



## CORPORATE GOVERNANCE AND EARNINGS MANAGEMENT PRACTICES AMONG LISTED FIRMS: A STUDY ON POST STOCK MARKET CRISIS PERIOD IN BANGLADESH



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### ABSTRACT

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This paper investigates the effect of corporate governance on earnings management practice of listed firms in Bangladesh during post stock market crisis period. The data set consists of 300 firm year observation from 2011-15. We have used six (6) corporate governance variables as independent variables namely board Size, CEO duality, board independence, board meeting, audit committee independence and ownership concentration. Leverage and firm size have been used as control variables. Our dependent variable is earnings management measured by discretionary accruals following Original Jones Model. Our panel data regression reveals CEO duality and audit committee independence have significant relationship with earnings management practices. This paper fills a gap in the literature by providing evidence about the effect of corporate governance quality on listed firms' earnings management behavior in the context of stock market volatility. Finally, the study suggests that listed firms should enhance their compliance with corporate governance standards which will assist to constraint the unethical practices of earnings management.

**Contribution/ Originality:** This paper has the potential to contribute empirically to corporate governance literature by investigating how corporate governance structure is associated with firm's earnings management behaviour during post stock market crisis periods especially in context of the developing market.

### 1. INTRODUCTION

Financial information especially earnings figure are a matter of interest to different stakeholders as the earnings figure provides more insight into a firm's performance in the long run. Since the financial performance is in the center of financial decision making process and they provide critical information when investment decisions are made (DeGeorge, Patel, & Zeckhauser, 1999); therefore, it is not surprising that managers are engaged in earnings management activities

to create a perfect image for their companies. Earnings management activity refers to the use of discretionary accounting in order to influence financial statements having the goal of reporting an outcome that is not in line with the economic performance of the company (Beattrice, 2013). A considerable amount of research has been conducted in past two decades on the issue of earnings management. Earning management issue has gained special interest in existing literature as it is seen as method for firms to intentionally manipulate their earnings by influencing the discretionary accruals. Earnings management is taking advantage of the flexibility in the choice of accounting treatment to signal the manager's private information on future cash flow. There are a number of techniques by which managers may engage in earnings management practices such as changes in the estimated amount of assets impaired, the amount of inventory recorded, the volume of bad debts written off, the estimated useful life of long-term assets, and estimated post-employment benefits and warranty costs (Chhabra, 2016).

At the same time, the issue of corporate governance comes forward as it is designed to pursue stakeholders' interests. Corporate governance is the set of processes and policies by which a firm is directed and controlled for the best interest of stakeholders (Khan, 2011). Recent corporate governance reforms around the world are intended to promote capital market efficiency through increased public disclosure by firms (Anglin & Gao, 2011). Over the past several years, the importance of corporate governance has been highlighted by an increasing body of academic research and many of them attempted to determine the impact of corporate governance on firms' performances (Brown & Caylor, 2006; Gompers, Ishii, & Metrick, 2003; Sharma & Singh, 2018). The corporate governance framework is the widest control mechanism, both internal and external, to encourage the efficient use of corporate resources and equally to require accountability for the stewardship of those resources (Imam & Malik, 2007). Prior studies demonstrate that it is less likely for managers to divert earnings or assets when there is greater legal protection (Shleifer & Wolfenzon, 2002). Burgstahler, Hail, and Leuz (2006) provided evidence that countries with stronger legal systems have lower earnings management.

On the other hand, previous research also documented that managers are likely to manipulate earnings in times of crisis as it creates opportunistic incentive for managers to camouflage the true performance of the companies which is expected to decline during financial crisis period (Habib, Uddin Bhuiyan, & Islam, 2013; Johl, Jubb, & Houghton, 2003; Ming Chia, Lapsley, & Lee, 2007). Financial crisis can be to an important extent attributed to failures and weaknesses in corporate governance arrangements acknowledged by a number of key policy makers and therefore, the issue has been reflected in both national and multilateral financial regulatory reform efforts (Kirkpatrick, 2009). According to Strobl (2013), managers are more likely to engage in earnings manipulations during an economic boom as opposed to a recession. Therefore, the practice of earning management can be continued even after crisis period. Moreover, following financial crisis period new rules and legislation are implemented and for which reason corporate governance may have impact on ethical behavior of management regarding earnings management in the post crisis period (Reinhart & Rogoff, 2009). At the end of 2010, stock market of Bangladesh faced a significant volatile condition. In this time, firms may have high propensity to engage in earnings management practices. At the same time, in the reforming process, policy makers emphasized on ensuring corporate governance among listed firms. But, no vivid attempt has been taken so far to conduct the research on the mentioned issue. Therefore, the present study aims to investigate the relationship between corporate governance and earnings management practice in Bangladesh following stock market crisis period. The research question of this study is 'whether there is influence of corporate governance policies on earnings management practices of the listed firms at the Dhaka Stock Exchange (DSE) during post stock market crisis period?'

The study has potential contribution towards policy formulation that will assist to mitigates the agency problem, to protect information transparency and ensure the independence of auditors, all in order to protect the investors interests' and increase the confidence of capital markets.

## 2. LITERATURE REVIEW & HYPOTHESIS DEVELOPMENT

For the last couple of decades the issue of earnings management has become a matter of investigation among researchers worldwide (Malikov, Manson, & Coakley, 2018). By practicing earnings management activity, managers intend to influence the financial outcome report that is

not in line with the actual performance of the company; and this is mostly done by using discretionary accounting. Diverse managerial motives for earnings management exist, as supported in prior researches. Management is more likely to engage in earnings management if they intend to report positive profits, to sustain recent performance or to meet analysts' expectations (DeGeorge et al., 1999). Previous research also documented that managers are likely to manipulate earnings in times of crisis as it creates opportunistic incentive for managers to camouflage the true performance of the companies which is expected to decline during financial crisis period (Habib et al., 2013; Ming Chia et al., 2007; Shireenjit, Jubb, & Houghton, 2007). Shih and Lin (2002) studied earnings management during the 1990-1991 recessions using original Jones model (Jones, 1991). The results show that earnings reserves have been released strategically in quarters with moderate economic growth. Masruki and Azizan (2012) investigates the impact of Asian financial crisis to earnings management and operating performance on 100 Malaysian listed firms from 1999 to 2002. They report that firms tend to choose income-increasing strategies, specifically when the operating performance is extremely poor following the crisis period. Johl et al. (2003) attempts to establish the relationship between audit quality and earnings management during the Asian financial crisis using the modified Jones model. The authors report that Big 5 auditors constrain upward accrual earnings management but only industry specialized Big 5 auditors constrain downward accrual earnings management. Using a sample of 74 financially distressed Chinese firms from the period of 2002 to 2016, Yenpao, Chen, and Huang (2010) finds that discretionary accruals are used to manage earnings downward in the year that firms make a loss.

On the other hand, a number of prior studies documented how corporate governance can influence earnings management behavior (Sanad, Shiwakoti, & Kukreja, 2019). Prior studies demonstrate that it is less likely for managers to divert earnings or assets when there is greater legal protection (Shleifer & Wolfenzon, 2002). Leuz, Nanda, and Wysocki (2003) reported that countries with lower investor protection usually have a higher magnitude of earnings management. By using internal control mechanism board governance can also prevent opportunistic earnings management practice (Carcello, Hollingsworth, Klein, & Neal, 2006; Klein, 2002). Prior studies have documented that ownership structure and audit expertise can influence firm earnings quality (Abbott, Parker, & Peters, 2004). González and García-Meca (2013) studied a sample of listed Latin American non-financial companies from the period 2006-2009 to inspect the association between the internal mechanisms of corporate governance and earnings management measured by discretionary accrual. They reported that insider shareholding, board independence, institutional investors, ownership concentration and greater number of board meetings negatively affect earnings management while family ownership and board size positively influence earnings management. Using a sample of 687 large publicly-traded U.S. firms, Klein (2002) examined whether the magnitude of earnings management is related to audit committee independence. He finds that board characteristics such as audit committee independence can predict lower discretionary accruals. Mansor, Che-Ahmad, Ahmad-Zaluki, and Osman (2013) conclude that larger audit committees with a greater degree of independence perform better as oversight bodies. Chung, Firth, and Kim (2002) find that institutional investors prefer that managers do not engage in earnings management. Xie, Davidson, and DaDalt (2003) examine discretionary accruals from a corporate governance perspective in a cross-section of industries. Earnings management is found to be mitigated when boards have more independent outside directors or boards meet more often, and when directors have corporate or investment banking experience.

Similarly, Peasnell, Pope, and Young (2000) find an increased likelihood of discretionary accrual to avoid earnings loss for firms with higher proportions of non-executive directors. Being the outsider, independent directors are able to monitor any self interested actions by managers and thus they can reduce earnings management (Fama & Jensen, 1983; Peasnell et al., 2000). G. Chen, Firth, Gao, and Rui (2006) observe that the potential for fraud is reduced when the board meets frequently because this allows the directors to identify and resolve any potential problems. Davidson III, Jiraporn, Kim, and Nemeč (2004) conclude that CEO duality gives the CEO greater control over the perception created by the firm's financial reports. This eventually concentrates more power in the CEO's position and allows greater managerial discretion.

Based on above literature and discussion, we have developed following hypothesis:

*H<sub>0</sub>: There is no significant relationship between corporate governance and earnings management among the listed firms in Bangladesh during post stock market crisis period (2011-15).*

*H<sub>1</sub>: There is significant relationship between corporate governance and earnings management among the listed firms in Bangladesh during post stock market crisis period (2011-15).*

### 3. METHODOLOGY

For the study, we have taken 60 firms under all 10 manufacturing industry listed at DSE from the period of 2011 to 2015 which results 300 firm year observations. Banks, other financial institutions, trust companies and utility companies have been excluded because these companies have different legal and regulatory reporting requirements (Becker, DeFond, Jiambalvo, & Subramanyam, 1998; Rusmin, 2010). The selection of the sample firms are shown in Table 1.

Table-1. Sample selection.

Industry	Total firms under each industry (2011-15)	No. of sample firms
Cement	5	3
Ceramic	5	3
Engineering	21	13
Food & allied	13	8
Jute	2	1
Miscellaneous	9	5
Paper & printing	1	1
Pharmaceuticals & chemicals	19	11
Tannery industries	4	2
Textile	22	13
Total	101	60

Data have been collected from annual reports of 60 sample firms from the period of 2011-2015 (post stock market crisis period). The following model has been developed for determining functional relationship between corporate governance and earnings management:

$$DA = \alpha - \beta_1 \text{BoardSize} - \beta_2 \text{Independence} - \beta_3 \text{Meeting} + \beta_4 \text{CEODual} - \beta_5 \text{Audit} - \beta_6 \text{Concentration} + \beta_7 \text{Lev} + \beta_8 \text{Firm size} \quad (1)$$

Where,

DA= Discretionary Accruals measured by Jones (1991).

This DA has been calculated as:

$TA = (\Delta \text{Non-cash current assets} - \Delta \text{Current liabilities excl. current portion of long term debt} - \text{Depreciation and Amortization}) / \text{Lagged total assets}$ .

Where:

$$TA_t = \text{total accruals}$$

The original Jones (1991) estimates nondiscretionary accruals (NDA) using the following equation:

$$NDA_t = a [1/A_{t-1}] + b_{1t} [\Delta \text{REV}_t / A_{t-1}] + b_2 [\text{PPE}_t / A_{t-1}]$$

Finally to determine the discretionary accruals (DA) as representation of earning management, nondiscretionary accruals have been deducted from Total Accruals (TA):  $DA_t = TA_t - NDA_t$

Board size= Numbers of Directors on the Board

Independence= Board independence measured as % of independent director on board. [Number of Independent Director/Board Size].

Meeting= No. of board meeting held during each financial year.

CEO Dual= When CEO and MD is the same person. [Using as Dummy; If yes= 1, No= 0].

Audit= Independence of audit committee measured as: Number of Non- Executive Director in Audit Committee/ Total Audit Committee Member.

Concentration= Measured as % of shares hold by Directors.

Control Variables: Lev= Leverage measured as long term debt/ total asset.

Firm Size= Measured as log of total asset.

We have performed panel data regression. Besides, specification test like heteroskedasticity, multicollinearity and hausman (fixed/random) have been performed. All data have been processed using STATA-12 Software.

**4. FINDINGS & DISCUSSION**

Table 2 shows descriptive statistics of study variables. From the table, it is revealed that listed firms in Bangladesh were engaged in income decreasing discretionary accruals. During study period, most of the board size is of seven (7) members on an average. Most of the firms held meeting on average eight (8) times per year. Our study also shows that there exists CEO Duality issue. Moreover, board of directors hold on average 43% of company share.

Table-2.Descriptive analysis.

Variable	Obs	Mean	Std. dev.	Min	Max
DA	300	-.2956	.6231	-8.69	.8647
Board size	300	7.196	1.673	4	12
Independence	300	.2218	.1203	0	.8
Meeting	300	7.92	5.214	4	42
CEO dual	300	1	.4590	0	1
Audit	300	.0122	.1030	0	1
Concentration	300	.4313	.2114	0	.95
Lev	300	3.789	56.51	.0102	979.4
Firm size	300	21.47	1.520	15.59	25.4

Table 3 shows pair wise correlation among study variables. As none of the correlation coefficient between independent variables is greater than 0.80; so, no multicollinearity problem amongst independent variable exists (Gujarati, 2003). This has been further confirmed by Variance Inflation Factor (VIF) test.

Table-3.Correlation matrix & VIF.

Variables	Discri. accrual	Board size	Independence	Meeting	CEO dual	Audit	Concentration	Lev	Size	VIF
Discri. Accrual	1									-
Board Size	0.12	1								1.27
Independence	-0.08	-0.38	1							1.22
Meeting	0.003	-0.14	0.06	1						1.13
CEO dual	0.02	-0.15	0.09	-0.11	1					1.30
Audit	0.05	0.15	-0.09	-0.09	0.08	1				1.52
Concentration	-0.02	0.13	0.09	-0.20	-0.13	-0.04	1			1.12
Lev	0.06	0.10	-0.06	-0.04	0.04	0.56	-0.02	1		1.58
Size	0.11	0.10	-0.12	0.21	-0.42	-0.03	-0.07	-0.22	1	1.40

From the diagnostic test in Table 4, we reject the null hypothesis of homoscedasticity and found that heteroscedasticity problem is present in the data. We have addressed this problem in our Panel Regression Model using robust technique. To determine the appropriateness of regression model (fixed or random), Hausman test has been conducted. The result of hausman test suggests that random model is appropriate for the study.

Table-4. Diagnostic tests.

Test	Chi2	P-value
Breusch- Pagan/ Cook Weisberg test	Chi2(1) = 92.55	Prob> chi2: <0.001
Hausman test (Fixed)	Chi2= 5.84	Prob>chi2: 0.6654

Table 5 shows panel data regression (Random) with robust technique for controlling heteroskedasticity problem.

Table-5.Random-effects GLS regression robust.

Variables	Coefficient	z	P-value	95% conf. interval	
Board size	.024903	1.18	0.236	-.0162939	.0660998
Independence	-.1985122	-0.65	0.519	-.8011632	.4041389
Meeting	-.0022261	-0.49	0.627	-.0112095	.0067573
CEO dual	.1208783***	2.61	0.009	.0299843	.2117722
Audit	-.1830842***	-3.58	<0.001	-.2831851	-.0829834
Concentration	-.0370568	-0.28	0.783	-.3006984	.2265849
Lev	.0010005***	3.71	<0.001	.0004718	.0015293
Firm size	.0607825*	1.69	0.091	-.0096016	.1311665
Constant	-1.788851*	-1.89	0.059	-3.647158	.0694566
Wald chi2 (8)= 2367.40, Prob> chi2: < 0.001					
R-Squared=0.1176					

Note: \*\*\* and \* indicates significant at 1% and 10% level respectively.

The result shows among six (6) governance variables two (2) are showing significant relationship with earnings management practice represented by discretionary accruals. The positive and significant relationship of CEO duality with earnings management indicates that if CEO and MD serves as same person (CEO Duality) then this will increase earnings management practice and vice versa. This result is confirmed by prior study of Soliman and Ragab (2013); Latif and Abdullah (2015) and Daghani, Zouhayer, and Mbarek (2016). On the other hand, a negative and significant relationship of audit committee independence with earnings management indicates that the more independence of audit committee, i.e. presence of external member in the committee, the less practice of earnings management. It is true that firm with well governed audit committee with independent, expert panels produces less earnings manipulations as they are responsible for financial oversight and control which eventually assists to improve the market performance by ensuring better quality disclosed financial reporting. The finding is also in line with the previous studies of Klein (2002) and Latif and Abdullah (2015). We found that the relationship between board size and earnings management is positive but insignificant. Because if number of directors in the boards increase without effective participation, then this will not control earnings management practice (Sarkar, Sarkar, & Sen, 2008). The relationship between board independence and earnings management is negative and insignificant. The reason is that the number of independent directors is trivial compared to total number of board of directors and it is observed that in most of the time independent directors cannot perform their responsibilities as most of them are recruited without having required specialization (X. Chen, Cheng, & Wang, 2015). Moreover, they are also being appointed based on personal relationship or political connection. The relationship of board meeting with earnings management is negative but insignificant. Because most of the cases directors participate in the board meetings to fulfill the regulatory regulation and for the benefit of sitting allowance without productive decision making (Jiraporn, Davidson, Wallace, DaDalt, & Ning, 2009). We also found that the relationship of ownership concentration with earnings management is negative and insignificant. It was expected that by holding greater percentage of shares, directors can ensure greater participation in company affairs and ensure corporate governance. But most of the cases they are holding those shares for keeping and taking advantage of ownership rather adding value to the firm (Connelly, Hoskisson, Tihanyi, & Certo, 2010).

## 5. CONCLUSION

The study has been undertaken to investigate the effect of corporate governance quality on the practice of earnings management through discretionary accruals in those companies which is listed in DSE during 2011 to 2015. We found CEO duality and audit committee have significant influence on earnings management practice. This means corporate governance is an important mechanism for controlling earnings management and in case of Bangladesh; these two factors are most important variables for limiting the practice of earnings management. Our comprehensive research evidence will help the policy makers and regulators to evaluate the effectiveness of corporate governance policy for controlling earnings management practice. At the policy level, the study suggests ensuring and monitoring of practice of corporate governance so that earnings management behaviour can be controlled further.

However, the limitations of this study can create an opportunity for further research work in this area. The present study only focuses on post stock market crisis period. Future study can take longer time period and compare whether there is any association of study variables in between pre and post stock market crisis period. Future researcher can also use other models like Modified Jones model or Dechow model for detecting earnings management.

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