The Effects of Corporate Governance Structures on European Bank Performance

by

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Summary

Our study investigates the relationships between the management structure, ownership structure and the performance of banks operating in Europe according to the perspectives of the corporate governance literature, theories and codes. We use financial ratios and established measures of management and ownership structure. To control for the endogeneity of our governance measures, we employ a fixed-effects regression model, using a sample of 195 European Banks from 2006 to 2008. We also control for the country and year effects using dummies. Our results indicate that ownership concentration significantly and positively influence the price to book ratio of European banks. Moreover, the board size affects the bank performance in a significantly negative way when country and year differences are taken into consideration On the other hand, the tenure of chief executive directors is negatively related to performance. Our analysis of board structure reveals a negative relationship with the banks' performance, implying that boards composed of two leaders damage the performance unless the country dummies are included. Also, the presence of independent directors and non-executive directors do not influence the bank performance significantly. Furthermore, none of the effects of the tenure of non-executive director, the chief executive director's age, the percentage of state ownership and also the board type are significant even though the year and country dummies, and also different specifications are taken into consideration. The results are robust to the potential endogeneity problem and also homoscedasticity, multicollinearity and model specification error.

Keywords: corporate governance, bank performance, European banks, management structure, ownership structure, board size, tenure of managers, CEO age, independent directors, non-executive directors, duality structure, supervisory board, management board.

Özet

Çalışmamız, Avrupa bankalarının yönetim ve sahiplik yapıları ile performansları arasındaki ilişkiyi kurumsal yönetişim kaynaklarının, teorilerinin ve kodlarının ışığı altında incelemektedir. Çalışmamızda, finansal oranlar ile beraber yönetim ve sahiplik yapısı oranlarını da kullanmaktayız. Kurumsal yönetişim oranları ilgili içsellik problemini kontrol edebilmek için, çalışmamızda 2006 ve 2008 yılları arası 195 tane Avrupa bankasından oluşan örneklemimiz ile sabit etkiler panel veri modeli kullanmaktadır. Ayrıca ülke ve yıl etkileri de kukla değişkenler kullanarak kontrol edilmektedir. Sonuçlarımız; sahiplik yoğunluğunun anlamlı bir şekilde ve pozitif yönlü olarak Avrupa bankalarının fiyat kazanç oranını etkilemekte olduğunu göstermektedir. Ayrıca, ülke ve yıl farlılıkları dikkate alındığında, yönetim kurulu büyüklüğü banka performansını anlamlı bir şekilde ve negatif yönlü etkilemektedir. Diğer taraftan, yönetim kurulu başkanının makam tecrübesi performansla ters yönlü bir ilişki içindedir. Yönetim kurulu yapısı ile ilgili analizimiz banka performansı ile ters yönlü bir ilişkiyi göstermektedir yani; eğer ülke gölge değişkenleri dikkate alınmazsa, iki tane liderden oluşan yönetim kurulları performansa zarar vermektedir. Ayrıca, bağımsız yöneticilerin ve icra yetkisi olmayan yöneticilerin varlıkları banka performanslarını anlamlı bir şekilde etkilememektedir. Bunun yanında, icra yetkisi olmayan yöneticilerin makam tecrübesi, yönetim kurulu başkanının yaşı, devletin sahiplik yüzdesi, yönetim kurulu tarzı, yıl ve ülke kukla değişkenleri eklense de ya da farklı nitelemeler dikkate alınsa da, banka performansını anlamlı bir şekilde etkilememektedir. Sonuçlar potansiyel içsellik, eşit yayılım, çoklu eşdoğrusallık ve model kurma hatalarına karşı tutarlıdır. **Anahtar Sözcükler:** kurumsal yönetişim, banka performansı, Avrupa bankaları, yönetim yapısı, sahiplik yapısı, yönetim kurulu büyüklüğü, yöneticilerin makam tecrübesi, CEO yaşı, bağımsız yöneticiler, icra yetkisi olmayan yöneticiler, ikili yönetim yapısı, denetleme kurulu, yönetim kurulu

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Contents

Table List

1. Introduction

In recent years, corporate governance topics have been attracting greater interest. There have been many corporate governance studies and many related practices published by academics, institutions and regulators throughout the world.[1] Our study focuses on the effect of the corporate governance components related to the ownership and management structure on bank performance. The ideal corporate governance structure is vital and a more complex issue for banks than non-financial firms as stated in the reports of national and international institution.

Following the financial crisis and the failures of listed companies in the 1990s and 2000s, corporate governance gets more importance and becomes more vital and more complex for banks than non-financial firms worldwide. Basel Committee on Banking Supervision express this importance as

"Corporate governance for banking organizations is arguably of greater importance than for other companies, given the crucial financial intermediation role of banks in an economy, the need to safeguard depositors' funds and their high degree of sensitivity to potential difficulties arising from ineffective corporate governance. Effective corporate governance practices, on

[1] Fama (1980), McAvoy et al. (1983), Mikkelson and Ruback (1985), Anderson and Anthony (1986), Donaldson (1990), Donaldson and Davis (1991), Hermalin and Weisbach (1991), Cadbury (1992), Kameda et al. (1992), Lipton and Lorsch (1993), Jensen (1993), Halebian and Finkelstein (1993), Finkelstein and D'Aveni (1994), Mehran (1995), Johnson et al. (1996), Finkelstein and Hambrick (1996), Mikkelson and Partch (1997), Dalton et al. (1999), Bhagat and Black (1999), Mishra and Nilesen (1999), OECD (1999), Hermalin and Weisbach (2003), Basel Committee on Banking Supervision (2005), Krivogorsky (2006), Staikouras et al. (2007), Masulis and Mobbs (2009), Ladipo and Nestor (2009), Bektas and Kaymak (2009)

both a system-wide and individual bank basis, are essential to achieving and maintaining public trust and confidence in the banking system, which are critical to the proper functioning of the banking sector and economy as a whole." (Basel Committee on Banking Supervision, 2005)[2]

Corporate governance can be defined in a variety of ways. Generally, these definitions involve a set of relationships between a company's management, its board, and its shareholders. The corporate governance also maintains the structure through which the objectives of the company are set. Furthermore, the ways of attaining these objectives and monitoring performance are determined by the help of the corporate governance structure. The Millstein Report explains the role of a proper corporate governance system as

"Corporate governance comprehends that structure of relationships and corresponding responsibilities among a core group consisting of shareholders, [supervisory] board members and managers designed to best foster the competitive performance required to achieve the corporation's primary objective." (Business Sector Advisory Group, 1998)[3]

Although the popularity of corporate governance topics has lead to many academic studies, there are only a few studies which examine the relationship between the corporate governance structures and the performance of financial institutions/banks.[4] The topics of these previous

[2] Basel Committee on Banking Supervision consists of senior representatives of bank supervisory authorities and central banks from Belgium, Canada, France, Germany, Italy, Japan, Luxembourg, Netherlands, Spain, Sweden, Switzerland, United Kingdom and the United States

[3] "Corporate Governance: Improving Competitiveness and Access to Capital in Global Markets" is published by Business Sector Advisory Group of OECD in 1998. This report is also called "The Millstein Report" since one of the members of this group is Ira M. Millstein.

[4] Staikouras, Staikouras, & Agoraki, (2007),

studies are usually about the corporate governance structure of non-financial institutions. Additionally, these studies have investigated the effect of corporate governance topics on firms' performances in more than one industry, not in a core industry. Moreover, some of these studies are about the corporate governance structure in only one country, which prevents making any comprehension between countries. Lastly, some of these previous studies do not even include financial institutions in their samples.

In spite of some previous studies related to the corporate governance structure of the banks, there are no studies which examine the situation between the years 2006 to 2008. Furthermore the potential endogeneity problem associated with corporate governance variables, also the year and country effects on the models are two critical difficulties related with the models with different years and countries, which is not usually taken into consideration in previous studies. Especially, during the years 2006 to 2008, the year and country effects are considerably important because of the economic crisis affecting the banking sector worldwide in different scales between these years.

Our goal is to explain the effect of the corporate governance components on the bank performance in a unique sample consisting of banks from 18 European countries in recent years. Previous empirical studies on the corporate governance concerning the European banking sector is limited since the emphasis is placed upon research conducted in the U.S. banking sector. Moreover, the timeline of the study (years 2006-2008) makes it special since the crisis originated from the USA has damaged the banking sector worldwide creating strong criticisms about the corporate governance topics related to the banking sector.

Although many previous studies focus on the corporate governance topics in respect of the corporate governance theories, these studies have not taken the corporate governance practices into consideration. However the regulator institutions have been publishing more than one hundred codes and practices, these codes usually have been investigated in the studies under law discipline, which are not interested in the relationship between the corporate governance structure and firm performance. For this reason, in literature review, we introduce not only the corporate governance theories or studies, but also the important corporate governance codes and practices especially related to the banking sector and the developed European countries. We make a comprehension between theories, the findings of studies and the recommendations of international and national codes. Lastly, the findings of this study is explained and commented according to this detail comprehension grounded these three areas of literature.

Additionally, to overcome the potential endogeneity problem in panel data studies, the methodology in our study is also conducted carefully and it reports the results of not only the pooled regression models but also the least squares dummy variable model. Thus, the fixed-effects model controls for all time invariant differences and the least squares dummy variable model controls for all effects of years and countries. Additionally, before all these models are constructed, the tests of residuals are conducted in order to test for the normality, homoscedasticity, multicollinearity and model specification error. The Roger's standard errors, which are consistent with errors calculated by using Huber-White sandwich estimator, are chosen as an appropriate tool in this study and also a great number of robustness checks are conducted to make sure that our results are robust.

In summary, we investigate the links of the management structure, ownership structure with the performance of banks operating in Europe according to the perspectives of the corporate governance theories, codes and practices. This study is the first one in the literature because of not only its very interesting and controversial timeline, 2006 to 2008, but also its sample, 195 European banks from 18 countries. Besides, this study explains the relationship with many variables related to the performance, management and also ownership structures. Additionally our results are robust to the potential endogeneity problem and also homoscedasticity, multicollinearity, model specification error.

Our findings support the positive effect of blockholders on the bank success and also the positive effect of only one director at the top of management. On the other side, our results indicate that large boards do not improve the bank performances when country and year effects are considered. Additionally, not only large boards decrease the bank performances but also a chief executive director with a long tenure decreases it significantly. In this study, it is founded that independent and non-executive directors on boards do not influence the bank performances significantly. Additionally, the other factors such as tenures of non-executive directors, chief executive director's ages, percentages of state ownership and also board types do not affect the banks' performances significantly.

The structure of our study is as follows. Section 2 gives information about the corporate governance terminology, literature, theories, codes and practices. Section 3 explains the data and the selection. Following the previous results which clarify the data, in Section 4, we focus on the methodology in detail by giving information about panel data, explaining the variables, applied tests and constructed models. Section 5 is about the descriptive statistics whereas Section 6 is related to the univariate tests. In addition to these analyses about the tests and

models, in Section 7, we explain our findings in detail. The robustness checks about our study are introduced in Section 8. Lastly, we explain our final findings and recommendations in Section 9 with the summary of this study.

2. Literature

2.1 Corporate Governance Terminology

Board of directors is an essential component of corporate governance due to two primary reasons. One is that the board of directors is a powerful and critical part of the firm since it is the main source of knowledge and expertise, which sustain firms successfully for years (Fama & Jensen,1983 and Li, 1994). Another is that it advocates the shareholders' rights by monitoring and controlling management.

The board of directors has significant tasks relevant to the managers of the firm. Firstly, the board of directors has the right to approve or reject the managers' decision and monitor their performance. Secondly, the board of directors is able to evaluate the performance of the managers. Finally, the board of directors makes the decision of rewarding or penalizing the performance of top managers based on these evaluations.

There are two types of board of directors. The first type is a two-tier board that separates boards' functions into two different bodies as the supervisory functions and the management functions. Such a system typically has a "supervisory board" composed of non-executive board members and a "management board" composed of executives. The second type is a "unitary", "one-tier", board, which includes both the executive and non-executive board members.

The composition of board of directors is a major topic which is usually mentioned in corporate governance codes. The board may include the firm's top managers and managers outside the firm. Classifications such as "non-executive directors", "executive directors", "independent directors" and "non-independent directors" are used in order to separate these two groups of managers within the board.

Non-executive directors[5] are members of the board concerned with only managerial problems, not operational problems. They are not employees of the company. Their duties are to discuss the strategy the key appointments and standards of conduct in detail. The non-executive directors are mostly responsible for constructively challenging and helping to develop proposals on strategy. Additionally, to control the board of managers is stated as one of their important tasks (Jungmann, 2006 and FRC, 2008).

Executive directors are the senior managers of the firm. Their primary role is to run the firm. Their other duties include designing, developing and implementing strategic plans for their firms in an effective manner. According to the regular reports of the executive directors, the non-executive directors may offer suggestions about how to improve the organization, but these are only suggestions, not obligations.

Another type of director is the independent directors. The independent directors are free of any business, family or other relationship with the company, its controlling shareholder or the management. In some cases the term 'independent' is also used to describe the non-executive directors, yet this is not accurate because some 'non-executive' directors are not absolutely independent in view of their past or present connections with the company. In a two-tier

[5] Non-executive directors are called also "outsider'' or "supervisory directors".

board, a director is considered independent if he/she has no business or personal relations with the company or its management which may cause a conflict of interest. In a one-tier board, the definition of independent directors includes more constraints on the business relations.[6]

There is an important classification between corporate governance systems as an insider system or an outsider system. An outsider system is described as "a system with large equity markets and dispersed ownership". The important example of this system is the UK. The other type of system is called an insider system which consists of "a small number of quoted stock companies and concentrated share ownership". The prototype of this system is Germany (Jungmann, 2006).

2.2 Corporate Governance Literature Overview

Corporate governance literature includes studies which examine the relationship between the performance and the management structure and also between the performance and ownership concentration of firms. The main issues of management structure and board structure are the non-executive directors, independent directors, the tenure of chief executive officer, the tenure of board members, the board size, and the age of chief executive officer, the type of board and the duality of leaderships. The ownership issue is the ownership concentration. The literature overview is about the review of studies about the effects of these factors on firm success.

[6] In deciding whether a director is independent, the Board should take into account whether the director: (a) has been an employee of the company or group within the last 5 years, (b) has, or has had within the last 3 years, a material business relationship with the company either directly, or as a partner, shareholder, director or senior employee of a body that has such a relationship with the company, (c) has received or receives additional remuneration from the company apart from a director's fee, participates in the company's share option or a performance-related pay scheme, or is a member of the company's pension scheme, (d) has close family ties with any of the company's advisers, directors or senior employees, (e) holds cross directorships or has significant links with other directors through involvement in other companies or bodies, (f) represents a

2.2.1 The Non-Executive Directors

The first issue is the optimal number of non-executive directors on the board since it is related to the success of the boards as well as these firms. Researchers do not agree on this issue. There are studies supporting a positive, negative or even a non-existing relationship between the number of non-executive directors and firm performance.

Some studies find that the non-executive directors improve firm performance.[7] One of the arguments supporting this positive relationship is that non-executive directors understand the internal and external markets more accurately and make more appropriate decisions than executive directors (Fama, et al., 1983). It is founded that they are aware of the importance of the control mechanism in boards in terms of avoiding risk and being sustainable in the market. As a consequence, they can work more efficiently with the controlling and monitoring system and they are successful at monitoring the senior directors at the same time (Weisbach, 1988). Additionally, they are not influenced by the power of the chief executive officer (CEO) as are the executive directors who have close ties with the CEO. Vinod and Geddes (1997) report that by increasing the portion of non-executive directors on boards, one can reduce the agency cost.[8] The last one of the contentions for a positive relationship is that boards which have a majority of either non-executive board members or executive members show high performance (Bektas & Kaymak, 2009).

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significant shareholder, (g) has served on the board for more than 9 years from the date of their first election (UK Combined Code on Corporate Governance, par. A.3.1).

[7] Fama, et al. (1983), Baysinger & Butler (1985), Rosenstein & Wyatt (1990), Pearce & Zahra (1992), Ezzamel & Watson (1993), Masulis & Mobbs (2009)

[8] They explain as

"Agency problems arise because contracts are not costlessly written and enforced. Agency costs include the costs of structuring, monitoring, and bonding a set of contracts among agents with conflicting

However, there are some studies which find that there is no link between the number of non-executive directors and firm success. Firstly, Hermalin and Weisbach (1991), Johnson et al. (1996) and Bhagat and Black (1999) report insignificant results about the relationship between the composition of boards and the performance variable. Additionally, Abdullah (2004) and Staikouras (2007) contend that there is an insignificant relationship between board composition and firm performance in most cases.

Finally, some studies find a negative relationship between these two variables.[9] Their first claim is that if the CEO often dominates the director nomination process, then he/she will systematically nominate directors who support his/her decisions. For this reason, some of the non-executive directors will be cooperative to get more income. This position goes on to further claim that if the CEO is also a member of the supervisory board, the non-executive directors may be unwilling to challenge the CEO.

The second claim in support of a negative relationship is that the non-executive directors may not have enough expertise about the firm's environment to be able to criticize the CEO's decisions (Lorsch & MacIver, 1989). Nestor Advisors (2008) and Nestor (2008) find that high percentage of the non-executive directors on board makes managerial oversight by the board a more complicated affair since the executive directors are generally more familiar with the details of the activities specific to the firm than non-executive directors.

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interests. Agency costs also include the value of output lost because the costs of full enforcement of contracts exceed the benefits." (Fama, et al., 1983)

[9]Fama & Jensen (1983), Baysinger, Kosnik & Turk (1991), Hoskisson, Johnson & Moesel (1994), Boyd (1994), Klein (1998), Kochhar & David (1996), Weir & Liang (2000), Kiel & Nicholson (2003), Raheja (2005), Adams & Ferreira (2007), Harris & Raviv (2008)

2.2.2 The Independent Directors

Another important issue is the optimal number of independent directors on the board since it relates to the profitability and firm performance. Researchers have different ideas on this issue as well. There are studies suggesting a positive, negative or even a non-existing relationship between these two variables.

Some studies claim that independent directors have a positive impact on firm performance.[10] The main reason for this positive effect is that the independent directors are highly qualified. Additionally, they have the ability and interest to monitor the company's dynamics and to ensure sustained profitability.

On the opposite side, some studies find a negative relationship between these two variables.[11] Their claim is that the independent directors cannot understand the importance of topics about the firm and the firm's industry exactly. The reason for this situation is that directors should have extensive knowledge and expertise to be able to understand these topics however independent directors generally do not have enough knowledge and expertise (Becht et al., 2003).

Finally, there are some studies which find no meaningful relationship between the number of independent directors and firm success.[12]

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[10] Krivogorsky (2006), Denis & Sarin (1999) and Masulis & Mobbs (2009)

[11] Becht et al. (2003), Yermack (1996), Butler & Baysinger (1985)

[12] McAvoy et al. (1983), Hermalin & Weisbach (1991), Mehran (1995), Dalton et al. (1999), Bhagat & Black (1999), Staikouras et al. (2007)

2.2.3 The Duality

Another critical issue is the separation of the leadership of the supervisory and management boards as this may affect the supervisory ability of the board and the profitability of the companies in different ways. Duality means that the same director manages both boards at the same time which usually means that the chief executive officer (CEO) is also the chairman of the board (CH). Researchers find different results about the relationship of the duality and firm performance. There are studies which suggest a positive link between these two variables whereas there are studies reporting a negative or even an insignificant relationship between them.

Some studies argue in favor of the positive impact of duality on firm performance.[13] A frequently stated objection to the separation of the leaderships is that one director in both roles is more likely to improve firm performance because this removes any internal and external ambiguity for the responsibility of firm processes and outcomes (D'Aveni & Finkelstein, 1994). Bektas and Kaymak (2009) report that duality may result in better internal control systems and may decrease the probability of financial distress.

However, there are studies which advocate a negative relationship between duality and firm success.[14] A common objection to the duality structure is that duality reduces the effectiveness of board monitoring (D'Aveni & Finkelstein, 1994). Secondly, Bektaş and Kaymak (2009) find that duality may preclude the board from exercising independent

[13] Anderson & Anthony (1986), Donaldson (1990), Donaldson & Davis (1991), Lipton & Lorsch (1993), Finkelstein & D'Aveni (1994)

[14] Lorsch & MacIver (1989), Kesner & Johnson (1990), Rechner & Dalton (1991), Dobrzynski (1991), Levy (1993), Boyd (1995), Baliga, Moyer & Rao (1996), Brickley & Coles (1997), Kiel & Nicholson (2003), Kula (2005), Ladipo & Nestor (2009)

judgment and reduce its efficiency in making strategic decisions. Furthermore, it is generally advocated that the separation of positions of CEO and the chairman of board improves the effectiveness of control system.[15] Additionally, Nestor (2008) warns that weak management occurs in case of the joint structure of chairman and CEO as well as too few executives in the board.

However, there are also studies which report no link between these two variables. For instance; Rechner and Dalton (1989), Daily and Dalton (1993), Johnson et al. (1996), Weir and Liang (2000), Abdullah (2004) find no direct relationship between duality and firm performance. Moreover, Bektas and Kaymak (2009) find that duality is not significantly related to Turkish banks' return on assets.[16]

Additionally, Boyd (1995) finds that although duality does not have a significant positive effect under certain industry conditions, it affects the firm success positively under other conditions such as low mutual assistance environment or high complexity environment.

2.2.4 The Board Size

The board size is another topic which has been extensively studied in the corporate governance literature. Researchers do not have the same opinion about the ideal board sizes as well. Some studies suggest a positive relationship between large boards and performance whereas some studies find a negative or even a non-existing relationship between them.

[15] Lorsch & MacIver (1989), Kesner & Johnson (1990), Rechner & Dalton (1991), Dobrzynski (1991), Levy (1993), Boyd (1995), Baliga, Moyer & Rao (1996), Brickley & Coles (1997), Kiel & Nicholson (2003), Kula (2005), Ladipo & Nestor (2009)

[16] Twenty-seven commercial banks (Turkish and foreign) established in Turkey are the sample of the study. Three of these banks are state banks, eighteen are privately owned, and six are foreign owned.

Some studies claim that larger size boards lead firms to perform better. For example; Alexander et al. (1993), Goodstein et al. (1994), Halebian and Finkelstein (1993) find that larger boards are associated with higher levels of firm performance. The first reason is that larger boards are often more capable of monitoring the actions of the top management, since it is less likely for the CEO to dominate larger boards (Ghezzi & Malberti, 2008). Additionally, Bektas and Kaymak (2009) find that small boards may result in a representation problem for minority shareholders, since the board size is an important tool for the corporation; especially the board links the firm to external resources and environment. Another reason is that larger boards have integrated problem-solving capabilities therefore large boards can expand the depth of their expertise (Kiel & Nicholson, 2003 and Bektas & Kaymak, 2009).

However, some studies advocate that small boards are more better-suited for the success of a firm. For example; Jensen (1993), Kameda et al. (1992) and Finkelstein and Hambrick (1996) report that smaller boards result in more effective decision-making procedures and participation since it is claimed that small boards are more appropriate for the CEO to control and monitor (Jensen, 1993). Hermalin and Weisbach (2003), Staikouras et al. (2007) similarly find that there is a negative relationship between the profitability of firm and board size. Moreover, small boards are more likely to function efficiently, control management, and have greater focus, participation and debate atmosphere.[17] In addition, in large boards, effort per member, degree of group cohesiveness, the productivity level, the quality of processing of information and also the participation in decision-making process decrease as the number of

[17] Lipton & Lorsch (1993), Kameda, Stasson, David, Parks, & Zimmerman (1992)

members increases.[18] Furthermore, the bureaucratic, communication and coordination problems and spending time to make decisions are increased as the board size increases.[19]

Finally, there are some studies which find that there is no relationship between the board size and firm success. For example; Dalton et al. (1999) find no meaningful relationship between board size and firm performance. Bektas and Kaymak (2009) similarly find that board size is not significantly related to Turkish banks' return on assets.

2.2.5 The Tenure of Chief Executive Director

The link between the tenure of Chief Executive Director and firm performance is a critical topic which has been studied in the corporate governance literature. Researchers examine the issue of tenure from different aspects related to the performance of the boards. They find results suggesting a positive, negative or even non-existing relationship between these two variables.

Some studies claim that a CEO with a long tenure leads to a better-performing board and firm. According to Buchanan (1974) and Vance (1983), since the CEO with a long tenure has more related knowledge and expertise about the firm and its business environment, he/she has greater experience, commitment, confidence and competence in doing his/her job. Also they claim that directors perform better as their tenure increases due to an increase in organizational commitment.

[18] Vafeas (2003) , Pham, Suchard, & Zein (2008)

[19] Vafeas (2003) , Pham, Suchard, & Zein (2008)

Additionally, there are studies which examine the relationship between the tenure of Chief Executive Director and different dependent variables. For example, Barro and Barro (1990) state that better firm performance leads to a decrease in the probability of CEO turnover. Warner et al. (1988) find that there is an inverse relationship between stock prices and top management changes. In addition, Weisbach (1988) finds that the relationship between firm performance and CEO turnover in outsider-dominant boards is more significant than insider-dominant boards.

Alternatively, seasoned directors can also lead to poor performance of the board and the firm. For example; Halebian and Finkelstein (1993) explain that firms with dominant CEOs perform worse in difficult times. Additionally, Masulis and Mobbs (2009) explain that a CEO with a long tenure facilitates less objective board decision-making with less information transparency. Mishra and Nilesen (1999), Nestor Advisors (2009) and Nestor Advisors (2008) report that the power of CEO with a very long tenure damages the independence of the board since CEO is more likely to be friends with managers and less likely to monitor them. Furthermore, CEO with a long tenure also has more influence in the nomination process and has significant voting power (Vafeas, 2003). Additionally, CEO with a long tenure may have problems about quickly responding to the requirements of a changing environment (Nestor, 2008 and Ladipo & Nestor, 2009).

2.2.6 The Tenure of Non-Executive Directors

The opinions of researchers about the optimal tenure of non-executive director (NED) differ. Some studies find that the firm performance improves as the tenure of NED increases since their influence increases on the organization and they are less likely to accept the ideas that they do not agree, so these boards have more independence (Mishra & Nielsen, 1999). In

addition, Buchanan (1974) and Vance (1983) report the same effect due to the increase in their confidence and organizational commitment.

Other studies find an opposite relationship between these two variables.[20] For instance, it is found that the long tenure of NED has a negative effect on the firm performance.[21] They argue that when the board members work together for a long time, their monitoring level, their desire and acceptance level for change may decrease and they may be more likely to commit to status quo. It is further founded that they fail to take advantage of market opportunities. Nestor Advisors (2009) and Nestor Advisors (2008) find that NED with long tenure decreases the independence of the board since the tenure of a CEO relative to the tenure of a NED is a measure of the influence over the NED. Greater information transparency within the board of directors combined with a CEO and NED of low tenure encourage more objective board decision-making process while better serving shareholder interests (Nestor Advisors, 2008). Vafeas (2003) explains that as tenure of NED increases, they do not achieve more interlocking directorships or more consulting and they are more likely to work with their current firm. Consequently, they lose their independence and their competencies.

2.2.7 The Structure of Board

Another critical issue is the relationship between the board structure of the firm, a two-tier or a one-tier system, and firm success. This link has been examined from different aspects mostly in corporate governance codes. Corporate governance codes, which are explained in

[20] Mishra and Nielsen (1999), Masulis and Mobbs (2009), Bektas and Kaymak (2009)

[21] Mishra and Nielsen (1999), Masulis and Mobbs (2009), Bektas and Kaymak (2009)

detail in *Section 2.3*, express different views on the relationship between the two-tier system and firm performance.

Unfortunately, there are only a few studies that examine the relationship between these two variables. For example; Staikouras et al. (2007) finds that one-tier board system influences bank profitability positively. Alternatively, Bektas and Kaymak (2009) find that the structure of board does not affect firm performance in a significant way in Turkish banks during 2001-2004.

2.2.8 The Ownership Concentration

An important issue about the ownership structure is the optimal level of ownership concentration since it relates to the success of boards and firms. Some studies find that a high level of ownership concentration is positively correlated with the firm performance. Ownership concentration is important for effective corporate governance since they can use their voting power to control the management behavior (Jensen, 1993 and Edwards, Nibler, Berglof, & Franks, 2000). It is believed that the shareholders with a large ownership stake (blockholders) affect the performance of the firm positively.[22] Furthermore, relational investors[23] are a substitute for corporate control by contributing to firm performance due to the advantage of collective action and getting accurate information easily. In addition, they can be active in the decision-making process (Jensen, 1986 and Mikkelson & Partch, 1997). Finally, another view is that concentrated ownership is a useful tool for protecting the rights of controlling shareholders.

[22] McEachern (1975), Mikkelson and Ruback (1985), Mikkelson and Partch (1997), Krivogorsky (2006)

[23] Relational investors are investors who are holding large stakes.

However, there are some studies which find that there is a negative relationship between the level of ownership concentration and firm success. Firstly, Edwards et al. (2000) warn that conflicts among blockholders can arise if there is a high level of ownership concentration. Secondly, concentrated ownership can damage the rights of the minority shareholders by protecting the rights of only the controlling shareholders but not the rights of minority shareholders (Edwards, Nibler, Berglof, & Franks, 2000).

Finally, some studies find a non-existing relationship between these two variables. For example, Bektas and Kaymak (2009) find that ownership concentration does not affect firm performance in a significant way.

Alternatively, some studies find different types of relationship between these two variables. For example, Himmelberg et al. (1999) and Kang et al. (1999) find that the best ownership structure is determined by the firm's industry and environment.[24] Another type of the relationship is non-monotonic relationship between ownership concentration and firm performance; negative correlation between the critical points of 5% and 25% and positive correlation at other points (Morck et al., 1989 and Hermalin and Wiesbach, 1991).

One other interesting issue about the ownership structure is the state-ownership of firms. There are, unfortunately, few studies which investigate the relationship between the state-

[24] They explain as

"Financial economic research suggests some industries are "transparent" where firms are relatively simple to monitor, whereas others are "opaque" where firms are difficult to monitor, based on whether or not capital and investments are highly firm specific (Zeckhauser & Pound 1990). Transparent industries, such as textiles and steel, are characterized by less firm specific capital and investments, where most shareholders are more easily able to monitor managers. By contrast, opaque industries, such as microprocessors and pharmaceuticals, are those with highly specific capital investments, where most shareholders are unlikely to have the expertise and information necessary to monitor managers." (Kang et al. ,1999)

ownership concentration and firm success. Eralp and Kaymak (2009) find that the ownership type[25] is not a significant variable in Turkish banks.

Besides, the state-owned banks have different properties in their management structures and strategies to improve firm success. For example, they may be more concerned with supporting government-affiliated firms since maximizing profit may not be the primary goal of the state-owned banks. Also, the state-owned banks may have larger boards to represent different political views and stakeholders (Bektas & Kaymak, 2009).

2.2.9 The Age of Chief Executive Officer

The age of the CEO is another topic which has been studied in the corporate governance literature. There are studies which state a positive relationship between the age of the CEO and firm performance whereas there are studies claiming a negative relationship between these two variables. A common objection to older directors is that older directors might be less alert to business challenges, and removed from the financial sector frontlines. It is further claimed that they might have lower sensitivity to their professional reputation and future employability. For example; Geddes and Vinod (1997) explain that there is a negative and nonlinear effect of a CEO age's on his/her tenure with the firm. However, Nestor Advisors (2009) find that an older director with an old age may lead to a poor-performing board. Furthermore, Ladipo and Nestor (2009) find that the best performing boards in 25 European banks are not too young and with non-executive directors older than the average tenure of non-executive directors of banks in Europe.

The findings of these studies are summarized in Table 1.

[25] Ownership type is classified as domestic, international or state ownership.

2.3 Corporate Governance Theories

Theories about corporate governance have roots in different disciplines such as economics, law, management and sociology. The major theories are the agency theory, the stewardship theory, the resource dependence theory, the institutional theory and the stakeholder theory. In this study, three of them, agency, stewardship and resource dependence theories are highlighted, since those are the more commonly-referred ones in finance and economics

2.3.1 Agency Theory

"Agency Theory" is usually the main theory of corporate governance studies in economics and finance literature.[26] Agency theory is concerned with aligning the interests of owners and managers and is based on the premise that there is an inherent conflict between these two parties.[27] When a "principal" delegates authority to an "agent" to perform some service for the principal, then there occurs an agency relationship in different forms such as between clients and lawyers, or employers and employees, or stockholders and managers of corporations (Kang & Sorensen, 1999).

Agency theory asserts that managers with their firm-specific knowledge and managerial expertise are believed to gain an informational advantage over the firm owners who are largely removed from the operational aspects of the firm. Managers are more likely to control the firms due to this knowledge and expertise. Moreover, they may think only about their own personal benefits and not the best interest of the shareholders. Hence, this creates a potential conflict of control between owners and managers (Dalton, Daily, Johnson, & Ellstrand, 1999).

[26] Eisenhardt (1989), Jensen & Meckling (1976), Hermalin & Weisbach (2000)

[27] Fama & Jensen (1983), Fama (1980) , Jensen & Meckling (1976)

As a consequence, owners wish to maximize their profits, but at the same time their managers may not have any interest or incentive to maximize the owners' or shareholders' profit (Gedajlovic & Shapiro, 1998).

There are some implications of the agency theory to improve firm performance. For example; this theory suggests control mechanisms designed to protect shareholder. Indeed, the control function of a board is often described as the most critical and necessary of the directors' roles.[28] Therefore, according to the agency theorists, the separation of ownership and control is economically efficient (Baysinger & Hoskisson, 1990).

In addition, this theory also provides some recommendations about the board composition. For example, the agency theory asserts that a majority of outsiders, and, ideally, independent directors create an independent atmosphere within the board of directors since they are not affected by emotions, bias, or prejudices created by personal relations with the firms' owners and managers. Moreover, it is further suggested that the positions of CH and CEO should be held by different directors.[29]

Lastly, there are some suggestions about the board size in agency theory. In agency theory, it is believed that large boards are more suitable for large companies since a greater number of directors is required to monitor and control firm's activities easily and efficiently.

[28] Fama & Jensen (1983), Fama (1980) , Jensen & Meckling (1976)

[29] Kiel & Nicholson (2003), Dalton, Daily, Johnson, & Ellstrand (1999)

2.3.2 Stewardship theory

An alternative perspective in corporate governance literature is the stewardship theory. The supporters of this theory believe that managers are inherently trustworthy and also they are the right persons to entrust corporate resources. Moreover, inside directors work mostly to attain high levels of corporate profit and shareholder returns (Donaldson, 1990, Donaldson & Davis, 1991, 1994).

There are some implications of the stewardship theory for firm success. In contrast to the agency theory, stewardship theory suggests that control should be centralized in the hands of the managers.[30]

Some other implications of this stewardship theory relates to the board composition. For example, this theory suggests that inside directors understand the business they govern better than the outside directors and they make superior decisions using this knowledge. As a result, a majority of inside directors leads to better performance and more valuable shares. Moreover, stewardship theory argues that the board should have a significant proportion of inside directors to ensure a more effective and efficient decision-making process (Kiel & Nicholson, 2003).

In addition, this theory implies that the leadership of only one director for the boards is seen as a positive impact leading to better corporate performance, as one director holding the leadership avoids any internal and external ambiguity (Donaldson, 1990, Donaldson & Davis, 1991, 1994).

[30] Kiel & Nicholson (2003), Dalton, Daily, Johnson, & Ellstrand (1999)

2.3.3 Resource dependence theory

Resource dependence theory is usually referred in sociology whereas agency and stewardship theories have been emphasized in the economics and finance literature. Resource dependence theory focuses mainly on interlocking directorships and there are some implications of this theory for institutional and societal power (Pettigrew, 1992). According to this theory, firms need to maximize the performance of the boards since the essential link between the firm and the external resources is the board (Pfeffer & Salancik, 1978). Resource dependence theory does not take into consideration the alternative activities of the board such as providing advice, monitoring and strategizing whereas the other two corporate governance theories mainly focus on the links between the external environment and the firm.

The suggestions of this theory are based mainly on the board size. For example, it is claimed that larger companies require access to a greater range of resources. As a consequence, these firms appoint more directors to provide access to those resources according to the resource dependence theory (Pettigrew, 1992).

To sum up, all these theories try to explain different views about corporate governance components. There is no theory that explains corporate governance–corporate performance relationship completely but elements of each theory can be seen to apply in different circumstances. Each of the theories contributes to the corporate governance topic by theorizing different aspects about corporate governance factors.

2.4 Corporate Governance Codes

The European corporate governance codes are based on the recommendations of national and international institutions to improve the firm performance and to protect the rights of shareholders. Some of them have implications about the ownership and management structure of firms, especially banks, which is the main topic of this study. In this section, we first discuss the importance and the adoption process of corporate governance codes for banks. We then present the recommendations of European corporate governance codes in order to provide a basis for comparison with the results of this study in *Section 7*.

2.4.1 The Importance and The Adoption Process of Corporate Governance Codes

Following the financial crisis and the failures of listed companies in the 1990s, the countries in Europe began to deal with the corporate governance codes. Firstly Cadbury Report was published in 1992 in United Kingdom to emphasize the effective management for corporate performance. In Cadbury Report, the reasons for the necessity of corporate governance rules were introduced.[31]

Some unexpected failures of major companies reminded the firms of these concerns about the workings of the corporate system. Also there were criticisms of the lack of effective board accountability. Further evidence that action had to be taken to clarify responsibilities and to raise standards came from a number of reports on different aspects of corporate governance. These had been published or were in preparation at that time.

[31] In the report, it is underlined as

" The underlying factors were seen as the looseness of accounting standards, the absence of a clear framework for ensuring that directors kept under review the controls in their business, and competitive

In the late 1990s, there were several factors that caused an increased interest in corporate governance codes, generally accepted norms and best practices. These were the reduction of regulatory barriers in EU; increased competition as a result of communication and transportation technology; equity markets getting importance and broader-based shareholding. Ten codes whose names are reported in the appendix in *Table 2* were issued from 1991 to 1997, mostly in the United Kingdom. After 1998, this trend in corporate governance codes continued across Europe and 25 codes published only at this and the following three years. Also at this time period, OECD published "Principles of Corporate Governance" in 1999 after the global economic downturn (OECD, 1999).

After 2002, the corporate governance codes have continued to be popular in the European countries. There are 81 more codes published between 2002 and April 2010, including the codes published in 2010. Indeed each country has published a new code or made a revision for an already-published code at least once in every two years. 2006, 2007 and 2008 are the scope years of this study and codes were published mostly in these years. Germany and the UK are the countries which have been publishing most of the corporate governance codes. The list of the published codes and practices are in *Table 2.*

All these published codes highlight the fact that good corporate governance codes are critical and that they are depended on the national culture, law, traditions, history, business environment and the goals of the each European countries. However, there is a recent

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pressures both on companies and on auditors which made it difficult for auditors to stand up to demanding boards" (Cadbury, 1992).

convergence between corporate governance codes in parallel with the development of a single EU capital market.[32]

2.4.2 The Importance of Corporate Governance Codes for Banks

Regulations about corporate governance factors are especially important for the banking sector. Especially, Basel Committee on Banking Supervision[33] emphasizes the special importance of corporate governance for banks.[34]

There are several reasons as to why banks are special institutions. First of all, owing to the fact that the banks are highly leveraged firms by undertaking complex risks and are holding portfolios of illiquid assets, they have special capital structures and balance sheets in comparison with other sectors. Secondly, they have special roles in economic system since they are the primary and sometimes the only financial source for investment in countries. Consequently, there occurs a direct and severe threat to the entire financial system if there is a financial crisis as a result of the panic generating possibly severe liquidity problems. As it can be seen in the financial crisis of 2008, banks may damage the whole economy in a short time in case of financial crisis.

[32] Weil, Gotshal and Manges (2002) state that the reasons for this convergence is "the adoption of a common European currency, the free flow of capital, goods, services and people across EU borders, the competitive pressures of globalization, the realization of new technologies, privatization of state-owned enterprises, the growth and diffusion of shareholding, and increased merger activity among large European corporations and among Europe's largest stock exchanges".

[34] "Corporate governance for banking organizations is arguably of greater importance than for other companies, given the crucial financial intermediation role of banks in an economy, the need to safeguard depositors' funds and their high degree of sensitivity to potential difficulties arising from ineffective corporate governance. Effective corporate governance practices, on both a system-wide and individual bank basis, are essential to achieving and maintaining public trust and confidence in the banking system, which are critical to the proper functioning of the banking sector and economy as a whole." (Basel Committee on Banking Supervision, 2005)

It has been argued that there are some solutions for governments to protect the economy from a financial crisis. For example; there can be safety nets against the financial crisis not to trigger a chain reaction which is an important risk to the stability of financial system as a whole. Regulations based on the financial stability and the protection of consumers in a prudential manner; standards on internal control systems, constraints on large exposures are some examples of these safety nets. They are the initial responses before any possible crisis to reduce or totally get rid of the effects of it.

It could be further claimed that after any financial crisis, government involvement as the lender-of-last-resort, reorganization of liquidation process, deposit insurance or any other ex-post regulations are some of the main tools which are used to avoid the crisis to spread (Staikouras, Staikouras, & Agoraki, 2007). However, these regulations cause contrary influences such as less efficient monitoring systems of banks' management by creditors or depositors. Moreover, banks might take on more risk in a guarantee of a safety net such as government involvement.

This position goes on to further claim that banking system with poor corporate governance structure results in loss confidence by the creditors and depositors in the ability of a bank to properly manage its assets and liabilities, including deposits. Moreover, in this system, confidential information about the accounts is misused for personal gains. Additionally, analysis of the investments, activities, risks and financial statements of banks may be more complex for several reasons, including the unrated, borrower-specific nature of a bank's loan portfolio in this system. In summary, different internal and external factors may trigger the spread of a problem in banking system and this may turn to a domino effect for the whole economy.

In conclusion, corporate governance is vital and a more complex issue for banks than non-financial firms as stated in the report of Basel Committee on Banking Supervision in 2005. In light of these sensitivities, minimum standards of corporate governance for banks should therefore be more ambitious than for non-financial firms.

2.4.3 Recommendations of Corporate Governance Codes

2.4.3.1 Recommendations of Basel Committee on Banking Supervision

The composition of boards and the duties of the directors are the most emphasized topics in the report of Basel Committee on Banking Supervision. Indeed, the principles about them are introduced as the "critical elements of any corporate governance process". The topics highlighted in the report are generally about transparency, board composition and control.[35] These recommendations are guidelines for corporate governance codes on banking system.

[35] The topics are highlighted in the report in order as:

"Establishing strategic objectives and a set of corporate values that are communicated throughout the banking organization (paragraphs from 16 to 22)

Setting and enforcing clear lines of responsibility and accountability throughout the organization (paragraphs from 23 to 28)

Ensuring that board members are qualified for their positions, have a clear understanding of their role in corporate governance and are able to exercise sound independent judgment about the affairs of the bank (paragraphs from 29 to 35)

Ensuring that there is appropriate oversight by senior management (paragraphs from 36 to 37)

Effectively utilizing the work conducted by internal and external auditors, as well as other control functions, in recognition of their critical contribution to sound corporate governance (paragraphs from 38 to 40)

Ensuring that compensation policies and practices are consistent with the bank's ethical values, objectives, strategy and control environment (paragraphs from 41 to 44)

Conducting corporate governance in a transparent manner (paragraphs from 45 to 48)

Maintaining an understanding of the bank's operational structure, including operating in jurisdictions, or through structures, that impede transparency (i.e. "know-your structure")" (paragraphs from 49 to 53) (Basel Committee on Banking Supervision, 2005)

2.4.3.2 Recommendations of corporate governance codes on board of directors

The banks are introduced as “unique animals” in the report of Fitch Ratings Special Reports. The composition of boards in these unique organizations is critical at the core of the corporate governance framework as described in the critical elements of corporate governance (Staikouras, Staikouras, & Agoraki, 2007).

One of the topics related to the composition of boards is the number of independent and non-executive directors. It is suggested that there should be an appropriate composition of directors for the independence of the board. Additionally, non-executive directors on the supervisory board can enhance independence and objectivity. Independent directors can bring new perspectives from other businesses and contribute to improve the quality of strategic decisions given by the management (Basel Committee on Banking Supervision, 2005). However, there is not a consensus about the optimal number of directors (Weil, Gotshal and Manges, 2002).

2.4.3.3 Recommendations of corporate governance codes on the structure of board

Corporate governance codes and reports leave firms free to choose “two-tier” or “one-tier” board system.

These two systems have similarities and also differences between them. Both types of systems recognize a supervisory function and a managerial function. In addition, they have similar functions such as appointing the members of the managerial body, ensuring financial reporting, ensuring that functioning control systems and the corporation is in compliance with law.

The differences between two systems are mentioned in corporate governance codes. For example; it is commonly thought that the one-tier system may result in a closer relationship and better and quicker information flow within the supervisory and managerial directors. However, the distinctions between the managers tend to be more formalized in the two-tier structure. Furthermore, especially, in codes of one-tier board systems, it is strongly advised to have non-executive directors or independent directors to the supervisory body of the administrative board.

Additionally, in Germany, Austria, Denmark and Netherlands, firms are legally required to have a two-tier system whereas in United Kingdom, Ireland, Spain, Sweden, Luxemburg and Italy all firms have only unitary board. The other countries in Europe such France, Belgium, Finland, Greece and Portugal, both systems are available.

2.4.3.4 Recommendations of corporate governance codes about state ownership

The separation of functions of board is a critical issue for state-owned banks. It is emphasized that the administrative separation of the ownership and supervision functions in state-owned companies is essential to minimize the political interference in management of the companies.

2.4.3.5 Recommendations of corporate governance codes about duality

The separation of chairman of the board and the CEO is another issue for corporate governance codes. It is generally recommended to separate the leaderships of boards. One common objection to duality is that in case of duality, director faces a significant conflict of interest. It is also claimed that a reason for a conflict is eliminated and the independence of boards is increased by separation of the leaderships.

The separation of boards is emphasized mostly on corporate governance codes in the countries of two-tier system. Additionally, it is claimed that the companies are warned against the naming of retired managers to the supervisory board as it will damage the independency of supervisory board. Furthermore, in Austria, Germany, Denmark, Netherlands and also Sweden, the separation of the leaderships is required under the regulatory framework.

2.4.3.6 Recommendations of corporate governance codes about the board size

There are some recommendations about the minimum number and maximum number of members sitting on boards. The minimum number of board size is usually set up by laws or listing rules. The minimum number is 3 directors in many European countries whereas in Ireland and United Kingdom it is 2. Alternatively, to ensure the flexibility of the decision-making process, there are some recommendations about the maximum size. It is recommended to have enough members to make possible expressing ideas of each member in discussions of boards.

The comprehension of the theories and recommendations of codes are summarized in Table 3.

3. Data and Selection

The banks in developed European countries and Turkey are the scope of this study at a total of 18 countries. The portfolio reports and company overviews in Thomson One Banker database are the primary source of the data in our study. The variables used in this study are related to the financial, managerial and ownership structure of the banks.

Firstly, the financial information of the banks is gathered from bank templates in "Worldscope Annual Financial Overview" in Thomson One Banker database. The timeline of the study is dependent on the available information of these reports; we use the data from the years 2006 to 2008. The financial variables are reported yearly and in Euro (fixed rates) for all companies to make comparisons possible across countries.

Secondly, the information about the management of the banks is obtained initially from the *"Thomson Reuters Extel Company Report" in the Thomson One Banker database*. In these reports, there are parts entitled "Management" which give information about the directors and the boards. The parts with missing information are searched first in the "Bankscope Company Reports", in parts entitled "Directors & Auditors" and later in the company web sites. In web sites, the information about directors and boards is collected from their published annual reports and their corporate governance reports. The data is reviewed for reporting errors and other possible inconsistencies from other web sources like "The Official Board" and "The Financial Times".

Lastly, the information about ownership of the banks is collected again from the "Thomson Reuters Extel Company Report" in the Thomson One Banker database. The part, entitled "Capital" is the main area for the information about ownership structures. Additionally, there is another detailed report in Thomson One Banker database which is called "Ownership Summary". The missing information about the ownership of banks is obtained from the Bankscope Company Reports, in parts entitled "Current Shareholders". Again, if the necessary information was missing, the company websites, annual reports and corporate governance reports were examined to collect data manually. Finally, "Institutional Shareholders" parts in "The Financial Times" are also checked for data consistency.

The definitions of all variables are summarized in Table 4 and they are explained in Section 4.2 in detail.

Note that many of the previous studies also used the annual reports, proxy reports, company websites and internet sources such as newspapers, magazines or different databases as in our study.

In conclusion, in this study, the final sample includes 195 banks and three years of information for each of them.[36] The initial sample consisted of 213 banks existing in the Thomson One Banker database. However, 18 banks were omitted from the sample since their performance variables were not reported in the Thomson One Banker database annually.

4. Methodology

In this section of our study, the decision making process for the suitable panel data model is introduced according to the panel data methodology. As a result of this process, the fixed effect regression model is used in order to control the endogeneity problem and the advantages of the fixed effect regression model are explained in Section 4.3 in detail.

4.1 Panel Data

A panel data has two dimensions; one is for the cross-sectional units and the other one is usually for the time dimension (Hayashi, 2000). In this study, the cross-sectional unit is the banks' performance and the time dimension is year. This panel data contains *195 banks,* each

[36] The list of banks is shown in Table 16.

of which includes *3 o*bservations measured yearly from 2006 to 2008. Thus, the total number of observations is *585* firm-year data in this study. This dataset is balanced and short panel, since all entities have measurements in all time periods and the data has many cross sectional units but few time periods.

Panel data has some important advantages such as allowing for individual-specific variables; "more informative data, more variability, less collinearity among variables, more degrees of freedom and more efficiency"; being suitable for studying the dynamics of change (Baltagi, 1995). However, there are some limitations of panel data such as design and data collection problems, distortions of measurement errors, self-selectivity and short time-series dimension (Baltagi, 1995).

The panel data has two types of error component model as the one-way error component and two-way error component regression models. Both of the error component models have also two models as fixed and random effects models.

The one-way error component regression model can be shown as

$$y_{it} = \alpha + X_{it}^{'}\beta + u_{it} \qquad i = 1,..,N; \quad t = 1,...,T$$
$$u_{it} = \mu_i + v_{it} \tag{1}$$

where μ_i denotes the unobservable individual specific effect which is time-invariant. v_{it} denotes the remainder disturbances which usually is the combined times series error component

(Hayashi, 2000, Gujarati, 2003). Information about the two-way error component model is relegated details to footnotes.[37]

A fixed effects model examines whether the intercepts vary across groups or time periods, assuming the same slopes and constant variance across subjects (Gujarati, 2003). In a one-way error component (fixed effects) regression model, the μ_i is assumed to have fixed parameters to be estimated. The v_{it} is assumed to be independent and identically distributed iid(0, σ_v^2) and additionally X_{it} is assumed to be independent of v_{it} for all *i* and *t*. Furthermore, in two-ways error component (fixed effects) regression model μ_i and λ_t are assumed to be fixed parameters to be estimated and the properties of v_{it} and X_{it} still remains (Baltagi, 1995). μ_i is a random variable that is possibly correlated with X_{it} so the regressor X_{it} may be endogenous with respect to μ_i but not v_{it} (Cameron & Pravin, 2009). In fixed effects models there may be too many dummy variables if N and T are large. This may cause the loss of degree of freedom and in addition the problem of multicollinearity among variables (Baltagi, 1995). Information about random effects model is relegated details to footnotes.[38]

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[37] The two-way errors component regression model is shown with

$$y_{it} = \alpha + X_{it}^{'}\beta + u_{it} \qquad i=1,..,N; \qquad t=1,...,T$$
$$u_{it} = \mu_i + \lambda_t + v_{it}$$

where μ_i denotes the individual effect, or the fixed effect as in the one-way error component regression model and λ_t denotes the unobservable time effect, individual-invariant part, and lastly v_{it} is the remainder disturbances term. λ_t term holds any time specific effect which is a special case of that time and can not the included in the one-way error component regression model.

[38] A random effect model explores the differences in error variances and there is no need to estimate N cross-sectional intercepts in this model, only the mean and variance value of intercept is enough to be estimated (Gujarati, 2003). So the problem of too many parameters resulting in the loss of degrees of freedom in fixed effects model can be handled with the random effects model. Additionally, μ_i is assumed to be random and

The structure of the methodology part is as follows. *Section 4.2* explains the tests of residuals which are necessary for the success of the regression models. The tests of residuals are used to analyze the sample data whether to satisfy the necessary conditions. *Section 4.3* contains the test of fixed effects panel data versus random effects panel data. Following the previous results which clarify the variables of each model, in this section, we determine which panel data model is used in each of these models. *Section 4.4* reviews the types of the chosen panel data model. The tests about this type of panel data are explained in *Section 4.5.* In addition to these analyses about the tests and models, the models and the variables used in this study are introduced in the last section of the methodology part, in *Section 4.6.*

4.2 Tests of Residuals

A number of tools are used to get more significant and robust results from the models. Moreover, tests are conducted to determine whether the data in models meets the necessary regression assumptions. Depending on the results, if necessary, the variables were dropped from the regression models to avoid correlated regressors. The results of the correlation matrix are reported as a part of the univariate results. The tests of residuals are conducted in order to test for the normality, homoscedasticity, multicollinearity and model specification

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independent and identically distributed iid(0, σ_{μ}^{2}) and unrelated to X_{it} (Baltagi, 1995) (Cameron & Pravin, 2009).

A random effects model estimates variance components for groups and error. Since in this model, μ_i is a part of the errors, it should not be correlated to any regressor (Park, 2009). Therefore, regressor X_{it} is exogenous (Cameron & Pravin, 2009). μ_i is independent of the v_{it} and X_{it} is independent of the μ_i and v_{it} error components for all i and t (Baltagi, 1995). In a two-ways error component (random effect) regression model, μ_i, λ_t and v_{it} are independent and identically distributed with constant variances σ_{μ}^{2}, σ_{λ}^{2} and σ_{v}^{2}. In addition, X_{it} is assumed to be independent of the error components for all i and t (Baltagi, 1995). In a random effects model, the individual and time error components are assumed not to be correlated with each other and not to be autocorrelated across both cross-section and time series units (Gujarati, 2003).

error. According to the results of these tests, the models are adjusted in order to get more significant and robust results from the models.

Initially, tests of residuals for the normality assumption are performed. Normality of residuals is required for valid hypothesis-testing since the normality assumption makes the p-values for the t-tests and F-test to be valid. However, normality is not required in order to obtain unbiased estimates of the regression coefficients. Both fixed and random panel data require that the residuals be identically and independently distributed. But there is no assumption that the predictor variables be normally distributed in panel data assumptions. “Resistant normality check and outlier identification test”, written by Lawrence C. Hamilton, reports the univariate statistics and the number and percentage of mild and severe outliers. The presence of any severe outliers should be sufficient evidence to reject normality at a 5% significance level. Mild outliers are common in samples of any size (Hamilton, 1991). In this data set, the presence of 1 or 2 severe outliers cause the distribution of error terms to be not symmetrical. Furthermore, “The Shapiro-Wilk W Normality Test” reports the same results, the null hypothesis that the residuals are normally distributed is rejected. In the robustness check, the observations with severe outliers are analyzed.

Secondly, to test homoscedasticity, “Breusch-Pagan / Cook-Weisberg test” has the null hypothesis that the error variances are all equal where the alternative hypothesis is that the error variances are a multiplicative function of one or more variables. In the data set, according to the results of this test, there is evidence against the null hypothesis. But “Breusch-Pagan / Cook-Weisberg test” has a problem when the errors are not normally distributed as they are in this data set. White’s general test for heteroscedasticity, a special case of “Breusch-Pagan / Cook-Weisberg test”, takes this into consideration and the

assumption of normally distributed errors is relaxed. According to the results of this test, there is no need to reject the null hypothesis of homoscedasticity of residuals in the final regression models.

Thirdly, to test for multicollinearity of the residuals, "variance inflation factor" is performed. VIF is based on $VIF_j = \frac{1}{(1-R_j^2)}$, where R_j^2 is R^2 in the regression of X_i on the remaining *(k-2)* regressions (Hayashi, 2000). The VIF shows how much the variance of the coefficient estimate is inflated by multicollinearity. As the value of VIF increases, the evidence of alternative hypothesis, multicollinearity, increases. In the final regression models, there is no multicollinearity since the mean VIF is about 1.5 in these models.

Finally, model specification error may affect the estimate of regression coefficients because of the omission of a relevant variable, inclusion of unnecessary variable or adoption the wrong functional form (Gujarati, 2003). Two different tests are conducted for this purpose. "The regression specification error test for omitted variables", named Ramsey's RESET Test, is conducted. The idea behind this test is to create new variables and refit the model using these new variables in order to make estimation and get R_{new}^2. Then the F–ratio is calculated

$$F = \frac{(R_{new}^2 - R_{old}^2)/\text{df (=number of new regressors)}}{(1-R_{new}^2)/\text{df (=n - number of parameters in the new model)}} \qquad (2)$$

Then, if the F–ratio is significant, model specification error occurs. The regression models do not have any specification errors according to the results. In spite of the simplicity of this test, it does not guide about a better alternative model. Hence, also "the model specification link

test" is conducted. It depends on the same methodology with Ramsey's RESET test but it gives additional information about the model. Its results are consistent with the Ramsey's RESET Test. To sum up, there is not any problem about the model specification errors in final regression models.

4.3 Test of Fixed Effects Panel Data versus Random Effects Panel Data

In order to decide for the presence of individual – specific fixed effects, "the test of fixed effects panel data versus random effects panel data" is conducted. Hausman test is a common tool with the null hypothesis of validity of random effects model with $E(\alpha_i + e_{it} | x_{it}) = 0$. However, if the residuals are not independently and identically distributed, the random effects estimator is not fully efficient under this estimator.

Alternatively, when α_i and e_{it} are not iid, or heteroscedasticity or cross sectional dependency is present, panel-robust Hausman test as suggested by Wooldridge is conducted (Wooldridge, 2007). Hausman(1978) shows that

$$PER_{it} - \hat{\lambda}\,\overline{PER_i} = (1-\hat{\lambda})\mu + (x_{1it} - \hat{\lambda}\,\overline{x_{1i}})'\beta_1 + (x_{1it} - \overline{x_{1i}})'\gamma + u_{it} \qquad (3)$$

where PER is the dependent variable of the model, x_{1it} is time-varying regressor, x_{1i} time-invariant regressor, $\hat{\lambda} = 1 - \sigma_e \Big/ \sqrt{\sigma_e^2 + T\sigma_e^2}$. Hausman(1978) shows that the Wald test of $\gamma = 0$ in auxiliary OLS regression is asymptotically equivalent to the chi-squared test. The null hypothesis is that the random effects model is appropriate. Wooldridge estimates the same the

auxiliary regression by using panel-robust standard errors (Wooldridge, 2007). We reject this null hypothesis by the Wooldridge test.

In conclusion, the fixed effects regression model is used in this study in order to control the endogeneity of the governance measures and to ensure the consistency of the results. Many researchers conduct fixed effects regression model in their studies about the effect of the corporate governance factors on the firm success so that they are able to control all time invariant differences between cross-sectional units.[39] To sum up, our reason for using the fixed-effects regression model is to study especially the reasons of changes within banks since the fixed-effects model controls for all time invariant differences (Kohler & Frauke, 2009).

4.4 Types Of Fixed Effects Model

Using the fixed effects model has some advantages for the consistency of the results. The fixed-effects model explores the relationship between the independent variables and the performance variables within banks. However, each bank has its own properties that may or may not affect the performance variable. It is suggested that any bank-specific characteristics that may affect or bias the performance variable is controlled by using the fixed effects model. In this model, the effects of time-invariant characteristics are removed from the independent variables. Thus the net effect of independent variables is estimated (Pham, Suchard ve Zein, 2008).The set of control variables described in the variable section stands for the observable factors that may influence the relationship between the corporate governance factors and the banks. Briefly, to solve the endogeneity problem created by the unobservable factors, the fixed-effects regression method controls for potentially unobserved firm-specific factors that

could be driving both the corporate governance mechanisms and performance (Himmelberg, Hubbard and Palia, 1999).

There are different fixed effect models to control for several different factors such as "within effect model" and "the least squares dummy variable model".

The first one is "within effect model". The functional from is

$$y_{it} - \bar{y}_{i.} = \beta(x_{it} - \bar{x}_{i.}) + (v_{it} - v_{i.}) \qquad (4)$$

This form does not need dummy variables; it uses the deviations from the group means (Baltagi, 1995).

The second one is "The least squares dummy variable model (LSDV)". Using this model, the effects of the time-invariant variables are observed. It uses dummy variables for estimating fixed effects. It suffers from a large loss of degrees of freedom and too much dummies may deepen the problem of multicollinearity among regressors (Baltagi, 1995, Park, 2009).

A joint test is conducted to see if the fixed effects are needed by the null hypothesis that dummies for all years are equal to zero and the null hypothesis for dummies for all countries are equal to zero. We find that the both null hypotheses are rejected and that fixed effects are needed to control the unobservable effects of countries and years.

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[39] Himmelberg, Hubbard, & Palia (1999), Adams & Mehran (2003), Jonga, DeJongb, Mertensa, & E. Wasleyc (2005), Staikouras, Staikouras, & Agoraki (2007), Bhagat & Bolton (2008), Pham, Suchard, & Zein (2008), Masulis & Mobbs (2009), Giannetti & Ongena (2009)

4.5 Tests for Fixed Effects Regression Models

4.5.1 Cross-sectional dependence

Cross-sectional dependence is generally ignored in most empirical studies. However, unobservable common factors such as social norms and physiological patterns may enter the panel regression model and result in complex forms of spatial and temporal dependence (Hoechle, 2007). If cross-sectional dependence is present, ignoring it results in consistent but inefficient estimators and biased standard errors (Baltagi, 1995).

To test cross-sectional dependence, Breusch and Lagrange Multiplier Test is a common tool in cases of large time dimension and low individual dimension. But when N > T, the LM test is not consistent. Alternatively, "Pesaran Cross-Sectional Dependence test" is used to test whether the residuals are correlated across entities (Sarafidis & Wansbeek, 2010). The null hypothesis is that residuals are not correlated and the test is based on

$$CD = \sqrt{\frac{2T}{N(N-1)}}\left(\sum_{i=1}^{N-1}\sum_{j=i+1}^{N}\hat{\rho}_{ij}\right) \xrightarrow{d} N(0,1) \qquad (5)$$

In case of cross-sectional dependence, Driscoll-Kraay standard errors may handle this problem (Hoechle, 2007). It is important to note that the fixed-effects model coefficients relate only to within-banks changes over time and consider any variation across banks as well. However, the results of the models with Driscoll - Kraay standard error are consistent in case of cross sectional dependence; heteroscedasticity and autocorrelation. The details are explained in the robustness check part in *Section 8*.

4.5.2 Heteroscedasticity

The regression models, which are set up after tests for residuals, are tested for heteroscedasticity by "Modified Wald Statistic for Groupwise Heteroscedasticity". This test is suitable even if the assumption of normality is violated. The modified Wald test statistic, defined as $W=\sum_{i=1}^{N_g}\frac{\left(\hat{\sigma}^2-\hat{\sigma}^2\right)^2}{V_i}$ (6) where the $H_0:\sigma_i^2=\sigma^2$ for i = 1,.., N and N is the number of cross section units. W is distributed as X_N^2 under the null hypothesis (Greene, 2000) .

According to the results of the test, the White's heteroscedasticity-corrected standard errors, known as robust standard errors, and also Roger's standard errors, known as clustered standard errors, are calculated. In fact, heteroscedasticity is a general case in panel data studies since they involve different size firms together; small-size, medium-size and large-size firms. In addition, the variance of error terms is not possible to be constant (Gujarati, 2003).

4.5.3 Autocorrelation

The final regression models are also tested for serial autocorrelation by "Wooldridge test for serial correlation in panel-data models" (Wooldridge, 2007). Serial correlation in linear panel-data models biases the standard errors and causes the results to be less efficient.

There are many tests for serial correlation in the presence of random and fixed effects with many specific assumptions (Baltagi, 1995). However, the Wooldridge test is based on fewer assumptions and is more robust (Drukker, 2003).

According to the results of this test, the null hypothesis of no serial correlation is rejected. Therefore, Roger's standard error terms are calculated since they are consistent when iid assumption is relaxed, residuals are correlated and also heteroscedastic (Hoechle, 2007).

4.6 The Model and the Variables Used in the Model

To investigate the question of how two corporate-governance factors such as ownership and management structure affect the level of the bank's performance ratios, the following model is estimated:

$$PER_{it} = f(Ownership\_Structure_{it}, Management\_Structure_{it}, Control\_Variables_{it})$$

4.6.1 The Dependent Variables

The dependent variable is bank performance in this study. The main aim in looking at performance measures is to assess the financial condition of a company at a specific point in time. In addition they are used as tools to decide how well a company has been managed over a period of time (Staikouras, Staikouras, & Agoraki, 2007).

One of the dependent variables is PB, price-to-book-value ratio which is a stock performance ratio. P/B is the ratio of the market value of equity to the book value of equity. P/B is a good way to compare stocks across industries and it also gives a quick look at how the market is valuing assets vs. earnings. Furthermore, it enables the comparison of a company's performance around the world (Krivogorsky, 2006).

The other dependent variable is ROA, return on asset, which is one of the most frequently used performance indicators. The last one is ROE, return on equity per share. These performance measures have some limitations that P/B does not exhibit. For example, they are historical reports, which are affected by accounting conventions. In this study all variables are recorded as Euros and the data is based on the Worldscope database definitions.

4.6.2 The Independent Variables

There are two sections for independent variables. One of them is independent variables on the management structure and the other one is independent variables on the ownership structure. These two sections are used as items of corporate governance to explain the possible implications of corporate governance on bank performance.

The board size, represented by SIZE, is the number of directors on the board at the end of each examined financial year. In two tier systems, represented by the dummy variable STR = 1, an assumption is made that the directors belonging to the supervisory board perform as non-executives and the board size is the total of directors in supervisory board and management board (Staikouras, Staikouras, & Agoraki, 2007).

The board composition is captured by IND, the percentage of independent directors on board, and NED, the percentage of non-executive directors on board at the end of each financial year.[40] Executive directors, non-executive directors and independent directors are specified by Thomson One Banker database. The directors are classified as non-executive directors if they have such an announced title. In the same way, if a director is classified as an independent

[40] Weisbach (1988), Hermalin & Weisbach (2000), Brickley, Coles, & Terry (1994), Adams & Mehran (2003), John & Qian (2003), Staikouras, Staikouras, & Agoraki (2007), Bektas & Kaymak (2009)

director, then they are counted as an independent director (Krivogorsky, 2006 and Bektas & Kaymak, 2009).

The board structure is represented by STR. If STR = 1, there is a two-tier system. Otherwise, it is a one-tier system. Using STR dummy variable enables us to examine the effect of board structure on the performance of the bank.

Another dummy variable, DUALITY, is used to investigate the effect of the power concentration on bank performance (Bhagat & Bolton, 2008). Duality means that the bank's general manager or CEO is also the chairman of the board. So if CEO is the manager/chairman then DUALITY = 1.

The tenure of non-executive directors and the tenure of the CEO are the other important topics which influence the independence of the boards. The tenure of CEO is calculated from the first appointment year as a CEO in that particular firm and the tenure of a NED is calculated as the average of board tenure of NEDs (Lawton, 2009). Age of CEO, represented by AGE, is another interesting item which may influence the board performance and independence.

Lastly, to investigate the effect of ownership structure on bank performance, two independent variables are used. If the percentage of the largest blockholders' shares is 5% or more, the percentage of his/her shares in all shares is represented by OWN and it is obtained to investigate the ownership structure. It is simply the ownership concentration ratio which considers the holdings of the largest shareholder (Gedajlovic & Shapiro, 1998). The other ownership concentration ratio is STATEOWN to measure the percentage of state ownership

on banks to analyze the effect of the type of ownership concentration on bank performance (Bektas & Kaymak, 2009).

4.6.3 The Control Variables

There are five control variables which have been mostly used in the corporate governance literature as it relates to firm performance.

First of all, total asset, represented by TA, is used as a size variable and computed as the logarithm of it. The size control variables are important since small firms usually have lower performance variables compared to the large firms (Fama & French, 1995). Logarithmic transformation reduces the effect of outliers (Masulis & Mobbs, 2009)

The second control variable is GROWTH, the ratio of total loans to last year's total asset to capture the effects of growth opportunities of banks. The third financial control variable is NLTA to capture the effect of liquidity measured as the ratio of net loans to total assets and also to show the balance sheet composition.

Finally, the last financial control variable is TDTA to represent the leverage of banks which is a vital instrument to explain the performance of the banks. TDTA is measured as the ratio of total debt to total assets to capture the financial and credit risk due to the borrowing (Krivogorsky, 2006, Staikouras, Staikouras, & Agoraki, 2007)

5. Descriptive Statistics

The entire sample consists of 195 banks with 3 years. *Table 5* represents the basic statistics of the variables regarding the whole sample.

The ranges of performance variables are different from each other since in this error component model, the size of the performance variables of 195 banks from these 18 countries is changing due to the banks' scales.

86% of the sample has 5% or more shares which are held by the largest shareholder. Furthermore, 15% of the sample has banks with at least 5% of their shares owned by the state. The ownership in the sample ranges from having 100% of the bank owned by one person to having no shareholders owning more than 5%. The mean ownership percentage in the sample is 26% whereas the mean state ownership is 16%.

The independent variables related to the composition of the board of directors indicate that the firms in the sample are dominated by non-executive directors with a mean of 52%. The percentage of independent directors is about 32%. However there are banks that have neither a non-executive director nor an independent director; or all directors on board are independent or non-executive.

The average tenure of a non-executive director in the sample is 2.97 years whereas the average tenure of CEOs is almost twice this number. This may affect the independence of boards negatively since the powerful CEO may influence the non-executive members sitting

on the board according to the studies of Mishra and Nielsen (1999), Masulis and Mobbs (2009) and Bektas and Kaymak (2009).

AGECEO is another independent variable related to board composition. The average age of the CEOs is 53, with the oldest CEO being 78 years old and the youngest CEO being 34.

The average board size consists of 15 members. The size in the sample ranges from having 59 members to only 4 members.

340 observations in the sample (58%) have two-tier systems. Therefore the banks' organizations are largely dependent on separating the management and supervisory roles of boards to create efficiency.

Another independent variable is duality. In 12% of the banks, the same person is holding the positions of the chairman of board and chief executive officer at the same time.

In Table 6 the variables are summarized across countries. In ownership variables, it is interesting to see that states hold no share of banks in some countries such as Austria, Denmark, Finland, Ireland, Netherlands, Portugal and Spain. On the other side, Liechtenstein, Switzerland and Turkey have the highest levels of state ownership percentages; 30%; 26% and 13% in order.

Turkey, Austria and Portugal are the countries with the highest level of ownership concentration; with 48%, 45% and 40% respectively. On the other hand, Ireland, United Kingdom and Norway are countries with the lowest level of ownership concentration with 6%; 9% and 11% respectively.

The lowest level of percentage of independent members in boards is in France and Ireland with 7%; Turkey with 11% whereas the banks in Netherlands have no independent members sitting on boards. Sweden is the country which has the highest percentage of independent members on the board, with 82%. The United Kingdom is the second-highest country with a mean of 63% whereas Switzerland is the third-highest country with a mean of 49%.

Norway, Austria and Denmark are the countries with the highest percentage of non-executive members sitting on boards in that order. Moreover, France, Turkey and Finland are countries with the lowest percentage of non-executive members with 16%; 25% and 30% respectively.

The chief executive officers with the highest average tenure work in Liechtenstein, Ireland and Norway with 13.5, 10 and 9.8 years respectively. In contrast, the CEOs in banks of Finland, Italy and France have the lowest tenure with 2 years, 2.9 years and 3 years respectively.

The average age of chief executive directors is 60.5 in Belgium whereas the second-highest average age is 59.67 in Portugal and the third one is 56.80 in Spain. The youngest chief executive directors with a mean of 46.75 years-old, 49.67 years-old and 50.5 years-old are work in Sweden, Finland and Turkey respectively.

The highest mean of average tenure of non-executive directors is listed as 6.83 years, 6.67 years and 5.45 years in Liechtenstein, Finland and Spain respectively. France, Turkey and Italy have non- executive directors with the lowest tenure as 0.95; 1.93 and 1.97 years in that order.

The board size varies based on the structure of each country. The countries which have the smallest boards are Turkey with a mean of 8.96, Liechtenstein with a mean of 9.83 and Denmark with a mean of 9.97 members. However, Norway with a mean of 40, Austria with a mean of 20.67 and France with a mean of 18.10 members are the countries which have the largest boards in the sample.

The countries which have two-tier systems at all banks are Denmark, Germany, Liechtenstein, Netherlands, Norway and Austria. Ireland, Sweden and United Kingdom, conversely, have one-tier system at all banks.

Lastly, the countries that do not have any duality structure on boards are Austria, Belgium, Denmark, Germany, Ireland, Liechtenstein, Netherlands, Norway, Sweden and United Kingdom. In half of the banks of Finland, Portugal and Greece, the chairman of the board and the chief executive director positions are held by the same person.

To have a better idea on the sample, descriptive analysis is investigated in detail. For this reason, the sample is separated into different groups depending on various characteristics such as state ownership, duality and board structure. At this stage, "Two-sample Wilcoxon rank-sum (Mann-Whitney) test" is conducted since the distributions of the variables are not normal. This test is used to investigate whether there is a statistically significant difference between the underlying distributions of the two populations. The results of this non-parametric test are shown in Table 7.

In panel A of Table 7, the sample is separated into two groups as the state-owned banks and non-state-owned-banks. In the sample there are 86 observations whose five percent or more

shares are held by the state. There are no significant differences between the values of performance variables of the state-owned banks and non-stated-owned banks as seen in Table 7.

The values of control variables are also similar, excluding the total assets of banks; the mean TA of state-banks (235,000 million Euros) is approximately double the mean of TA of the non-state-owned banks (111,000 million Euros). The results suggest that there is a statistically significant difference between the distributions of the total assets of the state-owned banks and the non-stated-owned banks ($z = -5.015$, $p = 0.0000$). It can be determined which group has the higher rank by looking at how the actual rank sums compare to the expected rank sums under the null hypothesis of equality of ranks. Thus the non-stated-owned banks group has higher rank. This means that the state-owned banks have more total assets on average. This may be a result of the small sample (n=85) of state-owned banks. The test result means that the samples come from different populations.

42% of boards of the state-owned banks are independent directors, whereas 44% of the boards are non-executive directors. These two distributions are different from each other ($z= -3.052$, $p=0.0023$; $z=2.436$, $p=0.0148$). The ranks of number of independent directors and non-executive directors in non-stated owned banks are higher.

The mean tenure of non-executive directors in state-owned banks is 2.3 years, which is lower than the tenure of NED in non-state-owned banks (3.08 years). The mean tenure of the CEO is 6.41 years, higher than in non-state owned banks (4.96 years). The distributions of these two variables in state-owned banks are not the same as in non-state owned banks at 95%

confidence level. This difference between the tenure of CEO and NED are much higher in state-owned banks, causing some doubts in the independence of their boards.

The average CEO age and the board size of both types of banks are approximately equal to each other and also to the mean of the whole sample. 55% of the state-owned banks have two-tier systems and 14% of them have the same director, who is holding the chairman of board and the CEO positions at the same time. However, the percent of two-tier systems is 59% and duality is 13% in non-state-owned banks. There is not any statistically significant difference between the distributions of these underlying variables in these two types of banks.

As shown in panel B of Table 82% of banks have 5% or more shares held by an institution or an individual rather than the state. The distributions of performance variables related to the ownership concentration in owned-banks[41] are not significantly different from the distributions of the non-owned banks at 95% confidence level.

31% of boards of owned-banks are independent directors whereas 51% are non-executive directors. The tenure of the CEO is 5.18 years and the tenure of non-executive directors is 3 years and also the average age of CEO is 53.2 years. 58% of owned banks have two-tier systems and 11% of them have duality leadership structure. All these variables about the management structure of banks are distributed similarly in both of the owned banks and non-owned banks since the null hypotheses are not rejected at 5 % significance level.

[41] "Owned-bank" term is used to represent the bank having 5% or more shares held by an institution or an individual rather than the state. "Non-owned-bank" term is used to represent the bank having no such a shareholder.

However, another management structure variable, the board size, is distributed differently in the owned-banks and non-owned banks due to the results of "two-sample Wilcoxon rank-sum (Mann-Whitney) test". The board size in owned banks is 15.85 members at average whereas the mean in non-owned banks 12.64. As expected, the rank sum of owned banks is higher than the rank sum of non-owned banks.

In panel C of Table 7, the banks with duality structure are analyzed. The age of the director who holds the chairman of board and the chief executive position at the same time is 55.5 years on average, higher than the average of the whole sample and the banks without duality structure (in "two-sample Wilcoxon rank-sum (Mann-Whitney) test", z= -1,985, p=0.0471). The banks' CEOs working in duality structures hold the leadership at earlier ages in comparison with the CEOs in the banks with duality. Although the tenure of non-executive directors and CEO are 2.58 and 4 years in that order, lower than the values in banks without duality, this is not statistically significant.

The distributions of the performance variables except PB in the banks with duality are not statistically and significantly different from the distributions of the banks without duality at 95% confidence level. The rank of ownership structure of the banks with a duality structure is similar to the banks without duality, except the OWN variable. The rank of the banks without duality is higher than the rank of banks with duality in the topic of the ownership concentration variable (z=2.442, p=0.0146).

Lastly, the distributions of many management structure variables are the same in both types of banks. However, in banks with duality, the two-tier system is at 31%, lower than the banks

without duality. As expected, the rank of the two-tier system in banks with duality structure is lower than the ranks in the banks without duality (z=4.898, p = 0.0000).

In panel D of Table 7, the descriptive statistics are shown within the two-tier system and one-tier system. The state-ownership of banks with the two-tier system is similar to the mean of the whole sample and the one-tier system; there is not a statistically significant difference. However, the percent of the largest shareholder in two-tier system banks is 23, lower than the whole sample and the banks with the one-tier system. The distribution of this variable in two classifications of banks is different from each other (z=3.145, p= 0.0017).

Furthermore, the majority of the management structure variables are not distributed similarly. For example; 64% of the boards are non-executive directors, much higher than the banks with STR= 0 (34%). The rank of this variable in banks with two-tier system banks is higher than the rank in one-tier system banks (z=-3.774, p= 0.002). The mean tenure of the CEOs in the two-tier system banks is 5.9 years whereas the mean tenure of the non-executive directors is 3.79. Again, the distributions are not same with the distributions in unitary system banks and the rank is still higher in two-tiered system banks. In contrast, the mean tenure of the CEO in one-tier system banks is 4.19 years whereas the mean of tenure of NED is 1.85 years. The ages of the CEOs are not significantly different from each other (z=-0.047, p=9628). As expected, the duality of the two-tier system is much lower than the banks of one-tier system banks, as just one third (in "two-sample Wilcoxon rank-sum (Mann-Whitney) test", z= -24,104, p=0.000) . All these results are consistent with the recommendations of corporate governance codes. These findings show that those recommendations are mostly applied in countries with two-tier system countries. All these statistical differences are significant, again, in 95% confidence level.

Lastly, the average board size of the two-tier system is larger than that of the one-tier system as expected because of the board size calculations.[42] However, there is no distribution difference between two system banks at 5% significance level.

6. Univariate Tests

Table 8 presents the correlation matrix consisting of all variables and shows several significant correlation coefficients. First, the levels of OWN and STATEOWN are negatively correlated (r = -0.33). Also, the level of OWN is inversely related to the numbers of independent directors on the board (r = - 0.34). Second, the percentage of independent directors on board and the logarithm of total assets are inversely correlated (r = -0.33). Third, companies with a high percentage of non-executive directors sitting on boards have a higher level of size (r = 0.32) and are more likely to have two-tier boards (r = 0.38). Moreover, there is a positive correlation between the percent of non-executive directors on board and their tenure (r= 0.55). Furthermore, the tenure of CEO is positively related with the average tenure of the non-executive directors (r = 0.30). The companies with the two-tier system are more likely to have non-executive directors with a long tenure (r = 0.34). Lastly, there is a negative correlation between two control variables, total assets and net loans percent to total assets (r= -0.59). Therefore, these two control variables are used as alternatives for robustness and are not used in the same regression models to avoid possible multicollinearity.

[42] In the two-tier system, the directors belonging to the supervisory board perform as non-executives and the board size of these banks is the total of directors in supervisory board and management board.

7. Panel Data Results

In this section the relationship between the independent variables and performance variables will be examined. Table 9 provides the results of "within effects models" with Rogers standard errors since Rogers standard errors are heteroscedasticity and autocorrelation consistent. Table 10 shows the results with year dummies in "The least squares dummy variable model (LSDV)" whereas Table 11 shows the results with country dummies. Additionally, in Tables 12, 13 and 14, the percentages of shares outstanding held by the largest shareholder are divided into five categories to analyze the effect of ownership structure on the bank performance in more details. Lastly, in Table 15, the results of LSDV models are reported with different omitted countries.

The description and univariate results provide us with some ideas regarding the relationship of the ownership and management structure with the performance variables. Panel data regression models are conducted to be able to control for several different factors; such as unobservable effects.

The main model which investigates the effect of management and ownership structure on bank performance is

$$PER_{it} = f(Ownership\_Structure_{it}, Management\_Structure_{it}, Control\_Variables_{it}) \quad (7)$$

According to the results of residual tests and univariate tests, there are six models to be explored. The first one is to examine the relationship with STATEOWN ;

$$PER_{it} = \beta_i + \beta_2 STATEOWN_{it} + \beta_3 IND_{it} + \beta_4 NED_{it} + \beta_5 TENCEO_{it} + \beta_6 AGECEO_{it} + \beta_7 DUALITY_{it} + \beta_8 TDTA_{it} + \beta_9 GROWTH_{it} + \beta_{10} LOGTA_{it} + u_{it} \quad (8)$$

The second one examines the same relationship with OWN;

$$PER_{it} = \beta_i + \beta_2 OWN_{it} + \beta_3 NED_{it} + \beta_4 TENCEO_{it} + \beta_5 AGECEO_{it} + \beta_6 DUALITY_{it} + \beta_7 TDTA_{it} + \beta_8 GROWTH_{it} + \beta_9 LOGTA_{it} + u_{it} \quad (9)$$

The third one adds the tenure of NED variable instead of tenure of CEO and has an additional variable SIZE;

$$PER_{it} = \beta_i + \beta_2 OWN_{it} + \beta_3 TENNED_{it} + \beta_4 SIZE_{it} + \beta_5 AGECEO_{it} + \beta_6 DUALITY_{it} + \beta_7 TDTA_{it} + \beta_8 GROWTH_{it} + \beta_9 LOGTA_{it} + u_{it} \quad (10)$$

The fourth model replaces OWN variable with STATEOWN;

$$PER_{it} = \beta_i + \beta_2 STATEOWN_{it} + \beta_3 IND_{it} + \beta_4 TENNED_{it} + \beta_5 SIZE_{it} + \beta_6 AGECEO_{it} + \beta_7 DUALITY_{it} + \beta_8 TDTA_{it} + \beta_9 GROWTH_{it} + \beta_{10} LOGTA_{it} + u_{it} \quad (11)$$

The fifth model consists of STR variable additionally;

$$PER_{it} = \beta_i + \beta_2 OWN_{it} + \beta_3 TENCEO_{it} + \beta_4 AGECEO_{it} + \beta_5 SIZE_{it} + \beta_6 STR_{it} + \beta_7 DUALITY_{it} + \beta_8 TDTA_{it} + \beta_9 GROWTH_{it} + \beta_{10} LOGTA_{it} + u_{it} \quad (12)$$

The last model is the same as the fifth one with the inclusion of the STATEOWN variable as;

$$PER_{it} = \beta_i + \beta_2 STATEOWN_{it} + \beta_3 TENCEO_{it} + \beta_4 AGECEO_{it} + \beta_5 SIZE_{it} + \beta_6 STR_{it} + \beta_7 DUALITY_{it} + \beta_8 TDTA_{it} + \beta_9 GROWTH_{it} + \beta_{10} LOGTA_{it} + u_{it} \quad (13)$$

Note that the dependent variable is PB in the following sections since the models with the dependent variable PB do not reject the null hypotheses of tests of homoscedasticity of residuals, tests of multicollinearity of independent variables and also tests for model specification error.

7.1 The Ownership Structure and the Performance Variables

The ownership structures of the banks are analyzed by two variables which capture the effect of the ownership concentration on bank performance. There are six specifications in this study to investigate this relationship; three of them are about the blockholders and the other ones are about the state ownership.

In within effects model with Rogers standard errors, in Table 9, models 1, 4 and 6 are about the ownership of state whereas the models 2, 3 and 5 are about the ownership of the largest shareholder such as an institution or an individual. The ownership of blockholders is also analyzed according to the magnitudes of the percentages in the shares in Tables 12, 13 and 14.

All models including the OWN variable do not report any significant effect on the performance variable, PB. OWN is positively correlated with the performance variable at insignificant levels. This means that the percentage of blockholders do not affect the performance of the banks if the country and year affects are not taken into the consideration. This insignificant effect is persistent in case of analyzing the ownership structure according to five categories in Tables 12.

Model 4 supports that the percentage of state ownership is negatively and significantly correlated with the price-to-book value ratio. The significance of this result is sensitive to the inclusion of variable of tenure of non-executive directors. If the ownership percentage of the state rises by one unit, 1.41% loss occurs in the performance variable at 10% significance level. However, in the other specifications without the non-executive directors' tenure, the effect of state-ownership percentage is still negative but statistically insignificant. This

negative relationship between the two variables is consistent with the results of univariate statistics. These bring us the conclusion that the blockholders shares raise the bank performance statistically insignificantly whereas the states' shares reduce the performance if the country and year differences are not controlled.

In *Table 10,* the results with year dummies are shown. In "the least squares dummy variable model (LSDV)", the dummy variable coefficient for year 2006 is omitted to avoid the dummy variable trap, or perfect multicollinearity (Baltagi, 1995).

The dummy variable coefficient for the year 2007 is negatively significant in models 3 and 4.[43] If the ownership concentration is measured by OWN variable, then the year 2007 causes a 6% loss in the performance variable at 5% significance level. Otherwise, if the ownership concentration is measured by STATEOWN variable, the effect of year 2007 is a 4% loss, again at 5% significance level. Moreover, the year of the global crisis, 2008, reduces the bank performance in all specifications at significant levels. If the year is 2008 in the panel regression models, then the performance variable has a 30% loss in all models. This loss is significant at %1 level in models 1, 2 and 4 whereas it is significant at %5 level in models 3, 5 and 6. All these results and effects of years are in comparison with the year 2006.

When year dummies are taken into consideration, the results get more significant in comparison with the pooled regression. The ownership concentration measured by OWN raise the performance variables at 10% significance level, as seen in Table 10. Additionally, these positive effects get more significance in all specifications whenever the categories of ownership are taken into consideration, as seen in Tables 12, 13 and 14. These results are

consistent with the results of the univariate statistics. On the other side, there is no significant impact of STATEOWN on LSDV models with year dummies. The ownership concentration captured by the state shares is insignificantly and negatively related to the performance variable, which is consistent with the results of the univariate statistics and also the results of Himmelberg et al. (1999), Kang et al. (1999) Bektas & Kaymak (2009).

In *Table 11* country dummies are added to the fixed effects model to control for the effects that are country-specific. In the LSDV models, there are some countries that always have statistically significant effect on the price-to-book-value ratio. In Table 11, the omitted country is Austria whereas in Table 15 the omitted countries are Turkey, Greece, Portugal and France respectively.[44]

In case of Austria being the omitted country, the countries which have a positive and significant effect on the banks' performances in all specifications are Finland, Germany, Greece, Portugal, Spain, Switzerland and Turkey. The majority of these impacts are significant at 1% levels. However, the only country that always affects the performance variable negatively at significant levels is France. The dummies for Ireland, Italy, Liechtenstein, Sweden and the United Kingdom are positively significant in first three specifications. However, the dummy for Norway creates a negative and significant effect on PB in the first three models. Belgium and Denmark also have a positive effect on the value of the performance variable, but not in all of the specifications. Lastly the country dummy of

[43] These models are controlled for the effects of the tenure of non-executive directors (TENNED), age of CEO (AGECEO), board size(SIZE), duality (DUALITY) and the ownership structure(STR).

[44] The reason to choose these omitted countries is that the country effects of Finland, Germany, Greece, Portugal, Spain, Switzerland and Turkey are always significantly positive in all specifications in case of Austria being the omitted country. In contrast, the country dummy of France has a significant and negative effect on the bank performance in all cases, again in case of Austria being the omitted country in table 12.

Netherlands does not have any significant impact on PB, so its effect is the same as the omitted country, Austria. It should be remembered that these dummies for countries are added to the constant term of the models in comparison with the omitted country, Austria. Hence, their effects are more or less than the country effect of Austria.

In the models with country dummies, the effect of ownership concentration is similar to the models with year dummies. OWN has a positive and significant impact on PB in all specifications whereas STATEOWN has an insignificant negative effect on PB. This positive effect of OWN is significant at 5% level. The shares of relational investor bring an additional 40% increase to the price-to-book ratio at 5% significance level. Additionally, in case of the models with the ownership categories in Tables 12, 13 and 14, some country effects lose their significance such as Ireland, Italy, Liechtenstein and the United Kingdom and also the size effect is significant in all specifications.

In conclusion, to understand the effect of ownership structure on the banks' performance, the ownership concentration, measured by OWN and STATEOWN, is used in different specifications. The effect of the blockholders on the firm performance is positive whereas the effect of the state ownership is negative. The findings are consistent with the results of the univariate statistics and the studies of Himmelberg et al. (1999), Kang et al. (1999) Bektas & Kaymak (2009). They suggest that the largest shareholders might be seen as the substitute of the corporate control or investor protection. As their shares increase at banks, the relational shareholders spend more effort for the profit maximization. They have a better chance of controlling the directors and their decisions at announced shareholder meetings. Furthermore, their decision is generally more objective than any other internal control mechanism (Jensen, 1986 and Mikkelson & Partch, 1997).

7.2 The Composition of Boards and the Performance Variables

The management structures of the banks are examined by using the related variables about the board composition. The boards may include the non-executive directors or independent directors, which differs across the firms. In this study, there are two specifications about the non-executive directors and two specifications about the independent directors.

According to the results of fixed effects models with Roger standard errors, in *Table 9*, none of the variables about the board composition is significantly related to the banks' performance. There is an insignificantly positive relationship between the PB and the percent of non-executive directors sitting on the board. Conversely, there is an insignificantly negative relationship between PB and the percent of independent directors on boards. Although these results are not significant, they are consistent with the results of the univariate statistics.

The same results are also supported by the "the least squares dummy variable model (LSDV)" with year dummies in *Table 10* and also with the country dummies in *Table 11*. These results are consistent with some studies[45] in the corporate governance literature about the independent directors and non-executive directors.

It is generally claimed that the non-executive directors have the ability to understand the internal and external markets more accurately and give more suitable decisions for rapidly

[45] Yermack (1996), Becht et al. (2003), Baysinger & Butler (1985), Rosenstein & Wyatt (1990), Pearce & Zahra (1992), Ezzamel & Watson (1993), Johnson et al. (1996), Staikouras (2007), Masulis & Mobbs (2009), Bektas & Kaymak (2009)

changing conditions.[46] Furthermore, it is theorized that their objectivity may affect the firm success by decreasing agency costs.[47] However, we find that the relationship between these two variables is not statistically significant as in some other studies.[48] Staikouras (2007) state that

"As it concerns the banking sector, according to Adams and Mehran (2003), a lack of correlation between the board composition and performance is consistent with the theory in the banking sector. As a result of regulatory requirements, directors do not emphasize value maximization over the safety and soundness of the banks. In addition, it should be also noted that certain regulations at the bank level could constrain board structure regarding size and composition."

7.3 The Board size and the Performance Variables

To further understand the relationship between the management structure and bank performance, another independent variable, SIZE, is added to the models. There are four specifications related to the board size variable.

As reported in *Table 9*, there is no significant result about the effect of board size on the performance variable. Indeed, the effect is insignificantly negative, which means that as the board size increases, the bank performance decreases insignificantly.

[46] Yermack (1996), Becht et al. (2003), Baysinger & Butler (1985), Rosenstein & Wyatt (1990), Pearce & Zahra (1992), Ezzamel & Watson (1993), Johnson et al. (1996), Staikouras (2007), Masulis & Mobbs (2009), Bektas & Kaymak (2009)

[47] Fama, et al. (1983) , Weisbach (1988), Vinod & Geddes (1197)

[48] Hermalin & Weisbach (1991), Johnson et al.(1996), Bhagat & Black (1999)

In *Table 10*, if the effect of the different years is controlled, the effects of size variable become significantly and negatively related to the price-to-book-value ratio. In model 3, one more director in the boards causes a 2% loss in the performance in specifications with OWN at 10% significance level. In model 4, when IND and STATEOWN are added to the regression model, the significance level of negative effect rises to 5% level. In the other models, the results are the same, meaning that if the ownership concentration is captured by OWN, then the significance level of relationship is 10% whereas the significance level becomes 5% in the models with STATEOWN. In all models, one more director sitting on the board results in 2% loss in the performance variable at significant levels.

In models with country dummies in *Table 11*, the significance level of the effect in models with STATEOWN decreases and becomes 10%. Additionally, the magnitude of the impact is the same, 2% loss, as the models of year dummies. Although the significance of the board size is lost in the models with the blockholders in case of Austria being the omitted country, the board size is again significant in all specifications in case of Turkey, Greece, Portugal and France being the omitted country, as seen in Table 15.

In conclusion, all these results about the board size are consistent with some studies [49] in literature and also with the reports of univariate statistics. Large boards are less likely to function efficiently or control the decisions. Moreover, the large boards are not suitable for CEO to control and monitor due to communication and coordination problems usually occurring in the large boards. Furthermore, in the large boards, the efforts per member decreases, and the participation and production levels of directors fall. The less efficient

[49] Kameda et al. (1992), Jensen (1993), Finkelstein & Hambrick (1996), Hermalin &Weisbach (2003), Staikouras et al. (2007)

information flow across board members and less efficient working time are claimed as the reasons for this negative effect.[50]

7.4 The Tenures of Directors and the Performance Variables

Another variable about the management structure is the tenure of directors. The CEO tenure and the tenure of the non-executive directors are critical variables related to the bank performance. Four specifications are about the CEO tenure whereas two specifications are about the tenure of non-executive directors.

In *Table 9*, the models report that the tenure of CEO affects the bank performance in a significant and negative way; as one year increase in the tenure of CEO causes a 7% loss in the performance of the bank at 5% significance level. This result is consistent with the findings of some studies[51] and also the results of the univariate statistics. Furthermore, the significant negative effect remains in all specifications and also in the analyses related to the ownership categories in Tables 12, 13 and 14.

Furthermore, in *Table 9*, all models, including TENNED support the results of univariate statistics. The tenure of non-executive directors is strongly and negatively correlated with PB. The performance variables of the banks have a 10% loss at 1% significance level if the tenure of non-executive directors is increased by one year. Moreover, the negative effect of tenure of non-executive directors is larger and more significant than the negative effect of tenure of CEO. This result supports the ideas in the articles of some researchers.[52]

[50] Dalton, Daily, Johnson, & Ellstrand (1999), Vafeas (2003), Pham, Suchard, & Zein (2008)

[51] Halebian and Finkelstein (1993), Mishra and Nilesen (1999), Masulis and Mobbs (2009)

[52] Mishra & Nilesen (1999), Vafeas (2003), Nestor Advisors (2008), Bektas & Kaymak (2009)

The tenure of directors has a negative relationship with bank performance and the age of CEO does not make any significant effect. This independent variable enters into all models, but in none of them its effect is significant. However, the coefficient of AGECEO becomes negative when TENNED is included into the model. Thus, an older CEO and non-executive directors with long tenure leads to a loss in bank performance.

In *Table 10,* when the year dummies are included, the effect and significance of the tenure of CEO change. In "the least squares dummy variable model (LSDV)", each dummy for the years is absorbing the effects particular to that year. In LSDV, the effect and significance of the tenure of CEO is lower than the results in the pooled regression. TENCEO is negatively correlated with PB at 10% significance level in model 1(2.8%) and in model 2 (2.5%). As seen in Tables 12, 13 and 14, these negative effects get more significance if the categories of ownership are taken into consideration. Again AGECEO is not a significantly effective independent variable, even if the year dummies are included. It affects the bank performance negatively in an insignificant way in all specifications. Moreover, the significant effect of TENNED is lost in the specifications with year dummies. It affects the bank performance insignificantly and positively in model 3 (1.2%) and model 4 (1.2%).

In Table 11, the country dummies are included to control for the unobservable internal conditions affecting the bank performance, which may be differing from one country to another. When country dummies are included, the significances of tenure and age variables are lost as seen in *Table 11* and other LSDV tables with the country dummies such as Table 15. However the sign of the effects are consistent with the results of univariate statistics and other types of fixed effects model.

In conclusion, the long tenures of CEO and of non-executive directors may damage the board independence since the directors are less likely to monitor each other in these boards. Furthermore, in general, the CEO with long tenure also has more impact on the nomination process and more significant voting power.[53] Additionally, they may have problems about keeping up with the requirements of a changing environment and conditions. They are more likely to commit to status quo. The tenure of NED in comparison with the tenure of CEO is a measure of the degree of board independence and information transparency.[54] Hence, the balance between two variables is an important tool for the board success as well as the firm success.

Additionally, the significance of the negative impact related to the tenure variables is dependent on the inclusion of year and country dummies. However, the negative effect of the long tenure of directors on the bank performance persists in all specifications.

7.5 The Duality and the Performance Variables

Duality is another important corporate governance component which is related to the leadership of the boards. Duality variable is added to all specifications since there is not a problem about multicollinearity.

The results about the duality effect in the pooled regression are significant, except Model 3, in *Table 9.* However, all results show that the effect of the same director who is holding chairman of board and CEO positions is related positively to the bank performance. In the models, including the ownership concentration showed by OWN, the significance level is 1%,

[53] Vafeas (2003), Nestor (2008), Ladipo & Nestor (2009)

[54] Mishra & Nielsen (1999), Masulis & Mobbs (2009), Bektas & Kaymak (2009)

except in model 4. If the independent variable about the ownership structure is replaced by STATEOWN, then the size of this effect and the significance level increase. In case of controlling the effects of state-ownership structure, the same person holding the leaderships of both boards affects the bank performance positively.

In *Table 10*, the duality structure makes the price-to-book-value ratio increase in all specifications if the year dummies are added to the regression models. Furthermore, the significance level of the relationship is very high; 1%. However the duality structure loses its significance if the country dummies are added to the fixed effects model, as seen in Table 11 and other LSDV tables with the country dummies such as Table 15 since the impact of duality is absorbed by the country dummies.

As a result, these findings are consistent with the results of the univariate statistics. Moreover, some researchers report[55] the same positive effect of the sole leader in the management. The cause of this positive effect is that the sole leadership removes any internal and external ambiguity for the responsibility of the managerial decisions (Donaldson, 1990, Donaldson & Davis, 1991, 1994). Additionally, duality may reduce the probability of financial distress (Bektas & Kaymak, 2009).

7.6 The Structure of Management and the Performance Variables

The last variable is the structure of management, which means that this independent variable, STR, is equal to 1 if the organization structure of management consists of two boards,

[55] Anderson & Anthony (1986), Donaldson (1990), Donaldson & Davis (1991), Lipton & Lorsch (1993), Finkelstein & D'Aveni (1994)

otherwise equals to 0. This variable captures the organization effect on the bank performance. There are two specifications including this variable.

The results about the STR effect in the pooled regression are insignificant in all specifications in *Table 9*. Furthermore all results in *Table 10* and *Table 11* support that the effect of two-tier system is insignificantly and positively related to the performance variable of the banks. These insignificant results are consistent with the results of Bektas and Kaymak (2009). Unfortunately, there are not many studies on this topic in the literature.

The two-tier board structure of the bank has a positive influence on the bank profitability according to some corporate governance codes and practices. For instance, codes published in Germany, Austria and Denmark are supporters of this system. Additionally, this system provides the independence of supervisory boards and defines the boards' tasks in order to run the business by allowing further developments.

In addition to the independent variables, also control variables have significant effects in most specifications. The logarithm of total assets is used to capture the scale effect and the total debt to total asset is used to capture the effect of leverage on the bank performance. They affect the bank performance negatively and significantly according to the general results of the least square dummy variable models.

8. Robustness Checks

As explained in the methodology section, to check the robustness of the results, several methods are used. The results of these methods are explained here, in detail. To make sure

that our results are robust, additional robustness checks are also conducted in this study and explained in the following sections.

8.1 Multicollinearity

Before deciding the applied models, to prevent possible multicollinearity, initially, the pair-wise correlation matrix is used. The couples of variables which have strong correlation between themselves are not used in the same models (correlation greater than 0.30). Secondly, to test for multicollinearity, "the variable inflation factor" is computed for each variable. The results show that there are no variables included in the tests with mean VIF>1.20. As a consequence, multicollinearity does not to appear to be a problem for the results.

8.2 Normality Test

To check the OLS residuals for consistency with normality assumption before deciding the applied models, the Shapiro–Wilk test is conducted. According to the results of the test, the null hypothesis is rejected and the possible presence of fat-tailed error distribution is identified. If observations have large residuals, then the fat-tailed error distribution is possible to occur. "In the presence of fat-tailed error distributions, although the OLS estimator is BLUE, it is markedly inferior to some nonlinear unbiased estimators. These nonlinear estimators, called robust estimators, are preferred to the OLS estimator whenever there may be reason to believe that the error distribution is fat-tailed." (Kennedy, 2003). For this reason, the Roger's standard errors, which are consistent with errors calculated using Huber-White sandwich estimator, is chosen as an appropriate tool in this study.

8.3 Identifying Outliers

To identify severe and mild outliers, the regression specification error test for omitted variables", named Ramsey's RESET Test, is conducted. Mild outliers are common in samples of any size and severe outliers are the main cause of the asymmetric distribution. The first thing should be to examine these observations very carefully and to investigate if there is any obvious reason such as a misspecification, data mining error etc. The observations are corrected for these possible errors. Then REST and Shapiro–Wilk test are conducted again, and for the first three models, the null hypotheses are not rejected at this time. Moreover, there are no severe outliers for the corrected data. The applied regression models are conducted with these corrected data and Roger's standard errors.

Furthermore, the observations with mild outliers are examined again. As it has been known that there is no mistake about the data, at this time the regression models are conducted again by the new data set without mild outliers. The new results are consistent with the pervious results which were explained in the results *Section 7*. In conclusion, this shows that the normality and outliers do not stand as a problem for our main results.

8.4 Heteroscedasticity

As explained before, "Breusch-Pagan / Cook-Weisberg test" and "the White general test" are performed to test the homoscedasticity of residuals. There is no need to reject the null hypothesis of residual homoscedasticity in final regression models which are explained in the results section.

Furthermore, the regression models are tested by “Modified Wald Statistic for Groupwise Heteroscedasticity”. In addition, Roger’s standard errors are calculated to make sure that the test statistics are robust to heteroscedasticity, which is a general case in error effects models (Rogers, 1993).

8.5 Model Specification Error

The models explained before are tested by “the regression specification error test for omitted variables” and “a model specification link test”. These applied models in the study do not have any problem about model specification errors according to the results of these tests.

8.6 Autocorrelation

To test for autocorrelation, “Wooldridge test for serial correlation in panel-data models” is conducted. The null hypothesis of “no first-order autocorrelation” is rejected with the dependent variable, PB, in models 1, 2, 5 and 6. Thus Roger’s standard error terms are used to avoid potential autocorrelation problem since Rogers standard errors are heteroscedasticity and autocorrelation consistent.

8.7 Different Standard Errors

8.7.1 Discroll- Kraay Standard Errors

Cross sectional dependence is likely to exist in panel data models since there are usually common shocks in the existing data. These shocks may be classified as a result of the

economic and financial integration of countries which implies strong interdependencies between countries.[56]

In model with Driscoll-Kraay standard errors, the error structure is assumed to be heteroscedastic, autocorrelated, and possibly correlated between the groups (Driscoll & Kraay, 1998). The Driscoll-Kraay standard errors are robust to very general forms of spatial and temporal dependence in case of T dimension is large. This is a problematic case in this study as there is a small T/N in our data set. It is a weakness to have a small T/N in the application of Driscoll and Kraay standard errors since the estimator calculations are based on asymptotic theory.[57]

In conclusion, the significantly effective corporate governance variables which have been found from the within effects models with Roger's standard errors are still significant in this type of panel data analysis.[58] Additionally, the CEO age and the structure of board system get

[56] They explain as

"Spatial correlations among such cross-sections may arise for a number of reasons, ranging from observed common shocks such as terms of trade or oil shocks, to unobserved "contagion" or "neighborhood" effects which propagate across countries in complex ways." (Driscoll & Kraay, 1995).

[57] To use fixed effects or random effects model should be decided according to the Driscoll-Kraay standard errors. Hence, to perform a Hausman test which is robust to cross sectional dependence, the estimation of the auxiliary regression (which is explained in methodology *Section 4)* with Driscoll and Kraay standard errors is conducted again (Wooldridge, 2007, Hoechle, 2007). The null hypothesis of no fixed effects is not rejected in models 1, 2, 4 and 5 whereas in models 3 and 6, it is rejected.

[58] Firstly, the positively significant impact of OWN is persistent at significant level of 1%. This first result is consistent with the previous results and also results of univariate statistics. The negative effect of STATEOWN is resistant in this type of pooled regression; this negative relationship is supported by the univariate statistics.

Secondly, in case of cross sectional dependence, the significance of the tenure of CEO and age of CEO increase. The significance level of TENCEO rise to 1% and also its loss on the PB is 2%. This negative effect of tenure of CEO is consistent not only with the results of previous results but also some studies in literature.

Thirdly, ageing CEO makes the price-to-book-value ratio decrease in models with the presence of non-executive directors and independent directors sitting on boards, which is similar to the previous results of this study, but at this time it is a significant effect.

significant with the same sign effects. Indeed, the possible correlation in terms of u_{it} between countries, named spatial correlation, would not arise if the sample were a random sample. The sample of the developed countries in Europe is not a random sample. Hayashi (2000) states that "Statistical inference treating countries as if they were independent data points would overstate statistical significance. This problem, too, is largely ignored in the literature and will be ignored in our discussion". In the same way, while reporting the final comments about the results of this study, spatial correlation will be ignored.[59]

8.7.2 Panel-Corrected Standard Errors

To further investigate more efficient estimators and evaluate the within effects model results, "Panel-corrected standard error" (PCSE) are estimated also.[60] PSCE are robust to heteroscedasticity and contemporaneously correlation across panels. Also in this model, it is possible to assume first-order autocorrelation and that the coefficient of the AR(1) process is specific to each panel (Beck & Katz, 1995).

Furthermore, the effect of tenure non-executive directors sitting on boards is negative at 1% significance level in the pooled regression with Driscoll-Kraay standard errors. This result is consistent with within effects model with Roger's standard errors and the results of univariate statistics.

In addition to these results, the duality of leadership increases the bank performance. The magnitude of increases in price-to-book-value ratio is similar to the LSDV models with year dummies. However, the results about two-tier system get significance and it has still a positive effect on bank performance.

Finally, the impact of board size on the performance variable, PB, is still, negatively significant, like in LSDV models and within fixed effects model; however the significance level increases. In addition, the signs of other independent variables are consistent with the previous results in Section 7 and the univariate statistics.

[59] Note that cross sectional dependence tests were tried to handle in spite of the small *T/N* causing some problems. However, the Pesaran test has a null hypothesis of no cross sectional dependence for that N goes to infinity and T is sufficiently large. Besides the Pesaran test, LM test, developed by Breusch and Pagan is suitable only for cases of *T > N*; otherwise there occurs size distortions (Pesaran, 2004, Sarafidis & Wansbeek, 2010).

[60] Note that PCSE is feasible if time dimension, T, is bigger than the cross section dimension, N, unlike GLS (generalized least squares) or FGLS (feasible generalized least squares), which requires the case that T>>(N+1)/2 (Driscoll & Kraay, 1995).

The main findings continue to exist. Especially the results of panel-corrected standard errors are consistent with results with Discroll –Kraay standard errors and LSDV with year dummies. The positive significant effect of OWN and DUALITY persist. Furthermore, the negative significant impact of the board size, the long tenure of CEO and the control variable, TD/TA, on performance variable also continue to exist.

Additionally, there is an insignificant relationship between the tenure of the non-executive directors and the price-to-book-value ratio. PSCE gives the same results with Discroll-Standard error models in topics of the negative significant effect of STATEOWN. Moreover, it also reports that there are insignificant relationships between IND, AGECEO, STR, and PB, which is consistent with the results of "the least squares dummy variable model (LSDV)" with year dummies.[61]

8.8 Non-monotonic Relationship

To test for a non-monotonic relationship between independent variables and performance variables, a piecewise linear regression of the relationship is estimated between the PB and SIZE, PB and TENCEO, PB and TENNED, PB and AGECEO. Some of these variables were used with nonlinear forms in some studies.[62] A piecewise regression model allows for changes in slope, with the restriction that the line is estimated to be continuous. As a result of

[61] However, there are some problems about the data with the small ratio of T/ N while using PSCE. "Since PCSE method estimates the full $N \times N$ cross-sectional covariance matrix and this estimate will be rather not exact if the ratio T/N is small" (Hoechle, 2007). Despite these deficits, the regression model is conducted with using panel-corrected standard errors again to see the results.

[62] Bektas & Kaymak (2009), Bhagat & Bolton (2008), Gedajlovic & Shapiro (1998), Staikouras, Staikouras, & Agoraki (2007)

the test, there is no evidence for any relationship between these modified variables and a company's price-to-book-value ratios as their levels change.

Additionally, Wald test is conducted to test whether polynomial terms are needed. We find that there is no necessity for any polynomial term.

8.9 Redefining the Dependent Variable

There is data about the return on assets and return on equity per share as explained in the variables section. We run the test of residuals with dependent variables ROA, ROE and PB. The models with dependent variable ROA have problems with model specification errors, also normality and heteroscedasticity according to the tests of residuals. Although the dependent variable ROE has fewer problems than ROA, it cannot satisfy the assumptions as much as dependent variable, PB. In addition, it is decided to run the models with price-to-book-value ratio, PB, to get more consistent and robust results.

8.10 The Least Squares Dummy Variable Model

The least squares dummy variables models are conducted with year dummies and country dummies. The results are explained in the result section, in Table 10 and in Table 11. The problem about the insufficient number of year observations occurs in many cross sectional models. Furthermore it is sometimes tried to be handled by the introduction of year dummies against cross sectional dependence. It should be noted that cross sectional dependence is assumed to be the same for every pair of company units (Hoechle, 2007). In conclusion, the results show that although some degree of significance level has changed, generally the results are same with "within effects model" with cluster of the companies.

8.11 Remodeling Without Independent Variables with Less Information

The models, which are set up after the tests for residuals, are again conducted without the variable AGECEO. As explained in descriptive analysis, the observation number of this independent variable is less than the number of other variables, which may cause a loss in the explaining power of the models. Furthermore, there is no significant relationship about AGECEO within models.

Additionally, the models without AGECEO is tested for the normality, heteroscedasticity, autocorrelation, multicollinearity and model specification errors and the results are same as the results of the tests for the models with the dependent variable AGECEO. The observation numbers of within effects model with Roger's standard errors increase, as expected. However the R^2 of the new models are different from the previous models.

Therefore, the insignificant effect of the control variable TD/TA in all models and the LOGTA in first models turn to be significantly positive effect on the performance variable, PB. These results are consistent with other results found by LSDV models. Furthermore, in model 4, STATEOWN loses its significance just as in LSDV models. The other results are largely similar to the previous results.

8.12 Changing Control Variables

One of the control variables, logarithm of total assets, is changed with net loans to total assets to control for the liquidity effect. After tests of residuals, the regression models are conducted. In addition, the results of within fixed effects model with Roger's standard errors and LSDV model results do not change, and again the same results are obtained.

9. Conclusion

In the last 15 years, corporate governance practices have received heightened attention. Especially for the banking sector, special corporate governance codes or practices have been published. Shareholders, creditors, regulators, and academics have focused on the decision-making processes in banks. Changes are proposed in governance structures to enhance accountability and efficiency in order to create a reliable and stable financial environment. Besides the corporate governance codes and practices, the popularity of corporate governance topics has lead to many academic studies which examine the relationship between firm performance and the corporate governance structures.

This study analyzes the performances of banks in 18 European countries within the years of 2006 to 2008 with respect to their corporate governance practices. According to the results, the year 2008 affects the performance of the European banks negatively for all countries. This effect can be considered as a consequence of the global crisis which originated in the USA. The country effects of Finland, Germany, Greece, Portugal, Spain, Switzerland and Turkey are always significantly positive in all specifications in case of Austria being the omitted country. In contrast, the country dummy of France has a significant and negative effect on the bank performance in all cases, again in case of Austria being the omitted country. As a result of the detailed analyses for country effects, these countries with positive and significant effects are the countries which have the optimal numbers and percentages of the variables used in this study such as Turkey, Greece, Portugal, and Finland.

Obviously, the effects of year or country dummies are the same for all models; so it is important to consider that the effects of corporate governance codes are contingent upon the several observable and unobservable factors.

Firstly, in most cases, the presence of the largest shareholder holding five percent or more shares of the banks decreases the agency cost between the managers and the owners. The largest shareholders standing as the substitute of corporate control is an efficient and objective type of control system, which is essential for the success of the board without inhibiting its operations. These blockholders have better chance of getting information more accurately. Therefore, they control the board and the decisions more accurately and objectively. It is further claimed that their control on the boards' performance is more effective and objective than other control mechanisms. Additionally, they are more likely to work for the firm success as their shares are increasing in banks.

Moreover they can use their voting power to control the behavior of management. However, there are some concerns about the investor protection of minority shareholders; the control mechanism between the relational shareholders and the board is more efficient and proactive than the control mechanism exhibited between the minority shareholders and the board. The reason is that the largest shareholders do not have any problem about collective action whereas small shareholders remain passive in the decision-making process due to the collective action problems. The countries which have the largest ownership concentration are Turkey, Austria and Portugal across the sample countries. This result is not consistent with the implications of the stewardship theory which suggest that the control should be centralized in the hands of managers. In contrast, the separation system of ownership and control designed for protection of shareholders is consistent with the statements of agency theory.

Secondly, the tenure of the chief executive director is negatively and significantly related to the bank performance in most cases. As already shown in the literature, directors with long tenure do not want to be monitored and rely on their own knowledge, expertise and confidence. Moreover, the chief executive officer with a long tenure creates pressure on board members with a shorter tenure since he or she has significant power in the nomination, performance assessment and promotion process. Also, his or her decisions are excessively critical, which may damage the objectivity of boards.

Additionally, the knowledge and the expertise of a seasoned chief executive director may result in cumbersome structures in banks, which are not easily adoptable to the financial changes, technological improvements and environmental requirements. In this case, the arrival of a chief executive officer with a shorter tenure results in beneficial changes for the firm success and better performance for banks. The chief executive directors with the lowest tenure on average are working in Finland across the sample countries.

Thirdly, it is found that the board size affects bank performance in a significantly negative way when country and year differences are taken into consideration. There are several studies which find the same negative effect of the size variable on the bank performance due to the efficiency of small boards. Small boards enable the control mechanism in firms to work efficiently. In large boards, the efficiency of functions, monitoring and control mechanisms, the group cohesiveness level and the quality of processing information may decrease due to the possible bureaucratic, communication and coordination problems.

Furthermore, in small boards the effort per member for the profit maximizing and the protection of rights of shareholder increases in addition to the increased participation in the

decision-making process. It is also stated that directors have greater focus in small boards. These boards with greater focus are more likely to take action and implement strategy in an efficient way and in a short time. The country which has the smallest boards is Turkey as mentioned in the results of the descriptive statistics. This result does not support the implications of the resource dependence theory.

Furthermore, as explained in the part of corporate governance codes and theories, duality is one of the most important issues. Our results show that the leadership of only one director affects banks' performances positively unless the county dummies are included. It is known that the duality structure leads to better internal control systems and less probability of financial distress in coordination with the statements of the stewardship theory.

Additionally, one leader in both roles is less likely to cause any internal and external ambiguity on the relations between boards. In Finland, Portugal and Greece, the chairman of the board and the chief executive director positions are held by the same person at half of the banks. This result is not consistent with the implications of many corporate governance codes and the agency theory. However, this positive result about the relationship between the duality structure and the bank performance supports the stewardship theory.

Moreover, the effects of the other variables[63] are not significant in this study. These insignificant effects on the banks' performances exist in spite of the pooled regression, models with country and year dummies and also different specifications with categories of some variables. These results do not support the recommendations of codes and practices.

In summary, this study examines the relationship between the corporate governance factors and the banks' performance on a sample of 195 European Banks over the period 2006 to 2008. More specifically, the corporate governance factors examined include the management structure and ownership structure of banks. Our results reveal that the ownership structure represented by the ownership concentration is positively related to bank performance. Corporations must employ highly skilled professional managers, but at the same time the relational shareholders increase the effectiveness of these managers by shaping strategic decisions in positive ways.

Additionally, the models with the management structure and bank performance capture some significant relations. For example, the seasoned directors with the large board size damage the efficiency of boards at a significant level whereas only one leader solves the power problems rooted from the two-headed leadership structure. Besides the presence of independent directors on boards, an older CEO decreases bank performance. In contrast, the non-executive directors and the two-tier board system affect the bank performance positively, but insignificantly.

Although the findings of this study support many results of previous studies[64], the results do not support some of them because of different reasons. First of all, many previous studies

[63] The presence of independent directors (IND) and the non-executive directors (NED), the tenure of non-executive director (TENNED), the chief executive director's age (AGECEO), the percentage of state ownership (STATEOWN), the board type (STR)

[64] McAvoy et al. (1983), Mikkelson and Ruback (1985), Anderson and Anthony (1986), Donaldson (1990), Donaldson and Davis (1991), Hermalin and Weisbach (1991), Kameda et al. (1992), Lipton and Lorsch (1993), Jensen (1993), Halebian and Finkelstein (1993), Finkelstein and D'Aveni (1994), Mehran (1995), Johnson et al. (1996), Finkelstein and Hambrick (1996), Mikkelson and Partch (1997), Dalton et al. (1999), Bhagat and Black (1999), Mishra and Nilesen (1999),Hermalin and Weisbach (2003), Krivogorsky (2006), Staikouras et al. (2007), Masulis and Mobbs (2009), Ladipo and Nestor (2009), Bektas and Kaymak (2009)

have analysed only one cross section.[65] This makes the comprehension of corporate governance applications between countries impossible. Additionally, studies about only one cross section are not suitable for a cross-sectional econometric analysis. Secondly many previous studies have used different hypotheses tests and empirical methodologies in order to analyse the relationships among the variables; they have not used any cross-sectional analysis.[66] Thus, the results of our study can be different from some previous studies. Although there are a lot of empirical studies related to more than one sector[67], a few studies have focused on only one sector.[68] Therefore, these few studies may report more focused and consistent results about corporate governance factors because of controlling for the sector effects by analysing only one sector. Finally, many previous studies have not included the financial institutions in their samples.[69] There are only one or two studies which have examined the banks' performance among some cross sections over a time period in the literature.[70]

Our study has some similar findings with the study of Staikouras, P. K., Staikouras, C. K., & Agoraki (2007) which is about the relationship between the performance of 58 large European banks and some of the corporate governance factors over the period 2002–2004. However the effect of board composition is still insignificant and the effect of board size is still negative in our study related to period 2006-2008, the size of some effects is different. This may be

[65] Bektas and Kaymak (2009), Kiel and Nicholson (2003), Abdullah (2004), Kula (2005), Edwards, J. et.al. (2000). Ezzamel and Watson (1993), Jonga, DeJongb, Mertensa, & E. Wasleyc (2005)

[66] Kiel and Nicholson (2003), Abdullah (2004), and Kula (2005) employ a correlation matrix.

[67] Gedajlovic & Shapiro (1998), Kiel and Nicholson (2003), Krivogorsky (2006), Bhagat and Black (1999),

[68] Staikouras, P. K., Staikouras, C. K., & Agoraki (2007)

[69] Krivogorsky (2006), Kiel and Nicholson (2003), Gedajlovic & Shapiro (1998)

[70] Staikouras, P. K., Staikouras, C. K., & Agoraki (2007)

because of the period difference, large sample size of our study and the sample countries. Also, it is possible to be effected from the financial crisis over our period 2006-2008. Additionally, our study include additional variables such as independent directors, duality, tenures of directors, CEO age and also ownership structure.

As stated in contingency theory, there is no best way to perform well for a bank with respect to the corporate governance factors. The results of this study do not support the recommendations of only one code or the results of only one theory, again as in the contingency theory. This conclusion was also reported in the study of Kiel&Nicholson (2003) about Australia, in statements of Nestor (2008) about the European banks, in the studies of Masulis&Mobbs (2009) examining the firms worldwide, Baysinger& Hoskisson (1990) about the USA and Kang&Sorensen (1999). As stated by William Richard Scott, “The best way to organize depends on the nature of the environment to which the organization must relate" (Scott, 1981). It is suggested here to tailor the mentioned factors to internal and external situations and requirements according to the previous studies, recommendations and theories, in spite of the recent strong regulatory pressures about uniform corporate governance by national and international institutions.

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Table 1 The List of Corporate Governance Literature

EMPIRICAL FINDINGS	
Independent Variables	Performance and Profitability Variables
1. Independent Directors	
(+) Good Effect	Baysinger and Butler (1985), Denis and Sarin (1999), Krivogorsky (2006), Staikouras et al. (2007), Masulis and Mobbs (2009)
(-) Bad Effect	Yermack (1996), Becht et al. (2003)
(0) No effect	McAvoy et al. (1983), Hermalin and Weisbach (1991), Mehran (1995), Dalton et al. (1999), Bhagat and Black (1999), Ladipo and Nestor (2009)
2. Non-Executive Directors	
(+) Good Effect	Baysinger and Butler (1985), Rosenstein and Wyatt (1990), Pearce and Zahra (1992), Ezzamel and Watson (1993), Staikouras (2007), Masulis and Mobbs (2009) Bektas and Kaymak (2009)
(-) Bad Effect	Fama and Jensen (1983), Baysinger, Kosnik and Turk (1991), Hoskisson, Johnson and Moesel (1994), Boyd (1994), Kochhar & David (1996), Klein (1998), Weir and Liang (2000), Kiel and Nicholson (2003), Raheja (2005), Adams and Ferreira (2007), Harris and Raviv (2008), Nestor (2008), Bektas and Kaymak (2009)
(0) No effect	Hermalin and Weisbach (1991), Johnson et al. (1996), Bhagat and Black (1999)
3. Separation of chairman and chief executive officer	
(+) Good Effect	Lorsch and MacIver (1989), Kesner and Johnson (1990), Rechner and Dalton (1991), Dobrzynski (1991), Levy (1993), Boyd, (1995), Baliga, Moyer, and Rao (1996), Brickley and Coles (1997), Kiel and Nicholson (2003), Kula (2005), Ladipo and Nestor (2009)
(-) Bad Effect	Anderson and Anthony (1986), Donaldson (1990), Donaldson and Davis (1991), Lipton and Lorsch (1993), Finkelstein and D'Aveni (1994)
(0) No effect	Rechner and Dalton (1989), Daily and Dalton (1993), Johnson et al. (1996), Weir and Liang (2000), Abdullah (2004), Bektas and Kaymak (2009)
4. Large Board Size	
(+) Good Effect	Halebian and Finkelstein (1993), Alexander et al. (1993), Goodstein et al. (1994), Bektas and Kaymak (2009)
(-) Bad Effect	Kameda et al. (1992), Jensen (1993), Finkelstein and Hambrick (1996), Hermalin and Weisbach (2003), Staikouras et al. (2007)
(0) No effect	Bektas and Kaymak (2009)
5. Tenure Of Chief Executive Officer	
(+) Good Effect	Buchanan (1974), Vance (1983), Warner et al. (1988), Barro and Barro

	(1990)
(-) Bad Effect	Halebian and Finkelstein (1993), Mishra and Nilesen (1999), Masulis and Mobbs (2009)

6. Tenure Of Non-Executive Directors

(+) Good Effect	Buchanan (1974), Vance (1983)
(-) Bad Effect	Mishra and Nilesen (1999), Vafeas (2003), Nestor Advisors (2008), Bektas and Kaymak (2009)

7. Two-Tier Board Structure

(-) Bad Effect	Staikouras et al. (2007)
(0) No effect	Bektas and Kaymak (2009)

8. Ownership Concentration

(+) Good Effect	McEachern (1975), Mikkelson and Ruback (1985), Mikkelson and Partch (1997), Krivogorsky (2006)
(-) Bad Effect	Morck et al. (1989), Hermalin and Wiesbach (1991), Edwards et al.(2000)
(0) No effect	Himmelberg et al. (1999), Kang et al. (1999) Bektas and Kaymak (2009)

Table 2 The List of the Corporate Governance Codes and Practices of the Sample Countries

1991	
Institute of Chartered Secretaries & Administrators Code	United Kingdom
Institutional Shareholders Committee Statement of Best Practice	United Kingdom
1992	
Cadbury Report	United Kingdom
1995	
Viénot I Report	Finland
Greenbury Report	United Kingdom
1994	
PIRC Shareholder Voting Guidelines (updated in 2001)	United Kingdom
1997	
Chamber of Commerce/Confederation of Finnish Industry & Employers Code	Finland
Peters Report	Netherlands
VEB Recommendations	Netherlands
Hermes Statement (updated in 2001)	United Kingdom
1998	
Recommendations of the Federation of Belgian Companies	Belgium
Recommendations of the Belgian Banking & Finance Commission	Belgium
Cardon Report	Belgium
Olivencia Report	Spain
Hampel Report	United Kingdom
Combined Code	United Kingdom
1999	
Viénot II Report	Finland
Mertzanis Report	Greece
IAIM Guidelines	Ireland
Preda Report	Italy
Securities Market Commission Recommendations	Portugal
Swedish Shareholders Association Policy	Sweden
Turnbull Report	United Kingdom
OECD Principles of Corporate Governance	OECD
ICGN Statement	International Organization
2000	
The Director's Charter	Belgium
Danish Shareholders Association Guidelines	Denmark
Ministry of Trade & Industry Guidelines	Finland

Berlin Initiative Code	Germany
German Panel Rules	Germany
NAPF Corporate Governance Code	United Kingdom
Euroshareholders Guidelines	Pan-European Organization
EASD Principles and Recommendations	Pan-European Organization
Government Governance; Corporate governance in the public sector, why and how?	The Netherlands
2001	
Nørby Report & Recommendations	Denmark
Hellebuyck Commission Recommendations	France
Cromme Commission Code	Germany
Federation of Greek Industries Principles	Greece
SCGOP Handbook & Guidelines	Netherlands
PIRC Shareholder Voting Guidelines	United Kingdom
Code of Good Practice	United Kingdom
AUTIF Code	United Kingdom
SCGOP Handbook of Corporate Governance	The Netherlands
2002	
Austrian Code of Corporate Governance	Austria
Promoting Better Corporate Governance In Listed Companies	France
The German Corporate Governance Code	Germany
Corporate Governance Code	Italy
Euroshareholders Corporate Governance Guidelines	Pan-European Organization
Swiss Code of Best Practice for Corporate Governance	Switzerland
The Responsibilities of Institutional Shareholders and Agents - Statement of Principles	United Kingdom
The Hermes Principles	United Kingdom
2003	
Report on Corporate Governance in Denmark	Denmark
The Corporate Governance of Listed Corporations	France
Amendment to the German Corporate Governance Code	Germany
Recommendations on Corporate Governance	Portugal
CMVM Regulation Nº 11/2003: Corporate Governance	Portugal
The Aldama report	Spain
The NBK Recommendations	Sweden
The Dutch corporate governance code	The Netherlands
Corporate Governance Principles	Turkey
The Combined Code on Corporate Governance	United Kingdom
The Smith Report	United Kingdom
The Higgs Report	United Kingdom
2004	

Recommandations sur le gouvernement d'entreprise	France
Handbook on Corporate Governance Reports	Italy
The Norwegian Code of Practice for Corporate Governance	Norway
OECD Principles of Corporate Governance	OECD
IC-A: Principles of Good Corporate Governance	Spain
Decálogo del Directivo	Spain
Swedish Code of Corporate Governance *Report of the Code Group*	Sweden
SCGOP Handbook of Corporate Governance 2004	The Netherlands
Corporate Governance: A Practical Guide	United Kingdom
2005	
Austrian Code of Corporate Governance	Austria
Revised Recommendations for Corporate Governance	Denmark
Corporate Governance Code for Asset Management Companies	Germany
Amendment to the German Corporate Governance Code - The Cromme Code	Germany
ICGN Statement on Global Corporate Governance Principles	International
The Norwegian Code of Practice for Corporate Governance	Norway
OECD Guidelines on Corporate Governance of State-Owned Enterprises	OECD
EVCA Corporate Governance Guidelines	Pan-European Organisation
Pension Scheme Governance - fit for the 21st century: A Discussion Paper from the NAPF	United Kingdom
Corporate governance in central government departments: Code of good practice	United Kingdom
IC-A: Principles of Good Corporate Governance for Unlisted Companies	Spain
Internal Control: Revised Guidance for Directors on the Combined Code	United Kingdom
Good Governance: The Code of Governance for the Voluntary and Community Sector	United Kingdom
2006	
Austrian Code of Corporate Governance	Austria
Corporate Governance Code	Italy
The Norwegian Code of Practice for Corporate Governance	Norway
White Book on Corporate Governance in Portugal	Portugal
Unified Good Governance Code	Spain
C-A: Code of Ethics for Companies	Spain
Governance in Family Firms	Switzerland
The Combined Code on Corporate Governance	United Kingdom
Good practice suggestions from the Higgs Report	United Kingdom
2007	
Austrian Code of Corporate Governance	Austria
German Corporate Governance Code	Germany
The Norwegian Code of Practice for Corporate Governance	Norway
CMVM Corporate Governance Code	Portugal
Swedish Code of Corporate Governance	Sweden

Guidelines for Disclosure and Transparency in Private Equity	United Kingdom
2008	
Active ownership and transparency in private equity funds: Guidelines for responsible ownership and good corporate governance	Denmark
Recommendations for corporate governance	Denmark
Corporate Governance Code of Listed Corporations	France
AFG - Recommandations sur le gouvernement d'entreprise	France
German Corporate Governance Code	Germany
Sovereign Wealth Funds: Generally Accepted Principles and Practices (GAPP) - Santiago Principles	International
Irish Development NGOs Code of Corporate Governance	Ireland
New Regulation on Banks' Organisation and Corporate Governance	Italy
Swedish Code of Corporate Governance	Sweden
Dutch corporate governance code	The Netherlands
The Combined Code on Corporate Governance	United Kingdom
2009	
Austrian Code of Corporate Governance	Austria
ICGN Global Corporate Governance Principles	International
The Norwegian Code of Practice for Corporate Governance	Norway
The Swedish Code of Corporate Governance	Sweden
Swiss Code of Best Practice for Corporate Governance	Switzerland
Banking Code	The Netherlands
2009 Review of the Combined Code: Final Report	United Kingdom
The Walker Review	United Kingdom
2010	
Recommendations on Corporate Governance	France
Code of Corporate Governance for Independent Directors of Investment Funds	Ireland
CMVM Corporate Governance Code 2010	Portugal
A Stewardship Code for Institutional Investors	United Kingdom
The Audit Firm Governance Code	United Kingdom

Table 3 The Summary of Corporate Governance Codes and Theories

	Variables Of Interest*					
	IND	NED	SIZE	STR	DUALITY	OWN
Theories						
Agency Theory	+	+	+	N/A**	-	-
Stewardship theory	-	-		N/A	+	+
Resource dependence theory	N/A	+	+	N/A	N/A	N/A
Recommendations of Codes						
BASEL - Enhancing Corporate Governance For Banking Organizations	+	+	N/A[3]	N/A	-	N/A[4]
OECD Principles of Corporate Governance	+	+	N/A[3]	+	-	N/A[5]
German Corporate Governance Code [1]	+	+	N/A[3]	+	-	N/A
The Combined Code on Corporate Governance[2]	+	+	N/A[3]	-	-	N/A

*The definitions of the variables are shown in Table 4. **N/A. indicates that the information is not available.

[1]The recommendations of this code are generally applied in "two-tier system" countries like Germany, Austria, Denmark and Netherlands. [2] The recommendations of this code are generally applied in "one-tier system" countries like United Kingdom, Ireland, Spain, Sweden, Luxemburg and Italy. [3]There is a legal minimum size. [4]There are recommendations related to the state-ownership banks. [5] There are recommendations in the report entitled "OECD Guidelines on Corporate Governance of State-Owned Enterprises"

Table 4 The List of all Variables

Independent Variables - Management structure	
IND	Total numbers of independent board members / Board Size
NED	Total numbers of non-executive board members / Board Size
TENCEO	Board tenure of CEO
TENNED	Average board tenure of non-executive board members
SIZE	Number of directors on the board at the end of the year
STR	1 if there is a two-tiered governance system (includes board of management and supervisory board at the same time) 0 if there is a unitary system
AGECEO	Age of CEO
DUALITY	1 if Chief Executive Officer of the bank is also chair of the board of directors 0 otherwise
Independent Variables - Ownership Structure	
OWN	The ownership concentration by the percentage of shares outstanding held by the largest shareholder, in case of equal to or more than 5%
STATEOWN	The ownership concentration by the shares outstanding held by the state, in case of equal to or more than 5%
Control Variables - Firm Characteristics	
LOGTA	Logarithm of the bank's total assets
TD/TA (Leverage)	Total Debt / Total Assets = (Short Term Debt & Current Portion of Long Term Debt + Long Term Debt) / (Total Assets - Customer Liabilities on Acceptances) * 100 Customer Liabilities on Acceptances only subtracted when included in Total Assets
NL/TA (Liquidity)	The ratio of net loans to total assets
GROWTH	Loans - 1 Year Annual Growth = (Current Year's Loans-Total / Last Year's Loans-Total - 1) * 100
Dependent Variables - Firm Performance	
ROA	Return on Assets = Net Income before [Preferred Dividends + ((Interest Expense on Debt-Interest Capitalized) * (1-Tax Rate))) / (Last Year's Total Assets - Last Year's Customer Liabilities on Acceptances) * 100]. Customer Liabilities on Acceptances only subtracted when included in Total Assets
PB	Price/Book Value Ratio - GAAP - AVG HIGH - LOW = [((Market Price - High + Market Price - Low) / 2) / Book Value Per ADR – GAAP]
ROE	Return On Equity Per Share = Earnings Per Share / Last Year's Book Value Per Share * 100

Table 5 Descriptive Statistics of the Sample Banks for Years 2006 to 2008

In our study there is 195 banks and 3 years; 585 observations. The descriptive analysis reports the number of observations, mean, Standard deviation, maximum and minimum numbers.

VARIABLE	#OBS.	MEAN	ST. DEV.	MIN	MAX
ROA	496	1.55	3.53	-59.64	21.50
ROE	573	10.63	13.97	-144.38	46.52
PB	564	1.68	1.00	0.01	7.84
OWN	585	0.26	0.27	0.00	1.00
STATEOWN	585	0.06	0.18	0.00	0.99
IND	585	0.32	0.30	0.00	1.00
NED	585	0.52	0.35	0.00	1.00
TENCEO	538	5.19	4.91	0.00	28.00
AGECEO	412	53.09	7.07	34.00	78.00
TENNED	553	2.97	2.79	0.00	14.00
SIZE	585	15.26	9.31	4.00	59.00
STR	582	0.58	0.49	0.00	1.00
DUALITY	582	0.12	0.32	0.00	1.00
TDTA	509	34.53	17.53	0.00	127.70
GROWTH	492	18.32	36.36	-46.94	658.58
NLTA	549	0.73	0.18	0.00	0.95
TA (millions)	576	129000	354000	3	2580000

Dependent Variables
ROA= Return on Assets
PB = Price/Book Value Ratio
ROE = Return on Equity per Share
Independent Variables
OWN = the ownership concentration
STATEOWN = the ownership concentration by the shares outstanding held by the state
IND = Total numbers of independent board members / Board Size
NED =Total numbers of non-executive board members / Board Size
TENCEO = Board tenure of CEO
AGECEO = Age of CEO
TENNED = Average board tenure of non-executive board members
SIZE = Number of directors on the board at the end of the year
STR = dummy variable for the governance system
DUALITY = dummy variable for the leadership of boards
Control Variables
TDTA = (Leverage) Total Debt / Total Assets
GROWTH = Loans - 1 Year Annual Growth
NLTA = (Liquidity) The ratio of net loans to total assets
LOGTA = Logarithm of the bank's total assets
TA=the bank's total assets

Table 6 Descriptive Statistics of the Sample Banks of Each Countries for Years 2006 to 2008

In our study there are 18 countries. This table represents the descriptive statistics of the sample banks. The first numbers in the columns are the means of variables; the second ones are the standard deviations of them.

COUNTRY	#Obsv.	OWN	STATE OWN	IND	NED	TENCEO	AGECEO	TENNED	SIZE	STR	DUALITY	TDTA	GROWTH	NLTA	TA (millions)
AUSTRIA	21	0.45	0.00	0.22	0.77	5.00	53.00	4.24	20.67	1.00	0.00	40.34	11.75	0.74	51600
		0.16	0.00	0.30	0.19	3.07	6.17	1.58	6.48	0.00	0.00	13.35	14.84	0.08	66100
BELGIUM	15	0.23	0.11	0.38	0.70	4.33	60.46	3.50	16.73	0.60	0.00	42.55	26.34	0.42	330000
		0.23	0.20	0.34	0.20	3.06	2.82	1.92	5.28	0.51	0.00	29.60	27.88	0.26	297000
DENMARK	96	0.14	0.00	0.41	0.75	6.53	51.43	5.30	9.97	1.00	0.00	28.12	17.67	0.75	15800
		0.16	0.00	0.22	0.18	6.73	6.84	2.02	4.57	0.00	0.00	13.60	14.80	0.09	75600
FINLAND	6	0.17	0.00	0.23	0.30	2.00	49.67	6.67	12.67	0.50	0.50	48.73	12.71	0.72	15000
		0.10	0.00	0.04	0.11	0.89	3.83	0.58	2.58	0.55	0.55	19.19	10.64	0.17	14000
FRANCE	69	0.38	0.00	0.07	0.16	3.00	56.18	0.95	18.10	0.13	0.09	43.45	13.40	0.77	218000
		0.26	0.01	0.16	0.36	2.76	7.39	2.40	7.31	0.34	0.28	20.73	13.61	0.20	504000
GERMANY	33	0.29	0.02	0.20	0.67	3.13	53.65	2.67	17.24	1.00	0.00	39.82	13.42	0.60	254000
		0.33	0.07	0.21	0.13	2.85	9.07	1.36	10.33	0.00	0.00	29.53	17.73	0.23	540000
GREECE	42	0.32	0.09	0.21	0.63	3.03	56.52	2.08	12.24	0.07	0.33	26.10	44.61	0.74	27700
		0.31	0.22	0.14	0.22	2.53	4.93	1.27	3.43	0.26	0.48	14.29	109.82	0.16	27800
IRELAND	6	0.06	0.00	0.07	0.71	10.00	52.00	2.50	15.50	0.00	0.00	44.71	16.63	0.74	178000
		0.01	0.00	0.00	0.06	1.41	3.41	0.84	1.22	0.00	0.00	4.15	11.15	0.03	15100
ITALY	60	0.30	0.00	0.40	0.64	2.98	53.58	1.97	16.70	0.40	0.25	37.50	22.46	0.71	101000
		0.31	0.01	0.29	0.34	1.67	9.81	1.29	6.39	0.49	0.44	13.38	22.37	0.11	223000
LIECHTENSTEIN	6	0.24	0.30	0.33	0.69	13.50	51.00	6.83	9.83	1.00	0.00	17.39	18.87	0.82	10300
		0.27	0.33	0.36	0.16	6.09	1.41	1.72	1.33	0.00	0.00	12.37	15.02	0.05	4140

NETHERLANDS	3	0.39	0.00	0.00	0.58	4.00	56.00	3.00	12.00	1.00	0.00	20.29	5.78	0.88	20400
		0.00	0.00	0.00	0.00	1.00	1.00	1.00	0.00	0.00	0.00	6.88	9.68	0.01	1520
NORWAY	33	0.11	0.04	0.40	0.80	9.83	54.93	2.89	40.12	1.00	0.00	43.66	9.95	0.83	21400
		0.07	0.10	0.09	0.05	6.77	5.76	1.55	13.95	0.00	0.00	7.03	16.42	0.08	51100
PORTUGAL	15	0.40	0.00	0.13	0.33	3.40	59.67	3.40	19.20	0.60	0.47	35.05	12.32	0.77	41500
		0.20	0.00	0.13	0.25	2.29	11.66	2.59	8.50	0.51	0.52	13.90	6.18	0.07	33500
SPAIN	30	0.23	0.00	0.42	0.54	8.41	56.80	5.45	14.40	0.57	0.33	43.68	15.51	0.79	154000
		0.26	0.00	0.20	0.37	7.04	7.61	4.55	3.58	0.50	0.48	9.20	12.72	0.10	235000
SWEDEN	12	0.14	0.05	0.82	0.00	4.00	46.75	0.00	11.00	0.00	0.00	45.27	8.84	0.68	249000
		0.05	0.09	0.10	0.00	2.37	3.36	0.00	1.04	0.00	0.00	11.76	11.08	0.12	98200
SWITZERLAND	69	0.19	0.26	0.49	0.31	6.25	50.85	2.59	11.48	0.72	0.13	25.70	15.87	0.75	131000
		0.29	0.28	0.41	0.34	5.09	6.18	3.35	3.14	0.45	0.34	8.58	25.53	0.27	375000
TURKEY	51	0.48	0.13	0.11	0.25	5.51	50.51	1.93	8.96	0.47	0.08	27.45	22.42	0.68	15200
		0.33	0.30	0.24	0.34	3.42	4.49	2.82	1.64	0.50	0.27	18.65	22.49	0.12	16100
UNITED KINGDOM	18	0.09	0.10	0.63	0.67	4.39	51.72	3.89	14.56	0.00	0.00	25.65	7.34	0.52	978000
		0.08	0.22	0.17	0.10	2.50	3.98	1.49	3.97	0.00	0.00	6.70	28.42	0.14	861000
Total	585	0.26	0.06	0.32	0.52	5.19	53.09	2.97	15.26	0.58	0.12	34.53	18.32	0.73	129000
		0.27	0.18	0.30	0.35	4.91	7.07	2.79	9.31	0.49	0.32	17.53	36.36	0.18	354000

Independent Variables

OWN = The ownership concentration

STATEOWN = The ownership concentration by the shares outstanding held by the state

IND = Total numbers of independent board members / Board Size

NED =Total numbers of non-executive board members / Board Size

TENCEO = Board tenure of CEO

AGECEO = Age of CEO

TENNED = Average board tenure of non-executive board members

SIZE = Number of directors on the board at the end of the year

STR = Dummy variable for the governance system

DUALITY = Dummy variable for the leadership of boards

Control Variables

TDTA = (Leverage) Total Debt / Total Assets

GROWTH = Loans - 1 Year Annual Growth

NLTA = (Liquidity) The ratio of net loans to total assets

TA=the bank's total assets

Dependent Variables

ROA= Return on Assets

PB = Price/Book Value Ratio

ROE = Return on Equity per Share

Table 7 Descriptive Statistics of the Subsamples for Years 2006 to 2008

In panel A, the sample is separated into two groups as the state-owned banks and non-state-owned-banks. In the panel B, the sample is separated into two groups as owned-banks and non-owned-banks In panel C, the banks are separated according to the duality structure. In panel D, the descriptive statistics are shown within the two-tier system and one-tier system. The means, standard deviations and number of observations are reported. The last rows of each panel give the results of "Two-Sample Wilcoxon Rank-Sum (Mann-Whitney) Test". This non-parametric test is used to investigate whether there is a statistically significant difference between the underlying distributions of two populations.

PANEL			ROA	ROE	PB	OWN	STATEOWN	IND	NED	TENCEO	AGECEO	TENNED	SIZE	STR	DUALITY	TDTA	GROWTH
PANEL A	Non-State-Owned Banks	mean	1.49	10.33	1.69	0.30	0.00	0.30	0.53	4.96	53.13	3.08	15.27	0.59	0.11	35.15	18.30
		sd	3.72	14.51	1.01	0.28	0.00	0.28	0.35	4.84	7.37	2.82	9.13	0.49	0.32	17.55	38.37
		N	413	488	479	499	499	499	499	455	341	473	499	496	496	426	407
	State-Owned Banks	mean	1.55	12.39	1.63	0.08	0.43	0.42	0.44	6.41	52.92	2.31	15.19	0.55	0.14	31.34	18.44
		sd	2.32	10.28	0.94	0.13	0.26	0.36	0.37	5.12	5.41	2.52	10.31	0.50	0.35	17.21	24.67
		N	83	85	85	86	86	86	86	83	71	80	86	86	86	83	85
	Total	N	496	573	564	585	585	585	585	538	412	553	585	582	582	509	492
	Dif.	z	-0.575	-1.552	0.590	8.22	-23.58	-3.052	2.436	-3.027	0.012	2.446	0.937	0.767	0.709	2.721	0.558
		Pr.>|z|	0.56	0.12	0.55	0.00	0.00	0.00	0.015	0.00	1	0.01	0.35	0.44	0.48	0.00	0.58
PANEL B	Non-Owned-Banks	mean	1.01	10.62	1.71	0.00	0.25	0.37	0.54	5.22	52.58	2.78	12.64	0.61	0.17	29.28	19.25
		sd	7.37	11.89	0.82	0.00	0.32	0.33	0.35	4.61	8.10	2.42	7.56	0.49	0.37	16.84	21.62
		N	92	107	105	108	108	108	108	98	78	99	108	108	108	92	89
	Owned - Banks	mean	1.68	10.64	1.68	0.32	0.02	0.31	0.51	5.18	53.22	3.01	15.85	0.58	0.11	35.68	18.12
		sd	1.71	14.42	1.04	0.27	0.09	0.29	0.36	4.97	6.81	2.86	9.56	0.49	0.31	17.49	38.88
		N	404	466	459	477	477	477	477	440	334	454	477	474	474	417	403

	Total	N	496	573	564	585	585	585	585	538	412	553	585	582	582	509	492
	Dif.	z	-0.46	-0.22	0.89	-16.2	9.72	1.60	0.77	0.65	-1.01	-0.32	-4.20	0.63	1.79	-3.84	0.46
		Pr.>|z|	0.65	0.83	0.37	0.00	0.00	0.11	0.44	0.51	0.31	0.75	0.00	0.53	0.07	0.00	0.65
PANEL C	DUALITY = 0	mean	1.48	10.32	1.66	0.27	0.06	0.31	0.51	5.36	52.85	3.01	15.48	0.62	0.00	35.07	18.84
		sd	3.62	14.47	1.03	0.27	0.17	0.30	0.36	5.10	6.92	2.85	9.80	0.49	0.00	17.79	38.68
		N	429	505	494	514	514	514	514	472	364	482	514	514	514	442	426
	DUALITY = 1	mean	2.02	12.88	1.88	0.23	0.11	0.34	0.54	4.03	55.51	2.58	13.69	0.31	1.00	31.36	15.21
		sd	2.85	9.42	0.78	0.30	0.27	0.31	0.34	2.93	7.84	2.34	4.05	0.47	0.00	15.53	14.03
		N	64	65	67	68	68	68	68	63	45	68	68	68	68	64	63
	Total	N	493	570	561	582	582	582	582	535	409	550	582	582	582	506	489
	Dif.	z	-0.58	-1.55	0.59	2.44	-1.07	-0.56	-0.44	1.12	-0.05	0.83	-0.69	4.89	24.10	1.21	0.05
		Pr.>|z|	0.57	0.12	0.55	0.01	0.28	0.58	0.66	0.26	0.96	0.40	0.49	0.00	0.00	0.22	0.96
Panel D	STR = 0	mean	1.68	11.04	1.72	0.31	0.06	0.27	0.34	4.19	53.13	1.85	13.69	0.00	0.19	34.89	19.72
		sd	2.05	13.38	1.14	0.30	0.17	0.30	0.36	4.11	6.47	2.45	5.75	0.00	0.40	18.05	48.95
		N	230	234	229	242	242	242	242	222	155	236	242	242	242	233	226
	STR = 1	mean	1.45	10.31	1.66	0.23	0.07	0.35	0.64	5.93	53.16	3.79	16.39	1.00	0.06	34.36	17.21
		sd	4.45	14.44	0.90	0.25	0.19	0.29	0.29	5.30	7.42	2.75	11.07	0.00	0.24	17.15	20.38
		N	263	336	332	340	340	340	340	313	254	314	340	340	340	273	263
	Total	N	493	570	561	582	582	582	582	535	409	550	582	582	582	506	489
	Dif.	z	-2.38	-0.20	-0.11	3.15	0.23	-3.77	-9.60	-3.86	-0.05	-9.14	-0.52	-24.10	4.90	0.39	-0.28
		Pr.>|z|	0.02	0.84	0.92	0.00	0.82	0.00	0.00	0.00	0.96	0.00	0.60	0.00	0.00	0.70	0.78

Table 8 The Results Of The Correlation Matrix

	ROA	ROE	PB	OWN	STATE OWN	IND	NED	TENCEO	AGECEO	TENNED	SIZE	STR	DUALITY	TDTA	GROWTH	NLTA	LOGTA
ROA	1																
ROE	0.404	1															
PB	0.114	0.012	1														
OWN	-0.022	-0.043	0.165	1													
STATEOWN	0.169	-0.004	-0.011	-0.331	1												
IND	-0.170	-0.054	-0.037	-0.342	-0.019	1											
NED	-0.050	-0.097	0.018	-0.235	-0.043	0.284	1										
TENCEO	0.028	0.128	-0.152	-0.110	0.011	0.029	0.192	1									
AGECEO	-0.127	-0.068	-0.023	-0.055	-0.128	-0.048	0.218	0.137	1								
TENNED	-0.073	0.077	-0.001	-0.055	-0.036	0.118	0.549	0.302	0.103	1							
SIZE	-0.089	-0.009	-0.282	-0.157	-0.125	0.071	0.323	0.147	0.108	0.096	1						
STR	0.026	-0.046	-0.078	-0.012	0.092	0.135	0.382	0.230	0.048	0.339	0.278	1					
DUALITY	0.092	0.060	0.144	-0.217	0.167	0.017	0.159	-0.119	0.120	-0.070	-0.124	-0.238	1				
TDTA	-0.318	-0.019	-0.013	-0.162	-0.080	0.372	0.107	-0.103	0.188	0.086	0.184	-0.115	-0.107	1			
GROWTH	-0.017	-0.029	-0.257	0.044	-0.158	-0.089	-0.096	-0.091	-0.052	-0.122	0.231	-0.044	-0.102	0.178	1		
NLTA	0.007	0.138	0.152	0.037	0.049	-0.077	-0.066	-0.051	-0.034	0.008	-0.078	-0.011	-0.021	-0.021	0.003	1	
LOGTA	0.007	0.028	-0.029	0.098	0.108	-0.330	-0.174	0.034	-0.152	-0.092	0.007	-0.062	0.040	-0.594	0.017	-0.010	1

Independent Variables

OWN = The ownership concentration

STATEOWN = The ownership concentration by the shares outstanding held by the state

IND = Total numbers of independent board members / Board Size

NED =Total numbers of non-executive board members / Board Size

TENCEO = Board tenure of CEO

AGECEO = Age of CEO

TENNED = Average board tenure of non-executive board members

SIZE = Number of directors on the board at the end of the year

STR = Dummy variable for the governance system

DUALITY = Dummy variable for the leadership of boards

Control Variables

TDTA = (Leverage) Total Debt / Total Assets

GROWTH = Loans - 1 Year Annual Growth

NLTA = (Liquidity) The ratio of net loans to total assets

LOGTA = Logarithm of the bank's total assets

Dependent Variables

ROA= Return on Assets

PB = Price/Book Value Ratio

ROE = Return on Equity per Share

Table 9 The Results of Fixed Effects-Model

This table provides the results of "within effects models" with Rogers standard errors. The numbers in brackets are the robust standard errors. * significant at 10%; ** significant at 5%; *** significant at 1%

DEPENDENT VARIABLE – PB	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
OWN		0.321	0.72		0.345	
		[1.036]	[1.094]		[1.014]	
STATEOWN	-1.52			-1.410*		-1.324
	[0.918]			[0.808]		[0.967]
IND	-0.574			-0.25		
	[0.349]			[0.507]		
NED	0.278	0.136				
	[0.394]	[0.373]				
TENCEO	-0.077**	-0.073**			-0.071**	-0.071**
	[0.033]	[0.032]			[0.031]	[0.031]
AGECEO	0.002	0.001	-0.009	-0.009	0.001	0.002
	[0.009]	[0.009]	[0.015]	[0.015]	[0.009]	[0.009]
TENNED			-0.097***	-0.098***		
			[0.036]	[0.037]		
SIZE			-0.01	-0.011	-0.012	-0.012
			[0.011]	[0.012]	[0.011]	[0.011]
STR					0.362	0.362
					[0.380]	[0.381]
DUALITY	0.925**	0.819*	0.298	0.409*	0.651*	0.710***
	[0.354]	[0.444]	[0.344]	[0.224]	[0.339]	[0.236]
TD/TA	0.01	0.01	0.014	0.014	0.01	0.01
	[0.007]	[0.007]	[0.009]	[0.009]	[0.007]	[0.007]
GROWTH	0.002	0.002	0.003	0.003	0.002	0.002
	[0.003]	[0.003]	[0.002]	[0.003]	[0.003]	[0.003]
LOGTA	-0.305	-0.324	-0.353	-0.346	-0.391*	-0.393*
	[0.207]	[0.208]	[0.218]	[0.219]	[0.213]	[0.213]
Constant	9.069*	9.189*	10.375**	10.579**	10.856**	11.077**
	[4.941]	[4.931]	[5.050]	[5.097]	[4.931]	[5.025]
Observations	316	316	315	315	316	316
R-squared	0.13	0.12	0.1	0.1	0.13	0.13

Independent Variables

OWN = The ownership concentration

STATEOWN = The ownership concentration by the shares outstanding held by the state

IND = Total numbers of independent board members / Board Size

NED =Total numbers of non-executive board members / Board Size

TENCEO = Board tenure of CEO

AGECEO = Age of CEO

TENNED = Average board tenure of non-executive board members

SIZE = Number of directors on the board at the end of the year

STR = Dummy variable for the governance system

DUALITY = Dummy variable for the leadership of boards

Control Variables

TDTA = (Leverage) Total Debt / Total Assets

GROWTH = Loans - 1 Year Annual Growth

NLTA = (Liquidity) The ratio of net loans to total assets

LOGTA = Logarithm of the bank's total assets

Dependent Variables

ROA= Return on Assets

PB = Price/Book Value Ratio

ROE = Return on Equity per Share

Table 10 The Results Of The Least Squares Dummy Variable Model (Year)

This table provides the results of the least squares dummy variable model for 3 years. The numbers in brackets are the robust standard errors. * significant at 10%; ** significant at 5%; *** significant at 1%

DEPENDENT VARIABLE – PB	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
OWN		0.635*	0.735*		0.53	
		[0.216]	[0.206]		[0.218]	
STATEOWN	-0.142			-0.461		-0.251
	[0.246]			[0.184]		[0.218]
IND	-0.172			-0.268		
	[0.198]			[0.123]		
NED	0.077	0.127				
	[0.187]	[0.156]				
TENCEO	-0.028*	-0.025*			-0.02	-0.024
	[0.008]	[0.006]			[0.008]	[0.011]
AGECEO	-0.008	-0.007	-0.005	-0.008	-0.004	-0.004
	[0.007]	[0.007]	[0.007]	[0.006]	[0.007]	[0.005]
TENNED			0.008	0.006		
			[0.012]	[0.012]		
SIZE			-0.018*	-0.021**	-0.019*	-0.022**
			[0.006]	[0.004]	[0.006]	[0.005]
STR					0.1	0.107
					[0.056]	[0.040]
DUALITY	0.258***	0.360**	0.425*	0.333**	0.352*	0.261***
	[0.008]	[0.059]	[0.116]	[0.057]	[0.101]	[0.018]
TD/TA	-0.017**	-0.016**	-0.014**	-0.014**	-0.014**	-0.014**
	[0.002]	[0.002]	[0.001]	[0.002]	[0.002]	[0.002]
GROWTH	0.004	0.004	0.003	0.004	0.003	0.003
	[0.002]	[0.002]	[0.003]	[0.002]	[0.002]	[0.002]
LOGTA	0.022	0.029*	0.054**	0.053**	0.044**	0.030*
	[0.013]	[0.007]	[0.007]	[0.010]	[0.005]	[0.008]
YEAR(2007)	0.003	-0.011	-0.060**	-0.042**	-0.011	0.005
	[0.005]	[0.005]	[0.007]	[0.009]	[0.004]	[0.008]
YEAR(2008)	-0.307***	-0.330***	-0.404**	-0.381***	-0.343**	-0.320**
	[0.030]	[0.032]	[0.041]	[0.038]	[0.035]	[0.035]
Constant	2.383***	1.882***	1.258***	1.869***	1.590***	2.131**
	[0.190]	[0.176]	[0.015]	[0.076]	[0.135]	[0.263]
Observations	316	316	315	315	316	316
R-squared	0.16	0.19	0.23	0.2	0.22	0.2

Independent Variables

OWN = The ownership concentration

STATEOWN = The ownership concentration by the shares outstanding held by the state

IND = Total numbers of independent board members / Board Size

NED =Total numbers of non-executive board members / Board Size

TENCEO = Board tenure of CEO

AGECEO = Age of CEO

TENNED = Average board tenure of non-executive board members

SIZE = Number of directors on the board at the end of the year

STR = Dummy variable for the governance system

DUALITY = Dummy variable for the leadership of boards

YEAR(2007) = Dummy variable for year 2007

YEAR (2008) = Dummy variable for year 2008

Control Variables

TDTA = (Leverage) Total Debt / Total Assets

GROWTH = Loans - 1 Year Annual Growth

NLTA = (Liquidity) The ratio of net loans to total assets

LOGTA = Logarithm of the bank's total assets

Dependent Variables

ROA= Return on Assets

PB = Price/Book Value Ratio

ROE = Return on Equity per Share

Table 11 The Results Of The Least Squares Dummy Variable Model (Country)

This table provides the results of the least squares dummy variable model for 18 countries. The numbers in brackets are the robust standard errors. * significant at 10%; ** significant at 5%; *** significant at 1%. The omitted country is Austria.

DEPENDENT VARIABLE – PB	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
OWN		0.450**	0.450**		0.401**	
		[0.176]	[0.176]		[0.140]	
STATEOWN	-0.271			-0.421		-0.277
	[0.240]			[0.374]		[0.261]
IND	-0.246			-0.226		
	[0.181]			[0.211]		
NED	0.283	0.253				
	[0.182]	[0.160]				
TENCEO	-0.014	-0.013			-0.011	-0.012
	[0.013]	[0.013]			[0.013]	[0.013]
AGECEO	-0.011	-0.01	0.253	-0.011	-0.01	-0.011
	[0.009]	[0.010]	[0.160]	[0.009]	[0.009]	[0.008]
TENNED			-0.013	-0.007		
			[0.013]	[0.009]		
SIZE			-0.01	-0.025*	-0.02	-0.022*
			[0.010]	[0.012]	[0.012]	[0.012]
STR					0.01	0.002
					[0.168]	[0.174]
DUALITY	-0.17	-0.114	-0.114	-0.148	-0.093	-0.155
	[0.240]	[0.239]	[0.239]	[0.216]	[0.219]	[0.218]
TD/TA	-0.013***	-0.012***	-0.012***	-0.011***	-0.013***	-0.012***
	[0.004]	[0.004]	[0.004]	[0.004]	[0.004]	[0.004]
GROWTH	0.004	0.004	0.004	0.005	0.004	0.004
	[0.004]	[0.004]	[0.004]	[0.004]	[0.004]	[0.004]
LOGTA	0.02	0.014	0.014	0.07	0.045	0.038
	[0.048]	[0.048]	[0.048]	[0.045]	[0.041]	[0.041]
BELGIUM	0.365	0.496**	0.496**	0.262	0.427*	0.37
	[0.253]	[0.214]	[0.214]	[0.202]	[0.206]	[0.234]
DENMARK	0.334***	0.398***	0.398***	0.2	0.266*	0.129
	[0.100]	[0.087]	[0.087]	[0.166]	[0.148]	[0.147]
FINLAND	0.923***	1.025***	1.025***	1.294***	0.784***	0.665***
	[0.169]	[0.156]	[0.156]	[0.246]	[0.164]	[0.177]
FRANCE	-0.329**	-0.232*	-0.232*	-0.631***	-0.455***	-0.523***
	[0.136]	[0.129]	[0.129]	[0.084]	[0.156]	[0.170]
GERMANY	0.625***	0.636***	0.636***	0.676***	0.670***	0.671***
	[0.088]	[0.088]	[0.088]	[0.101]	[0.103]	[0.103]
GREECE	1.311***	1.353***	1.353***	1.246***	1.207***	1.174***
	[0.160]	[0.148]	[0.148]	[0.150]	[0.205]	[0.222]
IRELAND	0.236*	0.479***	0.479***	-0.072	0.298	0.134
	[0.127]	[0.148]	[0.148]	[0.105]	[0.200]	[0.218]
ITALY	0.273**	0.356**	0.356**	0.177	0.277	0.176
	[0.125]	[0.128]	[0.128]	[0.115]	[0.166]	[0.175]
LIECHTENSTEIN	0.283**	0.278**	0.278**	0.024	0.053	0.039
	[0.103]	[0.115]	[0.115]	[0.149]	[0.179]	[0.161]
NETHERLANDS	0.108	0.202	0.202	-0.088	-0.016	-0.046
	[0.125]	[0.138]	[0.138]	[0.176]	[0.183]	[0.173]
NORWAY	-0.424***	-0.320***	-0.320***	0.208	0.207	0.128
	[0.079]	[0.093]	[0.093]	[0.304]	[0.284]	[0.305]
PORTUGAL	1.055***	1.133***	1.133***	1.060***	1.111***	1.068***
	[0.150]	[0.148]	[0.148]	[0.110]	[0.140]	[0.131]
SPAIN	0.969***	0.963***	0.963***	0.519***	0.757***	0.715***
	[0.196]	[0.199]	[0.199]	[0.162]	[0.176]	[0.183]
SWEDEN	0.547**	0.545***	0.545***	-0.025	0.098	-0.032
	[0.191]	[0.151]	[0.151]	[0.155]	[0.201]	[0.197]
SWITZERLAND	0.626***	0.584***	0.584***	0.240*	0.310**	0.297**
	[0.100]	[0.080]	[0.080]	[0.122]	[0.115]	[0.107]
TURKEY	0.674***	0.619***	0.619***	0.344**	0.331*	0.377**
	[0.119]	[0.129]	[0.129]	[0.153]	[0.175]	[0.177]

UNITED KINGDOM	0.339*	0.422*	0.422*	0.063	0.186	0.076
	[0.189]	[0.203]	[0.203]	[0.146]	[0.239]	[0.222]
Constant	1.808	1.633	1.633	1.207	1.497	1.897
	[1.386]	[1.352]	[1.352]	[1.219]	[1.215]	[1.276]
Observations	316	316	316	315	316	316
R-squared	0.32	0.33	0.33	0.36	0.33	0.33

Independent Variables

OWN = The ownership concentration

STATEOWN = The ownership concentration by the shares outstanding held by the state

IND = Total numbers of independent board members / Board Size

NED =Total numbers of non-executive board members / Board Size

TENCEO = Board tenure of CEO

AGECEO = Age of CEO

TENNED = Average board tenure of non-executive board members

SIZE = Number of directors on the board at the end of the year

STR = Dummy variable for the governance system

DUALITY = Dummy variable for the leadership of boards

Country="country name" = Dummy variable for that country

Control Variables

TDTA = (Leverage) Total Debt / Total Assets

GROWTH = Loans - 1 Year Annual Growth

NLTA = (Liquidity) The ratio of net loans to total assets

LOGTA = Logarithm of the bank's total assets

Dependent Variables

ROA= Return on Assets

PB = Price/Book Value Ratio

ROE = Return on Equity per Share

Table 12 The Results of Fixed Effects-Model with Ownership Categories

This table provides the results of "within effects models" with Rogers standard errors. The numbers in brackets are the robust standard errors. * significant at 10%; ** significant at 5%; *** significant at 1%. OWN_DUMMY1 represents the percentages of shares outstanding held by the largest shareholder, in case of more than 5%. OWN_DUMMY2 represents "the percentages of shares outstanding held by the largest shareholder, in case of more than 10%". OWN_DUMMY3 represents "the percentages of shares outstanding held by the largest shareholder, in case of more than 20%". OWN_DUMMY4 represents "the percentages of shares outstanding held by the largest shareholder, in case of more than 50%". OWN_DUMMY5 represents "the percentages of shares outstanding held by the largest shareholder, in case of more than 80%". SPECI. represents specification.

	2.MODEL					3.MODEL					5.MODEL				
DEPENDENT VARIABLE – PB	1.SPECI.	2.SPECI.	3.SPECI.	4.SPECI.	5.SPECI.	1.SPECI.	2.SPECI.	3.SPECI.	4.SPECI.	5.SPECI.	1.SPECI.	2.SPECI.	3.SPECI.	4.SPECI.	5.SPECI.
OWN_DUMMY1															
	0.321					0.72					0.345				
	[1.036]					[1.094]					[1.014]				
OWN_DUMMY2		-0.051					0.175					-0.003			
		[1.011]					[1.095]					[0.995]			
OWN_DUMMY3			-0.006					0.404					0.024		
			[0.875]					[1.017]					[0.861]		
OWN_DUMMY4				-1.653					-1.418					-1.617	
				[1.894]					[1.889]					[1.899]	
OWN_DUMMY5					0.382					0.373					0.438
					[0.294]					[0.396]					[0.265]
NED	0.136	0.159	0.156	0.298	0.089										
	[0.373]	[0.374]	[0.371]	[0.421]	[0.364]										
TENCEO	-0.073**	-0.073**	-0.073**	-0.072**	-0.073**						-0.071**	-0.070**	-0.070**	-0.070**	-0.071**
	[0.032]	[0.032]	[0.032]	[0.031]	[0.032]						[0.031]	[0.031]	[0.031]	[0.030]	[0.031]
AGECEO	0.001	0.001	0.001	0.001	0.001	-0.009	-0.009	-0.009	-0.007	-0.009	0.001	0.001	0.001	0.002	0.001
	[0.009]	[0.009]	[0.009]	[0.009]	[0.009]	[0.015]	[0.015]	[0.015]	[0.015]	[0.015]	[0.009]	[0.009]	[0.009]	[0.009]	[0.009]
TENNED						-0.097***	-0.095***	-0.096***	-0.083**	-0.093**					
						[0.036]	[0.036]	[0.036]	[0.034]	[0.036]					
SIZE						-0.01	-0.01	-0.01	-0.009	-0.011	-0.012	-0.012	-0.012	-0.01	-0.013
						[0.011]	[0.011]	[0.011]	[0.010]	[0.011]	[0.011]	[0.011]	[0.011]	[0.010]	[0.012]
STR											0.362	0.36	0.36	0.324	0.378
											[0.380]	[0.382]	[0.380]	[0.376]	[0.384]
DUALITY	0.819*	0.902**	0.892**	1.843	0.855**	0.298	0.405	0.359	1.202	0.438*	0.651*	0.717**	0.712**	1.58	0.714***
	[0.444]	[0.432]	[0.415]	[1.210]	[0.332]	[0.344]	[0.340]	[0.329]	[1.090]	[0.224]	[0.339]	[0.327]	[0.313]	[1.106]	[0.236]

TD/TA	0.01	0.01	0.01	0.01	0.01	0.014	0.014	0.014	0.014	0.014	0.01	0.01	0.01	0.01	0.009
	[0.007]	[0.007]	[0.007]	[0.007]	[0.007]	[0.009]	[0.009]	[0.009]	[0.009]	[0.009]	[0.007]	[0.007]	[0.007]	[0.007]	[0.007]
GROWTH	0.002	0.002	0.002	0.003	0.002	0.003	0.003	0.003	0.004**	0.003	0.002	0.002	0.002	0.003	0.002
	[0.003]	[0.003]	[0.003]	[0.002]	[0.003]	[0.002]	[0.002]	[0.002]	[0.002]	[0.003]	[0.003]	[0.003]	[0.003]	[0.002]	[0.003]
LOGTA	-0.324	-0.324	-0.323	-0.315	-0.327	-0.353	-0.351	-0.352	-0.349	-0.357	-0.391*	-0.390*	-0.390*	-0.374*	-0.398*
	[0.208]	[0.206]	[0.208]	[0.202]	[0.210]	[0.218]	[0.216]	[0.217]	[0.212]	[0.219]	[0.213]	[0.211]	[0.212]	[0.208]	[0.214]
CONSTANT	9.189*	9.250*	9.238*	9.046*	9.352*	10.375**	10.453**	10.445**	10.426**	10.617**	10.856**	10.908**	10.906**	10.599**	11.097**
	[4.931]	[4.889]	[4.942]	[4.826]	[5.029]	[5.050]	[5.014]	[5.054]	[4.999]	[5.148]	[4.931]	[4.905]	[4.948]	[4.866]	[5.032]
OBSERVATİONS	316	316	316	316	316	315	315	315	315	315	316	316	316	316	316
R-SQUARED	0.12	0.12	0.12	0.17	0.12	0.1	0.1	0.1	0.13	0.1	0.13	0.13	0.13	0.18	0.13

Independent Variables

OWN = The ownership concentration

STATEOWN = The ownership concentration by the shares outstanding held by the state

IND = Total numbers of independent board members / Board Size

NED =Total numbers of non-executive board members / Board Size

TENCEO = Board tenure of CEO

AGECEO = Age of CEO

TENNED = Average board tenure of non-executive board members

SIZE = Number of directors on the board at the end of the year

STR = Dummy variable for the governance system

DUALITY = Dummy variable for the leadership of boards

Country="country name" = Dummy variable for that country

Control Variables

TDTA = (Leverage) Total Debt / Total Assets

GROWTH = Loans - 1 Year Annual Growth

NLTA = (Liquidity) The ratio of net loans to total assets

LOGTA = Logarithm of the bank's total assets

Dependent Variables

ROA= Return on Assets

PB = Price/Book Value Ratio

ROE = Return on Equity per Share

Table 13 The Results Of LSDV Model (Country) with Ownership Categories

This table provides the results of the least squares dummy variable model for 18 countries. The numbers in brackets are the robust standard errors. * significant at 10%; ** significant at 5%; *** significant at 1%. OWN_DUMMY1 represents the percentages of shares outstanding held by the largest shareholder, in case of more than 5%. OWN_DUMMY2 represents "the percentages of shares outstanding held by the largest shareholder, in case of more than 10%". OWN_DUMMY3 represents "the percentages of shares outstanding held by the largest shareholder, in case of more than 20%". OWN_DUMMY4 represents "the percentages of shares outstanding held by the largest shareholder, in case of more than 50%". OWN_DUMMY5 represents "the percentages of shares outstanding held by the largest shareholder, in case of more than 80%". SPECI. represents specification.

	2.MODEL					3.MODEL					5.MODEL				
DEPENDENT VARIABLE – PB	1.SPECI.	2.SPECI.	3.SPECI.	4.SPECI.	5.SPECI.	1.SPECI.	2.SPECI.	3.SPECI.	4.SPECI.	5.SPECI.	1.SPECI.	2.SPECI.	3.SPECI.	4.SPECI.	5.SPECI.
OWN_DUMMY1	0.450**					0.542**					0.401*				
	[0.227]					[0.210]					[0.223]				
OWN_DUMMY2		0.424*					0.504**					0.372*			
		[0.218]					[0.200]					[0.213]			
OWN_DUMMY3			0.363*					0.440**					0.31		
			[0.216]					[0.199]					[0.212]		
OWN_DUMMY4				0.299					0.351*					0.255	
				[0.201]					[0.190]					[0.200]	
OWN_DUMMY5					0.355					0.486*					0.359
					[0.287]					[0.277]					[0.296]
NED	0.253	0.262	0.256	0.229	0.197										
	[0.190]	[0.190]	[0.191]	[0.187]	[0.187]										
TENCEO	-0.013	-0.013	-0.013	-0.013	-0.013						-0.011	-0.011	-0.011	-0.012	-0.011
	[0.011]	[0.011]	[0.011]	[0.011]	[0.011]						[0.011]	[0.011]	[0.011]	[0.011]	[0.011]
AGECEO	-0.01	-0.011	-0.01	-0.01	-0.009	-0.009	-0.009	-0.009	-0.008	-0.008	-0.01	-0.01	-0.01	-0.01	-0.009
	[0.007]	[0.007]	[0.007]	[0.007]	[0.007]	[0.007]	[0.007]	[0.007]	[0.007]	[0.007]	[0.007]	[0.007]	[0.007]	[0.007]	[0.007]
TENNED						-0.008	-0.007	-0.007	-0.01	-0.014					
						[0.017]	[0.017]	[0.017]	[0.018]	[0.019]					
SIZE						-0.023**	-0.023**	-0.024**	-0.023**	-0.025**	-0.020**	-0.020**	-0.021**	-0.020*	-0.021**
						[0.011]	[0.011]	[0.011]	[0.011]	[0.011]	[0.010]	[0.010]	[0.010]	[0.010]	[0.010]
STR											0.01	0.011	0.004	0.003	0.006
											[0.142]	[0.142]	[0.144]	[0.141]	[0.140]
DUALITY	-0.114	-0.119	-0.135	-0.172	-0.188	-0.094	-0.104	-0.122	-0.176	-0.198	-0.093	-0.098	-0.116	-0.153	-0.168
	[0.181]	[0.180]	[0.180]	[0.185]	[0.183]	[0.172]	[0.172]	[0.171]	[0.175]	[0.176]	[0.176]	[0.176]	[0.176]	[0.179]	[0.182]
TD/TA	-0.012***	-0.012***	-0.012***	-0.012***	-0.013***	-0.011***	-0.011***	-0.011***	-0.011***	-0.012***	-0.013***	-0.013***	-0.013***	-0.013***	-0.013***
	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]
GROWTH	0.004*	0.004*	0.004*	0.004*	0.005*	0.005**	0.005**	0.005**	0.005**	0.006**	0.004	0.004	0.004	0.004	0.005*
	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]	[0.002]	[0.002]	[0.002]	[0.002]	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]
LOGTA	0.014	0.014	0.014	0.014	0.009	0.062**	0.063**	0.063**	0.060**	0.057**	0.045	0.046*	0.046*	0.043	0.04

	[0.029]	[0.029]	[0.029]	[0.029]	[0.029]	[0.029]	[0.029]	[0.028]	[0.028]	[0.028]	[0.028]	[0.027]	[0.027]	[0.027]	[0.027]
BELGIUM	0.497	0.487	0.475	0.444	0.344	0.385	0.369	0.359	0.323	0.199	0.427	0.416	0.402	0.378	0.293
	[0.550]	[0.550]	[0.552]	[0.552]	[0.555]	[0.534]	[0.535]	[0.540]	[0.544]	[0.547]	[0.521]	[0.521]	[0.522]	[0.524]	[0.529]
DENMARK	0.398	0.405	0.39	0.349	0.256	0.321	0.325	0.307	0.256	0.133	0.266	0.27	0.253	0.22	0.127
	[0.246]	[0.247]	[0.247]	[0.243]	[0.243]	[0.265]	[0.266]	[0.267]	[0.265]	[0.260]	[0.277]	[0.278]	[0.279]	[0.276]	[0.271]
FINLAND	1.026***	1.045***	1.036***	1.008***	0.903***	1.448***	1.491***	1.479***	1.449***	1.353***	0.784**	0.796**	0.785**	0.774**	0.690**
	[0.312]	[0.321]	[0.322]	[0.311]	[0.306]	[0.302]	[0.308]	[0.308]	[0.305]	[0.285]	[0.338]	[0.345]	[0.346]	[0.338]	[0.333]
FRANCE	-0.231	-0.225	-0.24	-0.265	-0.33	-0.500**	-0.500**	-0.513**	-0.531**	-0.617***	-0.454*	-0.454*	-0.471*	-0.481**	-0.529**
	[0.238]	[0.240]	[0.240]	[0.235]	[0.239]	[0.217]	[0.217]	[0.217]	[0.217]	[0.219]	[0.247]	[0.248]	[0.250]	[0.244]	[0.249]
GERMANY	0.636**	0.640**	0.641**	0.619**	0.509*	0.676**	0.680**	0.684**	0.655**	0.509*	0.670**	0.673**	0.673**	0.656**	0.554*
	[0.294]	[0.294]	[0.293]	[0.294]	[0.307]	[0.281]	[0.280]	[0.279]	[0.282]	[0.296]	[0.276]	[0.276]	[0.276]	[0.278]	[0.290]
GREECE	1.353***	1.360***	1.354***	1.350***	1.258***	1.283***	1.291***	1.288***	1.284***	1.142***	1.208***	1.212***	1.201***	1.203***	1.115***
	[0.400]	[0.402]	[0.403]	[0.403]	[0.366]	[0.376]	[0.378]	[0.379]	[0.380]	[0.336]	[0.410]	[0.412]	[0.414]	[0.416]	[0.380]
IRELAND	0.479	0.49	0.464	0.394	0.303	0.223	0.234	0.203	0.117	-0.009	0.298	0.304	0.27	0.216	0.133
	[0.309]	[0.312]	[0.313]	[0.302]	[0.301]	[0.316]	[0.319]	[0.320]	[0.311]	[0.308]	[0.351]	[0.354]	[0.358]	[0.343]	[0.347]
ITALY	0.357	0.36	0.344	0.307	0.219	0.292	0.293	0.279	0.233	0.115	0.277	0.277	0.258	0.23	0.154
	[0.267]	[0.269]	[0.270]	[0.262]	[0.261]	[0.247]	[0.248]	[0.248]	[0.243]	[0.244]	[0.261]	[0.263]	[0.265]	[0.256]	[0.254]
LIECHTENSTEIN	0.278	0.272	0.263	0.283	0.17	0.029	0.018	0.004	0.038	-0.102	0.053	0.044	0.034	0.059	-0.053
	[0.289]	[0.288]	[0.285]	[0.275]	[0.276]	[0.320]	[0.318]	[0.316]	[0.310]	[0.304]	[0.326]	[0.324]	[0.323]	[0.318]	[0.312]
NETHERLANDS	0.203	0.204	0.2	0.264	0.159	0.024	0.022	0.016	0.1	-0.032	-0.016	-0.017	-0.022	0.042	-0.052
	[0.221]	[0.221]	[0.222]	[0.228]	[0.224]	[0.238]	[0.238]	[0.238]	[0.249]	[0.240]	[0.245]	[0.245]	[0.245]	[0.255]	[0.246]
NORWAY	-0.32	-0.315	-0.31	-0.376*	-0.475**	0.278	0.294	0.307	0.195	0.118	0.207	0.214	0.218	0.144	0.09
	[0.223]	[0.223]	[0.230]	[0.219]	[0.220]	[0.325]	[0.325]	[0.334]	[0.331]	[0.340]	[0.303]	[0.302]	[0.308]	[0.306]	[0.315]
PORTUGAL	1.134***	1.139***	1.132***	1.152***	1.046***	1.144***	1.148***	1.146***	1.174***	1.063***	1.111***	1.112***	1.107***	1.131***	1.060***
	[0.344]	[0.346]	[0.347]	[0.339]	[0.339]	[0.294]	[0.297]	[0.297]	[0.290]	[0.290]	[0.292]	[0.293]	[0.293]	[0.290]	[0.288]
SPAIN	0.964***	0.976***	0.975***	0.930***	0.830***	0.575*	0.583*	0.581*	0.539*	0.403	0.758**	0.765**	0.763**	0.735**	0.631**
	[0.295]	[0.297]	[0.296]	[0.291]	[0.296]	[0.319]	[0.321]	[0.322]	[0.323]	[0.326]	[0.297]	[0.299]	[0.298]	[0.294]	[0.294]
SWEDEN	0.546*	0.550*	0.544*	0.481*	0.375	0.054	0.049	0.048	-0.008	-0.141	0.099	0.094	0.081	0.052	-0.028
	[0.294]	[0.295]	[0.301]	[0.286]	[0.287]	[0.292]	[0.292]	[0.298]	[0.291]	[0.290]	[0.317]	[0.318]	[0.326]	[0.312]	[0.316]
SWITZERLAND	0.585*	0.591*	0.577*	0.534*	0.447	0.219	0.223	0.21	0.177	0.069	0.31	0.309	0.295	0.273	0.196
	[0.309]	[0.310]	[0.311]	[0.301]	[0.308]	[0.283]	[0.283]	[0.285]	[0.278]	[0.280]	[0.297]	[0.297]	[0.298]	[0.289]	[0.292]
TURKEY	0.619**	0.627**	0.632**	0.626**	0.559**	0.296	0.301	0.306	0.314	0.21	0.331	0.334	0.337	0.346	0.275
	[0.259]	[0.259]	[0.259]	[0.261]	[0.264]	[0.274]	[0.273]	[0.273]	[0.276]	[0.278]	[0.286]	[0.285]	[0.286]	[0.286]	[0.288]
UNITED KINGDOM	0.425	0.424	0.415	0.346	0.254	0.188	0.181	0.174	0.097	-0.023	0.188	0.183	0.165	0.115	0.036
	[0.288]	[0.288]	[0.295]	[0.284]	[0.285]	[0.291]	[0.290]	[0.297]	[0.289]	[0.286]	[0.324]	[0.324]	[0.333]	[0.319]	[0.322]
CONSTANT	1.637*	1.628*	1.660*	1.729*	1.936**	0.934	0.923	0.96	1.073	1.285	1.500*	1.495*	1.533*	1.604*	1.772**
	[0.900]	[0.895]	[0.890]	[0.889]	[0.891]	[0.880]	[0.875]	[0.868]	[0.872]	[0.863]	[0.854]	[0.849]	[0.845]	[0.851]	[0.855]
OBSERVATİONS	316	316	316	316	316	315	315	315	315	315	316	316	316	316	316
R-SQUARED	0.33	0.33	0.33	0.32	0.32	0.37	0.37	0.37	0.36	0.37	0.33	0.33	0.33	0.33	0.33

Table 14 The Results Of The LSDV Model (Year) with Ownership Categories

This table provides the results of the least squares dummy variable model for 3 years. The numbers in brackets are the robust standard errors. * significant at 10%; ** significant at 5%; *** significant at 1%. OWN_DUMMY1 represents the percentages of shares outstanding held by the largest shareholder, in case of more than 5%. OWN_DUMMY2 represents "the percentages of shares outstanding held by the largest shareholder, in case of more than 10%". OWN_DUMMY3 represents "the percentages of shares outstanding held by the largest shareholder, in case of more than 20%". OWN_DUMMY4 represents "the percentages of shares outstanding held by the largest shareholder, in case of more than 50%". OWN_DUMMY5 represents "the percentages of shares outstanding held by the largest shareholder, in case of more than 80%". SPECI. represents specification.

	2.MODEL					3.MODEL					5.MODEL				
DEPENDENT VARIABLE – PB	1.SPECI.	2.SPECI.	3.SPECI.	4.SPECI.	5.SPECI.	1.SPECI.	2.SPECI.	3.SPECI.	4.SPECI.	5.SPECI.	1.SPECI.	2.SPECI.	3.SPECI.	4.SPECI.	5.SPECI.
OWN_DUMMY1	0.635***					0.735***					0.530**				
	[0.211]					[0.207]					[0.207]				
OWN_DUMMY2		0.594***					0.677***					0.489**			
		[0.202]					[0.196]					[0.196]			
OWN_DUMMY3			0.550***					0.616***					0.428**		
			[0.199]					[0.196]					[0.196]		
OWN_DUMMY4				0.440**					0.516**					0.350*	
				[0.198]					[0.203]					[0.200]	
OWN_DUMMY5					0.701**					0.843***					0.657**
					[0.290]					[0.302]					[0.299]
NED	0.127	0.135	0.133	0.087	0.04										
	[0.144]	[0.146]	[0.146]	[0.141]	[0.132]										
TENCEO	-0.025**	-0.024**	-0.024**	-0.026**	-0.026**						-0.020**	-0.020**	-0.020**	-0.022**	-0.021**
	[0.011]	[0.011]	[0.011]	[0.011]	[0.010]						[0.010]	[0.010]	[0.010]	[0.010]	[0.009]
AGECEO	-0.007	-0.008	-0.008	-0.006	-0.005	-0.005	-0.005	-0.005	-0.003	-0.002	-0.004	-0.004	-0.004	-0.003	-0.002
	[0.006]	[0.006]	[0.006]	[0.006]	[0.006]	[0.006]	[0.006]	[0.006]	[0.006]	[0.006]	[0.006]	[0.006]	[0.006]	[0.006]	[0.006]
TENNED						0.008	0.009	0.008	0.004	-0.002					
						[0.014]	[0.014]	[0.014]	[0.014]	[0.015]					
SIZE						-0.018***	-0.018***	-0.017***	-0.018***	-0.019***	-0.019***	-0.020***	-0.019***	-0.020***	-0.021***
						[0.003]	[0.003]	[0.003]	[0.003]	[0.003]	[0.004]	[0.004]	[0.004]	[0.004]	[0.004]
STR											0.099	0.101	0.096	0.1	0.099
											[0.111]	[0.111]	[0.112]	[0.111]	[0.110]
DUALITY	0.360**	0.355**	0.342**	0.290**	0.259*	0.424***	0.417***	0.401***	0.335**	0.285**	0.351**	0.347**	0.330**	0.284*	0.253*
	[0.148]	[0.149]	[0.148]	[0.146]	[0.146]	[0.144]	[0.144]	[0.143]	[0.142]	[0.144]	[0.153]	[0.153]	[0.153]	[0.151]	[0.153]
TD/TA	-0.016***	-0.016***	-0.016***	-0.016***	-0.016***	-0.014***	-0.014***	-0.014***	-0.013***	-0.014***	-0.014***	-0.014***	-0.014***	-0.014***	-0.014***
	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]
GROWTH	0.004	0.004	0.004	0.004	0.004	0.003	0.003	0.003	0.003	0.004	0.003	0.003	0.003	0.003	0.004
	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]
LOGTA	0.028	0.029	0.029	0.024	0.017	0.053***	0.054***	0.053***	0.048**	0.040**	0.044**	0.045**	0.043**	0.039*	0.034

	[0.022]	[0.022]	[0.022]	[0.022]	[0.022]	[0.020]	[0.020]	[0.020]	[0.020]	[0.019]	[0.021]	[0.021]	[0.021]	[0.021]	[0.021]
YEAR==2007	-0.012	-0.013	-0.011	-0.01	-0.013	-0.06	-0.061	-0.059	-0.056	-0.059	-0.011	-0.012	-0.01	-0.009	-0.015
	[0.106]	[0.107]	[0.107]	[0.107]	[0.107]	[0.101]	[0.102]	[0.102]	[0.102]	[0.101]	[0.102]	[0.102]	[0.102]	[0.102]	[0.102]
YEAR==2008	-0.330**	-0.332**	-0.331**	-0.327**	-0.330**	-0.404***	-0.407***	-0.405***	-0.402***	-0.398***	-0.343***	-0.345***	-0.342***	-0.340***	-0.346***
	[0.128]	[0.128]	[0.129]	[0.131]	[0.129]	[0.129]	[0.129]	[0.130]	[0.131]	[0.130]	[0.126]	[0.126]	[0.127]	[0.128]	[0.126]
CONSTANT	1.637*	1.628*	1.660*	1.729*	1.936**	1.261**	1.290**	1.324**	1.440**	1.644***	1.592***	1.604***	1.648***	1.739***	1.859***
	[0.900]	[0.895]	[0.890]	[0.889]	[0.891]	[0.601]	[0.596]	[0.590]	[0.609]	[0.572]	[0.609]	[0.606]	[0.601]	[0.617]	[0.603]
OBSERVATİONS	316	316	316	316	316	315	315	315	315	315	316	316	316	316	316
R-SQUARED	0.33	0.33	0.33	0.32	0.32	0.23	0.23	0.23	0.22	0.24	0.22	0.22	0.21	0.21	0.22

Independent Variables

OWN = The ownership concentration

STATEOWN = The ownership concentration by the shares outstanding held by the state

IND = Total numbers of independent board members / Board Size

NED =Total numbers of non-executive board members / Board Size

TENCEO = Board tenure of CEO

AGECEO = Age of CEO

TENNED = Average board tenure of non-executive board members

SIZE = Number of directors on the board at the end of the year

STR = Dummy variable for the governance system

DUALITY = Dummy variable for the leadership of boards

Country="country name" = Dummy variable for that country

Control Variables

TDTA = (Leverage) Total Debt / Total Assets

GROWTH = Loans - 1 Year Annual Growth

NLTA = (Liquidity) The ratio of net loans to total assets

LOGTA = Logarithm of the bank's total assets

Dependent Variables

ROA= Return on Assets

PB = Price/Book Value Ratio

ROE = Return on Equity per Share

Table 15 The Results Of The LSDV Model (Country) with Different Omitted Countries

This table provides the results of the least squares dummy variable model for 18 countries. The numbers in brackets are the robust standard errors. * significant at 10%; ** significant at 5%; *** significant at 1%.

	Panel A – The omitted country is Turkey						Panel B – The omitted country is Greece					
DEPENDENT VARIABLE – PB	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
OWN		0.450**	0.542**		0.401*			0.450**	0.542**		0.401*	
		[0.227]	[0.210]		[0.223]			[0.227]	[0.210]		[0.223]	
STATEOWN	-0.271			-0.421*		-0.277	-0.271			-0.421*		-0.277
	[0.244]			[0.255]		[0.258]	[0.244]			[0.255]		[0.258]
IND	-0.246			-0.226			-0.246			-0.226		
	[0.232]			[0.221]			[0.232]			[0.221]		
NED	0.283	0.253					0.283	0.253				
	[0.205]	[0.189]					[0.205]	[0.189]				
TENCEO	-0.014	-0.013			-0.011	-0.012	-0.014	-0.013			-0.011	-0.012
	[0.011]	[0.011]			[0.011]	[0.011]	[0.011]	[0.011]			[0.011]	[0.011]
AGECEO	-0.011	-0.01	-0.009	-0.011	-0.01	-0.011	-0.011	-0.01	-0.009	-0.011	-0.01	-0.011
	[0.007]	[0.007]	[0.007]	[0.007]	[0.007]	[0.007]	[0.007]	[0.007]	[0.007]	[0.007]	[0.007]	[0.007]
TENNED			-0.008	-0.007					-0.008	-0.007		
			[0.017]	[0.017]					[0.017]	[0.017]		
SIZE			-0.023**	-0.025**	-0.020**	-0.022**			-0.023**	-0.025**	-0.020**	-0.022**
			[0.011]	[0.011]	[0.010]	[0.010]			[0.011]	[0.011]	[0.010]	[0.010]
STR					0.01	0.002					0.01	0.002
					[0.142]	[0.146]					[0.142]	[0.146]
DUALITY	-0.17	-0.114	-0.094	-0.148	-0.093	-0.155	-0.17	-0.114	-0.094	-0.148	-0.093	-0.155
	[0.197]	[0.181]	[0.172]	[0.187]	[0.176]	[0.204]	[0.197]	[0.181]	[0.172]	[0.187]	[0.176]	[0.204]
TD/TA	-0.013***	-0.012***	-0.011***	-0.011***	-0.013***	-0.012***	-0.013***	-0.012***	-0.011***	-0.011***	-0.013***	-0.012***
	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]
GROWTH	0.004*	0.004*	0.005**	0.005**	0.004	0.004	0.004*	0.004*	0.005**	0.005**	0.004	0.004
	[0.003]	[0.003]	[0.002]	[0.002]	[0.003]	[0.003]	[0.003]	[0.003]	[0.002]	[0.002]	[0.003]	[0.003]
LOGTA	0.02	0.014	0.062**	0.070**	0.045	0.038	0.02	0.014	0.062**	0.070**	0.045	0.038
	[0.028]	[0.029]	[0.029]	[0.028]	[0.028]	[0.027]	[0.028]	[0.029]	[0.029]	[0.028]	[0.028]	[0.027]
AUSTRIA	-0.674**	-0.619**	-0.296	-0.344	-0.331	-0.377	-1.311***	-1.353***	-1.283***	-1.246***	-1.207***	-1.174***
	[0.270]	[0.259]	[0.274]	[0.283]	[0.286]	[0.293]	[0.400]	[0.400]	[0.376]	[0.385]	[0.410]	[0.406]
BELGIUM	-0.309	-0.123	0.089	-0.082	0.096	-0.007	-0.946	-0.856	-0.898	-0.984	-0.78	-0.803
	[0.551]	[0.544]	[0.559]	[0.558]	[0.564]	[0.557]	[0.615]	[0.583]	[0.582]	[0.604]	[0.613]	[0.622]

DENMARK	-0.340*	-0.221	0.025	-0.144	-0.065	-0.248	-0.976***	-0.954***	-0.962***	-1.046***	-0.941***	-1.044***
	[0.192]	[0.197]	[0.182]	[0.183]	[0.203]	[0.192]	[0.364]	[0.352]	[0.300]	[0.332]	[0.343]	[0.363]
FINLAND	0.249	0.406	1.152***	0.950***	0.453	0.289	-0.388	-0.327	0.165	0.048	-0.423	-0.508
	[0.245]	[0.253]	[0.272]	[0.266]	[0.288]	[0.279]	[0.337]	[0.321]	[0.267]	[0.284]	[0.358]	[0.373]
FRANCE	-1.003***	-0.851***	-0.797***	-0.975***	-0.786***	-0.900***	-1.640***	-1.584***	-1.783***	-1.877***	-1.662***	-1.696***
	[0.157]	[0.170]	[0.173]	[0.166]	[0.185]	[0.177]	[0.317]	[0.303]	[0.301]	[0.323]	[0.327]	[0.340]
GERMANY	-0.049	0.016	0.379	0.332	0.339	0.295	-0.685*	-0.717*	-0.607	-0.57	-0.538	-0.502
	[0.291]	[0.292]	[0.322]	[0.318]	[0.320]	[0.317]	[0.394]	[0.392]	[0.402]	[0.408]	[0.423]	[0.420]
GREECE	0.637*	0.733**	0.987***	0.902***	0.876**	0.797**						
	[0.331]	[0.351]	[0.331]	[0.326]	[0.356]	[0.338]						
IRELAND	-0.438	-0.141	-0.073	-0.416	-0.033	-0.243	-1.074***	-0.874**	-1.060***	-1.318***	-0.910**	-1.039**
	[0.285]	[0.292]	[0.282]	[0.269]	[0.296]	[0.283]	[0.410]	[0.368]	[0.351]	[0.392]	[0.380]	[0.412]
ITALY	-0.401	-0.263	-0.004	-0.167	-0.054	-0.201	-1.037***	-0.996***	-0.991***	-1.069***	-0.931***	-0.998***
	[0.245]	[0.255]	[0.251]	[0.248]	[0.255]	[0.242]	[0.322]	[0.309]	[0.303]	[0.325]	[0.323]	[0.340]
LIECHTENSTEIN	-0.391*	-0.341	-0.266	-0.32	-0.278	-0.338	-1.027***	-1.075***	-1.253***	-1.222***	-1.154***	-1.135***
	[0.225]	[0.218]	[0.229]	[0.248]	[0.234]	[0.226]	[0.389]	[0.374]	[0.339]	[0.371]	[0.373]	[0.377]
NETHERLANDS	-0.566***	-0.417**	-0.272*	-0.432**	-0.347*	-0.423**	-1.203***	-1.150***	-1.259***	-1.334***	-1.223***	-1.220***
	[0.191]	[0.163]	[0.150]	[0.168]	[0.181]	[0.188]	[0.357]	[0.338]	[0.308]	[0.331]	[0.352]	[0.350]
NORWAY	-1.098***	-0.939***	-0.017	-0.136	-0.124	-0.249	-1.735***	-1.673***	-1.004**	-1.039*	-1.000*	-1.045*
	[0.189]	[0.197]	[0.442]	[0.469]	[0.428]	[0.447]	[0.360]	[0.335]	[0.490]	[0.530]	[0.514]	[0.543]
PORTUGAL	0.381	0.514*	0.848**	0.716**	0.780**	0.691**	-0.256	-0.219	-0.139	-0.186	-0.096	-0.106
	[0.285]	[0.303]	[0.329]	[0.315]	[0.331]	[0.322]	[0.369]	[0.371]	[0.389]	[0.389]	[0.411]	[0.407]
SPAIN	0.295	0.344	0.279	0.175	0.426	0.339	-0.342	-0.389	-0.708**	-0.727**	-0.45	-0.458
	[0.269]	[0.269]	[0.298]	[0.317]	[0.269]	[0.265]	[0.321]	[0.324]	[0.338]	[0.364]	[0.326]	[0.324]
SWEDEN	-0.127	-0.075	-0.243	-0.369	-0.233	-0.408**	-0.764**	-0.808**	-1.229***	-1.271***	-1.109***	-1.205***
	[0.248]	[0.221]	[0.217]	[0.232]	[0.224]	[0.207]	[0.351]	[0.315]	[0.326]	[0.363]	[0.343]	[0.373]
SWITZERLAND	-0.048	-0.035	-0.076	-0.104	-0.022	-0.08	-0.685*	-0.768**	-1.063***	-1.006***	-0.898***	-0.877**
	[0.235]	[0.205]	[0.204]	[0.231]	[0.200]	[0.204]	[0.381]	[0.346]	[0.315]	[0.356]	[0.329]	[0.352]
TURKEY							-0.637*	-0.733**	-0.987***	-0.902***	-0.876**	-0.797**
							[0.331]	[0.351]	[0.331]	[0.326]	[0.356]	[0.338]
UNITED KINGDOM	-0.335	-0.197	-0.111	-0.281	-0.146	-0.301	-0.971***	-0.931***	-1.098***	-1.184***	-1.022***	-1.098***
	[0.244]	[0.265]	[0.251]	[0.232]	[0.264]	[0.245]	[0.357]	[0.338]	[0.321]	[0.345]	[0.354]	[0.382]
CONSTANT	2.482***	2.252***	1.225	1.551**	1.828**	2.274***	3.119***	2.986***	2.212**	2.453***	2.704***	3.070***
	[0.778]	[0.835]	[0.808]	[0.721]	[0.780]	[0.771]	[0.943]	[0.978]	[0.908]	[0.855]	[0.923]	[0.945]
OBSERVATİONS	316	316	315	315	316	316	316	316	315	315	316	316
R-SQUARED	0.32	0.33	0.37	0.36	0.33	0.33	0.32	0.33	0.37	0.36	0.33	0.33

DEPENDENT VARIABLE – PB	Panel C - The omitted country is Portugal						Panel C - The omitted country is France					
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
OWN		0.450**	0.542**		0.401*			0.450**	0.542**		0.401*	
		[0.227]	[0.210]		[0.223]			[0.227]	[0.210]		[0.223]	
STATEOWN	-0.271			-0.421*		-0.277	-0.271			-0.421*		-0.277
	[0.244]			[0.255]		[0.258]	[0.244]			[0.255]		[0.258]
IND	-0.246			-0.226			-0.246			-0.226		
	[0.232]			[0.221]			[0.232]			[0.221]		
NED	0.283	0.253					0.283	0.253				
	[0.205]	[0.189]					[0.205]	[0.189]				
TENCEO	-0.014	-0.013			-0.011	-0.012	-0.014	-0.013			-0.011	-0.012
	[0.011]	[0.011]			[0.011]	[0.011]	[0.011]	[0.011]			[0.011]	[0.011]
AGECEO	-0.011	-0.01	-0.009	-0.011	-0.01	-0.011	-0.011	-0.01	-0.009	-0.011	-0.01	-0.011
	[0.007]	[0.007]	[0.007]	[0.007]	[0.007]	[0.007]	[0.007]	[0.007]	[0.007]	[0.007]	[0.007]	[0.007]
TENNED			-0.008	-0.007					-0.008	-0.007		
			[0.017]	[0.017]					[0.017]	[0.017]		
SIZE			-0.023**	-0.025**	-0.020**	-0.022**			-0.023**	-0.025**	-0.020**	-0.022**
			[0.011]	[0.011]	[0.010]	[0.010]			[0.011]	[0.011]	[0.010]	[0.010]
STR					0.01	0.002					0.01	0.002
					[0.142]	[0.146]					[0.142]	[0.146]
DUALITY	-0.17	-0.114	-0.094	-0.148	-0.093	-0.155	-0.17	-0.114	-0.094	-0.148	-0.093	-0.155
	[0.197]	[0.181]	[0.172]	[0.187]	[0.176]	[0.204]	[0.197]	[0.181]	[0.172]	[0.187]	[0.176]	[0.204]
TD/TA	-0.013***	-0.012***	-0.011***	-0.011***	-0.013***	-0.012***	-0.013***	-0.012***	-0.011***	-0.011***	-0.013***	-0.012***
	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]
GROWTH	0.004*	0.004*	0.005**	0.005**	0.004	0.004	0.004*	0.004*	0.005**	0.005**	0.004	0.004
	[0.003]	[0.003]	[0.002]	[0.002]	[0.003]	[0.003]	[0.003]	[0.003]	[0.002]	[0.002]	[0.003]	[0.003]
LOGTA	0.02	0.014	0.062**	0.070**	0.045	0.038	0.02	0.014	0.062**	0.070**	0.045	0.038
	[0.028]	[0.029]	[0.029]	[0.028]	[0.028]	[0.027]	[0.028]	[0.029]	[0.029]	[0.028]	[0.028]	[0.027]
AUSTRIA	-1.055***	-1.133***	-1.144***	-1.060***	-1.111***	-1.068***	0.329	0.232	0.501**	0.631***	0.455*	0.523**
	[0.340]	[0.344]	[0.294]	[0.286]	[0.292]	[0.284]	[0.247]	[0.238]	[0.217]	[0.230]	[0.247]	[0.253]
BELGIUM	-0.69	-0.637	-0.759	-0.798	-0.684	-0.697	0.694	0.728	0.885*	0.893*	0.882	0.893
	[0.579]	[0.563]	[0.536]	[0.539]	[0.536]	[0.536]	[0.531]	[0.514]	[0.517]	[0.525]	[0.551]	[0.549]
DENMARK	-0.721**	-0.735**	-0.823**	-0.859***	-0.845**	-0.938***	0.664***	0.630***	0.822***	0.831***	0.721***	0.652***

	[0.311]	[0.324]	[0.324]	[0.320]	[0.326]	[0.315]	[0.206]	[0.209]	[0.190]	[0.205]	[0.240]	[0.233]
FINLAND	-0.132	-0.108	0.304	0.234	-0.327	-0.402	1.252***	1.257***	1.949***	1.925***	1.239***	1.188***
	[0.322]	[0.330]	[0.354]	[0.340]	[0.365]	[0.355]	[0.227]	[0.222]	[0.260]	[0.266]	[0.274]	[0.275]
FRANCE	-1.384***	-1.365***	-1.644***	-1.691***	-1.566***	-1.590***						
	[0.245]	[0.255]	[0.260]	[0.247]	[0.277]	[0.271]						
GERMANY	-0.429	-0.497	-0.468	-0.383	-0.441	-0.396	0.955***	0.868***	1.176***	1.307***	1.124***	1.194***
	[0.330]	[0.334]	[0.302]	[0.300]	[0.297]	[0.295]	[0.245]	[0.240]	[0.248]	[0.257]	[0.268]	[0.273]
GREECE	0.256	0.219	0.139	0.186	0.096	0.106	1.640***	1.584***	1.783***	1.877***	1.662***	1.696***
	[0.369]	[0.371]	[0.389]	[0.389]	[0.411]	[0.407]	[0.317]	[0.303]	[0.301]	[0.323]	[0.327]	[0.340]
IRELAND	-0.819**	-0.654*	-0.921***	-1.132***	-0.813**	-0.933**	0.566**	0.711***	0.723***	0.558**	0.752***	0.657***
	[0.356]	[0.355]	[0.350]	[0.340]	[0.385]	[0.379]	[0.257]	[0.253]	[0.237]	[0.234]	[0.252]	[0.248]
ITALY	-0.781***	-0.777***	-0.852***	-0.882***	-0.834***	-0.892***	0.603***	0.588***	0.792***	0.808***	0.731***	0.699***
	[0.287]	[0.295]	[0.269]	[0.258]	[0.273]	[0.260]	[0.188]	[0.177]	[0.162]	[0.182]	[0.169]	[0.170]
LIECHTENSTEIN	-0.772**	-0.855**	-1.114***	-1.035***	-1.058***	-1.029***	0.613**	0.510**	0.530**	0.655**	0.508*	0.562**
	[0.355]	[0.355]	[0.377]	[0.381]	[0.378]	[0.369]	[0.256]	[0.247]	[0.256]	[0.278]	[0.288]	[0.281]
NETHERLANDS	-0.947***	-0.931***	-1.120***	-1.148***	-1.127***	-1.114***	0.437**	0.434***	0.524***	0.543***	0.438**	0.476**
	[0.290]	[0.286]	[0.292]	[0.281]	[0.288]	[0.277]	[0.173]	[0.161]	[0.147]	[0.148]	[0.209]	[0.208]
NORWAY	-1.479***	-1.453***	-0.865**	-0.852**	-0.904**	-0.939***	-0.095	-0.088	0.779**	0.838**	0.662*	0.651*
	[0.298]	[0.305]	[0.350]	[0.359]	[0.350]	[0.359]	[0.182]	[0.179]	[0.375]	[0.404]	[0.376]	[0.394]
PORTUGAL							1.384***	1.365***	1.644***	1.691***	1.566***	1.590***
							[0.245]	[0.255]	[0.260]	[0.247]	[0.277]	[0.271]
SPAIN	-0.086	-0.17	-0.569	-0.541	-0.354	-0.352	1.298***	1.195***	1.076***	1.149***	1.212***	1.238***
	[0.311]	[0.319]	[0.362]	[0.377]	[0.321]	[0.314]	[0.223]	[0.212]	[0.259]	[0.297]	[0.239]	[0.247]
SWEDEN	-0.508	-0.589*	-1.090***	-1.085***	-1.013***	-1.099***	0.876***	0.776***	0.554***	0.606***	0.553***	0.491***
	[0.322]	[0.302]	[0.330]	[0.338]	[0.351]	[0.345]	[0.225]	[0.167]	[0.175]	[0.211]	[0.176]	[0.169]
SWITZERLAND	-0.429	-0.549*	-0.924***	-0.820**	-0.801**	-0.771**	0.955***	0.816***	0.720***	0.871***	0.764***	0.820***
	[0.344]	[0.317]	[0.330]	[0.353]	[0.333]	[0.342]	[0.252]	[0.194]	[0.192]	[0.249]	[0.203]	[0.221]
TURKEY	-0.381	-0.514*	-0.848**	-0.716**	-0.780**	-0.691**	1.003***	0.851***	0.797***	0.975***	0.786***	0.900***
	[0.285]	[0.303]	[0.329]	[0.315]	[0.331]	[0.322]	[0.157]	[0.170]	[0.173]	[0.166]	[0.185]	[0.177]
UNITED KINGDOM	-0.716**	-0.711**	-0.959***	-0.997***	-0.925***	-0.992***	0.669***	0.654***	0.686***	0.693***	0.640***	0.599***
	[0.314]	[0.324]	[0.328]	[0.313]	[0.349]	[0.342]	[0.216]	[0.218]	[0.208]	[0.205]	[0.208]	[0.199]
CONSTANT	2.863***	2.766***	2.073**	2.266***	2.608***	2.964***	1.479*	1.401	0.428	0.576	1.042	1.374
	[0.913]	[0.975]	[0.938]	[0.843]	[0.913]	[0.894]	[0.863]	[0.926]	[0.888]	[0.793]	[0.867]	[0.845]
OBSERVATİONS	316	316	315	315	316	316	316	316	315	315	316	316
R-SQUARED	0.32	0.33	0.37	0.36	0.33	0.33	0.32	0.33	0.37	0.36	0.33	0.33

Table 16 The List of the Sample Banks

No	Company	Country	No	Company	Country
1	Agricultural Bank Of Greece SA	GREECE	99	Fortis NV	BELGIUM
2	Akbank TAS	TURKEY	100	General Bank Of Greece SA	GREECE
3	Alandsbanken ABP	FINLAND	101	Graubundner Kantonalbank	SWITZERLAND
4	Albaraka Turk	TURKEY	102	Gronlandsbanken A/S	DENMARK
5	Allied Irish Banks PLC	IRELAND	103	Helgeland Sparebank ASA	NORWAY
6	Alpha Bank SA	GREECE	104	HSBC Holdings PLC	U.K.
7	Alternatifbank AS	TURKEY	105	Hvidbjerg Bank A/S	DENMARK
8	Amagerbanken A/S	DENMARK	106	Hypothekarbank Lenzburg	SWITZERLAND
9	Aspis Bank SA	GREECE	107	IKB Deutsche Industriebank AG	GERMANY
10	Asya Katilim Bankasi AS	TURKEY	108	Intesa Sanpaolo	ITALY
11	Attica Bank SA	GREECE	109	IW Bank	ITALY
12	Aurskog Sparebank ASA	NORWAY	110	Julius Bar Gruppe AG	SWITZERLAND
13	Banca Carige	ITALY	111	Jyske Bank A/S	DENMARK
14	Banca Finnat	ITALY	112	KBC Ancora	BELGIUM
15	Banca Monte DEI Paschi	ITALY	113	KBC Groep	BELGIUM
16	Banca Popolare DI Milano	ITALY	114	Kreditbanken A/S	DENMARK
17	Banca Popolare DI Sondrio	ITALY	115	Lan & Spar Bank A/S	DENMARK
18	Banca Popolare DI Spoleto Spa	ITALY	116	Landesbank Berlin Holding AG	GERMANY
19	Banca Popolare Emilia Romagna	ITALY	117	Liechtensteinische Landesbank AG	LIECHTENSTEIN
20	Banca Popolare Etruria	ITALY	118	Lloyds Banking Group PLC	U.K.
21	Banco Bilbao Vizcaya Argentaria SA	SPAIN	119	Lollands Bank A/S	DENMARK
22	Banco BPI SA	PORTUGAL	120	Luzerner Kantonalbank AG	SWITZERLAND
23	Banco Comercial Portugues	PORTUGAL	121	Marfin Egnatia Bank SA	GREECE
24	Banco De Sabadell SA	SPAIN	122	Marfin Investment Group Holdings SA	GREECE
25	Banco De Valencia SA	SPAIN	123	Max Bank A/S	DENMARK
26	Banco DI Desio E Della Brianza	ITALY	124	Mediobanca	ITALY
27	Banco DI Sardegna	ITALY	125	Merkur Bank Kgaa	GERMANY
28	Banco Espanol De Credito SA	SPAIN	126	Mons Bank A/S	DENMARK
29	Banco Espirito Santo SA	PORTUGAL	127	Morso Bank A/S	DENMARK
30	Banco Guipuzcoano SA	SPAIN	128	National Bank Of Greece SA	GREECE
31	Banco Pastor SA	SPAIN	129	Natixis	FRANCE
32	Banco Popolare	ITALY	130	Neue Aargauer Bank AG	SWITZERLAND
33	Banco Popular Espanol SA	SPAIN	131	Nordea Bank AB	SWEDEN
34	Banco Santander SA	SPAIN	132	Nordfyns Bank A/S	DENMARK
35	Banif-Sgps SA	PORTUGAL	133	Nordjyske Bank A/S	DENMARK
36	Bank CA Saint Gallen	SWITZERLAND	134	Norresundby Bank A/S	DENMARK
37	Bank Coop AG	SWITZERLAND	135	Oberbank AG	AUSTRIA
38	Bank FUR Tirol Und Vorarlberg AG	AUSTRIA	136	Oldenburgische Landesbank AG	GERMANY
39	Bank Linth LLB AG	SWITZERLAND	137	Osterreichische Volksbanken AG	AUSTRIA
40	Bank Of Greece SA	GREECE	138	Ostjydsk Bank A/S	DENMARK

41	Bank Of Ireland	IRELAND
42	Bank Of Piraeus SA	GREECE
43	Bank Sarasin & CIE AG	SWITZERLAND
44	Bankinter SA	SPAIN
45	Banque Cantonale De Geneve	SWITZERLAND
46	Banque Cantonale Du Jura	SWITZERLAND
47	Banque Cantonale Vaudoise	SWITZERLAND
48	Banque De Savoie	FRANCE
49	Banque Nationale De Belgique	BELGIUM
50	Banque Reunion	FRANCE
51	Banque Tarneaud	FRANCE
52	Barclays PLC	U.K.
53	Basellandschaftliche Kantonalbank	SWITZERLAND
54	Basler Kantonalbank	SWITZERLAND
55	Berner Kantonalbank AG	SWITZERLAND
56	BKS Bank AG	AUSTRIA
57	BNP Paribas	FRANCE
58	Caja Ahorros Del Mediterraneo	SPAIN
59	Commerzbank AG	GERMANY
60	Crcam Aquitaine	FRANCE
61	Crcam Atlantique	FRANCE
62	Crcam Brie Picardie CCI	FRANCE
63	Crcam Ille-Village CCI	FRANCE
64	Crcam Langued CCI	FRANCE
65	Crcam Nord De France CCI	FRANCE
66	Crcam Normandie Seine	FRANCE
67	Credit Agricole Alpes Provences	FRANCE
68	Credit Agricole Ile De France	FRANCE
69	Credit Agricole Loire-H-Loire	FRANCE
70	Credit Agricole Morbihan	FRANCE
71	Credit Agricole SA	FRANCE
72	Credit Agricole SUD Rhone Alpes	FRANCE
73	Credit Agricole Toulouse	FRANCE
74	Credit Agricole Touraine	FRANCE
75	Credit Foncier De Monaco	FRANCE
76	Credit Industriel Et Commercial	FRANCE
77	Credit Suisse Group AG	SWITZERLAND
78	Credito Artigiano	ITALY
79	Credito Bergamasco	ITALY
80	Credito Emiliano	ITALY
81	Credito Valtellines	ITALY
82	Danske Bank A/S	DENMARK
83	Denizbank AS	TURKEY
84	Deutsche Bank AG	GERMANY
85	Deutsche Postbank AG	GERMANY
139	Pohjola Pankki A	FINLAND
140	Proton Bank SA	GREECE
141	Quirin Bank AG	GERMANY
142	Raiffeisen International Bank Holding AG	AUSTRIA
143	Ringkjobing Landbobank	DENMARK
144	Royal Bank Of Scotland Group PLC	U.K.
145	Salling Bank A/S	DENMARK
146	Sandnes Sparebank ASA	NORWAY
147	Schweizerische National Bank	SWITZERLAND
148	SE Banken	SWEDEN
149	Sekerbank TAS	TURKEY
150	Skaelskor Bank A/S	DENMARK
151	Skjern Bank A/S	DENMARK
152	Societe Generale	FRANCE
153	Spar Nord Bank A/S	DENMARK
154	Sparbank A/S	DENMARK
155	Sparebank 1 Buskerud Vestfold ASA	NORWAY
156	Sparebank 1 Nord-Norge ASA	NORWAY
157	Sparebank 1 SMN	NORWAY
158	Sparebank 1 SR Bank ASA	NORWAY
159	Sparebanken More ASA	NORWAY
160	Sparebanken Ost ASA	NORWAY
161	Sparekassen Faaborg A/S	DENMARK
162	St Galler Kantonalbank AG	SWITZERLAND
163	Standard Chartered PLC	U.K.
164	Svendborg Sparekasse A/S	DENMARK
165	Svenska Handelsbanken AB	SWEDEN
166	Swedbank AB	SWEDEN
167	Sydbank A/S	DENMARK
168	Tekstil Bankasi AS	TURKEY
169	Tonder Bank A/S	DENMARK
170	Totalbanken A/S	DENMARK
171	Totens Sparebank ASA	NORWAY
172	Tradegate AG	GERMANY
173	TT Hellenic Postbank SA	GREECE
174	Turk Ekonomi Bankasi AS	TURKEY
175	Turkiye Garanti Bankasi AS	TURKEY
176	Turkiye Halk Bankasi AS	TURKEY
177	Turkiye Is Bankasi AS	TURKEY
178	Turkiye Kalkinma Bankasi AS	TURKEY
179	Turkiye Sinai Kalkinma Bankasi AS	TURKEY
180	Turkiye Vakiflar Bankasi Tao	TURKEY
181	UBI Banca	ITALY
182	UBS AG	SWITZERLAND
183	Umweltbank AG	GERMANY

86	Dexia	BELGIUM	184	Unicredit	ITALY
87	Diba Bank A/S	DENMARK	185	Valiant Holding AG	SWITZERLAND
88	Djurslands Bank A/S	DENMARK	186	Van Lanschot NV	NETHERLANDS
89	DNB Nor ASA	NORWAY	187	Verwaltungs Und Privat-Bank AG	LIECHTENSTEIN
90	EFG Eurobank Ergasias SA	GREECE	188	Vestfyns Bank A/S	DENMARK
91	EFG International AG	SWITZERLAND	189	Vestjysk Bank A/S	DENMARK
92	Emporiki Bank Of Greece SA	GREECE	190	Vinderup Bank A/S	DENMARK
93	Erste Group Bank AG	AUSTRIA	191	Vorarlberg Volksbank	AUSTRIA
94	European Islamic Investment Bank	U.K.	192	Vordingborg Bank A/S	DENMARK
95	FIB Frankfurter Investmentbank	GERMANY	193	Walliser Kantonalbank	SWITZERLAND
96	Finansbank AS	TURKEY	194	Yapi ve Kredi Bankasi AS	TURKEY
97	Finibanco SA	PORTUGAL	195	Zuger Kantonalbank AG	SWITZERLAND
98	Fortis Bank AS	TURKEY			