



## The Impact of Institutional Ownership on CEO Compensation among the NBFIs: Bangladesh Perspective

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### ABSTRACT

The connection between institutional ownership and CEO compensation has been studied in this paper. In this context, the authors use the data of the non-bank financial institutions (NBFIs) working in Bangladesh from 2010-2019. The research finds that NBFIs with a higher institutional ownership concentration pay substantially higher CEO compensation than comparable NBFIs. The results are robust to the multifaceted fixed effects regression and alternative measurement models. The results further show that pay premiums are attributable to the ownership concentration and agency theory. Institutional owners prefer to avoid agency problems through rewarding higher CEO compensation.

**Keywords:** Institutional Investors, CEO Compensation

**JEL Code:** G32, G39

### 1. INTRODUCTION

Considering different theoretical and empirical perspectives, institutional ownership as one of the important determinants of CEO compensation has been frequently examined with varied results in both developed and developing markets (Davis & Thompson, 1994; Core, Holthausen & Larcker, 1999; Chhaochharia & Grinstein, 2009; Sheikh, Shah & Akbar, 2018 and Ullah, Jiang, Shahab, Li & Xu, 2020). Unlike individual investors, institutions investors have a legitimate fiduciary authority to take preventative action as they invest "other people's money", e.g. influencing CEO pay to gain economy of scale & safeguard their investments from potential devaluation (David et al, 1998). Shareholder's advocacy, voting rights, capacity to influence management and election of board members are some of the formal and informal mechanism used by large institutional investors to protect their investment (Dong & Ozkan, 2008). Additionally the study of Lin and Fu (2017) illustrated that, the term "institutional investor" refers to a diverse set of companies which includes mutual funds, private & public pension funds, banks etc. with varying degrees of power to supervise management and influence CEO compensation. Several prior studies (e.g., Heard & Sherman, 1987; Ferreira & Matos, 2008; Maranhão et al., 2020) found the two-dimensional relationship between institutional ownership and firm, that is an investor and business, may exert countervailing pressures on institutional investors in the context of determining CEO compensation. The literature prior mid-1980s (Davis & Thompson, 1994) illustrated that in the era of dominant individual ownership,

shareholders had no control over deciding executive pay. However, relative to 1965, institutional owners and their representatives have become more vocal regarding executive compensation, both in terms of levels and forms when institutional ownership started to replace individual ownership (Coffee, 1991). In addition, "institutional owners" are viewed as the most effective tool to influence corporate governance (Khan, Dharwadkar & Brandes, 2005). The potential effect of increased institutional ownership on various corporate policies have examined in several studies. Several studies have examined the potential influence of increased institutional ownership on various corporate practices e.g. (Holderness, 2003), (Yan & Zhang, 2009), (Becker, Cronqvist & Fahlenbrach, 2011), (Chichernea, Petkevich & Zykaj, 2013), (Knyazeva, Knyazeva & Kostovetsky, 2018) (Ward, Yin & Zeng, 2019). By recent literature e.g. (Firth, Fung & Rui, 2007), (Chen, Ezzamel & Cai, 2011), (Dasgupta, Fos & Sautner, 2020) institutional ownership has received considerable attention as a factor affecting CEO pay.

Although, In the context of developing countries, there is minimal literature on the ownership structure and CEO compensation to reflect how first-world theories and concepts should expand on their empirical findings because developing economies vary from other markets because of their complex legal, financial, social, and institutional environments (Jiang & Kim, 2015). In Bangladesh, CEO pay in financial institutions becomes a profitable investment for the shareholders (The Business Standard, 2020) that shows the ever-growing importance of CEO compensation. However, compensation

and incentive mechanisms are not well explained in Bangladeshi financial institutions. Therefore, the goal of this study is to add to the existing empirical literature by examining the impacts of institutional ownership on CEO pay.

This study investigates the CEO compensation with the theoretical insights drawn from the agency theory where Jensen & Meckling (1976) emphasizes in protecting the interest of shareholders by controlling company management efficiently and effectively where corporate governance structures (including institutional ownership) plays a significant role. "Institutional owners" who carry a large amount of money from other individuals are expert and proficient in company dynamics and can effectively control executive's pay (Jensen & Meckling, 1976). Previous research in developed countries (e.g., Fernandes et al. 2012; Croci, Gonenc & Ozkan 2012) show that increased institutional ownership affect CEO compensation, improves the quality of firm monitoring, and ties CEO compensation to company performance (Hartzell & Starks 2003). Studies (e.g., Jiang & Kim, 2015) in the sense of developing countries, however, do not disclose any role of institutional ownership in reducing agency issues due to minor shareholders stake and short-term interest. Therefore, this study intended to determine the impact institutional ownership have on Bangladesh's CEO compensation.

The scope of this study are the non-bank financial institutions (NBFIs) working in Bangladesh. NBFIs start their journey in 1981, ten years after the independence. Industrial Promotion and Development Company (IPDC) is the pioneer in the sector. Following that, the number of non-bank financial institutions grows as more private, joint-venture, and state-owned firms join the sector. Due to the development of new fields of business operations such as leasing, term loan, housing and real estate finance, merchant banking, factoring, and so on, the importance of the non-banking sector is growing substantially (Ahmed & Chowdhury 2007). But the research on NBFIs regarding ownership concentration remains entirely unexplored (Datta 2014). Against this backdrop, another relevant fact is that most NBFIs have institutional owners in Bangladesh (mostly other banks and business conglomerates). NBFIs operating in Bangladesh have a specific ownership structure where effective control is exercised by institutional owners. Together, the authors hope to analyze whether the type of owner has an impact on the CEO's use and scope of performance-related pay. This study contributes to extend the theoretical findings and tried to find out the magnitude of the relationship between institutional ownership & CEO compensation in a developing country context.

The research takes into account of NBFIs operating in Bangladesh, covering annual data between 2010 and 2019. The company-level dataset is combined with macroeconomic data (inflation and GDP growth). This study sample does not consider the NBFIs who suffer from some financial and other image crises spotting the daily newspapers (The Daily Prothomo Alo and The Financial Express). The method of data analysis starts with several data cleaning rounds that remove any possible errors and outliers. Consistent with recent studies the authors find positive and significant impact of institutional ownership on CEO compensation (e.g., Ullah et al., 2020;

Nawaz 2022). This impact not only statistically significant but also economically meaningful. Even after adjusting for time effects and alternate definitions of institutional ownership, the finding remains true. This review refers in the following distinct ways to the current literature. First, this study's empirical results indicate that institutional ownership has a significant positive impact on the compensation of CEOs. Alternatively, the report supports future research to conduct the ownership impact of the channel on CEO pay.

The paper has definite structure. Section two addresses the theoretical and literature review. Section three focused on methods and data. The empirical findings are given in section four, while the analysis concludes in section five.

## 2. THEORETICAL AND LITERATURE REVIEW

Agency theory enunciates that as a tool of minimizing agency conflict institutional ownership plays a key role by becoming a monitoring device (Jensen & Meckling, 1976). As per the Agency theory CEOs are the shareholders' agents and their primary responsibility is to optimize and protect the interests of the shareholders (Jensen & Meckling, 1976). However, when CEO wants to maximize their interest rather than the wealth of shareholders, conflict of interest occurs (Donaldson & Davis, 1991). It becomes difficult for the institutional owners to sell shares at the time of firm's bad performance due to future stock price depreciation, as institutional owners hold the substantial aggregate ownership of the company (Cornett et al, 2007). Due to the difficulty in identifying credible alternative investments and departing from them, institutional investors have been given an incentive to work for the greater interest of the investors influencing the level and mix of CEO compensation packages (Gillan & Starks, 1998). According to power perspective e.g. (Bathala, 1996), (Beatty & Zajac, 1994), (John & Senbet, 1998), institutional investor engagement allows experienced experts to monitor assets, minimizes top management's control on boards and allows more effective remuneration than fragmented individual owners. Prior theoretical and empirical studies; (e.g. (Shleifer & W. Vishny, 1986), (Shleifer & W. Vishny, 1997), (Chizema, Lio, Lu & Gao, 2015), (Ullah, Jiang, Shahab, Li & Xu, 2020) suggested that best corporate governance practices should be followed to minimize the agency problems and optimize the shareholders' wealth. In this regard, a large spectrum of previous studies, e.g., (Burkart & Panunzi, 2006) consider that institutional investors can be a tool to mitigate the free-rider issue with minimal potential agency costs and make sure that management behaves for the greater interests of shareholders. Institutional investors can also provide effective management oversight, which can have an impact on key corporate strategies by deciding best CEO compensation packages (Gillan & Starks, 2000). Some of the theories e.g. (Shin & Seo, 2011), (Janakiraman, Radhakrishnan & Tsang, 2010), (Gallagher, Smith & Swan, 2006), predict that the fiduciary responsibilities, conflicts of interest and asymmetric information that institutional investors face may limit institutional investors' ability to supervise CEO pay. For example, mutual funds and public pension funds have different monitoring objectives and capacities which results in different CEO pay policies in their portfolio companies (Shin & Seo, 2011).

The role of institutional investors in deciding CEO compensation has been studied from two perspectives. Some researchers found homogenous impact of institutional investors on CEO pay structure. According to Saleh, Eleyan, and Maigoshi (Saleh et al., 2022), CEO influence positively modifies the relationship between institutional investors and firm performance, so CEO compensation should reflect rewards for long-term success (Manso, 2011). Big, established companies frequently have high CEO salaries and bonuses. The CEO's compensation, however, is heavily influenced by institutional ownership. Nevertheless, a study discovered that institutional ownership had a negative impact on the CEOs' overall compensation, salary-based compensation, and bonus-based compensation (Nawaz, 2022). According to (Hartzell & Starks, 2003), institutional investors could motivate the companies to pay their CEOs more performance-based compensation by creating a substantial and constructive relationship between the CEO performance and the level of CEO pay. As per the report on US firms, (Fernandes, Ferreira, Matos & Murphy, 2012) reported a positive relationship between CEO pay & institutional ownership with the fact that institutional investors, both in the US and around the world, are advocating for a greater fraction of equity-based compensation. Similarly, the influence of institutional ownership on CEO compensation in continental Europe was examined (Crocì, Gonenc & Ozkan, 2012), where institutional ownership and CEO pay show a positive and substantial relationship. On the other hand, some researcher argued that the level of CEO compensation has a negative relationship with institutional investor concentration. e.g. (Hoskisson, Castleton & Withers, 2009), (Hadani, Goranova & Khan, 2011), that is, after adjusting for business size, industry, investment possibilities, and recent performance, firms with larger institutional investors concentration had lower management remuneration. Furthermore, institutional ownership and CEO pay will be expected to be connected negatively, that is, large owners or institutional block holders may support higher behavior-based compensation and minimize results-based compensation (Eisenhardt, 1989). Although, the increasing participation of institutional investors in the continental European capital market shows few indications of their role in deciding the compensation of CEOs (Elston & Goldberg, 2003).

Though there are mixed literature regarding influence of institutional ownership on CEO compensation determination, a recent study by (Gallagher, Smith & Swan, 2006) found that increased institutional influence increase compensation level of CEO while reducing total pay-for-performance sensitivity. According to (Gillan & Starks, 2003), large institutional investors have a direct or indirect effect on the firm by owning or trading shares in the investee company. The stock price may fall as a result of these investors' heavy selling or it might be misinterpreted as negative news, causing additional investors to sell, leading to a drop in the stock price and increase in cost of capital (Parrino, Sias & Starks, 2003; Baysinger, Kosnik & Turk, 1991; Hutchinson, Seamer & Chapple, 2015). Thus, large institutional ownership leads into less CEO compensation packages. While some researchers e.g. (Shin & Seo, 2011), (Johnson et al, 2010), classified institutional investors into two categories- pressure resistant

institutional investors & pressure sensitive institutional investors– and argued that the contribution of institutional investors are not equal for monitoring CEO pay structure. In research on block ownership & CEO compensation, this categorization of (Brickley et al, 1988) has been widely used. In (Brickley et al, 1988), (Rubach & Seborá, 2009) and many more literature, banks, nonbank financial institutions & insurance companies considered as pressure-sensitive institutional investors (they have an impact on the portfolios of companies with whom they deal business) and mutual funds, pension funds, endowments, and foundations (they are less likely to have a business relationship with firms) considered as pressure resistant institutional investors. Pressure-sensitive institutional investors may be better able to form commercial relationships with their investee companies and that is why less prone to confront management in fear of going out of business (Hutchinson, Seamer & Chapple, 2015). Additionally, other findings indicated that block ownership does not generate adequate supervision since most European organizations are family members owned (Gillan & Starks, 2003). According to theoretical and empirical evidence, Hill and Snell (1989) imply that institutional investors are advantageous to smaller and less sophisticated investors in a way that includes active oversight at a competitive cost, voting control, shareholder activism, the appointment of board members, and their ability to influence individual stakeholder management decisions.

Finally, (Cubbin & Leech, 1983); (Carleton, Nelson & Weisbach, 1998) suggested that in comparison to other major individual investors, large institutional shareholders have individual and collective expertise to influence the management in a manner to neutralize the interests. However, researchers revelation from power perspective is that institutional investor concentration decreases the influence of top management on boards that set compensation (Bathala, 1996) and from an expertise perspective, large institutional investors have shares in a variety of companies and employ competent professionals to manage their investments, making them more successful in influencing compensation arrangements than dispersed individual owners (Khan, Dharwadkar & Brandes, 2005). So combining the above assertion of agency theory arguments with ownership concentration facets of institutional investors e.g. (Johnson & Greening, 1999), (Wardhana & Tandellilin, 2011), (Bethel & Liebeskind, 1993) the authors may derive the idea that companies with higher institutional ownership may have greater authority to control managerial pay. In the context of Bangladesh, the impact of institutional directorship on corporate decisions like CEO pay is ambiguous. In this regard, the specific research interest of this study is to examine the impact of institutional ownership on CEO compensation. So, the main research question of this study is: Do institutional shareholders have any significant impact on deciding CEO compensation? From existing literature review, this study hypothesizes that there is relationship between institutional ownership as determinant of CEO compensation.

### 3. METHODOLOGY

This study utilizes the firm-level panel data of the listed NBFIs for the duration between 2010 and 2019. The authors exclude

NBFIs who suffer from some financial and other image crises spotting the daily newspapers (The Daily Prothemo Alo and The Financial Express). Since firms with image crises seldom disclose the CEO compensation. The authors extracted the variable-related data from the annual report of those selected NBFIs. Data has been analyzed using STATA software.

### CEO compensation

CEO compensation refers to the overall amount of money paid to CEOs.; includes the base salaries, bonuses, and commissions (Canyon & He, 2012), (Canyon, He & Zhou, 2015), (Ullah, Jiang, Shahab, Li & Xu, 2020). To measure CEO remuneration many authors collected data on cash and equity-based compensation e.g. (Crocì, Halit & Ozkan, 2012). Base salary and bonuses are part of the cash compensation package whereas equity-based compensation includes share options, long-term incentive plans (LTIPs) and the value of shares. This study did not consider equity-based compensation of the NBFIs because the data for most NBFIs is either missing or inadequate to undertake panel research throughout the specified time period.

### Institutional ownership

Institutional ownership refers the existence of institutional investor in a firm's equity structure (Guthrie et al., 2012). To measure the independent variable (institutional ownership) the authors rely on previous literature e.g. (Canyon & He, 2011), (Wen, Xu, Chen., Xia & Li, 2019), (Ullah, Jiang, Shahab, Li & Xu, 2020) and measured institutional ownership as the entire proportion of outstanding shares held by various institutions such as insurance companies, banks, qualified foreign institutional investors (QFIIs) social security funds and all other institutions at the end of the firm-year. In Bangladesh, private commercial banks are very prominent institutional investors of NBFIs.

### Control Variables

Prior research e.g. (Firth, Fung & Rui, 2007) (Chizema, Lio, Lu & Gao, 2015), (Canyon, He & Zhou, 2015), show that institutional ownership in case of deciding executive compensation are controlled for some variables representing board of directors' characteristics, firm characteristics, macro-economic variables and CEO characteristics.

The firm characteristics variables include board diversity (BDIV), board size (BSIZ), return on assets (ROA), firm size (SIZE), leverage (LEV), Market to book ratio (MTB) & Tobin's Q (Tobin's Q). Earnings before interest and taxes are divided by total assets to get the return on asset (ROA). Leverage is calculated by dividing total debt by total assets. The natural log of a company's total assets is defined as 'SIZE.' The market to book ratio is calculated by dividing the current market price per share by the book value per share. Several studies e.g. (Wright, Ferris, Sarin & Awasthi, 1996) measures growth opportunities with Tobin's Q that is the firm's entire market value divided by the firm's total asset value. Prior studies such as (Khan, Dharwadkarb & Brandes, 2005) and (Ullah, Jiang, Shahab, Li & Xu, 2020) measures board size (BSIZ) and board diversity (BDIV) to measure the board characteristics.

'BSIZ' is measured by the total number of board of directors in the firm & 'BDIV' is measured by the total number of female directors divided by total directors. According to Ullah et al., (2020), the authors measure CEO with foreign exposure (CFEX) which dummy variable. If the CEO has worked or studied in a foreign country, it is equivalent to 1; otherwise, it is equal to 0. The authors also control for macroeconomic variable inflation (INF) & GDP growth (GDP\_GROWTH) which are extracted from the World Bank database.

### Econometric Model

Canyon et al. (2019) used the following model to analyze the relationship between international exposures and CEO compensation for all firms in the UK's FTSE 350 index between 1999 and 2015.

$$CEOPAY_{it} = \alpha + \beta * Institutional\ Investor_{it} + \sum \lambda * Control\ Variables_{it} + \varepsilon_{it} \dots \dots \dots Model (1)$$

The authors employed a similar model in this study as well. The dependent variable  $CEOPAY_{it}$  is the natural logarithm of the CEO compensation for the Hypothesis. *Institutional Investor (BLOCK)* defines institutional ownership as the amount of the total proportion of outstanding shares owned by various institutions. *Control Variables* include a collection of control variables at the firm stage. In addition, to control for macroeconomic shocks, a selection of year dummies are included. Therefore, along with the model mentioned above, the following two additional models have been developed to test the hypothesis.

$$CEOPAY_{it} = \alpha + \beta * Institutional\ Investor_{it} + \sum \lambda * Control\ Variables_{it} + \sum \lambda 1 * Macroeconomic\ Control\ Variables_{it} + \varepsilon_{it} \dots \dots \dots Model (2)$$

And

$$CEOPAY_{it} = \alpha + \beta * Institutional\ Investor_{it} + \sum \lambda * Control\ Variables_{it} + \sum \lambda 1 * Macroeconomic\ Control\ Variables_{it} + \sum year_{it} + \varepsilon_{it} \dots \dots \dots Model (3)$$

However, the causal impact of international experience on CEO compensation is complex to describe statistically. Further, the lack of an appropriate experimental design that would require the random allocation of NBFIs to treatment and control groups, which in CEO compensation is unusual in general and impossible (Oxelheim et al., 2013) makes it difficult to define and ensure the robustness of institutional investors' causal impact on CEO compensation. However, the OLS estimation suggested here, identical to Canyon et al. (2019), implies that the involvement of institutional investors is exogenous. The authors further utilize fixed-effects regression models and alternative measurement for institutional investors to check the robustness of the findings.

## 4. RESULTS AND DISCUSSION

### Summary Statistics

This paper starts with the summary statistics before conducting the multivariate regression analysis. Table: -1

shows the summary statistics of the study. The dependent variable, *CEO PAY* ranges from BDT 16.5 million to BDT 17.5 million with a mean value of BDT 9.66 million per annum. Figure-1 also reports the increasing trend of CEO compensation within the sample period. This indicates that the *CEOPAY* of the NBFIs is not producing any concentric results. On the other hand, the independent variable, *BLOCK* ranges from 0.545 to 0.933 with a mean value of (0.849) and also does not produce any convergent results. The control variables *BDIV* varies from 0 to 0.30 with a mean of 0.157. The *BSIZ* ranges from 8 to 15 with an average of 11.44. *ROA* ranges from -0.049 to 0.0789 with a mean value of 0.0209. *LEV*, the financial leverage shows the proportion of company assets that are financed through debt range from 0.698 to 0.941 with an average of 0.861. *SIZE* shows the natural logarithm of a firm's total assets which ranges from 3.707 to 5.059 with an average of 4.366. The firm's growth ratio (*Tobin's Q*) ranges from 0.0554 to 1.271 with an average value of 0.315. *MTB* ranges from 0.759 to 38.66 and CEOs with foreign experience ranges between 0 to 1.

<i>MTB</i>	160	4.562	5.351	0.759	38.66
<i>FEXP</i>	160	0.900	0.301	0	1

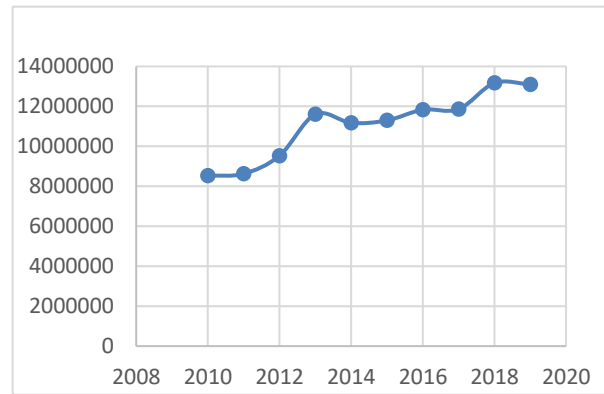


Figure-1: CEO Compensation Trend between 2010 and 2019

Table-1: Summary statistics

VARIABLES	N	mean	SD	min	max
<i>CEO Pay</i>	160	9660725	360432	165290	175000
<i>BLOCK</i>	160	0.849	0.108	0.545	0.933
<i>BDIV</i>	160	0.157	0.0927	0	0.300
<i>BSZI</i>	160	11.44	1.577	8	15
<i>ROA</i>	160	0.0209	0.0154	-0.0495	0.0789
<i>LEV</i>	160	0.861	0.0582	0.698	0.941
<i>SIZE</i>	160	4.366	0.336	3.707	5.059
<i>TOBIN'S Q</i>	160	0.315	0.207	0.0554	1.271

Table 2 reports correlations between the variables. There is a positive and highly ( $p < 0.01$ ) significant correlation between *BLOCK* and *CEOPAY* (0.3970). It is observed that there is a high correlation between firm size and leverage (0.603, where  $p < 0.01$ ), and also between Tobin's Q and ROA (-0.5562, where  $p < 0.01$ ) which indicates that firm with greater profitability tends to have greater growth opportunities. As expected, the correlation between CEO with foreign exposure and CEO pay is also considerably high (0.4445, where  $p < 0.01$ ). The correlation matrix is consistent with the research hypotheses

Table-2: Correlation Matrix

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
(1) <i>CEOPAY</i>	1									
(2) <i>BLOCK</i>	0.397***	1								
(3) <i>BDIV</i>	-0.002***	-0.378***	1							
(4) <i>BSIZE</i>	-0.307***	-0.139	-0.373***	1						
(5) <i>ROA</i>	0.147	0.218	-0.128	-0.099	1					
(6) <i>LEV</i>	0.105	-0.071	-0.093	-0.137	-0.375***	1				
(7) <i>SIZE</i>	0.591***	0.240***	0.035***	-0.335***	-0.131	0.603**	1			
(8) <i>Tobin's Q</i>	-0.276**	0.071	-0.219	-0.001	0.556***	-.383	-0.455***	1		
(9) <i>MTB</i>	0.0538	0.1600	-0.053	-0.288***	0.323***	-0.003	0.086	0.545***	1	
(10) <i>FEXP</i>	0.4445***	-0.1952**	0.370***	-0.093	-0.065	-0.062	0.240**	-0.218**	0.00	1

### Regression Analysis:

Table 3 shows the regression coefficient estimates. Model-1 shows that except *MTB*, all coefficients are highly significant. The R-square value of this model is 0.640 ( $p=0.000$ ), which indicates that the model is statistically significant. Alternatively stated, 64% of the changes in CEO compensation can be explained by both independent and control variables. This paper hypothesizes that there is a relationship between

institutional ownership and CEO compensation among the listed NBFIs of Bangladesh. The coefficient estimates of *BLOCK* are 0.49 and statistically significant at 1%. The effect is economically meaningful. Hence, it confirms a significant relationship between institutional ownership and CEO compensation. Consistent with prior studies (i.e. (Jiang & Kim, 2015), (Wen, Xu., B. Chen., Xia & J., 2019), (Ullah, Jiang, Shahab, Li & Xu, 2020), the findings have policy implications

which is firms with a high level of institutional ownership are more inclined to increase CEO compensation.

**Table 3: Baseline Results (Impact of Institutional ownership on CEO Compensation)**

Independent Variable: <b>BLOCK</b>		Dependent Variable: <b>CEOPAY</b>		
VARIABLES	(1) Model 1	(2) Model 2	(3) Model 3	
<b>BLOCK</b>	0.49*** (0.13)	0.5137*** (0.1357)	-0.0189 (0.1493)	
BDIV	-0.36*** (0.13)	-0.3398*** (0.1281)	-0.6632*** (0.1685)	
BSZIE	-0.02*** (0.01)	-0.0216*** (0.0068)	-0.0090 (0.0081)	
ROA	2.77* (1.56)	3.6099** (1.5569)	3.5954*** (0.8597)	
LEV	-0.44** (0.22)	-0.2579 (0.2506)	-0.7368** (0.3331)	
SIZE	0.23*** (0.04)	0.1717*** (0.0564)	0.5992*** (0.1164)	
Tobin's Q	-0.21** (0.10)	-0.1678* (0.0920)	-0.0343 (0.1019)	
MTB	-0.00 (0.00)	-0.0014 (0.0023)	-0.0086** (0.0033)	
FEXP	0.27*** (0.04)	0.3018*** (0.0402)	0.2435*** (0.0449)	
INF		-1.5517* (0.8755)	-0.3019 (0.7044)	
GDP_GROWTH		1.2311 (1.7108)	-3.9279* (2.0629)	
Constant	5.96*** (0.30)	6.019*** (0.513)	5.2294*** (0.4210)	
Observations	160	160	160	
R-squared	0.640	0.655	0.608	
Year_FE	No	No	Yes	

Standard errors in parentheses; \*\*\* p<0.01, \*\* p<0.05, \* p<0.01

Table 3 further reports that the control variables coefficients have the expected signs. For example, larger and profitable firms are more likely to pay higher CEO packages. In column (2), the authors control for macroeconomic variables e.g., inflation, GDP growth. This helps us to eliminate the omitted variables bias and rule out the possibility that *CEOPAY* is guided by inflationary pressure and or economic growth. Consequently, the coefficient of institutional ownership increases to 0.514. It remains consistently significant, both statistically and economically. The authors also include year-fixed effects in column (3) to capture the unobserved year effects that could influence the *CEOPAY*. Although the coefficient becomes negative, it remains statistically insignificant and economically not meaningful.

**Robustness Check and Alternative Analysis:**

The authors conduct two sets of robustness tests for validating the baseline regression results. The paper utilizes the year-

fixed effects to control for any unobserved year-wise heterogeneity. Moreover, there is employed board ownership (*BOWN*) as an alternative measure of institutional ownership. Table 4 shows the estimates of regression coefficients. Model-1 shows that except *MTB*, all are highly significant. The R-square value of this model is 0.636 (p=0.000), which indicates that the model is statistically significant. The results remain consistent with the baseline model. A significant and considerable correlation between board ownership and CEO compensation has been observed. The coefficient estimates of *BOWN* are 0.219 and statistically significant at 1%. The effect is economically meaningful. As a result, it confirms the existence of a significant correlation between institutional ownership and CEO compensation.

**Table 4: Alternative Analysis (Impact of Institutional ownership on CEO Compensation)**

Independent Variable: <b>BOWN</b>		Dependent Variable: <b>CEOPAY</b>		
VARIABLES	(1) Model 1	(2) Model 2	(3) Model 3	
<b>BOWN</b>	0.2187*** (0.0415)	0.2156*** (0.0457)	-0.2320 (0.2897)	
BDIV	-0.7121*** (0.1323)	-0.7170*** (0.1350)	-0.6528*** (0.1609)	
BSZIE	-0.0216*** (0.0065)	-0.0238*** (0.0065)	-0.0094 (0.0081)	
ROA	3.6668** (1.5824)	3.8904** (1.5125)	3.5556*** (0.8588)	
LEV	-0.4895** (0.2125)	-0.4282* (0.2240)	-0.6743** (0.3392)	
SIZE	0.2845*** (0.0431)	0.2658*** (0.0507)	0.6180*** (0.1177)	
Tobin's Q	-0.3020*** (0.1026)	-0.2898*** (0.0992)	-0.0278 (0.0993)	
MTB	0.0018 (0.0029)	0.0019 (0.0029)	-0.0081** (0.0034)	
FEXP	0.2175*** (0.0359)	0.2236*** (0.0366)	0.2382*** (0.0428)	
INF		-1.4331* (0.8290)	-0.2685 (0.6969)	
GDP_GROWT H		-1.6485 (1.8045)	-4.1662** (2.0800)	
Constant	6.2453*** (0.2419)	6.4960*** (0.2639)	5.1513*** (0.3553)	
Observations	160	160	160	
R-squared	0.6364	0.6458	0.6097	
Year_FE	No	No	Yes	

Standard errors in parentheses; \*\*\* p<0.01, \*\* p<0.05, \* p<0.01

Similarly, the control variables coefficients have the expected signs. For example, larger and profitable firms are more likely to pay higher CEO packages. In column (2), the authors control for macroeconomic variables e.g., inflation, GDP growth. This helps to eliminate the omitted variables bias and

rule out the possibility that *CEOPAY* is guided by inflationary pressure and or economic growth. Consequently, the coefficient of political risk increases to 0.212. It remains consistently significant, both statistically and economically. The authors also include year-fixed effects in column (3) to capture the unobserved year effects that could influence the *CEOPAY* and the result becomes negative and insignificant.

## 5. CONCLUSION

The relationship between institutional ownership and CEO compensation is investigated in this study in line with the agency theory, where this paper expects institutional ownership to be an important instrument for enhancing corporate governance and quality monitoring. NBFIs from Bangladesh are the focus of this research. The authors hypothesize that a positive association between institutional ownership and CEO compensation and found that ownership has a favorable and important effect on CEO compensation, consistent with hypothesis and other recent studies. Even after multifaceted fixed effects regression and alternative institutional ownership measurement, the findings remain accurate. One interesting explanation is that institutional owners and boards of directors place a greater emphasis on minimizing agency problems to better safeguard the interests of shareholders through higher CEO compensation packages. This study can be further extended by incorporating more governance and compensation variables. Future studies will also discuss the channels influencing the CEO compensation agreement by the ownership structure. However, by disclosing the determinants of CEO compensation in an emerging market like Bangladesh, this study tried to expand the previous literature.

## 6. REFERENCES

- Ahmed, M.N. & Chowdhury, M.I. (2007). Non-Bank Financial Institutions in Bangladesh: An Analytical Review. Working Paper Series: WP 0709, Bangladesh Bank, Bangladesh.
- Bathala, C. (1996). Determinants of Managerial Stock Ownership: The Case of Ceos. *Financial Review*, 31(1), 127–147. <https://doi.org/10.1111/j.1540-6288.1996.tb00867.x>
- Baysinger, B. D., Kosnik, R. D., & Turk, T. A. (1991). Effects of Board and Ownership Structure on Corporate R&D Strategy. *Academy of Management Journal*, 34(1), 205–214. <https://doi.org/10.5465/256308>
- Beatty, R. P., & Zajac, E. J. (1994). Managerial Incentives, Monitoring, and Risk Bearing: A Study of Executive Compensation, Ownership, and Board Structure in Initial Public Offerings. *Administrative Science Quarterly*, 313–335. <https://doi.org/10.2307/2393238>
- Bebchuk, L. A., & Fried, J. M. (2004). *Pay without Performance: The Unfulfilled Promise of Executive Compensation*. Harvard University Press.
- Becker, B., Cronqvist, H., & Fahlenbrach, R. (2011). Estimating the Effects of Large Shareholders Using a Geographic Instrument. *Journal of Financial and Quantitative Analysis*, 46(4) 907–942. <https://doi.org/10.1017/S0022109011000159>
- Bethel, J. E., & Liebeskind, J. (1993). The Effects of Ownership Structure on Corporate Restructuring. *Strategic Management Journal*, 14(1), 15–31. <https://doi.org/10.1002/smj.4250140904>
- Brickley, J. A., Lease, R. C., & Smith Jr, C. W. (1988). Ownership Structure and voting on Antitakeover Amendments. *Journal of financial economics*, 20, 267–291. [https://doi.org/10.1016/0304405X\(88\)90047-5](https://doi.org/10.1016/0304405X(88)90047-5)
- Burkart, M., & Panunzi, F. (2006). Agency Conflicts, Ownership Concentration, and Legal Shareholder Protection. *Journal of Financial Intermediation*, 15(1), 1–31. [https://doi.org/10.1016/0304-405X\(88\)90047-5](https://doi.org/10.1016/0304-405X(88)90047-5)
- Carleton, W. T., Nelson, J. M., & Weisbach, M. S. (1998). The Influence of Institutions on Corporate Governance Through Private Negotiations: Evidence from TIAA-CREF. *The Journal of Finance*, 53 (4), 1335–1362. <https://doi.org/10.1111/0022-1082.00055>
- Chen, J., Ezzamel, M., & Cai, Z. (2011). Managerial Power Theory, Tournament Theory, and Executive Pay in China. *Journal of Corporate Finance* 17, 1176–1199. <https://doi.org/10.1016/j.jcorpfin.2011.04.008>
- Chhaochharia, V., & Grinstein, Y. (2009). CEO Compensation and Board Structure. *The Journal of Finance* 64, 231–261. <https://doi.org/10.1111/j.1540-6261.2008.01433.x>
- Chichernea, D. C., Petkevich, A., & Zykaj, B. B. (2013). Idiosyncratic Volatility, Institutional Ownership, and Investment Horizon. *European Financial Management*, 21(4), 613–645. <https://doi.org/10.1111/j.1468-036X.2013.12033.x>
- Chizema, A., Lio, X., Lu, J., & Gao, L. (2015). Politically Connected Boards and Top Executive Pay in Chinese Listed Firms. *Strategic Management Journal* 36(6), 890–906. <https://doi.org/10.1002/smj.2253>
- Coffee, J. C. (1991). Liquidity versus control: The institutional investor as corporate monitor. *Columbia law review*, 91(6), 1277–1368.
- Conyon, M. J., & He, L. (2012). CEO Compensation and Corporate Governance in China. *Corporate Governance: An International Review*, 575–592. <https://doi.org/10.1111/j.1467-8683.2012.00935.x>
- Conyon, M. J., He, L., & Zhou, X. (2015). Star CEOs or Political Connections? Evidence from China's Publicly Traded Firms. *Journal of Business Finance & Accounting*, 412–443. <https://doi.org/10.1111/jbfa.12110>
- Conyon, M., & He, L. (2011). Executive Compensation and Corporate Governance in China. *Journal of Corporate Finance* 17, 1158–1175. <https://doi.org/10.1111/jbfa.12110>
- Conyon, M. J., L. H. Hass, S. I. Peck, G. V. Sadler and Z. Zhang. (2019). 'Do compensation consultants drive up CEO pay? Evidence from UK public firms'. *British Journal of Management*, 30(1), 10–29. <https://doi.org/10.1111/1467-8551.12307>
- Core, J. E., Holthausen, R. W., & Larcker, D. F. (1999). Corporate Governance, Chief Executive Officer Compensation, and Firm Performance. *Journal of Financial Economics* 51(3), 371–406. [https://doi.org/10.1016/S0304-405X\(98\)00058-0](https://doi.org/10.1016/S0304-405X(98)00058-0)
- Comett, M. M., Marcus, A. J., Saunders, A., & Tehranian, H. (2007). The impact of institutional ownership on corporate operating performance. *Journal of Banking & Finance*, 31(6), 1771–1794. <https://doi.org/10.1016/j.jbankfin.2006.08.006>
- Croci, E., Gonenc, H., & Ozkan, N. (2012). CEO Compensation, Family Control, and Institutional Investors in Continental Europe. *Journal of Banking and Finance*, 36(12), 3318–3335. <https://doi.org/10.1016/j.jbankfin.2012.07.017>
- Cubbin, J., & Leech, D. (1989). The Effects of Shareholding Dispersion on the Degree of Control in British Companies. *The Economic Journal*, 93(370), 351–369. <https://doi.org/10.2307/2232797>
- Dasgupta, A., Fos, V., & Sautner, Z. (2020). Institutional Investors and Corporate Governance. *Foundations and Trends in Finance*, 12(4), 276–394.
- Datta, R. (2014). Projection of Non-Bank Financial Institutions and Money Market: Bangladesh View. *Review of contemporary business research*, 3(2), 51–66
- Davis, G., & Thompson, T. (1994). A social movement perspective on corporate control. *Administrative science quarterly*, 39(1), 141– 73. <https://doi.org/10.2307/2393497>
- David, P., Kochhar, R., & Levitas, E. (1998). The effect of institutional investors on the level and mix of CEO compensation. *Academy of Management journal*, 41(2), 200–208. <https://doi.org/10.5465/257102>
- Donaldson, L., & Davis, J. H. (1991). Stewardship theory or agency theory: CEO governance and shareholders return. *Australian Journal of Management* 16(1), 49–64. <https://doi.org/10.1177/0312896291016001>
- Dong, M., & Ozkan, A. (2008). Institutional investors and director pay: An Empirical Study of UK companies. *Journal of Multinational Financial Management*, 18(1), 16–29. <https://doi.org/10.1016/j.mulfin.2007.06.001>
- Eisenhardt, k. (1989). Agency theory: an assessment and review. *Academy of management review*, 14(1) 57– 74. <https://doi.org/10.5465/amr.1989.4279003>
- Elston, J., & Goldberg, L. (2003). Executive Compensation and Agency Costs in Germany. *Journal of Banking and Finance* 27(7), 1391–1410. [https://doi.org/10.1016/S0378-4266\(02\)00274-1](https://doi.org/10.1016/S0378-4266(02)00274-1)
- Fernandes, N., Ferreira, M., Matos, P., & Murphy, K. (2012). Are U.S. CEOs Paid More? New International Evidence. *The Review of Financial Studies*, 26(2), 323–367. <https://doi.org/10.1093/rfs/hhs122>
- Ferreira, M. A., & Matos, P. (2008). The Colors of Investors' Money: The Role of Institutional Investors around the World. *Journal of Financial*

- economics*, 88(3), 499-533. <https://doi.org/10.1016/j.jfineco.2007.07.003>
- Firth, M., Fung, P. M., & Rui, O. M. (2007). How Ownership and Corporate Governance Influence Chief Executive Pay in China's Listed Firms. *Journal of Business Research* 60(7), 776–785. <https://doi.org/10.1016/j.jbusres.2007.01.014>
- Gallagher, D. R., Smith, G., & Swan, P. (2006). Do Institutional Investors really monitor Executive Compensation. *The University of New South Wales, School of Banking and Finance Working Paper Series*.
- Gillan, S., & Starks, L. T. (1998). A Survey of Shareholder Activism: Motivation and Empirical Evidence. *Contemporary Finance Digest* 2 (3), 10–34.
- Gillan, S., & Starks, L. (2000). Corporate Governance Proposals and Shareholder Activism: The Role of Institutional Investors. *Journal of Financial Economics*, 57(2), 275–305. [https://doi.org/10.1016/S0304-405X\(00\)00058-1](https://doi.org/10.1016/S0304-405X(00)00058-1)
- Gillan, S., & Starks, L. T. (2003). Corporate governance, corporate ownership, and the role of institutional investors: A global perspective. *Journal of Applied Finance*, 13(2).
- Guthrie, K., Sokolowsky, J., & Wan, K. M. (2012). CEO compensation and board structure revisited. *The Journal of Finance*, 67(3), 1149-1168. <https://doi.org/10.1111/j.1540-6261.2012.01744.x>
- Hartzell, J., & Starks, L. (2003). Institutional Investors and Executive Compensation. *Journal of Finance*, 58(6), 2351–2374. <https://doi.org/10.1046/j.1540-6261.2003.00608.x>
- Hadani, M., Goranova, M., & Khan, R. (2011). Institutional investors, Shareholder Activism, and earnings Management. *Journal of business research*, 64(12), 1352-1360. <https://doi.org/10.1016/j.jbusres.2010.12.004>
- Heard, J. E., & Sherman, H. D. (1987). *Conflicts of Interest in the Proxy Voting System*. Investor Responsibility Research Center.
- Hill, C., & Snell, S. (1989). Effects of Ownership Structure and Control on Corporate Productivity. *Acad Manage J* 32(1), 25–46. <https://doi.org/10.5465/256418>
- Holthausen, Core, J. E., R. W., & Larcker, D. F. (1999). Corporate governance, chief executive officer compensation, and firm performance. *Journal of financial economics*, 51(3), 371-406. [https://doi.org/10.1016/S0304-405X\(98\)00058-0](https://doi.org/10.1016/S0304-405X(98)00058-0)
- Holderness, C. G. (2003). A survey of blockholders and corporate control. *Economic Policy Review*, 9(1), 51-64.
- Hoskisson, R. E., Castleton, M. W., & Withers, M. C. (2009). Complementarity in Monitoring and Bonding: More Intense Monitoring Leads to Higher Executive Compensation. *Academy of Management Perspectives*, 23(2), 57-74. <https://doi.org/10.5465/amp.2009.39985541>
- Hutchinson, M., Seamer, M., & Chapple, L. E. (2015). Institutional Investors, Risk/Performance and Corporate Governance. *The International Journal of Accounting*, 50(1), 31-52. <https://doi.org/10.1016/j.intacc.2014.12.004>
- Janakiraman, S., Radhakrishnan, S., & Tsang, A. (2010). Institutional Investors, Managerial Ownership, and Executive Compensation. *Journal of Accounting, Auditing & Finance*, 25(4), 673-707. <https://doi.org/10.1177/0148558X1002500409>
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure. *Journal of Financial Economics*, 3(4), 305–360.
- Johnson, R. A., Schnatterly, K., Johnson, S. G., & Chiu, S. C. (2010). Institutional Investors and Institutional Environment: A Comparative Analysis and Review. *Journal of Management Studies*, 47(8), 1590–1613. <https://doi.org/10.1111/j.1467-6486.2010.00930.x>
- Jiang, F., & Kim, K. A. (2015). Corporate governance in China: A modern perspective. *Journal of Corporate Finance*, 32, 190-216. <https://doi.org/10.1016/j.jcorpfin.2014.10.010>
- John, K., & Senbet, L. W. (1998). Corporate Governance and Board Effectiveness. *Journal of banking & Finance*, 22(4), 371-403. [https://doi.org/10.1016/S0378-4266\(98\)00005-3](https://doi.org/10.1016/S0378-4266(98)00005-3)
- Johnson, R. A., & Greening, D. W. (1999). The effects of Corporate Governance and Institutional Ownership Types on Corporate Social Performance. *Academy of management journal*, 42(5), 564-576. <https://doi.org/10.5465/256977>
- Khan, R., Dharwadkar, R., & Brandes, P. (2005). Institutional ownership and CEO compensation: a longitudinal examination. *Journal of Business Research*, 58(8), 1078-1088. <https://doi.org/10.1016/j.jbusres.2004.02.002>
- Knyazeva, A., Knyazeva, D., & Kostovetsky, L. (2018). Investor heterogeneity and trading. *European Financial Management*, 24(4), 680-718. <https://doi.org/10.1111/eufm.12169>
- Lin, Y. R., & Fu, X. M. (2017). Does institutional ownership influence firm performance? Evidence from China. *International Review of Economics & Finance*, 49, 17-57. <https://doi.org/10.1016/j.iref.2017.01.021>
- Manso, G. (2011). Motivating Innovation. *The Journal Of Finance*, 66(5), 1823–1860. <https://doi.org/https://doi.org/10.1111/j.1540-6261.2011.01688.x>
- Maranho, F. S., Bortolon, P. M., & Leal, R. P. (2020). The Firm–Investor Level Characteristics of Institutional Investor Engagement in Brazil. *International Journal of Disclosure and Governance*, 17(4), 267–281. <https://doi.org/10.1057/s41310-020-00095-w>
- Nawaz, T. (2022). How Much Does the Board Composition Matter? The Impact of Board Gender Diversity on CEO Compensation. *Sustainability*, 14(18). <https://doi.org/10.3390/su141811719>
- Oxelheim, L., Gregorič, A., Randøy, T., & Thomsen, S. (2013). On the internationalization of corporate boards: The case of Nordic firms. *Journal of International Business Studies*, 44(3), 173-194.
- Rubach, M. J., & Seбора, T. C. (2009). Determinants of institutional investor activism: A test of the Ryan Schneider model (2002). *Journal of Managerial Issues*, 245-261. <https://doi.org/10.1057/jibs.2013.3>
- Saleh, M. W. A., Eleyan, D., & Maigoshi, Z. S. (2022). Moderating effect of CEO power on institutional ownership and performance. *EuroMed Journal of Business*. <https://doi.org/10.1108/EMJB-12-2021-0193>
- Sheikh, M. F., Shah, S. Z., & Akbar, S. (2018). Firm Performance, Corporate Governance and Executive Compensation in Pakistan. *Applied Economics* 50(18), 2012–2027. <https://doi.org/10.1080/00036846.2017.1386277>
- Shin, J. Y., & Seo, J. (2011). Less pay and more sensitivity? Institutional investor heterogeneity and CEO pay. *Journal of Management*, 37(6), 1719-1746. <https://doi.org/10.1177/0149206310372412>
- Shleifer, A., & W. Vishny, R. (1986). Large Shareholders and Corporate Control. *Journal of Political Economy*, 94(4), 461–488.
- Shleifer, A., & W. Vishny, R. (1997). A Survey of Corporate Governance. *The Journal of Finance*, 52(2), 737–783. <https://doi.org/10.1177/0149206310372412>
- Parrino, R., Sias, R. W., & Starks, L. T. (2003). Voting with Their Feet: Institutional Ownership Changes around Forced CEO Turnover. *Journal of financial economics*, 68(1), 3-46. [https://doi.org/10.1016/S0304-405X\(02\)00247-7](https://doi.org/10.1016/S0304-405X(02)00247-7)
- Ullah, F., Jiang, P., Shahab, Y., Li, H.-X., & Xu, L. (2020). Block ownership and CEO compensation: Does Board Gender Diversity Matter? *Applied Economics*, 52(6), 583-597. <https://doi.org/10.1080/00036846.2019.1659490>
- Ward, C., Yin, C., & Zeng, Y. (2019). Motivated Monitoring by Institutional Investors and Firm Investment Efficiency. *European Financial Management*, 26(2), 348-385. <https://doi.org/10.1111/eufm.12232>
- Wardhana, L. I., & Tandellin, E. (2011). Institutional Ownership and Agency Conflict Controlling Mechanism. *Journal of Indonesian Economy and Business*, 26(3), 389-406.
- Wen, F., Xu, L., Chen, B., Xia, X., & Li, J. (2019). Heterogeneous Institutional Investors, Short Selling and Stock Price Crash Risk: Evidence from China. *Emerging Markets Finance and Trade*, 56(12), 1-14. <https://doi.org/10.1080/1540496X.2018.1522588>
- Wright, P., Ferris, S., Sarin, A., & Awasthi, V. (1996). Impact of corporate Insider, Blockholder and Institutional Equity Ownership on Firm Risk Taking. *Acad Manage J* 39(2), 441–63. <https://doi.org/10.5465/256787>
- Yan, X., & Zhang, Z. (2009). Institutional investors and equity returns: Are short-term institutions better informed? *Review of Financial Studies*, 22(2), 893-924. <https://doi.org/10.1093/revfin/hh046>
- Yermack, D. (1996). Higher Market Valuation of Companies with a Small Board of Directors. *Journal of Financial Economics* 40(2), 185–211. [https://doi.org/10.1016/0304-405X\(95\)00844-5](https://doi.org/10.1016/0304-405X(95)00844-5)