Analysis of the Board of Directors of the Banks in Turkey

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Summary
Banking sector in Turkey constitutes a significant importance in the economy. Educated human resource of the sector, high capital adequacy ratio, effective supervision and control, and relatively high profitability are its prominent factors. In addition, boards of directors of the banks in this sector are noteworthy with their perfect organizations, effective activities and qualified members.

Like in all companies, boards of directors in the banks must also be established in accordance with the characteristics of the banks and effectively operated for a sustainable success. In order to ensure that, it is necessary to analyze the boards of directors of the banks in this sector and to determine how an appropriate board is established in terms of the effecting factors. In this study, the boards of directors of the banks acting in Turkey are analyzed.

First of all, linear regression analysis is made to determine the factors which are affecting the number of members of the boards of directors. According to the result of the analysis; the variables which are used to determine the bank's scale like total assets, deposits, number of employees and number of branch offices have statistically a significant effect on the number of the members of the board of directors.

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The number of members of the Board of Directors has a significant effect on the bank's return on equity and it is found by using a simple linear regression. Besides that, it is determined that the banks that has a profitability over the average return on equity; and the banks under the average return on equity have different number of members; and the banks which have higher return on equity have more number of members.

Keywords: *Structure of the Bank's Board of Directors, Size of the Board of Directors, The Factors Which are Determining the Size*

JEL Classification: *G21, G34*

Türkiye'de
Faaliyet Gösteren Bankaların Yönetim Kurullarının Analizi

Özet

Türkiye'de bankacılık sektörü, ekonomi içinde önemli bir büyüklüğü oluşturmaktadır. Sektörün eğitimli insan kaynağı, yüksek sermaye yeterliliği, etkili gözetim ve denetimi ve göreceli yüksek karlılığı öne çıkan özellikleridir. Bunların yanında sektördeki bankaların yönetim kurulları da iyi organize olmaları, etkili faaliyetleri ve nitelikli üyeleri ile dikkat çekicidir.

Tüm şirketlerde olduğu gibi bankalarda da yöneyim kurulları, sürdürülebilir başarı için bankanın özelliklerine uygun niteliklerde oluşturulması ve etkili şekilde çalıştırılması gereklidir. Bunun sağlanması için de öncelikle sektördeki bankaların yönetim kurullarının analiz edilmesi ve uygun bir kurulun hangi faktörler dikkate alınarak oluşturulduğunun tespit edilmesi lazımdı. Bu çalışmada Türkiye'de faaliyet gösteren bankaların yönetim kurulları analiz edilmiştir.

Öncelikle banka yönetim kurullarının üye sayısını etkileyen faktörlerin ortaya çıkarılması için doğrusal regresyon analizi yapılmıştır. Analiz sonucuna göre, banka ölçeğini belirlemede kullanılan faktörlerden olan toplan aktifler, mevduat, personel sayısı ve şube sayısı değişkenlerinin yönetim kurulu üye sayısı üzerinde istatistiki olarak anlamlı etkileri tespit edilmiştir.

Yönetim kurulu üye sayısının bankanın özkaynak karlılığı üzerinde anlamlı bir etkisinin olduğu yine basit doğrusal regresyon ile ortaya çıkarılmıştır. Ayrıca, t testi ile ortalama özkaynak karlılığı üzerinde karlılığa sahip olan bankalar ile ortalamanın altında kalan bankaların üye sayılarının birbirinde farklı olduğu ve karlılığı yüksel olan bankaların daha fazla üye sayısına sahip oldukları belirlenmiştir.

Anahtar Kelimeler: *Banka Yönetim Kurullarının Yapısı, Yönetim Kurulu Büyüklüğü, Büyüklüğü Belirleyen Faktörler*

JEL Sınıflaması: G21, G34

1. Preface

Turkish banking sector is differentiated from other countries' sector especially after the financial crisis in the year 2008 with its strong capital structure and relatively high profitability. Qualified personnel, trustable technological infrastructure, investments of the foreign capital in this sector, and effective supervision and control made by the public authorities are some of the reasons of the sector's growth during the recent years. Parallel to the development of this sector, the successes of individual banks are also remarkable. Functionalities of the banks' board of directors are also an important factor that affects the success without a doubt. In this study, the structures of the banks' board of directors are examined,

and it is tried to determine which elements are taken into the consideration when the number of members are established.

According to the basic regulation of the banking sector as Banking Law number 5411, it is necessary for the banks being joint stock corporations. The provisions related with the board of directors' structure of the banks are determined in Commercial Code number 6102. 375th clause of this law saddles non-delegable tasks and responsibilities to the board of directors of the joint stock corporations. When these non-delegable tasks and responsibilities are investigated, it will be seen that the responsibility of two serious functionalities as making the leadership for sustainability of the companies and supervision are incurring to the board of directors. Therefore the establishment and effectively running of these boards have vital importance. On the other hand, 530th clause of the aforementioned Law subjects that the companies which could not establish their board of directors may be liquidated after a specific court process, and this increases the importance of this governing body.

How many members should have such a board with vital importance, by whom or how should it be established, and how the structure must be constructed are the issues both the academicians and practitioners are considering. The expression "joint stock companies have board of directors established from one of more members" takes place in 359th clause's first paragraph of the Commercial Code allowing even to the board of directors with 1 person.

On the other hand the Banking Law brought a minimum limit for the number of members for banks' board of directors. 23rd clause of the Law adjudicated that the banks' board of directors "cannot have less than 5 persons including the general manager". Besides that

the organization related with the board of directors of companies which their shares are active in Istanbul Stock-Exchange is also given in securities legislation. The standard determined in Capital Markets Board's "Notification of Corporate Governance" number II-17.1 brings the obligation for public-traded companies to have minimum 5 members in their board of directors.

When these legal arrangements are put a side, it is the main issue to consider establishing a board of directors with the size that realizes the company's purposes in an effective way and provides the sustainability. In fact it is discussed since long years in the academic world how the size and structure of the board of directors must be. Main reason of this discussion is the question "is there an ideal number for the members of the board of directors?" which is asked by the regulatory public authorities and company directors. In one of the studies which is looking for an answer to this question, it is found in the boards with excessive number of members the coordination between members is insufficient, it became harder to control the company's upper management, the decision-making procedures are prolonged and the difficulties are experienced for taking the decisions. Therefore, it is concluded that the board of directors became non-functional against the upper management of the company (Lipton and Lorch, 1992).

In another study made in the United States of America over 452 companies which covers the years between 1984 and 1991 is stated that the board of directors with less members are more effective on the company's upper management. The relation between the size of the board of directors and the success indicator for companies as Tobin's Q quotient is analyzed, and it is came to the conclusion that the companies with lesser members have larger market prices (Yermack, 1996).

The results that the academicians who studied on this subject have reached show the ideal number of the members of the board of directors depends rather to the conditions. In a study about this subject it is determined that each company has specific and various characteristic features. Factors like the age of the company, life cycle, aims, scale, business sector, if it is a local or international company may affect the structure and the size of its board of directors. In this case, it is seen that the companies with different characteristics should have board of directors with different structures and sizes. Therefore, it is not possible to mention an ideal number of members which is suitable for each and every company, and the ideal number is a function of the company's characteristics (Raheja, 2005). In another similar study, it is stated that there is not an ideal size which is suitable for each and every companies, but the ideal size is changing according to the company's characteristics (Coles and others, 2008).

As there is no pattern suitable for every company, how should the companies establish a board of directors with the size suitable for themselves, and provide to reach them to their targets in an effective way? For correctly answering this question, it is first necessary to show scientifically the factors which are affecting the number of members. In other words, it is necessary to know the indicators of the number of the board members. Thus, it is possible to find writings in the literature about this subject.

Main purpose of this study is to analyze all banks' board of directors resident in the country and which variables are affective on their number of the members through statistical methods. It is possible to list the variables which are considered that they are affective on the number of members of the banks' board of directors and defined in this article as follows: Age of the bank, its type (investment or deposit), its statute (public and private),

existence of a foreign partner, total assets, deposit, equity, number of branch offices and number of employees. These factors are handled as independent variables, and their effects on board size as a dependent variable are tried to discover by using the multiple regression analysis.

2. Banking Sector in Turkey

There are 49 banks active in Turkey as from the date of 31.12.2013. 4 of them are known as participation banks and similarly to deposit banking they are giving banking services according to the Islamic principles. These 4 banks are the members of a professional association named Association of Turkish Participation Banks. The rest 45 banks are deposit banks and development and investment banks which are the members of Turkish Banks Association.

Except the participation banks, 32 of the 45 banks are deposit banks and 13 of them are development and investment banks. Three of the deposit banks are public banks, 11 of them are private capital banks, 17 of them are the banks which more than 51% of their capitals are belonging to foreign capitals, and only one of them is in the Saving Deposit Insurance Fund body. 3 of the development and investment banks are public, 6 of them are private and 4 of them are foreign capital banks.

49 banks operating in banking sector are employing 214.228 persons, and they have 11.970 branch offices in total. According to their consolidated financial statements inspected by the independent audit on 31.12.2013, their total active size is 1,731 trillion TL, total deposit is 1,007 trillion TL and total equities are 193,7 milliard TL; and the sector produced totally 24,7 milliard TL profit in the year 2013.

3. Literature

It is very rare the academic studies made to determine the factors which are affecting the size of the board of directors both in the world and Turkey. Despite the minor number of studies, it is possible to see that the results of these studies are supporting each other

In a study made in Singapore for publicly-traded companies, the relation between the ownership structure of the company, and the structure and size of the board of directors is analyzed with regression model. At the result of this study, it is stated that the ownership types like public ownership, block ownership and company management are the factors which are determining the size of the company's board of directors (Mak and Li, 2001).

A research made over 82 companies which are sustaining their activities between the years 1935-2000 for a long period it is tried to reveal the factors which are affecting the size of the board of directors. In the study which examines the factors like company size, growing potential and geographical extensity, it is found that the company size is the most important factor which determines the number of the members (Lehn and others, 2009).

In another study made on the randomly selected publicly-held companies in United States of America, it is seen that the size of the board of directors are significantly different according to the sectors. Additional to the sector's effect on this board, it is stated that other variables like member variety in the board, ownership structure of the company, financial bottleneck and removal from the stock-exchange quota are also affecting the size of the board. In the model established by the researchers with using the aforementioned variables, it is concluded that the independent

variables are 52% determinative for the board size as a dependent variable (Ning and other, 2007).

In a study made between the years 1990-2004 on 7000 companies, a distinctive difference is found among the number of the members of small companies and the number of members of large companies according to their active sizes. They statistically analyzed a model in which the number of members is a dependent variable; and the factors like market value, leverage ratio, company age and size are the independent variables and they have concluded that 45% of the difference of number of members between companies is grounded from the independent variables in the model. Besides that it is shown that there is a positive and significant relation between the company's size and age, and the number of the members (Linck and others, 2008).

In this area, there are only two studies found in Turkey. First research is executed by using the data of 98 companies which their shares are active in Istanbul Stock-Exchange between the years 2006-2007 and through making the regression and correlation analysis. In the analysis in which the dependent variable is the board size, it is found that the assets total and leverage ratios are determinative on the size. A positive relation is determined between active total and board size, and a negative relation is found between leverage ratio and board size (Aygün and others, 2001).

Second research made in Turkey is executed on all the insurance companies active in the insurance sector with the data of year 2012. In the regression model where the number of members of the board of directors in 58 insurance companies is taken as the dependent variable; and the total assets, premium production, number of employees, being a publicly-traded company or not, company type and board structure are taken as the independent variables;

corrected R-square found as 31%. In another word, all of the dependent variables are explaining 31% of the dependent variables, and the rest is determined by the factors which are not included into the model. Additionally, the only statically significant relation in the model was the relation between premium production and the number of members (Kır and Talebi, 2013).

4. Methodology

It is explained in the below given sections on which banks and when the research is made, what are the variables and which analysis are used.

4.1. Scope of the Research and the Variables

The research is executed by using the information disclosed by the banks operating in Turkey to the public on 31.12.2013. As from this date, 49 banks were active in Turkey. Foreign bank offices which have deposit collection license are not included into the research. 4 participation banks, 26 deposit banks and 13 investment and development banks are included into the research's scope.

The below defined data related with research variables are derived from the internet sites of Turkish Banks Association and Turkish Participation Banks Association. Additionally in the book published by Turkish Banking Association in May 2014, the data about variables used in this study except the participation banks are collectively given.

It is possible to define all variables used in the statistical analysis as follows.

- *Number of members*: it means the number of the members in board of directors on 31 December 2013.

- *Bank Age:* it means the period between the establishment of the bank and the year 2013. If there is a merger in bank's history, the establishment year is taken as the last merger date.
- *Bank Type*: The banks have been divided into two groups as "deposit and development bank" and "investment and development banks".
- *Statute:* The ownerships of banks have been divided into two groups as public and private banks.
- *Foreign Partner:* It means that there are foreign partners non-resident in Turkey in the shareholding structure of bank which is disclosed to public.
- *Total Assets:* It means the assets total shown on the consolidated balance sheet inspected by the independent audit on 31 December 2013.
- *Deposit:* It means the deposit amount shown on the consolidated balance sheet inspected by the independent audit on 31 December 2013.
- *Equities:* It means the equities item shown on the consolidated balance sheet inspected by the independent audit on 31 December 2013.
- *Number of Employees:* It means the bank's number of employees on 31 December 2013.
- *Number of Branch Offices:* It means the bank's number of branch offices on 31 December 2013.
- *Return on Equity:* According to their consolidated financial statements inspected by the independent audit on 31 December 2013, it is the ratio calculated by dividing the bank's net profit into the equities.

4.2. Hypotheses of the Research

By taking the above defined variables into the consideration, two hypotheses have been determined. First hypotheses (H1) is as

follows; "*Number of members of the board of directors as dependent variable is affected significantly from the nine independent variables as bank age, bank type, statute, foreign partner, total assets, deposit, equity, number of employees, and number of branch offices*". Multiple regression model with the below given formula is created for testing the H1 hypothesis.
Y(Number of members of the Board of Directors) = β0 + β1(Bank Age) + β2(Type) + β3(Foreign Partner) + β4(Statute) + β5(Total Assets) + β6(Deposit) + β7(Equities) + β8(number of Employees) + β9(Number of Branch Offices) + α ***(1)***

Second hypothesis of the research (H2) is as follows: *"Number of members of the Board as independent variable is effective of the Return on Equity."* Below given simple regression model is created for testing the H2 hypothesis. In this model, different from the first one, the independent variable is determined as return on equity, and the independent variable is defined as the number of members.

Y(Return on Equity) = β0 + β1(Number of members of the Board of Directors) + α ***(2)***

Additionally the relation between return on equity which is known as an indicator for bank's financial success and number of members is also analyzed. By taking the average returns on equity of 43 banks included into the research as basis, the banks under the average and over the average are divided into two groups and by applying the t test, it is stated if there is a significant difference between their numbers of members of the board.

The descriptive statistics related with size of the board of directors as dependent variable, and independent variables as bank age, type, statute, foreign partner, total assets, deposit and equity, number of employees and number of branch offices are calculated.

Besides that, the correlation matrix is prepared to show the relations between all variables included into the multiple regression model. In this matrix, the independent variables which have strong correlation among them are removed from the model, and new regressions models are created to show the effect of independent variables on the number of members.

4.3. Regression Analysis

Regression analysis is a technique that investigates the causal relation between one or more dependent variable and one or more independent variable. The method which investigates the relation between one dependent variable (Y) and one independent variable (X_1) is called simple regression; the method which investigates the relation between one dependent variable (Y) and two or more independent variables (X_1, X_2,….., X_p) is called multiple regression . If the models investigate the relation between dependent and independent variables are in linear relationship form, they are called as simple linear or multiple linear regression methods; if the relationship models between dependent variable and independent variables are not linear, they are called as simple non-linear or multiple non-linear regression methods. The analysis method used for analyzing the validity of created models named as regression analysis (Özdamar, 2004).

Simple, multiple regression models or regression models with multiple variables are expressed respectively as:

$$Y = \beta_0 + \beta_1 X_1 + e_{ij}$$

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + ... + \beta_p X_p + e_{ij}$$

$$Y_1, Y_2 = f\left(X_1, X_2, .., X_p\right)$$

4.4. t Test

t test is the most commonly used method for hypothesis tests. With t test averages of two groups will be compared and it is decided if

the difference between them is significant randomly or statistically. As the t distribution, which is also known as small sampling theory, gives the opportunity to study with small samplings, it provides an important convenience for the researchers.

In cases where the sample size of t test is too small, and standard deviations related with the main mass are not known, by using the t distribution; it is tested

- For the purposes of an investigated variable, if the average value of a group is different than its previously known value,
- For the purposes of an investigated variable, if there is a difference between two independent groups,
- For the purposes of an investigated variable, if the reactions of a group are different under various circumstances, and this is an analysis method developed to test the hypothesis.

Therefore there are three types of 3 t tests which are used to determine the differences between one-sample t-test, independent samples "t" test and paired-samples "t" test.

5. Analysis and Findings

The findings derived in the result of aforementioned analysis and the new analyses made by using these findings are listed below.

5.1. Descriptive Statistics

Statistical data related with all the variables in the scope of this research are shown in tables 1 and 2. Average number of members as dependent variable for 43 banks calculated as 8,84 and its standard deviation is 2,28. The situation of numerical independent variables in the research is: the oldest bank has been established 151 years ago, and the newest bank started to its operations only 3 years ago. Average age of the banks is 38,3 years. When the bank age is calculated, if two or more banks are merged, this merger date

is taken into the consideration as foundation date. Average number of employees is 4.969 and average number of branch offices is 277,8.

Table:1- Descriptive Statistics of the Numerical Variables

Numerical Variables	**Average**	**Standard Deviation**
Number of Members	8,84	2,28
Bank Age	38,3	28,73
Total Assets	40.137 Milyar TL	63.304 Milyar TL
Deposit	23.384 Milyar TL	38.989 Milyar TL
Equity	4.466 Milyar TL	6.807 Milyar TL
Number of Employees	4.969 Kişi	7.028 Kişi
Number of Branch Offices	277,8 Adet	417,8 Adet
Return on Equity	0,072	0,077

The statistics related with 3 categorical independent variables in the research are shown in Table 2.

Table:2- Descriptive Statistics of the Categorical Variables

Categorical Variables	**Categories**	**Number of Banks**	**Average Number of Members of the Board of Directors**	**Number of Members Standard Deviation**
Bank Type	Deposit	30	9,53	2,08
	Investment and Development	13	7,23	1,92
Statute	Public	9	7,56	1,13

	Private	34	9,18	2,39
Foreign Partner	Exists	22	9,77	2,35
	Not exists	21	7,86	1,77

In banking sector there are 30 banks with deposit collection authority, and 13 investment and development banks. Average number of members of the board of directors in deposit banks is 9,5 and number of members in investment and development banks is 7,2. Average number of members in 34 private sector banks is 9,2, and the average of public banks is 7,6. There are foreign partners in 22 of the total 43 banks taken for the research. Average number of the members of the boards in these banks is 9,8, and the average number of members in remaining 21 banks is 7,9.

5.2. Pearson Correlation Test

As it may be remembered, in the multiple regression model 6 numerical independent variables which may affect the dependent variable as number of members have been included into the model. Results of the Pearson test which gives an idea about the relation between these variables and number of members have been given collectively in Table:3.

Table:3- Results of the Pearson Correlation Test

	Coefficient of the Correlation	**Significance Level (p)**
Number of Members-bank age	,246	,112
Number of Members-total asset	,310	,043*
Number of Members-deposit	,311	,042*
Number of Members-equity	,271	,079
Number of Members-number of branch	,384	,011*

offices		
Number of Members-number of employees	,401	,008**

***p≤ 0,05**

At it is seen, there is no statistically significant relation between bank age and equity variables with number of members. However total assets, deposit, number of branch offices and number of employees are affecting the number of members in positive way. In other words the increases on these variables are causing also to an increase on the number of members. For example, there is a positive correlation for 40% between the number of employees which has the maximum effectiveness and number of members of the board of directors.

5.3. Multiple Linear Regression Analysis

At the beginning of the research, following first model was created to find the effect of 3 categorical and 6 numerical, totally 9 independent variables on the number of members of the board of directors.

Y(Number of Members of the Board of Directors) = β0 + β1(Bank Age) + β2(Type) + β3(Foreign Partner) + β4(Statute) + β5(Total Assets) + β6(Deposit) + β7(Equities) + β8(number of Employees) + β9(number of Branch Offices) + α ***(1)***

When all variables in model derived from the data dated on 31.12.2013 analyzed with SPSS program, p coefficient of the analyzed model increased to 0,05. In other words, the model was not found statistically meaningful. According to this result, first hypothesis of this research as H1 is rejected.

The second model was the simple regression model and expressed as follows.

Y(Return on Equity) = β0 + β1(Number of Members of the Board of Directors) + α ***(2)***

Analysis results of this model are shown in Table: 4.

Table:4- Results of the Simple Linear Regression Analysis

Variables	**Model Summary**			**ANOVA**	
	R-square	**Corrected R-square**	**Durbin-Watson**	**F Value**	**Significance Level (p)**
Number of members	,11	,08	1,447	4,832	,034*

In the analysis, first of all a statistically significant correlation is determined between the two variables. The significance value became 0,011 and correlation value found as +0,38. In other words, the increases on number of members of the board of directors are also affecting the return on equity to increase. Analysis results of the second model are shown in Table:4. As it is seen p value proven that the model is statically meaningful. However, R-square is a pretty low value as 0,11. According to this result, the number of members of board of directors is affecting the return on equity only for a level as 11%.

According to this result second hypothesis of this research as H2 *"Number of members of the Board as independent variable is effective of the Return on Equity."* is accepted. In other words, number of members is determinative on the return on equity.

However, it is necessary to emphasize that the decisiveness is considerably limited.

Especially because the first model was not meaningful, numbers of the independent variables in this model are decreased and different regression models are created and it is continued to make the analysis. In the below given two regression models, significance coefficient as p value found less than 0,05 and it is determined that both models are statistically significant.

Third Model:

Y (Number of Members of the Board of Directors) = β0 + β1(Total Assets) + β2(number of Employees) + α ***(3)***

Fourth Model:

Y (Number of Members of the Board of Directors) = β0 + β1(Deposit) + β2(Number of Branch Office) + α ***(4)***

The results found in this regression model are shown in Table:5 and Table:6.

Table:5- Results of the Third Linear Regression Analysis

Variables	**Model Summary**			**ANOVA**	
	R-square	**Corrected R-square**	**Durbin-Watson**	**F Value**	**Significance Level (p)**
Total Active Number of Employees	,241	,203	1,740	6,341	,004*

Here, it is seen how the independent variables as total assets and number of employees are affective on the number of members of the board of directors. First of all as p coefficient is less than 0,05, the model results are statistically significant. Corrected R-square value of this model is 0,20. This result shows that the total assets and number of employees are affective for determining the number of members of the board of directors on 20% level. The rest 80% part are affected by the factors which are not included into the model. This result has a relatively low level in comparison with the results found in similar studies.

In Table:6, the effects of both independent variables on the dependent variable are separately shown.

Table:6- Third Model's Summary

Model	B	Standard Error	Beta	t Value	Significant Level (p)
(Fixed term)	8,079	,385		20,974	,000*
Assets Total	-3,777E-5	,000	-1,050	-2,050	,047*
Number of Employees	,0001	,000	1,412	2,758	,009*

As the p coefficients are less than 0.05, it proves that the effects of this two variables on number of members are statistically significant. According to Beta values the effect of number of employees is greater than the other. When the values of table put into their places, first model formed as follows.

$\hat{Y}$ = 8,079 -3,777E-5(Total Assets) + ,0001(Number of Employees) $+\hat{u}_i$ **(3)**

Results of the fourth regression model are shown in Table:7 and Table:8. In this model, the effect of deposit and number of branch offices as independent variables on the number of members of the board of directors is shown.

Table:7- Results of the Fourth Multiple Linear Regression Analysis

Variables	Model Summary			ANOVA	
	R-square	Corrected R-square	Durbin-Watson	F Value	Significance Level (p)
Deposit and Number of Branch Offices	,227	,188	1,802	5,869	,006*

As the p value that shows the significance level is under 0,05 it is determined that the analysis results are statistically significant. However, the corrected R-square is also found very low. Deposit and number of branch offices are explaining only 19% part of the number of the members. The remaining part is determined by the variables which are not included into the model.

In Table:8 the effects of both independent variables in fourth model over the number of members of the board of directors are separately shown.

Table:8- Summary of Second Model

Model	B	Standard Error	Beta	t Value	Significance Level (p)
(Fixed term)	8,118	,383		21,181	,000*
Deposit	-7,324E-5	,000	-1,254	-2,026	,049*
Number of Branch Offices	,009	,003	1,606	2,595	,013*

According to the p values of significance coefficient both the deposit and number of branch offices variables are statistically affecting the number of members significantly. According to Beta values the effect of number of branch offices is greater than the other. When the values of table put into their places, second model is formed as follows.

$\hat{Y}$ = 8,118 -7,324E-5(Deposit) + ,009(Number of Branch Offices) $+\hat{u}_i$ **(4)**

5.4. t Test

Second hypothesis of the research was that the number of members of the board of directors has a significant effect on the return on equity. According to the simple regression result, it is stated that the number of members is affecting the return on equity. Another point of the relation between these two variables is found through the t test. Primarily average of 43 banks' return on equities is taken. The banks have been divided into two groups as under and over this average profitability If there is a statistically significant difference between the average number of members of the board of

directors in these two groups is determined through the t test. Test results are shown in Table:9.

Table:9- Results of t test

Categories	Number of Banks	Number of Members of the Board of Directors	Standard Deviation of the Number of Members	t value	Significance level
Over the Average	23	9,83	2,31	-3,420	0,001*
Under the Average	20	7,70	1,66		

According to these results, as the significance level is under 0,05; the difference between two groups' average return on equities is statistically significant. 23 banks which have higher profitability have an average for 10 members of the board of directors; 20 banks under the average return on equity have an average 8 members of the board of directors. According to this determination, it is concluded that a board of directors with 10 members is more successful in terms of return on equity.

6. Result and Argument

The results causing to reject the first hypothesis of the research, show that the factors which are used to determine the Turkish banks' number of members of the board of directors as assets total, equity size, number of employees, number of branch offices, deposit amount, foreign partner existence, bank's age, type and statute are usually not taken into the consideration as a whole. However, the aforementioned factors which are determinative for the banks' scale as assets total, deposit, number of employees and

number of branch offices are positively affecting the number of members of the board of directors. When the bank's scale grows, the numbers of members are also increases. In fact, as the average number of members in large scale banks is 10, this average number in the small scales banks is 8.

Another important result emanated from the research findings is the significant relation between financial success and the number of members of the board of directors. Number of members is a variable that has a positive effect over the return on equity. Either this effect is limited, it is still a remarkable factor. Because each and every administrative application that may change a variable like profitability which is affected from various factors; has a big importance in the business life with an intense competition. Thus, the reality about the banks which have profitability over the average return on equity from the 43 banks included into this research, have more members of the board of directors in comparison with the others; and this must not be kept out of sight.

According to the Banking Law and Capital Markets Board's Notification of Corporate Governance brings the obligation for banks to have a board of directors with minimum 5 members. No document is found that explains the basis for minimum 5 member obligation in these regulations. In Institutional Management Principals; it is proposed to establish committees like auditing, institutional management and risk committees inside the board. It is also determined that the aforementioned committees must be established with different persons. It is obvious that it is not possible to meet the requirements of institutional management principals with 5 members. More numbers of members are needed for this. In this case, how many members should be found in the board of directors of a bank? According to the results of this present research, average number of members in Turkey is 9 as

from the end of 2013. Besides that, as the average number of members in the banks over average return on equity is 10, this average number in the banks under the average return on equity is 8.

Both for fulfilling the requirements of institutional management principals, and based on the results of this research, having 8 to 10 members in banks' board of directors will provide to execute the board's functions more effectively.

Bibliography

[1] Aygün Mehmet, Süleyman İç and Cem Sayın, *"The Factors Determining the Size of the Board of Directors, and the Relation Between the Size of the Board of Directors and Company Performance: A Survey About Turkish Capital Market",* Gaziantep University Social Sciences Magazine, Number: 10, No: 1, 2001, Pages: 77-92.

[2] Coles F Jeffrey, Daniel D. Naveen and Lalitha Naveen, *"Boards: Does one size fit all"*, Journal of Financial Economics, Volume: 87, Issue: 2, 2008, Page: 329-356.

[3] James S. Linck, Jeffry M. Netter, and Tina Yang, *"The determinants of board structure"*, Journal of Financial Economics, Volume: 87, Issue: 2, 2008, Pages: 308-328.

[4] Kır Ceyhun ve Nurhan Talebi, "*The Factors Which are Affecting the Insurance Companies' Number of Members of the Board of Directors in Turkey",* Anadolu Bil Vocational High School Magazine, Year: 8, Number: 29-30, 2013, Pages: 29-30.

[5] Lehn M. Kenneth, Sukesh Patro, and Mengxin Zhao, *"Determinants of size and structure of corporate boards: 1935–2000",* Financial Management, Volume: 38, Issue: 4, 2009, Pages: 747-780.

[6] Lipton Martin and Jay Lorsch, “A Modest Proposal for Improved Corporate Governance”, Business Lawyer, Volume: 48, No: 1, November, 1992, Pages: 59-77.

[7] Mak Y. T. and Yuan Li, “Determinants of corporate ownership and board structure: evidence from Singapore”. Journal of Corporate Finance, Volume: 7, Issue: 3, September, 2001, Pages: 235-256.

[8] Ning Yixi, , Wallace N. Davidson and Ke Zhong, “The Variability of Board Size Determinants: An Empirical Analysis”, Journal of Applied Finance, Volume: 17, No: 2, Fall/Winter, 2007, Pages: 46-61.

[9] Özdamar Kazım, **Statistical Data Analysis with Package Programs**, 5th Edition, Kaan Bookstore, 2004, Page: 187.

[10] Raheja G. Charu, “Determinants of Board Size and Composition: A Theory of Corporate Boards”, Journal of Financial and Quantitative Analysis, Volume: 40, Issue: 02, June, 2005, Pages: 283-306.

[11] Yermack David, “Higher Market Valuation of Companies with a Small Board of Directors”, Journal of Financial Economics, Volume: 40, No: 2, February, 1996, Pages: 185-211.

[12] http://www.tbb.org.tr/Content/Upload/istatistikiraporlar/ekler/708/Bankalarimiz_2013_TR.pdf, accessed on 01.06.2014.

[13] http://www.istatistikanaliz.com/t-testi.asp, June 2014.

[14] www.spk.gov.tr, accessed on June 2014.

[15] www.tbb.org.tr, accessed on June 2014.

[16] www.tkbb.org.tr, accessed on June 2014.