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The Moderating Role of Dividend Policy in Aligning the Accounting and Market based performance Measures with CEO Compensation

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Abstract

This study aims to report the results of an investigation into the effect of accounting and market based performance measures on CEO compensation along with the moderating role of dividend policy. The study has utilized hierarchical multiple regression on a sample of 66 financial companies/banks listed on Karachi Stock Exchange (KSE), for a 5-year period (2010-2014). The results indicate that there is positive and significant impact of accounting based measures (operating performance and firm size) on CEO compensation. In case of market-based measures only growth opportunities have significant and positive impact on CEO compensation. Significant negative impact of market share and insignificant effect of market performance on CEO compensation has been revealed. Contrary to agency theory, this study finds that dividend policy is not utilized as a substitute control device. Additionally, dividend policy cannot mitigate agency conflicts in financial sector of Pakistan due to its ineffective role as aligning mechanism. Overall, the results imply that inefficient dividend policy can further distort the pay-performance link.

Keywords: Operating performance, market performance, market share, dividend policy, CEO compensation, growth opportunities.

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Introduction

CEO compensation is a controversial issue that arouses substantial debate on whether CEOs are compensated appropriately both in level and relative to firm performance and its characteristics. Surveys revealed that there is huge detachment between the perception of directors responsible for compensating CEOs and the perception of general public. Almost 65 percent directors perceive that CEO compensation is not an issue but according to the 70 percent of the public, the problem subsists (Donatiello, Larcker, & Tayan, 2016). Policymakers and companies usually neglect the profound public outrage over excessive CEO compensation and its role in deteriorating income inequality (Wilmer, 2014). This uproar could leads to severe agency conflicts.

A series of newspaper articles has publicised the cases of agency conflicts and over paid CEOs in Pakistan (see Alam, 2014, 2015, 2016). Despite of their plummeting share price, some companies are paying a very high level of remuneration to their CEOs (Alam, 2016). Although the advocates of agency theory (Grossman & Hart, 1983; Holmstrom, 1979; Jensen & Murphy, 1990) suggests that aligning CEO compensation with firm performance could solve the problem but practically that is not exactly the case. Yahya and Ghazali (2015a) revealed that the Code of Corporate Governance (2012) in Pakistan has tried to link the CEO compensation with accounting and market indicators but a little increase in these indicators give rise to exceptionally increase in the compensation. Therefore, further study is required to reach an efficient model which could align the interest of CEOs with shareholders or which could resolve the potential agency conflicts.

Despite the fact that efficient corporate governance could resolve the agency conflicts (Core, Holthausen, & Larcker, 1999), Usman, Akhtar and Akhtar (2015) revealed weak corporate governance structures in Pakistan. Thus, this study underpins the proposition of Agency theory that when corporate governance provisions are not favourable for shareholders then dividends can be utilized as a substitute control device. It is postulated that firms adjust their dividend policy in response to control changes caused by corporate governance provisions (Haye, 2014). Therefore, it is proposed that dividend policy could align the interest of executives with shareholders. This paper is an extension of the study by Yahya and Ghazali (2015a). On the same argument, previously Yahya and Ghazali (2015b) has presented a theoretical framework that dividend policy can moderate the relationship between various determinants of CEO compensation. However, this study is the first attempt to empirically test that notion.

Literature Review and Hypotheses Development

Although agency theory suggested the alignment of performance measures with executive compensation but it did not specify any accounting or market indicator in determining compensation contracts (Lambert, & Larcker, 1987). Therefore, researchers have tested various factors that could determine executive compensation and pay-for-performance principle (see Chalmers, Koh, & Stapledon, 2006; Cordeiro & Veliyath, 2003; Khanna, 2016; Ramaswamy, Veliyath, & Gomes, 2000). Shim and Kim (2015) revealed that the CEO compensation was strongly associated with market-based performance measures in the pre-SOX period, however, it was positively associated to accounting-based performance measures in the post-SOX period.

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Yang, Dolar and Mo (2014) discussed the effects of financial crises on the relationship between firm performance and CEO compensation within U.S. corporate environment. Their results suggest that incentive-based contracts were not effective compensation tools in the aftermath of the crisis. Similarly, using US listed companies, Vemala, Nguyen, Nguyen and Kommasani (2014) examines the effect of financial crises on CEO compensation. They found that equity-compensation increase after crises period with the decrease in cash compensation. Wahyuni (2014) also investigated the pay-for-performance principle during the global financial crises in Indonesian firms. They revealed that there is high level of executive compensation in financial firms as compared to non-financial firms. The author reached to a conclusion that although pay-for-performance strategy could mitigate agency conflicts but it encourages managers to take excessive risk which ultimately increase the overall firm risk.

There are numerous studies which focused on pay-for-performance hypothesis. For instance, Kato, Kim and Lee (2007) found stock market performance to be significantly associated with cash compensation in Korean firms. Conversely, Banghøj, Gabrielsen, Petersen and Plenborg (2010) found weak pay-for-performance sensitivity in privately held Danish firms despite of well-designed bonus plans in some firms. In Pakistan, researchers have also tested several performance-based measures with CEO compensation to ensure pay-for-performance sensitivity, nevertheless, the results are inconsistent.

Shah, Javed and Abbas (2009) analyzed the effect of firm performance and firm size on CEO compensation in Karachi Stock exchange (KSE) listed companies over the period 2002 to 2006. They found that CEO compensation have insignificant relationship with firm performance but positive relationship with firm size. Same results were found by Anjam (2010) who analyzed 83 Lahore stock exchange listed companies from the year 2007 to 2009. Likewise, Hussain, Obaid and Khan (2014) also do not found significant performance-compensation link but found positive and significant relationship between CEO compensation and firm size over the year 2008 to 2010, however, they have considered only 15 KSE listed companies with no justification of any sector. In the same lines, Lone, Hasan and Afzal (2015) analyzed 22 public listed banks of Pakistan over the period 2006 to 2013. They also revealed that CEO compensation was tied to firm size but not with firm performance.

On the other hand, the results of Younas, Mehmood, Ilyas and Bajwa (2012) supports managerial power theory as they found negative association between firm performance and CEO compensation in 151 KSE listed companies. By utilizing PLS-SEM technique, Usman et al. (2015) found firm size as the major determinant of CEO compensation in KSE listed companies but also found negative association between firm performance and CEO compensation over the period 2007 to 2011. They blamed poor corporate governance for this negligently designed compensation structure.

The most recent study on the determinants of CEO compensation in Pakistan has been conducted by Yahya and Ghazali (2015a). The studies by Shah et al. (2009), Anjam (2010), Hussain et al. (2014), Lone et al. (2015), Younas et al. (2012) and Usman et al. (2015) have considered only accounting-based performance measures while making their link to CEO compensation in Pakistan. However, Yahya and Ghazali (2015a) also

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examined the market-based performance measures (market performance, investment opportunities and market share) to ensure their link with CEO compensation. By analyzing financial sector of Pakistan including insurance companies, investment banks/companies and commercial banks, they found positive significant association of operating performance, market performance, investment opportunities, firm size and market share with CEO compensation. Yahya and Ghazali (2015a) have omitted leasing companies while examining financial sector, therefore, this study will contemplate leasing companies to validate the results. On account of the fact that this study is extending the previous study by Yahya and Ghazali (2015a), so the hypotheses have been formulated in the following manner:

H1: There is a significant impact of Accounting-based performance measures on CEO compensation.

H1a: There is a significant impact of Operating Performance on CEO compensation.

H1b: There is a significant impact of Firm Size on CEO compensation.

H2: There is a significant impact of Market-based performance measures on CEO compensation.

H2a: There is a significant impact of Market Performance on CEO compensation.

H2b: There is a significant impact of Growth Opportunities on CEO compensation.

H2c: There is a significant impact of Market Share on CEO compensation.

Baron and Kenny (1986) have suggested that moderator variable can be employed if there is inconsistent relationship between criterion and predictor variable. Owing to the inconsistent results among the studies on determinants of CEO compensation in Pakistan, this study is utilizing dividend policy as a moderating variable. Firms pay dividends to mitigate agency costs (DeAngelo, DeAngelo, & Stulz, 2004) and they can be utilized as a substitute control when corporate governance provisions are not favorable for shareholders (Haye, 2014). According to the free cash flow hypothesis, firms pay dividend to diminish free cash flow so that executives would be unable to misuse the shareholders' resources through overinvestment or investment in negative NPV projects. It is believed that minority shareholders rights could be protected where there is high level of dividends (La Porta, Lopez-de-Silanes, Shleifer, & Vishny, 2000).

Based on principal-agent paradigm, the direct relation of managerial compensation and dividend payouts has been discussed reasonably by Bhattacharyya (2003). The model of Bhattacharyya assumes that managers differ in the skills regarding the assessment of NPV projects. Shareholders prefer that managers should distribute excess cash in terms of dividends if there are no positive NPV projects to invest in. High quality managers get access to many positive NPV projects but less efficient managers distribute dividends because they are unable to find better investment opportunities. Through tobit analysis of dividend payouts and managerial compensation in Canadian firms, Bhattacharyya, Mawani and Morrill (2008) also found negative relationship between these two variables. Similar results were found by Gaver and Gaver (1993). In addition, a substitute

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association between dividend policy and CEO's compensation has been reported by Hauser, Salomon, Shohet and Tanhuma (1996). They purported that majority shareholders exploit minority shareholders by withdrawing profits in terms of compensation rather distributing the surplus cash through dividends.

Easterbrook (1984) proposes that firms pay dividend to restrict managers' overinvestment. In order to invest in positive NPV projects, managers move toward financial institutions or other capital markets which restrict them to invest efficiently. Moreover, distribution of dividends reduces agency costs and compel managers to disclose new information to secure requisite funds. It is evident that distribution of dividends, protect the rights of minority shareholders and consequently mitigate agency conflict, however, the literature regarding the influence of dividend policy on pay-performance sensitivity is very limited. According to the best knowledge of the authors, there is only one study by Emerenciana (2012) who tried to empirically test the effect of dividend policy on pay-performance sensitivity and agency conflicts. Unexpectedly, the findings by Emerenciana (2012) are totally different than the previous theoretical propositions. She revealed that there was stronger pay-performance link in non-dividend paying firms. She also purported that dividends paying firms are more likely to exhibit rent extraction and dividends do not mitigate the effects of a weak governance structure. Since, the study of Emerenciana (2012) is specifically in the context of S&P 500 listed companies over the period 2008 to 2010, so this study still proposes that dividend policy acts as a substitute control and it strengthens the link between performance and CEO compensation in financial sector of Pakistan. Thereby, following hypotheses has been developed through previous theoretical foundation:

H3: There is a significant moderating effect of dividend policy between Accounting-based performance measures and CEO compensation.

H3a: There is a significant moderating effect of dividend policy between Operating performance and CEO compensation.

H3b: There is a significant moderating effect of dividend policy between Firm size and CEO compensation.

H4: There is a significant moderating effect of dividend policy between Market-based performance measures and CEO compensation.

H4a: There is a significant moderating effect of dividend policy between Market performance and CEO compensation.

H4b: There is a significant moderating effect of dividend policy between Growth Opportunities and CEO compensation.

H4c: There is a significant moderating effect of dividend policy between Market Share and CEO compensation.

Research Methodology

Population and Sample

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Previously, Yahya and Ghazali (2015a) have omitted the leasing companies while studying the determinants of CEO compensation, thus, to fulfill the objectives of this study, the entire financial sector of Pakistan (commercial banks, investment banks, insurance companies and leasing companies) listed in Karachi Stock Exchange (KSE) has been considered. Although there are total 95 financial companies/banks listed in KSE but due to data unavailability, only 66 companies/banks from the year 2010 to 2014 were selected as shown in Table 1.

Table 1 *Population and Sample*

Sector	Total Listed	Data Available
Commercial Banks	24	20
Investment Banks	28	16
Insurance Companies	32	22
Leasing Companies	11	8
Total	95	66

Operationalization of Variables

CEO Compensation: This variable has been measured through the total remuneration paid to CEO annually including basic salary, bonus, medical allowance, maintenance etc.

Operating Performance: Operating performance can be measured through operating margin. A strong operating margin is essential for a firm to be able to pay for its fixed costs. Operating margin can also be utilized to evaluate the operating efficiency and company's pricing strategy. It is also known as return on sales (ROS) and can be measured through operating income divided by net sales (see Richard, Devinney, Yip, & Johnson, 2009).

Market Performance: Price to earnings ratio (P/E) has been utilized to measure the market performance. It can be calculated simply by market value of share divided by earning per share.

Firm Size: This study has employed natural log of sales to measure the firm size. A number of researchers have used this proxy in their study (Himmelberg, Hubbard, & Palia, 1999; Stanley, Buldyrev, Havlin, Mantegna, Salinger, & Stanley, 1995).

Growth Opportunities: Growth or Investment opportunities are the projects or investments which grow progressively and increase shareholder’s wealth. Book-to-Market ratio can be utilized in this perspective (Cakici & Topyan, 2014).

Market Share: A company's market share is its sales measured as a percentage of an industry's total revenues (Bikker & van Leuvensteijn, 2014).

Dividend Payout Ratio: The percentage of earnings paid to shareholders in dividends.

Dividend Yield: A dividend expressed as a percentage of a current share price.

Model

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OLS model has been formulated to accomplish the objectives of the study. The dependent variable is CEO compensation and the independent variables are operating performance, market performance, firm size, growth opportunities and market share. Furthermore, dividend policy (moderator variable) and its interaction terms are listed in the following model:

$$CEOit = a0 + \beta1\ OPit + \beta2\ MPit + \beta3\ FSit + \beta4\ GOit + \beta5\ MSit + \beta6\ DPRit + \beta7\ DYit + \beta8\ OPDPRit + \beta9\ MPDPRit + \beta10\ FSDPRit + \beta11\ GODPRit + \beta12\ MSDPRit + \beta13\ OPDYit + \beta14\ MPDYit + \beta15\ FSDYit + \beta16\ GODYit + \beta17\ MSDYit + eit \quad (1)$$

Note = CEOit = CEO compensation in time by annually data, OPit = Operating performance in time by annually data, MPit = Market performance in time by annually data, FSit = Firm size in time by annually data, GOit = Growth Opportunities in time by annually data, MSit = Market Share in time by annually data, DPRit = Dividend payout ratio in time by annually data, DYit = Dividend yield in time by annually data, OPDPRit = Interaction for dividend payout ratio with operating performance, MPDPRit = Interaction for dividend payout ratio with market performance, FSDPRit = Interaction for dividend payout ratio with firm size, GODPRit = Interaction for dividend payout ratio with growth opportunities, MSDPRit = Interaction for dividend payout ratio with market share, OPDYit = Interaction for dividend yield with operating performance, MPDYit = Interaction for dividend yield with market performance, FSDYit = Interaction for dividend policy with firm size, GODYit = Interaction for dividend policy with growth opportunities, MSDYit = Interaction for dividend policy with market share

Data Cleaning and Validity

First of all, z-scores of all independent and moderating variables were computed and then interaction was formulated accordingly. Prior to analyzing hierarchical analysis, the data was normally distributed through Box-Cox power transformation using QI Macros on MS Excel (Box & Cox, 1964). However, Box-Cox transformation technique does not deal with negative and zero values, therefore, a constant has been added to the data columns with zero values through LN(X+2). Moreover, to transform the negative values, the variables with negative values were transformed with a larger Lambda (i.e. λ=2). After fulfilling the assumptions of Box-Cox transformation technique, optimal Lambda for all variables were evaluated through the software by Wessa (2015). After transforming data, the normality was ensured through histogram. However, some potential outliers were detected through cook's distance. Thus, as per the suggestions of Pardoe (2012), the rows with the value greater than 0.5 were eliminated. There were 325 observations prior to eliminating outliers but after removing outliers, there were 297 testable observations.

The authors also found no autocorrelation in the data. Durbin-Watson value as shown in Table 2 is the evidence of no autocorrelation in the dataset because the value is close to 2 (i.e. D=2.11). Linearity has also been validated through Normal P-P plot and Homoscedasticity through scatter plots (no specific pattern was indicated). Moreover, a significant main effect was found ($F(16, 280) = 39.51$, $p=0.000$). The issue of Multicollinearity was detected in the model due to the direct effect of dividend yield, therefore, dividend yield was exempted from the model. After removing the direct effect of dividend yield, no issue of Multicollinearity was detected as shown in Table 4 (VIF

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values are below 10 and tolerance values above 0.1). Fortunately, with a R2 of .693, it can be purported that model's goodness of fitness is also satisfactory (see Table 2).

Table 2 Model Summary[b]

Model	R	R^2	Adjusted R^2	Std. Error of the Estimate	Durbin-Watson
1	.832[a]	.693	.675	14.08428	2.111

a. Predictors: (Constant), MSDY, Market Performance, Dividend payout Ratio, FSDPR, GPDPR, Firm Size, OPDY, Growth Opportunities, Market Share, MPDY, Operating Performance, MSDPR, GPDY, FSDY, OPDPR, MPDPR
b. Dependent Variable: CEO Compensation

Table 3 Descriptive Statistics with Correlations

Variable	*M*	*SD*	1	2	3	4	5	6	7
CEO Compensation	31140.57	39743.89	--						
Operating Performance	-0.003	3.072	0.003	--					
Market Performance	10.049	59.764	-0.033	0.02	--				
Firm Size	13.994	3.752	0.558	0.053	-0.009	--			
Growth Opportunities	3.810	45.300	-0.047	-0.564	0.018	-0.133	--		
Market Share	0.072	0.148	0.038	0.131	-0.016	-0.023	-0.032	--	
Dividend payout Ratio	0.167	0.341	0.163	0.093	0.012	0.203	-0.025	0.112	--
Dividend Yield	0.090	0.339	-0.114	0.095	-0.001	-0.602	-0.02	0.296	0.026

Results and Discussion

Ware, Ferron and Miller (2012) suggested that one needs to undo transformation to report original values in descriptive statistics, therefore, this study has evaluated the descriptive of original values. Table 3 shows that CEO compensation of financial sector in Pakistan is Rs. 31 million (USD 0.3 million) on the average. There is negative operating performance but positive market performance. In addition, on the average, positive values for other accounting and market performance measures have been observed. Dividend payout ratio and dividend yield clearly demonstrates the low dividend payments in financial sector from the year 2010 to 2014.

Pearson's correlations have also been evaluated to ensure the linear relationship between variables, nevertheless, most of the variables have shown either no or too weak correlation. For instance, the results illustrated that only firm size has moderate positive correlation with CEO compensation but the relationship is almost nonexistent for other variables. Additionally, it is also purported that there is moderate negative relationship between firm size and dividend yield. A weak uphill linear relationship also been found between dividend payout ratio and dividend yield. For further elaboration, Table 3 can be viewed.

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Table 4 Coefficients [a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	-117.088	73.348	-	-1.596	0.112	-	-
Operating Performance	3.641	0.744	0.360	4.896	0.000	0.202	4.941
Market Performance	118.234	64.838	0.128	1.824	0.069	0.222	4.497
Firm Size	3.259	0.201	0.962	16.218	0.000	0.312	3.208
Growth Opportunities	20.102	6.825	0.158	2.945	0.003	0.383	2.613
Market Share	-39.837	9.847	-0.0195	-4.046	0.000	0.474	2.111
Dividend payout Ratio	-1.680	3.277	-0.025	-0.513	0.609	0.476	2.102
OPDPR	-6.246	3.266	-0.172	-1.913	0.057	0.135	7.408
MPDPR	2.116	3.448	0.058	0.614	0.540	0.121	8.283
FSDPR	-5.012	2.726	-0.150	-1.839	0.067	0.164	6.085
GPDPR	-3.235	2.411	-0.097	-1.342	0.181	0.209	4.795
MSDPR	2.239	2.348	0.066	0.953	0.341	0.227	4.397
OPDY	-9.287	6.557	-0.107	-1.416	0.158	0.191	5.227
MPDY	-13.066	6.088	-0.185	-2.146	0.033	0.148	6.758
FSDY	3.908	6.556	0.046	0.596	0.552	0.186	5.362
GPDY	-3.152	5.020	-0.046	-0.628	0.531	0.206	4.863
MSDY	7.138	5.218	0.101	1.368	0.172	0.200	4.988

a. Dependent Variable: CEO Compensation

The empirical results of hierarchical linear regression have been given on Table 4. It has been revealed that there is a positive and significant impact of accounting based performance measures (operating performance and firm size) on CEO compensation. Therefore, in the light of results, H1 (H1a and H1b) has been accepted. These results are consistent with the study of Yahya and Ghazali (2015a). Previous studies in Pakistan also found firm size as the major determinant of CEO compensation (Anjam, 2010; Lone et al., 2015; Usman et al., 2015) but did not found positive and significant impact of performance on CEO compensation.

In case of market based performance measures, growth opportunities have a significant positive impact on CEO compensation but significant negative impact of market share on CEO compensation. In both cases, H2b and H2c has been accepted. Nevertheless, no significant impact of market performance on CEO compensation has been found, leading to rejection of H2a. These results are different from the results of Yahya and Ghazali (2015a). They found significant and positive impact of all market base performance measures on CEO compensation. The difference in results could be due to exclusion of leasing companies in their dataset or may be inclusion of dividend policy in this study has distorted these relationships.

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The results also indicated that the moderating effect of dividend policy is insignificant except the moderating effect of dividend yield between market performance and CEO compensation. Nevertheless, as there is negative coefficient in this regard so it can be postulated that dividend yield could further weaken the relationship between market performance and CEO compensation. Therefore, the outcomes of this study are contrary to agency theory as in financial sector of Pakistan, dividend policy is not utilized as a substitute control device (Haye, 2014). However, it cannot be assumed that dividend policy cannot align the interest of agents with shareholders because the model has been tested on financial sector of Pakistan only. It is possible that dividend policy in financial sector of Pakistan is inefficient.

Conclusion

This study has examined whether financial sector of Pakistan has aligned the accounting and market based performance measures with their CEO compensation and if dividend policy could moderate the relationship among these variables. The results revealed that accounting based measures (operating performance and firm size) has a significant positive impact of CEO compensation but in case of market based performance measures, only growth opportunities have a significant positive impact on CEO compensation. Significant negative impact of market share and insignificant impact of market performance on CEO compensation has been revealed. Moreover, the results also purported that dividend policy in financial sector of Pakistan is inefficient and it could not mitigate agency conflicts in the industry. However, it is suggested that the model should be tested on bigger sample size including nonfinancial firms. Probably, due to inefficient dividend policy in financial sector of Pakistan, the results contradicts the role of dividend policy as theoretical aligning mechanism, therefore, same study along with other control variables should be conducted on financial markets of different other developing and developed countries. These outcomes are specifically in the context of financial sector in Pakistan and cannot be generalized on any other market without further empirical evidence.

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