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## The Association of Corporate Governance and Economy Performance in Turkish Business

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### Abstract:

The aim of this study is to examine the effects of corporate governance practices on financial performance for listed Turkish companies in BIST star market over the period of 2010 to 2015. This study also investigates whether there is a relationship between corporate governance index (CG Index) and firm performance. In this study, five attributes of corporate governance (board size, board composition, ownership concentration, and managerial ownership and CEO duality) have been used to determine their influence on firm performance. Tobin's Q, ROA and ROE are selected as firm performance measures. The empirical results show that not all attributes of corporate governance significantly consistent for all three financial performance measures (Tobin's Q, ROA and ROE) excepting board size and CG Index. Board composition, ownership concentration, managerial ownership and CEO duality have mix and statistically inconsistent relationship with all three financial performance measures.

### Keywords

1. Turkey, corporate governance, firm performance.

### 1. Introduction

Corporate governance first came into spotlight in the Cadbury Report in 1992. The Cadbury report is widely seen as the first comply corporate governance code. In the Report, corporate governance defined shortly as "the system by which companies are directed and controlled" (Cadbury, 1992:15). Corporate governance refers to the system of rules, practices, process and relations by which corporation are controlled and directed. Corporate governance practices enhance good governance and balance the interests of the corporation's stakeholders such as the board of directors, managers, shareholders, creditors, auditors, government, customers community. Shleifer and Vishny (1997) suggest that corporate governance maximize the return to the shareholder and provide an efficient system to mitigate agency problems.

Public attention on corporate governance issues have increased after the recent wave of accounting scandals occurred in US at prominent companies such as Enron, WorldCom, Parmalat and Tyco. These accounting scandals have shaken the confidence of investors and other stakeholders about financial report integrity and caused widespread outcry. Fallowing these scandals wide-ranging legislative and regulatory changes have been made in audit and corporate governance rules in

United States (U.S). In 2002, the U.S. Congress passed legislation, the Sarbanes-Oxley Act of 2002, hat establishes many new requirements, including those governing the composition and responsibilities of audit committees. Furthermore, in 2004, The Organization for Economic Co-operation and Development (OECD) updated and published its "Principles of Corporate Governance" which originally developed in 1999. These principles consist of ensuring the basis for effective corporate governance, rights of shareholders, equitable treatment of shareholders, role stakeholders in corporate disclosure governance, and transparency responsibilities of the board (OECD, 2004:7). Taking into account recent developments in corporate sector and capital markets OECD launched to review of these principles at the meeting of G20 in September 2015 held in Turkey.

Corporate governance was first introduced in Turkey in the report published by Turkish Industry and Business Association (TUSIAD) in December 2002. In 2003, Capital Markets Board of Turkey (CMB) published its corporate governance principles, which consist of four main sections: "shareholders", "public disclosure and transparency", "stakeholders" and "board of directors", based on OECD principles which originally developed in 1999 and updated them in 2005 after OECD revised the principles in 2004. Starting from these dates, the CMB has made considerable efforts to implement corporate governance principles in Turkey and to harmonize Turkish capital markets with world markets. Companies listed on public stock exchange are required to disclose information about compliance of the principles of corporate governance in "The Corporate Governance Principles Compliance Report", which is included as a separate section in the Annual Activity Report. Additionally, Borsa Istanbul (BIST), formerly known as the Istanbul Stock Exchange (ISE), established The Corporate Governance Index in 2007 to measure the price and return performance of the companies traded on stock exchange.

The objective of this study is to investigate whether corporate governance practices have an impact on firm performance in Turkey. To examine the relationship between corporate governance practices and firm performance, I use several corporate governance measures that have been mostly referenced in the international literature: board size, board independence, duality of the CEO; and ownership structure and additionally corporate governance index that constructed for Turkish listed firm in BIST, mentioned above. I also use three

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different financial measures for firm performance: ROA (Return on Assets) ratio, ROE (Return on Equity) ratio and Tobin's O ratio (the market value of a firm's assets). The hypotheses constructed for this study are examined using data set which consists of 107 Turkish listed companies for the period of 6 years from 2010 to 2015. Statistical analysis is carried out using EViews 8.0 package program. The results of statistical analysis indicate that board size has a significant positive effect on firm performance under the all three financial performance measures, namely Tobin's Q, ROA and ROE. Board independence has a significant negative effect on firm performance only under the Tobin's Q and insignificant positive effect on ROE. The separation of CEO and chairman position (CEO duality) has a significant negative effect on ROA and ROE but not significant effect on Tobin's Q. Ownership structure has inconsistent results regarding effect on firm performance. Finally, the empirical findings show that corporate governance index has a significant positive association with firm performance under the all three performance measures. The empirical findings of this study are expected to provide additional evidence to the literature about association between corporate governance practices and firm performance.

The rest of the paper is organized as follows. Section 2 provides literature review on corporate governance and firm performance and hypothesis development for this study. Section 3 describes methodology of research. Section 4 shows data analysis and results and section 5 concludes.

## 2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

There is a considerable study which has examined the relationship between corporate governance and firm performance both theoretically and empirically. The majority of researchers have focused on specific features of corporate governance, such as board composition, size of boards, duality of CEO/chairman positions, board diversity and ownership, information asymmetries and board culture, to establish a relationship between corporate governance and firm performance. This section gives an overview of literature on which hypothesizes are developed for this study.

### 2.1. BOARD SIZE AND FIRM PERFORMANCE

Board size is an important feature of board structure, as it influences the communication and coordination and control management in corporation. Board size effect is most controversial issue in academic literature. Pfeffer (1972; 1983), Pearce and Zahra (1992), and Goodstein et al. (1994) argue that large board size will improve firm's performance. According to them increased size and diversity may create a network with external environment and reduce uncertainties and thereby secure corporate's valuable resources. On the other hand, Lipton and Lorsch (1992) and Jensen (1993) suggest that large board creates most likely coordination and communication problems in corporation thereby, less sincere discussion of managerial performance and less effective in monitoring. Empirical

results on the relationship between board size and firm performance provided mixed results. While Eisenberg et al. (1988), Hermalin and Weisbach (2003), De Andres et al. (2005), Cheng et al. (2008) and Coles et al. (2008) find a significant negative relationship between board size and firm performance, Dalton et al. (1999), Adams and Mehran (2005) and Beiner et al. (2004: 2006) find positive relationship between board size and firm performance.

Considering discussion about board size and mixed empirical results give good reason to re-examine the association between board size and corporate performance for Turkish firm. Hence following hypothesis is formed.

There is a positive relationship between board size and firm performance.

### 2.2. BOARD COMPOSITION AND FIRM PERFORMANCE

One of the key objectives in corporate governance is to deal with agency problems. According to Fama (1980) and Jensen (1993), the board of directors provides a very important monitoring function in dealing with agency problems in the company. In diffused ownership situation, monitoring function must focus on reducing the agency problems between the dispersed shareholders and the management (Hermalin and Weiscbach, 2003). However, for companies with a high ownership concentration, the agency conflict between the controlling shareholders and the minority shareholders (Lefort and Urzua, 2008; Morck and Yeung, 2003). According to agency theory, boards dominated by outsiders mitigate the agency problem by monitoring and controlling the opportunistic behavior of management (Jensen and Meckling, 1976). Fama (1980) and Fama and Jensen (1983) suggest that board outsiders provide expert knowledge and monitoring services and thereby add value to firms. Outside directors are supposed to be guardians for shareholder's interest through monitoring and supposed to contribute positively to a firm's performance (Jensen and Murphy, 1990; Mehran, 1995). However, empirical studies on the relationship between board composition and firm performance provide mixed results. For example, Coles et al. (2001), Erickson et al. (2005), Rashid and Lodh (2008) and Moscu (2013) find negative relationship between composition of the board (the proportion of independent directors on the board) and firm performance for listed firms. Conversely, Liang and Lie (1999), Rashid et al. (2010), Dehaena et al. (2001), Callen et al. (2003), Erhardt et al. (2003), Krivogorsky (2006), Lefort and Urzua (2008) and Awan (2012) find significant positive relationship between board composition and firm financial perfor-mance. However, Bhagat and Black (2002), Bermig and Frick (2010, Ness et al. (2010), Kumar and Singh (2012) and Latif et.al (2013) find no significant relationship between board composition and firm performance. In the light of the agency theory, the following research hypothesis can be formed.

There is a positive relationship between board composition and firm performance.

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### 2.3. CEO-CHAIRMAN DUALITY AND FIRM **PERFORMANCE**

Chief Executive Officer (CEO) duality refers to the situation when the CEO also holds the position of the chairman of the board. Like the board size, CEO duality is one of the controversial issues in academic literature. Unlike agency theory, stewardship theory assumes that managers are stewards whose behaviors are aligned with the objectives of their principals (Donaldson and Davis, 1991). According to stewardship theory, managers protect the interests of the owners and make decisions on their behalf. Firms that embrace stewardship place the CEO and the Chairman responsibilities under one executive allow for intimate knowledge of organizational operation and a deep commitment to success. The combined role of CEO and board chairman would assist to attain superior performance. In this situation, power and authority are concentrated in a single person. Thus, the organization will enjoy the benefits of unity of direction and of strong command and control.

Davis et al. (1997) and Adams et al. (2005) support CEO duality as it reflects the stewardship theory of management. They argue that holding two top positions ensures monitoring and implementing control thorough the corporation. Conversely, Fama and Jensen (1983) and Jensen (1993) suggest that CEO duality would reduce the efficiency of the board's supervision in corporation management. Thus, CEO duality increase the agency cost. Sharing the same thought, Jensen and Meckling (1976), Harris and Helfat (1998) and Gillan (2006) argue that in combined roles, the CEO can set the board's agenda by adopting personal interest strategies, thereby can lead to the conflict of interest and challenge the board's ability to monitor executives. Empirical studies relating to the impact of CEO duality on corporate performance provide inconclusive and mixed results. For example, Coles et al. (2001), Judge et al. (2003), Bhagat and Bolton (2008) and Heidric and Struggles (2009) find negative significant relationship between CEO duality and firm performance. In contrast, Wand and Ong (2005), Carapeto et al. (2005) and Schmid and Zimmermann (2007) find no significant relationship between firm performance and CEO duality. Based on the discussions and in the light of stewardship theory, the following hypothesis will be test:

There is a positive relationship between CEO duality and firm performance.

### OWNERSHIP STRUCTURE **FIRM PERFORMANCE**

The relationship between ownership structure and corporate performance has been receiving significant attention in literature. According to Berle and Means (1932) the separation of ownership and control of corporations reduces the management incentives to maximize corporate efficiency. Jensen and Meckling (1976) reveal that the separation of control and ownership has a significant effect on the validity of maximizing value of firm's owners as the separation naturally opens door for managers to act in their own interests. In this context ownership structure is very important determinants for agency problems and hence for good governance. In the literature, ownership structure categorized by taking into accounts the level of concentration and ownership identity. Ownership concentration refers to the presence of large shareholders. Ownership identity is about insider (managerial) shareholders and outsider shareholders. Schleifer and Vishny (1997) claims that owning a large share of the corporate's equity provides substantial control rights and thereby reduce the agency problem and increase corporate performance. Besides, high level of ownership concentration gives opportunity for large shareholders to expropriate minority shareholders (Schleifer and Vishny 1997; La Porta et al. 1999). Similarly, a large managerial shareholding helps to align the interest of shareholders and managers, so increase corporate performance (Jensen, 1993). According to Brickley et al. (1988) managerial ownership encourage manager to supervise management in a more efficient way.

Empirical studies regarding to the relationship between ownership structure and firm's performance indicate mixed and inconclusive results. For example, Jandick and Renie (2008), Singh and Gaur (2009), Mandacı and Gumus (2010), Obiyo and Lenee (2011), Khan et al. (2011) and Karaca and Eksi (2012) find a positive association between ownership concentration and firm performance. However, Belkhir (2005), Millet-Reyes and Zhao (2010) and Sanchez-Ballesta J.P. and Garcia-Meca E. (2011) find a negative association between ownership concentration and firm performance. Besides Earle et al. (2005), Sanchez-Ballesta J.P. and Garcia-Meca E. (2007,) Bektas and Kaymak (2009), Wahla et al. (2012), and Karaca and Eksi (2012) find no relationship between ownership concentration and firm performance.

Empirical studies that examined the relationship between managerial ownership and firm performance also reveal mixed and inconclusive findings. For example, while Morck et al. (1988), Sanchez-Ballesta J.P. and Garcia-Meca E. (2007), Dey (2008) and Bauer et al. (2010) find a positive relationship, Belkhir (2005), Irina and Nadezhda (2009), Mandacı and Gumus (2010), Liang et al. (2011) and Wahla et al. (2012) find a negative relationship between managerial ownership and firm's performance. Chang (2009) and Sanchez-Ballesta J.P. and Garcia-Meca E. (2011) find no relationship between managerial ownership and firm's performance.

Mixed and inconclusive findings of empirical studies give reason to re- examine relationship between ownership structure and firm performance. In the light of the agency theory, the following hypothesizes are proposed.

There is a positive relationship between ownership concentration and firm performance.

: There is a positive relationship between managerial ownership and firm performance
2.5. CORPORATE GOVERNANCE INDEX AND

FIRM PERFORMANCE

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Corporate governance index is constructed on several attributes known to be associated with good corporate governance. BIST Corporate Governance index started to be calculated on August 31, 2007 aims to measure the price and return performance of the companies traded on Borsa Istanbul Markets. BIST Corporate Governance (CG) Index includes companies that receive rating of minimum 7 over 10 in terms of compliance with corporate governance principles. The corporate governance rating is determined by rating agencies authorized by the CMB of Turkey as a result of their assessment of the company's with corporate governance principles. In this context, fallowing hypothesis is formed.

: There is a positive relationship between CG Index and firm performance.

### 3. METHODOLOGY

### 3.1. VARIABLES AND MODELS

In this study three different dependent variables have been adopted to measure firm's financial performance. One is Tobin's Q, the ratio of the market value of the firm assets. Tobin's Q is used widely in several different versions as measure of corporate performance. It provides an estimate of market values of the firm total assets. Second is Return on Assets (ROA) ratio and third is Return on Equity (ROE) ratio. The independent variables for this study are corporate governance attributes, namely board size, board composition, CEO duality, ownership concentration, managerial ownership and corporate governance index, which are hy-pothesized to influence firms financial performance. Firm size, leverage and firm age are control variables. Measurement of dependent independent and control variables are summarized in Table 1.

TABLE 1: SUMMARY OF VARIABLES MEASUREMENT

Variables	Definition	Measurement				
Dependent Var	iables					
TQ	Total Market Value of Firm/Total Asset Value					
ROA	Return on Assets	Net Income /Total Assets				
ROE	Return on Equity	Net Income /Shareholder's Equity				
Independent Va	ariables					
BSIZE	Total number of directed the board					
ВСОМР	Board composition	The percentage of independen directors to total number o directors on the board.				
CEODUAL	CEO duality	Dummy variable, taking a value of 1 if chairman also hold the position of CEO, and 0 otherwise.				
OWNC	Ownership concentration	The proportion of shares held by the largest shareholder				
OWNM	Managerial Ownership	The proportion of shares owned by insiders and board members				
CGINDEX	Corporate Governance Index	Dummy variable, taking a value of 1 if firm listed in CGINDEX and 0 otherwise.				
Control Variab	les					
FSIZE	Firm Size The logarithm of book value of total assets					

LEV	Financial leverage	Ratio of total debt divided by equity
FAGE		The logarithm of years since firm establishment

In order to examine the effect of corporate governance attributes on firm performance, the following three regression models are developed:

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is	is the managerial ownership for firm i at time t; !														



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## 3.2. SAMPLE SELECTION AND DATA COLLECTION

The sample covers 107 listed firms on Star Market of Borsa Istanbul (BIST), formerly known as Istanbul Stock Exchange (ISE), for the period from 2010 to 2015. In the end of 2015, BIST structure and the share market names were changed with the announcement. According the announcement, The National Market and Second National Market were abolished and replaced by to new markets, namely Star Market and Main Market. BIST Star Market refers to the shares included in BIST 100 index and the market value of free float more than 100 million TL. BIST Main Market refers to the market value of the free float between 25 million TL and 100 million TL. There are 120 companies listed on BIST Star Market as of 31.12.2015. The sample is constructed on the basis following criteria: First it is eliminated 4 companies having different reporting date from the financial year end (31 December). Second 9 listed companies excluded due to missing data. The final sample consists of 107 listed companies which operated in a range of industries, namely: Mining (2) Manufacturing (41), Electricity gas and water (5), Construction (3), Wholesale and retail trade (14), Transportation and telecommunication (4), Financial and institutions (including holding investment companies) (33), Technology (5). The data for each of 107 companies has been collected from their activity annual reports available on the companies' own website and Public Disclosure Platform (KAP)'s website.

## **4.** DATA ANALYSIS AND RESULTS **4.1.** DESCRIPTIVE STATISTICS

Table 2 presents descriptive statistics for related variables. As shown in the table, the average firm performance is 156 % under Tobin's Q, 5 % under the ROA and 8% under the ROE performance measures. The average board size is 8.8 directors, ranging from a minimum of 4 board directors to a maximum 18 of board directors. The average board composition is 29 %, ranging from a minimum of 0 to a maximum 42.8 %. It means 29 % of the board directors consist of independent board members for the sample firms.

7. TABLE 2: DESCRIPTIVE STATISTICS

Variab les	Minim um	Maxim um	Mea n	Media n	St d. De v.
	-		1.5	1.3	17.86
TQ	422.2258	143.4411	618	141	70
			0.0	0.0	0.074
ROA	-0.3763	0.3724	526	448	2
			0.0	0.1	1.225
ROE	-17.9678	18.2188	887	168	8
			8.8	9.0	2.507
BSIZE	4.0000	18.0000	224	000	3
			0.2	0.3	0.079
BCOMP	0.0000	0.4286	931	333	4
CEODU	0.0000	1.0000	0.0	0.0	0.244

AL			639	000	7
			0.5	0.5	0.208
OWNC	0.0670	0.9880	051	000	5
			0.0	0.0	0.179
OWNM	0.0000	0.8927	836	000	1
CGIND			0.3	0.0	0.469
EX	0.0000	1.0000	271	000	5
			9.3	9.3	0.739
FSIZE	7.5716	11.4466	840	191	0
			0.5	0.5	0.239
LEV	0.0239	1.0385	357	404	8
			1.5	1.6	0.201
FAGE	0.9542	1.9590	676	232	7

The results also indicate that 6 % of the sample firms have the CEO duality. In other words, approximately 94 % of the firms subjected to analysis have separated the position of chairman and CEO. Regarding the ownership structure, while the average ratio of the share of the largest shareholder is 50 % with a minimum of 6.7 % and a maximum of 98.8 %, the average managerial ownership is 8 % ranging from a minimum of 0 to a maximum of 89.27 %. Descriptive statistics for CG index reveal that approximately 32 % of companies in the sample comply with corporate governance principles of CMB.

### 4.2 CORRELATION ANALYSIS

Table 3 represents Spearman and Pearson correlation analysis between the research's variables. The results spearman rank correlation indicates that there is significantly positive relationship between Tobin's Q and ownership concentration and leverage. However, board size is not significantly associated with Tobin's Q. Managerial ownership and firm size are negatively and significantly associated with Tobin Q. Ownership concentration, managerial ownership, firm size and leverage are negatively and significantly associated with ROA. Board size, CG index and firm age are significantly and positively related with ROE. But CEO duality, ownership concentration and managerial ownership are negatively and significantly associated with ROE. Pearson correlation results show that none of the re-search variables have a significant relationship with Tobin Q. However, Pearson results reveal a significant negative relationship between ROA and board compo-sition, CEO duality, ownership concentration, managerial ownership, firm size and leverage. On the other hand, the results indicate that while ownership concen-tration is significantly and positively associated, managerial ownership negatively and significantly associated with ROE.

TABLE 3: RESULTS OF SPEARMAN AND PEARSON CORRELATION

EARSON CORRELATION					
Spearma	Pear				

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		n		son		
Variable	TQ	ROA	ROE	Γ Q	ROA	ROE
BSIZE	0.0555	0.0249	0.1788	0.01 33	0.0088	0.059 4
ВСОМР	-0.0311	0.0112	0.0033	- 0.02 33	-0.1060*	0.014 0
CEODU AL	-0.0041	0.0628	0.0736	0.02 75	-0.1004 *	0.097 0
OWNC	0.0785	- 0.0988 **	0.1026	0.03 54	-0.1289*	0.110 9 *
OWNM	- 0.0774 **	- 0.1479 *	0.1618	- 0.01 95	-0.0982 *	0.030 7 *
CGIND EX	-0.0255	0.0145	0.1052	0.00 75	-0.0135	0.024 6
FSIZE	0.2275	0.2640	0.0294	- 0.02 23	-0.2214*	0.018 9
LEV	0.1196	0.5010	-0.0221	- 0.02 28	-0.4584*	0.038 9
FAGE	-0.0182	0.0533	0.0898	- 0.06 77	0.0871 **	0.066 5

Significance is indicated by \*, \*\* and \*\*\* for the 1%, 5% and 10% level respectively.

### 4.3. MULTIPLE LINEAR REGRESSION ANALYSIS

Table 4 presents the findings of the regression models which are regressed financial firm's performance (Tobin's Q, ROA and ROE) on corporate governance attributes and control variables. The table also shows the explanatory power of multiple linear regression models with adjusted R square and F statistic value.

TABLE 4: REGRESSION RESULTS

	To	obin's Q		ROA		ROE
Variables						
	Coeff.	t-Stat.	Coeff.	t-Stat.	Coeff.	t-Stat.
						-
C	7.320 8	13.193 *	0.1374	11.902 *	0.1716	3.0653
BSIZE	0.084 9	6.005 *	0.0023	7.9751 *	0.010	5.1386
DSIZE	-	0.003	0.0023	1.7731	0.090	
BCOMP	2.2366	-4.176 *	-0.0058	-0.3934	0	1.4795
						-
CEODUA L	0.246 5	1.146	-0.0140	1.726	0.2239	6.5860
L	3	1.170	-0.0140		0.2237	_
	1.261				-	3.8964
OWNC	6	8.217 *	-0.0230	-5.4915*	0.1079	者
OWAIM	1.0063	0.434#	0.0215	2.0704#	0.033	0.0650
OWNM	1.8063 0.168	-8.434 *	-0.0215	-3.0704 *	8 0.023	0.9652 3.1801
CGINDEX	5	2.593 *	0.0054	3.558 *	6	3.1801
		-		-		
FSIZE	0.0972	1.561	-0.0026	2.0014	0.004 5	0.5908
						-
	-				-	4.0324
LEV	0.8915	-5.993 *	-0.1274	-24.609 *	0.0903	*
FAGE	3.2862	-14.478*	0.0028	0.5888	0.140	6.8900
Weighted St			3.0020	3.0000		
R-squared	0.4768		0.6712		0.186	

Adj. R- squared	0.4693	0.6665	0.174 4
F-statistic	63.896	143.11 3	16.02 3
Prob(F- statistic)	0.000	0.000	0.000

Significance is indicated by \*, \*\*, and \*\*\* for the 1%, 5% and 10% level respectively.

The results indicate that estimated models give explanation the variations in Tobin's Q, ROA and ROE quite well. The adjusted R square value is approximately 47

for first regression model, where Q is the dependent variable, 67 % for second regression model, where ROA is the dependent variable and 17 % for third regression model, where ROE is the dependent variable. These results indicate that the 67 % of the variance in ROA that is predictable from corporate governance attributes and other independent variables. In the same way the 47 % of the variance in Tobin's Q that is predictable from corporate governance attributes and other independent variables. Furthermore, the value of F statistic is also statistically significant at the 0.01 level for all the three estimated models.

Estimation results of the first regression model show that board size, ownership concentration, and CG index have a significant positive relationship with Tobin's Q at the 0.01 level. Regarding coefficient values, board size has 0.0849, ownership concentration has 1.2616 and CG index has 0.1685 coefficient value. This means that a 1% increase in board size and ownership concentration increase firm performance 8.5 %, and 126 % respectively and being in the CG index increases firm performance by 18%. In addition, CEO duality has positive effect on firm performance but not significant with coefficient value is 0.246. These results support Hypothesis 1, Hypothesis 4 and Hypothesis 6. However, board composition, managerial ownership, firm size, leverage and firm age have negative relationship with firm performance having coefficient value is -2.236, -1.806, -0.097, -0.891, -3.286 respectively. Thus the results don't support Hypothesis 2 and Hypothesis 5. Table 4 also gives the results of the coefficient estimates for the second model that ROA as dependent variable. According to estimation results, Board size and CG index are positively related with ROA at 0.01 significant level. Firm age is also having positive effect on ROA but not significantly. CEO duality, ownership concentration, managerial ownership, firm size and leverage have a significant negative impact on firm performance (ROA) with coefficient value is -0.014, -0.023, -0.0215, -0.0026 and -0.1274 respectively. Board composition is too having negative effect on ROA but not significantly. These results support only Hypothesis 1 and Hypothesis 6 but not support other hypothesises.

The estimation results of the regression model that regress ROE on dependent variables show that board size, CG index and firm age have a significant positive effect on ROE with coefficient value is 0.0109, 0.0236 and 0.1402 respectively. Besides board composition and managerial ownership and firm size have positive effect on ROE but insignificantly with coefficient value is



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0.0900, 0.0338 and 0.0045 respectively. CEO duality, ownership concentration and leverage have a significant negative impact on ROE with coefficient value is -0.2239, -0.1079 and -0.0903 respectively. These results support Hypothesis 1 and Hypothesis 6 but not support Hypothesis 3 and Hypothesis 4.

To summarize, results of regression estimations indicate that board size has a significant impact on firm performance. Besides the average board size for analysed firm is 8.8 persons. Thus, these findings empirically support the suggestion of Lipton and Lorsch (1992) that board of directors should consist of eight or nine persons. However, results regarding CEO duality don't support the suggestion of Davis et.al (1997) and Adams et al. (2005) and thus stewardship theory. Finally, estimation results concerning managerial ownership don't support the suggestion of Brickley et al. (1988) and Jensen (1993).

### 5. CONCLUSION

This study investigates the relationship between corporate governance practices and financial performance for listed Turkish companies in BIST star market over the period of 2010 to 2015. In order to provide a better understanding about the relationship between corporate governance and financial performance, various variables are used in this study. More precisely, three financial performance measures, which are Tobin's Q, ROA and ROE; 5 attributes characteristics of corporate governance, including board size, board composition, ownership concentration, managerial ownership, CEO duality and other variables, which are corporate gov-ernance index, firm size, leverage and firm age.

Results generated from the regression analysis indicate that there is a significant positive relationship between board size and firm's financial performance. The result is significantly consistent for both market based performance measure (Tobin's Q) and accounting based performance measures (ROA and ROE). Regression results show that the independent directors in board have a negative impact on financial performance. More precisely, independent directors have a significant negative effect on Tobin's Q but insignificant negative effect on ROA. Board composition is only having positive effect on ROE but insignificant. It can be stated that research findings don't support Hypothesis 2 and the agency theory that assume independent directors have an important controlling and advising function. Regarding the relationship between CEO duality and firm performance, empirical results don't support Hypothesis 3 and thereby, stewardship theory. Analysis results validate hypothesis 4 for market based performance measure but does not validate for accounting based performance. Concerning hypothesis 5, empirical results show that there is a significant and negative association between managerial ownership and Tobin's O and ROA. However, there is positive but insignificant association between managerial ownership and ROE. Hereby

empirical results don't support hypothesis 5. Regarding the last hypothesis, regression results indicate that there is a significant and positive relationship between CG index and financial performance. The result is significantly consistent for Tobin's Q, ROA and ROE. Therefore, it can be stated that empirical findings support hypothesis 6.

This study conducted to contribute to the knowledge of the agency and stewardship theory and give empirical insight to corporate governance practices. The findings are not free from limitations which give opportunities for further investigation in future research. First, this study does not use the whole population in the BIST, therefore the generalization is not possible for all listed Turkish firm. Second, the data underlying this study is collected exclusively in Turkey thereby it limits the possibility of generalizing the findings to other countries too. Third, this study examines only 5 dimension of corporate governance. Hence I encourage fellow researcher to investigate other good corporate governance practices based on large data base either in Turkey or in other countries.

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