 to 3.7 in 2018. Finally, the capital adequacy component increased 100%, from 1.8 to 3.6 in 2018.

7.6.15. Comparing QNB Finansbank A.Ş. Values and Average Values

Table 7:33 QNB Finansbank A.Ş. and average value comparison chart



BANKS	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
QNB Finansbank A.Ş.	5,0	15,6	41,8	19,0	-1,3	13,2	-1,9	0,3	13,9	-6,8	-14,0	-11,8	-16,4	-4,6	-6,7	-2,1
Average for the Banks	-1,8	-3,2	-3,7	-3,4	-3,9	-3,8	-3,9	-3,9	-3,1	-3,2	-3,2	-3,2	-3,3	-2,4	-2,7	-2,1

QNB Finansbank A.Ş. the CAMELS have shown a generally fluctuating performance during the periods studied. This fluctuation, which lasted above average value from 2003 to 2012, declined below average value as of 2012. QNB Finansbank A.Ş., we can interpret the most powerful and powerless performances,

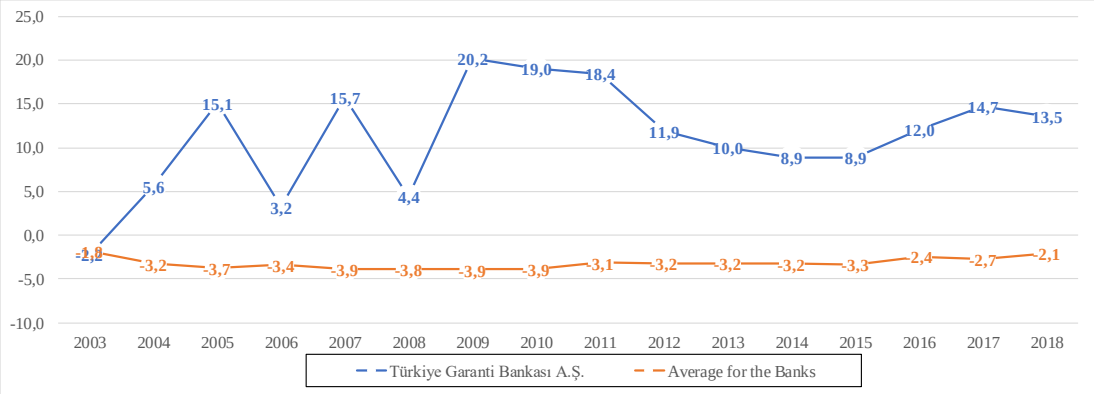
QNB Finansbank A. in 2005S has the highest value of CAMELS. In order to explain this situation, it is possible to interpret over 3 different components. The component that gets the most attention is earnings. The earning component increased from 20.3 in 2004 to 33.1 in 2005. The profitability component showed a 60% jump. The other notable component is the management competence component. The value of the profitability component, which stood at 4.4 in 2004, increased to 12.2 in 2005. The last component that stands out for this period is the capital adequacy component. The capital adequacy component increased from a negative level of -2.7 in 2004 to 2.7 in 2005. This increase in components ensured that the value of CAMELS was the highest among the periods studied.

For the value of CAMELS, which began to show declining performance in 2012, the most significant component value that stands out is profitability. The profitability component declined from 27.2 in 2011 to 12.7 in 2012.

In 2015, the bank was tracked as having the lowest CAMELS value. The declining component for this period is capital adequacy. While the capital adequacy component was valued at 0 in 2014, it declined to -2 in 2015.

7.6.16. Comparing Türkiye Garanti Bankası A.Ş. Values and Average Values

Table 7:34 Türkiye Garanti Bankası A.Ş. and average value comparison chart



BANKS	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Türkiye Garanti Bankası A.Ş.	-2,2	5,6	15,1	3,2	15,7	4,4	20,2	19,0	18,4	11,9	10,0	8,9	8,9	12,0	14,7	13,5
Average for the Banks	-1,8	-3,2	-3,7	-3,4	-3,9	-3,8	-3,9	-3,9	-3,1	-3,2	-3,2	-3,2	-3,3	-2,4	-2,7	-2,1

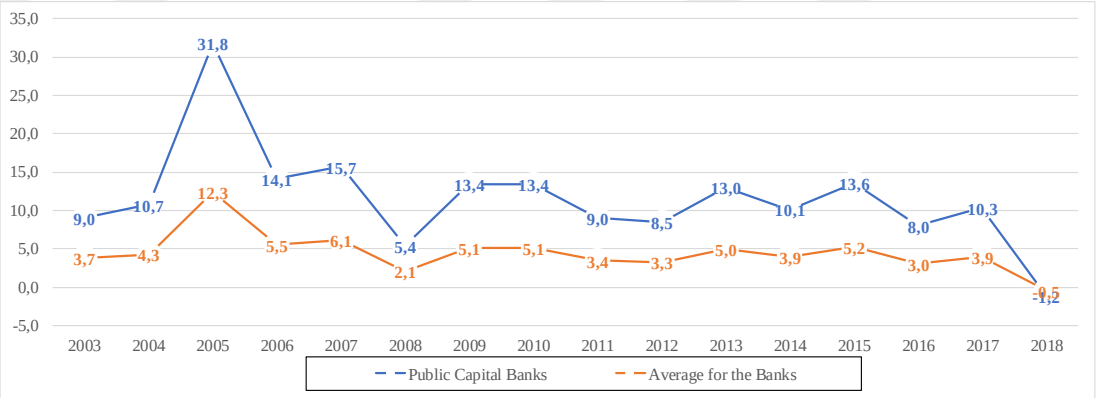
Türkiye Garanti Bankası A.Ş., it has performed above average value in nearly all the periods studied. Türkiye Garanti Bankası A.Ş., it is one of the banks with the best performance among the banks surveyed for. There is a performance value that is below the average value only in 2003. It would certainly be a misinterpretation to characterize the bank as a weak performer for this period. It shows a fluctuating performance well above the average value in the following periods. This strong performance has had peak value, especially in 2009.

In 2003, the value of CAMELS, which was lower than other periods, could be interpreted over 2 separate components. The first of these is the capital adequacy component. The capital adequacy component value in 2003 was -6,6. This value increases in subsequent periods. Again, in the same year, the profitability component shows a low value. In 2003, the component value of profitability was -3.8. In 2004, this value increased to a normal, even strong value of 8.1.

In 2009, Türkiye Garanti Bankası A.Ş., it has the highest value of CAMELS among the periods studied. The reason for this is the increase trend of 3 different component values compared to the previous year. The capital adequacy component increased from -1.6 in 2008 to 2.1 in 2009. The earnings component increased from -6.5 in 2008 to 1.1 in 2009. Finally, the liquidity component value increased from 0.2 to 5.4. These component increases directly affected the CAMELS score. For this reason, the value of CAMELS has reached the highest level between periods.

7.7. Industry Averege Values

Table 7:35 Public Banks Group Values and Group Average Values comparison chart



GROUPS	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Public Capital Banks	9,0	10,7	31,8	14,1	15,7	5,4	13,4	13,4	9,0	8,5	13,0	10,1	13,6	8,0	10,3	-1,2
Average for the Banks	3,7	4,3	12,3	5,5	6,1	2,1	5,1	5,1	3,4	3,3	5,0	3,9	5,2	3,0	3,9	-0,5

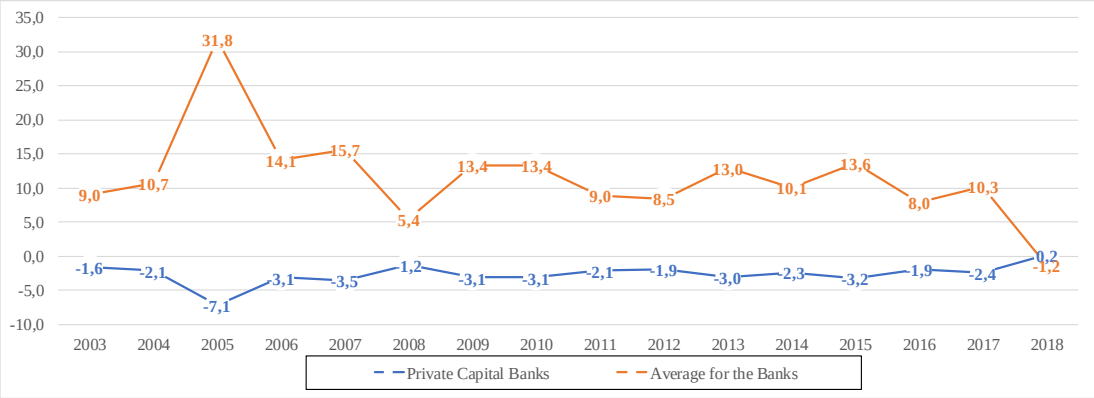
Public Banks have a view of performance above the average value of bank groups in all periods examined. The performance of these strong CAMELS reached its peak value in 2005. It remained negative and below average in 2018 alone. Despite the value of Public Banks in 2018, it would not be right to call them weak. If we need to interpret the component value for the periods in question,

In 2005, 3 separate components stand out. The capital adequacy component increased from 9.3 in 2004 to 14.1 in 2005. Management quality was 2.1 in 2004 and increased to 7.9 in 2005. Finally, the profitability component increased from 0.1 in 2004 to 4.9 in 2005.

In the decline of the value of CAMELS in 2018, the most important factor is the liquidity component. In 2018, the liquidity component has a value of -6,7. In 2017, this value is monitored as 0.3.

7.7.1. Comparing Private Capital Banks Group Values and Group Average Values

Table 7:36 Private Capital Banks Group Values and Group Average Values comparison chart



GROUPS	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Private Capital Banks	-1,6	-2,1	-7,1	-3,1	-3,5	-1,2	-3,1	-3,1	-2,1	-1,9	-3,0	-2,3	-3,2	-1,9	-2,4	0,2
Average for the Banks	9,0	10,7	31,8	14,1	15,7	5,4	13,4	13,4	9,0	8,5	13,0	10,1	13,6	8,0	10,3	-1,2

The Private Capital Banks Group has displayed a below-average profile in all the periods examined. Only in 2018, it has risen to 0.2 and could rise above average value. In general, when group comparisons are taken into consideration, private capital banks Group has shown lower CAMELS performance. This negative performance is the lowest in 2005, as of the periods studied. To evaluate the components affecting the performance of the Private capital banks Group,

In 2005, 3 different components had a direct negative effect on the value of the group CAMELS. The capital adequacy component stood at -2.1 in 2004. In 2005, this value decreased to the level of -3. The quality of management fell from -0.5 in 2004 to -1.8 in 2005. The other significant decrease in the value of the component is in the liquidity component. The liquidity component was -1.1 in 2005. In the previous period, this value is -0.4.

When viewed in 2018, evaluation can again be made on 3 separate component specials. The capital adequacy component has a positive value of 0.1 in 2018 alone

during the periods studied. The earning component was 0.4 in 2017, to 0.8 in 2018. The last important component is liquidity. The liquidity component increased from -0.1 in 2017 to 1.6 in 2018.

8. CONCLUSION

The banking sector, which is one of the basic building blocks of the Turkish economy, has a rapid and direct impact on the Turkish economy during periods when it can be characterized as strong and weak. In order to minimize these effects in a negative sense, it is very important to analyze the existing structure, build the infrastructure and prepare the action plan for possible positions. In order to achieve this, maintain its strong position and achieve a stronger position, it must be followed by regulatory rules on a permanent basis. These regulations should also be audited, subject to supervision. The most important institution providing this mechanism in Turkey is the Banking Supervision and Regulation Authority.

The Banking Supervision and Regulation Authority does not share its analysis of CAMELS for banks operating in Turkey with the public.

Performance measurements made with the CAMELS model are included in financial performance based on the formula. This method is used by auditors and supervisors as financial and human resources for the management quality of the bank. Banks can be mixed in a group-based or individually cost-free way, interpreted objectively. The results of the analysis carried out by CAMELS method provide important data about the financial performance of the bank to the bank's Board of directors, especially to those who supply and demand funds, risk managers and many analysts. This data can be used as an early warning system, helping to create an action plan for potential problems. The performance of banks with an effective supervision and Regulation Authority in the banking sector will also help to interpret the balance sheets with accounting makeup. Furthermore, the performance comparison required for the competitive environment will thus gain continuity. If the competitive

environment can be controlled, it creates a positive impact for the markets in the long term.

In our study, 16 banks and 2 different bank groups were evaluated in 16 different periods. As a result of the author's subjective assessment, 3 banks can be considered as the strongest banks in performance analysis based on the CAMELS method. These are unorthodox Türkiye Cumhuriyeti Ziraat Bankası A.Ş., Akbank T.A.Ş. and Türkiye Garanti Bankası A.Ş. This assessment is based on the average valuations of the banks and their comparisons to this value on a solo basis.

The Public Banks Group is clearly seen as having a strong performance compared to the Private Capital Banks Group.

The fact that all banks and bank groups operating in the Turkish banking sector have a stronger performance in the coming process will undoubtedly create a more appropriate level of economic prosperity for every structure in the state and individual scale in Turkey's economic sense.

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VITAE

Caner Koç was born on September 23, 1993 in Bursa Turkey. After having completed her high school studies in Bursa Sınav College, he started his Business Administrative-English in Işık Univesity in 2011 which he completed in 2015. In 2017, he had his Master degree in the Graduate School of Social Sciences in Işık University.

Also, he started the business life in 2012 at Işık University in 2012 at Department of the Sports, Culture and Health. During graduate process at collage, started internship at DenizBank department of retail banking group, at head office in 2014. After graduate from college, started working full-time at DenizBank commercial brach in 2015. After the experience of branch, he changed the department under the same group. He passed head office, department of corporate and commercial banking in 2017. Still working for better professional career.