RESEARCH ARTICLE

CEO Compensation and Firm Performance-Evidence from Non-Financial Sector

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ABSTRACT

This study is conducted to bridge this gap and highlight the position of CEO in relevance to corporate governance. The main purpose of this research was to check the effect of CEO characteristics on firm performance i.e. CEO compensation was taken as independent variable whereas firm performance was considered as a dependent variable. The controlled variables assumed in the model were board size, non-executive directors, leverage, firm age and firm size. We have collected our data from the 72 companies of non-financial sector listed in Karachi Stock Exchange from 2006 to 2013. Regression and Correlation techniques were used to test the relationship between CEO compensation and firm performance. Our findings showed that there is a positive and significant relationship between CEO compensation and firm performance in case of ROA and Tobin's q as a measure of firm performance whereas CEO compensation is negatively and significantly related with the firm performance in case of ROA.

Key words: *CEO compensation, Firm performance, ROA and ROE*

INTRODUCTION

During the past two decades, research study on CEO's compensation Research on executive compensation has drained huge consideration from the economists but it is important to note that due to problem of data availability regarding CEO's compensation, much work regarding this topic has been made in some developed countries like Britain and U.S. Executive compensation is a main element of incentive tools which the organizations approve to line up the manager's interests with the shareholders. It is informative to study that in what the firms in underdeveloped countries decide the compensation of their CEO's because these countries can do this efficiently through using good practices of corporate governance.

Agency theory proposes that the compensation of a CEO should be positively related with the performance of a firm but it does not elaborate that how strongly it should relate. In the light of evidence provided by Jensen and Murphy (1990), there exist some positive relationship between CEO's compensation and the performance of firms in many industries. Same results have been detected by Carroll and Ciscel, 1982; Joskow et al., 1993; Haubrich, 1994). In some research studies, the criteria to set the compensation of CEO has also been identified i.e. The board is authorise to commend the incentive mechanism and CEO's compensation to which the managers react (Coughlan & Schmidt; 1985). As proposed by Smith and Watts (1984), the compensation plans which the board approves are related with the performance of a firm which ultimately results in increasing the wealth of shareholders.

In some studies, it has been observed that equity based compensation created more benefit to the CEO and as a result, the value of firm enhances i.e. Jensen and Murphy (1990a) suggested that equity based compensation is more better as compared to cash compensation as equity based compensation provides more benefits to the managers and consequently, the performance of a firm enhances but the empirical evidence regarding this view is small and there is not huge evidence that the firms having equity based compensation performs better than those of cash compensation firms. However, some research studies also found that compensation plans do not create any encouragement to the CEO's to fulfill the goal of maximizing shareholder's wealth i.e. Baumol

(1967) and Maris (1963) observed that the more concern of a CEO is related with the growth and size of an organization rather than its profitability. Similarly, Loomis (1982) found that the CEO's compensation and performance of an organization are not interlinked with each other.

OBJECTIVES OF THE RESEARCH
The main objectives of the study are:
1. To determine the impact of CEO compensation on the firm performance in the corporate sector of Pakistan.
2. Recommend investors as to how they may reduce their monitoring and other agency costs by focusing on the CEO compensation in the corporate sector of Pakistan.

PROBLEM STATEMENT
1. Much in the context of CEO and its characteristics has been done by relating these to the performance of the firm and to other corporate governance related variables. Many studies however, till now have not considered an array of CEO compensation and their composite impact on the performance of the corporations is an area which is yet to be explored in Pakistani context.
2. This study will bridge this gap by providing the empirical evidence in this regard. Moreover, this study is being proposed in the Pakistan which is a developing country and lacks serious initiatives of research in almost every domain of knowledge and no such study could be traced out in Pakistani context till yet. Thus, this study would also lay the foundation of the research in this area of research and the understanding of the phenomenon would also be developed in Pakistan.

HYPOTHESIS
H_0 = There is no significant relationship between CEO turnover & firm performance.
H_0 = There is no significant relationship between CEO compensation& firm performance.
H_0 = Leverage has no significant impact on corporate performance.
H_0 = Board independence has no significant effect on firm performance.
H_0 = Board size has no significant effect on the performance of a firm.
H_0 = Firm size has no significant effect on the performance of a firm.
H_0 = Firm age has no significant effect on the performance of a firm.

LITERATURE REVIEW
Boyd (1994) put forward their model by proposing that CEO compensation depends upon Board control and CEOs try to increase their compensation by affecting the members of the board. By using cross sectional data of 193 firms in year of 1980, this study found that compensation of an executive had no influence on the value of a company but CEO's tend to find ways to influence the members of the board and CEO's compensation was greater in firms with lower levels of board control and vice versa.

Kato and Long (2004) investigated the relation of executive compensation with the performance of an organization. They collected data from Chinese corporations. The sample was consisted of 918 Chinese firms. Regression technique was used in the study and it was found that the executive compensation was significantly related with the growth of sales. In addition, it was also observed that the strength of relationship between the compensation of a CEO and performance of a company depends upon the structure of that organization i.e. in privately owned firms; the relationship between the above stated variables becomes stronger as the agency problem arises in government owned firms and the interests of CEO's are also higher in privately owned firms due to more benefits.

Brick, Palmon and Wald (2005) analyzed the general relationship of compensation of a CEO and enterprise's performance through collecting a sample of 237 firms from 1992 to 2001. The purpose of that research study was to check whether there is any relationship between CEO and Director Compensation with enterprise's performance or not. The study employed Pooled and Fixed effects regressions to test these relationships. It was empirically proved that the excess compensation and performance were inversely associated to each other.

Ozkan(2007) conducted a research on CEO compensation and its relationship with the performance of an organization by taking a data of 390 UK companies over the period from 1999 to 2005. By applying Regression of the data it was found that the performance of those firms is higher which pay higher compensation to SEOs. Therefore, CEO compensation is found positively associated with the stock return (performance).

Malik and Nehra(2014) empirically provided the relative influence of different practices of corporate governance on the company's performance. The assumed variables assumed in this study were board and CEO characteristics. The data was obtained from listed companies in Securities and Exchange board of India (SEBI) from 2001 to 2009. The variables used in the study were board size, board independence, board meetings, CEO duality, CEO compensation, CEO turnover and firm performance. The Regression technique was used for testing this relationship. It was concluded that board independence, board size, duality of a CEO, board meetings and CEO turnover had a negative impact on the performance of a company which was being measured through Tobin's Q and stock return whereas CEO compensation was positively related with the firm performance.

RESEARCH METHODOLOGY

Research Model:

This chapter provides the regression model description along with the definition of variables, Data set and sample used for this research study along with its analysis.

This study proposes a model in which the impact of different CEO's characteristics has been taken into account on the performance of a firm (FPM) i.e. CEO compensation (COMP), Board size (BOS), Board Independence (BOIND), Leverage (LEV), Firm age (AGE) and Firm size (SIZE). Hence, it can be written as follows

Model 1: Firm Performance (FP) = $\alpha + \beta_1$ (COMP) + e

Model 2: Firm Performance (FP) = $\alpha + \beta_1$(COMP) + β_2 (BOS) + β_3 (BOIND) + e

Model 3: Firm Performance (FP) = $\alpha + \beta_1$(COMP) + β_2 (BOS) + β_3 (BOIND) + β_4 (LEV) + β_5 (AGE) + β_6 (SIZE) + e

Whereas

COMP = CEO Compensation

BOS = Board Size

BOIND = Board Independence

LEV = Leverage

AGE = Firm Age

SIZE = Firm Size

FP = Firm Performance

VARIABLE DEFINITION AND MEASUREMENT

Dependent Variable:

Firm performance is the dependent variable of the study. Firm performance means that how well the organization uses its resources to increase its profit. In this study, firm performance is taken dependent variable. Researchers have used different measures as a proxy of firm performance but the commonly used proxies are Return of Assets (ROA), Return on Equity (ROE) and Tobin's Q (Xu & Wang, 1997; Kwok, 1998; Wu, Lin & Lai, 2005; Gottesan & Morey, 2006; Shakir, 2006; Garg, 2007; Wei, Lin & Yi, 2008; Bathula, 2008; Yu, 2008; Wu, 2009; Horjoto &Jo, 2009; Peng, Li & Su, 2009; Bhagat, Bolton & Subramanian, 2010; Ramdani & Stuijn, 2010; Kind & Schläpfer, 2010, Halebian & Finkelstein, 2011; Desoky & Mousa, 2012; Yang & Zhao, 2012, Al-Matari, Swidi, Fadzil & Matari, 2012; Phung & Hoang, 2013; Moscu, 2013; Johl, Kaur & Cooper, 2013; Rehman & Shah, 2013; Amba, 2013; Dekker, 2013, Ali & Nasir, 2014). Therefore, this study has also used ROA, ROE and Tobin's Q to measure firm performance in our study.

ROA = Net profit before taxes/ Average of (Non-Current Assets + Current Assets)

ROE = Net profit before taxes/ Average of Shareholder's equity

Tobin's Q= (Book value of total debt + market value of equity) / total assets of the firm

Independent variable:
The purpose of the study is to determine the impact of CEO compensation on firm performance. The detailed description of this variable is as under:

CEO Compensation:
CEO compensation (also Executive pay), is composed of the financial compensation and other non-financial benefits received by an executive of the firm. It is typically a mixture of salary, bonuses and other perquisites. CEO compensation could contribute in an organizational value as Holstrom (1979) suggested that tying executive compensation to firm's performance will motivate the executives to make more value-maximizing decisions for the stockholders. Bebchuk, Fried and Walker (2002) explained the part and contribution of power of the management in the context of compensation of an executive. In this prospective, two different approaches were given. According to the approach of optimal contracting, the board decides the compensation of a CEO at arm's length and also offers other incentives so that the agency cost should be reduced to achieve the goal of maximization of shareholder's wealth. On the contrary, the second approach named managerial power explained that while deciding the compensation of a CEO and its incentives, a CEO can use its powers to affect this issue which can result in increasing the agency cost and consequently, the wealth of shareholders falls (Bebchuk & Fried, 2003). Ozkan (2007) argued that corporate governance mechanisms can be helpful in decreasing the potential problem of agency between managers and shareholders and influence the way firms set their compensation packages. However, various research studies observed that the compensation of a CEO is positively related with the performance of the firm (Murphy, 1985; Hall & Liebman, 1998; Morris, 2000; Par, Gabay & Murcia, 2005 & Ozkan, 2007). Murphy (1985), Hall and Liebman (1998) and Par, Gabay and Murcia (2005) used 6 measures of CEO compensation i.e. salary, bonus, salary & bonus, deferred compensation, value of stock options and total compensation. Ozkan (2007) and Nulla & Mohammed (2012) used total compensation (sum of base salary & bonus) to measure CEO compensation. Therefore, total compensation has been used in this study to measure the compensation of a CEO.
CEO Compensation= Salary (Managerial Remuneration) + Bonus + Provident fund + Compensated absences + Utilities and upkeep + House rent allowance + Conveyance allowance + Medical re-imbursement

Control Variables:
Following is a detailed description of control variables considered in this study. This study includes Board size, leverage, board independence, firm age and firm size as control variables.

Board Size:
The number of directors who act and play their role on the place of other shareholders is called board size. Directors perform their important role in the corporations now a day. Adam Smith proposed in its book named Wealth of Nations in 1776 that as a manager does not have any ownership and power of directing the decisions than that of the real owners of the company. This observation was also put forward by Berle and Means (1932) and Jensen and Meckling (1976). If the number of board members is greater than seven or eight, then, it will not be much useful for the company as this will result in a communication gap, in-effective organization and can limit the powers of the CEO which could be useful for the firm Jensen (1983) and Florackis and Ozkan (2004). Lipton and Lorsch (1992) and Jensen (1993) analyzed the same thing in some other way that in the start, large member board enables major and important board matters but after some times, a situation arrives when communication gap is created among the board members which ultimately affects the organizational performance in a negative way. Veliyath (1999) investigated that the responsibility of a board is to defend the benefits of shareholders as it presents itself in joining the shareholders and the managers. The capability of a board to make major decisions rises as its size also increases (John & Senbet, 1998 and Kiel & Nicholson, 2003). Most of the research makers found that size of the board is negatively correlated with the performance of the firm as an increase in board size would make it difficult for a CEO to govern them and due to this, firm

performance reduces (Yermack, 1996; Eisenberg et al., 1998; Mak and Kusnadi, 2005; Andres et al., 2005; Wu, Lin & Lai, 2005; Combs, ketchen JR, Perryman & Donahue, 2007; Garg, 2007; Bathula, 2008; Mashayekhi & Bazaz, 2008; Wu, 2009; Ramdani & Stuijn, 2010; Yang & Zaho, 2012; Chen, Lu & Sougiannis, 2012, Pandya, 2013 & Vo & Phan, 2013). So, the relationship proposed in most of the studies between board size and firm performance is negative. To measure size of the board, number of board members is used by various researchers in their (Yermack, 1996; Eisenberg et al., 1998; Mak and Kusnadi, 2004; Andres et al., 2005; Wu, Lin & Lai, 2005; Shakir, 2006; Combs, ketchen JR, Perryman & Donahue, 2007; Garg, 2007; Bathula, 2008; Mashayekhi & Bazaz, 2008; Wu, 2009; Ramdani & Stuijn, 2010; Chen, Lu & Sougiannis, 2012; Yang & Zaho, 2012; Pandya, 2013 & Vo & Phan, 2013). Hence, the same formula has been used in this study to measure the size of the board.
Board size= Number of directors on board.

Leverage:
Leverage means that how much amount of capital has been borrowed by the firm i.e. how much amount has been raised from the outsiders. Through leverage, it can be closely observed that which method of getting sources a firm is using to raise its funds so that it can fulfill its liabilities (Lin & Wijethilake, 2011). Different researchers have provided their theories on the part and contribution of debt in the structure of corporate as the management can be screened and monitored through this. If a firm is highly leveraged, then managers will have lesser cash flows to use them for their own interest to reduce the firm's profitability and this thing keeps a check on an agency cost (Jensen & Meckling, 1976 and Shleifer & Vishny, 1989). Jensen and Meckling (1976) examined that an ideal and finest level of leverage should be related with the least total agency cost. Moreover, Jensen (1986) elaborated that the control over cash by the management can be minimized due to debt as the agency cost of the free cash flows will be cut. Braun and Sharma (2007) studied that debt facilitates such steps and procedures that can limit and restrict the agency cost. Performance of those firms who have high degree of leverage, reduces (Ibrahim & Samad, 2007; Yu, 2008; Babtista, Klotzle & Melo, 2008; Harjoto & Jo, 2009; Abbasi, Kalantari & Abbasi, 2012; Moscu, 2013; Pandya, 2013; Yang & Zhao, 2012; Vo & Phan, 2013; Dekker, 2013). Thus, most of the studies found a negative relationship between leverage and firm performance. Previous researchers have used the ratio of total liabilities (debt) divided by total assets as a proxy of leverage (Baliga et al., 1996; Tian, 2003; Ibrahim & Samad, 2007; Mashayekhi & Bazaz, 2008; Yu, 2008; Harjoto & Jo, 2009; Peng, Li, Xie & Su, 2009; Bhagat & Bolton, 2009; Abbasi, Kalantari & Abbasi, 2012 & Dekker, 2013). Kind and Schlapfer (2010) measured leverage by dividing debt to equity. So, the ratio of total liabilities divided by total assets has been used to measure leverage.
Leverage= Total Liabilities/Total Assets.

Board Independence:
Independence of a board refers to number of independent and non-executive directors that are included in the total board members. Chen, Lin and Yi (2008) analyzed that independent directors are concerned with their directorship only. If the old existing directors do not enable the company to perform well, then, independent directors can eradicate the bad performance of that firm (Weisbach, 1988). Rosenstein and Wyatt (1997) observed that by appointing the independent directors, the share price can be increased. On similar grounds, Denis and Sarin (1999) identified that the share prices of the firm goes above from an average level if that firm enhances the number of independent directors on the board. When a firm possess independent directors and audit committee too, then, the chances of frauds in the financial statements are decreased (Beasley, 1996). As concluded by various researchers that the existence of independent directors and audit committee increase the audit procedure (Treadway Commission, 1987; Blue Ribbon Committee, 1999).On the contrary, there are some evidences also available in which the presence of in-dependent directors do not benefit the firm i.e. if the independent directors possess some quantity of shares, then, there presence will not favour the goals of shareholders (Conyon and Peck, 1998). Many empirical studies have agreed that to achieve the success of firm, independent directors should be appointed e.g. Elloumi and Gueyié (2001) concluded that firms with high ratio of

independent directors in a board face less frequent financial pressure. In addition, when a business environment worsens, firms with many independent directors have had lower probability of filing for bankruptcy (Daily et al., 2003). Prior studies have indicated that the independence of board members is positively linked with the firm's performance as their presence has been found to be suitable for the firm (Ibrahim & Samad, 2007; Yu, 2008; Mashayekhi & Bazaz, 2008; Harjoto & Jo, 2009; Yang & Zaho, 2012; Chen, Lu & Sougiannis, 2012 & VO & Phan, 2013). Different researchers have used total numbers of non-executive and independent directors including the total board members (Mallette & Fowler, 1992; Boyd, 1994; Ibrahim & Samad, 2007; Combs, Ketchen, Perryman &Donahue, 2007; Yu, 2008; Harjoto & Jo, 2009; Abbasi, Kalantari & Abbasi, 2012; Nasir, 2012; Chen, Lu & Sougiannis, 2012 & VO & Phan, 2013).

Board Independence= Number of independent and non-executive members in a total board members.

Firm Size:

Size of the firm means the speed and the growth extend that is ideal for a specific business. Successful entrepreneurs and business experts agree that the key to find the optimal firm size is to grow in a controlled way (Naveen Khanna, 2001). Previous researchers have shown that size of the firm and its performance are related to each other and thus suggested to add size of the firm as a control variable (Weiner &Mahoney, 1981; Wernerfelt & Montgomery, 1988; Ramaswamy, 2001; Frank & Goyal, 2003) e.g. Fama and French (1995) demonstrated that the profitability of the firms measured from ROE of small size firms is lesser as compared to those firms who are large in their size. Thus, to perform practical analysis of an organizational performance, size of the firm is being widely used as a control variable. As large size firms create more agency and monitoring costs, so, size of the firm and its performance are inversely related to each other (Himmelberg et al, 1999).In contrast, Barber and Lyon (1996) recommended that due to the advantage of economies of scale, large size companies are more beneficial. Most of the studies observed a positive relationship between firm size and performance (Yu, 2008; Mashayekhi & Bazaz, 2008; Kind & Schlapfer, 2010; Abbasi, Kalantari & Abbasi, 2012, VO& Phan, 2013 & Yang & Zhao, 2013). To measure firm size, Kerlinger (1973) and Boyd (1994) used natural log of annual sales whereas many researchers have used natural log of value of total assets as a measure of size of the firm (John & Knyazeva, 2006; Ibrahim & Samad, 2007; Yu, 2008; Mashayekhi & Bazaz, 2008; Babtista, klotzle & Melo, 2008; Schmid & Zimmermann, 2008; Peng, Li, Xie & Su, 2009; Javid & Iqbal, 2009; Bhagat & Bolton, 2009; Schlapfer & Kind, 2010 & VO & Phan, 2013). Therefore, natural log of value of total assets has been used for the measurement of size of the firm.

Firm Size= Log of Total Assets

Firm Age:

Coad, Segarra and Teruel (2011) stated that age of the firm is the change between the present year and the year from which that firm has started its trading. Finkelstein and Hambrick (1990) suggested that age of the firm is considered to be a vital standard as it is linked with the decisive performance of the firm from its origin. The advancements in a life of a company have large impact in the establishment of the board (Lynall et al., 2003). Ang et al. (1999) commented that matured firms are in a better position of efficiency due to the results of learning curve and survival bias. Hence, older firms can perform in a good manner. Barron et al. (1994) discussed that the firms having old age do not adapt according to the new business situations and atmosphere i.e. they indulge in "liability of obsolescence". Using age of the firm as a control variable, this study has followed the lead of Jaskiewicz, Gonzalez, Menendez, Schiereck (2005) and Anderson & Reeb (2003). On the contrary there also exists evidence that the performance of a company and age of the firm are negatively related to each other because older firms are less efficient as compared to their industry peers, as manifested in higher costs, slower growth, older assets, and reduced R&D and investment activities (Yu, 2008; Mashayekhi & Bazaz, 2008 & Pandya, 2013). Different researchers have used number of years since establishment as a measure of firm age (Shumway, 2001; Fama & French, 2004; Chun et al., 2008: Mashayekhi & Bazaz, 2008; Yu, 2008; VO & Phan, 2013 & Pandya, 2013). So, the study has also used it to measure firm age.

Firm Age= Years after the incorporation of a company.

SAMPLE AND DATA COLLECTION

To check the effect of CEO compensation on organizational performance, sample of KSE-100 companies listed in Karachi Stock Exchange of Pakistan has been taken. These represented the largest companies in the Pakistan.

This study has considered company specific variables i.e. CEO compensation, board size, leverage, board independence, firm size and firm age. The data for the company specific variables have been collected from the published financial statements of the companies provided by the websites of selected companies for the time period of 2006 to 2013. Moreover, other sources such like website of Karachi Stock Exchange have been consulted for information related to individual company. The hard copies of the financial report has also been gathered from the stock market record room in case online soft copy version of the report could not be obtained from the websites of the selected companies.

Data has been analyzed using E-views software by means of descriptive and inferential statistical techniques. In particular, regression analysis using fixed and random effect has been employed to determine the impact of CEO compensation on the performance of selected firms.

DATA ANALYSIS

This part of the thesis provides the empirical results of the study. Analysis is integral part of the thesis which is conducted in the following sequence. First of all descriptive statistics are provided and then correlation matrix would be explained and discussed for the variables included in the study and in the end regression analysis is provided in order to test the models of the study.

DESCRIPTIVE STATISTICS

Table 1 provides descriptive statistics of the variables considered in the study. Descriptive statistics provide mean, minimum, maximum and standard deviation relating to the variables of the study.

The average value of ROA is 0.134961as provided by the mean value of ROA. This indicates that average profitability of the firm's considering their return on asset is 13.4961%; whereas maximum and minimum values are 0.732800 and -0.284900 indicating that range of ROA falls between the values of 0.732800 and -0.284900; while standard deviation of ROA is 0.133292 indicating an average intercompany variation.

The average value of ROE is 0.236627as indicated by mean of ROE of the firms in the sample indicating that average profitability of the companies is 23.6627% considering return on equity; whereas maximum and minimum values of ROE are 0.9749 and -0.560000 indicating that range of the variable falls between 0.9749 and -0.560000. Standard deviation of ROE is 0.218874 indicating an average intercompany variation for the value of ROE. The average value of Tobin's Q is 1825.881 indicating the average performance of the firms in the sample is 1825.881 considering Tobin's Q; whereas its maximum and minimum values are 28871.31 and 0.283626 indicating the range of Tobin's Q. Standard deviation of Tobin's Q is 3000.412 indicating intercompany variation in the data.

The average value of CEO compensation is 10.67354 as indicated by mean of CEO compensation of the firms in the sample; whereas its maximum and minimum values are 18.70775 and 6.006353 providing the range of the variable values. Standard deviation of compensation is 2.778801 showing inter firm variability of values of CEO compensation.

The average value of board size is 8.851852 indicating that on average corporations in Pakistan have around 9 directors. The maximum and minimum values of board size were found to be 15 and 6 indicating that minimum number of members in the board of any company was 6, while board size did not exceed 15 members in any case. Value of standard deviation of board size is 2.178377 indicating intercompany variation from the value of mean.

The average value of non-executive directors is 5.550617 as indicated by its mean value which depicts that companies included in the sample have 6 non-executive directors on average; whereas

minimum and maximum values of non-executive directors are 0 and 14. Standard deviation of non-executive directors is 2.973569 indicating the variation in the number of non-executive directors.

The average value of leverage is 0.505465indicating that on average every company employs almost 52.5465% debt in its financing structure whereas maximum and minimum values of leverage are 0.906997 and 0.005920 indicating the range of the leverage employed by the firms considered in the sample. Standard deviation of leverage is 0.216296 indicating inter firm variation of the values from mean.

The average value of firm's age is 39.23951indicating that on average companies considered in the sample were around 40 years old; whereas maximum and minimum values of the age of the firm are 153 and 4 indicating that sample counts for both mature and newly inaugurated ventures. Standard deviation of firm's age is 23.58678 indicating average of inter firm variation in the age of the firms.

Table 1

	ROA	ROE	TQ	COMP	BSZ	NONEX	LEV	AGE	SZ
Mean	0.134961	0.236627	1825.881	10.67354	8.851852	5.550617	0.505465	39.23951	17.45976
Median	0.108700	0.217000	1027.846	9.694555	8.000000	5.000000	0.517370	37.00000	17.07942
Maximum	0.732800	0.974900	28871.31	18.70775	15.00000	14.00000	0.906997	153.0000	24.12681
Minimum	-0.284900	-0.560000	0.283626	6.006353	6.000000	0.000000	0.005920	4.000000	13.78295
Std. Dev.	0.133292	0.218874	3000.412	2.778801	2.178377	2.973569	0.216296	23.58678	2.206069
Skewness	1.024385	0.261606	5.140658	1.430535	1.241747	0.794283	-0.106296	1.960554	1.347578
Kurtosis	4.702959	3.873242	38.56185	3.679457	3.819192	3.537660	1.930740	10.13839	4.636253
Jarque-Bera	119.7708	17.48760	23124.67	145.9245	115.4051	47.46298	20.05613	1119.348	167.7575
Probability	0.000000	0.000159	0.000000	0.000000	0.000000	0.000000	0.000044	0.000000	0.000000
Sum	54.65930	95.83390	739481.9	4322.784	3585.000	2248.000	204.7134	15892.00	7071.205
Sum Sq. Dev.	7.177752	19.35389	3.64E+09	3119.582	1917.111	3572.212	18.90071	224759.8	1966.163
Observations	405	405	405	405	405	405	405	405	405

The average value of size of the firm is 17.45976as indicated by mean value of the firm size; whereas it's maximum and minimum values are 24.12681 and 13.78295 respectively. Standard deviation of firm's size is 2.206069.

CORRELATION ANALYSIS

Analysis of correlation has been given in Table 2 for the measured variables. The primary purpose of this correlation analysis is to diagnose any trace of multi-co linearity. For this purpose, the study has opted for a cut off value of .8 as a measure of high correlation among the independent variables. Moreover, correlation analysis could also be used as initial investigation to check the track and direction between the independent and dependent variables.

The values of correlation co-efficient of taken dependent, independent and controlled variables have been mentioned in the correlation matrix. The value of r between ROA and Compensation is -0.047784 which reveals that ROA and compensation of a CEO are negatively related to each other. The value of r is –0.028880 between ROA and Board size which interprets that ROA and size of the board are related to each other in an opposite way. ROA and Non-executive director has a value of 0.048722 between them which shows that ROA and Non-executive directors are positively related with each other. ROA and Leverage has a value of -0.398003 which interprets that there is a negative relationship between ROA and leverage. The value of r between ROA and firm age is 0.126091which reveals that the relationship between ROA and firm age is positive. The value of r is -0.041972 between ROA and size of the firm which means that ROA and firm size is negatively correlated with each other.

The value of r between ROE and CEO compensation is 0.025000 which means that ROE and CEO compensation are positively correlated with each other. The value of r is 0.136407 between ROE and size of the board which reveals that the relationship between ROE and board size is positive. ROE and Non-executive director has a value of 0.077439 between them which shows that ROE and Non-executive directors are positively related with each other. ROE and leverage has a value of -0.043675 which reveals that the relationship between ROE and leverage is negative. The value of r between ROE and firm age is -0.031176 which interprets that ROE and firm age are negatively

associated to each other. The value of r is -0.041972 between ROE and size of the firm which shows that ROE and firm size are negatively related with each other.

The value of r between Tobin's Q and Compensation is 0.017991 which means that Tobin's Q and CEO compensation have same relation between them. The value of r is 0.004455 between Tobin's Q and Board size which reveals that the relationship between Tobin's Q and CEO board size is positive. Tobin's Q and Non-executive directors has a value of -0.125178 between them which interprets that there Tobin's Q and Non-executive directors are related to each other in an opposite way. Tobin's Q and Leverage has a value of 0.003778 which means that Tobin's Q and leverage are positively correlated with each other. The value of r between Tobin's Q and Firm age is 0.030513 which shows that Tobin's Q and firm age are positively related with each other. The value of r is -0.206579 between Tobin's Q and size of the firm which confirms that the connection lies between Tobin's Q and the size of firm is negative.

In the above matrix, the value of correlation co-efficient (r) among the independent and controlled variables (Compensation, Board size, Non-executive directors, Leverage, Firm age & Firm size) is less than 0.8 which shows that there is no multi-co linearity in this model the maximum value indicated by the correlation matrix is 0.520819 indicating a moderate correlation between CEO compensation and firm size.

Table 2

	ROA	ROE	TQ	COMP	BSZ	NONEX	LEV	AGE	SZ
ROA	1.000000	0.755350	0.351453	-0.047784	-0.028880	0.048722	-0.398003	0.126091	-0.041972
ROE	0.755350	1.000000	0.397557	0.025000	0.136407	0.077439	-0.043675	-0.031176	-0.039257
TQ	0.351453	0.397557	1.000000	0.017991	0.004455	-0.125178	0.003778	0.030513	-0.206579
COMP	-0.047784	0.025000	0.017991	1.000000	-0.100789	-0.120287	-0.015049	-0.143305	0.520819
BSZ	-0.028880	0.136407	0.004455	-0.100789	1.000000	0.674850	0.255357	-0.017132	0.069920
NONEX	0.048722	0.077439	-0.125178	-0.120287	0.674850	1.000000	0.143924	0.035736	0.135583
LEV	-0.398003	-0.043675	0.003778	-0.015049	0.255357	0.143924	1.000000	-0.064607	0.101906
AGE	0.126091	-0.031176	0.030513	-0.143305	-0.017132	0.035736	-0.064607	1.000000	-0.214312
SZ	-0.041972	-0.039257	-0.206579	0.520819	0.069920	0.135583	0.101906	-0.214312	1.000000

REGRESSION ANALYSIS

This section of the analysis provides regression analysis for the models off the study.

Regression Table 3 Impact of CEO Compensation on Tobin's q

Table 3

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-7274.841	3929.625	-1.851281	0.0650
COMP	-719.8201	316.8019	-2.272145	0.0237
BSZ	152.4227	166.5856	0.914981	0.3608
NONEX	30.88200	80.28166	0.384671	0.7007
LEV	755.1759	1240.338	0.608847	0.5430
AGE	122.2947	54.21389	2.255781	0.0247
SZ	575.5191	316.3988	1.818968	0.0698

Effects Specification				
Cross-section fixed (dummy variables)				

R-squared	0.599894	Mean dependent var	1843.308
Adjusted R-squared	0.528166	S.D. dependent var	2977.775
S.E. of regression	2045.439	Akaike info criterion	18.22540
Sum squared resid	1.49E+09	Schwarz criterion	18.84845
Log likelihood	-3780.559	Hannan-Quinn criter.	18.47161
F-statistic	8.363484	Durbin-Watson stat	0.999781
Prob(F-statistic)	0.000000		

In the table 3, the value of R-squared is 0.599894 which means that the power of predictability of the model is 59.9894% i.e. all the independent & controlled variables (compensation, board size, non-executive directors, leverage, firm size & firm age) have predicted change in Tobin q (Dependent Variable) up to 59.9894%. The value of F-statistic is 8.363484 which mean that the model is good fit as it is greater than 5 and the F-statistic (probability value) is zero. The p-values of compensation, board size, non-executive directors, leverage, firm age and firm size are 0.0237, 0.3608, 0.7007, 0.5430, 0.0247 and 0.0698. The p-values of CEO compensation and firm age are 2.37% and 2.47% which interprets that both CEO compensation and firm age are significant at 5% whereas p-value of firm size is 0.0698 that interprets that it is significant at 10%. However, board size, non-executive directors and leverage are in-significant. The values of co-efficient (slope) for compensation, board size, non-executive directors, leverage, firm age and firm size are-719.8201, 152.4227, 30.88200, 755.1759, 122.2947 and 575.5191 which explains that Tobin's q is positively correlated with board size, non-executive directors, leverage, firm age and firm size whereas Tobin's q is negatively correlated with CEO compensation. At the end, the value of Durbin-Watson is 0.999781 which is quite acceptable.

Regression Table 4 Impact of CEO Compensation on ROE.

Table 4

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.596717	0.312073	1.912109	0.0567
COMP	0.076524	0.025609	2.988139	0.0030
BSZ	-0.002893	0.012929	-0.223781	0.8231
NONEX	0.009435	0.006464	1.459587	0.1453
LEV	-0.216135	0.097168	-2.224348	0.0268
AGE	-0.010291	0.004380	-2.349497	0.0193
SZ	-0.039641	0.025426	-1.559050	0.1199
		Effects Specification		
Cross-section fixed (dummy variables)				
R-squared	0.556679	Mean dependent var		0.232332
Adjusted R-squared	0.475048	S.D. dependent var		0.226101
S.E. of regression	0.163818	Akaike info criterion		-0.636483
Sum squared resid	9.473276	Schwarz criterion		-0.000446
Log likelihood	199.3432	Hannan-Quinn criter.		-0.385068
F-statistic	6.819424	Durbin-Watson stat		1.888224
Prob(F-statistic)	0.000000			

In the table 4, the value of R-squared is 0.556679 which means that the power of predictability of the model is 55.6679% i.e. all the independent & controlled variables (compensation, board size, non-executive directors, leverage, firm size & firm age) have predicted change in ROE (Dependent Variable) up to 55.6679%. The value of F-statistic is 6.819424 which mean that the model is good fit as it is greater than 5 and its probability value is zero. The p-values of CEO compensation, board size, non-executive directors, leverage, firm age and firm size are 0.0030, 0.8231, 0.1453, 0.0268, 0.0193 and 0.1199 respectively. From p-values, it can be observed that CEO compensation is significant at 1% as its p-value is 0.3%. The p-values of leverage and firm age are 2.68% and 1.93% which interprets that both leverage and firm age are significant at 5%. However, board size, non-executive directors and firm size are in-significant. The values of co-efficient (slope) for compensation, board size, non-executive directors, leverage, firm age and firm size are 0.076524, -0.002893, 0.009435, -0.216135, -0.010291 and -0.039641 which explains that ROE is positively correlated with compensation and non-executive directors, whereas ROE is negatively correlated with board size, leverage, firm age and firm size. At the end, the value of Durbin-Watson is 1.888224 which falls in ideal limit 0f 1.5 and 2.5.

Regression Table 5 Impact of CEO Compensation on ROA

Table 5

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.416583	0.160496	2.595605	0.0098
COMP	0.036457	0.013100	2.782915	0.0057
BSZ	-0.012353	0.006578	-1.877949	0.0612
NONEX	0.005264	0.003271	1.609316	0.1085
LEV	-0.203106	0.049398	-4.111620	0.0000
AGE	-0.006573	0.002256	-2.913987	0.0038
SZ	-0.013210	0.013032	-1.013664	0.3115
		Effects Specification		
Cross-section fixed (dummy variables)				
R-squared	0.689958	Mean dependent var		0.134477
Adjusted R-squared	0.633505	S.D. dependent var		0.135360
S.E. of regression	0.081945	Akaike info criterion		-2.023056
Sum squared resid	2.323395	Schwarz criterion		-1.396143
Log likelihood	478.7264	Hannan-Quinn criter.		-1.775033
F-statistic	12.22187	Durbin-Watson stat		1.436412
Prob(F-statistic)	0.000000			

In the table 5 the value of R-squared is 0.689958 which means that the power of predictability of the model is 68.9958% i.e. all the independent & controlled variables (compensation, board size, non-executive directors, leverage, firm size & firm age) have predicted change in ROA (Dependent Variable) up to 68.9958%. The value of F-statistic is 12.22187 which mean that the model is good fit as it is greater than 5 and its probability value is zero. The p-values of CEO compensation, board size, non-executive directors, leverage, firm age and firm size are 0.0057, 0.0612, 0.1085, 0.0000, 0.0038 and 0.3115 respectively. From p-values, it can be observed that CEO compensation, leverage and firm age are significant at 1% as the p-values are 0.57%, 0 and 0.38%. However, board size is significant at 10% since its p-value is 6.12% but non-executive directors and firm size are in-significant. The values of co-efficient (slope) for compensation, board size, non-executive directors, leverage, firm age and firm size are 0.036457, -0.012353, 0.005264, -0.203106, -0.006573 and -0.0131210 which explains that ROA is positively correlated with compensation and non-executive directors, whereas ROA is negatively correlated with board size, leverage, firm age and firm size. At the end, the value of Durbin-Watson is 1.436412 which is good.

CONCLUSION AND IMPLICATIONS

The main objective of this study was to check the effect of CEO compensation on firm performance. This study was conducted on the companies related to non-financial sector listed in KSE-100 Index from 2006 to 2013. In this research study, we have used one independent and five controlled variables i.e. CEO compensation, Board size, Leverage, Board independence, Firm size and Firm age whereas firm performance has been taken as a dependent variable. These independent variables were related solely with the characteristics of CEO. We collected our data from the published financial statements of companies related to non-financial sector listed in KSE-100 Index. The financial statements were taken from the web-site of the companies and from Lahore Stock Exchange. Our results using regression and correlation revealed that CEO compensation is positively and significantly related to firm performance in case of ROE and Tobin's q are used. Similarly, one of the controlled variable in the model i.e. Leverage also showed its significance.

This study does not only cover some gap between the past literature related to the impact of CEO characteristics on the firm performance but it also provides some guide-lines and insights about the practical field of corporate governance mechanism in Pakistan i.e. our results showed that CEO compensation is negatively related to the firm performance (ROA) in Pakistani context because

here, the compensation of CEO is not condition based in most of the companies. Similarly, board size is also inversely related with the firm performance because if board size is large, then, there can be a communication gap among the members which can ultimately affect the firm performance. Same is the case with number of independent directors in board composition i.e. number of independent directors showed a negative relationship with the performance of a firm because larger non-executive/independent directors can restrict and limit the decision making power a CEO and consequently, firm performance declines. Our results in this study are not only useful and beneficial for the policy makers but they also provide effective directions to the shareholders, investors and individual investors who can use the findings of the data to check the performance and profitability of companies in KSE-100 Index.

LIMITATIONS
This study has the following limitations.
1. The nature of the study is rather exploratory as much work is done in this domain is not done in Pakistan and due to data availability constraint, all variables related to the CEO characteristics would not be included in the study.
2. As the time period of our study was from 2006 to 2013, however, data related to some companies cannot be taken due to their late listing in the stock exchange

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