

# **Corporate Governance Reforms and Firm Performance in Bangladesh**

**PhD Thesis**



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Faculty of Business Studies  
University of Dhaka**

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# **Corporate Governance Reforms and Firm Performance in Bangladesh**



**This thesis is submitted in fulfilment of the requirements for the degree of  
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## **Certificate of the Supervisor**

This is to certify that the thesis entitled “*Corporate Governance Reforms and Firm Performance in Bangladesh*” submitted by Md. Faruk Hossain for the award of the degree of Doctor of Philosophy is a record of original research work carried out by him under my supervision and guidance in the Department of Finance, University of Dhaka. I believe that this research work is a unique one and has not been submitted elsewhere for the award of any degree or diploma.

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## **Declaration**

I, hereby, declare that this PhD thesis entitled “*Corporate Governance Reforms and Firm Performance in Bangladesh*” is my own work and all the sources used or quoted have been indicated and acknowledged by means of complete references. I also declare that this research paper was not previously submitted by me for any other purpose.

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## Abstract

The Asian financial crisis of 1997 and global financial crisis of 2007-08 provokes worries about the weakness or failure of the corporate governance rules and practices throughout the world. In Bangladesh, at first the corporate governance guideline (CGG) was issued by the Bangladesh Securities and Exchange Commission (BSEC) in 2006 though it was lagging behind the world' standard. The collapse of stock market in Bangladesh during 2010-2011 instigates the policy makers and scholars to explore the indispensable areas for the further revisions and amendments in the corporate governance mechanisms and re-examine or review their effects on firm performance. Like many Asian countries (such as India, Malaysia, Singapore, China, Vietnam, Indonesia), most of the Bangladeshi firms are family controlled. There remains a high reluctance in family centric firms to objectively adopt the corporate governance systems for the best interests of shareholders (Hasan et al., 2014). Overall, these facets promote the necessity of learning the new way and remind us to find the new steps of corporate governance mechanisms that will let the firm to yield corporate effectiveness and efficiency in attaining the shareholders' wealth maximization.

In family controlled firms, the monitoring role from the body of independent directors is mostly expedient to protect the interests of the non-family (minority) shareholders. According to the Organisation for Economic Co-operation and Development (OECD), the proportion of independent directors to the corporate board shall be increased in family controlled firms for effective monitoring and better performance of firms. In Bangladesh, CGG issued in 2006 have been revised in 2012 and 2018. The major areas of the corporate governance reforms in Bangladesh that concern this study are: (a) board independence –the ratio of independent directors to non-independent directors in a board shall be 1:5 as of CGG of 2012, up from the previous recommendation of 1:10 as of CGG of 2006; (b) qualifications of independent directors are precisely mentioned in the corporate governance code issued in 2018; (c) independence of audit committee – appointing an independent director as the chairman of audit committee becomes compulsory to all listed firms as per corporate governance guidelines issued in 2012; (d) audit committee meeting- executing at least four meetings by audit committees becomes compulsory as per corporate governance code issued in 2018; and (e) CEO duality (when the board chair and the chief executive officer are same person) become strictly

proscribed as compulsory basis as per corporate governance guidelines issued in 2012. Ultimately, this prohibition leads many listed firms to maintain a family-CEO duality which is referred to a situation when the chairman of a board and the chief executive officer are not the same person but they belong to the same family. It is argued that family directors keep family control over the board through family-CEO duality even in the absence of CEO-duality. Thus, this study considers the family-CEO duality as a neo-CEO duality. Moreover, family directors usually hold substantial stake of the family centric firm and occupy majority seats of the board. This dominance might instigate them to easily grab the opportunity of expropriating the firms' wealth at the cost of non-family shareholders' interests. Considering whole these things, this study empirically examines the influence of board independence, audit committee independence, audit committee meeting, family-CEO duality, and family ownership on firm performance. Further to this, this study investigates the moderating role of family-CEO duality and family ownership on the relationship between board independence and firm performance.

This study collected data from a sample of 210 non-financial companies those were listed with the Dhaka Stock Exchange between the years of 2000 and 2020. A total of 2655 firm-year observations (unbalanced panel) have been selected for 21 years longitudinal data panel. This study applies two-step system generalized method of moments (GMM) approach for econometric analysis of data. This approach is more sophisticated to control for endogeneity problems inherent in the data variables. This study finds that any increase in the proportion of independent directors to the board does not lead to improve the performance of firms. Similarly, independent chairman of the audit committee does not lead to enhance the performance of firms. But, the board independence as well as audit committee independence positively influences firm performance when firms appoint qualified independent directors through complying with corporate governance code of 2018. The findings of the study also reveal that frequency of audit committee meeting is not beneficial to firms even though audit committee meets at least four times in a year. Further to this, this study documents that family-CEO duality and family ownership are negatively associated with firm performance. These results suggest that family-CEO duality does not make a board free from excessive influence of family dominance. As a result, this family control provides them with excessive power to expropriate firms' assets for family benefits at the cost of non-family shareholders' benefits. By the same token, family ownership incentivizes the family

directors to achieve their personal benefits rather than organizational benefits, consistent with the entrenchment effect. The results also show that the interaction of board independence and family-CEO duality is significantly and positively associated with performance of firms. Similarly, the interaction of board independence and family ownership is positively and significantly related to performance of firms. These findings indicate that both family-CEO duality and family ownership moderate the relationship between board independence and performance of firms. Based on the findings of this study, it is concluded that effective reforms in corporate governance mechanisms are crucial for enhancing the performance of firms. The findings of this study have significant policy implications for the companies, investors, regulators and policy makers in Bangladesh. First, firms may get important insights for designing the structure and composition of the board, which will help them attain higher productivity and more efficiency. Second, investors may consider the issue of family-CEO duality and family ownership while choosing their optimal investment portfolio. Third, the regulators and the policymakers may design and impose more standard rules and regulations taking account of family dominance in Bangladeshi listed firms that could encourage the firms to practice better monitoring, more transparency, and enjoy better performance. This will contribute to the development of capital market and economic growth of Bangladesh.

**Keywords:** Audit Committee Independence, Audit Committee Meeting, Board Independence, Corporate Governance Reforms, Endogeneity, Family Control, Firm Performance.



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## List of Abbreviations

|       |                                                          |
|-------|----------------------------------------------------------|
| 2SLS  | Two-Stage Least Squares                                  |
| 3SLS  | Three-Stage Least Squares                                |
| AC    | Audit Committee                                          |
| ACIND | Audit Committee Independence                             |
| ACM   | Audit Committee Meeting                                  |
| AGE   | Age of Firm                                              |
| AR1   | First-order Autocorrelation                              |
| AR2   | Second-order Autocorrelation                             |
| BASM  | Bangladesh Academy for Securities Markets                |
| BEI   | Bangladesh Bank, Bangladesh Enterprise Institute         |
| BEP   | Basic Earning Power                                      |
| BICM  | Bangladesh Institute of Capital Market                   |
| BIND  | Board Independence                                       |
| BS    | Board Size                                               |
| BSEC  | Bangladesh Securities and Exchange Commission            |
| CCBL  | Central Counterparty Bangladesh Limited                  |
| CDBL  | Central Depository Bangladesh Limited                    |
| CEO   | Chief Executive Officer                                  |
| CEOD  | CEO Duality                                              |
| CG    | Corporate Governance                                     |
| CGC   | Corporate Governance Code                                |
| CGG   | Corporate Governance Guideline                           |
| CSE   | Chittagong Stock Exchange Ltd.                           |
| DOW   | Directors' Ownership                                     |
| DSE   | Dhaka Stock Exchange Ltd.                                |
| FCEO  | Family-CEO Duality                                       |
| FE    | Fixed Effect                                             |
| FOWN  | Family Ownership                                         |
| GMM   | Generalized Method of Moments                            |
| GROW  | Growth of Total Assets                                   |
| IAASB | The International Auditing and Assurance Standards Board |

|      |                                                            |
|------|------------------------------------------------------------|
| IAS  | International Accounting Standards                         |
| ICAB | Institute of Chartered Accountants of Bangladesh           |
| INST | Institutional Ownership                                    |
| ISA  | International Standards of Auditing                        |
| LEVR | Leverage                                                   |
| MB   | Market to Book Ratio                                       |
| OECD | The Organisation for Economic Co-operation and Development |
| OLS  | Ordinary Least Squares                                     |
| ROA  | Return on Assets                                           |
| SIZE | Size of Firm                                               |
| TBQ  | Tobin's Q                                                  |
| VIF  | Variance Inflation Factor                                  |

# **Chapter 1**

## **Introduction**

### **1.0 Introduction**

The relationship between corporate governance (CG) mechanisms and firm performance has been widely studied by researchers in many countries. It is argued in literature that a good corporate governance is inevitable to improve firm image, increase shareholders wealth, and to reduce the hazard of fraudulent activities. Indeed, it provides the board of directors and management of company with a set of instruments to run a business with transparency, fairness and accountability and ensures effectiveness and efficiencies in business operations keeping a balance of interests among the stakeholders. Sengur (2011) claimed that proper implementation of corporate governance principles leads an effective control and a better financial performance. But the consensus on the role of CG instruments on the performance of firms is not analogously supported by the empirical evidences because of the effects of various contextual factors (Gulama, 2021; Chen & Al-Najjar, 2012). For instance, the monitoring role of a board of directors is mostly influenced by the ownership structure as well as the firm-specific attributes (Lie et al., 2018). Garcí'a-Ramos and Garcí'a-Olalla (2011) find that the board independence has a significant positive association with the performance of founder led firms but negative association with the performance of descendant led firms. Hence, the basic premise on which researchers contend that corporate governance improves firm performance may be disrupted by the presence of family dominance or managerial entrenchment of family directors on a corporate board. Along the line, Ward (1991) and Shleifer and Vishny (1997) found that family shareholders are reluctant to increase board independence because they are afraid of losing control and they have incentives to expropriate minority shareholders or entrench themselves in managerial positions i.e. the positions of board chair and CEO/Managing Director are occupied by same individual (CEO duality) or different individuals from the same family (family-CEO duality). In Bangladesh, Hasan et al. (2014) found that family ownership is negatively related to board size and board independence but positive to CEO duality. In addition, it is claimed by Uddin and Choudhury (2008) that the family control sometimes threatens the board accountability and weakens the significance of adopting the western

corporate governance models and blending it with Bangladeshi settings. Based on this premises, this study argues that the relationship between CG mechanisms and firm performance should be examined under the context of family dominance.

In Bangladesh, several reforms have been taken place in the field of corporate governance. More specifically, in Bangladesh, the corporate governance guideline (CGG) was firstly issued by the Bangladesh Securities Exchange Commission (BSEC) in 2006 as ‘comply or explain’ basis. This was a good attempt of the regulatory body in Bangladesh to curb the agency problems in the listed companies and the management intention of expropriating wealth. This guideline has been revised in 2012 (replacing CGG 2006) which is issued as ‘comply’ basis in place of ‘comply or explain’ basis. At very recent, it has been further revised in 2018, which is named as corporate governance code (CGC), with an expansion and refinement of the corporate governance guidelines issued in 2012 to foster the good governance practices in the corporate level (Bala, 2019). In every stage of these reforms, CGG put stress on the board effectiveness and audit committee effectiveness. Some of the major reforms are as follows: (i) increasing the proportion of independent directors on board to 1/5<sup>th</sup> as of CGG 2012 from the level of 1/10<sup>th</sup> as of CGG 2006; (ii) separating the role of board chair from that of CEO as compulsory basis as of CGG 2012; (iii) appointing an independent director as a chair of audit committee as of CGG 2012; (iv) conducting at least four meetings of audit committee in a year as of CGC 2018; and (v) appointing independent directors who shall be qualified as per CGC 2018. But, CG mechanisms may not follow a rule of ‘one-size fit’ and are not equally applicable to all countries (Agrawal & Knoeber; 1996). This is because that the effectiveness of CG is subject to the differences in laws and regulatory systems (Prowse, 1996), differences in cultural settings (Bhasa, 2004), and contextual as well as internal and external factors (Aguilera & Jackson, 2003; Aguilera, 2005; Elsayed, 2011). Furthermore, several studies provide evidence on the moderating effect of a CG variable on the relationship between other CG variables and firm performance (e.g., Anderson & Reeb, 2004; Mishra et al., 2001; Villalonga & Amit (2006). In the same vein, Liu et al (2016) argue that board independence work more effectively in improving disclosure quality when substantial stake of the company is held by family members. In this backdrop, this study also argues that the influence of board and audit committee independence on firm performance may be moderated by the family dominance or family control. This study documents that family-CEO duality and

family ownership moderates the relationship between board independence, audit committees independence and firm performance.

According to the Organisation for Economic Co-operation and Development (OECD) (2014), monitoring role of independent directors is to be inevitably inducted into the firms where no separation of ownership and control exists. This is very common in many Asian family-controlled businesses and, thus, Bangladesh is not an exception here. It is noted that about 73 percent of the non-bank listed companies' board power (Chairman of the board and position of CEO) is controlled by the sponsor-shareholders belonging to the same family (Sobhan and Werner 2003). In 2020, this figures stands at about 55 percent (1 percent and 54 percent are explained by CEO duality and family-CEO duality respectively). Moreover, Hasan, Rahman and Hossain (2014) find that the progress of adopting CGG in Bangladeshi firms is very slow due to a high level of family control. Hence, the aftermath of reforms in CG mechanisms raises an important research question that whether the revised CG mechanisms are well standard and fit for the Bangladeshi corporate settings to maximize shareholder wealth. Therefore, this study attempts to draw the empirical evidence by examining how these changes or reforms in CG guidelines are influencing the firm performance in Bangladesh.

### **1.1 Motivation of the Study**

One of the major objectives of enforcing the corporations to comply with governance guidelines and codes is to protect the interest of minor group of shareholders/retail shareholders. In Bangladesh, retail investors were confronted with huge paper loss in the aftermath of a dramatic collapse of Dhaka Stock Exchange (DSE) in 2011. Just few steps prior to this circumstance, both sponsors and directors were claimed to reaping huge capital gains by selling their shares during the astonishing rocketing drive of Dhaka Stock Exchange (DSE) in 2010 (the benchmark index of DSE reached an all-time high of 8,500 points from its previous level of 4000 points). Thereafter, a significant reform was made in corporate governance guidelines in 2012 looking for overcoming most of the problems in CGG 2006. For instance, the problems in CGG 2006 are: there was no legislative guideline for controlling share ownership, for the directors' duties, for the appointment of independent directors, for the qualifications of independent directors, for the role of audit committee and for the audit committee

independence. Moreover, after another six-year interval CGG has been further modified in 2018 which is named as Corporate Governance Code (CGC) stretching the existing provisions including: refining the meaning of independent directors; precisely clarifying the qualification of independent directors; marking boundary on the scope of duality of chairperson of the board of directors and managing director or chief executive officer; and constitution of audit committee. It also incorporates some new provisions. Thus, board independence, board leadership independence, and board audit committee independence have had been the focusing area of amendments to the CGC.

However, the path of development in the CGG leaves a question that how effectively it has been enacted for the corporate board effectiveness where family businesses are mostly common in Bangladesh. In other word, there appears to be a great challenge in extracting the benefit of corporate governance where firms are dominated by family members. Thus, it is a prime time to check whether these revisions are working properly in family business and hence lead to better performance and higher firm value for the sake of stakeholders. All of these mainly motivated me to conduct this study.

## **1.2 Statement of the Problem**

A reform or revision of corporate governance codes in a country, generally, aims to broaden the scope of accountability, transparency, and equity of the firms' businesses towards its stakeholders and, overall, enhance firm performance. Corporate board and its committees are still causing a matter of considerable concern for the reformation of corporate governance codes in any country. But how effectively board and board committees are functional in a firm can be affected by varied corporate governance mechanisms. Vafeas (1999) argued that there is one aspect that would affect the effectiveness of board activity on business performance i.e. the presence of substitute or complementary governance mechanisms in the firms. Complementary hypothesis argues that there are various corporate governance mechanisms those are interrelated, and one governance mechanism becomes more effective through "mutual enhancement" and the synergistic effects when it is combined with another effective governance mechanism (Hassan et al., 2017). Alternatively, substitution hypothesis

argues that the marginal effects of one governance mechanism may be substituted by the existence of another potentially effective corporate governance mechanism (Hassan et al., 2017). In this regard, ownership structure with respect to family vs. nonfamily and concentrated vs. dispersed could be important governance mechanisms that may converge or differentiate between the interest of shareholders and managers. It may provide incentive for large shareholders to monitor shareholders or management. According to Ward et al. (2009), corporate governance mechanisms should be viewed as a bundle of mechanisms to protect shareholders' interests and not in isolation from each other. Agrawal and Knoeber (1996) argued that the results of the effectiveness of one mechanism might be misleading as the effectiveness of one mechanism could disappear if other mechanisms are combined. Therefore, there remains reasonable cause to draw a good attention towards the effectiveness of corporate governance mechanisms if it is revised in absence of taking account of the basic structure of business like family business in a country.

Unlike in developed countries, characterized by diffused share ownership, in Bangladesh most of the firms are in the circle of concentrated ownership by the founding family members (Rashid, 2013) and have interlocking business relationships where the legal protection of investor rights and legal enforcement are very weak. Sobhan and Werner (2003) noted that, about 73% of the non-bank listed companies in Bangladesh, the boards are heavily dominated by the sponsor-shareholders who generally belong to one family. Though, it is less common to find conflict between principal and agent in this type of firms, since the owner and the manager are often the same person or they belong to the same family (Jensen & Meckling, 1976). But conflict between family members and non-family members or between major shareholders (family members) and minority shareholders (non-family members) is very common in family business (Villalonga & Amit, 2006). In addition, directors belonging to the owner family could be mainly oriented to satisfy the family interest, without being particularly careful of the other stakeholders' needs. As it is most likely common in a family-owned business that board is family dominated, less diversified and less independent and hence board decisions highly tend to favor their own interests rather than minor/retail shareholders' interest. Wang (2006) argued that family members typically occupy significant positions on the board of directors as well as the management team. In these firms, nepotism, private benefits, and personal

relations among family members are very severe. Consequently, there remains an ineffective monitoring system that hurts good governance practices. Therefore, in the context of Bangladesh, it bears an untouched important issue that how the family power/dominance influences the relationship between corporate governance and firm performance.

In Bangladesh, the practice of corporate governance in listed companies is not to a level of standard compared to many of Asian countries. For instance, Asian Corporate Governance Association (2012) finds that around 60 percent of Indian companies have boards where independent directors account for more than half of the total. In Malaysia, most directors are to be non-executive directors and typically at least one-third of the boards must have no connection with the management and major shareholders (World Bank, 2012). According to CGG2012 in Bangladesh, all listed companies must form the boards maintaining the ratio of independent directors to non-independent directors equals to one to five, but which was one to ten as of CGG 2006. It is worthwhile to mention that Corporate Governance Guidelines 2009 in India and Corporate Governance Guidelines 2007 in Malaysia show that audit committee shall be comprised of at least three-member with a majority of independent directors. In addition, Malaysia requires that all members of the audit committee should be non-executive directors and Chinese Taipei believes that an audit committee shall be composed of the entire number of independent directors. Whereas in Bangladesh, the majority of independent directors in audit committee are not emphasized in CGG 2006, CGG 2012 and even in CGC 2018, but according to CGG 2012 and CGC 2018, chairman of the committee shall be filled with an independent director. CGG 2012 also specifies the qualification of independent directors (such as Business Leader/Corporate Leader/Bureaucrat/University Teacher with Economics or Business Studies or Law background/Professionals like Chartered Accountants, Cost & Management Accountants, Chartered Secretaries), which did not remain in CGG2006. However, recent amendments to corporate governance mechanisms in Bangladesh might not be sufficient to urge the listed companies to adopt well-balanced boards. Consequently, the board and its committees may face challenges in playing effective monitoring role on the management actions.



In addition, the directors of Bangladeshi companies have sometimes been found to be involved in malpractice. For example, founding sponsors/directors started selling their shares during astonishing movement of Dhaka Stock Exchange (DSE) in 2010, which accelerated the force of driving the market into huge collapse in 2011. Thereafter, the BSEC has made it mandatory for sponsors, directors, and promoters of a firm to collectively hold a minimum of 30 percent stake in the company. This directive was aimed at increasing the ownership of sponsor-directors and safeguarding the market from any more bearish movements (Murtuza, 2016). In this backdrop, the improvement of corporate governance principles in Bangladesh becomes high necessary for the betterment of investors, corporations, and society.

### **1.3 Research Questions**

In order to provide new insights of corporate governance practices in Bangladesh, this study empirically examines whether board structure, audit committee structure (sub-committee of the board), and family control have influence on firm performance measured in basic earnings power (BEP), return on assets (ROA), and Tobin's Q (TBQ). Based on the fundamental changes in CGG2012/CGG2018 in comparison with CGG2006 the following research questions are addressed.

- i. Does the board independence lead to a better firm performance?
- ii. Does the audit committee independence enhance firm performance?
- iii. Does the audit committee meeting enhance firm performance?
- iv. Does the family-CEO duality influence firm performance?
- v. Is family ownership detrimental to firm performance?
- vi. Do the family-CEO duality and family ownership moderate the relationship between board independence and firm performance?

### **1.4 Significance of the Study**

Bangladesh Securities and Exchange Commission (BSEC) had made a significant reform in corporate governance Guidelines (CGG) on 3 July 2012, later it is called CGG2012, with an objective to replace CGG2006. These reforms in Guidelines came along with the separation between the roles of CEO, chairmanship of the audit

committee, the minimum proportion of independent directors on the board, and qualifications of being an independent director on the board. Table 1 shows the major reforms, which will be taken into consideration in this study, in CGG2012 compared to CGG2006 in Bangladesh.

**Table 1: Major Reforms in Corporate Governance Guidelines in Bangladesh**

| Area of major reforms                                | CGG 2006                                                                                                | CGG 2012                                                                                        | CGC 2018                                                                                    |
|------------------------------------------------------|---------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| Board Independence                                   | A board must have 10 percent independent directors                                                      | A board must have 20 percent independent directors                                              | A board must have 20 percent independent directors                                          |
|                                                      | In calculating the number of independent directors, any fraction is ignored                             | Fraction is ignored                                                                             | Any fraction must be converted into the next integer                                        |
| Qualifications of Independent Directors              | Not specified                                                                                           | Narrowly clarified                                                                              | Precisely clarified                                                                         |
| CEO-non-duality                                      | As comply or explain basis                                                                              | As comply basis                                                                                 | As comply basis                                                                             |
| Audit Committee Independence                         | It does not become compulsory that the chairman of the audit committee shall be an independent director | It becomes compulsory that the chairman of the audit committee shall be an independent director | It is not required that the chairman of the audit committee must be an independent director |
| Minimum Number of Audit Committee Meetings in a year | Not specified                                                                                           | Not specified                                                                                   | At least four meeting in a year                                                             |

To the best of author's knowledge, most studies attempted to examine the impact of board structure and/or ownership structure on firm performance in Bangladesh during the period when listed firms in Dhaka Stock Exchange did not adopt CGG 2012 as

they were based on CGG 2006, such as Farooque et al. (2007a), Rashid and Lodh (2008), and Rashid et al. (2010). More recently, Nath, Islam, and Saha (2015) conducted a study to examine the influence of board structure on firm's financial performance in the pharmaceutical industry of Bangladesh, which does not cover the wider aspect of corporate governance in Bangladesh. In addition, there has been a dearth of empirical evidence in Bangladesh in investigating the influence of audit committee independence, family dominance, and audit committee meeting on firm performance, such as Hossain and Khan (2006) and Mohiuddin (2012). Finally, none of the studies in Bangladesh attempted to investigate the influence of family-CEO duality on firm performance. There is also a dearth of empirical evidence on the relationship between family ownership and firm performance. Further to this, none of the studies investigated the moderating effects of the family-CEO duality and family ownership on the relationship between board composition and firm performance. Therefore, this study will have a substantial effort to fill this gap providing an opportunity to justify the effectiveness of corporate governance reforms in the context of Bangladesh.

### **1.5 Objectives of the Study**

This study will attempt to justify whether reform in CGG 2012 is becoming expedient to the firms and to provide a policy guideline for further reforms in corporate governance guidelines in Bangladesh. Thus, the main purpose of this study is to examine the influence of corporate governance reforms on the performance of Bangladeshi firms listed in DSE from the periods between 2000 and 2020. The specific objectives of this study are:

- i. To empirically examine the influence of board independence on firm performance;
- ii. To examine the influence of audit committee independence on firm performance;
- iii. To examine the influence of frequency of audit committee meeting on firm performance;
- iv. To examine the influence of family-CEO duality on firm performance;
- v. To examine the influence of family ownership on firm performance; and

- vi. To examine the moderating effect of family-CEO duality on the relationship between board independence and firm performance.
- vii. To examine the moderating effect of family ownership on the relationship between board independence and firm performance.

### **1.6 Scope of the Study**

The study has keenly focused on how the changes in the CGG 2012 with respect to the internal governance mechanisms such as board independence, leadership structure, and audit committee structure lead to the progress of firm performance during. Apart from, it examined how the family dominance interacts with these governance mechanisms. This does not mean that the study ignores assessing the impact of all changes in the CGC 2018 on the firm performance as a new provision namely ‘nomination and remuneration committee’ had been enacted into the code to be practiced by the listed companies in Bangladesh since 2019. It is because that the interest of this study emphasizes on the key changes in internal governance mechanisms in CGG 2012 those remain fairly unchanged in CGC 2018 in order to increase the degree of validity of the findings. The effect of ‘nomination and remuneration committee’ has not been examined in this study due to unavailability of data for more than two-year time span. This study has drawn evidence from a total of 210 listed non-financial companies during 2000-2020. Thus, observed results aim to disentangle some of the debating issues in the dilemma of corporate governance. For example, why independent directors in the board and audit committee are unable to exercise their coherent role, whether family dominance is becoming challenging for minor or non-family shareholders, would it be well justified to focus on only the views of agency theory in formulating CGG and in designing corporate board when the effort of resource dependence theory and stewardship theory may also draw attention to the practitioners, regulators, and policy makers to attain organizational wellbeing. In the most empirical researches, three broad perspectives of corporate governance and family business are substantially apprehended: first, control ownership structures in family firms and its implications; second, succession process inherent in family firms and its implications; and finally, corporate policies and decision-making strategies in family controlled firms (Pindado & Requejo, 2015).

Thus, one of fundamental efforts of this analysis is to enhance the existing knowledge in the first two perspectives of corporate governance.

### **1.7 Contribution of the Study**

This study contributes to the knowledge of corporate governance domain in the following ways. First, the practitioners can gain an important knowledge from the empirical insights into the influence of board independence and audit committee independence on firm performance. As there is a claim in the empirical research that independent directors could not independently exercise their monitoring and supervising role in the family controlled firms. It is because that they are appointed on the basis of personal relationships with dominating family directors in the board. Further to this, it is argued in the empirical literature that only qualified independent directors could perform their responsibilities effectively. Thus, only increasing the proportion of independent directors in the board and appointing an independent chairman to the audit committee may not be appropriate to gain effective advice and monitoring.

Second, it provides the regulatory bodies, policy makers, and investors with an extended avenue of knowledge to gain the insight of the influence of family-CEO duality on firm performance. It is earlier mentioned that family-CEO duality is a situation when the chairman of a board and CEO are not the same person but belong to the same family. As it is observed in this study that many listed firms have switched over to family-CEO duality when BSEC issued a notification in 2012 as compulsory basis that CEO duality is no more permissible to the board of listed companies. In fact, family-CEO duality acts as a caterpillar to grab and retain the family control over the board though CEO duality is not there. Thus this study provides an important evidence to know that whether family-CEO duality is better than CEO duality.

Third, like many Asian countries, most of the listed firms in Bangladesh are family centric where family directors hold substantial stake of the company. Compared to non-family controlled firms, conflict of interest between managers and shareholders is less in family controlled firms but the conflict of interest between family and non-

family minority shareholders is more (Chen et al., 2013). This argument supports an entrenchment effect of family ownership on firm performance. However, there is a lack of empirical research to examine the influence of family ownership on the accounting-based performance and market-based performance of Bangladeshi firms. Thus, the results of this study may provide extended evidence on the relationship between family ownership and firm performance. The evidence of this study would be insightful to regulatory body in framing the governance mechanisms in a sophisticated manner to keep the family and non-family controlled firms under proper surveillance and to reduce potential agency problems. Investors also get insightful knowledge from the results of this study to design their optimal investment portfolio.

Finally, consistent with arguments of Elsayed (2011) and Mishra et al. (2001), this study attempts to examine the contingent effect of corporate governance mechanisms on firm performance. More specifically, this study explores the moderating role of family-CEO duality and family ownership on the relationship between board independence and firm performance. To the best knowledge of researcher, this is the first attempt in the context of Bangladesh. Therefore, this study brings new knowledge for the policy makers, practitioners, and academic to gain insights of the contingent influence of board independence on performance.

Overall, the findings of this study are to be useful to the investors for making investment decisions, to the practitioners for promoting an effective management and efficient work; to the academia for exploring new knowledge, and to the regulatory bodies for formulating and standardizing the governance mechanisms.

## **1.8 Structure of the Research Report**

This report will finally be constructed of the following chapters along with the current chapter 1. Chapter 2 provides an insight of corporate governance emergence and its reforms in Bangladesh. Chapter 3 discusses the theoretical background and review the related literature in corporate governance. Chapter 4 presents the relevant discussions to develop the research hypothesis. Chapter 5 outlines the research design, data statistics and analytical approach used in this study. Chapter 6 is developed to present the results of econometric analysis and discuss the findings of this study.

Chapter 7 addresses the summary of the research, the policy implications, the limitations of the study, and the conclusions and recommendations for future research.

## **Chapter 2**

### **Development of Corporate Governance Systems in Bangladesh**

#### **2.1 Introduction**

According to Prowse (1996), a nation's political, cultural, and historical traits influence how corporate governance structures are developed and fostered. Bangladesh still bears the scars of over 200 years of British colonial rule. Thus, the path of the emergence of Bangladesh as an independent and sovereign nation in the history of the world and its successive movements for ensuring political and economic development are followed by many patriotic struggles, sacrifices and strategies.

After a nine month of struggle with Pakistan armed forces it became an independent nation on December 16, 1971. Entrepreneurial spirit of liberated Bangladeshi people makes them hardworking and helps them to utilize technological developments in a better way in their business during post liberation period. The economic development of Bangladesh during the post liberation period moves unevenly. Empirical evidence suggests that the economy of Bangladesh witnessed a 9.6% growth rate in 1974 which is the highest in her history, while an average growth of 2.38% during 1971-90. According to the World Bank, Bangladesh earned on an average of 5.95% growth during 2000-2020 with the highest value of 7.9% in 2019. To this development process, agricultural sector accounted for about 52% of GDP during 1971-80. But the contribution of agricultural sector gradually declines to 12% in 2020 from 22% in 2000. On the other hand, the contribution of industrial sector to GDP has increased to about 33% in 2020 from 22.28% in 2000, while it was only around 13% during 1971-80. Thus, this change of economic structure gives a clear view that primarily Bangladesh emerged in the world economy as an agrarian country and gradually starts taking favor from industry sectors.

Moreover, many significant reformations had been successively taken by the Government of the People's Republic of Bangladesh to ensure her economic development; even some of the reforms had taken place by the pressure of donor agencies like World Bank who urges Bangladesh to move on an open market economy. Thereafter, a vast de-nationalization strategy of public enterprises has been



implemented since the policy of state control of the corporate sector was reversed in 1975. This process moves the economic wheel away from a "socialist" economy toward a private sector-led industrialization that leads to a "mixed" and a "market" economy. But the privatization process was opaque and many of the state-owned businesses that were privatized were bought by private residents of Bangladesh (Uddin & Hopper, 2003). At present, few state-owned enterprises, a sizable number of privatized and privately owned businesses, joint ventures, and multinational corporations make up the majority of Bangladesh's corporate sector. Among them family-owned corporations make up a sizable share of the Bangladesh's capital market. The capital market of Bangladesh is evolving in the circle of emergent economies. The economic prospect of this market is gradually widening as its market capitalization rose to 24.01% of GDP in 2020 from only 4.11% in 2000 (TheGlobalEconomy.com, 2022). As per declaration of UN, Bangladesh is expecting to formally leave the group of least developed nations in 2026 and is currently categorized as a lower middle-income nation by the World Bank.

## **2.2 Legal and Institutional Framework of Corporate Governance Systems**

A well institutional setting and legal framework are essential in shaping the good governance system for any country. It is claimed that a strong institutional foundation is required to create a strong legal environment that enhances accountability, transparency, and equity at every level of organization. Farooque et al., (2007b) argued that the legal and regulatory environment and its enforcement are generally weak, which seriously impedes the potential growth of the capital markets in Bangladesh. Nonetheless, many timely needed attempts are taken place by the capital market institutions in Bangladesh in order to protect the interest of minority shareholders and reviving the confidence of the investors. One of the fundamental regulators those are working for protecting the interests of shareholders and the development of capital markets in Bangladesh is Bangladesh Securities and Exchange Commission (BSEC). The BSEC sailed its voyage in 1993 through the provision of SEC act issued in 1993. On the other hand, money market is regulated by the Bangladesh Bank. In Bangladesh, there are two stock exchanges such as Dhaka Stock Exchange Ltd. (DSE) and Chittagong Stock Exchange Ltd. (CSE). Before the year of 2013 they acted as a non-profit mutual organization where the members enjoyed dual

roles as owners and clients. As a result, they grabbed the monopoly power to provide themselves with excessive benefits from trading shares even unfair profits. Therefore, in an attempt to curb their unfair trading and ensure the good governance in these stock exchanges, the Bangladesh government passed a legislation issuing a gazette of demutualization of DSE and CSE in 2013. Thereafter, they debut as demutualized exchange bourses. This structural change (demutualization) of DSE and CSE aimed at performing better and effective contributions towards the sustainable growth of capital markets in Bangladesh. However, other institutions affiliated with the development of capital markets are Bangladesh Enterprise Institute (BEI), Institute of Chartered Secretaries of Bangladesh (ICSB), Institute of Chartered Accountants of Bangladesh (ICAB), audit firms, and other professional bodies in Bangladesh. Moreover, two institutions such as Bangladesh Institute of Capital Market (BICM) and Bangladesh Academy for Securities Markets (BASM) are also working for providing the market participants with special education and training on capital market.

The BSEC directly patronized the formation of Central Depository Bangladesh Limited (CDBL) in 2000 in order to facilitate the registration and record of transferring the ownership of shares through an electronic or a computerized book recording systems. Its operations started in December, 2003. Moreover, in a continuous process of improving the smooth clearing and settlement systems of capital markets in Bangladesh, the Central Counterparty Bangladesh Limited (CCBL) is formed through a revised rules issued by the BSEC in 2017. The CCBL started its journey in 2019. The CCBL is owned by DSE, CSE, CDBL, and some commercial Bangladeshi banks. In December 2015, the BSEC issued a notification regarding the book-building approach of IPO for providing a platform of discovering fair price for the IPO of issuing firms.

Moreover, the BSEC provided license to merchant banks for operating their business on the areas of underwriting the IPOs and managing portfolios. They also provide the corporations with the well-structured advice and facilitate the management of new and right issues. In addition to the merchant bankers, portfolio managers also act for the betterments of investors under the rules issued by the BSEC in 1996. More importantly, Asset Management Company also performs their operations as issue

manager and mutual fund as well under the rules of mutual fund 2001 issued by the BSEC. In Bangladesh, credit rating agencies also perform their operations. At very recent (2022), the CSE took initiative to launch a commodity exchange market which would be the first ever futures market in Bangladesh. This market help establish a mechanism of discovering a competitive price for commodity. This will expedite the trade of contacts for commodity between buyer and seller at utmost fair price and help reduce manipulation of commodity price. The effective operations of this market also help establish price stability and reduce price risk of the commodity. That is, it will ward off the unpleasant post-harvest loss of commodity and ensures market efficiency for an emerging economy like Bangladesh. Overall, the effective operations of all these institutions will help expedite the sustainable development of capital markets in Bangladesh.

All institutions are led by the various instruments of the respective Acts. For example, Companies Act 1994 which is amended in 2020, Securities and Exchange Ordinance 1969, the Securities and Exchange Commission Act 1993, Corporate Governance Notification 2006, Corporate Governance Guidelines 2012, Corporate Governance Code 2018, and Listing Regulations 2015 are notable, which are inevitable to foster the good governance at every stage of corporate affairs. In 2017, the BSEC issued rules for the market makers. The market makers are primarily responsible to keep the price of the shares of listed company within a justified or rational price bracket based on the fundamental performance indicators of the listed companies in such a situation when stock market behaves abnormally. Moreover, BSEC's reforms towards the compulsory application of International Accounting Standards (IAS) and International Standards of Auditing (ISA) of the listed companies improve the overall governance environment in Bangladesh.

### **2.3 Reforms in Corporate Governance Systems**

In Bangladesh, the first initiative on the way of formulating corporate governance guidelines was taken by the Bangladesh Enterprise Institute (BEI) in 2003. They conducted a study to assess the comparative scenario of corporate governance practices in south Asian countries. In their study they find that Bangladesh is lagging behind India, Sri Lanka and Pakistan in respect of practicing corporate governance.

Later, BEI formed a taskforce on corporate governance (CG) in 2004. This taskforce prescribed a Code of Corporate Governance for Bangladesh in March 2004 in order to ensure the best practices of good governance in private firms, financial institutions, government organizations, and non-government organizations. On the basis of this code, Bangladesh Securities and Exchange Commission (BSEC) issued Corporate Governance Guidelines through a notification in February 2006 and imposed it on all the Bangladeshi listed companies as “comply or explain” basis. Thereafter, these guidelines are replaced with the revised guidelines (Corporate Governance Guidelines 2012) which is published in August 2012 and imposed on listed companies as “comply” basis. Furthermore, the Corporate Governance Guidelines of 2012 is replaced with the Corporate Governance Code which is published on June 10, 2018 in the Bangladesh Gazette and imposed on the listed companies as “comply” basis. In every stage of these amendments, CG guidelines put stress, among others, on board independence, audit committee independence, and CEO non-duality in respect of the views of Anglo-American corporate governance model.

There are two prominent models in the field of corporate governance: Anglo-American governance model and German-Japanese governance model. The first model is parallel to the McKinsey’s market-based model which is driven into the external market forces (mergers, takeover), well-developed equity markets, substantial institutional ownership, dispersed ownership pattern, and independent directors dominated base board (Fernando, 2011). This model is mostly common in USA, UK, Canada, and Australia. Under this model managers are monitored by the market forces and shareholders’ interest are protected by the activities of outsider (independent directors) dominated board (Cernat, 2004; Rajan & Zingales, 1998). On the other hand, the second model is parallel to the McKinsey’s control-based model which is driven into the concentrated (family/bank/financial institution) ownership, less-developed equity markets, limited external market forces (mergers, takeovers) and insider dominated base board (Fernando, 2011).

Like many business firms in Asian countries, one of the important features of corporate governance model in Bangladesh is that controlling ownership of most of the listed firms is typically gripped by a founder, the founder’s family and associates, who are also taking the position in the board as well as top management. In a study on

Bangladesh, Sobhan and Warner (2003) report that about 73% of corporate board of listed non-financial firms are dominated by the members of a single family. Farooque et al. (2007b) report that about 78% of the listed firms either have a founder-led CEO or have a descendent-led CEO. This study finds that the position of board chairman and CEO of around 41% of listed non-financial companies in Bangladesh are occupied by the two members of a single family. This controlling ownership and family management could be a big challenge in the wake of practicing good governance because they may interfere the whole decision making process and it possibly create a conflict between major and minor shareholders or family and non-family shareholders. It is empirically evident that Bangladeshi family firms are less spontaneously adopting the CG guidelines (Hasan et al., 2014). Among other important features, a less developed merger and takeover market (Farooque et al., 2007b) followed by less liquid capital market is prevailing in Bangladesh (Muttakin, 2014). Moreover, like Anglo-American model, Bangladeshi model has one-tier corporate board where executive and non-executive directors are bracketed together in the same organizational layer for performing their duties. That is this model is also different from the German's, the Japan's, and the Brazil's supervisory board type or two-tier board. Thus, Bangladeshi corporate governance model is completely explained by neither Anglo-American model nor German-Japanese model. According to Rashid (2009), there is a weak form of the Anglo-American corporate governance system in Bangladesh.

Table 2 presents the major reforms to the corporate governance (CG) guidelines during 2006-2018. As shown in this table, the CG code issued in 2018 and revised CG guidelines issued in 2012 are much improved in several aspects compared to the CG guidelines of 2006. In fact, the most conditions of CG guidelines 2012 are either the modified or revised conditions of CG guidelines 2006 or some new conditions. Similarly, the most of the conditions of CG code 2018 are either the modified or revised conditions of CG guidelines 2012 or some new conditions. For instance, in light of improving the board effectiveness and better monitoring and supervision of managerial activities by non-executive outside directors, the reforms of corporate governance mechanisms take place in the proportion of independent directors on the board, as it rises to 20 percent from 10 percent over the development phases. The presence of independent director is also given emphasis for the audit committee,

**Table 2: Phases of major reforms in corporate governance mechanisms in Bangladesh**

| <b>CG Area</b>                                           | <b>Phase One:<br/>CG Guidelines-2006</b>                                                                                   | <b>Phase Two:<br/>CG Guidelines-2012</b>                                                                                                           | <b>Phase Three:<br/>CG Code-2018</b>                                                                                                         |
|----------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| State of instruction                                     | Comply or explain basis                                                                                                    | Comply basis                                                                                                                                       | Comply basis                                                                                                                                 |
| Proportion of independent directors in board             | At least 10% of board of directors shall be independent directors (a minimum of one)                                       | At least 20% of board of directors shall be independent directors                                                                                  | At least 20% of board of directors shall be independent directors                                                                            |
| Definition of Independent Director (IND)                 | Only five separate explanations/conditions including ownership bar and affiliation/relationship bar are used to define it. | Only nine separate explanations/conditions including ownership bar, tenure bar, and segment of affiliation/relationship bar are used to define it. | Ten separate explanations/conditions including ownership bar, tenure bar, and segment of affiliation/relationship bar are used to define it. |
| Vacancy period of the post of IND                        | Not specified                                                                                                              | Not more than 90 days                                                                                                                              | Not more than 90 days                                                                                                                        |
| Office tenure of IND                                     | Not specified                                                                                                              | 3 years, which may be extended for 1 term only                                                                                                     | 3 years, which may be extended for 1 term only                                                                                               |
| Reappointment of former IND                              | Not specified                                                                                                              | Not specified                                                                                                                                      | Reappointment with three years gap                                                                                                           |
| Qualifications of independent directors                  | Not mentioned                                                                                                              | Mentioned but less precise                                                                                                                         | Precisely Mentioned                                                                                                                          |
| CEO Non-duality                                          | Proposed                                                                                                                   | Obligatory                                                                                                                                         | Obligatory                                                                                                                                   |
| Holding the position of MD/CEO of another listed company | Not mentioned                                                                                                              | Not mentioned                                                                                                                                      | Restricted                                                                                                                                   |

**Table 2 (continued).**

|                                                              |                                                   |                                                                  |                                                                                                                                 |
|--------------------------------------------------------------|---------------------------------------------------|------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| Disclosures of Directors' Report                             | Only 11 statements are included                   | Only 22 statements are included                                  | 27 statements are included                                                                                                      |
| Chairman of Audit Committee (AC)                             | A qualified professional in Accounting or Finance | An independent director                                          | An independent director                                                                                                         |
| Qualifications of AC Members                                 | Not specified                                     | Financially literate                                             | Financially literate                                                                                                            |
| Non-executive directors in AC                                | No such requirement                               | No such requirement                                              | Members are to be non-executive directors excepting chairman and at least one independent director                              |
| Conditions required to fulfill the quorum of AC meeting      | Not specified                                     | Presence of at least one independent director at the AC meeting. | Presence of 2/3 <sup>rd</sup> or two members (whichever is higher) of the AC including one independent director at the meeting. |
| Presence of AC chairman at AGM                               | No such requirement                               | Required                                                         | Required                                                                                                                        |
| Number of AC meeting                                         | Not specified                                     | Not specified                                                    | At least four meetings in a year                                                                                                |
| Formation of the Nomination and Remuneration Committee (NRC) | No such requirement                               | No such requirement                                              | Required                                                                                                                        |
| Chairperson of the NRC                                       | No such requirement                               | No such requirement                                              | An independent director                                                                                                         |
| Number of NRC meeting                                        | No such requirement                               | No such requirement                                              | At least one meeting in a year                                                                                                  |

where independent director shall be the chairman of the committee. Even, the quorum of audit committee meeting would not be fulfilled without the presence of at least one independent director. However, all these reforms are made aiming at enriching the CG practices in Bangladeshi publicly traded firms.

## **2.4 Area of Future Development**

Even though the current code of corporate governance are much improved over those issued in 2006 and 2012, there remains some areas of further improvement. For example, the existing code of corporate of governance in Bangladesh require all listed firms to maintain a minimum ratio of  $1/5^{\text{th}}$  independent directors of the total number of directors on board. On the other hand, it is  $1/3^{\text{rd}}$  if the chairman of the board is an executive director or it shall be  $1/2^{\text{nd}}$  if the chairman of the board is a non-executive director in the corporate governance context of India. Similarly, the CG codes of Malaysia and China also follow a minimum ratio of  $1/3^{\text{rd}}$  independent directors of the total number of directors on board. In the family centric firms, independent directors can play a vital role in monitoring the managerial activities and ensuring check and balance in board decisions in order to protect the interests of minority shareholders and enhance firm performance (OECD, 2014). In addition, it is obligatory for the listed firms in India, Malaysia, and Pakistan that they should fill the majority seats of their audit committees with independent directors, whereas it is required to be filled with non-executive directors in the context of Bangladesh. More specifically, a majority independent directors led audit committee is typically required for a family centric firm as there is a high tendency of family members to occupy maximum seats of the audit committee and manipulate the financial statements opportunistically.

## **2.5 Chapter Summary**

This study examines the impact of major reforms of the corporate governance guidelines on firm performance in the context of Bangladeshi listed firms during 2000-2020. While doing this, the knowing of economic background and institutional settings of Bangladesh becomes essential as it provides additional information regarding the corporate environment and culture in Bangladesh. Apart from, it might



act as a catalyst in the wake of the emergence and structure of the corporate governance systems in Bangladesh.

Like many firms in Asian countries, Bangladeshi firms are highly family controlled. In this effect, board independence is less entertained by owners in family controlled business. In light of this perspective, the revised corporate governance code in Bangladesh enforces firms to increase their board independence, audit committee independence and outlaw CEO duality following the views of Anglo-American governance system. But in compliance with these reforms, family controlled firms are found advance in occupying the position of chairman of board of directors and Managing Director/CEO by two individuals from the same family. Eventually, these two seats occupied by the same family members provide excessive control to exercise board power in maximizing their family's interests at the cost of non-family interests. Therefore, there remains a big question about how effectively these reforms work for the betterment of shareholders. However, to improve corporate governance practices in Bangladesh, Bangladesh Securities and Exchange Commission (BSEC) revise the guidelines as on necessity and always keeps surveillance sight of the company's progress in compliance with these revised guidelines.

## **Chapter 3**

### **Theoretical Background and Literature Review**

#### **3.1 Introduction**

From the early development phase of corporate governance mechanisms in the world, the active presence of independent non-executive directors in corporate board is always given a high importance (Cadbury Report of 1992 and Higgs Report of 2003 in UK; Blue Ribbon Commission Report of 2001 and Sarbanes-Oxley Act of 2002 in USA) to enhance board's independent judgment, fair and transparent decisions and disclosures, and equitable treatment for shareholders. According to Hermalin and Weisbach (2003) and Van den Berghe and Baelden (2005), board independence strengthens board ability to formulate strategic policy and monitor management activities and it enhances firm performance. But, the enhancement of board independence in family centric firms deserves high attention of policy makers and regulators as, typically, there remain a close connection between management and owners because family members inseparably occupy majority chairs of the management. That is, the board lacks true separation between management and owners and, eventually, the board fears for losing control in the domain of independence. Along the line, the OECD (2014) argued that more presence of independent directors in the board is inevitably required in family control firms where no separation between management and owner is prevalent in terms of substance but in form. In the recent years, agency issues within the family-centric firms have been discussed in the governance literatures arguing that it has a greater impact on designing the effective corporate control systems (Acero & Alcalde, 2014). This study examines the influence of revised corporate governance mechanism with respect to board independence (the presence of independent directors both in the board and the audit committee) on firm performance under a given condition of the various degree of family control. Therefore, in this section, we attempt to draw a clear view of the key theories and empirical literatures in the corporate governance periphery on the coherent arguments relating to our objectives in a systematic way.

#### **3.2 Theories of Corporate Governance**

### **3.2.1 Agency Theory**

The separation of ownership from management has been a great concern in the corporate governance domain. In a seminal work of corporate governance, Berle and Means (1932) drew attention to the separation of the power of executive management from diverse and remote shareholders. Smith (1776) coined this view more than three-hundred years ago arguing that the directors of a company cannot be expected to keep a vigilance eye on it with the same concerned with which they monitor their own money because they are managing other people's money rather than their own. This view makes an argument that there is a potential conflict of interest between managers (the agent) and owners (the principal). Thus, this theory (principal-agent theory), emerged from the concept of the separation between ownership and managerial control, argues that managers are self-interested and act opportunistically to maximize their own personal benefits by taking actions those are advantageous to themselves but detrimental to the shareholders (Jensen & Meckling, 1976). According to Denis (2001), the conflict of interest between owners and managers are the effects of the three causes: first, the managers want to retain their jobs and the shareholders need to replace them when they underperform; second, different level of risk preferences of shareholders and managers; and finally, different views on the use of free cash flow. To manage and minimize these conflicts as well as encourage the agents to ensure that they will work for the maximization of principals' wealth, the firm has to incur agency costs; these costs include restructuring cost, monitoring cost, bonding cost and residual loss (Jensen & Meckling 1976; Jensen, 2004). In addition, there are two more types of agency problems: one may exist in between managers (as on behalf of principals) and debt holders; and another form of agency problem may occur in between major shareholders and minor shareholders- this is called principal-principal agency problems (Chrisman, Chua, & Litz, 2004; Morck, Wolfenzon, & Yeung, 2005).

Most scholarly research into corporate governance has relied on the agency theory (owner-manager) in financial economics discipline (Fama & Jensen, 1983). This theory advocates, inter alia, using the managerial ownership, large outside blockholder ownership (such as institutional ownership), the board independence, and the family ownership/control as mechanisms for mitigating agency problems (Jensen &

Meckling, 1976; Singh & Davidson, 2003; Chrisman et al. 2004). But the empirical evidence of the effects of these controlling mechanisms on firm performance is not conclusive and even it varies with company specific attributes, industry attributes, and country characteristics. Thus, empirical evidences do not completely support the agency view without any systematic arguments. For example, what percentage of managerial ownership shall be appropriate for minimizing the agency problem is not well recognized. Mehran (1995) finds that managerial ownership is positively associated with performance. This positive relationship supports a view that giving equity-stake incentive to the managers can align their interests to with the owners' interests i.e. incentive-alignment hypothesis (Berle & Means 1932; Jensen & Meckling 1976). In contrast, Agrawal and Mandelker (1990) report that a higher level of managerial ownership is negatively associated with firm performance suggesting the entrenchment effect. Moreover, Stulz (1988) provide evidence of a non-linear association between managerial ownership and economic performance. He finds that corporate performance improves as the ownership increases; thereby it starts decreasing after a certain level of stake and touches the minimum level when managers hold 50 per cent or more stakes of the company.

In the case of block-holder ownership, agency theory views that block-holder ownership has the big interest to monitor the managerial activities. But it is still equivocal that what percentage of block-holder ownership is advantageous to firm. Fama and Jensen (1983), Morck et al., (1988) and Shleifer and Vishny, (1997) argue that the entrenchment effects rise to expropriate the minority shareholders' wealth when this ownership extends beyond a certain level. Holderness and Sheehan (1988), Agrawal and Mandelker (1990); and Bethel et al. (1998) find positive impact of block-holder ownership on performance. In contrast, Slovin and Sushka (1993) find a negative effect, but Demsetz and Villalonga (2001) find no significant effect.

From the perspective of board independence, agency theory argues that board shall be comprised of majority independent directors in order to ensure effective monitoring to the managerial activities and independent and critical examinations of the board's decisions. But the empirical evidence is incomplete and do not strongly support the agency views without arguments. For example, in supporting the aspects of agency theory, Raheja (2005) and Jackling and Johl (2009) report that more independent

director on boards are positively associated with firm performance. In sharp contrast, Bhagat and Black (2002) and Klein, Shapiro and Young (2005) find a negative relationship between these variables and, on the other hand, Hermalin and Weisbach (1991) find no significant relation.

Finally, another type of mechanism i.e. family ownership/control is likely to mitigate the owner-manager agency problems arisen from the separation of ownership and control because, typically, family owners occupy top managerial position (such as CEO) and concurrently play their roles as decision makers, controllers as well as residual claimants (Fama & Jensen, 1983). Miller et al. (2013) argued that family control, by owning significant percent of corporate stake and occupying leading managerial positions, makes the family members highly self-motivated supervisors for their companies' interests. Apart from, family owners, compared to the outside large shareholders, are expected to be more interested in company for family succession, reputation and survival that reduces managerial myopia (Anderson & Reeb, 2003) and increases their responsibility and accountability in utilizing their company's assets in long-horizon goal oriented basis following the wealth maximization criteria (Lee, 2006). Notwithstanding, due to their significant ownership of cash flow rights, controlling family designs managerial decisions to benefit themselves at the expense of the firm's broad benefits (Anderson & Reeb, 2003).

Family businesses, like any company with consolidated ownership, may benefit from lower principal-agent agency problems but they suffer from higher principal-principal (majority family owners and minority non-family owners) agency problems because family members take use of their knowledge at the expense of other shareholders (Wasserman, 2006). Rich family business owners, who concentrate their business interests in a single company, are risk averse because they will fall into huge financial loss if the business fails (Beatty & Zajac 1994) and therefore to protect the business for their offspring they follow conservative thinking of investment approach (Bertrand & Schoar, 2006) and make little investment in new technologies and products (Ellington, Jones, & Deane, 1996). In addition, family directors and managers could be very kind to their offspring, providing them undeserved gifts like stable jobs at the company, excellent pay, extra perks, and lavish expenditures (Lubatkin et al. 2007). When a family member occupies the position of CEO, he/she enjoys a

discretionary power to make major decisions without undue intervention from the family members or shareholders (Miller & Breton-Miller, 2005). This family succession in the top executive positions irrespective of their qualifications, talent and expertise incurs opportunity costs in terms of lost benefits from the talent executive pool (Volpin, 2002) and consequently leads to a competitive disadvantage and poor performance in family-controlled firms (Anderson & Reeb, 2003). Thus, this controlling family-ownership or family-management is converted into the entrenchment power and, in turn, incentivizes the family members to take part in the related party transaction as well as to expropriate the firm's wealth through private rents, excessive remunerations, and special dividends (DeAngelo & DeAngelo, 2000; Faccio, Lang & Young, 2001). This mechanism yields a conflict between controlling (family) and non-controlling (non-family) shareholders (Villalonga & Amit, 2006).

However, there is a few and inconclusive evidences on a view that family control mitigates all sort of agency problems including principal-principal agency problem. For example, McConaughy and Phillips (1999), Randøy and Goel (2003) and Maury (2006) report that family ownership works for the better performance of the company under a well-regulated economy. Anderson and Reeb (2003) and Pindado et al., (2008) find a nonlinear relationship between family ownership and firm performance. In contrast, Bennedsen et al. (2007) find that family leadership is negatively related to firm performance, but Villalonga and Amit (2006) find no association between family ownership and performance.

### **3.2.2 Stewardship Theory**

Stewardship theory sheds light on corporate governance through a different lens from agency theory. Unlike agency theory which focuses on more control to bring out the alignment of interests between the managers and principals, stewardship theory focuses on cooperation and collaboration to sustain the already aligned interests between these parties (Pastoriza & Ariño, 2008). Thus, stewardship theory believes that managers are inevitably steward and trustworthy towards an organization and they work for the best interests of the shareholder (Donaldson, 1990; Donaldson & Davis, 1991). This theory is based on motivation theory-Y rather than theory-X (McGregor, 1960). There is an intuitive postulate in this theory that managers are pro-

organizational and self-motivated by the upper scales of Maslow's hierarchy of needs, such as self-actualization, and do act responsibly with independence and integrity (Donaldson, 1990). Therefore, excessive control over the stewards might be potentially harmful because it emasculates their pro-organizational conduct by diminishing their motivation (Fernando, 2011). This theory puts stress on the insider-led (or executive-led) board because being full-time directors they could be highly connected to and more informed of the daily operations of business (Baysinger & Hoskisson, 1990). This strength enables them to make a superior decision and lead an effective overseeing on the operations linked with the corporate performance compared to any other outside directors (Donaldson, 1990; Donaldson & Davis, 1991). In the premises of stewardship theory, two factors are mostly recognizable to minimize the agency costs: firstly, managers are necessarily trustworthy; and secondly, they are reluctant to commit any conduct hazardous to shareholders because they are always concerned about the fear of losing their reputations (Donaldson & Davis, 1994). Moreover, Davis, Schoorman, and Donaldson (1997) argue that the behavioral traits and perceptions of situational factors are the key determinants of the alignments of interests between owners and managers.

Unlike agency theory, stewardship theory argues that outside independent directors could not efficiently work for the better monitoring under the environment of asymmetric information because their judgments are most likely to be dependent on the key piece of information provided by the insiders. Therefore, inside directors (or executive directors) with the strength of trustworthiness can potentially minimize information gap among them and make right decision for company's betterment. This is a very optimistic view towards the executives and managers. However, there is no clear empirical evidence to find the altruism attitude of the insiders. For example, Kesner et al., (1986) and Daily and Dalton (1992) from individual-analysis and Dalton et al., (1998) and Rhoades et al., (2000) from meta-analysis fail to establish any clear relationship between board composition and corporate performance. This is also exemplified by several corporate collapses such as Enron, WorldCom, and Waste Management in USA; Marconi, Barings Bank, and British Rail in UK; Parmalat in Italy; HIH insurance in Australia; Vodaphone Mannesmann in Germany; and Satyam in India. These examples paint a big question mark of susceptible behavior of individual in the area of stewardship theory, arguing that individual is not free from

the tendency of following self-interested and opportunistic behavior rather than altruistic behavior. Thus, irrespective of the claim of this theory about insiders, there is a need for getting monitoring role from outside independent directors.

Bourdieu (1986) and Putnam (2000) contend that stewardship develops among parties in a stable relationship, a high interdependence and interaction, and a common social network engagement. These circumstances are said to arise in family businesses where family members are emotionally connected to the company and are subsequently willing to invest in order to increase long-term value for all stakeholders (Miller & Breton-Miller, 2005). Stewardship may produce social capital in terms of group solidarity, trust, and loyalty and indeed it eventually extends beyond the family to stakeholders (Bourdieu, 1986). According to stewardship theory, family members are reliable, pro-organization, collectivists, and resources that should be used wisely. When family members lead their business as stewards, they will optimize their own utility by working to achieve the company's broad goals, such as profitability or sales growth (Davis, et al., 1997). Family members supports their business under a view of collective asset of patrimony, psychological-ownership and socio-emotional involvement (Arregle et al, 2007; Pierce, Kostova, & Dirks, 2001; Gómez-Mejía et al., 2007) that makes them sincere to uplift family fortune, career opportunities, and social recognition and reputation and shapes their attitude towards the fate of business (Miller & Breton-Miller, 2005). Corbetta and Salvato (2004) argue that stewardship philosophy is commonly practiced in only successful family businesses.

Nevertheless, stewardship theory has a disadvantage as it requires more time from the principal to involve the stewards in problem-solving processes, cooperative decision-making, and information sharing; all of which increase transaction costs (Van-Slyke, 2006). This theory is also criticized for giving directors a complete discretionary power when using it, but the board is constrained by a number of factors including the availability of a qualified workforce, the demand for the company's new products and investments, and the cost and availability of financing (Blair & Stout, 2001). Moreover, stewardship philosophy may not flourish independently in the company and reduce the negative influence of individual claims to the company without practicing corporate democracy where the collective decision is made by the parties at interest (Engelen, 2002).



### **3.2.3 Resource Dependency Theory**

It is well documented that the agency theory is more frequently used in studies on boards of directors compared to the resource dependence theory (Dalton et al. 2007; Zahra & Pearce, 1989). But the empirical data suggest that resource dependence theory is a better lens for comprehending the scenario of board effectiveness (Johnson et al., 1996; Hillman, Withers, and Collins, 2009). From the functional perspective, one of the major roles of a board is to monitor the managerial activities and provide dynamic resources to the company (Hillman & Dalziel, 2003). Such type of resource-based board may be suited to meet the challenges of the needs in changing corporate worlds and, thereby, it reduces firm's external dependency in maximizing its market growth and share (Pfeffer, 1972). Nicholson and Kiel (2007) argue that a board maintaining collaboration with external environment provides a company with a high level of access to various resources and, hence, resulting in a high corporate performance.

Independent directors are basically appointed from outsiders who have to have the eligibility criteria as per the requirements of the respective countries' governance code in order to ensure fair, transparent and equitable treatment to all shareholders. As per governance code in Bangladesh, an independent director shall come from the following pools of qualifications: business leader; corporate leader; former government official; university teacher in Economics or Commerce or Business Studies or Law; and professionals. According to Rhoades et al. (2000), all independent directors are not equally qualified, but some of them are more qualified to perform their duties as resources, advisors, and monitors due to their industry or occupation background, executive or managerial experience, and other potential abilities or experiences. Along the line, Pfeffer (1972) argue that despite the monitoring responsibilities of independent directors, independent directors also serve as valuable source of guidance and counsel for senior management and making it simple for the company to acquire the resources necessary to manage important external links. Thus, whole these things view an independent director as a good resource for an organization.

In the lens of family business, this theory argues that family controlled firms are better able to build social capital and establish gainful relationships with stakeholders (Miller et al., 2009; Sirmon & Hitt, 2003) because of their strong dedication to their companies as well as their relentless endures for firm's sustainability (Kappes & Schmid, 2013). According to Arregle et al. (2007), family businesses are particularly adept in creating, maintaining, and capturing the value of different types of social capital. Putting more stress on the beneficial outcomes of family business, Miller and Breton-Miller (2006) claim that governance tools are not well suited to family centric firms as it endangers their competitive strengths and advantages. In sharp contrast, Young et al. (2008) and Heugens et al. (2009) claim that when a firm is managed and controlled by a family group there remain a high likelihood of falling into their own inherent weaknesses and various investment hazards for minority shareholders. In this case, family control allows them to apply management entrenchment and tunneling efforts in order to expropriate minority shareholders' wealth (Morck & Yeung, 2003; Bertrand & Schoar, 2006). Such principal-principal agency problems lead to an inefficient resource allocation practice into the firm (Burkart, Panunzi, & Shleifer, 2003) and a higher effective costs of capital (Claessens et al., 2002) and, eventually, both of which carry out their threat to poor performance. In this effect, Anderson and Reeb (2003) suggest that the firm should increase board independence to curb the managerial entrenchment force and the family's intent of getting private benefits.

#### **3.2.4. Institutional Theory**

This theory argues that an organization brings change into its structure due to the institutional pressures. According to Jennings (1994), institutional pressure comes from two ways that ultimately promote organizational development. First, introducing of new rules enforces the organization to comply with these regulations. For example: in the context of Bangladesh, present corporate governance code requires all listed firms to maintain a corporate board that shall be composed of minimum 1/5<sup>th</sup> independent directors of the total directors on board; audit committee chairman shall be an independent director; and audit committee shall conduct four meetings in a year. Second, competitive necessity enforces an organization to confront with a mimetic pressure to comply with the changes what other organizations have successfully done. When new principles or practices become more acknowledged, enacted, and

legitimized in the institutional environment, every organization is automatically enforced to comply with these new standards otherwise a failure of abiding these rules threatens organization's reputations, comparative benefits and competitive advantages (Deephhouse & Suchman, 2008).

In the literature of corporate governance, it is evident that institutional pressures promote an organization to inevitably entail a legitimized shape of business structure with regard to board composition (Jones & Goldberg, 1982; Luoma & Goodstein, 1999) and board's subcommittee composition (Kalbers & Fogarty, 1998; Newman & Mozes, 1999). This theory suggests that publicly traded family firms are highly concerned about their social capital and reputation that incline them to maintain board independence in effective manner and, eventually, they gain legitimacy and good image in the corporate world (Liu et al., 2016). Moreover, it is typically common in the family controlled firms that most of the directors and managers come from the same family. Therefore, the corporate board of family controlled firm may suffer from board diversity in terms of professional expertise, talent, and knowledge. Thus, family controlled firms shall prefer qualified outside independent directors for the sake of the reputation, sustainability, and, more importantly, betterment of their family businesses.

### **3.3 Literature Search: Governance Mechanisms, Family Control, and Firm Performance**

#### **3.3.1 Board Independence**

The independence of corporate boards has received an increasing and significant attention in domain of the culture of governance after the enactment of SOX in the US (Leung, Richardson, & Jaggi, 2014). This is followed by several corporate scandals (for example: Enron scandal of 2001; Tyco scandal of 2002; WorldCom scandal of 2002) that create a big question that why directors fail to keep their effective monitoring role over the management. It is because of that the directors' persistence of occupying the top seats in executive body instigates them to remove the line of control from the distinguishable role between principals and agents and, eventually, influences them to get private benefits through earnings management. Moreover,

when a board is comprised of majority executive directors, it creates a state of homogeneous clan and the board starts exercising more influence over other members (Murray, 1989). Such type of board lacks an effective counter-balance to restrain the executives from expropriating shareholders' wealth (Mahadeo, Soobaroyen, and Hanuman, 2012). In a similar vein, McCabe and Nowak (2008) argued that a board comprising of majority non-executive independent directors provides checks and balances between power and control of the management. Hence, independent directors, who do not keep any familial relation with managers and other directors, are expected to perform the monitoring and supervising roles more independently and objectively (Hermalin & Weisbach, 2003).

The proponents of agency theory (Jensen & Meckling, 1976; Dalton et al., 2007; Johnson et al., 1996; Zahra & Pearce, 1989; Dalton et al., 1998) contend that insiders exercise more power and pursue action to satisfy their personal interest in the cost of shareholders' interest and, in this case, the presence of independent directors can strengthen board's monitoring and supervision power as they are outsiders and have no personal relation with insiders. Raheja (2005) and Jackling and Johl (2009) find that majority outsider-board enhances firm value and lowers information costs. Byrd and Hickman (1992), Rosenstein & Wyatt (1990), Subrahmanyam et al. (1997), He et al. (2014) and Wang, Jin, and Yang (2016) find that independent directors play a pivotal role in enhancing both corporate governance and company performance. Resource dependency theory (Pfeffer & Salancik, 1978), supports a view that outsider independent directors bring extra talent, skill, and expertise to the board that enhances board's capability to supervise and monitor managerial activities. Findings of a study by Kor and Misangyi (2008) reveal a negative relation between industry experience of board and top management, suggesting that collective board supplements top management with vital supervision and advice. Peng (2004) confirms a positive relation between resource-rich outside directors and firm performance. In addition, Jones, Makri, and Gomez-Mejia (2008) suggest that family firms can improve their diversification and growth strategies and reduce their perceived risks without diluting family control through appointing non-family affiliated directors and independent directors as they basically shares their knowledge and experience with family executives. In sharp contrast, Fan and Wong (2002) argue that founding family concentrated ownership does not work in favor of transferring accounting information

to outside independent directors that limits outsiders' monitoring capacity. On the other hand, stewardship theory (Donaldson & Davis, 1991, 1994) suggests that insiders are motivated by the organizational goals rather than personal goals so any attempt to impose over control on them may yield the magnitude of potential counterproductive because it undermines their pro-organizational behavior and hinders them from getting motivation. Empirical evidence suggests that certain level of insiders are more effective at monitoring and board performance implying that inside directors provide valuable information, directions, and services to the board about the firms' strategic and investment decisions (Drymiotis, 2007; Masulis & Mobbs, 2011; Mobbs, 2013).

Notwithstanding, a great deal of empirical studies did not find significant relationships between independent directors and firm performance (Mak & Li, 2001; Bhagat & Black, 2002; Ferris, Hagannathan & Pritchard, 2003; Lehn, Patro, & Zhao, 2009). Some studies report the detrimental effects of high board independence on firm performance. For example: Yermack (1996) discovers a significant negative association between board independence and market-based performance but no significant association with accounting-based performance measures (total assets turnover; basic earnings power; operating profit margin); Agrawal and Knoeber (1996) and Mishra et al. (2001) report that proportion of independent directors is negatively related to market-based performance measure; Klein (1998) find a significant adverse effect of independent directors on market value of equity, but insignificant for return on assets and stock market returns; and Bhagat and Bolton (2008) find that any increase of outside directors in the corporate board does not lead to make beneficial influence on firms' operating performance. In the context of Bangladesh, Rashid (2018) analyzed a data over a sample of 135 listed non-financial companies in Dhaka Stock Exchange during 2006-2011 (when 1/10<sup>th</sup> seats of board had been filled with appointed independent directors, whereas it increased to 1/5<sup>th</sup> in a revised governance guidelines issued in 2012) and report that proportion of independent directors is negatively correlated to market-based performance but insignificant to accounting-based performance concluding no significant influence of board independence. Agrawal and Knoeber (1996) and Coles, McWilliams, and Sen (2001) find a negative association between board independence and firm performance. Hermlin and Weisbach (1991) found no significant association

between proportion of independent directors and firm performance. In response to these vexing and inconclusive effects of board independence, Baysinger and Butler (1985), Pearce and Zahra (1992), and Finkelstein and Hambrick (1996) argued that it is subject to whether they carefully considered various factors such as corporate law, managerial talent, board room culture, capital structure, external environment, and contextual factors, etc. Despite these discrepancies, Anderson and Reeb (2004), Brennan and McDermott, (2004), Fields and Keys, (2003), and Park and Shin, (2003) presumes that independent directors can add substantial efforts to the board to increase its monitoring capability. Finkelstein and Hambrick (1996) contend that quality monitoring by independent directors may positively affect firm performance. Thus, these contradictory findings and arguments necessitate more research to explore the untouched issues of board independence. More specifically, this study intends to know whether the board independence lead to a better firm performance in Bangladeshi firms.

### **3.3.2 Audit Committee (AC) Independence**

Audit committee (AC) -a subcommittee of the board- is basically responsible to evaluate the reliability, appropriateness, and truthfulness of the accounting and financial reporting of the company and ensure an good monitoring system so that shareholders' interest can be protected (Mallin, 2007). It is an implied phenomenon in the corporate governance domain that independent and qualified AC members are inseparably linked to a better monitoring process of financial reporting (Bronson et al., 2009) and act as custodian of the public interest (Abbott et al., 2004). Upholding the importance of AC independence, Sarbanes-Oxley Act 2002 supports that the AC shall entirely be composed of independent directors including at least one financially literate member and Australian Securities Exchange Corporate Governance Council (2007) mandates that the audit committee shall be composed of at least three independent directors. In practical view, OECD (2014) observes that independent chairman along with majority independent members is inevitable for AC effectiveness. Beasley and Salterio (2001) and Sharma et al. (2009) argue that appointment of inside director or board chair or CEO as AC chair is a salient reason for deterioration of the magnitude of AC independence. According to IAASB (2012), professional judgment by the auditor is essential to the proper conduct of audit, which

can be facilitated by professional skepticism; it is led by the fundamental ethical principles of objectivity and auditor independence of mind and in appearance. Carcello and Neal (2000) discover a significant link between increased audit committee independence and better oversight of the financial reporting process. In the code of corporate governance in 2018, Bangladesh Securities Exchange Commissions (BSEC) -a stock market regulatory body in Bangladesh- puts the additional weight in strengthening the pillar of AC independence urging all listed firms to constitute their AC committees with all non-executive directors including one independent chair.

Empirical evidence mostly supports the regulatory demand for audit committee independence. Abbott et al. (2004) assert that firm is less likely to be involved in materially misstated and fraudulent reporting when AC comprises of independent members and meets at least twice a year. Similarly, Beasley (1996) finds that it is tough for an AC to effectively reduce the likelihood of earnings management but more independent members on this committee can appositely control this tendency. Dey (2008), Chan and Li (2008) and Erickson et al. (2005) report that independent and expert member on audit committee is positively associated with firm performance. DeFond, Hann, and Hu (2005) find that positive movement of cumulative abnormal return is associated with the appointment of outside independent directors in the audit committee. Unparalleled to this view, some earlier researches (for example: Klein, 1998; Mak & Kusnadi, 2005; Rahman & Ali, 2006) come up with evidence showing no significant relationship between AC independence and firm performance. Along the line, Sharma et al. (2009) report a negative impact of committee independence on effective monitoring. As outside independent directors are completely separate from management they have less information about the firm compared to the insiders and they may not critically dig dipper into executives' movements (Aldamen et al. 2012). Hence, keeping effective monitoring becomes harder from their side. One the basis of these discussions, this study fixes a research question- does the audit committee independence enhance firm performance?

### **3.3.3 Audit Committee (AC) Meetings**

The main role of audit committee is to ensure that financial reports are prepared fair and transparent manner reflecting factual information considerable to its internal and

external users for strategic decision making and/or effective monitoring. But to do this role AC shall take some visible measures and one of them is number of meetings held by this committee per year. Prior studies have used the frequency of meetings to gauge the diligence of the audit committee (Menon & Williams, 1994; McMullen & Raghunandan, 1996). A clearly structured and chairmen led well-controlled AC meeting can examine the accounting and financial data more effective way and disseminate the information to the board for precautionary actions (McMullen & Raghunandan, 1996). Indeed, the frequency of meetings in a financial year would presumably be a better reflect of the extent of monitoring by AC and hence it yields a better firm performance (Aldamen et al. 2012). Beasley et al. (2000) argued that fewer AC meetings are strongly related to more financial statement frauds. Sarbanes Oxley Act of 2002 explicitly focuses on a requirement that AC shall meet at least four times per year which is later explicitly adopted by CGC 2018 in Bangladesh.

Agency theory (Jenson, 1993) views that more frequent meetings are essential for effective monitoring over the management. Abbott et al. (2003) argue that an audit committee that meets frequently may enhance financial accounting procedures and boost performance. From the stewardship theory perspective, Rebeiz and Salameh (2006) argued that boards have to be relatively relaxed in its activity as higher monitoring may lead to disappoint the executive motivation and lead to poor performance. They highlighted on the importance of the quality of the meeting and not just the quantity of the meeting. Similarly, resource dependence theory put stress on the quality of audit committee rather than frequency of the meeting. Along this line, Bedard and Gendron (2010) claimed that AC effectiveness is not subject to the meetings frequencies. Sharma et al. (2009) find evidence that an AC led by independent chair does necessarily feel less imperious to hold more frequent meetings of AC. Moreover, holding three or four AC meetings in financial year does exactly not assure that a financially underperformed firm avoids their financial distress rather other factors such as commitment and quality of committee members may do it (Rahmat, Iskandar, & Saleh, 2009). Along the line, Saleh, Iskandar, and Rahmat (2007) find that the frequency of AC meetings acts as a monitoring tool of managerial activities that controls for management's intentions of managing firm's earnings and hence it enhances firm performance.



The evidence on the impact of AC meetings on firm performance is less investigated compared to that of the board meetings (Brick & Chidambaran, 2007). Existing literatures provide inconclusive assertions about the impact of AC meetings on firm performance. For example, Kyereboah-Coleman (2008) finds a positive association between AC meetings and firm performance. In contrast, Hsu and Petchsakulwong (2010) find a negative relation between these variables. On the other hand, Khanchel (2007) and Rahmat et al. (2009) find no significant association between AC meeting and firm performance. On the basis of the above discussions, this study sets up a research question- does the audit committee meeting enhance firm performance?

### **3.3.4 Family Control**

A family business is a business where family members basically own significant stake of ownership with voting rights, occupy many chairs in the sphere of top management, and board leadership position that incentivizes them to exert mighty power over the organization in formulating policies and making strategic directions (Pieper, Klein, & Jaskiewicz, 2008). It is reported in the earlier studies that family firms are mostly prevalent in both developed and emerging economies (Villalonga & Amit, 2020). Along the line, Claessens et al. (2000) argue that family control is mostly prevalent in the older and smaller types of firms in Asia. In USA, about 90% of incorporated businesses are family owned and family controlled (Poza, 2007). One-third of the S&P 500 corporations (Anderson & Reeb, 2003) and the Fortune 500 companies (Shleifer & Vishny, 1986) have corporate boards representing the dominance of founding families. In Asian countries, approximately 95% of the companies are family owned (Tricker & Tricker, 2015) with an exception for Japan where family control is at insignificant rate (Claessens et al., 2000). In Western Europe, family control is account for about 44% of the total companies (Faccio & Lang, 2002). In France, about 25% of the companies listed on CAC40 stock market index is family controlled (Tricker & Tricker, 2015). In Bangladesh, about 73% of listed non-financial companies are dominated by single family (Sobhan & Werner, 2003).

#### **3.3.4.1 Dimension of Family Control**

Our study measures the family control from two dimensions: first, the leadership and managerial power of the board; and second, family ownership of the board. The first dimension explains family-CEO duality when the chairman of a corporate board and the CEO are not the same person but belong to the same family. This definition has not been widely used and is unpanelled to earlier literatures (for example: McConaughy, 2000; Mishra et al., 2001; Anderson & Reeb, 2003; Pérez-González, 2006; Villalonga & Amit, 2006; Wang, 2006; Bennedsen et al., 2007; Adams et al., 2009; Randøy et al., 2009; Jackling & Johl, 2009; Jiang & Peng, 2011; Cai et al. 2012; Miller, Minichilli, & Corbetta, 2013; González et al., 2014; Bhatt & Bhattacharya, 2017). It bears a great significance of family control as a close tie between family owners and family CEO may expedite board's effective monitoring (Fama & Jensen, 1983) and improve economic performance (Anderson & Reeb, 2003; Lee, 2006; Adams et al., 2009; Kowalewski et al., 2010; Cai et al., 2012; Poutziouris et al., 2015). In contrast, family-CEO duality enlarges family dominance. Therefore, it deprives the firm to avail the talent, capacity, and expertise of outsider CEO (Kets-de-Vries, 1993) and results in a competitive disadvantage (Anderson & Reeb, 2003). Villalonga and Amit (2006) reported that family control leads to a poorer performance when family descendants occupy the top positions at management level. In the same line, Jiang and Peng (2011) claim that board family leadership instigates family members to be involved in related party transaction for the fulfillment of their own interests; it is also not the exceptional for Asian family business (OECD, 2014). Thus, this dimension has wider scope for explaining family control. The second dimension of family control is ownership structure which is widely used in earlier literatures (for example: Anderson & Reeb, 2003; Lee, 2006; Miller et al., 2007; Andres, 2008; Filatotchev et al., 2005; Kowalewski et al., 2010; Giovannini, 2010; Sacristán-Navarro et al., 2011; Cai et al., 2012; Poutziouris et al., 2015).

In defining family-controlling ownership we, firstly, identify the directors on the board who are belonging to the same family; secondly, we form multiple family groups based on their family identity, and finally find and keep the maximum degree of ownership held by the leading family group. Andres (2008) argue that ownership of family members without board representation seems to be less effective for influencing the performance. Hence, we do not consider the ownership of a family member who belongs to a family but does not hold directorship. Agency theory

argues that family ownership could be utilized as a magnificent tool for aligning the ownership with control, but on the other hand it avails family members to expropriate the fund in the cost of non-family owners' interests (Jensen & Meckling, 1976). It is because that they can opportunistically appoint family descendant as CEO and dominate and influence the board function in favor of their own interest (Shleifer & Vishny, 1997). High voting rights also allow the family members to appoint personally known people as independent director, force them to act in favor of their personal interests and lead to the adverse selection of independent directors. Empirically, Lee (2006), Andres (2008), and Cai et al. (2012) find a positive relation between family ownership and performance. Anderson and Reeb (2003), Kowalewski et al., (2010), and Poutziouris et al. (2015) find non-linear relation between these variables. In contrast, Giovannini (2010) find a negative relation. Therefore, family ownership has broad significance in influencing firm performance and affecting the selection process of CEO and independent directors. In this study, family ownership is measured by three types of thresholds: first, when board members from a single family hold at least 20 percent ownership or greater (Cai et al., 2012); second, when board family members hold at least 25 percent ownership or greater (Andres, 2008; Kowalewski et al., 2010); and finally, a threshold of 30 percent family ownership or greater. The measures of family control are as follows:

- a) Family CEO duality refers to a state where board Chairman and CEO/MD are two different individuals but belong to the same family; and
- b) Percentage of equity shares held by the directors of the same family.

#### **3.3.4.1.1 Family-CEO Duality**

In the last two decades, the business world has vastly experienced with groundbreaking technological changes that induce every firm to review their business strategy for sustainability. In this regard, a talent corporate board is supposed to be best fitting to keep pace with these challenges and run the business in a line of long life survival. Chandler (1977) claimed that a professionally managed board is more accountable to external capital markets and be able to compete successfully in technologically advanced market compared to family controlled board as family firm lacks managerial efficiencies and professional competitiveness. In contrast, Jensen

and Meckling (1976) argued that managers are agents and they put their expertise in organization for the fulfillment of their personal interests rather than owners' interests. Surprisingly, they also argued that typically agency problems (owners-managers i.e. Type I) are less appeared in family controlled firms. This is because, in family controlled firms, family members typically occupy the positions in top management and, hence, owners and managers become non-separable from each other.

A situation of family control turns to a high denseness when family members hold the position of chairmanship of the board and managing director. That is, family-CEO duality occurs when chairman of the board and chief executive officer (CEO) are different individuals but belong to the same family. In this effect, an excessive controlling power over the board is converged into the hands of the members of a single family. This family-CEO duality provides a big question that is family leadership makes a board more talent, efficient, and strategically competent to lead the business for better economic performance? Empirical evidence with regard to the costs and benefits of family leadership streams through two separate and opposite directions and hence it becomes a center of interest to the researchers in looking for the effective corporate governance mechanisms in family firms (Raelin & Bondy, 2013).

In regard to the benefits of family control, it is argued that family leadership could expedite controlling and monitoring capacity of the board and assist the board to exert high-power. Therefore, it incentivizes the board family members to maximize the value of the firm. That is, strong ties between family CEOs and business owners can produce an efficient and motivated monitoring system for businesses (Fama & Jensen, 1983). Anderson and Reeb (2003) found a positive correlation between family CEO and accounting measure of performance in a survey of big publicly traded US corporations. Other empirical evidence from Lee (2006), Adams et al. (2009), Kowalewski et al. (2010), Cai et al. (2012), and Poutziouris et al. (2015) has also supported the positive influence.

In contrast, excessive family control provides the family executives with a big opportunity to exploit less influential owners and to benefit only themselves at the

expense of the benefit of the company. This situation triggers a conflict between minority shareholders and dominating shareholders that is called principal-principal agency problem- a Type II agency problem (Morck et al., 2005; Villalonga & Amit, 2006; Schulze, Lubatkin, & Dino, 2003). Along the line, Faccio et al. (2001) and Lee (2006) find that family managers seek for family benefits at the cost of minor-investors' interests. Randøy et al. (2009) argued that if firms experience a low profit margin in the highly competitive industries, founding family leadership is not well capable to take substantial risk in making new investments in research and development, foster efficient investment and sustainable growth of company, and make strategic decisions. Moreover, occupying the executive management positions by family members may restrain the firm from the benefits of utilizing qualified, capable, and talent outsider executives, which potentially leads to a competitive disadvantage (Anderson & Reeb, 2003). Family members are reluctant to share accounting information to outside investors (Fan & Wong, 2002) that yields information asymmetry and lower transparency of accounting disclosures (Francis et al., 2005). Thus, Wang (2006) argued that family owners enjoy both an incentive and an opportunity to bag private benefits at the cost of organizational benefits. Consistent with these arguments, Smith and Amoako-Adu (1999) and Pérez-González (2006) find that the investors respond negatively towards the valuation of share when firms appointment family heirs as managers.

The most of the earlier studies defined family CEO as either by founding family CEO or descendent CEO or non-founding family CEO or non-decedent family CEO (McConaughy, 2000; Mishra et al., 2001; Anderson & Reeb, 2003; Pérez-González, 2006; Villalonga & Amit, 2006; Wang, 2006; Bennedsen et al., 2007; Adams et al., 2009; Randøy et al., 2009; Jackling & Johl, 2009; Jiang & Peng, 2011; Cai et al., 2012; Miller et al., 2013; Muttakin et al., 2014; González et al., 2014; Bhatt & Bhattacharya, 2017). But, Sacristán-Navarro et al. (2011) used a dummy variable to measure the family control by taking a value of one when any member of the family owner group holds the position of CEO and/or the chairman. In this study, family-CEO duality refers to a state when the chairman of the board and the CEO belong to the same family. To the best knowledge of the authors, the measurement device of this variable is not parallel to that of any extant studies. In Bangladesh, there is a very little and limited evidence on the influence of family-CEO duality on accounting-

based performance and market-based performance of firms. Therefore, this study intends to take a momentous attempt to examine the impact of family-CEO duality on firm performance in national and international contexts.

#### **3.3.4.1.2 Family Ownership**

Unlike market-based governance system in the most developed countries where dispersed ownership is common, in control-based governance system in continental Europe including Bangladesh. In Bangladesh, the founding family ownership (concentrated ownership), institutional ownership, and government ownership typically hold a larger block of stock. Arguably, there remain many unexplored and unexamined areas in the domain of family business research (Collins & O'Regan, 2011). One of these areas could be related to the investigation of the impact of family involvement (concentrated ownership) on firm performance (Filatotchev et al., 2005). Anderson & Reeb (2003) presume that founding families with large ownership of cash flow rights have the motivation and authority to act in a way that benefits them at the expense of the performance of the company. Fama and Jensen (1985) report that large concentrated owners reap more private benefits from pursuing goals like business expansion, technological advancement, or business survival. In this case, small shareholders should increase their investment to curb the degree of extracting the private benefits of controlling shareholders (Thomsen, Pedersen, & Kvist, 2006). According to Barclay and Holderness (1989), large family ownership stakes create a shield against the likelihood of bidding by other agents that deteriorates firm's value. In addition, the pressure of occupying the space of managerial role and directorship by family members, while they are poor performer due to their cognitive limitation, do refrain the third parties from capturing the control of the firm, resulting in higher managerial entrenchment and lower company performance compared to non-family firms (Shleifer & Vishny, 1997; Anderson & Reeb, 2003; Morck & Yeung, 2003). Additionally, through excessive compensations, related-party transactions, or special dividends, family members opportunistically grab the assets of the company (DeAngelo & DeAngelo, 2000; Anderson & Reeb, 2003). Thus the whole things support a view of Type II agency problem. In Asian nations, family businesses are found to hurt minority shareholders where transparency is poor (Faccio et al., 2001). Other empirical evidence also reports the adverse effects of family control on firm

performance such as Yermack (1996), Faccio et al. (2001), Smith and Amoako-Adu (1999), Gomez-Mejia et al., (2001), Gürsoy and Aydoğan (2002), Cronqvist and Nilsson (2003), Piesse, J., Filatotchev, I., & Lien, Y. C. (2007); Bennedsen et al. (2007).

As it is earlier mentioned, family control aligns owners' interests with managers' interests and helps reducing the gap between owners and managers through holding important positions on both the managerial body and the board of directors. Family members also have incentive to make long-term and sustainable presence in the firm in order to uphold the family fame (Wang, 2006) even in some cases family succession permits them to gather a learning curve. This superior knowledge enables them to make effective decision and monitoring (Anderson & Reeb, 2003). Also, family member typically maintains long term investment horizons (James, 1999) as well as they make controlling position in a company with dispersed ownership structure. As a result, their economic benefits become highly sensitive to the firm's achievements which strongly motivate them to make efficient investment decisions (James, 1999), monitor managers and minimize the free rider problem associated with widely held companies where non-family shareholders are relatively small (Anderson & Reeb, 2003), suggesting lower owners–manager conflict and better firm performance (Shleifer & Vishny, 1986). Long-term presence of family members and their reputation further save the firm from managerial myopia and provide a competitive advantage compared to non-family firms that help firm to make an effective and efficient supply chain management systems with external suppliers, dealers, and lenders (Anderson & Reeb, 2003). Davis (1983) argues that family firms can reach at the level of competitive edge riding on the two factors such as altruism and trust among the family members that enhances firm performance. In a meta-analysis on US firms, Essen et al. (2015) report that family firms do well compared to non-family firms, but performance drops dramatically when the leadership role is delegated to the second generation and onwards. Previous studies find a positive effect of family control on firm performance (McConaughy et al., 1998; Lee, 2006; Maury, 2006; Villalonga & Amit, 2006; Mishra et al., 2001; Chu, 2011; Isakov & Weisskopf, 2014; Sraer & Thesmar, 2007). Other studies find a curvilinear relationship between family control and performance (Anderson & Reeb, 2003; Pindado et al., 2008; Kowalewski et al., 2010) find a nonlinear relationship between

family control and performance. Apart from, Sciascia and Mazzola, (2008) find that firm performance has a negative quadratic relationship with family management but no relationship with family ownership. Nevertheless, Górriz and Fumás (1996) and Miller et al. (2007) find that family control has no significant influence on performance. In the context of Bangladesh, the evidence on the association between family control and firm performance is very limited. For instance, Muttakin et al. (2014) investigated the impact of family ownership and family generation on firm performance during 2005-2009. They find that firm performance improves as family ownership increases but deteriorates when family descendent (second generation) occupies the position of board chairman or CEO.

Due to these inconclusive results in international domain and dearth of evidence in the context of Bangladesh, this study focuses on the potential effects of family control on firm performance exploring some untouched issues like family CEO duality and its direct and moderating effects. This study makes a research question- does the family control (family-CEO duality, family ownership) influence firm performance?

#### **3.3.4.2 Contingent Effects of Board Structure**

It is observed from reviewing these literatures that the effects of board structure on firm performance are mixed. These inconclusive results find a new space to investigate the possible contingent relationships among these variables. Pearce and Zahra (1992) argued that the effects of board composition on performance is contingent upon the external environment in which a firm operates, the strategy what a firm needs, the contextual variables what a firm keenly deals with, and the past performance of a firm. They identified two more major tasks of a board beyond its monitoring and controlling tasks such as formulating strategy and providing fiduciary services. A better accomplishment of these tasks is closely related to the resource dependence theory (Pearce & Zahra, 1992). Elsayed (2011) find that impact of board size on firm performance is determined by whether CEO duality exists or not. Desai, Kroll, and Wright (2003) find that monitoring capacity of outside directors is influenced by the power of CEO duality. Along the line, Combs et al. (2007) claim that the how independently and effectively outside independent directors work for protecting and maximizing the interests of shareholders is subject to the power of



CEO i.e. CEO duality. Thus, CEO power is becoming a tool of transforming the degree and even directions of potential impacts of board independence on performance. But the degree of CEO power further depends on whether there exists duality or not as duality intensifies power. However, empirical evidence fails to draw conclusive results in examining the effects of CEO duality on firm performance. Brickley et al. (1997) and Elsayed (2007) report that the industry characteristics shape the nature of leadership structure (CEO duality or CEO non-duality), which in turn moderate firm's performance.

In a meta-analysis, Pindado and Requejo (2015) conclude that the effects of various corporate governance mechanisms on firm performance are influenced by the interaction between family ownership and governance variables. Moreover, it is also argued by Van den Berghe and Carchon (2002) and Miguel et al. (2005) that the correct combination of governance mechanisms in family firms varies with their ownership structures and the institutional environment. Institutional theory argues that, on the one hand, family firms are enforced by the institutional requirements to appoint independent directors and, on the other hand, they are highly concerned about their family's social capital and reputation. Both these things motivate them to form a balanced board where family members and non-family outside independent directors act together for the betterment of the organization. Similarly, stewardship theory and resource dependence theory argue that families select directors based on their qualifications and experience, and they look for independent directors to join their boards so they can provide the board with proper guidance and advise. In family firms, monitoring role of independent directors is very much crucial to safeguard the interests of non-family minority shareholders (Miller & Le Breton-Miller, 2006). In addition, advising role of independent directors is also needed in family firms to compensate the family-led managerial deficiencies (Voordeckers, Gils, & Heuvel, 2007). According to Johannisson and Huse (2000), independent directors can mitigate disputes and conflicts between family and non-family members through applying their fair views and judgments and professional competencies. Along the line, Jaggi, Leung, and Gul (2009) and Kuo and Hung (2012) report that the negative influence of family dominance on firm performance can be mitigated by the presence of independent directors. Anderson and Reeb (2004) find that the efforts of independent directors are positively associated with the performance of family controlled firms.

They argue that there should be fewer disputes regarding wealth distribution between family shareholders and non-family shareholders of family businesses if the percentage of independent directors increases in the family businesses. According to Liu, Valenti, and Chen (2016), family control strengthens the positive relationship between board independence and disclosure quality.

According to Agency theory, families who want to use the company's resources for their own gain are unlikely to build boards that limit and minimize their influence over the company. Chen and Jaggi (2000) claim that controlling families basically choose independent directors from the group of peoples who are to be personally known and loyal to them. As a result, independent directors give the value of their closeness at the cost of compromising their monitoring duties which in turn instigates the family members to expropriate the interest of minority shareholders. They find that board independence is positively associated with quality of financial disclosure, but this relationship starts deteriorating when family control rises. Jiang and Peng (2011) examine the direct impact of family ownership and the moderating effect of family CEO on the relationship between family ownership and firm performance in eight different Asian countries. They find mix results indicating that the direct influence of family ownership on firm performance is both positive and negative in different countries. In addition, they report that family CEO is negatively moderates these relationships in some countries but not in other countries. Garcí'a-Ramos and Garcí'a-Olalla (2011) find that the board independence positively affects the performance of founder led firms but negatively affects the performance of descendant led firms. In another study, García-Ramos, Díaz-Díaz, and García-Olalla (2017) report that board independence is positively related to the performance of non-family firms, negatively related to the performance of descendant led family firms, and insignificantly related to founder led family firms. In addition, they observe that board independence significantly interplays with the family leadership (when the position of CEO and chairman is filled up by the same individual of a family) and eventually enhances family-firm performance irrespective of founder or descendent led.

The aforesaid discussions suggest that the moderating role of family control on the effects of board independence and firm performance is not conclusive and even it is

not widely accepted because most of the evidences have drawn from developed countries and very little from developing countries. These mixed results and lack of generalizations raise several questions in exploring the moderating role of family control between board structure and firm performance. Taking into account these arguments, we attempt to extend the line of evidence in the existing knowledge. More specifically, the final thrust of investigations of this study is to bring out new evidence in the context of Bangladeshi family controlled firms where such type of research is quite absent. On the basis of these discussions, the study identifies a research question- does family control interact with board independence in affecting firm performance?

### **3.4 Summary of the Earlier Empirical Studies**

This study basically deals with the major reforms into the corporate governance codes in Bangladesh till the year of 2020 and its effects on firm performance, Therefore, it identifies four areas in these reforms like board independence, audit committee independence, audit committee meeting, and family ownership/control. Taking account of these reforms, the summary of the empirical studies discussed above is systematically presented through Table 3 to 7. The summary of the empirical studies presented in Table 3 indicates that the relationship between board independence and firm performance is mixed. Similarly, the summary of the empirical studies presented in Table 4 and 5 reveal that the effects of audit committee independence and audit committee meeting on firm performance are inconclusive. From Table 6, an interesting conclusion can be made that family control is defined in many ways and its effects on firm performance have many directions (i.e. positive/negative/nonlinear/no relation). Finally, Table 8 provides information about the empirical evidence on how family control interplays with other governance mechanisms (such as board independence, ownership structure, CEO duality, board size etc.) and make their interaction effect on firm performance.

**Table 3: Summary of the Empirical Studies on Board Independence and Firm Performance**

| Reference                                    | Sample Size, Period, and Country                                                 | Methods         | Performance Variable                                                 | Findings              |
|----------------------------------------------|----------------------------------------------------------------------------------|-----------------|----------------------------------------------------------------------|-----------------------|
| Reddy, Locke and Scrimgeour (2010)           | NZX top 50 companies, 1999-2007, New Zealand                                     | OLS, 2SLS       | Tobin's Q, Market-to-Book (M-B) and Return on Assets (ROA)           | No relationship       |
| Dalton, Daily, Ellstrand, and Johnson (1998) | 31 empirical studies with 69 samples                                             | Meta-analysis   | Market performance indicators, Accounting performance indicators     | No relationship       |
| Bhagat and Black (2002)                      | 934 large U.S. public companies, 1988 – 1991, USA                                | OLS, 3SLS       | Tobin's Q, ROA, Sales-to-Assets, Market adjusted stock price returns | No relationship       |
| Hermalin and Weisbach (1991)                 | 142 NYSE firms in 1971, 1974, 1977, 1980, and 1983, USA                          | OLS (Piecewise) | Tobin's Q                                                            | No relationship       |
| Rahman and Ali (2006)                        | 100 top companies in Bursa Malaysia Main Board, 2002-2003, Malaysia              | OLS             | Discretionary Accruals (Earnings Management)                         | No relationship       |
| Mashayekhi and Bazaz (2008)                  | 240 firm-year observations from TSE, 2005-2006, Iran                             | OLS             | EPS, ROA, ROE                                                        | Positive relationship |
| Jackling and Johl (2009)                     | 180 top listed Indian companies, 2005-2006, India                                | 3SLS            | Tobin's Q, ROA                                                       | Positive relationship |
| Agrawal and Knoeber (1996)                   | 383 firms in NYSE, 1987, USA                                                     | OLS             | Tobin's Q,                                                           | Negative relationship |
| Coles, McWilliams, and Sen (2001)            | 144 large US corporations, 1984-1994, USA                                        | OLS             | Market Value added, Economic Value added                             | Negative relationship |
| Sheikh, Wang, and Khan (2013)                | 154 firms listed in KSE, 2004-2008, Pakistan                                     | OLS             | ROA, EPS, M-B                                                        | Negative relationship |
| Mishra et al. (2001)                         | 120 non-financial companies listed on the Oslo Stock Exchange, 1993-1996, Norway | OLS             | Tobin's Q                                                            | Negative relationship |

**Table 4: Summary of the Empirical Studies on Audit Committee Independence and Firm Performance**

| Reference                                  | Sample Size                                                                                 | Methods              | Performance Variable                     | Findings              |
|--------------------------------------------|---------------------------------------------------------------------------------------------|----------------------|------------------------------------------|-----------------------|
| Dey, A. (2008)                             | 371 firm from Compustat, Spectrum, and ExecuComp; 2000-2001, USA                            | Multiple regressions | Tobin's Q, ROA                           | Positive relationship |
| DeFond, Hann, and Hu (2005)                | 509 firms from Corporate Library database, 2002-2003, USA                                   | Event Study, 2SLS    | Three-day cumulative abnormal return     | Positive relationship |
| Chan and Li (2008)                         | Fortune 200 companies, 2000, USA                                                            | FIML                 | Tobin's Q                                | Positive relationship |
| Erickson , Parka, Reising, and Shin (2005) | 236 firms, 1993-1997, Canada                                                                | GLS                  | Tobin's Q                                | Positive relationship |
| Klein (1998)                               | 486 firms from S&P 500, 1992-1993, USA                                                      | OLS                  | ROA, Jensen Productivity, Market returns | No relationship       |
| Mak and Kusnadi (2005)                     | 230 firms listed on SGX and 230 firms listed on the KLSE, 1999-2000, Singapore and Malaysia | OLS                  | Tobin's Q                                | No relationship       |
| Rahman and Ali (2006)                      | 100 top listed companies, 2002-2003, Malaysia                                               | OLS                  | Discretionary Accruals                   | No relationship       |

**Table 5: Summary of the Empirical Studies on Audit Committee Meetings and Firm Performance**

| Reference                          | Sample Size                                            | Methods                                  | Performance Variable                                 | Findings              |
|------------------------------------|--------------------------------------------------------|------------------------------------------|------------------------------------------------------|-----------------------|
| Kyereboah-Coleman (2008)           | 130 firms, 1997-2001, Africa                           | GMM                                      | Tobin's Q, ROA                                       | Positive relationship |
| Saleh, Iskandar, and Rahmat (2007) | 548 listed companies, 2001, Malaysia                   | Multivariate regression                  | Abnormal Accruals (a proxy of earnings management)   | Negative relationship |
| Hsu and Petchsakulwong (2010)      | 18 non-life insurance companies, 2000 – 2007, Thailand | Truncated bootstrapped regression models | Technical, Allocative, Cost, and Revenue Efficiency. | Negative relationship |
| Rahmat, Iskandar, and Saleh (2009) | 146 listed companies, 2001, Malaysia                   | Logistic regression                      | Financial distress                                   | No relationship       |

**Table 6: Summary of the Empirical Studies on Family Control and Firm Performance**

| Reference                  | Sample Size                                           | Methods            | Family Definition                                                                                                    | Firm Performance                      | Findings                                                                                                                                                      |
|----------------------------|-------------------------------------------------------|--------------------|----------------------------------------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Anderson and Reeb (2003)   | 403 non-financial firms in S&P 500, 1992 to 1999, USA | Fixed Effect, 2SLS | Fractional equity ownership of the founding family and (or) the presence of family members on the board of directors | ROA, Tobin's Q                        | Family firm outperforms non-family firm when family member serve as CEO. But the relationship between founding family ownership and performance is Nonlinear. |
| Villalonga and Amit (2006) | 508 listed firms in Fortune 500, 1994 to 2000         | OLS                | Fractional equity ownership of the founding family and (or) the presence of family members on the board of directors | ROA, (EBITDA, Net Income) & Tobin's Q | Positive impact on firm performance                                                                                                                           |

**Table 6 (continued).**

|                          |                                                                                  |                              |                                                                                                                      |                                                                                              |                                            |
|--------------------------|----------------------------------------------------------------------------------|------------------------------|----------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|--------------------------------------------|
| McConaughy et al. (1998) | The Business Week CEO 1000, 1986–1988                                            | OLS                          | Public corporations whose CEOs are either founders or members of the founder's family                                | Market-to-book equity                                                                        | Positive impact on firm performance        |
| Lee (2006)               | Standard and Poor's 500, 1992–2002, USA                                          | OLS                          | Fractional equity ownership of the founding family and (or) the presence of family members on the board of directors | Employment growth, revenue growth, gross income (before taxes) growth, and net profit margin | Positive impact on firm performance        |
| Maury (2006)             | 1672 non-financial Western European firms (13 countries), 1998, Europe           | Fixed Effect                 | Family controlling shareholder holding at least 10% of the voting rights                                             | Tobin's q, ROA, ROE                                                                          | Positive impact on firm performance        |
| Kowalewski et al. (2010) | 217 listed Polish companies, 1997 to 2005, Poland                                | GMM                          | A binary variable that equals 1 if the size of a family's ownership is 25% or greater, and 0 otherwise               | ROA, ROE and operating income scaled by the book value of assets (OROA)                      | Curvilinear relation with firm performance |
| Mishra et al. (2001)     | 120 non-financial companies listed on the Oslo Stock Exchange, 1993-1996, Norway | OLS                          | Founding family CEO, Founding family members on the board, Founding family ownership                                 | Tobin's Q                                                                                    | Positive impact on firm performance        |
| Chu (2011)               | 786 listed firms, 2002-2007, Taiwan                                              | OLS, Hierarchical Regression | Family ownership                                                                                                     | ROA                                                                                          | Positive impact on firm performance        |

**Table 6 (continued).**

|                             |                                                                  |                                                         |                                                                                                                                                                          |                                                                                                  |                                     |
|-----------------------------|------------------------------------------------------------------|---------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|-------------------------------------|
| Isakov and Weisskopf (2014) | 185 companies listed on Swiss Exchange, 2003 – 2010, Switzerland | Heckman Treatment Regressions, 2SLS                     | Family founder CEO or Chairman, Family descendent CEO or Chairman, family ownership, (Founder-stage & Descendant-stage), Founder or Descendent or both in the management | Tobin's Q , ROA                                                                                  | Positive impact on firm performance |
| Sraer and Thesmar (2007)    | 1,000 nonfinancial listed companies, 1994 – 2000, France         | Logistic regression with Huber-White-Sandwich Estimates | Founding family CEO, Founding family descended CEO                                                                                                                       | ROA, ROE, M-B ratio, Dividend Payout ratio                                                       | Positive impact on firm performance |
| Smith and Amoako-Adu (1999) | 124 firms, 1962-1996, Canada                                     | Multinomial Logit Analysis                              | Family successor in the senior management (dummy variable)                                                                                                               | Industry-Adjusted Return on Assets, Cumulative abnormal returns, Abnormal monthly stocks returns | Negative impact on firm performance |
| Pérez-González (2006)       | 335 firms in COMPUSTAT, 1994, USA                                | Event-Study, Difference-In-Differences Regression       | CEO succession by family members                                                                                                                                         | Abnormal return, ROA (Operating Income), M-B Ratio                                               | Negative impact on firm performance |



**Table 6 (continued).**

|                               |                                                      |                                                                |                                                           |                                                                                                                |                                             |
|-------------------------------|------------------------------------------------------|----------------------------------------------------------------|-----------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|---------------------------------------------|
| Yermack (1996)                | 452 large U.S. firms 1984 and 1991, USA              | Fixed Effects                                                  | Family CEO                                                | Tobin's Q                                                                                                      | Negative impact on firm performance         |
| Faccio, Lang and Young (2001) | 5,897 firms, 1992-1996, Western Europe and East Asia | OLS                                                            | Family ownership: at least 5% or 10%, or 20 %             | Dividend/Cash-flows ratio, Dividend/Earnings ratio, Dividend/Sales ratio, Dividend/Market-capitalization ratio | Negative impact on firm performance         |
| Gomez-Mejia et al. (2001)     | 276 daily newspapers in Spain, 1966-1993, Spain      | A likelihood ratio statistic                                   | Family CEO: If the CEO and owner have the same last name  | Percent change in the number of newspapers sold                                                                | Negative impact on firm performance         |
| Gursoy and Aydogan (2002)     | Large 500 listed companies, 1992-1998, Turkey        | GMM                                                            | Family ownership                                          | ROA, ROE, P-E ratio, Stock Returns                                                                             | Negative impact on market based performance |
| Cronqvist and Nilsson (2003)  | 309 listed firms, 1991-1997, Sweden                  | Fixed Effects (FE)                                             | Family ownership                                          | Tobin's Q, ROA                                                                                                 | Negative impact on firm performance         |
| Bennedsen, et al. (2007)      | 5,334 successions, 1994-2002, Denmark                | Difference-in-Difference, OLS, Instrumental Variables Approach | Family successions of CEO (measured by blood or marriage) | Operating Return on Assets                                                                                     | Negative impact on firm performance         |

**Table 6 (continued).**

|                       |                                                                          |                                     |                                                                                                                                                                                                                                                                                                     |                                                                                        |                                                                                       |
|-----------------------|--------------------------------------------------------------------------|-------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Piesse et al. (2007)  | 228 publicly listed firms, 1999, Taiwan                                  | OLS, 2SLS                           | Family ownership, Number of family members on the board, Number of family supervisors                                                                                                                                                                                                               | Return on assets, Return on capital employed, Market to book value, Sales as % capital | Negative impact on firm performance                                                   |
| Pindado et al. (2008) | 779 companies from nine European Countries, 2000-2006                    | GMM                                 | Family concentrated ownership (at least 10 %)                                                                                                                                                                                                                                                       | Market value of equity to Replacement value of total assets                            | No relationship with firm performance                                                 |
| Górriz & Fumás (1996) | 81 listed nonfinancial firms, 1990 - 1991, Spain                         | OLS                                 | When the family has the largest shareholdings                                                                                                                                                                                                                                                       | Productive efficiency and ROE                                                          | No relationship with firm performance                                                 |
| Miller et al. (2007)  | 896 firms of Fortune 1000 & 100 smaller public companies, 1996-2000, USA | OLS, Two-step Treatment Regressions | Single member of a family as insider (manager or director) or large owner (at least 5% ownership); Multiple members of a family as insiders (managers or directors) or large owners (at least 5% ownership); 1 <sup>st</sup> generation family led firm, 2 <sup>nd</sup> generation family led firm | Tobin's Q                                                                              | No relationship with firm performance. But single family member led firms outperform. |

**Table 6 (continued).**

|                        |                                                           |     |                                                                                                                                         |                |                                                                                                                                      |
|------------------------|-----------------------------------------------------------|-----|-----------------------------------------------------------------------------------------------------------------------------------------|----------------|--------------------------------------------------------------------------------------------------------------------------------------|
| Muttakin et al. (2014) | 141 listed non-financial companies, 2005-2009, Bangladesh | OLS | family ownership (at least 20 %), At least one member from controlling family holds managerial position (board member, CEO or chairman) | Tobin's Q, ROA | Positive effect of Family ownership on firm performance.<br>Negative effect of family descendent CEO or Chairman on firm performance |
|------------------------|-----------------------------------------------------------|-----|-----------------------------------------------------------------------------------------------------------------------------------------|----------------|--------------------------------------------------------------------------------------------------------------------------------------|

**Table 7: Summary of the Empirical Studies on Interaction between Family Control and Other Governance Variables and its Effects on Firm Performance**

| Reference                  | Sample Size                                           | Methods                     | Family Control (FC) definition                                                                                       | Moderating/ Interaction                                 | Performance | Findings                                                                                                        |
|----------------------------|-------------------------------------------------------|-----------------------------|----------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|-------------|-----------------------------------------------------------------------------------------------------------------|
| Anderson & Reeb (2004)     | 403 non-financial firms in S&P 500, 1992 to 1999, USA | Fixed-effects, 2SLS         | Fractional equity ownership of the founding family and (or) the presence of family members on the board of directors | Board Independence                                      | Tobin's Q   | Family control positively moderate the relationship between board independence and firm performance             |
| Villalonga and Amit (2006) | 508 firms listed in Fortune 500, 1994 to 2000         | Means Difference tests, OLS | Fractional equity ownership of the founding family and (or) the presence of family members on the board of directors | Family Ownership, Family Control, and Family Management | Tobin's Q   | Family ownership is positively related to firm value only with founder family CEO or Chairman with a hired CEO. |

**Table 7 (continued).**

|                                                   |                                                                                  |                    |                                                                                                             |                                                                                                   |           |                                                                                                                                                                                                                                                                                       |
|---------------------------------------------------|----------------------------------------------------------------------------------|--------------------|-------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Miller, Minichilli, and Corbetta (2013)           | 2,522 firms, 2000–2008, Italy                                                    | Fixed effects, GMM | Family CEO (familial relation of CEO is determined by surname affinity with that of the controlling family) | Firm Size, Concentrated/ Dispersed ownership                                                      | ROA       | Family CEO is beneficial to smaller firms with concentrated ownership, but not to larger firms with dispersed ownership.                                                                                                                                                              |
| Mishra et al. (2001)                              | 120 non-financial companies listed on the Oslo Stock Exchange, 1993-1996, Norway | OLS                | Proportion of founding family ownership, Founding family directors, Founding family CEO,                    | Family Ownership, Family CEO Board Size, Firm Age, Multiple Classes of Shares, Board Independence | Tobin's Q | Family ownership is beneficial when the firm is old and has a large board and multiple classes of shares; Family CEO is beneficial to firm with smaller board and a single class of share; Effect of family directors is not affected by firm age, board size and board independence. |
| García-Ramos, Díaz-Díaz, and García-Olalla (2017) | 221 publicly traded firms, 2001–2007, Spain, Portugal and Italy                  | GMM                | Same family member acts as CEO and Chairman (family CEO duality)                                            | Family CEO Duality, Board Independence                                                            | Tobin's Q | Family CEO duality positively moderates the board independence to determine family-firm performance.                                                                                                                                                                                  |

**Table 7 (continued).**

|                                       |                                                               |           |                                                                                       |                                                          |                                  |                                                                                                                                                                                                           |
|---------------------------------------|---------------------------------------------------------------|-----------|---------------------------------------------------------------------------------------|----------------------------------------------------------|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| García-Ramos and García-Olalla (2011) | 77 listed family firms, 2001–2007, Spain, Portugal and Italy  | GMM       | Founding family CEO or chairman                                                       | Family Firm, Board Size, Board Independence, CEO Duality | Tobin's Q                        | Negative effect of board independence on family firm performance turned into positive when it interacts with family control                                                                               |
| Yermack (1996)                        | 452 large. industrial firms, 1984–1991, USA                   | OLS, FE   | Founding family CEO                                                                   | Founding Family CEO, Board Size                          | Tobin's Q                        | Founding family in a small board works for higher market valuation                                                                                                                                        |
| Kuo and Hung (2012)                   | 1115 firms listed on Taiwan Stock Exchange, 2001–2008, Taiwan | GMM       | Family ownership (exceeding 20 percent)                                               | Excess Family Control Rights, Board Independence         | Investment-Cash Flow Sensitivity | Excess control rights in family firms increases Investment-Cash Flow Sensitivity (principal-principal agency conflicts), Family control with board independence reduces Investment-Cash Flow Sensitivity. |
| Jaggi et al. (2009)                   | 269 publicly traded firms, 1998–2000, Hong Kong               | OLS, 2SLS | Proportion of Family ownership, Number of directors from the same family on the board | Family Ownership, Family Directors, Board Independence   | Earnings Management              | Both family ownership and family member on board increase earnings management, but it is mitigated through board independence.                                                                            |

**Table 7 (continued).**

|                               |                                                 |                              |                                |                                                             |                                                  |                                                                                                                                                                      |
|-------------------------------|-------------------------------------------------|------------------------------|--------------------------------|-------------------------------------------------------------|--------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Chen and Jaggi (2000)         | 87 listed firms, 1993-1994, Hong Kong           | OLS                          | Proportion of Family ownership | Board independence                                          | Comprehensiveness of financial disclosures score | The positive impact of board independence on financial-disclosure quality weakens in family controlled firms.                                                        |
| Jiang and Peng (2011)         | 744 publicly firms, 1996, Eight Asian countries | OLS                          | Proportion of Family ownership | Family CEO                                                  | Cumulative stock return                          | Family CEO moderates the relationship between family ownership and firm performance.                                                                                 |
| Chu (2011)                    | 786 listed firms, 2002-2007, Taiwan             | OLS, Hierarchical Regression | Proportion of Family ownership | Family CEO, Family (Non-CEO) Top Managers, Family Directors | ROA                                              | The positive relationship between family ownership and firm performance strengthened with family CEO or family (non-CEO) top managers or family members on the board |
| Liu, Valenti, and Chen (2016) | 516 publicly traded firms, 2006–2010, Taiwan    | Random Effects               | Proportion of Family ownership | Family Ownership, Board Independence                        | Disclosure quality                               | Family ownership strengthens the positive association between board independence and disclosure quality                                                              |

### **3.5 Scope of Shedding New Lights**

At the end of literature review it is appeared that earlier studies on corporate governance have left some scopes of doing further research in a number of ways. Firstly, most of the studies used OLS regression to assess the effect of governance mechanisms on firm performance. But, OLS produces inconsistent results when there remains a possible endogeneity problem in these variables (Hermalin & Weisbach, 2003; Adams, Hermalin and Weisbach, 2010; Wintoki, Linck, & Netter, 2012). Some studies used fixed effects model to partially address endogeneity issue caused by time invariant fixed effects, but it still cannot deal with reverse causality problem and dynamic relationship between the variables and thereby produces biased results. To deal with endogeneity problem, some studies employed 2SLS or Instrumental variable approach but it also can not deal with the dynamic relationship between variables. In this effect, one of the prominent tools in mitigating the endogeneity problem is two-step GMM model (Wintoki et al. 2012), which is not vastly used in the earlier studies. Therefore, this study intends to control for any endogenous problem of the data set and apply the GMM regression to determine the robust evidence of the effects of governance mechanisms on performance.

Secondly, most of the definitional aspects of family control (c.f. Table 6 and Table 7) broadly demonstrate two dimensions. One is family ownership and another is family management. According to Miller et al. (2007), it is difficult to find a common agreement on the precise definition of a family firm. However, in covering the area of these two definitions, literatures are also divided into three lines of stream: the first is founding family ties; the second is non-founding family (descendent) ties; and the third is controlling family ties. A definition of family control used in this study is family-CEO duality; it is a circumstance when board chairman and CEO are different persons but from the same family. This measure introduces a distinct definition of family control which has not been used in any of the earlier studies. Thus, these definitions bear a significant importance to provide further insights into the effect of family control on firm performance. In another perspective, it may happen in the family firm that multiple families rather than a single family hold controlling shareholdings, whereas one of them (families) holds a larger or the largest controlling shareholdings. This study identifies the dominating family among the multiple

families on the corporate board, when it is necessary, according to their corresponding shareholdings. In the context of Bangladesh, the evidence of controlling family ownership is very limited and highly inconclusive.

Thirdly, as empirical studies supports a view that the degree of family control could affect the aspect of governance structure of a firm (García-Ramos & García-Olalla, 2011; Jaggi, et al., 2009; Kuo & Hung, 2012; Mishra et al., 2001; Yermack, 1996), it directs the possible impact of a governance mechanism on firm performance. However, there remains a great deal of brevity in the earlier studies that how family control moderates the relationship between board independence and firm performance.

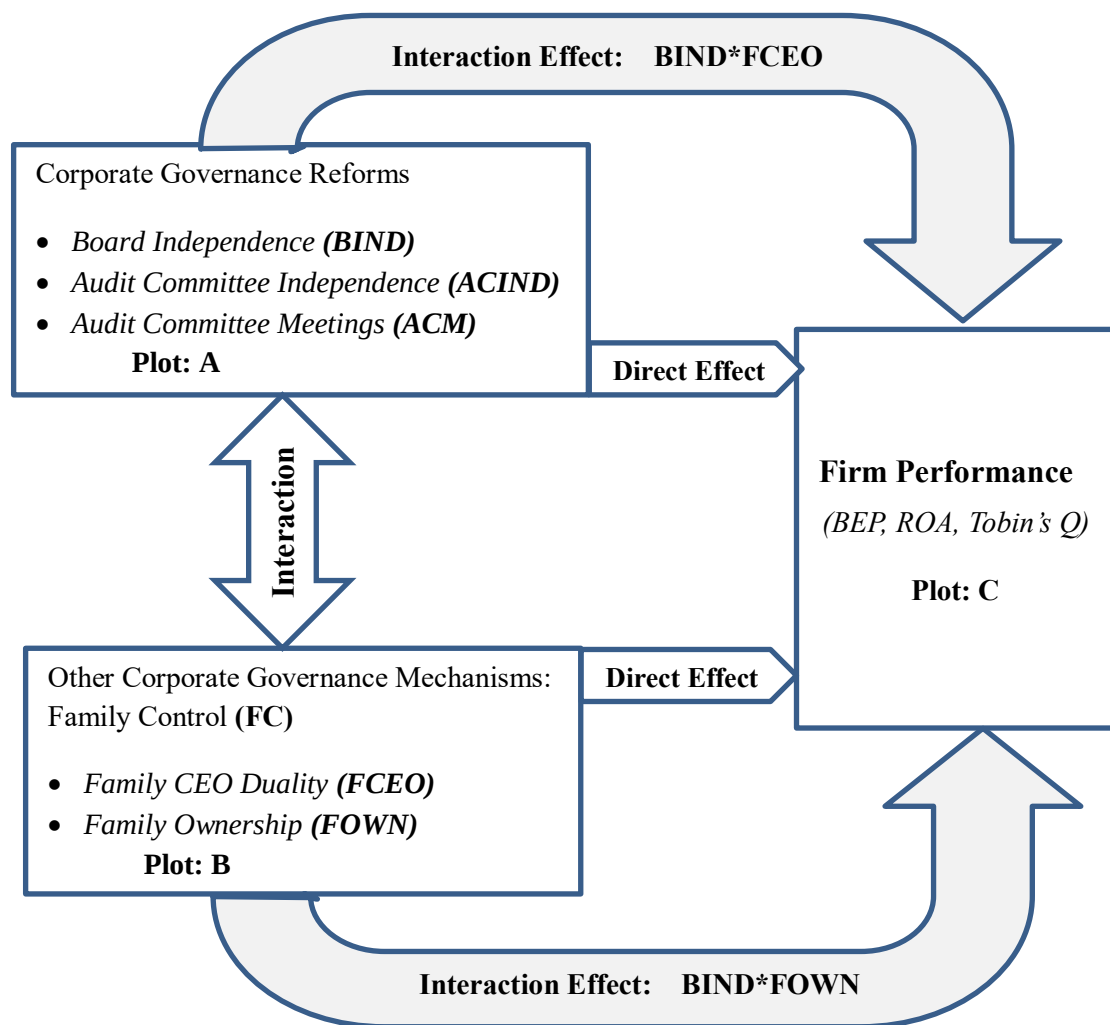
Fourthly, there are very limited researches on the field of examining the effect of audit committee meeting and audit committee independence on performance. Therefore, using the context of an emerging country like Bangladesh, where family control is highly prevalent like other Asian countries, could bring out valuable and applicable insights to the policy makers, regulators and investors.

Finally, this study is based on a 21-year long panel data ranging from 2000-2020. This study would be distinctly and highly different from any other empirical studies on the field of corporate governance both in national and international context as none of the reviewed empirical studies draws evidence from such a long panel data.

### **3.6 Conceptual Framework**

Figure 1 represents the conceptual framework of the influence of corporate governance variables on firm performance. On the basis of above discussions, it delineates the two types of effect such as direct effect and interaction effect. Each of the governance variables shown in the Plot B and C is expected to directly influence the firm performance (Plot D). On the other hand, the Plot A is formed combining the variables of the Plot A and B in order to show the moderating role of family control (FCEO and FOWN) on the relationship between board independence, audit committee independence and firm performance.





**Figure 1: Conceptual Framework of the relationship between the governance variables and firm performance**

### 3.7 Chapter Summary

This chapter provides a clear view that how corporate governance mechanisms work or behave under the arguments of different theories and figures out the effects of these mechanisms on corporate performance through a systematic review of the earlier empirical studies. That is, as per concerned area of this study, this chapter particularly underpins the relational aspects of major reforms in board independence, audit committee independence, and audit committee meetings in corporate governance mechanisms with performance. As the majority firms listed in DSE are more or less family centric and their regulatory body formulates the policy with that given

situation, the review of literature is administered to identify a noncontrolled (not regulated by the law) characteristic of the board room called family control and extract the potential benefits and costs of the family control towards firms. Conceptual framework is developed to show the path of direct and contingent relationship between the governance and performance variables. As major reforms of corporate governance mechanisms are followed by board and audit committee independence, this chapter pays a high attention to the interaction effects between family control and independent directors on firm performance. Overall, this chapter summarizes the earlier studies on corporate governance and identifies the limitations of those studies in order to fill the research gap as well as to provide the guidelines for developing the research hypothesis.

## **Chapter 4**

### **Hypothesis Development**

#### **4.1 Introduction**

In Bangladesh, the major reforms of corporate governance mechanisms took place in the area of board independence, audit committee independence and audit committee meetings. Surprisingly, all of these reforms are designed with such a given corporate environment/setting where family control, as a common feature, is found in the most publicly traded firms. Family control in terms of family management and family ownership is considered as one of the powerful corporate governance mechanisms in empirical literatures (Randøy & Goel, 2003; Farooque et al. 2007b; Villalonga & Amit, 2006). Thus, this study aims at exploring the association between family control (family CEO duality, family ownership), board independence, audit committee independence, and audit committee meeting on firm performance. To attain these objectives, this chapter develops severable testable research hypothesis taking account of existing evidences, using reasoning, and following research questions. In an initial attempt, this study proposes hypotheses with respect to the possible direct effects of family control, board and audit committee independence, and audit committee meeting on firm performance. Apart from, other hypotheses are developed on the basis of moderating effect of a selected explanatory variable (family control) on the relationship between explanatory variables (key independent variables: board independence, audit committee independence) and firm performance. This chapter also describes the significance of control variables to be included in the research model. In the absence of control variables, a regression in a regression model may find spurious relation between the variables and consequently supports the research hypothesis incorrectly.

#### **4.2 Board Independence**

Anderson and Reeb (2004) argue that both agency and resource dependence theories support a positive effect of independent directors on firm value in two different ways. In agency theory, independent directors monitor and control the management, decreasing the agency costs of type I. Similarly, under the resource dependence

theory, independent directors provide valuable counsel to the CEO, improving the board's decision making. Indeed, outside non-executive directors add new expertise and experience to a board and, hence, enhance board effectiveness (Fields & Keys, 2003), which becomes supportive to improve firm performance. Several scholars (Daily & Dalton, 1992; Ezzamel & Watson, 1993; Hossain, Prevost, & Rao, 2001; Yermack, 2004; Wang, Ziyue, & Xiaoyan, 2006; He et al., 2014) found a positive relationship between board independence and firm performance.

Nevertheless, some scholars question about the obvious role of independent directors. That is, their views with regard to how independent an independent director is and how independently an independent director influences company performance are not clear. According to the stewardship theory, insiders' works are inherently pro-organizational because they are highly motivated by the upper level heretical needs that minimizes agency problem. Therefore, excessive controlling from independent directors deteriorates their commitment towards organization rather promotes them. Moreover, an independent director is an outsider and could not have equal level of access to the company information relative to insiders. For instance, Adams & Ferreira (2007) argue that outside non-executive directors confront with difficulties in obtaining the inside and firm-specific information at minimal costs. Thus, the cost of monitoring by independent directors increases that hinders the growth of firms. According to Donaldson and Davis (1991), occupying majority seats of a corporate board by insiders enhances board's ability to effectively and efficiently utilize firm's resources and potentials. Several studies document that the board independence significantly and negatively impacts the performance of firms (Agrawal & Knoeber, 1996; Bhagat and Black, 2002) even though Hermalin and Weisbach (1991) document no significant association.

Johari et al. (2008) concluded that the composition of the independent directors on the board was not associated with shareholders return even though an 1/3 independent directors on the board. Similarly, in the context of china, Haijian & Heng (2006) claimed that 1/3 representation of independent directors in corporate board have limited influence when balancing principal shareholders and managerial staff. Besides, Hooy and Tee (2009) indicated that the independent directors have failed in their internal monitoring role in Malaysian Government Linked Companies (GLCs).

With regard to the mixed results of the relationship between independent directors and firm's performance, Wallison (2006) argued that having independent directors on the board was not better for performance but for governance. Nevertheless, independent directors play a pivotal role in enhancing both corporate governance and company performance (Wang, Jin, & Yang, 2016)

The proportion of independent directors on the board is used as a proxy of board independence, which was also used in a study by Müller (2014). As mentioned earlier, the CGG-2012 required the all listed Bangladeshi firms to maintain their boards with a minimum fraction of 1/5<sup>th</sup> independent directors as a replacement for 1/10<sup>th</sup> independent directors to foster the check and balance in the board. Based on the reforms in CGG the following hypothesis can be tested.

***Hypothesis 1: Board independence (measured by the proportion of independent directors on the board) leads to a better performance of firms.***

#### **4.3 Audit Committee Independence (ACIND)**

In jurisdiction, similar to the view of appointing independent directors in the board, audit committee should be composed of majority independent/non-executive directors who shall not be the officers or employees of the company. It can enhance the board's capability to meet legal responsibilities and ensure the credibility and objectivity of the financial reports, otherwise executive member (management) on the audit committee may tend to manipulate the accounts for their self-interest (Jeffrey et al., 2011).

It is claimed in the literature of resource dependence theory that a higher proportion of independent non-executive directors enhance firm performance because of their diverse background, attributes, characteristics, and expertise. Nonexecutive directors are thought to be in a better position than executive directors to fulfill their monitoring function because they are independent and concerned with maintaining their reputation in the external labor market (Fama & Jensen, 1983). Jennings (2002) argued that ultimate objective of the independent audit committee is to provide shareholders with the assurance that someone from outside the company is watching

over the activities, practices, and behaviors of managers and the company's employees. Beasley et al. (2000) suggest that a lesser degree of audit committee independence generally causes financial statement frauds. Hence, it is expected that greater independence of the audit committee leads to a higher firm performance. Bonn (2004) found that a higher proportion of independent members on the audit committee enhance firm performance. The same result was found by Aggarwal et al. (2007). On the other hand, Franks et al. (2001), Dejong et al. (2005), and Zábojníková (2016) found a negative association between the percentage of independent non-executive directors and the firm performance. Further to this, Hasan et al. (2022) report that audit committee independence does not improve financial reporting quality. Along the line, Ben-Barka and Legendre (2017) report that audit committee independence is negatively related to the firm performance.

An audit committee composed of more numbers of non-executive directors is supposed to be more independent than one that has more executive directors (Rahmat et al., 2009). In 2012, the revised corporate governance guidelines issued by BSEC adopted another rule mentioning that chairmanship of the audit committee shall be filled up with an independent director. Apart from, the CGG 2018 requires all listed companies that their audit committees shall be composed of only non-executive directors. Consistent with the Leung et al. (2014) and Rahmat et al. (2009), this study uses a dummy variable which takes 1 if the chairperson is an independent director, otherwise 0. Based on the scenario of reforms in regard to audit committee independence of Bangladeshi listed companies, the following hypothesis is identified.

***Hypothesis 2:*** *Audit committee independence (independent chairman) is positively related to the firm performance.*

#### **4.4 Audit Committee (AC) Meetings**

According to the Corporate Governance Code (CGC) in Bangladesh in 2018, audit committees shall conduct at least four meetings in a financial year as it was not appeared in CGC 2006 and CGC 2012 as well. Saleh et al. (2007) argued that audit committee effectiveness not only depends on the presence of more independent members but also depends on how frequently AC meetings are held. In the same vain,

Anderson et al. (2004) found that frequent audit committee meetings are associated with lower cost of debt, because it facilitates the active monitoring in financial accounting process. Thus, earlier studies provide meaningful results concerning the importance of holding many meetings. For example, using a sample of 7,668 Australian firm-year observations from 2004 to 2012, Sultana (2015) confirmed that recurrent audit committee meetings restricts the management's opportunistic behavior and overstatement of earnings. Along the line, Saleh et al. (2007), and Xie et al. (2003) both found that more meetings increases the firm's ability to monitor the management behavior and reduces managerial incentives to manage earnings in Malaysia and USA, respectively. Others studies also have found positive relationships between the frequency of AC meetings and quality of financial reporting (Hoitash & Hoitash, 2009) and it also enhances the accuracy of management earnings forecasts as well (Sil Kang et al., 2011). In contrast, Hasan et al. (2022) find that frequency of audit committee meeting is negatively associated with the financial reporting quality. Along the line, Ben-Barka and Legendre (2017) and Bazhair (2022) find that the frequency of audit committee meeting is negatively related to the firm performance. This research suggests that regular meetings may not always result in better performance of firms. Hence, the following hypothesis is identified:

***Hypothesis 3: Audit committee meeting is significantly related to firm performance***

#### **4.5 Family Control and Firm Performance**

Family control/dominance may be an important factor in determining the firm performance. It is common in the family firms that family members hold controlling shareholdings of these firms and opportunistically extracts a potential benefit through alignment effects. Alternatively, it creates potential loss to the minor shareholders through entrenchment effects (Wang, 2006). According to Goel et al. (2012), family concentrated ownership affects the effectiveness of CG mechanism, even though there is no separation of ownership and managerial control.

In the USA, 44.97% of Standard & Poor's (S&P) 500 companies are family CEOs led management (Anderson & Reeb, 2003). In Continental Europe about 44 percent of publicly traded firms experienced family business (Faccio & Lang, 2002) whereas

two-third of the firms in Asian countries is owned by families (Claessens et al, 2000). In East Asia, 83% of CEO positions in the large family controlled firms are held by family members (Peng & Jiang, 2010).

This controlling family is often involved in the management and holds the position of CEO that forms an alignment of interests and a minimal information asymmetry between owners and managers which, in turn, yields low agency costs (Jensen & Meckling, 1976; Chrisman et al., 2004). Along the line, Lemmon and Lins (2003) state that an owner-manager with a significant stake in a company may play a leading role to align owners' interest with managers' interest because the company is mainly controlled by family members. The possible agency problem due to the separation of ownership and management (Jensen & Meckling, 1976) can be minimized in family dominated firms as it is common that individual large family shareholders belong to managerial positions (Holderness & Sheehan, 1988). In addition, greater family involvement gives family directors extensive knowledge of their firm's activities and better access to information (Peng & Jiang, 2010) that provides them with strong incentives to monitor management activities (Tsao & Lien, 2013). Also, families tend to have lengthy and sustainable presence, longer investment horizon (Mishra et al., 2001) and incentives to pass their ownership as an asset on to their descendants (Casson, 1999) and hence they are less likely to expropriate the wealth from other shareholders through managing earnings (Wang, 2006). In the same vain, James (1999) argues that family owners are more interested in firm survival than other categories of large shareholders, which encourage them to maximize firm's value. Thus, family dominance is expected to be positively related to firm performance. For example, McConaughy et al. (1998) and Maury (2006) found a positive effect of family ownership and control on firm performance. The results of other empirical studies are also consistent with the argument that family involvement leads to enhance firm performance. In USA, a better firm performance was found in family firms compared to nonfamily firms, as measured by accounting performance and market performance (Anderson & Reeb, 2003). In Japan, family firms owned or managed by founder perform better than nonfamily firms (Saito, 2008). In a study of 13 European countries, Moury (2006) find evidence that family control is associated with higher valuation. Along the line, Lee (2006) and Cai et al. (2012) confirmed that family involvement in management (Family CEO) improves firm performance. In this



regard, McConaughy et al. (1998) revealed that CEOs with family ties manage their companies more effectively than other CEOs do. Similarly, Burkart et al. (2003), Cai et al. (2012), and Tsao and Lien (2013) also report that family ownership leads to improve firm performance. Jaggi et al. (2009) found that monitoring effectiveness of corporate boards is moderated either through ownership concentration or the presence of family members on corporate boards.

On the other hand, family owners may use their position of control to expropriate minor shareholders, managers and employees from equitable treatment and to benefit themselves at the expense of the company; it yields so called principal-principal agency problem (Morck et al., 2005). Family shareholders tend to forgo to attain shareholders' wealth maximization because of financial preferences (Anderson & Reeb, 2003) along with social and emotional preferences such as the need for belonging, affection, intimacy, and sense of identity (Kepner, 1983). In addition, founding families treat the company as a family-employment institutions and have a tendency to occupy top executive positions that hinders the firm to recognize the most talented, capable, and expert professionals (Kets-de-Vries, 1993; Westhead et al., 2001), which may create a form of resentment on the part of non-family executives (Schulze et al., 2002), competitive disadvantages (Anderson & Reeb, 2003) and adverse effects on employee effort and productivity (Burkart et al., 1997). Therefore, this biased game of family members in selecting managers and family's inherent tendency to grab and hold long term control of the firms may lead to a greater managerial entrenchment (Gomez-Mejia et al., 2001). In Denmark, Bennis et al. (2007) find that family succession through family-CEO has a large and negative causal relationship with firms' operating performance. They also report that this negative impact gets severe in the high growth firms, skilled-labor based firms, and larger size firms. In USA, Pérez-González (2006) finds that operating performance of a firm significantly deteriorates when its CEO is found to be connected with founders or departing CEO or large shareholders of that firm by either marriage or blood. Along the line, Anderson and Reeb (2003) find that benefits of family control declines when family ownership goes beyond a degree of 30 percent. In India, Pant and Pattanayak (2007) find that firms suffer from entrenchment effects when family ownership ranges from 20% to 49%. The adverse effect of family involvement on firm performance is also empirically evidenced by other studies, such as Kepner

(1983), Shleifer and Vishny (1997), Morck et al. (2000), Claessens et al. (2002), and Giovannini (2010). In some studies, family involvement is found insignificant in affecting firm performance (Jayaraman et al. 2000; Sacristán-Navarro et al., 2011, Bhatt & Bhattacharya, 2017). According to the CGG2012 issued by the BSEC, family director refers to the individual who has relation with others as spouse, son, daughter, father, mother, brother, sister, son-in-law, and daughter-in-law. Based on the above discussion, the following hypotheses are developed accordingly.

**Hypothesis 4:** *Family-CEO duality is negatively related to the firm performance.*

**Hypothesis 5:** *Family ownership is negatively related to the firm performance.*

#### **4.6 Interaction Effects of Family Control**

This section demonstrates a discussion that how family dominance interacts with board independence to make their combined effects on firm performance. In many Asian family-controlled businesses including Bangladeshi companies, separation of ownership and control is not remarkably found. When strong family ownership and managerial control often fade an assumption of agency theory that ownership and control are separated (Corbetta & Salvato, 2004), the monitoring role of independent directors is to inevitably be inducted into this type of firms (OECD, 2014). Nevertheless, the independent directors in family firms may not exercise their independent role in judgment because they are typically viewed as a source of expertise rather than monitoring (Gomez-Mejia et al. 2011). Apart from, the appointment of independent directors typically requires voting support from board where family members are in controlling chair and, therefore, appointed independent directors feel grateful and obliged to the controlling family (Schepker and Oh, 2013). As a result, they may not provide the board with impartial advice and, thereafter, they start compromising with the board ethics (Garcia-Ramos & Garcia-Olalla, 2011). According to Anderson and Reeb (2003), when family members hold controlling ownership of the company they enjoy an incentive to extend their family legacy in the board through appointing family directors. Anderson and Reeb (2004) argued that the presence of more independent directors in the board of family firm enhances the check and balance of family influence on board. As a result, the force of maintaining

family legacy in the board room may increase the chance of adverse selection of directors where some family directors fall in free riding problems. In this effect, to make the board truly effective family members are reinforced to choose outside board members based on their unique skill or decision-making abilities (Demsetz & Lehn, 1985). Empirical study argues that the relationship between independent directors and firm performance can be further investigated by the moderating role of family dominance (percentage of equity held by board family members or number of family members on a board or family CEO).

Family firms might be interested or reluctant to maintain a higher proportion of independent directors in the board. The following arguments are supposed to have good importance to disclose the reasons behind the unwillingness of family firms to offer a corporate board with majority independent directors. *Firstly*, according to the agency theory, corporate board independence and board committee (i.e. audit committee) independence may not be relevant for family firms because the majority shareholders partake in managing and controlling these firms. Hence, it is questionable whether family firms are motivated to appoint independent directors to their boards and committees (Leung et al., 2014). *Secondly*, family firms merely appoint independent directors in the board with a view to seeing their agreement to the firms' existing business philosophy and strategies rather than getting their independent observations. Consequently, these directors are highly supposed to be loyal to the controlling family that appoints them to the board and get independent in name only (Lane et al., 2006). *Thirdly*, it is expected that the controlling family members are entitled to bear superior knowledge of the firm's business activities compared with outside directors. Therefore, the firms lack incentive to seek advice from those outsiders (Leung et al., 2014). *Fourthly*, family firms are unlikely to consider the "checks-and-balances" role of independent corporate boards and committees to be important for their firms, and hence there is no compelling need for them to appoint independent directors (Leung et al., 2014). *Finally*, the controlling family members may be unwilling to share information and power with outside board members, thereby reducing the cooperative interaction between family members and independent directors (Westphal, 1999). Moreover, as family members are worry about the loss of control, autonomy, privacy and confidentiality, they become reluctant to welcome independent directors to the board (Gersick et al., 1997). Lane et

al. (2006) and Nash (1995) found that in family controlled business board is constituted with majority family members who are typically not incentivized to bring independent directors into the board owing to avoid accountability and sharing authority over the company and/or uncovering family secrets. Along the line, Shleifer and Vishny (1997) claim that family shareholders are reluctant to increase board independence as it becomes threatening to the family control and obstacle to the path of expropriating minority shareholders or entrenching managerial positions.

In contrast, the following arguments are supposed to have good importance to explain the reasons behind the willingness of family members to welcome the independent directors to corporate board with majority. *Firstly*, it is an institutional pressure for the listed family firms to appoint required number of competent independent directors to their boards (Miller et al., 2013). As family directors are highly concerned about their socio-emotional wealth, like family reputation, compared to non-family directors and managers (Deephouse & Jaskiewicz, 2013), they prefer to appoint qualified independent directors beyond the mandatory requirements. That is, to enhance family image and legitimacy in the same industry by outside stakeholders family members meet the institutional requirements. *Secondly*, a family led board arguably lacks general business knowledge when nepotism and reluctance of attracting the talent non-family managers arose in the board culture (Anderson & Reeb, 2004). Alternatively, a family led board necessarily seeks functional knowledge and expertise from external resources of independent directors to bridge the knowledge and skill gap between family members and non-family members (Jones et al., 2008). *Finally*, the presence of more members from a single family mostly falls into a generational gap which is induced by the differences in education, culture, and societal effects. Moreover, they pursue different needs, agendas, capabilities, and commitments that break their aligned vision (Schulze et al., 2003). In this effect, more formal governance like board independence is highly expected to manage the interests among the different family branches and protect business interests (García-Ramos & García-Olalla, 2011; Voordeckers et al. 2007).

The empirical evidence on the moderating role of family dominance on the relationship between board independence and firm performance is still very scant and even inclusive. For instant, Mishra et al. (2001) find that the positive impact of family

control on performance was greater for companies with smaller boards, but this relationship is not moderated by the board independence. Garcí'a-Ramos and Garcí'a-Olalla (2011) find that board independence is significantly and negatively associated with market-based performance, but the direction of this relation turns to be positive when a firm is managed by founding family member. García-Ramos et al. (2017) also find that the influence of board independence is significantly different between family centric firm and non-family centric firm. Apart from, they conclude that the relationship between board independence and firm performance is further moderated by the generational stages as well as founder or non-founder led leadership structure of the family businesses. Along the line, Jaggi et al. (2009) find a negative effect of board independence on earnings management which is triggered by the presence of high family ownership, suggesting a view that monitoring role of independent directors is strengthened under the shed of family control. Similarly, Liu et al. (2016) find a positive impact of board independence on the disclosure quality under high level of family ownership. In contrast, Chen and Jaggi (2000) find that board independence enhances the quality of financial disclosure, but this association becomes weak in the family controlled firms compared to the non-family controlled firms. In contrast Anderson and Reeb (2004) find that both family ownership and board independence are negatively associated with firm performance, but board independence performs better in family centric firms and performs worse in non-family centric firms. Based on the above discussion, the study proposes the following hypothesis:

**Hypothesis 6:** *Family-CEO duality interacts with board independence and, in turn, influences the relationship between board independence and firm performance.*

**Hypothesis 7:** *Family ownership interacts with board independence and, in turn, influences the relationship between board independence and firm performance.*

#### **4.7 Control Variables**

This study includes several control variables to check the influence of firm specific characteristics on performance. These are size of board (BS), CEO-duality (CEOD),

age of the firm (AGE), size of the firm (SIZE), growth of the total assets (GROW), financial leverage (LEVR), directors' ownership (DOW), institutional ownership (INST), market to book ratio (MB), COVID-19 dummy, and year and industry dummies.

#### **4.7.1 Board Size**

A board is primarily responsible to lead the business successfully. But, overall performance of a board may be determined by its size and thereby influences firm performance (Coles et al, 2008). Board size is measured as the natural logarithm of total number of directors in the board.

#### **4.7.2 CEO duality**

CEO wields vast responsibility for developing and executing the strategies within the firm. But, hence influences firm performance. Thus, this CEO can grab excessive power through occupying the chair of board, which could be threatening to impartial and objective judgment on management activities that leads to agency problem, which influences firm performance. CEO-duality is a circumstance when the CEO is also the chairman of the board of directors.

#### **4.7.3 Director Ownership**

Insider ownership could act as a catalyst for alignment of interests within managers and owners and hence resolves moral hazard problem and improves firm performance (Mehran, 1995). In contrast, increasing insider ownership could provide the managers with entrenching position to shelter them from market control (Fama & Jensen, 1983) and discretionary power also to pursue self-benefits at the cost of minority shareholders' interests, resultantly firm performance deteriorates. This study considers insider ownership as the percentage of shares held by promoters and directors (DOW).

#### **4.7.4 Institutional Ownership**

The incentive effects of other large-shareholders' ownership on firm performance is controlled with institutional ownership. As large shareholders, institutional shareholders are able to confine CEO discretion even in a situation of CEO duality (David, Kochhar, & Levitas, 1998), keep an active monitoring for better utilization of investee funds, reduce information asymmetries and agency problems because of their superior managerial skills and capable resources; consequently it predicts better firm performance. This study considers institutional ownership as the proportion of shares held by institutions.

#### **4.7.5 Leverage**

Financial leverage could be used as a mechanism for disciplining the management (Jensen & Meckling, 1976) and also as substitute of board independence in family firms (Setia-Atmaja, Tanewski, & Skully, 2009), which may influence firm performance. In contrast, Fama and French (1998) argue that the financial leverage is a source of agency problem that negatively impacts firm performance. Faleye (2007) argue that CEO non-duality is not preferably adopted by the firms who intend to exert the CEO's discretionary power in managing debt contracts.

#### **4.7.6 Size of Firm (SIZE) and Growth of Firm (GROW)**

Size of firm and growth of firm can be important determinants of firm performance. Indeed, larger firms may efficiently manage its investments, financing and operating activities through reaching at economies of scale (Hansen & Wernerfelt, 1989) in manufacturing, marketing, supervision and fund mobilization (Yadav, Pahi, & Gangakhedkar, 2022) and employ more skilled managers, which may positively influence their performance. On the contrary, larger firms may suffer from poor growth opportunities (Morck, Shleifer, & Vishny, 1988) and lack a good co-ordination, which may deteriorate their performance. Moreover, governance structures of firms with high growth opportunities are likely to be different from that of firms with low growth opportunities and hence firm performance varies widely. Boyd (1995) claimed that firms with greater growth opportunities prefer adopting CEO non-duality to reduce the CEO's discretionary power, which provides a strong incentive to curb the monitoring costs. While adopting CEO non-duality, family firms

with growth stage mostly prefer succeeding the CEO to family descendant (Chiang, He, & Yu, 2022). This study considers the natural logarithm of total assets as a measure of firm size (SIZE) following Eisenberg et al. (1998). Firm growth is measured as the relative change in book value of total assets.

#### **4.7.7 Age of Firm**

Firm age can influence firm performance. Older firms enjoy competitive advantages of past successes records and lessons from persistence in business operations (Anderson & Reeb, 2003), which can influence their performance. In contrast, older firms may have fewer growth opportunities compared to younger firms. In family firms, family descendants are succeeded in the helm of the management as firms grow older. Hence, firm age can be used as control variable to capture the effect of firm life cycle on firm performance (Hegde, Seth, and Vishwanatha, 2019). Firm age (AGE) is defined as the natural logarithm of the number of years since the firm has been listed on the stock exchange.

#### **4.7.8 Market to Book Value Ratio**

Linck et al. (2008) argue that firms require monitoring and advising role from the outside independent directors. But the cost of monitoring and advising does change with any change in the degree of volatility of the Market to Book Value Ratio (MB) ratio because transferring the firm-specific information- what this volatility contains- to outsiders becomes expensive (Fama & Jensen, 1983). Thereby, it could have impact on firm performance and this study considers it as a control variable. Apart from, MB ratio has good strength as a measure of growth opportunity from the perspective of market view. Following Wintoki et al. (2012), this study considers MB ratio as control variable.

#### **4.7.9 COVID-19 Dummy**

As the world witnessed financial collapse during 2019-2020 due to the COVID-19 pandemic, corporate performance in Bangladesh was also affected by the wave of this shock as well. In these effects, this study includes COVID dummy as control variable.



#### **4.7.10 Year and Industry Dummy**

Year and industry dummies are used to capture the year and industry fixed effects and tackle anymore endogeneity bias. Following Adams, Almeida, and Ferreira (2009), this study employs industry and year dummies as control variables.

#### **4.8 Firm Performance**

The dependent variables (firm performance) of this study are measured by the Basic Earnings Power (BEP), Return on Assets (ROA), and Tobin's Q (TBQ). BEP is calculated by using a ratio of earnings before interest and taxes (EBIT) to book value of total assets, ROA is calculated by using a ratio of net income after taxes to book value of total assets and ROE is calculated by net income after taxes to shareholders' equity. But, it is claimed in the literature that accounting-based measures don't reflect the future prospects of firm performance, whereas market-based measure reflects the information of market agents as well as their judgment about the firm's future prospects if the market is efficient. In Bangladesh, the performance of Dhaka Stock Exchange (DSE) is not consistent with the conditions of 'weak form efficiency' and 'strong form efficiency', rather it is goes to 'semi-strong' form of efficiency (Bose, Uddin & Islam, 2014). Nevertheless, consistent with Anderson and Reeb (2003), Agrawal and Knoeber (1999), and Bhatt and Bhattacharya, S. (2017), this study uses basic earnings power (BEP), return on assets (ROA) and a proxy for Tobin's Q ratio (TQ) in measuring the effects of internal corporate governance reforms on accounting-based performance and market-based performance of firms in Bangladesh.

#### **4.9 Summary of the Research Hypotheses**

This study identifies seven research hypotheses those are to be tested to examine how corporate governance variables affect performance of listed firms in Bangladesh. The summary of these hypotheses are presented in Table 8.

**Table 8: Summary of the Research Hypotheses**

| Hypothesis (H)       |                                                                                                | Key Explanatory Variable                     | Moderating Variable | Dependent Variable (Firm Performance) |
|----------------------|------------------------------------------------------------------------------------------------|----------------------------------------------|---------------------|---------------------------------------|
| <b>H<sub>1</sub></b> | Board independence is positively related to the firm performance.                              | Proportion of independent directors on board | None                | BEP, ROA, Tobin's Q                   |
| <b>H<sub>2</sub></b> | Audit committee independence is positively related to the firm performance.                    | Independent chairman of the audit committee  | None                | BEP, ROA, Tobin's Q                   |
| <b>H<sub>3</sub></b> | Audit committee meeting is significantly related to firm performance                           | Frequency of audit committee meeting         | None                | BEP, ROA, Tobin's Q                   |
| <b>H<sub>4</sub></b> | Family-CEO duality is negatively related to the firm performance.                              | Family CEO duality                           | None                | BEP, ROA, Tobin's Q                   |
| <b>H<sub>5</sub></b> | Family ownership is negatively related to the firm performance.                                | Family ownership                             | None                | BEP, ROA, Tobin's Q                   |
| <b>H<sub>6</sub></b> | Family-CEO duality moderates the relationship between board independence and firm performance. | Proportion of independent directors on board | Family CEO duality  | BEP, ROA, Tobin's Q                   |
| <b>H<sub>7</sub></b> | Family ownership moderates the relationship between board independence and firm performance.   | Proportion of independent directors on board | Family Ownership    | BEP, ROA, Tobin's Q                   |

#### 4.10 Chapter Summary

This chapter shows the explanation and reasoning in the wake of developing the testable research hypotheses considering the reforms of corporate governance (CG) systems. In Bangladesh, CG guidelines have been revised in the year of 2012 and the year of 2018 from its inception in 2006. Every round of these revisions focuses the importance of board independence, CEO non-duality, and audit committee effectiveness among other areas. Along the line, this study intends to examine how board independence, family CEO duality/family ownership, audit committee

independence, and audit committee meetings exert their influence on company performance. Moreover, their influence could be moderated by any of corporate governance variables. Thus, the first four hypotheses attempt to examine the direct effects of corporate governance variables on firm performance, wherein remaining two hypotheses intend to disclose whether the relationship between corporate governance variables and firm performance is contingent. That is, how a relation between dependent and independent variables changes with a given condition of another governance variable.

## **Chapter 5**

### **Research Design, Data Statistics and Analytical Approach**

#### **5.1 Introduction**

This chapter explains the definition of variables, sample selection and data collection process, research methodology and methods. The definition of the variables is presented in section 5.2. In an attempt to extract valid and reliable evidence, this study collects the data over a 21-year long panel ranging from 2000-2020. From the best of author knowledge, none of the earlier studies examined the impact of corporate governance variables on firm performance using such type of longitudinal data panel. In this regard, a panel unit-root test is conducted to check the data stationary which is presented in Table 5. Further to this, there is an argument in empirical literature (Wintoki et al., 2012) that the relationship between governance and performance variables might be inconsistent and biased if possible endogeneity is not controlled. Therefore, a justification for selecting an appropriate research method is explained in the part of data analysis procedure and model selection.

#### **5.2 Definition of the Variables**

This study sets up four types of variables such as dependent, explanatory, moderating, and control variables. There is one dependent variable called firm performance which is extended to three different specific variables. Two of them are related to accounting-base performance measures such as basic earnings power (BEP) and Return on Assets (ROA). Another is related to market base performance measure i.e. proxy of Tobin's Q. In addition, there are four key explanatory (governance) variables such as family control, board independence, audit committee independence, and audit committee meetings. This study also incorporates a moderating variable called family control in the research model. One of the major reasons behind the importing of moderating variable to this study is that it could strengthen, diminish, negate, or otherwise alter the association between explanatory (key independent) and dependent variables. Finally, in the variable set, this study incorporates control variables in the research model such as board size, CEO duality, firm's size, firm's growth, firm's age, leverage, MB ratio, total assets turnover ratio, directors' ownership, institutional

**Table 9: Definition of the variables**

| Variables                           | Proxies                                     | Symbol  | Measures                                                                                         |
|-------------------------------------|---------------------------------------------|---------|--------------------------------------------------------------------------------------------------|
| <b>Dependent Variables:</b>         |                                             |         |                                                                                                  |
| <i>Firm Performance</i>             | Basic Earnings Power                        | BEP     | Earnings before interest and taxes ÷ Total assets                                                |
|                                     | Return on Assets                            | ROA     | Net income after taxes ÷ Total assets                                                            |
|                                     | Proxy of Tobin's Q                          | TBQ     | (Market value of common equity + Book value of total liabilities) ÷ (Book value of total assets) |
| <b>Key Explanatory Variables:</b>   |                                             |         |                                                                                                  |
| <i>Board Independence</i>           | Presence of Independent Directors           | BIND    | Proportion of independent director on the board                                                  |
| <i>Audit Committee Independence</i> | Independent Chairman of the Audit Committee | ACIND   | '1' if both the chairmanship of the audit committee is an independent director, '0' otherwise    |
| <i>Audit Committee Meetings</i>     | Frequency of Audit Committee Meetings       | ACM     | Total number of audit committee meetings per year                                                |
| <i>Family Control</i>               | Family-CEO Duality                          | FCEO    | '1' if the chairman of board and the CEO belong to the same family, '0' otherwise                |
|                                     | Family Ownership                            | FOWN    | Percentage of shares held by the directors from a single family                                  |
|                                     | Family Ownership>20%                        | FOWN_20 | '1' if board members from a single family hold at least 20 percent ownership, '0' otherwise      |
|                                     | Family Ownership>25%                        | FOWN_25 | '1' if board members from a single family hold at least 25 percent ownership, '0' otherwise      |
|                                     | Family Ownership>30%                        | FOWN_30 | '1' if board members from a single family hold at least 30 percent ownership, '0' otherwise      |
| <b>Control Variables:</b>           |                                             |         |                                                                                                  |
| <i>Board Size</i>                   |                                             | BS      | Natural logarithm of the total number of members on the board                                    |
| <i>CEO duality</i>                  |                                             | CEOD    | '1' if both the chairmanship of the board and position of CEO belong to the same person          |
| <i>Director Ownership</i>           |                                             | DOW     | Percentage of shares held by directors                                                           |
| <i>Institutional Shareholdings</i>  |                                             | INST    | Percentage of shares held by institutions                                                        |
| <i>Leverage</i>                     |                                             | LEVR    | Total Liabilities ÷ Shareholders' Equity                                                         |
| <i>Growth of Firm</i>               |                                             | GROW    | [(Total assets in year t) ÷ (Total assets in year t-1)] -1                                       |
| <i>Size of Firm</i>                 |                                             | SIZE    | Natural logarithm of total assets                                                                |
| <i>Age of Firm</i>                  |                                             | AGE     | Natural logarithm of total number of years since firm's listing year                             |
| <i>Market to Book Value</i>         |                                             | MB      | Market price per share ÷ Book value per share                                                    |
| COVID-2019                          |                                             | COVID   | '1' if an industry is adversely affected by COVID-19 in year 2020, '0' otherwise                 |

ownership, and COVID 19 dummy. These control variables are taken in order to fix any spurious relationship between explanatory (key independent) variable and dependent variable. Table 9 shows the definition of these variables.

**Table 10: Samples by year and by industry**

| <b>Panel A: By year</b>     |              |              |              |
|-----------------------------|--------------|--------------|--------------|
| Year                        | No. of Firms | Year         | No. of Firms |
| 2000                        | 85           | 2011         | 130          |
| 2001                        | 87           | 2012         | 140          |
| 2002                        | 91           | 2013         | 151          |
| 2003                        | 93           | 2014         | 170          |
| 2004                        | 94           | 2015         | 176          |
| 2005                        | 96           | 2016         | 181          |
| 2006                        | 103          | 2017         | 185          |
| 2007                        | 105          | 2018         | 173          |
| 2008                        | 112          | 2019         | 124          |
| 2009                        | 117          | 2020         | 118          |
| 2010                        | 124          | Total        | 2655         |
| <b>Panel B: By industry</b> |              |              |              |
| Industry Type               |              | No. of Firms |              |
| Cement                      |              | 7            |              |
| Ceramics                    |              | 5            |              |
| Chemicals                   |              | 13           |              |
| Engineering                 |              | 36           |              |
| Food & Allied               |              | 17           |              |
| Fuel & Power                |              | 19           |              |
| Information Technology (IT) |              | 10           |              |
| Jute                        |              | 3            |              |
| Paper & Printing            |              | 3            |              |
| Pharmaceuticals             |              | 18           |              |
| Services & Real Estate      |              | 4            |              |
| Tannery                     |              | 6            |              |
| Telecommunication           |              | 2            |              |
| Textile                     |              | 51           |              |
| Travel & Leisure            |              | 3            |              |
| Miscellaneous               |              | 13           |              |
| Total                       |              | 210          |              |

### 5.3 Sample Selection

This study examines the relationship between corporate governance mechanisms and the performance of non-financial companies listed in the Dhaka Stock Exchange (DSE) during 2000-2020. A sample of 210-firm from a population of 223 non-financial companies in 16 different industries is identified. This study excluded 13 companies due to unavailability of data. The financial data and market related data are collected from the DSE library. In gathering family related data (familial relationship among the board members and family ownership), an interview with company secretaries of 76 companies is conducted. For the remaining companies, family related data are collected from the prospectus as well as annual reports. Finally, a total of 2655 firm-year observations (unbalanced panel) have been selected for analysis. A frequency distribution of sample by year and by industry is presented in Panel A and Panel B of Table 10 respectively.

#### **5.4 Data Analysis Procedures and Model Specification**

This study has used unbalanced panel data. Data will be analyzed using both descriptive and econometric methods. The descriptive analysis will provide the difference of means tests, difference of medians tests, and multicollinearity tests. In econometric analysis, this study will employ a more sophisticated linear regression model to examine the causal relationship between the interest variables. As earlier mentioned that DSE experienced a severe abnormal bullish trend in share price in 2010 and successively fell into a dramatic collapse in 2011, there remains a great concern about the outlier effects on the data pattern of TBQ. Therefore, to minimize the probable effect of outlier in the variable of market price, TBQ is winsorized at the top and bottom 1 percent level of their distributions.

##### **5.4.1 Panel Unit Root Problems**

The unit root test has been a great concern of the econometric analysis when the sample period covers more than 10 years of panel data. Two of the most popular unit root tests for panel data are Levin–Lin–Chu test (LLC) (2002) and Im–Pesaran–Shin test (IPS) (2003). All these tests work better in a certain condition. For example, LLC requires a balanced panel data set where number of panels shall be smaller (N) than number of observations (T) per panel i.e.  $N < T$ . On the other hand, IPS works better

for balanced panel set under a relaxation of the assumption that  $N < T$ . Therefore, this study transforms its unbalanced data into a balanced data which is comprised of 75 panels and 15 observations in each panel during 2006-2020. Thereafter, the LLC and the IPS tests are run over the balanced panel data to examine whether the panels are stationary. In addition, for the original unbalanced panel ( $N=210$ ,  $T=12.64$  average), Fisher-type test (Choi, 2001) is conducted to check panel unit root. Tests results are presented in Table 20.

#### **5.4.2 Endogeneity Problems**

This study is led by the attempts of examining the relationship between board independence, audit committee independence and firm performance and any possible of direct and moderating effect of family control on firm performance. There are ample evidences supporting the existence of endogeneity problems in deriving any relationship between governance variables and firm performance (Hermalin & Weisbach, 2003; Jara-Bertin, et al., 2008; Adams & Ferrari, 2009; Adams et al., 2010; Wintoki et al., 2012). In analyzing the data, this study is highly concerned for controlling the endogeneity problems that may inherently exist between firm performance and governance mechanisms (Bhagat & Black, 2002; Hermalin & Weisbach, 2003). In an empirical study, Carter et al. (2010) claimed that controlling for endogeneity is essential to come up with refined results of the relationship between board characteristics and firm performance. It is because that endogeneity begets coefficient estimates biased and inconsistent. Endogeneity may be caused by at least any of the three sources: (a) omitted variable bias, meaning that one or more explanatory variables are correlated with the unobserved variables including time-invariant firm characteristics (fixed effect) and eventually all of them are left to the error term; (b) simultaneity or reverse causality, meaning a situation when one or more of the explanatory variables is jointly determined with the dependent variable; and (c) measurement error.

For example, Bhagat & Black (2002) claimed that a highly family dominance firm typically does not prefer the more independent directors on the board. Booth and Deli (1996) argued that the larger firms need more external contracting relationships and require larger boards with more independent directors. Further to this, Fama and



Jensen (1983) argued that a company with significant executive ownership may have a conflict of interest between non-executive and executive directors because excessive managerial ownership encourages the managers to pursue their own interests at the expense of dispersed shareholders. Therefore, a larger board with more independent directors is required to the firms where excessive managerial ownership exists. Sometimes, the profitable firms enjoy less necessity of getting advisory and monitoring role from the independent directors and eventually such type of firms become less likely to look for reshaping their boards by appointing more independent directors. Leverage can also affect board independence. According to Pfeffer (1972), a company should expand its board independence when additional outside funding, such as debt financing, is required because independent directors provide advising services and maintain external relationship with fund suppliers. Age of a firm may affect the board diversification as it is presumed that the small firm usually enjoys high growth opportunity and thus requires more advice and monitor, which lead to a well-diversified board with more independent directors. Thus, family dominance, firm size, firm age, leverage, ownership structure and growth opportunity may affect board characteristics, board independence and audit committee independence as well.

Endogeneity is the effect of at least any one of the three causes: (a) omitted variable bias (i.e., a circumstance when one or more explanatory variables are correlated with the unobserved variables which are left to the error term); (b) measurement error bias (i.e., when variables are measured incorrectly); and (c) simultaneity or reverse causality (i.e., when one or more of the explanatory variables is jointly determined with the dependent variable). In this regard, a Durbin-Wu-Hausman test is applied to check whether the data suffer from endogeneity problem or not. Endogeneity test will be performed by applying the Durbin and Wu-Hausman tests in STATA. The test results presented in Table 25 indicate that there remains a problem of endogeneity in the variables of the study.

#### **5.4.3 Econometric Model Selection**

This study examines the relationship between corporate governance mechanisms (board independence, family-CEO duality, family ownership, audit committee independence, and frequency of audit committee meeting) and firm performance. In

analyzing the relationship, a major challenge is to remove any possible endogeneity problem in the empirical model. But, empirical evidence suggests the existence of endogeneity problems in the relationship between corporate governance mechanisms and firm performance (Adams et al., 2010; Adams & Ferrari, 2009; Bhagat & Black, 2002; Hermalin & Weisbach, 2003; Jara-Bertin et al., 2008; Wintoki et al., 2012). If any of the corporate governance mechanisms is endogenous, ordinary least square (OLS) regression will no longer be feasible to provide the unbiased and consistent coefficient estimates. In the case of the endogeneity when it is caused by reverse causality, the traditional estimations methods for panel data analyses (such as fixed-effect and random effect) are not expected to produce consistent and unbiased estimates. It is a case when one (or more) independent variable(s) is a function of the dependent variable. This problem is common while examining the relationship between corporate governance variable and performance variable. For example, any increase in board independence may lead to enhance firm performance. On the opposite end of the spectrum, a profitable firm might be less interested to increase its board independence as it has already been doing well.

In this case, **Two-Stage Least Squares (2SLS)** regression with observable instrumental variables can be a remedial measure of controlling endogeneity caused by omitted variables bias and measurement errors (Wooldridge, 2010). But, the choice of good instruments can be quite subjective while controlling for endogeneity - even it is limited to the availability of variables. It is because that there is no grounded theory or empirical model in the literature for selecting robust instruments. According to Balsam et al., (2016), this approach may be effective to produce unbiased estimates but its validity may be questioned because of arbitrary identification of instruments. Further to this, Bound et al., (1995) argued that the application of this approach is not judicious when there exists a weak association between instruments and endogenous variables.

In this regard, a **Generalized Method of Moments (GMM)** could be used with robust standard errors to produce unbiased and consistent estimators (Roodman, 2009). There are two forms of GMM such as first-difference GMM and system GMM, whereas system GMM is superior to the first-difference GMM by some extent. Typically in the GMM estimation, the endogenous variables are instrumented with

their suitable lags so that they don't remain correlated to the disturbance. But sometimes the lagged values of the endogenous regressors may not be considered as good instruments for the first-difference GMM equation (Arellano & Bover, 1995; Blundell & Bond, 1998). Anderson and Hsiao (1982) argue that the first-differenced GMM estimation is apt to eliminate the time-invariant fixed effects and constant. But such estimation would not take account of orthogonality conditions and accordingly it could produce inefficient estimator (Arellano & Bond, 1991). In this case, Arellano and Bond (1991) propose an augmented extension of first-difference GMM estimator which is called a system GMM. This model generates the output of regression analysis through two equations –one is for level and another is for differenced variables. Thus, first-differenced equation and level equation are channeled into a process of amalgamation embodying a sufficient number of instruments to correct the problems associated with the first-difference GMM. That is, system GMM uses the lagged values of the first-differenced instrumented variables as additional instruments and hence it increases estimation efficiency (Blundell & Bond, 1998). Instruments for differenced equations are commonly derived from taking at least twice lag of the explanatory variables with a risk of making poor instruments for the first differenced variables (Arellano & Bover, 1995; Blundell & Bond, 1998). Therefore, to overcome this problem the level equation is added to apply some other strong instruments obtained by making lagged differences of the variable. There are one- and two-step versions of the GMM estimator under either for the first-difference or the system approach. Arellano and Bond (1991) claim that two-step GMM is superior to one step GMM. Therefore, two-step system GMM regression approach is applied in analyzing the relationship between governance variables and firm performance.

GMM approach is more powerful tool for estimation when panel data consist of more number of cross-sections (N) compared to the number of observations (T) in each panel (Roodman, 2009). In this study, N is large relative to T ( $N=210$ ,  $T=12.64$  average). It is also useful when explanatory variables are associated with its past or the present realization of the error term (Roodman, 2009).

The consistency of GMM estimators is subject to the two standard specification tests prescribed by Arellano and Bover (1995) and Blundell and Bond (1998). The first test is the Sargan/Hansen test of over-identifying restrictions, which tests for overall

validity of the instruments with a null hypothesis that all instruments are exogenous i.e. they are not correlated with error term. The second test examines a null hypothesis that error term of the level equation is not serially correlated at the first order (AR1) and the differenced equation is not serially correlated at the second order (AR2).

In sum, two-step system GMM can control for unobserved heterogeneity, omitted variable bias, and time-invariant component of the measurement error. That is, this approach sophisticatedly deals with any possible existence of endogeneity between the governance and performance variables. Based on this discussion, this study vastly relies upon a two-step system GMM econometric approach. Therefore, the results of this study are deemed to provide new evidence compared to any other studies in Bangladesh because none of earlier studies attempted to use the two-step system GMM approach in measuring the influence of corporate governance mechanisms on firm performance.

#### **5.4.4 Methods Used by the Earlier Literatures on Corporate Governance**

In the extant literatures, it is observed that instrumental variable (IV) estimation approach was used by Adams et al. (2009), Anderson and Reeb (2003), Bhagat and Black (2002), Bhagat and Bolton (2008), Jackling and Johl (2009), and Yermack (1996). Several studies used generalized method of moments (GMM) estimation approach (for example: Guest, 2009; Kowalewski et al. 2010; Sacristán-Navarro et al., 2011; Wintoki et al., 2012; Miller, et al., 2013; Ramos, Diaz, & Olalla, 2017) to examine the relationship between corporate governance mechanisms and firm performance, Pooled ordinary least squares (OLS) approach was used in some empirical studies by Coles et al., (2008), Hasan et al. (2014), and Muttakin et al. (2014). Few studies applied fixed effect approach such as Poutziouris et al. (2015) and Yeung (2018). In some empirical studies, GMM estimates along with fixed effect estimates or random effects estimates are used to validate and strengthen the reliability of the empirical results or to check the robustness of empirical results under alternative econometric techniques (c.f. Miller et al., 2013). Thus, the above discussions draw an optimal justification to reach at the plausible conclusion in supporting the applicability of GMM econometric approach for data analysis of this study.

### 5.4.5 Econometric Model Specifications for Data Analysis

The hypotheses are tested by using a two-step system GMM regression model. That is, the regression models are developed to examine the relationship between corporate governance variables and firm performance. The following discussions delineate the details of the models for statistical analyses.

#### 5.4.5.1 Board Independence and Firm Performance

The regression model, shown in equation 1, is developed to test the first hypothesis ( $H_1$ ) that board independence is positively associated with firm performance.

$$Y_{it} = \beta_0 + \beta_1(Y_{it-1}) + \beta_2(BIND)_{it} + \beta_3(CEOD)_{it} + \beta_4(BS)_{it} + \beta_5(DOW)_{it} + \beta_6(INST)_{it} + \beta_7(LEVR)_{it} + \beta_8(GROW)_{it} + \beta_9(SIZE)_{it} + \beta_{10}(AGE)_{it} + \beta_{11}(MB)_{it} + \beta_{12}(COVID)_{it} + \varepsilon_{it}$$

.....Equation (1)

Where,  $i = 1, \dots, n$  denotes the cross-sectional dimension and  $t = 1, \dots, T$  represents the time series dimension.  $Y_{it}$  refers to the measure of firm performance which is alternatively  $BEP_{it}$ ,  $ROA_{it}$ , and  $TBQ_{it}$ .  $\beta_0$  refers to the intercept term.  $\beta_1$  to  $\beta_{14}$  refer to the slope coefficient of the respective variables. The term  $\varepsilon$  refers to the error term. In the above model, the key interest (explanatory) variable is proportion of independent directors on board (BIND). This model controls for board size (BS), and CEO duality (CEOD), director ownership (DOW), institutional ownership (INST), leverage (LEVR), firm growth (GROW), firm age (AGE), market to book ratio (MB), and COVID-19 dummy (COVID). In addition, industries classification dummies (INDUSTRY) and year classification dummies (YEAR) will be included in the model following Hermalin and Weisbach (1991) and Ezzamel and Watson (1993). Here, Linch et al. (2008) argue that firms require monitoring and advising role from the outside independent directors. But the cost of monitoring and advising changes with a change in the degree of volatility of the MB ratio because transferring the firm-specific information- what this volatility contains- to outsiders becomes expensive (Fama & Jensen, 1983). Thereby, it could have impact on firm performance and this

study considers it as a control variable. Apart from, MB ratio has good strength as a measure of growth opportunity from the perspective of market view.

#### 5.4.5.2 Audit Committee Independence, Audit Committee Meeting and Firm Performance

The regression model, shown in equation 2, is developed to test the second (H<sub>2</sub>) hypothesis that audit committee independence is positively associated with firm performance. The model shown in equation 3 is developed to test the third hypothesis (H<sub>3</sub>) that the frequency of audit committee meeting is positively associated with firm performance.

$$Y_{it} = \beta_0 + \beta_1(Y_{it-1}) + \beta_2(ACIND)_{it} + \beta_3(CEOD)_{it} + \beta_4(BS)_{it} + \beta_5(DOW)_{it} + \beta_6(INST)_{it} + \beta_7(LEVR)_{it} + \beta_8(GROW)_{it} + \beta_9(SIZE)_{it} + \beta_{10}(AGE)_{it} + \beta_{11}(MB)_{it} + \beta_{12}(COVID)_{it} + \varepsilon_{it}$$

.....Equation (2)

$$Y_{it} = \beta_0 + \beta_1(Y_{it-1}) + \beta_2(ACM)_{it} + \beta_3(CEOD)_{it} + \beta_4(BS)_{it} + \beta_5(DOW)_{it} + \beta_6(INST)_{it} + \beta_7(LEVR)_{it} + \beta_8(GROW)_{it} + \beta_9(SIZE)_{it} + \beta_{10}(AGE)_{it} + \beta_{11}(MB)_{it} + \beta_{12}(COVID)_{it} + \varepsilon_{it}$$

.....Equation (3)

$Y_{it}$  refers to the measure of firm performance which is alternatively  $BEP_{it}$ ,  $ROA_{it}$ , and  $TBQ_{it}$ .  $\beta_0$  refers to the intercept term.  $\beta_1$  to  $\beta_{13}$  refer to the slope coefficient of the respective variables.  $\varepsilon$  refers to the error term.

In the above models (2 and 3), the key interest (explanatory) variables are audit committee independence (ACIND) and no. of audit committee meeting (ACM). This model aims at exploring the influence of audit committee independence and audit committee meeting on firm performance. This model controls for board size (BS), CEO duality (CEOD), director ownership (DOW), institutional ownership (INS), leverage (LEVR), firm growth (GROW), firm age (AGE), market to book ratio (MB), and COVID-19 dummy (COVID). In addition, industries classification dummies (INDUSTRY) and year classification dummies (YEAR) will be included in the model following Hermalin and Weisbach (1991) and Ezzamel and Watson (1993).

#### 5.4.5.3 Family-CEO duality and Firm Performance

The regression model, shown in equation 4, is developed to test the fourth hypothesis (H<sub>4</sub>) that family-CEO duality has significant negative impact on firm performance.

$$Y_{it} = \beta_0 + \beta_1(Y_{it-1}) + \beta_2(FCEO)_{it} + \beta_3(BIND)_{it} + \beta_4(CEOD)_{it} + \beta_5(BS)_{it} + \beta_6(DOW)_{it} + \beta_7(INST)_{it} + \beta_8(LEVR)_{it} + \beta_9(GROW)_{it} + \beta_{10}(SIZE)_{it} + \beta_{11}(AGE)_{it} + \beta_{12}(MB)_{it} + \beta_{13}(COVID)_{it} + \varepsilon_{it}$$

.....Equation (4)

$Y_{it}$  refers to the measure of firm performance which is alternatively  $BEP_{it}$ ,  $ROA_{it}$ , and  $TBQ_{it}$ .  $\beta_0$  refers to the intercept term.  $\beta_1$  to  $\beta_{13}$  refer to the slope coefficient of the respective variables.  $\varepsilon$  refers to the error term.

The key explanatory variable of the above model is family-CEO duality (FCEO) which is measured by the dummy variable. That is, it takes a value of ‘1’ if family-CEO duality exists, and otherwise it takes a value of ‘0’. The above model has control variables such as board size (BS), CEO duality (CEOD), director ownership (DOW), institutional ownership (INST), leverage (LEVR), firm growth (GROW), firm age (AGE), market to book ratio (MB), and COVID-19 dummy (COVID). In addition, industries classification dummies (INDUSTRY) and year classification dummies (YEAR) will be included in the model following Hermalin and Weisbach (1991) and Ezzamel and Watson (1993).

#### 5.4.5.4 Family Ownership and Firm Performance

The following regressions models, shown in equations 5.1 to 5.4, are developed to test the fifth hypothesis (H<sub>5</sub>) that family ownership has significant negative impact on firm performance.

$$Y_{it} = \beta_0 + \beta_1(Y_{it-1}) + \beta_2(FOWN)_{it} + \beta_3(BIND)_{it} + \beta_4(CEOD)_{it} + \beta_5(BS)_{it} + \beta_6(DOW)_{it} + \beta_7(INST)_{it} + \beta_8(LEVR)_{it} + \beta_9(GROW)_{it} + \beta_{10}(SIZE)_{it} + \beta_{11}(AGE)_{it} + \beta_{12}(MB)_{it} + \beta_{13}(COVID)_{it} + \varepsilon_{it}$$

.....Equation (5.1)

$Y_{it}$  refers to the measure of firm performance which is alternatively  $BEP_{it}$ ,  $ROA_{it}$ , and  $TBQ_{it}$ .  $\beta_0$  refers to the intercept term.  $\beta_1$  to  $\beta_{13}$  refer to the slope coefficient of the respective variables.  $\varepsilon$  refers to the error term.

Here, family ownership is measured by four alternatives ways. *Firstly*, it is measured by proportion of equity ownership held by the directors come from a single large family (FOWN) which is shown in equation 5.1. *Secondly*, it is measured by the dummy variable where directors from a large individual family hold at least 20 percent family ownership (FOWN\_20) which is shown in equation 5.2. *Thirdly*, it is measured by the dummy variable where directors from a large individual family hold at least 25 percent family ownership (FOWN\_25) which is shown in equation 5.3. *Finally*, it is measured by the dummy variable where directors from a large individual family hold at least 30 percent family ownership (FOWN\_30) which is shown in equation 5.4. The last three alternative measures of family ownership (i.e. FOWN\_20, FOWN\_25, and FOWN\_30) are used to check the robustness of the base model shown in the equation 5.1.

$$Y_{it} = \beta_0 + \beta_1(Y_{it-1}) + \beta_2(\mathbf{FOWN\_20})_{it} + \beta_3(\mathbf{BIND})_{it} + \beta_4(\mathbf{CEOD})_{it} + \beta_5(\mathbf{BS})_{it} + \beta_6(\mathbf{DOW})_{it} + \beta_7(\mathbf{INST})_{it} + \beta_8(\mathbf{LEVR})_{it} + \beta_9(\mathbf{GROW})_{it} + \beta_{10}(\mathbf{SIZE})_{it} + \beta_{11}(\mathbf{AGE})_{it} + \beta_{12}(\mathbf{MB})_{it} + \beta_{13}(\mathbf{COVID})_{it} + \varepsilon_{it}$$

.....Equation (5.2)

$$Y_{it} = \beta_0 + \beta_1(Y_{it-1}) + \beta_2(\mathbf{FOWN\_25})_{it} + \beta_3(\mathbf{BIND})_{it} + \beta_4(\mathbf{CEOD})_{it} + \beta_5(\mathbf{BS})_{it} + \beta_6(\mathbf{DOW})_{it} + \beta_7(\mathbf{INST})_{it} + \beta_8(\mathbf{LEVR})_{it} + \beta_9(\mathbf{GROW})_{it} + \beta_{10}(\mathbf{SIZE})_{it} + \beta_{11}(\mathbf{AGE})_{it} + \beta_{12}(\mathbf{MB})_{it} + \beta_{13}(\mathbf{COVID})_{it} + \varepsilon_{it}$$

.....Equation (5.3)

$$Y_{it} = \beta_0 + \beta_1(Y_{it-1}) + \beta_2(\mathbf{FOWN\_30})_{it} + \beta_3(\mathbf{BIND})_{it} + \beta_4(\mathbf{CEOD})_{it} + \beta_5(\mathbf{BS})_{it} + \beta_6(\mathbf{DOW})_{it} + \beta_7(\mathbf{INST})_{it} + \beta_8(\mathbf{LEVR})_{it} + \beta_9(\mathbf{GROW})_{it} + \beta_{10}(\mathbf{SIZE})_{it} + \beta_{11}(\mathbf{AGE})_{it} + \beta_{12}(\mathbf{MB})_{it} + \beta_{13}(\mathbf{COVID})_{it} + \varepsilon_{it}$$

.....Equation (5.4)



In all models, the firm specific variables are used as control variables. These control variables are board size (BS), CEO duality (CEOD), director ownership (DOW), institutional ownership (INST), leverage (LEVR), firm growth (GROW), firm age (AGE), market to book ratio (MB), and COVID-19 dummy (COVID). In addition, industries classification dummies (INDUSTRY) and year classification dummies (YEAR) will be included in the model following Hermalin and Weisbach (1991) and Ezzamel and Watson (1993).

#### 5.4.5.5 Interaction Effects of Family Control on the Relationship Board Independence and Firm Performance

The regression model 6.1 is developed to test the sixth hypothesis (H<sub>6</sub>) that family-CEO duality (FCEO) moderates the relationship between board independence and firm performance. The key interest of the regression model (equation 6.1) is to examine how family leadership— family CEO duality (FCEO) – interacts in the relationship between board independence and firm performance.

$$Y_{it} = \beta_0 + \beta_1(Y_{it-1}) + \beta_2(BIND)_{it} + \beta_3(FCEO)_{it} + \beta_4(BIND)_{it} * (FCEO)_{it} + \beta_5(CEOD)_{it} + \beta_6(BS)_{it} + \beta_7(DOW)_{it} + \beta_8(INS)_{it} + \beta_9(LEVR)_{it} + \beta_{10}(GROW)_{it} + \beta_{11}(SIZE)_{it} + \beta_{12}(AGE)_{it} + \beta_{13}(MB)_{it} + \beta_{14}(COVID)_{it} + \varepsilon_{it} \quad \text{.....Equation (6.1)}$$

The regression model 6.2 is developed to test the seventh hypothesis (H<sub>7</sub>) that family ownership (FOWN) moderates the relationship between board independence and firm performance. The key interest of the regression model (equation 6.2) is to examine how the family ownership interacts in the relationship between board independence and firm performance.

$$Y_{it} = \beta_0 + \beta_1(Y_{it-1}) + \beta_2(BIND)_{it} + \beta_3(FOWN)_{it} + \beta_4(BIND)_{it} * (FOWN)_{it} + \beta_5(CEOD)_{it} + \beta_6(BS)_{it} + \beta_7(DOW)_{it} + \beta_8(INS)_{it} + \beta_9(LEVR)_{it} + \beta_{10}(GROW)_{it} + \beta_{11}(SIZE)_{it} + \beta_{12}(AGE)_{it} + \beta_{13}(MB)_{it} + \beta_{14}(COVID)_{it} + \varepsilon_{it} \quad \text{.....Equation (6.2)}$$

$Y_{it}$  refers to the measure of firm performance which is alternatively  $BEP_{it}$ ,  $ROA_{it}$ , and  $TBQ_{it}$ .  $\beta_0$  refers to the intercept term.  $\beta_1$  to  $\beta_{14}$  refer to the slope coefficient of the respective variables. The term  $\varepsilon$  refers to the error term.

All models have control variables such as board size (BS), CEO duality (CEOD), director ownership (DOW), institutional ownership (INS), leverage (LEVR), firm growth (GROW), firm age (AGE), market to book ratio (MB), and COVID-19 dummy (COVID). Further to this, industries classification dummies (INDUSTRY) and year classification dummies (YEAR) will be included in the model following Hermalin and Weisbach (1991) and Ezzamel and Watson (1993).

### **5.5 Chapter Summary**

This chapter delineates the methodological concerns related to data collection, definition and measurement of the variables, data analysis procedures and selection of econometric approach. In defining the different variables, this chapter identifies a set of data that combines nominal, ordinal and ratio type data. Moreover, before choosing the best econometric approach for data analysis, this chapter discusses the data stationary and the possible endogeneity problems that might cause with the research variables to produce inconsistent and biased results. Hence, it carefully identifies the methods that was used more often in the earlier literatures of corporate governance and evaluates them with respect to their capacity of controlling endogeneity. That is, this chapter provides methodological justification and reasoning to suggest a more sophisticated research method for analyzing the research data. Apart from, in examining the relationship between corporate governance variables and performance variables, this chapter develops regression models with respect to each of the research hypotheses. All analyses shall be computed using STATA version 14.2 for windows.

## **Chapter 6**

### **Empirical Analysis, Findings and Discussions**

#### **6.1 Introduction**

As mentioned earlier, this study examines whether the corporate governance variables (board independence, audit committee independence, audit committee meeting, family leadership, and family ownership) influence firm performance. In the process of doing so, this study develops a conceptual framework that may promote good governance in Bangladesh. The earlier chapter discusses the variables definitions, data collection, and research methodology. In addition, the previous chapter developed econometric model with respect to the research questions and hypotheses followed by justifications and reasoning. This chapter presents summary and descriptive statistics of the variables in order to provide better visualization about the trends, patterns and other basic characteristics of the variables. More importantly, this chapter conducts a number of statistical tests in order to complete the empirical analysis. The detailed structure of this chapter is given below.

Firstly, the descriptive statistics and univariate analysis of the variables are presented. Secondly, the assumptions of the statistical analysis including data stationary, panel cointegration, endogeneity, multicollinearity, heteroskedasticity, and autocorrelation are tested. Thirdly, the analysis of board independence and firm performance, audit committee independence and firm performance, audit committee meeting and firm performance, family CEO duality and firm performance, various degrees of family ownership and firm performance are examined. Fourthly, the analysis of the moderating role of family CEO duality and family ownership on the association between board independence, audit committee independence and firm performance are examined. Finally, additional analysis for checking the robustness of the empirical findings is presented. The conclusions and recommendations are developed on the basis of these analyses and presented in the next chapter.

#### **6.2 Summary Statistics of the Data Variables**

This section incorporates the three types of descriptive analysis for the variables of the sample firms. *First*, the Table 11 provides mean, median, minimum, maximum, and standard deviation of the all variables of this study. *Second*, the Table 12.1 offers segment-wise descriptive statistics of the performance variables as well as key explanatory variables of this study. Here, four different segments are categorized on the basis of corporate governance development phases in the context of Bangladesh. Further to this, this study tests the difference of means and difference of medians between different phases of corporate governance developments. The results of these tests are presented in Table 12.2, Table 12.3, and Table 12.3. *Third*, the Table 13 presents year-wise mean values for the all performance variables as well as the key explanatory variables. Finally, based on the values shown in Table 13, some trends are identified with graphical representation.

### 6.2.1 Descriptive statistics

Table 11, Table 12.1 and Table 13 present the summary of descriptive statistics. Table 12.2, Table 12.3, and Table 12.4 demonstrate the results of mean-difference tests and median-difference tests of all performance variables and key explanatory variables used in this study. Table 11 reveals that, on an average, the listed firms in the DSE earns 8.30 percent (median= 7.28) annual operating return on their assets during 2000-2020. On an average, the sample firms get a net income of 4.05 percent (median= 3.21) from their assets. In this study, Tobin's Q (TBQ) is winsorized at 1% in each tail to eliminate the effect of outlier. The mean value of the TBQ is 1.54 (median= 1.07). This value is greater than one, which implies that the investors are paying high value for occupying a company's shares compared to the value of assets. In Table 12, it is observed that sample firms earn the maximum average values of BEP, ROA and TBQ in the first phase of corporate governance development i.e. 2006-2012. It also reveals that the average performance of sample firms at the corporate governance (CG) development phases is high compared with the pre-development phase of corporate governance (CG).

As shown in Table 11 that, on an average, 16 percent of board members of listed companies is represented by independent directors over 2000-2020 with a minimum value of zero and a maximum value of 8. In addition, Table 12.1 shows that mean value of board independence is only 0.6 percent in the pre-development phase of

corporate governance. It increases to 24.3 percent from 11 percent between the second phase of corporate governance and the first phase of corporate governance in Bangladesh.

Table 11 shows that, on an average, about 40 percent of the corporate boards during 2000-2020 are dominated by family control where the chairman of the board and the CEO/MD are the same family members (family-CEO duality). In addition, Table 12 indicates that family-CEO duality (FCEO) gradually increases during the corporate governance development phases. That is, the mean value of the degree of FCEO has increased to 50.2 percent from 34.4 percent in between the second phase and the first phase of CG development in Bangladesh but slightly decreases to 48.8 percent in the third phase of CG reforms, whereas it was only 24.7 percent during the pre-development phase of CG. Moreover, it is noticeable that the degrees of CEO duality in the pre-development phase of CG (2000-2005), in the first phase of CG (2006-2012), in the second phase of CG (2012-2018), and in the third phase of CG (2019-2020) are 38.6 percent, 19.4 percent, 1.9 percent, and 0.08 percent respectively (c.f. Table 12). Overall, it is 14.41 percent during 2000-2020 (c.f. Table 11). These movements imply that degree of family-CEO duality increases as the degree of CEO duality decreases.

Table 11 reveals that, on an average, about 21 percent of the total shareholding of listed companies is held by the directors from a single family (family ownership) during 2000-2020 with a minimum shareholding of zero percent and a maximum shareholding of 93.97 percent. Apart from, Table 12 indicates that this family ownership (FOWN) does remain closely same over the pre-development phase, the first development phase and the second development phase of corporate governance systems in Bangladesh. According to Table 11, on average, at least 20 percent family ownership ( $FOWN > 20$ ) is appeared in the 47.57 percent of listed sample companies; at least 25 percent family ownership ( $FOWN > 25$ ) is appeared in the 38.98 percent of listed sample companies; and at least 30 percent family ownership ( $FOWN > 30$ ) is appeared in the 30.37 percent of listed sample companies in Bangladesh. In addition, Table 12 provides that all categories of family ownership i.e.  $FOWN > 20$ ,  $FOWN > 25$ , and  $FOWN > 30$  declines gradually over the pre-development phase, the first

development phase and the second development phase of corporate governance systems in Bangladesh.

In Table 11, it is reported that, on average, 56.13 percent chairman of the audit committees of listed companies in DSE over 2000-2020 is led by independent directors. Apart from, Table 12 provides that mean value of ACIND dramatically increases to 26.8 percent in the first development phase of corporate governance from 0.4 percent in the pre-development phase of CG and it successively reaches at 92 percent in the second development phase of corporate governance in Bangladesh.

In Table 11, it is revealed that the average number of audit committee meetings of listed sample companies in DSE is about 2.6 (median= 3) with a minimum value of zero and a maximum value of 24. In addition, Table 4 reveals that the median number of audit committee meetings in a year rises to 3 in the second development phase of corporate governance from 2 in the first development phase of corporate governance, and from zero in the pre-development phase of corporate governance systems in Bangladesh.

**Table 11: Summary of descriptive statistics of the variables during 2000-2020**  
**(Total Observations = 2655)**

| <b>Performance</b>     |                   |             |               |                           |                |                |
|------------------------|-------------------|-------------|---------------|---------------------------|----------------|----------------|
| <b>Variables</b>       | <b>Unit</b>       | <b>Mean</b> | <b>Median</b> | <b>Standard Deviation</b> | <b>Minimum</b> | <b>Maximum</b> |
| BEP                    | Ratio             | 0.0830      | 0.0728        | 0.0931                    | -1.0058        | 0.7450         |
| ROA                    | Ratio             | 0.0405      | 0.0321        | 0.0875                    | -1.1486        | 0.5284         |
| TBQ                    | Ratio             | 1.5351      | 1.0671        | 1.5297                    | 0.2111         | 10.0024        |
| <b>Key Explanatory</b> |                   |             |               |                           |                |                |
| <b>Variables</b>       | <b>Unit</b>       | <b>Mean</b> | <b>Median</b> | <b>Standard Deviation</b> | <b>Minimum</b> | <b>Maximum</b> |
| BIND                   | Fraction          | 0.1597      | 0.1667        | 0.1299                    | 0.0000         | 0.8000         |
| FCEO                   | Binary            | 0.3989      | 0.0000        | 0.4898                    | 0.0000         | 1.0000         |
| FOWN                   | Fraction          | 0.2100      | 0.1873        | 0.1853                    | 0.0000         | 0.9397         |
| FOWN>20                | Binary            | 0.4757      | 0.0000        | 0.4995                    | 0.0000         | 1.0000         |
| FOWN>25                | Binary            | 0.3898      | 0.0000        | 0.4878                    | 0.0000         | 1.0000         |
| FOWN>30                | Binary            | 0.3036      | 0.0000        | 0.4599                    | 0.0000         | 1.0000         |
| ACIND                  | Binary            | 0.5616      | 1.0000        | 0.4963                    | 0.0000         | 1.0000         |
| ACM                    | Number            | 2.6109      | 3.0000        | 2.1468                    | 0.0000         | 24.0000        |
| <b>Control</b>         |                   |             |               |                           |                |                |
| <b>Variables</b>       | <b>Unit</b>       | <b>Mean</b> | <b>Median</b> | <b>Standard Deviation</b> | <b>Minimum</b> | <b>Maximum</b> |
| BS                     | Number            | 7.2128      | 7.0000        | 2.2316                    | 3.0000         | 19.0000        |
| CEOD                   | Binary            | 0.1484      | 0.0000        | 0.3556                    | 0.0000         | 1.0000         |
| AGE                    | Natural Logarithm | 2.4386      | 2.7081        | 0.9197                    | 0.0000         | 3.8067         |
| SIZE                   | Natural Logarithm | 21.1241     | 21.0447       | 1.7199                    | 16.3158        | 26.4025        |
| GROW                   | Fraction          | 0.1336      | 0.0677        | 0.4268                    | -0.8959        | 10.9260        |
| LEVR                   | Fraction          | 0.2918      | 0.2385        | 0.3212                    | 0.0000         | 4.3413         |
| DOW                    | Fraction          | 0.4157      | 0.4500        | 0.2136                    | 0.0000         | 0.9916         |
| INST                   | Fraction          | 0.1636      | 0.1523        | 0.1223                    | 0.0000         | 0.7157         |
| MB                     | Fraction          | 3.0226      | 1.5431        | 4.9657                    | -1.3445        | 35.4570        |

Note: The definition and measurement of the variables are presented in Table 9. TBQ and MB are winsorized at 1% in each tail to control for outlier effect.

**Table 12.1: Segment-wise descriptive statistics of the performance and key explanatory variables for sample firms**

| Period               | 2000-2005                         |                    |        | 2006-2012                               |                    |        | 2013-2018                               |                    |        | 2019-2020                               |                    |        |
|----------------------|-----------------------------------|--------------------|--------|-----------------------------------------|--------------------|--------|-----------------------------------------|--------------------|--------|-----------------------------------------|--------------------|--------|
| Phases of CG reforms | Not availability of CG guidelines |                    |        | Issuance of CG guidelines in 2006       |                    |        | Issuance of CG guidelines in 2012       |                    |        | Issuance of CG Code in 2018             |                    |        |
| Segment              | Pre-development phase of CG       |                    |        | 1 <sup>st</sup> development phase of CG |                    |        | 2 <sup>nd</sup> development phase of CG |                    |        | 3 <sup>rd</sup> development phase of CG |                    |        |
| No. of Observations  | 546                               |                    |        | 831                                     |                    |        | 1036                                    |                    |        | 242                                     |                    |        |
| Variables            | Mean                              | Standard Deviation | Median | Mean                                    | Standard Deviation | Median | Mean                                    | Standard Deviation | Median | Mean                                    | Standard Deviation | Median |
| BEP                  | 0.074                             | 0.074              | 0.071  | 0.091                                   | 0.090              | 0.080  | 0.082                                   | 0.098              | 0.071  | 0.081                                   | 0.115              | 0.062  |
| ROA                  | 0.032                             | 0.072              | 0.027  | 0.045                                   | 0.072              | 0.033  | 0.041                                   | 0.100              | 0.037  | 0.041                                   | 0.106              | 0.028  |
| TBQ                  | 0.849                             | 0.503              | 0.744  | 1.721                                   | 1.667              | 1.263  | 1.684                                   | 1.560              | 1.188  | 1.809                                   | 1.956              | 1.061  |
| BS                   | 6.493                             | 2.017              | 6.000  | 7.282                                   | 2.005              | 7.000  | 7.449                                   | 2.283              | 7.000  | 7.591                                   | 2.801              | 7.000  |
| BIND                 | 0.006                             | 0.044              | 0.000  | 0.122                                   | 0.092              | 0.143  | 0.248                                   | 0.098              | 0.222  | 0.262                                   | 0.092              | 0.250  |
| CEOD                 | 0.386                             | 0.487              | 0.000  | 0.194                                   | 0.395              | 0.000  | 0.019                                   | 0.138              | 0.000  | 0.008                                   | 0.091              | 0.000  |
| FCEO                 | 0.247                             | 0.432              | 0.000  | 0.344                                   | 0.475              | 0.000  | 0.502                                   | 0.500              | 1.000  | 0.488                                   | 0.501              | 0.000  |
| FOWN                 | 0.231                             | 0.185              | 0.234  | 0.202                                   | 0.186              | 0.172  | 0.210                                   | 0.186              | 0.180  | 0.191                                   | 0.175              | 0.154  |
| FOWN >20             | 0.535                             | 0.499              | 1.000  | 0.458                                   | 0.499              | 0.000  | 0.467                                   | 0.499              | 0.000  | 0.438                                   | 0.497              | 0.000  |
| FOWN >25             | 0.471                             | 0.500              | 0.000  | 0.384                                   | 0.487              | 0.000  | 0.371                                   | 0.483              | 0.000  | 0.310                                   | 0.463              | 0.000  |
| FOWN >30             | 0.383                             | 0.487              | 0.000  | 0.304                                   | 0.460              | 0.000  | 0.280                                   | 0.449              | 0.000  | 0.223                                   | 0.417              | 0.000  |
| ACIND                | 0.004                             | 0.060              | 0.000  | 0.326                                   | 0.469              | 0.000  | 0.944                                   | 0.230              | 1.000  | 0.992                                   | 0.091              | 1.000  |
| ACM                  | 0.040                             | 0.329              | 0.000  | 2.028                                   | 1.655              | 2.000  | 4.009                                   | 1.635              | 4.000  | 4.430                                   | 1.316              | 4.000  |

Note: The definition and measurement of the variables are presented in Table 9. TBQ is winsorized at 1% in each tail to control for outlier effect.



Table 12.2: Difference of means tests

|              | Pre-development<br>phase of CG | 1 <sup>st</sup> phase<br>of CG |                    | 1 <sup>st</sup> phase<br>of CG | 2 <sup>nd</sup> phase<br>of CG |                    | 2 <sup>nd</sup> phase<br>of CG | 3 <sup>rd</sup> phase<br>of CG |                    |
|--------------|--------------------------------|--------------------------------|--------------------|--------------------------------|--------------------------------|--------------------|--------------------------------|--------------------------------|--------------------|
| Years        | 2000-05                        | 2006-12                        |                    | 2006-12                        | 2013-18                        |                    | 2013-18                        | 2019-20                        |                    |
| Observations | 546                            | 831                            |                    | 831                            | 1036                           |                    | 1036                           | 242                            |                    |
| Variables    | Mean                           | Mean                           | <i>t-statistic</i> | Mean                           | Mean                           | <i>t-statistic</i> | Mean                           | Mean                           | <i>t-statistic</i> |
| BEP          | 0.0738                         | 0.0909                         | <b>-3.8610***</b>  | 0.0909                         | 0.0818                         | <b>2.0886**</b>    | 0.0818                         | 0.0813                         | <i>0.0641</i>      |
| ROA          | 0.0321                         | 0.0451                         | <b>-3.2714***</b>  | 0.0451                         | 0.04130                        | <i>0.9559</i>      | 0.0413                         | 0.0408                         | <i>0.0706</i>      |
| TBQ          | 0.8492                         | 1.7208                         | <b>-14.1280***</b> | 1.7208                         | 1.6836                         | <i>0.4933</i>      | 1.6836                         | 1.8088                         | <i>-0.9290</i>     |
| BS           | 6.4927                         | 7.2816                         | <b>-7.1176***</b>  | 7.2816                         | 7.4488                         | <b>-1.6837*</b>    | 7.4488                         | 7.5909                         | <i>-0.7342</i>     |
| BIND         | 0.0057                         | 0.1218                         | <b>-31.2657***</b> | 0.1218                         | 0.2476                         | <b>-28.4614***</b> | 0.2476                         | 0.2617                         | <b>-2.1151**</b>   |
| CEOD         | 0.3864                         | 0.1937                         | <b>7.7189***</b>   | 0.1937                         | 0.0193                         | <b>12.1391***</b>  | 0.0193                         | 0.0083                         | <i>1.5266</i>      |
| FCEO         | 0.2473                         | 0.3442                         | <b>-3.9128***</b>  | 0.3442                         | 0.5019                         | <b>-6.9623***</b>  | 0.5019                         | 0.4876                         | <i>0.4007</i>      |
| FOWN         | 0.2311                         | 0.2020                         | <b>2.8407***</b>   | 0.2020                         | 0.2098                         | <i>-0.8940</i>     | 0.2098                         | 0.1909                         | <i>1.4965</i>      |
| FOWN >20     | 0.5348                         | 0.4584                         | <b>2.7762***</b>   | 0.4585                         | 0.4671                         | <i>-0.3744</i>     | 0.4672                         | 0.4380                         | <i>0.8210</i>      |
| FOWN >25     | 0.4707                         | 0.3839                         | <b>3.1871***</b>   | 0.3839                         | 0.3707                         | <i>0.5851</i>      | 0.3707                         | 0.3099                         | <b>1.8208*</b>     |
| FOWN >30     | 0.3828                         | 0.3045                         | <b>2.9850***</b>   | 0.3045                         | 0.2799                         | <i>1.1565</i>      | 0.2799                         | 0.2231                         | <b>1.8782*</b>     |
| ACIND        | 0.0037                         | 0.3261                         | <b>-19.5704***</b> | 0.3261                         | 0.9440                         | <b>-34.7686***</b> | 0.9440                         | 0.9917                         | <b>-5.1738***</b>  |
| ACM          | 0.0403                         | 2.0277                         | <b>-33.6255***</b> | 2.0277                         | 4.0087                         | <b>-25.8453***</b> | 4.0087                         | 4.4298                         | <b>-4.2674***</b>  |

Note: \*, \*\*, and \*\*\* denote 10%, 5%, and 1% significance level respectively. The definitions of the variables are presented in Table 9. TBQ is winsorized at 1% in each tail to control for outlier effect.

**Table 12.3: Difference of medians test using Mann-Whitney approach**

|              | Pre-development<br>phase of CG | 1 <sup>st</sup> phase<br>of CG | Mann-<br>Whitney   | 1 <sup>st</sup> phase<br>of CG | 2 <sup>nd</sup> phase<br>of CG | Mann-<br>Whitney   | 2 <sup>nd</sup> phase<br>of CG | 3 <sup>rd</sup> phase<br>of CG | Mann-<br>Whitney   |
|--------------|--------------------------------|--------------------------------|--------------------|--------------------------------|--------------------------------|--------------------|--------------------------------|--------------------------------|--------------------|
| Years        | 2000-05                        | 2006-12                        |                    | 2006-12                        | 2013-18                        |                    | 2013-18                        | 2019-20                        |                    |
| Observations | 546                            | 831                            |                    | 831                            | 1036                           |                    | 1036                           | 242                            |                    |
| Variables    | Median                         | Median                         | <i>z-statistic</i> | Median                         | Median                         | <i>z-statistic</i> | Median                         | Median                         | <i>z-statistic</i> |
| BEP          | 0.071                          | 0.080                          | <b>-3.264 ***</b>  | 0.080                          | 0.071                          | <b>2.353 **</b>    | 0.071                          | 0.062                          | <i>1.495</i>       |
| ROA          | 0.027                          | 0.033                          | <b>-3.204 ***</b>  | 0.033                          | 0.037                          | <i>-0.389</i>      | 0.037                          | 0.028                          | <i>1.338</i>       |
| TBQ          | 0.744                          | 1.263                          | <b>-13.955 ***</b> | 1.263                          | 1.188                          | <i>0.143</i>       | 1.188                          | 1.061                          | <i>0.715</i>       |
| BS           | 6.000                          | 7.000                          | <b>-6.810 ***</b>  | 7.000                          | 7.000                          | <i>-0.757</i>      | 7.000                          | 7.000                          | <i>0.275</i>       |
| BIND         | 0.000                          | 0.143                          | <b>-24.833 ***</b> | 0.143                          | 0.222                          | <b>-28.379 ***</b> | 0.222                          | 0.250                          | <b>-2.096 **</b>   |
| CEOD         | 0.000                          | 0.000                          | <i>7.875 ***</i>   | 0.000                          | 0.000                          | <b>12.656 ***</b>  | 0.000                          | 0.000                          | <i>1.188</i>       |
| FCEO         | 0.000                          | 0.000                          | <b>-3.817 ***</b>  | 0.000                          | 1.000                          | <b>-6.838 ***</b>  | 1.000                          | 0.000                          | <i>0.401</i>       |
| FOWN         | 0.234                          | 0.172                          | <b>2.994 ***</b>   | 0.172                          | 0.180                          | <i>-1.090</i>      | 0.180                          | 0.154                          | <i>1.314</i>       |
| FOWN >20     | 1.000                          | 0.000                          | <b>2.770 ***</b>   | 0.000                          | 0.000                          | <i>-0.374</i>      | 0.000                          | 0.000                          | <i>0.819</i>       |
| FOWN >25     | 0.000                          | 0.000                          | <b>3.194 ***</b>   | 0.000                          | 0.000                          | <i>0.586</i>       | 0.000                          | 0.000                          | <b>1.773 *</b>     |
| FOWN >30     | 0.000                          | 0.000                          | <b>3.010 ***</b>   | 0.000                          | 0.000                          | <i>1.160</i>       | 0.000                          | 0.000                          | <b>1.792 *</b>     |
| ACIND        | 0.000                          | 0.000                          | <b>-14.676 ***</b> | 0.000                          | 1.000                          | <b>-28.189 ***</b> | 1.000                          | 1.000                          | <b>-3.159 ***</b>  |
| ACM          | 0.000                          | 2.000                          | <b>-25.549 ***</b> | 2.000                          | 4.000                          | <b>-24.790 ***</b> | 4.000                          | 4.000                          | <b>-5.158 ***</b>  |

Note: \*, \*\*, and \*\*\* denote 10%, 5%, and 1% significance level respectively. The definitions of the variables are presented in Table 9. TBQ is winsorized at 1% in each tail to control for outlier effect.

**Table 12.4: Difference of medians test using Equality-of-Medians approach**

|              | <b>Pre-development<br/>phase of CG</b> | <b>1<sup>st</sup> phase<br/>of CG</b> | <b>Median Test</b> | <b>1<sup>st</sup> phase<br/>of CG</b> | <b>2<sup>nd</sup> phase<br/>of CG</b> | <b>Median Test</b> | <b>2<sup>nd</sup> phase<br/>of CG</b> | <b>3<sup>rd</sup> phase<br/>of CG</b> | <b>Median Test</b> |
|--------------|----------------------------------------|---------------------------------------|--------------------|---------------------------------------|---------------------------------------|--------------------|---------------------------------------|---------------------------------------|--------------------|
| Years        | 2000-05                                | 2006-12                               | Pearson<br>chi2(1) | 2006-12                               | 2013-18                               | Pearson<br>chi2(1) | 2013-18                               | 2019-20                               | Pearson<br>chi2(1) |
| Observations | 546                                    | 831                                   |                    | 831                                   | 1036                                  |                    | 1036                                  | 242                                   |                    |
| Variables    | Median                                 | Median                                |                    | Median                                | Median                                |                    | Median                                | Median                                |                    |
| BEP          | 0.071                                  | 0.080                                 | <b>7.7714 ***</b>  | 0.080                                 | 0.071                                 | <b>7.9233**</b>    | 0.071                                 | 0.062                                 | <b>4.8987**</b>    |
| ROA          | 0.027                                  | 0.033                                 | <b>9.0486***</b>   | 0.033                                 | 0.037                                 | <b>2.7415*</b>     | 0.037                                 | 0.028                                 | <b>4.2870**</b>    |
| TBQ          | 0.744                                  | 1.263                                 | <b>155.8381***</b> | 1.263                                 | 1.188                                 | <i>1.0925</i>      | 1.188                                 | 1.061                                 | <i>1.1469</i>      |
| BS           | 6.000                                  | 7.000                                 | <b>12.0071***</b>  | 7.000                                 | 7.000                                 | <b>5.6249**</b>    | 7.000                                 | 7.000                                 | <i>0.0920</i>      |
| BIND         | 0.000                                  | 0.143                                 | <b>707.3326***</b> | 0.143                                 | 0.222                                 | <b>562.7038***</b> | 0.222                                 | 0.250                                 | <i>0.0828</i>      |
| CEOD         | 0.000                                  | 0.000                                 | <b>61.0851***</b>  | 0.000                                 | 0.000                                 | <b>158.2823***</b> | 0.000                                 | 0.000                                 | <i>0.8362</i>      |
| FCEO         | 0.000                                  | 0.000                                 | <b>14.1262***</b>  | 0.000                                 | 1.000                                 | <b>46.1419***</b>  | 1.000                                 | 0.000                                 | <i>0.1089</i>      |
| FOWN         | 0.234                                  | 0.172                                 | <b>7.4051***</b>   | 0.172                                 | 0.180                                 | <i>0.8293</i>      | 0.180                                 | 0.154                                 | <i>0.4129</i>      |
| FOWN >20     | 1.000                                  | 0.000                                 | <b>7.3776***</b>   | 0.000                                 | 0.000                                 | <i>0.1075</i>      | 0.000                                 | 0.000                                 | <i>0.5592</i>      |
| FOWN >25     | 0.000                                  | 0.000                                 | <b>9.8539***</b>   | 0.000                                 | 0.000                                 | <i>0.2892</i>      | 0.000                                 | 0.000                                 | <b>2.8861*</b>     |
| FOWN >30     | 0.000                                  | 0.000                                 | <b>8.7206***</b>   | 0.000                                 | 0.000                                 | <i>1.2289</i>      | 0.000                                 | 0.000                                 | <b>2.9332*</b>     |
| ACIND        | 0.000                                  | 0.000                                 | <b>213.5127***</b> | 0.000                                 | 1.000                                 | <i>NA</i>          | 1.000                                 | 1.000                                 | <i>NA</i>          |
| ACM          | 0.000                                  | 2.000                                 | <b>732.3827***</b> | 2.000                                 | 4.000                                 | <b>87.9707***</b>  | 4.000                                 | 4.000                                 | <i>0.0731</i>      |

Note: \*, \*\*, and \*\*\* denote 10%, 5%, and 1% significance level respectively. The definitions of the variables are presented in Table 9. TBQ is winsorized at 1% in each tail to control for outlier effect. NA refers to not applicable as the output of median test is not found after running this test.

Table 11 also demonstrates the descriptive statistics of control variables. It reports that the average size of corporate boards of listed companies is 7.2 (median=7), which indicates that the board size lies in the small band. The presence of CEO duality has been observed in 14.84 percent of companies in Bangladesh over 2000-2020. The average age of sample firms is nearly 11.5-year. The average size of firms is 21.12. On an average, the firms grow up at 13.36 percent in every year. The mean value of leverage under a measure of total debt to total assets is 29.18 percent. The directors' shareholding is on an average of 41.57 percent which is still above the BSEC's directive (a minimum of 30 percent shareholdings) issued in 2011. The average value of institutional shareholdings is 16.36 percent. Finally, the average value of market to book value ratio is greater than one (3.02) with a standard deviation of 4.96 implying that most of the companies are overvalued in the stock market.

### **6.2.2 Difference of means and difference of medians tests**

This study used an independent-sample-t test to examine whether the means of key variables are significantly different between different phases of corporate governance reforms in Bangladesh. The results of independent-t test, presented in Table 12.2, indicate that the mean values of all performance measures (BEP, ROA, and TBQ) in the first phase of corporate governance (CG) developments are higher than that of the pre-development phase of corporate governance (CG) guidelines, which are statistically different at 1 percent level. Further to this, the means of key explanatory variables ((board size (BS), board independence (BIND), family-CEO duality (FCEO), audit committee independence (ACIND), and number of audit committee meetings (ACM)) in the first phase of CG developments are higher than that of the pre-development development phase of CG guidelines, which are statistically different at 1 percent level of significance. On the other hand, the means of CEO-duality (CEOD) and all measures of family ownership (FOWN, FOWN>20, FOWN>25, FOWN>30) in the first phase of CG developments are less than that of the pre-development development phase of CG guidelines, which are significantly different at 1 percent level. In Table 12.2, the mean values of a dependent variable (BEP) and an explanatory variable (CEOD) in the second phase of corporate governance reforms are less than that of the first phase of the corporate governance reforms, which are significantly different at 5 percent level and 1 percent level

respectively. As shown in Table 12.2, the means of FCEO, BIND, ACIND, and ACM in the second phase of CG reforms are higher than that of the first phase of CG reforms and these are statistically different at 1 percent level of significance. The means of BIND, ACIND and ACM in the third phase of CG reforms are high compared to that of the second phase of CG reforms and these are statistically different at a maximum 5 percent level of significance. It is also observed in Table 12.2 that the means of FOWN>25 and FOWN>30 in the third phase of CG reforms are less than that of the second phase of CG reforms, which are significant at 10 percent level.

Table 12.3 shows the results of Mann-Whitney tests to observe whether the medians of dependent and key explanatory variables in one phase of CG reforms are significantly different from that of another phase of CG reforms. Results demonstrate that medians of all performance variables and the key independent variables are significantly different between the first phase of CG development and pre-development phase CG development. In addition, the medians of basic earnings power (BEP), board independence (BIND), CEO-duality (CEOD), family-CEO duality (FCEO), audit committee independence (ACIND), and the number of audit committee meeting (ACM) are significantly different between the second phase of CG reforms and the first phase of CG reforms at maximum 5 percent level of significance. On the other hand, the medians of BIND, FOWN25, FOWN30, ACIND, and ACM are significantly between the third phase of CG reforms and the second phase of CG reforms in Bangladesh.

Table 12.4 shows the results of Equality-of-Median tests. Results indicate that medians of all performance variables and explanatory variables are different between first phase of CG development and pre-development phase and significant at 1 percent level of significance. The medians of accounting-based performance measures (BEP and ROA) and the medians of BS, BIND, CEOD, FCEO, and ACM are significantly different between the second phase of CG reforms and the first phase of CG development. Further to this, the medians of BEP and ROA are significantly different between the third phase CG reforms and the second phase of CG reforms. Finally, the medians of ACM are significantly different between the last two phases of CG reforms.

**Table 13: Year-wise mean value of the performance variables and key explanatory variables for sample firms**

| Phase                                   | Year | BEP   |        | ROA   |        | TBQ   |        | BIND  |        | ACIND |        | ACM   |        | CEOD  |        | FCEO  |        |
|-----------------------------------------|------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|
|                                         |      | Mean  | Median | Mean  | Median | Mean  | Median | Mean  | Median | Mean  | Median | Mean  | Median | Mean  | Median | Mean  | Median |
| Pre-development phase of CG             | 2000 | 0.084 | 0.084  | 0.041 | 0.036  | 0.898 | 0.826  | 0.005 | 0      | 0.000 | 0      | 0.024 | 0      | 0.412 | 0      | 0.224 | 0      |
|                                         | 2001 | 0.077 | 0.084  | 0.034 | 0.032  | 0.812 | 0.741  | 0.005 | 0      | 0.000 | 0      | 0.023 | 0      | 0.425 | 0      | 0.230 | 0      |
|                                         | 2002 | 0.068 | 0.071  | 0.023 | 0.028  | 0.837 | 0.74   | 0.004 | 0      | 0.000 | 0      | 0.022 | 0      | 0.396 | 0      | 0.242 | 0      |
|                                         | 2003 | 0.072 | 0.071  | 0.030 | 0.024  | 0.807 | 0.723  | 0.004 | 0      | 0.000 | 0      | 0.022 | 0      | 0.366 | 0      | 0.258 | 0      |
|                                         | 2004 | 0.067 | 0.066  | 0.032 | 0.024  | 0.871 | 0.783  | 0.004 | 0      | 0.000 | 0      | 0.043 | 0      | 0.372 | 0      | 0.266 | 0      |
|                                         | 2005 | 0.076 | 0.064  | 0.034 | 0.023  | 0.869 | 0.709  | 0.012 | 0      | 0.021 | 0      | 0.104 | 0      | 0.354 | 0      | 0.260 | 0      |
| 1 <sup>st</sup> development phase of CG | 2006 | 0.083 | 0.077  | 0.035 | 0.023  | 0.864 | 0.726  | 0.051 | 0      | 0.097 | 0      | 0.689 | 0      | 0.301 | 0      | 0.282 | 0      |
|                                         | 2007 | 0.080 | 0.078  | 0.032 | 0.027  | 1.054 | 0.871  | 0.092 | 0.111  | 0.238 | 0      | 1.305 | 1      | 0.238 | 0      | 0.333 | 0      |
|                                         | 2008 | 0.084 | 0.075  | 0.036 | 0.031  | 1.346 | 1.076  | 0.114 | 0.125  | 0.259 | 0      | 1.696 | 1      | 0.188 | 0      | 0.321 | 0      |
|                                         | 2009 | 0.103 | 0.083  | 0.050 | 0.033  | 1.710 | 1.44   | 0.128 | 0.143  | 0.291 | 0      | 1.966 | 2      | 0.179 | 0      | 0.342 | 0      |
|                                         | 2010 | 0.104 | 0.081  | 0.062 | 0.035  | 2.539 | 1.756  | 0.131 | 0.143  | 0.315 | 0      | 2.315 | 2      | 0.194 | 0      | 0.347 | 0      |
|                                         | 2011 | 0.092 | 0.078  | 0.051 | 0.039  | 2.945 | 2.03   | 0.130 | 0.143  | 0.369 | 0      | 2.615 | 3      | 0.177 | 0      | 0.346 | 0      |
|                                         | 2012 | 0.088 | 0.082  | 0.045 | 0.039  | 1.298 | 1.191  | 0.181 | 0.167  | 0.614 | 1      | 3.071 | 3      | 0.114 | 0      | 0.414 | 0      |
| 2 <sup>nd</sup> development phase of CG | 2013 | 0.090 | 0.081  | 0.046 | 0.042  | 1.413 | 1.145  | 0.221 | 0.2    | 0.841 | 1      | 3.45  | 4      | 0.053 | 0      | 0.464 | 0      |
|                                         | 2014 | 0.086 | 0.075  | 0.045 | 0.042  | 1.620 | 1.163  | 0.245 | 0.222  | 0.935 | 1      | 3.776 | 4      | 0.018 | 0      | 0.488 | 0      |
|                                         | 2015 | 0.082 | 0.071  | 0.043 | 0.035  | 1.720 | 1.169  | 0.254 | 0.25   | 0.960 | 1      | 4.057 | 4      | 0.011 | 0      | 0.506 | 1      |
|                                         | 2016 | 0.078 | 0.074  | 0.036 | 0.036  | 1.632 | 1.094  | 0.254 | 0.25   | 0.967 | 1      | 4.204 | 4      | 0.006 | 0      | 0.514 | 1      |
|                                         | 2017 | 0.075 | 0.066  | 0.032 | 0.036  | 1.879 | 1.419  | 0.251 | 0.25   | 0.968 | 1      | 4.151 | 4      | 0.016 | 0      | 0.508 | 1      |
|                                         | 2018 | 0.083 | 0.066  | 0.048 | 0.034  | 1.790 | 1.158  | 0.257 | 0.25   | 0.977 | 1      | 4.318 | 4      | 0.017 | 0      | 0.526 | 1      |
| 3 <sup>rd</sup> Phase of CG             | 2019 | 0.093 | 0.070  | 0.052 | 0.035  | 1.982 | 1.220  | 0.266 | 0.25   | 0.992 | 1      | 4.411 | 4      | 0.008 | 0      | 0.484 | 0      |
|                                         | 2020 | 0.069 | 0.053  | 0.029 | 0.02   | 1.626 | 0.947  | 0.257 | 0.222  | 0.992 | 1      | 4.449 | 4      | 0.008 | 0      | 0.492 | 0      |

Table 13 Continued

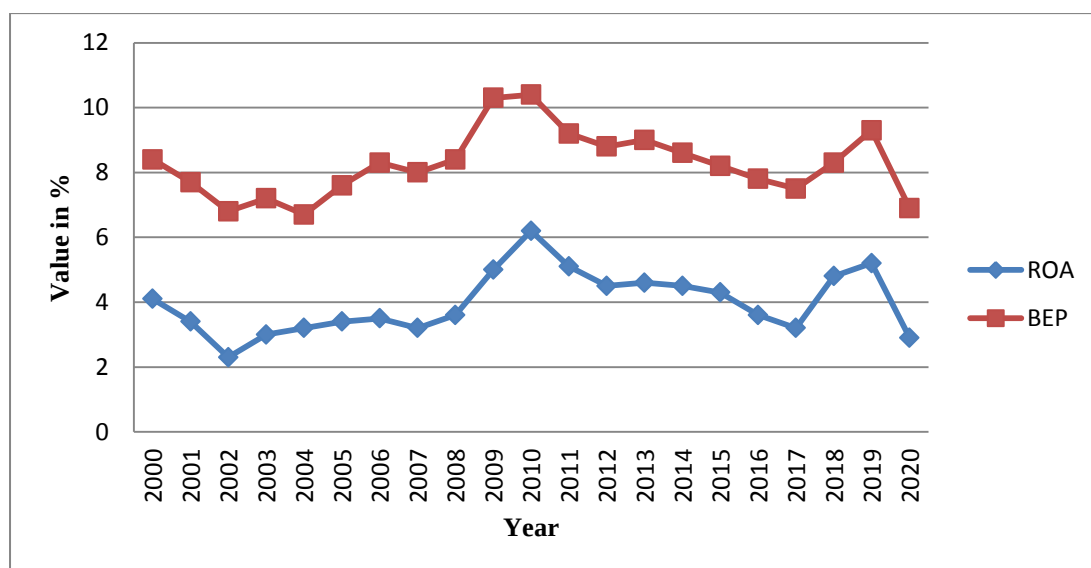
|                                         | Year | FOWN  |        | FOWN >20 |        | FOW-N >25 |        | FOWN>30 |        |
|-----------------------------------------|------|-------|--------|----------|--------|-----------|--------|---------|--------|
|                                         |      | Mean  | Median | Mean     | Median | Mean      | Median | Mean    | Median |
| Pre-development phase of CG             | 2000 | 0.229 | 0.234  | 0.541    | 1      | 0.482     | 0      | 0.388   | 0      |
|                                         | 2001 | 0.230 | 0.234  | 0.540    | 1      | 0.483     | 0      | 0.391   | 0      |
|                                         | 2002 | 0.236 | 0.234  | 0.538    | 1      | 0.473     | 0      | 0.385   | 0      |
|                                         | 2003 | 0.231 | 0.233  | 0.527    | 1      | 0.462     | 0      | 0.376   | 0      |
|                                         | 2004 | 0.233 | 0.234  | 0.532    | 1      | 0.468     | 0      | 0.383   | 0      |
|                                         | 2005 | 0.228 | 0.230  | 0.531    | 1      | 0.458     | 0      | 0.375   | 0      |
| 1 <sup>st</sup> development phase of CG | 2006 | 0.216 | 0.211  | 0.505    | 1      | 0.427     | 0      | 0.340   | 0      |
|                                         | 2007 | 0.216 | 0.198  | 0.495    | 0      | 0.429     | 0      | 0.352   | 0      |
|                                         | 2008 | 0.212 | 0.193  | 0.482    | 0      | 0.402     | 0      | 0.321   | 0      |
|                                         | 2009 | 0.199 | 0.149  | 0.453    | 0      | 0.393     | 0      | 0.316   | 0      |
|                                         | 2010 | 0.193 | 0.160  | 0.427    | 0      | 0.371     | 0      | 0.266   | 0      |
|                                         | 2011 | 0.189 | 0.148  | 0.423    | 0      | 0.346     | 0      | 0.277   | 0      |
|                                         | 2012 | 0.196 | 0.152  | 0.443    | 0      | 0.343     | 0      | 0.279   | 0      |
| 2 <sup>nd</sup> development phase of CG | 2013 | 0.199 | 0.169  | 0.444    | 0      | 0.344     | 0      | 0.258   | 0      |
|                                         | 2014 | 0.212 | 0.178  | 0.465    | 0      | 0.365     | 0      | 0.253   | 0      |
|                                         | 2015 | 0.209 | 0.182  | 0.460    | 0      | 0.369     | 0      | 0.273   | 0      |
|                                         | 2016 | 0.210 | 0.178  | 0.464    | 0      | 0.365     | 0      | 0.287   | 0      |
|                                         | 2017 | 0.210 | 0.187  | 0.476    | 0      | 0.384     | 0      | 0.297   | 0      |
|                                         | 2018 | 0.218 | 0.199  | 0.491    | 0      | 0.393     | 0      | 0.306   | 0      |
| 3 <sup>rd</sup> Phase of CG             | 2019 | 0.191 | 0.152  | 0.435    | 0      | 0.315     | 0      | 0.234   | 0      |
|                                         | 2020 | 0.190 | 0.162  | 0.441    | 0      | 0.305     | 0      | 0.212   | 0      |

Note: The definition and measurement of the variables are presented in Table 9. TBQ is winsorized at 1% in each tail to control for outlier effect.

### 6.2.3 Trend Analysis of Key Variables

Table 13 provides the information about the mean value of the performance variables and the key explanatory variables in every year. It also shows the distribution of total number of firms in year. Apart from, using the data of Table 13, the trends of the mean value of these variables are graphically presented throughout the Figure 2 to Figure 8.

**Figure 2: Comparative mean value of the accounting-based performance measures of firms**



The Figure 2 provides information about the trends of two accounting-based measures of performance (BEP, ROA) for all the sample firms of this study over the last twenty-one years ranging from 2000-2020, which are derived from the value presented in the Table 13. From this figure we can extrapolate two basic general trends in BEP and ROA such as upward and downward, even though they move very consistently in a parallel manner over the periods. As regards the first type of trend, the percentage of BEP and ROA go up from the year of 2002 and it continues to the next six-year with a dramatic rise in 2009 and 2010. Thereafter, they move down till 2020 with exception of year 2018 and 2019. On the other hand, the Figure 3 represents the trends in market-based measure of performance i.e. TBQ. It is observed in Figure 3 that the TBQ increases gradually and then climbs sharply exceeding the value of one. This soaring begins in year 2006 (It the first time when corporate



governance notifications are issued in the history of Bangladesh) and ends up in year 2011 touching the apex point of the line. Thereafter, it suddenly declines in 2012. Nevertheless, it turns to go up in 2013 (It is a year when the revised corporate governance guidelines are issued by the BSEC) and fluctuated steadily following an upward trend between 2012 and 2020. Overall, the trends of TBQ suggests that an effective corporate governance mechanism helps investors to make them confident and formulate better perceptions regarding the company's performance and consequently it leads to higher TBQ.

**Figure 3: Trend of TBQ of sample firms during 2000-2020**

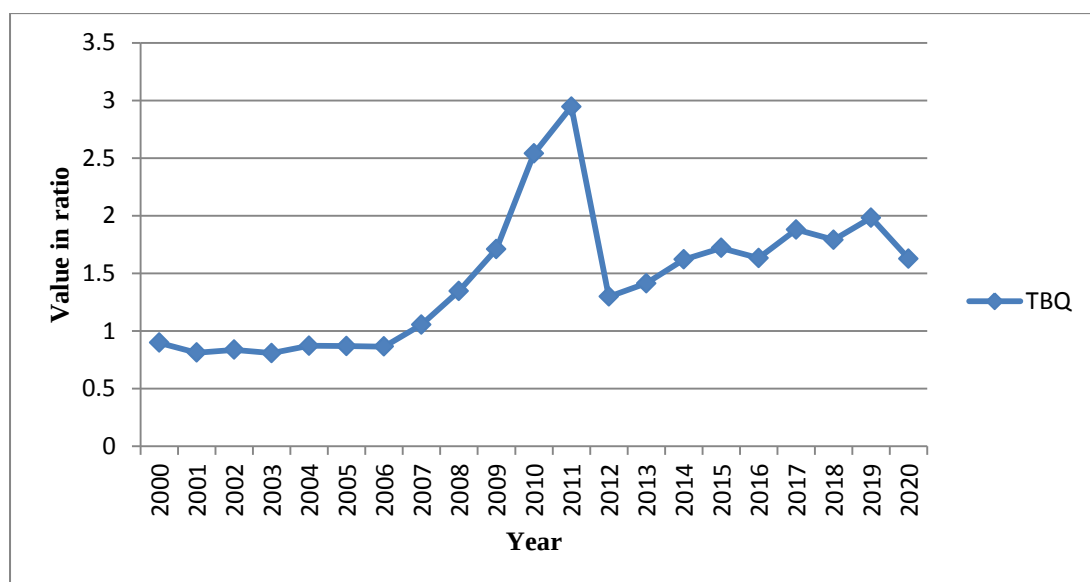
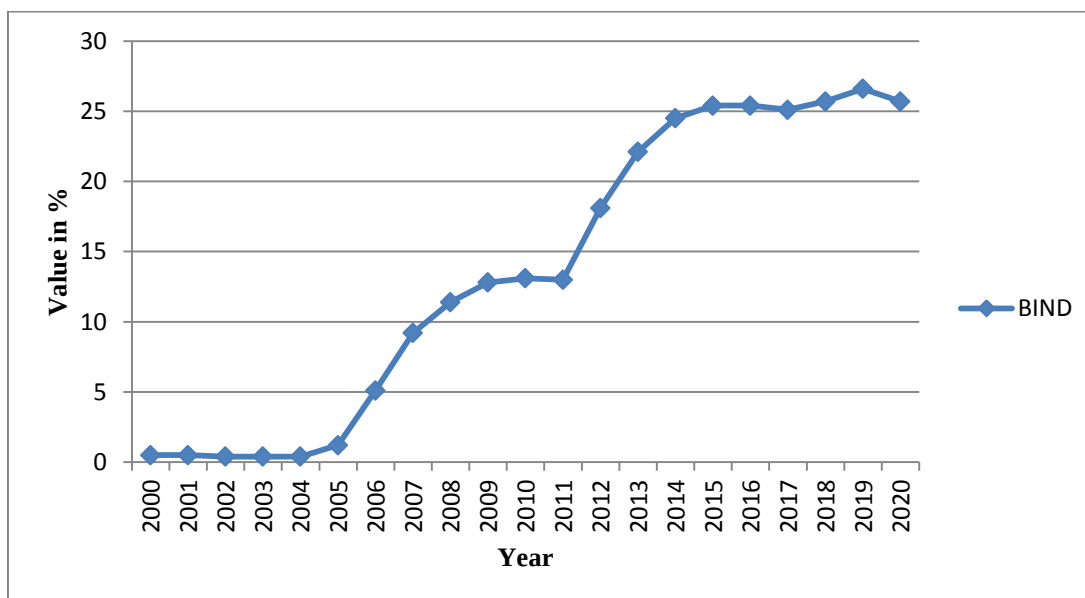
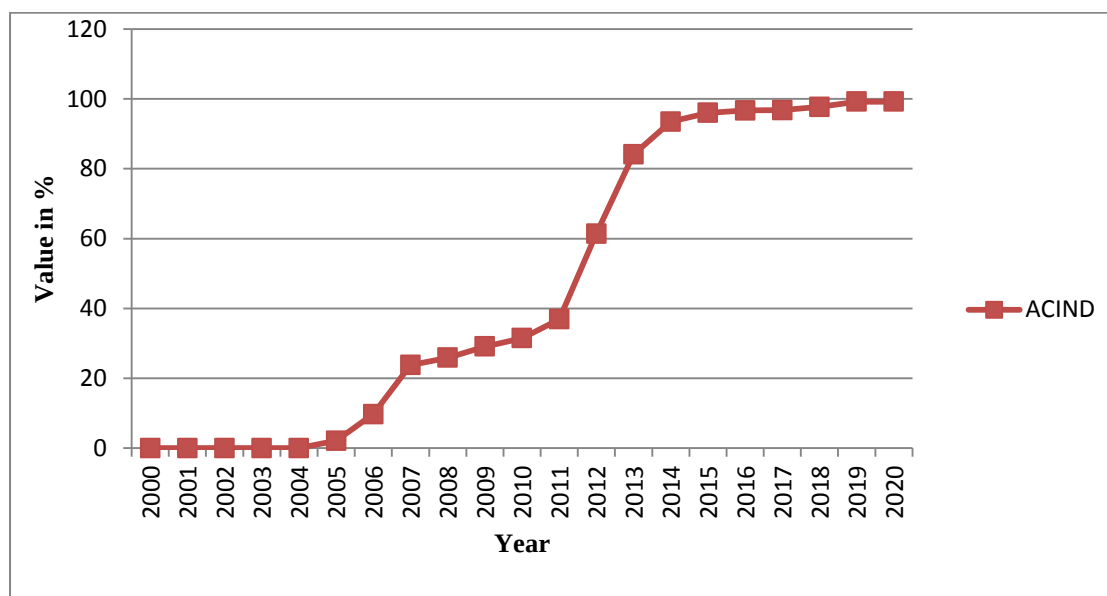


Figure 4 provides the information about the trend of board independence (BIND) for all the sample firms. As there remain no CG guidelines in Bangladesh till 2006, listed firms were highly reluctant to appoint independent directors in their board. Therefore, the line is more flattened on the horizontal axis, but it begins dramatically climbing up from 2006 (the year of issuing CG guidelines) to 2009 and then levels off for the next two years. Interestingly, it further sharply rises between 2012 (in this year, the revised CG guidelines are issued) and 2015 and then levels off. On the other hand, there is a great deal of similarity in pattern of the trends between audit committee independence (ACIND) (c.f. Figure 5) and board independence (BIND) (c.f. Figure 4). However, both lines hold upward trend.

**Figure 4: Trend of the board independence of all sample firms****Figure 5: Trend of the audit committee independence for the full sample**

**Figure 6: Comparative mean value of CEOD and FCEO of all firms in the sample**

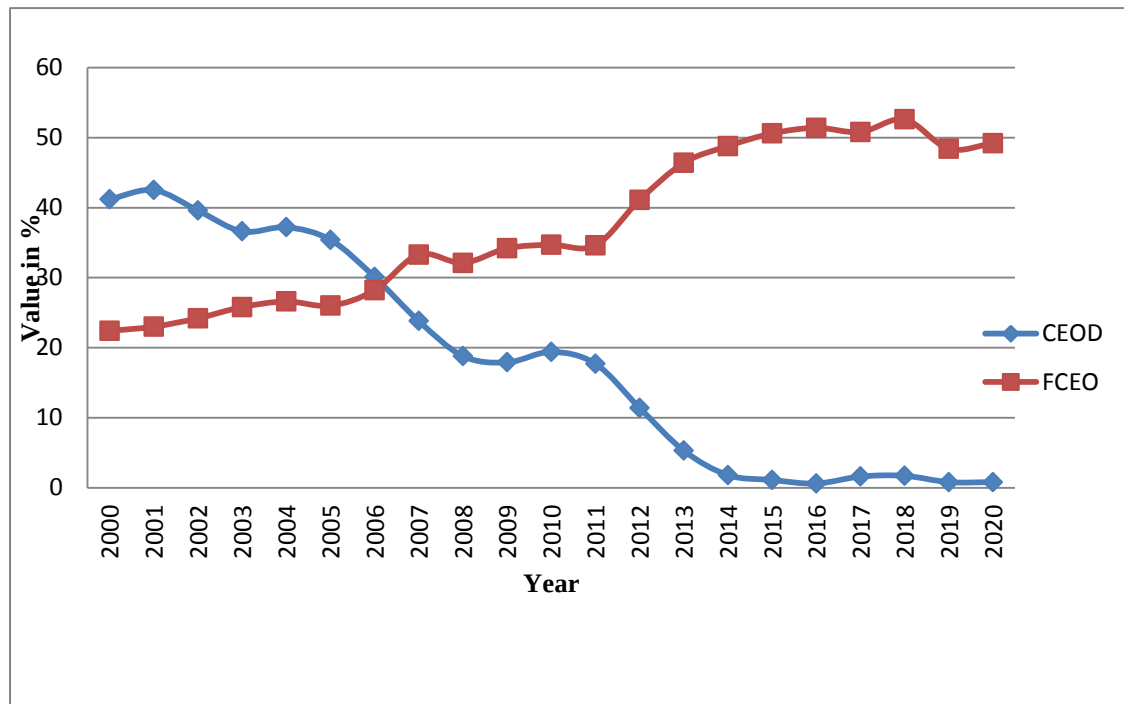
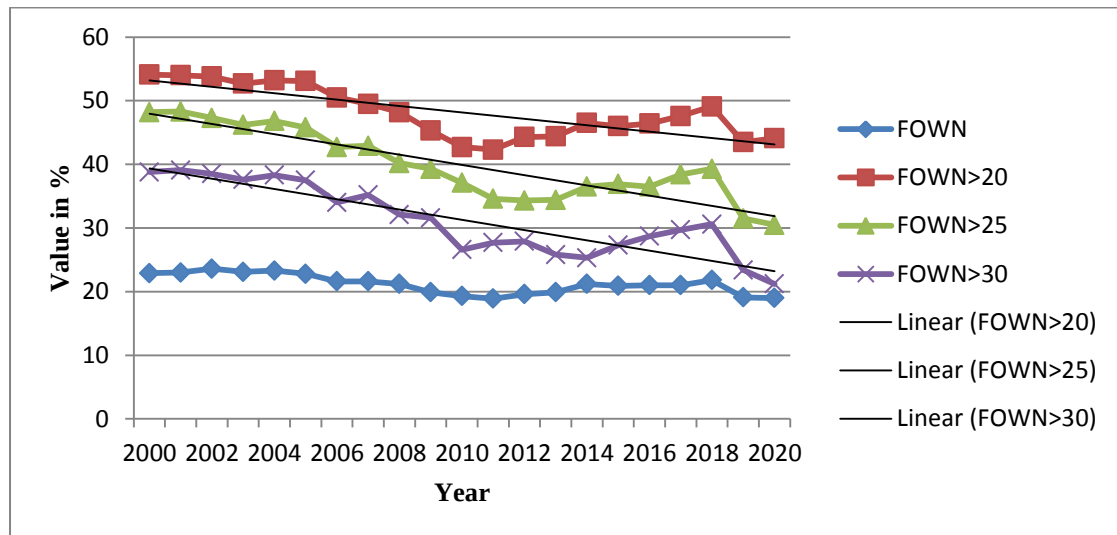
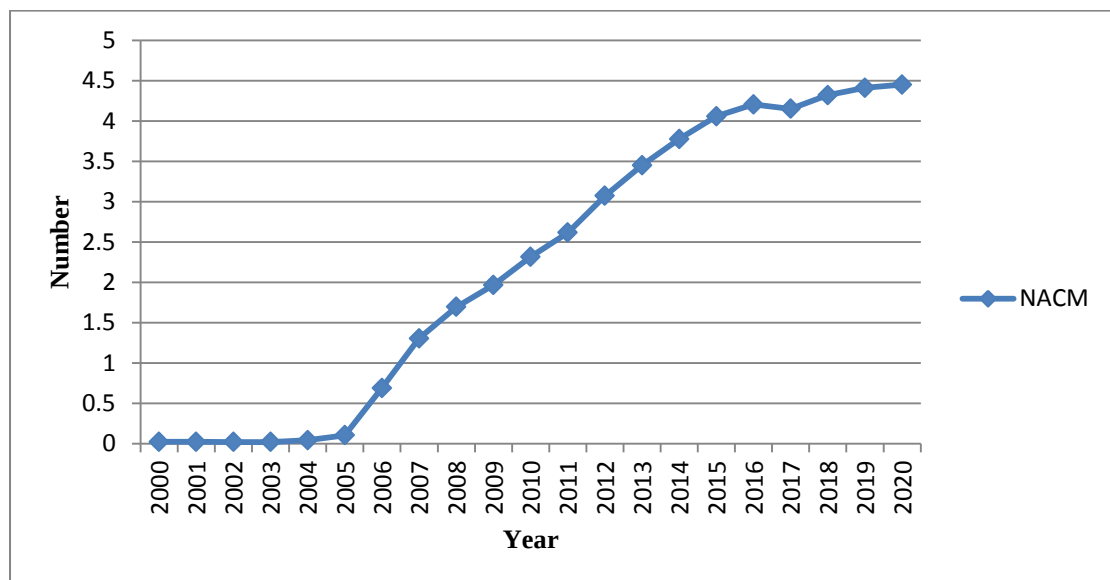


Figure 6 shows the trends of CEO- duality (CEOD) and family-CEO duality (FCEO) for the all firms in the sample during 2000-2020. It is noticeable that the degree of CEOD is down over the year, falling significantly from almost 41 percent a year to just fewer than 19 percent in 2008. Thereafter, it again sharply declines between 2011 and 2014 and then it levels off. By contrast, the degree of FCEO steadily goes up, followed by a sudden increase in years between 2011 and 2014 and a leveling off in the successive years. In sum, these two variables hold diametrically opposite trends. In other words, a gradual disappearance of CEOD leads to a steady and strong presence of FCEO in the listed sample firms in Bangladesh. As per corporate governance (CG) guidelines in 2006, the listed company were given a notification that they shall not have a board with a feature of CEO duality (where the board's chairman and CEO/ Managing Director (MD) are the same individual), though this notification was issued to the company as comply or explain basis rather than compulsory basis. Taking the opportunity of this loophole some companies get delayed to transform their duality-led board into a non-duality-led board (where board chairman and CEO/MD are not the same individuals). Thereafter, the Bangladesh Securities Exchange Commission (BSEC) gradually revised the CG guidelines in 2012 aiming

to bring it in an international standard form of corporate governance system in Bangladesh. It incorporates many new notifications as well as further clarifications/definitions of existing guidelines. In which, maintaining a CEO non-duality-led board becomes compulsory to all listed companies in Bangladesh. Moreover, BSEC revised its notifications in 2018 which is renamed as CG Code. This code becomes significantly different from the past two versions of CG guidelines in Bangladesh. Nevertheless, none of the CG codes does precisely clarify the style of the formation of CEO non-duality. That is, they do not mention whether the two individuals (chairman and CEO/MD) shall not come from the same family. As a result, many listed companies comply with the condition of CEO non-duality in form but retain family-CEO duality. This is a situation when the two positions (chairman and CEO/MD) are occupied by the two individuals who belong to the same family.

Figure 7 represents the trend of family control, measured by the different modes of family ownership, for all sample firms in this study during 2000-2020. It is revealed that percentage of family ownership (FOWN) dropped slightly over the periods. Interestingly, the rate of holding at least 30% ownership by the same family members (FOWN>30) steadily declined to 21.2 percent in 2020 from 38.8 percent in 2000. Similarly, the rate of holding at least 25% ownership by the same family members (FOWN>25) and at least 20% ownership by the same family members (FOWN>20) are both gradually declined. Moreover, the trend line of the FOWN>20 is more flat compared to that of FOWN>25, FOWN>30 during 2000-2020. It suggests that directors from the same family are reluctant to hold more than 25 percent ownership of the firm.

Figure 8 represents the trend of audit committee meetings (ACM) held over the years. From this figure it is observed that the trend of ACM is mostly upward. Between 2000 and 2005, it is highly flattened to the horizontal axis, but after that, it sharply climbed and rocketed to beyond the level of 4 in 2020.

**Figure 7: Comparative mean value of the different levels of family ownerships****Figure 8: Trend of the number of the audit committee meetings**

### 6.2.4 Univariate Analysis

This section provides information about the mean-difference tests and median-difference tests in order to check whether the performance of the sample firms significantly differ between two groups. These groups are formed based on family-CEO duality, family ownership, and audit committee independence and audit committee meetings. In this regard, Table 14-16 show the average value of the

accounting-based performance measures (BEP, ROA) and market-based performance measure (TBQ) for the different groups under the two spans of sample periods. The first span of sample periods ranges from 2000 to 2020 and the second span of sample period ranges between 2006 and 2020. On the other hand, Table 17-19 show the median value of the BEP, ROA and TBQ for the different groups under these two spans of sample periods. As the sole of concern of this section is to examine whether the mean or median values are significantly differ between groups during the periods of corporate governance reforms in Bangladesh (2006-2020), this study runs two-sample t-test and Whitney–Wilcoxon test.

In the panel A of Table 14, it is observed that the total observations are split into two groups with regard to the family-CEO duality. It is observed that the mean values of accounting-based measures of performance (BEP and ROA) are significantly different between groups during 2006-2020; whereas only ROA significantly differs between groups during 2000-2020. On the other hand, panel A of Table 17 indicates that the medians of ROA and TBQ are significantly different between these groups during 2006-2020, whereas only ROA significantly differs between these groups during 2000-2020.

The panel B of Table 14 shows that the total observations are split into two groups with regard to the family ownership. The first group is defined when family members hold at least 20 percent equity ownership and the second group is defined when family members hold more than 20 percent equity ownership. The results of t-statistic suggest that none of the mean values of the performance measures is significantly different between groups during 2006-2020, but ROA significantly differs during 2000-2020. Similarly, the results of z-statistic for medians difference test presented in the pane B of Table 17 indicate that all the median values of the performance measures are significantly different between these groups during 2000-2020, but none of them is significantly different during 2006-2020.

The panel C of Table 14 represents that the total observations are split into two groups with regard to the family ownership. The first group is defined when family members hold at least 25 percent equity ownership and the second group is defined when family members hold more than 25 percent equity ownership. The results of t-statistic

show that the means of all performance measures (BEP, ROA, and TBQ) are significantly different between groups during 2000-2020, but only ROA and TBQ significantly differ during 2006-2020. In the same way, the results of z-statistic for medians difference test presented in the panel C of Table 17 represent that the median values of the ROA and TBQ are significantly different between these groups during 2000-2020, but only ROA is significantly different between these groups during 2006-2020.

The panel D of Table 14 displays that the total observations are split into two groups with regard to the family ownership. The first group is defined when family members hold at least 30 percent equity ownership and the second group is defined when family members hold more than 30 percent equity ownership. The results of t-statistic reveal that the means of all performance measures (BEP, ROA, and TBQ) are significantly differing between groups during 2000-2020 and 2006-2020. By the same token, the results of z-statistic for medians difference test presented in the panel D of Table 17 depict that the median values of the all performance measures are significantly different between these groups during 2000-2020 and 2006-2020.

Overall, the results presented in the Table 14 and 15 suggest that firm performance differs between them with respect to the type and magnitude of family control.

**Table 14: Difference of means test under varying modes of family control  
(FCEO/FOWN20/FOWN25/FOWN30)**

| Panel A                |              |           |                    |              |           |                    |
|------------------------|--------------|-----------|--------------------|--------------|-----------|--------------------|
| Span of Periods        | 2000-2020    |           |                    | 2006-2020    |           |                    |
| Number of Observations | 1596         | 1059      | = 2655             | 1111         | 895       | = 2006             |
| Grouped by FCEO        | Without FCEO | With FCEO | <i>t-statistic</i> | Without FCEO | With FCEO | <i>t-statistic</i> |
| <b>BEP</b>             | 0.0847       | 0.0804    | 1.21               | 0.0888       | 0.0813    | 1.77*              |
| <b>ROA</b>             | 0.0429       | 0.0370    | 1.81*              | 0.0473       | 0.0379    | 2.36**             |
| <b>TBQ</b>             | 1.4970       | 1.5924    | -1.53              | 1.7805       | 1.7260    | 0.72               |
| Panel B                |              |           |                    |              |           |                    |
| Period                 | 2000-2020    |           |                    | 2006-2020    |           |                    |
| Number of Observations | 1392         | 1263      | = 2655             | 1087         | 919       | = 2006             |
| Grouped by FOWN>20     | FOWN≤20      | FOWN>20   | <i>t-statistic</i> | FOWN≤20      | FOWN>20   | <i>t-statistic</i> |
| <b>BEP</b>             | 0.0844       | 0.0814    | 0.84               | 0.0856       | 0.0853    | 0.08               |
| <b>ROA</b>             | 0.0449       | 0.0357    | 2.76**             | 0.0457       | 0.0400    | 1.42               |
| <b>TBQ</b>             | 1.5808       | 1.4847    | 1.61               | 1.7539       | 1.7589    | -0.07              |
| Panel C                |              |           |                    |              |           |                    |
| Period                 | 2000-2020    |           |                    | 2006-2020    |           |                    |
| Number of Observations | 1620         | 1035      | = 2655             | 1272         | 734       | = 2006             |
| Grouped by FOWN>25     | FOWN≤25      | FOWN>25   | <i>t-statistic</i> | FOWN≤25      | FOWN>25   | <i>t-statistic</i> |
| <b>BEP</b>             | 0.0863       | 0.0778    | 2.47**             | 0.0878       | 0.0814    | 1.54               |
| <b>ROA</b>             | 0.0457       | 0.0325    | 4.01***            | 0.0467       | 0.0368    | 2.48**             |
| <b>TBQ</b>             | 1.6144       | 1.4108    | 3.44***            | 1.8029       | 1.6752    | 1.68*              |
| Panel D                |              |           |                    |              |           |                    |
| Period                 | 2000-2020    |           |                    | 2006-2020    |           |                    |
| Number of Observations | 1849         | 806       | = 2655             | 1444         | 562       | = 2006             |
| Grouped by FOWN>30     | FOWN≤30      | FOWN>30   | <i>t-statistic</i> | FOWN≤30      | FOWN>30   | <i>t-statistic</i> |
| <b>BEP</b>             | 0.0890       | 0.0684    | 6.58***            | 0.0910       | 0.0712    | 5.16***            |
| <b>ROA</b>             | 0.0476       | 0.0243    | 7.31***            | 0.0490       | 0.0270    | 5.71***            |
| <b>TBQ</b>             | 1.6421       | 1.2895    | 6.02***            | 1.8465       | 1.5240    | 4.21***            |

Note:\*, \*\*, and \*\*\* denote the level of significance at 10%, 5%, and 1% respectively. The definition and measurement of the variables are presented in Table 9. TBQ is winsorized at 1% in each tail to control for outlier effect.



**Table 15: Difference of means test under audit committee independence (ACIND)**

| Period                 | 2000-2020     |            |                    | 2006-2020     |            |                    |
|------------------------|---------------|------------|--------------------|---------------|------------|--------------------|
| Number of Observations | 1164          | 1491       | = 2655             | 527           | 1749       | = 2006             |
| Grouped by ACIND       | Without ACIND | With ACIND | <i>t-statistic</i> | Without ACIND | With ACIND | <i>t-statistic</i> |
| <b>BEP</b>             | 0.0800        | 0.0853     | -1.50              | 0.0865        | 0.0851     | 0.29               |
| <b>ROA</b>             | 0.0362        | 0.0439     | -2.32**            | 0.0413        | 0.0437     | -0.60              |
| <b>TBQ</b>             | 1.2416        | 1.7642     | -9.21***           | 1.7196        | 1.7693     | -0.60              |

Note:\*, \*\*, and \*\*\* denote the level of significance at 10%, 5%, and 1% respectively. The definition and measurement of the variables are presented in Table 9. TBQ is winsorized at 1% in each tail to control for outlier effect.

**Table 16: Difference of means test under the number of audit committee meeting (ACM)**

| Period                 | 2000-2020    |        |                    | 2006-2020    |        |                    |
|------------------------|--------------|--------|--------------------|--------------|--------|--------------------|
| Number of Observations | 1453         | 1202   | = 2655             | 809          | 1197   | = 2006             |
| Grouped by ACM         | ACM $\leq$ 3 | ACM>3  | <i>t-statistic</i> | ACM $\leq$ 3 | ACM>3  | <i>t-statistic</i> |
| <b>BEP</b>             | 0.0807       | 0.0857 | -1.34              | 0.0857       | 0.0854 | 0.07               |
| <b>ROA</b>             | 0.0375       | 0.0442 | -1.91*             | 0.0419       | 0.0439 | -0.51              |
| <b>TBQ</b>             | 1.3415       | 1.7690 | -7.01***           | 1.7344       | 1.7709 | -0.49              |

Note:\* and \*\*\* denote the level of significance at 10%, 5%, and 1% respectively. The definition and measurement of the variables are presented in Table 9. TBQ is winsorized at 1% in each tail to control for outlier effect.

**Table 17: Whitney–Wilcoxon test for the difference of medians under varying modes of family control (FCEO/FOWN20/FOWN25/FOWN30)**

| Panel A                |              |           |                    |              |           |                    |
|------------------------|--------------|-----------|--------------------|--------------|-----------|--------------------|
| Period                 | 2000-2020    |           |                    | 2006-2020    |           |                    |
| Number of Observations | 1596         | 1059      | = 2655             | 1111         | 895       | = 2006             |
| Grouped by FCEO        | Without FCEO | With FCEO | <i>z-statistic</i> | Without FCEO | With FCEO | <i>z-statistic</i> |
| <b>BEP</b>             | 0.0724       | 0.0736    | -0.04              | 0.0725       | 0.0739    | 0.077              |
| <b>ROA</b>             | 0.0336       | 0.0303    | <b>2.31**</b>      | 0.0371       | 0.0322    | <b>3.21***</b>     |
| <b>TBQ</b>             | 1.0565       | 1.0818    | -1.59              | 1.3034       | 1.1801    | <b>1.87*</b>       |
| Panel B                |              |           |                    |              |           |                    |
| Period                 | 2000-2020    |           |                    | 2006-2020    |           |                    |
| Number of Observations | 1392         | 1263      | = 2655             | 1087         | 919       | = 2006             |
| Grouped by FOWN>20     | FOWN≤20      | FOWN>20   | <i>z-statistic</i> | FOWN≤20      | FOWN>20   | <i>z-statistic</i> |
| <b>BEP</b>             | 0.0690       | 0.0760    | <b>-1.84*</b>      | 0.0674       | 0.0798    | <b>-2.64**</b>     |
| <b>ROA</b>             | 0.0345       | 0.0306    | <b>3.16***</b>     | 0.0360       | 0.0340    | 1.50               |
| <b>TBQ</b>             | 1.1527       | 0.9914    | <b>4.09***</b>     | 1.3164       | 1.1757    | 1.63               |
| Panel C                |              |           |                    |              |           |                    |
| Period                 | 2000-2020    |           |                    | 2006-2020    |           |                    |
| Number of Observations | 1620         | 1035      | = 2655             | 1272         | 734       | = 2006             |
| Grouped by FOWN>25     | FOWN≤25      | FOWN>25   | <i>z-statistic</i> | FOWN≤25      | FOWN>25   | <i>z-statistic</i> |
| <b>BEP</b>             | 0.0723       | 0.0734    | 0.44               | 0.0699       | 0.0771    | -0.82              |
| <b>ROA</b>             | 0.0354       | 0.0288    | <b>4.38***</b>     | 0.0362       | 0.0333    | <b>2.01**</b>      |
| <b>TBQ</b>             | 1.1334       | 0.9893    | <b>4.02***</b>     | 1.2776       | 1.1910    | 1.63               |
| Panel D                |              |           |                    |              |           |                    |
| Period                 | 2000-2020    |           |                    | 2006-2020    |           |                    |
| Number of Observations | 1849         | 806       | = 2655             | 1444         | 562       | = 2006             |
| Grouped by FOWN>30     | FOWN≤30      | FOWN>30   | <i>z-statistic</i> | FOWN≤30      | FOWN>30   | <i>z-statistic</i> |
| <b>BEP</b>             | 0.0761       | 0.0702    | <b>4.19***</b>     | 0.0734       | 0.0724    | <b>2.47**</b>      |
| <b>ROA</b>             | 0.0370       | 0.0252    | <b>8.03***</b>     | 0.0388       | 0.0283    | <b>5.84***</b>     |
| <b>TBQ</b>             | 1.1341       | 0.9377    | <b>6.09***</b>     | 1.2981       | 1.1274    | <b>3.90***</b>     |

Note:\*, \*\*, and \*\*\* denote the level of significance at 10%, 5%, and 1% respectively. The definition and measurement of the variables are presented in Table 9. TBQ is winsorized at 1% in each tail to control for outlier effect.

Table 15 and 18 display the mean-difference test and median-difference test repeatedly for the two groups of observations based whether audit committee chairman is independent director or not (ACIND). In all firms of the first group, the chairman of audit committee is not an independent director. In all firms of the second group, the chairman of audit committee is an independent director. The results of two-sample t-test (c.f. Table 15) and Whitney–Wilcoxon test (c.f. Table 18) indicate that ROA and TBQ significantly differ between these groups during 2000-2020 but not during 2006-2020.

**Table 18: Whitney–Wilcoxon test for the difference of medians under audit committee independence (ACIND)**

| Period                 | 2000-2020     |            |                    | 2006-2020     |            |                    |
|------------------------|---------------|------------|--------------------|---------------|------------|--------------------|
| Number of Observations | 1164          | 1491       | = 2655             | 527           | 1749       | = 2006             |
| Grouped by ACIND       | Without ACIND | With ACIND | <i>z-statistic</i> | Without ACIND | With ACIND | <i>z-statistic</i> |
| <b>BEP</b>             | 0.0730        | .07270     | -1.39              | 0.0743        | 0.0726     | 0.12               |
| <b>ROA</b>             | 0.0288        | 0.0368     | -4.09***           | 0.0324        | 0.0367     | -1.67*             |
| <b>TBQ</b>             | 0.9020        | 1.2115     | -11.67***          | 1.2698        | 1.2265     | -0.04              |

Note:\*, \*\*, and \*\*\* denote the level of significance at 10%, 5%, and 1% respectively. The definition and measurement of the variables are presented in Table 9. TBQ is winsorized at 1% in each tail to control for outlier effect.

Table 16 and 19 exhibit the mean-difference test and median-difference test respectively for the two groups of observations based on audit committee meeting (ACM). In all firms of the first group, the minimum number of audit committee meeting is not higher than three in a year. In all firms of the second group, the minimum number of audit committee meeting is greater than three in a year. As CG Code 2018 in Bangladesh makes it compulsory for all listed company to held at least four meetings in a year, thus this study splits its total observation into two groups with respect to this threshold. The observed value of t-statistic (c.f. Table 16) and z-statistic (c.f. Table 19) suggest that number of audit committee meeting is not significantly differentiating the accounting-based performance between groups during 2006-2020, though ROA and TBQ are significantly different between groups during 2000-2020.

**Table 19: Whitney–Wilcoxon test for the difference of medians under the number of audit committee meeting (ACM)**

| Period                 | 2000-2020 |        |                    | 2006-2020 |        |                    |
|------------------------|-----------|--------|--------------------|-----------|--------|--------------------|
| Number of Observations | 1453      | 1202   | = 2655             | 809       | 1197   | = 2006             |
| Grouped by ACM         | ACM≤3     | ACM>3  | <i>z-statistic</i> | ACM≤3     | ACM>3  | <i>z-statistic</i> |
| <b>BEP</b>             | 0.0743    | 0.0713 | -0.44              | 0.0771    | 0.0712 | 0.94               |
| <b>ROA</b>             | 0.0291    | 0.0363 | -3.45***           | 0.0334    | 0.0363 | -1.17              |
| <b>TBQ</b>             | 0.9615    | 1.1878 | -8.09***           | 1.3184    | 1.1871 | 1.73*              |

Note:\*, \*\*, and \*\*\* denote the level of significance at 10%, 5%, and 1% respectively. The definition and measurement of the variables are presented in Table 9. TBQ is winsorized at 1% in each tail to control for outlier effect.

### 6.3 Assumptions of the Statistical Analysis

Statistical assumptions are need to be satisfied or controlled by the appropriate econometric model before testing the research hypotheses, otherwise tests results would not be consistent and unbiased.

#### 6.3.1 Results of Panel Unit Root Test

As the panel of this study is unbalanced and some of them contain more than 10-year observation, it requires investigating the data stationarity. This study runs three types of unit root tests for panel data to check whether panels are stationary or not. These tests are Levin-Lin-Chu (LLC) test, Im-Pesaran-Shin (IPS) test, and Fisher-type (FT). The test results are presented in Table 20. The first two tests (LLC and IPS) are conducted on a transformed balanced panel which is comprised of 59 panels and 14 observations in each panel during 2006-2019 for this study. In addition to these tests, the Fisher-type (FT) test is conducted to check panel unit root for the unbalanced panel ( $N=210$ ,  $T=12.64$  average) during 2000-2020. The results of all these tests, presented in the Table 20, support the hypothesis that panels are stationary at 1 percent level of significance for BEP and ROA with an exception that IPS test for ROA is significant at 5 percent level. Thus, test results satisfy the condition of data stationarity.

**Table 20: Panel unit root tests**

| Test Type | Conditions                                                                                                                                                                                                                                                                             | For | Statistics                      |          | P -value |
|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|---------------------------------|----------|----------|
| LLC       | Number of panels = 59<br>Number of periods = 14<br>AR parameter: Common<br>Panel means: Included<br>Time trend: Not included<br>Cross-sectional means removed<br>ADF regressions: 0.00 lags average (chosen by AIC)<br>LR variance: Bartlett kernel, 7.00 lags average (chosen by LLC) | BEP | Unadjusted-t                    | -14.1970 | 0.000    |
|           |                                                                                                                                                                                                                                                                                        |     | Adjusted-t                      | -6.9968  |          |
|           |                                                                                                                                                                                                                                                                                        | ROA | Unadjusted-t                    | -14.0984 | 0.000    |
|           |                                                                                                                                                                                                                                                                                        |     | Adjusted-t                      | -6.6825  |          |
|           |                                                                                                                                                                                                                                                                                        | TBQ | Unadjusted-t                    | -13.5911 | 0.000    |
|           |                                                                                                                                                                                                                                                                                        |     | Adjusted-t                      | -6.6892  |          |
| IPS       | Number of panels = 59<br>Number of periods = 14<br>AR parameter: Common<br>Panel means: Included<br>Time trend: Not included<br>Cross-sectional means removed<br>ADF regressions: No lags included                                                                                     | BEP | t-bar                           | -1.9450  | 0.000    |
|           |                                                                                                                                                                                                                                                                                        |     | t-tilde-bar                     | -1.6629  |          |
|           |                                                                                                                                                                                                                                                                                        |     | Z-t-tilde-bar                   | -3.3878  |          |
|           |                                                                                                                                                                                                                                                                                        | ROA | t-bar                           | -1.8026  | 0.026    |
|           |                                                                                                                                                                                                                                                                                        |     | t-tilde-bar                     | -1.5219  |          |
|           |                                                                                                                                                                                                                                                                                        |     | Z-t-tilde-bar                   | -1.9357  |          |
|           |                                                                                                                                                                                                                                                                                        | TBQ | t-bar                           | -2.1718  | 0.000    |
|           |                                                                                                                                                                                                                                                                                        |     | t-tilde-bar                     | -1.7590  |          |
|           |                                                                                                                                                                                                                                                                                        |     | Z-t-tilde-bar                   | -4.3768  |          |
| FT        | Number of panels = 210<br>Average number of periods = 12.64<br>AR parameter: Panel-specific<br>Panel means: Included<br>Time trend: Not included<br>Drift term: Included<br>Cross-sectional means removed<br>ADF regressions: 2 lags                                                   | BEP | Inverse-chi-squared (284) - P   | 812.2633 | 0.000    |
|           |                                                                                                                                                                                                                                                                                        |     | Inverse-normal-Z                | -16.6512 | 0.000    |
|           |                                                                                                                                                                                                                                                                                        |     | Inverse Logit-t (714)- L        | -17.4604 | 0.000    |
|           |                                                                                                                                                                                                                                                                                        |     | Modified-inverse chi-squared-Pm | 22.1654  | 0.000    |
|           |                                                                                                                                                                                                                                                                                        | ROA | Inverse-chi-squared (284) - P   | 863.6242 | 0.000    |
|           |                                                                                                                                                                                                                                                                                        |     | Inverse-normal-Z                | -16.4179 | 0.000    |
|           |                                                                                                                                                                                                                                                                                        |     | Inverse Logit-t (714)- L        | -18.0423 | 0.000    |
|           |                                                                                                                                                                                                                                                                                        |     | Modified-inverse chi-squared-Pm | 24.3205  | 0.000    |
|           |                                                                                                                                                                                                                                                                                        | TBQ | Inverse-chi-squared (284) - P   | 775.6256 | 0.000    |
|           |                                                                                                                                                                                                                                                                                        |     | Inverse-normal-Z                | -15.9159 | 0.000    |
|           |                                                                                                                                                                                                                                                                                        |     | Inverse Logit-t (714)- L        | -16.3226 | 0.000    |
|           |                                                                                                                                                                                                                                                                                        |     | Modified-inverse chi-squared-Pm | 20.6282  | 0.000    |

Note: The definition and measurement of the variables are presented in Table 9. TBQ is winsorized at 1% in each tail to control for outlier effect.

### 6.3.2 Cross Sectional Dependence

According to Baltagi (2005), cross-sectional dependence (CD) may appear in the longitudinal data panel with a time series of more than 20 years. The cross-sectional dependence creates contemporaneous correlation which in turn provides biased regression results. The most popular CD test for panel data is Pasaran test. This test is run with a hypothesis that residuals are not correlated. This study intends to conduct this test for a balanced panel data set which has been derived from the intimal unbalanced panel data set. This balanced panel is formed into 45 panels and 21

periods ranging from 2000 to 2020. The test results, shown in Table 21, indicate that there is no cross-sectional dependence at 1 percent level of significance.

**Table 21: Results of Pasaran cross-sectional dependence test**

| Model |                                                                                    |                    | BEP           | ROA           | TBQ           |
|-------|------------------------------------------------------------------------------------|--------------------|---------------|---------------|---------------|
| 1     | Board independence and firm performance                                            | CD test Statistics | -1.157        | -0.494        | 1.291         |
|       |                                                                                    | <i>P-value</i>     | <i>0.2473</i> | <i>0.6213</i> | <i>0.1966</i> |
| 2     | Audit committee independence, audit committee meeting and firm performance         | CD test Statistics | -1.189        | -0.435        | 1.192         |
|       |                                                                                    | <i>P-value</i>     | <i>0.2343</i> | <i>0.6634</i> | <i>0.2331</i> |
| 3     | Family CEO duality and firm performance                                            | CD test Statistics | -1.129        | -0.415        | 1.294         |
|       |                                                                                    | <i>P-value</i>     | <i>0.2591</i> | <i>0.6783</i> | <i>0.1955</i> |
| 4.1   | Family ownership (FOWN) and firm performance                                       | CD test Statistics | -1.291        | -0.584        | 1.240         |
|       |                                                                                    | <i>P-value</i>     | <i>0.1966</i> | <i>0.5594</i> | <i>0.2150</i> |
| 4.2   | Family ownership-2 (FOWN_20) and firm performance                                  | CD test Statistics | -1.147        | -0.418        | 0.890         |
|       |                                                                                    | <i>P-value</i>     | <i>0.2513</i> | <i>0.6760</i> | <i>0.3736</i> |
| 4.3   | Family ownership-3 (FOWN_25) and firm performance                                  | CD test Statistics | -1.164        | -0.516        | 1.292         |
|       |                                                                                    | <i>P-value</i>     | <i>0.2445</i> | <i>0.6056</i> | <i>0.1963</i> |
| 4.4   | Family ownership-4 (FOWN_30) and firm performance                                  | CD test Statistics | -1.216        | -0.557        | 1.276         |
|       |                                                                                    | <i>P-value</i>     | <i>0.2239</i> | <i>0.5777</i> | <i>0.2019</i> |
| 5     | Interaction effects of Family CEO duality, board independence and firm performance | CD test Statistics | -1.183        | -0.641        | 0.610         |
|       |                                                                                    | <i>P-value</i>     | <i>0.2370</i> | <i>0.5215</i> | <i>0.5420</i> |
| 6.1   | Interaction effects of FOWN, board independence and firm performance               | CD test Statistics | -1.330        | -0.726        | 1.098         |
|       |                                                                                    | <i>P-value</i>     | <i>0.1835</i> | <i>0.4676</i> | <i>0.2721</i> |
| 6.2   | Interaction effects of FOWN_20, board independence and firm performance            | CD test Statistics | -1.394        | -0.586        | 0.572         |
|       |                                                                                    | <i>P-value</i>     | <i>0.1634</i> | <i>0.5578</i> | <i>0.5674</i> |
| 6.3   | Interaction effects of FOWN_25, board independence and firm performance            | CD test Statistics | -1.449        | -0.670        | 1.019         |
|       |                                                                                    | <i>P-value</i>     | <i>0.1474</i> | <i>0.5027</i> | <i>0.3084</i> |
| 6.4   | Interaction effects of FOWN_30, board independence and firm performance            | CD test Statistics | -1.212        | -0.559        | 1.242         |
|       |                                                                                    | <i>P-value</i>     | <i>0.2255</i> | <i>0.5760</i> | <i>0.2143</i> |

Note: The definition and measurement of the variables are presented in Table 9. TBQ is winsorized at 1% in each tail to control for outlier effect.

### 6.3.3 Heteroscedasticity and Autocorrelation Tests

Heteroscedasticity is a situation when residuals of the regression model are not approximately equal. If it exists in the panel data regression, the estimations would no longer be valid unless it is controlled. The Wald test is used in this study to determine whether there is any evidence of heteroskedasticity in the panel data regression model under a null hypothesis that residual variance is constant (homoskedastic) across panels. The test results, presented in Table 22, rejected the null hypothesis at the 5% level of significance. Hence, it indicates the presence of heteroskedasticity in the variables. Therefore, this study runs the regression models with robust option so that we control for Heteroscedasticity and get robust standard errors.

The Wooldridge test is conducted to determine whether the panel data regression model has autocorrelation problem. As shown in Table 22, there remains a first order autocorrelation in the panel data as the null hypothesis is rejected at the 5% level of significance. Although the presence of autocorrelation does not bias the estimated coefficient, it causes the estimations of the standard errors to be less than the actual standard errors. Therefore, this study runs the system GMM regression so that we control for second order autocorrelation and get consistent coefficients.

**Table 22: Heteroscedasticity and Autocorrelation Tests**

| Test                       |                                                                     |                   |  | BEP           | ROA           | TBQ           |
|----------------------------|---------------------------------------------------------------------|-------------------|--|---------------|---------------|---------------|
| <b>Heteroskedasticity:</b> | Modified Wald test for group-wise heteroskedasticity in panel data. | Chi-squared (210) |  | 5.4e+33       | 1.8e+32       | 1.3e+08       |
|                            |                                                                     | <i>P-value</i>    |  | <i>0.0000</i> | <i>0.0000</i> | <i>0.0000</i> |
| <b>Autocorrelation:</b>    | Wooldridge test for first-order autocorrelation in panel data.      | F (1, 197)        |  | 28.160        | 56.335        | 38.761        |
|                            |                                                                     | <i>P-value</i>    |  | <i>0.0000</i> | <i>0.0000</i> | <i>0.0000</i> |

Note: The definition and measurement of the variables are presented in Table 9. TBQ is winsorized at 1% in each tail to control for outlier effect.

### 6.3.4 Collinearity

The pairwise correlation coefficients of the variables used in this are reported in the Table 23. Results suggest that board independence (BIND), audit committee independence (ACIND), audit committee meetings (ACM) are positively correlated to

firm performance. CEO duality (CEOD) and family ownership (FOWN) are negatively correlated to the firm performance. FCEO is significantly and negatively correlated to ROA. Firm age (AGE) is negatively correlated to accounting-based performance measures, but positively correlated to market-based performance. Firm size (SIZE) is positively and significantly correlated to the accounting-based performance, but insignificantly correlated to the TBQ. Firm leverage (LEVR) is negatively correlated to the all performance measures. Directors' shareholdings (DOW) and market to book value ratio (MB) is positively correlated to the firm performance. Institutional ownership and TBQ are negatively correlated. Finally, the correlation coefficients of COVID dummy (COVID) are significantly and negatively correlated to BEP and ROA, whereas it is positive but insignificantly correlated to TBQ.

Table 23 also provides the information with regard to the issue of multicollinearity between independent variables. Typically, multicollinearity exists when two independent variables are correlated with a coefficient value of 0.7 or above (Dormann et al., 2013). The highest value of correlation coefficient (0.68) is observed in between BIND and ACIND, yet it is less than 0.70. Moreover, none of the pair of the independent variables has high enough correlation coefficient to warrant a severe problem of multicollinearity.

Apart from, to get the further evidence of the magnitude of multicollinearity among the independent variables, variance inflation factor (VIF) is performed. Statistically, a value of  $VIF > 10$  indicates a multicollinearity problem (Hair et al., 2009). The results presented in Table 24 reveal that none of the variables has a VIF which is greater than 2.36. Thus, it implies that there is no severe multicollinearity problem in the independent variables.

However, taking account of high correlation between BIND and ACIND, this study runs two separate regressions for them to check their effect individually on firm performance (see equation 1 and 2). Similarly, considering the second highest correlation (0.66) between ACIND and ACM, this study also runs another two separate regressions to examine their influence on firm performance (see equations 2-3).



**Table 23: Correlation coefficient matrix**

|       | Dependent Variables |              |              | Independent Variables |              |              |              |              |              |              |              |              |              |              |              |              |             |
|-------|---------------------|--------------|--------------|-----------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------|
|       | BEP                 | ROA          | TBQ          | LNBS                  | BIND         | ACIND        | ACM          | CEOD         | FCEO         | FOWN         | AGE          | SIZE         | GROW         | LEVR         | DOW          | INST         | MB          |
| BEP   | 1.00                |              |              |                       |              |              |              |              |              |              |              |              |              |              |              |              |             |
| ROA   | <b>0.88</b>         | 1.00         |              |                       |              |              |              |              |              |              |              |              |              |              |              |              |             |
| TBQ   | <b>0.35</b>         | <b>0.30</b>  | 1.00         |                       |              |              |              |              |              |              |              |              |              |              |              |              |             |
| LNBS  | <b>0.08</b>         | <b>0.12</b>  | <b>0.11</b>  | 1.00                  |              |              |              |              |              |              |              |              |              |              |              |              |             |
| BIND  | <b>0.03</b>         | <b>0.04</b>  | <b>0.16</b>  | -0.01                 | 1.00         |              |              |              |              |              |              |              |              |              |              |              |             |
| ACIND | 0.03                | <b>0.04</b>  | <b>0.17</b>  | <b>0.13</b>           | <b>0.68</b>  | 1.00         |              |              |              |              |              |              |              |              |              |              |             |
| ACM   | <b>0.06</b>         | <b>0.07</b>  | <b>0.17</b>  | <b>0.23</b>           | <b>0.62</b>  | <b>0.66</b>  | 1.00         |              |              |              |              |              |              |              |              |              |             |
| CEOD  | <b>-0.05</b>        | <b>-0.07</b> | <b>-0.14</b> | <b>-0.14</b>          | <b>-0.31</b> | <b>-0.30</b> | <b>-0.31</b> | 1.00         |              |              |              |              |              |              |              |              |             |
| FCEO  | -0.02               | <b>-0.03</b> | 0.03         | <b>-0.17</b>          | <b>0.18</b>  | <b>0.20</b>  | <b>0.14</b>  | <b>-0.28</b> | 1.00         |              |              |              |              |              |              |              |             |
| FOWN  | <b>-0.07</b>        | <b>-0.10</b> | <b>-0.10</b> | <b>-0.21</b>          | <b>-0.05</b> | -0.03        | <b>-0.10</b> | <b>0.22</b>  | <b>0.35</b>  | 1.00         |              |              |              |              |              |              |             |
| AGE   | <b>-0.08</b>        | <b>-0.11</b> | <b>0.07</b>  | <b>0.04</b>           | -0.01        | -0.02        | 0.01         | <b>0.06</b>  | <b>-0.09</b> | <b>-0.14</b> | 1.00         |              |              |              |              |              |             |
| SIZE  | <b>0.18</b>         | <b>0.18</b>  | -0.03        | <b>0.35</b>           | <b>0.31</b>  | <b>0.40</b>  | <b>0.50</b>  | <b>-0.20</b> | <b>-0.03</b> | <b>-0.24</b> | <b>-0.15</b> | 1.00         |              |              |              |              |             |
| GROW  | <b>0.04</b>         | <b>0.08</b>  | 0.00         | 0.03                  | 0.01         | 0.00         | 0.00         | 0.01         | 0.00         | 0.00         | <b>-0.08</b> | <b>0.11</b>  | 1.00         |              |              |              |             |
| LEVR  | <b>-0.41</b>        | <b>-0.59</b> | <b>-0.05</b> | <b>-0.06</b>          | <b>-0.10</b> | <b>-0.12</b> | <b>-0.09</b> | <b>0.09</b>  | <b>0.03</b>  | <b>0.13</b>  | <b>0.06</b>  | <b>-0.12</b> | <b>-0.06</b> | 1.00         |              |              |             |
| DOW   | <b>0.30</b>         | <b>0.25</b>  | <b>0.15</b>  | <b>0.09</b>           | 0.01         | 0.03         | 0.05         | <b>0.10</b>  | <b>0.12</b>  | <b>0.31</b>  | <b>-0.16</b> | <b>0.04</b>  | 0.00         | -0.02        | 1.00         |              |             |
| INST  | -0.01               | 0.00         | <b>-0.13</b> | -0.02                 | <b>-0.06</b> | <b>-0.05</b> | 0.00         | -0.02        | <b>0.09</b>  | 0.02         | <b>0.06</b>  | <b>0.07</b>  | <b>-0.05</b> | <b>-0.04</b> | <b>-0.19</b> | 1.00         |             |
| MB    | <b>0.05</b>         | 0.02         | <b>0.32</b>  | 0.00                  | <b>0.05</b>  | <b>0.05</b>  | <b>0.06</b>  | <b>-0.04</b> | <b>0.05</b>  | 0.00         | <b>0.07</b>  | -0.01        | 0.00         | 0.03         | <b>0.04</b>  | <b>-0.05</b> | 1.00        |
| COVID | <b>-0.04</b>        | <b>-0.05</b> | 0.02         | -0.01                 | <b>0.14</b>  | <b>0.16</b>  | <b>0.14</b>  | <b>-0.07</b> | <b>0.06</b>  | -0.01        | <b>0.06</b>  | <b>0.09</b>  | <b>-0.04</b> | -0.02        | -0.02        | 0.03         | <b>0.09</b> |

Note: Values represent the correlation coefficients, wherein values in bold are statistically significant at a maximum level of 10%. Total sample size is characterized by 2655 firm-year observations during 2000-2020. The definition and measurement of the variables are presented in Table 9. TBQ and MB are winsorized at 1% in each tail to control for outlier effect.

**Table 24: Variance inflation factor (VIF)**

| Variable | LNBS  | BIND  | CEOD  | ACIND | ACM   | FCEO  | FOWN  | AGE   | SIZE  | LEVR  | GROW  | DOW   | INST  | MB    | COVID | Mean VIF    |
|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------------|
| VIF      | 1.30  | 2.22  | 1.40  | 2.36  | 2.33  | 1.44  | 1.54  | 1.12  | 1.65  | 1.06  | 1.03  | 1.24  | 1.10  | 1.02  | 1.05  | <b>1.46</b> |
| 1/VIF    | 0.771 | 0.450 | 0.713 | 0.424 | 0.430 | 0.693 | 0.648 | 0.891 | 0.605 | 0.948 | 0.971 | 0.809 | 0.908 | 0.977 | 0.956 |             |

Note: Total sample size is characterized by 2655 firm-year observations during 2000-2020. Definitions of variables are presented in Table 9.

**Table 25: Results of Endogeneity Test**

| Endogenous Variable                  | Null Hypothesis      | Instrumental Variable                               | Dependent Variable | Durbin Chi-squared | Wu-Hausman F-statistic |
|--------------------------------------|----------------------|-----------------------------------------------------|--------------------|--------------------|------------------------|
| Board independence (BIND)            | BIND is exogenous    | Firm size, Leverage, Board size                     | BEP                | 8.66096***         | 8.54198***             |
|                                      |                      |                                                     | ROA                | 25.8539***         | 25.6656***             |
|                                      |                      |                                                     | TBQ                | 4.34075**          | 4.29873**              |
| Family CEO duality (FCEO)            | FCEO is exogenous    | Firm size, Board size, Family ownership             | BEP                | 18.4844***         | 18.2985***             |
|                                      |                      |                                                     | ROA                | 26.4466***         | 26.2599***             |
|                                      |                      |                                                     | TBQ                | 19.876***          | 19.6864***             |
| % of Family ownership (FOWN)         | FOWN is exogenous    | Firm size, Board size, Family-CEO-duality           | BEP                | 20.8866***         | 20.6953***             |
|                                      |                      |                                                     | ROA                | 21.5314***         | 21.3395***             |
|                                      |                      |                                                     | TBQ                | 42.2012***         | 42.156***              |
| FOWN_20                              | FOWN_20 is exogenous | Firm size, Board size, Family-CEO-duality           | BEP                | 33.581***          | 33.4346***             |
|                                      |                      |                                                     | ROA                | 28.3041***         | 28.1241***             |
|                                      |                      |                                                     | TBQ                | 16.2942***         | 16.1169***             |
| FOWN_25                              | FOWN_25 is exogenous | Firm size, Board size, Family-CEO-duality           | BEP                | 18.3158***         | 18.1304***             |
|                                      |                      |                                                     | ROA                | 20.2612***         | 20.0709***             |
|                                      |                      |                                                     | TBQ                | 7.51218***         | 7.40577***             |
| FOWN_30                              | FOWN_30 is exogenous | Firm size, Board size, Family CEO-duality           | BEP                | 23.2528***         | 23.0605***             |
|                                      |                      |                                                     | ROA                | 28.1623***         | 27.9817***             |
|                                      |                      |                                                     | TBQ                | 29.4003***         | 29.2255***             |
| Audit committee independence (ACIND) | ACIND is exogenous   | Board-independence, Firm size, Leverage             | BEP                | 11.071***          | 10.9288***             |
|                                      |                      |                                                     | ROA                | 10.8232***         | 10.6832***             |
|                                      |                      |                                                     | TBQ                | 4.02239**          | 3.96019**              |
| Audit committee meeting (ACM)        | ACM is exogenous     | Board-independence, Firm size, Board size, Leverage | BEP                | 22.7868***         | 22.5944***             |
|                                      |                      |                                                     | ROA                | 29.3413***         | 29.1662***             |
|                                      |                      |                                                     | TBQ                | 33.1383***         | 32.9883***             |

Note: \*\* and \*\*\* denote the level of significance at 5% and 1% respectively. The definition and measurement of variables are presented in Table 9. TBQ and MB are winsorized at 1% in each tail to control for outlier effect.

### 6.3.5 Results of Endogeneity Test

It is important to examine that the endogeneity problem between the corporate board's structure and performance really does exist. This study makes the assumption that the board structure (board independence, audit committee independence, audit committee meeting, family CEO duality) and family ownership are endogenous. In Table 25, it is observed that there remains an endogenous problem in the selected variables as the null hypothesis is rejected at maximum 5 percent level of significance.

## **6.4 Results of Regression Analysis**

### **6.4.1 Impact of Board Independence on Firm Performance**

This study hypothesized that the presence of independent directors in the corporate board strengthens board's ability to monitor managerial activities, meet the external challenges, and maintain check and balance in the board's decision. Eventually, it enhances firm performance. As the corporate governance guidelines are issued and enacted for the listed companies in Bangladesh in 2006, the study attempt to show the impact of board independence on firm performance during 2006-2020. Apart from, the evidence about the relationship between these variables is drawn from the whole sample ranging from the period of 2000 to 2020.

Table 26 shows the outputs of dynamic panel regression analysis over 2444 observations of 204 listed companies in Bangladesh based on a two-step system GMM model. The value of F-statistic is statistically significant for all performance measures. Hence, it indicates the validity of all estimated models of this study. The validity and reliability of the instruments used in the estimation of system GMM are inspected by the results of first-order serial correlation test  $AR(1)$  and second-order serial correlation test  $AR(2)$  and the Hansen test as well. The p-values of  $AR(1)$  for all performance measures indicate that panel data contains first order serial correlation but the p-value of  $AR(2)$  shows that there is no second order serial correlation. The p-value of Hansen test of the GMM regression estimations under all performance measures accepts the null hypothesis that the instruments are significantly free from over-identification problems. Hence, all the instruments used in the respected models are statistically valid.

Model 1 and Model 4 of Table 26 show the GMM regression estimates on BEP during full sample period and CG period respectively. Model 2 and Model 5 of Table 26 show the GMM regression

estimates on ROA during full sample period and CG period respectively. Similarly, Model 3 and Model 6 of Table show the GMM regression estimates on TBQ during full sample period and CG period respectively. In all models of Table 26, the coefficient values of one-year-lag of BEP ( $BEP_{t-1}$ ), the one-year-lag of ROA ( $ROA_{t-1}$ ), and the one-year-lag of TBQ ( $TBQ_{t-1}$ ) are statistically significant at 1 percent level. These significant coefficient values of lagged dependent variables (both accounting-performance and market-performance) imply that current performance can be explained by the past performance. Hence, the past performance shall be used as a device of controlling for unobserved variables' effects in assessing the influence of board independence on firm performance. This evidence is extensively parallel to the arguments of Adams and Ferreira (2009), Dezsö and Ross (2012), and Wintoki et al. (2012) that the relationship between board characteristics and firm performance should be examined under a dynamic model. But surprisingly, this study finds the second-order serial autocorrelation after running the present form of the regression model for the TBQ; the result is not reported here. Hence, in order to remove the second order serial autocorrelation from the present form of the regression model for the TBQ, the second order lag of TBQ ( $TBQ_{t-2}$ ) is included as regressor along with first order lag of TBQ ( $TBQ_{t-1}$ ) and then this study reruns the regression model. The results indicate that  $TBQ_{t-2}$  is significantly affecting the current level of TBQ and the model has insignificant values of  $AR(2)$  in the both sample periods. Now, it becomes free from the second order serial correlation.

The prime focus of this section is to examine the influence of board independence on firm performance. In Table 26, it is observed that beta coefficient ( $\beta$ ) of BIND is -0.133 for BEP, -0.144 for ROA and -1.384 for TBQ during 2000-2020. All these negative beta coefficients are statistically significant at 5 percent level. These results remain qualitatively same when we run the regression on BEP, ROA, and TBQ during 2006-2020. The negative sign of the coefficient value of board independence for all performance measures is in line with the findings of Coles et al. (2001), Mishra et al. (2001), Mahadeo et al. (2012), and Sheikh et al. (2013). Hence, this result implies that the role of independent directors is not free from a plague of criticism in enhancing firm performance and in protecting retail investors' interest in the emerging market like Bangladesh. It may be claimed that independent directors fall into a crack of knowledge deficiency regarding company's specific (internal) information that drives them to play an advisory role rather than monitoring role. Alternatively, a board with fewer independent directors can be recognized as supermajority-insider board that mobilizes human capital of inside directors, which offers board efficiency with less

asymmetric information and, in turn, lead to a better strategic decision and firm performance (Hall & Liebman, 1998). This result may draw another view that the board prefers independent directors with those the board has good personal relation and they feel honored to be appointed as independent director. Resultantly, they are highly encouraged to give advice only foregoing their supervisory role. Finally, as the qualifications of independent director were not precisely defined in the corporate governance guidelines till 2018, the listed non-financial companies straightforwardly utilize this loophole and appoint independent directors irrespective of their qualifications. As a result, companies fail to encourage the nourished corporate environment in the board room to produce good fruits from good trees. Thus, a board with more independent directors may not assist and guide the company in increasing performance in the context of Bangladeshi firms. The overall evidence is contrary to the first hypothesis ( $H_1$ ) that board independence is positively related to the performance of firms, but supports the stewardship theory. In Table 26, results also indicate that BS and AGE have positive relation with TBQ. SIZE has positive influence over BEP and ROA, but negative influence over TBQ. GROW is significantly and negatively influencing both BEP and TBQ. LEVR is negatively associated with accounting-based performance. DOW is positively associated with all performance measures. INST has negative influence over TBQ. MB is found to be insignificant in affecting accounting performance and TBQ. COVID is negatively related to accounting-based performance.

**Table 26: Two-step system GMM estimates for the board independence and firm performance**

| Period                 | 2000-2020 (Full Period)          |                                  |                                  | 2006-2020 (CG Period)            |                                  |                                  |
|------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
|                        | Model 1                          | Model 2                          | Model 3                          | Model 4                          | Model 5                          | Model 6                          |
|                        | BEP                              | ROA                              | TBQ                              | BEP                              | ROA                              | TBQ                              |
| BEP <sub>t-1</sub>     | 0.5123***<br>5.33                |                                  |                                  | 0.4625***<br>4.61                |                                  |                                  |
| ROA <sub>t-1</sub>     |                                  | 0.5399***<br>7.05                |                                  |                                  | 0.5504***<br>5.17                |                                  |
| TBQ <sub>t-1</sub>     |                                  |                                  | 0.3913***<br>5.84                |                                  |                                  | 0.3896***<br>5.32                |
| TBQ <sub>t-2</sub>     |                                  |                                  | 0.0555**<br>2.13                 |                                  |                                  | 0.0545**<br>2.07                 |
| <b>BIND</b>            | <b>-0.1327**</b><br><i>-2.11</i> | <b>-0.1440**</b><br><i>-2.51</i> | <b>-1.3838**</b><br><i>-2.08</i> | <b>-0.1663**</b><br><i>-2.34</i> | <b>-0.1590**</b><br><i>-2.33</i> | <b>-1.6960**</b><br><i>-2.26</i> |
| BS                     | -0.0073<br><i>-1.09</i>          | -0.0066<br><i>-0.89</i>          | 0.9663**<br><i>2.49</i>          | -0.0131<br><i>-1.26</i>          | -0.0135<br><i>-1.45</i>          | 0.8090*<br><i>1.78</i>           |
| CEOD                   | -0.0056<br><i>-0.67</i>          | -0.0039<br><i>-0.54</i>          | 0.0160<br><i>0.12</i>            | -0.0068<br><i>-0.82</i>          | -0.0045<br><i>-0.50</i>          | 0.0517<br><i>0.31</i>            |
| AGE                    | -0.0001<br><i>-0.04</i>          | -0.0018<br><i>-0.79</i>          | 0.1103**<br><i>2.35</i>          | -0.0006<br><i>-0.20</i>          | -0.0029<br><i>-1.13</i>          | 0.1224**<br><i>2.31</i>          |
| SIZE                   | 0.0036*<br><i>1.96</i>           | 0.0031**<br><i>2.17</i>          | -0.1802***<br><i>-4.89</i>       | 0.0028<br><i>1.16</i>            | 0.0021<br><i>1.08</i>            | -0.1735***<br><i>-4.34</i>       |
| GROW                   | -0.0116***<br><i>-3.13</i>       | -0.0011<br><i>-0.19</i>          | -0.2377***<br><i>-3.53</i>       | -0.0137***<br><i>-4.22</i>       | -0.0031<br><i>-0.53</i>          | -0.2281***<br><i>-3.37</i>       |
| LEVR                   | -0.0578***<br><i>-3.89</i>       | -0.0788***<br><i>-3.14</i>       | 0.0271<br><i>0.16</i>            | -0.0773***<br><i>-5.26</i>       | -0.0928**<br><i>-2.14</i>        | -0.1083<br><i>-0.60</i>          |
| DOW                    | 0.0650***<br><i>3.88</i>         | 0.0558***<br><i>4.45</i>         | 0.6054**<br><i>2.49</i>          | 0.0770***<br><i>4.17</i>         | 0.0601***<br><i>3.15</i>         | 0.6582**<br><i>2.48</i>          |
| INST                   | 0.0065<br><i>0.42</i>            | 0.0053<br><i>0.47</i>            | -0.5289**<br><i>-2.18</i>        | 0.0217<br><i>1.14</i>            | 0.0161<br><i>0.86</i>            | -0.6414*<br><i>-1.91</i>         |
| MB                     | -0.0003<br><i>-0.80</i>          | -0.0002<br><i>-1.14</i>          | 0.0183<br><i>1.22</i>            | -0.0002<br><i>-0.61</i>          | -0.0002<br><i>-0.79</i>          | 0.0199<br><i>1.34</i>            |
| COVID                  | -0.0170*<br><i>-1.72</i>         | -0.0169<br><i>-1.59</i>          | 0.1246<br><i>0.89</i>            | -0.0182**<br><i>-2.12</i>        | -0.0169*<br><i>-1.72</i>         | 0.1520<br><i>0.98</i>            |
| Constant               | 0.0079<br><i>0.19</i>            | 0.0097<br><i>0.27</i>            | 3.0250***<br><i>3.60</i>         | 0.0553<br><i>0.99</i>            | 0.0598<br><i>1.34</i>            | 3.3017***<br><i>2.88</i>         |
| Year Dummies           | Yes                              | Yes                              | Yes                              | Yes                              | Yes                              | Yes                              |
| Industry Dummies       | Yes                              | Yes                              | Yes                              | Yes                              | Yes                              | Yes                              |
| Lags                   | 2 - 2                            | 2 - 2                            | 2 - 2                            | 2 - 2                            | 2 - 2                            | 2 - 2                            |
| P-value of F-statistic | 0.000                            | 0.000                            | 0.000                            | 0.000                            | 0.000                            | 0.000                            |
| P-value of AR(1)       | 0.002                            | 0.000                            | 0.000                            | 0.006                            | 0.001                            | 0.000                            |
| P-value of AR(2)       | 0.675                            | 0.256                            | 0.571                            | 0.717                            | 0.303                            | 0.607                            |
| P-value of Hansen test | 0.690                            | 0.364                            | 0.325                            | 0.642                            | 0.298                            | 0.136                            |
| No. of instruments     | 152                              | 152                              | 185                              | 121                              | 121                              | 149                              |
| No. of observations    | 2444                             | 2444                             | 2240                             | 1899                             | 1899                             | 1792                             |
| No. of groups          | 204                              | 204                              | 198                              | 202                              | 202                              | 196                              |

Note: BEP<sub>t-1</sub>, ROA<sub>t-1</sub>, and TBQ<sub>t-1</sub> stand for the first order lag values of BEP, ROA, and TBQ respectively. TBQ<sub>t-2</sub> stands for the second order lag values of TBQ. BIND refers to board independence. The t-statistics, based on robust standard error, are shown in italic. \*, \*\*, and \*\*\* denote the level of significance at 10%, 5%, and 1% respectively. The coefficients of year dummies and industry dummies are not reported for the sake of brevity. TBQ and MB are winsorized at 1% in each tail to control for outlier effect. The definition and measurement of variables are presented in Table 9.

### 6.4.2 Impact of Family-CEO Duality on Firm Performance

This section describes the empirical evidence in regard to a hypothesis that family-CEO duality (FCEO) influences firm performance. FCEO refers to a situation when board chairman and CEO/managing director (MD) are not the same person but they belong to the same family. It might be a mechanism of family control to align interests between owners and managers and minimize information asymmetry. Thus, it helps firms to mitigate the agency problem between shareholders and managers (principal-agent agency problem) and to enhance the firm performance. In fact in the context of Bangladesh, family-CEO seems to be an extension of a pie of family dominance in the board. In other words, in an attempt to grasp every opportunity to strengthen family ties, family owners highly incline to occupy the position of CEO that hinders the firm to recognize the most talented, capable, and expert professionals. This may create a form of resentment from the non-family executives, a competitive disadvantage, and an adverse effect on employee effort and productivity. Overall, it makes them more opportunistic to exploit power at the costs of nonfamily minority shareholders and eventually generates another agency problem between large (family) and small (nonfamily) shareholders (principal-principal agency problem). Thus, this study proposes a hypothesis that family-CEO duality is negatively associated with firm performance.

Table 27 shows the output of two-step system GMM regressions using the equation 4 for the listed companies in Bangladesh during 2000-2020 and 2006-2020. The value of F-statistic is statistically significant for all performance measures, which implies the validity of the estimated models of this study. The validity and reliability of the instruments of these models are inspected by the results of first-order serial correlation test  $AR(1)$  and second-order serial correlation test  $AR(2)$  and the Hansen test as well. The p-values of  $AR(1)$  for all performance measures indicate that panel data contains first order serial correlation but the lowest p-value of  $AR(2)$  under the all models is 0.334, suggesting that there is no second order serial correlation. The lowest p-value of the Hansen-test under all GMM models is 0.205, implying that there remains no significant over-identification problems in these models. Hence, all the instruments used in the respected models are statistically valid.

Model 7 and Model 10 of Table 27 show the regression estimates on BEP during full sample period and CG period respectively. Model 8 and Model 11 of Table 27 show the regression estimates on ROA during full sample period and CG period respectively. Similarly, Model 9 and Model 12 of

Table 27 show the regression estimates on TBQ during full sample period and CG period respectively. In the all models of Table 27, the coefficient values of  $BEP_{t-1}$ ,  $ROA_{t-1}$ , and  $TBQ_{t-1}$  are statistically significant at 1 percent level. Further to this, Model 9 and Model 12 of Table 27 show that the current value of TBQ also accounted for its two-year lag values. These significant coefficient values of lagged dependent variables imply that current performance of firms is explained by their past performance. Thus, the lag values of all performance measures are used as a device to control for unobserved factors' effects in assessing the influence of family-CEO duality on firm performance. This evidence is extensively supports a dynamic relationship between board characteristics and firm performance.

In Table 27, the coefficient value of FCEO is found to be negative in all the models under both sample periods. It is observed that beta coefficient ( $\beta$ ) of FCEO is -0.026 for BEP, -0.028 for ROA and -0.486 for TBQ during 2000-2020. All these negative coefficients are statistically significant at 5 percent level. These results remain qualitatively same when we run these regression models for the periods over 2006-2020. The negative influence of this type of family control on firm performance is parallel to the arguments of Pérez-González (2006), Bennedsen et al. (2007), and Sacristán-Navarro et al. (2011). Hence, this result implies that the family-CEO duality leads to establish a massive family control over the board that creates a grave dereliction of other directors' duty, narrows the space of independent judgment for making strategic decisions, and enhances the probability of fostering a 'sacred cow' in the board room. Thus, the board gradually strays far from the point of deliberation when there remains family-CEO duality and eventually firm performance deteriorates. That is, firm performance does not improve when there is a familial relation between board chairman and CEO/MD. The overall evidence accepts the hypothesis of this study that family control in terms of family-CEO duality is negatively associated with firm performance and it supports the agency theory. The results also indicate that BIND is negatively associated with accounting-based performance and market-based performance. CEOD has a significant negative influence over the accounting-based performance. AGE has positive influencing power over TBQ. SIZE has but negative influence over TBQ. GROW is significantly and negatively influencing both BEP and TBQ. LEVR is negatively associated with all performance measures and DOW is positively associated with all performance measures. MB has positive influence over TBQ. COVID is negatively related to accounting-based performance.



**Table 27: Two-step system GMM estimates for the family control (Family-CEO Duality: FCEO) and firm performance**

| Period                 | 2000-2020 (Full Period)         |                                 |                                 | 2006-2020 (CG Period)            |                                 |                                 |
|------------------------|---------------------------------|---------------------------------|---------------------------------|----------------------------------|---------------------------------|---------------------------------|
|                        | Model 7                         | Model 8                         | Model 9                         | Model 10                         | Model 11                        | Model 12                        |
|                        | BEP                             | ROA                             | TBQ                             | BEP                              | ROA                             | TBQ                             |
| BEP <sub>t-1</sub>     | 0.588***<br>5.96                |                                 |                                 | 0.532***<br>4.77                 |                                 |                                 |
| ROA <sub>t-1</sub>     |                                 | 0.735***<br>7.30                |                                 |                                  | 0.743***<br>5.90                |                                 |
| TBQ <sub>t-1</sub>     |                                 |                                 | 0.381***<br>5.73                |                                  |                                 | 0.337***<br>4.33                |
| TBQ <sub>t-2</sub>     |                                 |                                 | 0.046*<br>1.79                  |                                  |                                 | 0.052**<br>2.07                 |
| <b>FCEO</b>            | <b>-0.026**</b><br><i>-2.04</i> | <b>-0.028**</b><br><i>-2.33</i> | <b>-0.486**</b><br><i>-2.09</i> | <b>-0.034***</b><br><i>-2.63</i> | <b>-0.026**</b><br><i>-2.16</i> | <b>-0.419**</b><br><i>-2.06</i> |
| BIND                   | -0.099<br><i>-1.56</i>          | -0.052<br><i>-0.92</i>          | -2.100***<br><i>-3.35</i>       | -0.100<br><i>-1.53</i>           | -0.107**<br><i>-2.10</i>        | -1.934***<br><i>-2.62</i>       |
| BS                     | -0.008<br><i>-0.97</i>          | -0.003<br><i>-0.17</i>          | 0.096<br><i>0.66</i>            | -0.012<br><i>-1.12</i>           | -0.008<br><i>-1.17</i>          | 0.113<br><i>0.61</i>            |
| CEOD                   | -0.016**<br><i>-2.06</i>        | -0.013**<br><i>-2.19</i>        | -0.222<br><i>-1.40</i>          | -0.023**<br><i>-2.32</i>         | -0.011<br><i>-1.19</i>          | -0.146<br><i>-0.75</i>          |
| AGE                    | -0.003<br><i>-0.87</i>          | -0.002<br><i>-0.91</i>          | 0.107*<br><i>1.86</i>           | -0.005<br><i>-1.54</i>           | -0.004<br><i>-1.53</i>          | 0.085<br><i>1.30</i>            |
| SIZE                   | 0.002<br><i>1.02</i>            | 0.002<br><i>1.11</i>            | -0.163***<br><i>-4.81</i>       | 0.003<br><i>1.19</i>             | 0.001<br><i>0.79</i>            | -0.180***<br><i>-4.32</i>       |
| GROW                   | -0.010***<br><i>-3.35</i>       | 0.004<br><i>0.84</i>            | -0.223***<br><i>-3.18</i>       | -0.011***<br><i>-4.41</i>        | 0.000<br><i>-0.08</i>           | -0.213***<br><i>-3.17</i>       |
| LEVR                   | -0.066***<br><i>-4.09</i>       | -0.072***<br><i>-3.60</i>       | -0.088<br><i>-0.36</i>          | -0.088***<br><i>-3.99</i>        | -0.079***<br><i>-3.10</i>       | -0.015**<br><i>-2.24</i>        |
| DOW                    | 0.058***<br><i>3.98</i>         | 0.044***<br><i>3.84</i>         | 0.934***<br><i>4.12</i>         | 0.070***<br><i>3.59</i>          | 0.046***<br><i>2.86</i>         | 0.947***<br><i>4.00</i>         |
| INST                   | 0.019<br><i>1.44</i>            | 0.013<br><i>1.01</i>            | -0.222<br><i>-0.80</i>          | 0.021<br><i>1.06</i>             | 0.025<br><i>1.53</i>            | -0.285<br><i>-0.92</i>          |
| MB                     | 0.000<br><i>-0.93</i>           | 0.000<br><i>-1.17</i>           | 0.020<br><i>1.43</i>            | 0.000<br><i>-1.16</i>            | 0.000<br><i>-1.19</i>           | 0.037*<br><i>1.79</i>           |
| COVID                  | -0.018*<br><i>-1.69</i>         | -0.014<br><i>-1.10</i>          | 0.105<br><i>0.77</i>            | -0.017**<br><i>-2.05</i>         | -0.016*<br><i>-1.71</i>         | 0.056<br><i>0.40</i>            |
| Constant               | 0.036<br><i>0.81</i>            | -0.009<br><i>-0.25</i>          | 4.663***<br><i>5.19</i>         | 0.043<br><i>0.85</i>             | 0.027<br><i>0.69</i>            | 4.830***<br><i>4.37</i>         |
| Year Dummy             | Yes                             | Yes                             | Yes                             | Yes                              | Yes                             | Yes                             |
| Industry Dummy         | Yes                             | Yes                             | Yes                             | Yes                              | Yes                             | Yes                             |
| Lags                   | 2 - 2                           | 2 - 2                           | 2 - 2                           | 2 - 2                            | 2 - 2                           | 2 - 2                           |
| P-value of F-statistic | 0.000                           | 0.000                           | 0.000                           | 0.000                            | 0.000                           | 0.000                           |
| P-value of AR(2)       | 0.689                           | 0.334                           | 0.501                           | 0.786                            | 0.334                           | 0.717                           |
| P-value of Hansen test | 0.521                           | 0.264                           | 0.545                           | 0.449                            | 0.324                           | 0.205                           |
| No. of instruments     | 154                             | 193                             | 185                             | 124                              | 125                             | 150                             |
| No. of observations    | 2444                            | 2444                            | 2240                            | 1899                             | 1899                            | 1792                            |
| No. of groups          | 204                             | 204                             | 198                             | 202                              | 202                             | 196                             |

Note: BEP<sub>t-1</sub>, ROA<sub>t-1</sub>, and TBQ<sub>t-1</sub> stand for the first order lag values of BEP, ROA, and TBQ respectively. TBQ<sub>t-2</sub> stands for the second order lag values of TBQ. FCEO refers to family-CEO duality. The t-statistics, based on robust standard error, are shown in italic. \*, \*\*, and \*\*\* denote the level of significance at 10%, 5%, and 1% respectively. The coefficients of year dummies and industry dummies are not reported for the sake of brevity. TBQ and MB are winsorized at 1% in each tail to control for outlier effect. The definition and measurement of variables are presented in Table 9.

### 6.4.3 Impact of Family Ownership on Firm Performance

Typically, the directors can take control of the board power through ownership. It is claimed that family ownership with directorship is more effective to influence the firm performance than the family ownership without directorships. In this study, family ownership is measured by the proportion of shareholdings occupied by the directors of board who belong to the same family. In addition, this study applies dummy variables for the three different magnitudes of family control such as when directors from the same family hold at least 20% or 25% or 30% family ownership of the company in order to identify the threshold of the detrimental effects of family ownership.

Family ownership with directorship can mitigate owner-manager agency problem and enhance firm performance. On the other hand, a conflict between minority shareholders and dominating shareholders, also known as the principal-principal agency problem, may arise from a situation when family directors hold controlling shareholdings because it provides them with influential power to benefit only themselves at the expense of the benefit of the company. This study hypothesized that family ownership is negatively associated with firm performance. This section describes the empirical evidence with regard to this hypothesis.

Table 28 shows the output of two-step system GMM regressions for the sample listed companies in Bangladesh during 2000-2020 and 2006-2020 following the econometric specification in equation 5. Model 13 and Model 16 of Table 28 show the regression estimates on BEP during full sample period and CG period respectively. Model 14 and Model 17 of Table 27 show the regression estimates on ROA during full sample period and CG period respectively. Similarly, Model 15 and Model 18 of Table 28 show the regression estimates on TBQ during full sample period and CG period respectively. The p-value of F-statistic in all models is less than 0.01, which implies the validity of the estimated models for this study. The results of first-order serial correlation test  $AR(1)$  and second-order serial correlation test  $AR(2)$  and the Hansen test extend the validity and reliability of the instruments for the models of the study. The p-values of  $AR(1)$  for all performance measures indicate that panel data contains first order serial correlation but the lowest p-value of  $AR(2)$  under the all models is 0.410, suggesting that there is no second order serial correlation. The lowest p-value of the Hansen-test under all GMM models is 0.302, implying that there remains no significant over-identification problems in these models. Hence, all the instruments used in the respected

models are statistically valid. In Table 28, results suggest that the coefficient values of  $BEP_{t-1}$ ,  $ROA_{t-1}$ , and  $TBQ_{t-1}$  are statistically significant at 1 percent level for both sample periods. In addition, the coefficient value of  $TBQ_{t-2}$  is significant at 1 percent level during 2000-2020, whereas it is significant at 5 percent level during 2006-2020. These significant coefficient values of the lagged level of BEP, ROA, and TBQ imply that the level of firm performance in any year can be explained by its immediate preceding year. Apart from, the current value of TBQ accounted for its two-year lag value as well as one-year lag values. In the econometric models of this study, using the lag values of all performance measures could control for unobserved factors' effects on the relationship between family ownership and firm performance.

In Table 28, it is observed that beta coefficient of FOWN is -0.071 for BEP, - 0.068 for ROA and - 0.980 for TBQ during 2000-2020. On the other hand, the beta coefficient of FOWN is -0.071 for BEP, - 0.071 is for ROA and -1.157 for TBQ during 2006-2020. All these beta negative coefficients are statistically significant. These results imply that family ownership does not lead to better performance of firms. This negative relationship between family ownership and firm performance also indicates that family directors are not motivated to work for the betterment of non-family shareholders rather they are motivated to satisfy their personal benefits. This finding is parallel to the earlier studies such as Claessens et al. (2002), Jaggi et al. (2009), and Giovannini (2010). The overall evidence accepts the hypothesis that family control in terms of family ownership is negatively associated with firm performance. It also supports the arguments of agency theory from the perspective of the entrenchment effect of family ownership.

The results also indicate that BS is negatively associated with accounting-based performance. BIND is negatively associated with ROA and TBQ. SIZE has a significant positive influence over the

**Table 28: Two-step system GMM estimates for the family control (Family Ownership: FOWN) and firm performance**

| Period                 | 2000-2020 (Full Period)          |                                  |                                 | 2006-2020 (CG Period)           |                                 |                                 |
|------------------------|----------------------------------|----------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
|                        | Model 13                         | Model 14                         | Model 15                        | Model 16                        | Model 17                        | Model 18                        |
|                        | BEP                              | ROA                              | TBQ                             | BEP                             | ROA                             | TBQ                             |
| BEP <sub>t-1</sub>     | 0.726***<br><i>7.31</i>          |                                  |                                 | 0.734***<br><i>6.19</i>         |                                 |                                 |
| ROA <sub>t-1</sub>     |                                  | 0.842***<br><i>10.44</i>         |                                 |                                 | 0.907***<br><i>10.58</i>        |                                 |
| TBQ <sub>t-1</sub>     |                                  |                                  | 0.364***<br><i>5.55</i>         |                                 |                                 | 0.353***<br><i>4.75</i>         |
| TBQ <sub>t-2</sub>     |                                  |                                  | 0.051**<br><i>2.08</i>          |                                 |                                 | 0.065**<br><i>2.48</i>          |
| <b>FOWN</b>            | <b>-0.071***</b><br><i>-3.75</i> | <b>-0.068***</b><br><i>-2.79</i> | <b>-0.980**</b><br><i>-2.51</i> | <b>-0.071**</b><br><i>-2.37</i> | <b>-0.071**</b><br><i>-2.42</i> | <b>-1.157**</b><br><i>-2.39</i> |
| BS                     | -0.062***<br><i>-3.24</i>        | -0.068***<br><i>-2.81</i>        | 0.139<br><i>1.11</i>            | -0.066***<br><i>-2.63</i>       | -0.060**<br><i>-2.09</i>        | -0.002<br><i>-0.01</i>          |
| BIND                   | -0.052<br><i>-1.06</i>           | -0.075<br><i>-1.51</i>           | -2.148***<br><i>-3.54</i>       | -0.080<br><i>-1.54</i>          | -0.098*<br><i>-1.68</i>         | -2.275***<br><i>-3.32</i>       |
| CEOD                   | -0.003<br><i>-0.73</i>           | 0.001<br><i>0.22</i>             | 0.099<br><i>0.84</i>            | -0.002<br><i>-0.37</i>          | 0.003<br><i>0.73</i>            | 0.144<br><i>0.99</i>            |
| AGE                    | 0.001<br><i>0.38</i>             | 0.000<br><i>0.17</i>             | 0.071<br><i>1.49</i>            | 0.002<br><i>0.68</i>            | 0.000<br><i>-0.01</i>           | 0.063<br><i>1.06</i>            |
| SIZE                   | 0.006***<br><i>3.04</i>          | 0.004***<br><i>2.83</i>          | -0.164***<br><i>-4.88</i>       | 0.006**<br><i>2.11</i>          | 0.003**<br><i>2.02</i>          | -0.192***<br><i>-4.97</i>       |
| LEVR                   | -0.001***<br><i>-7.92</i>        | -0.001***<br><i>-7.02</i>        | -0.012**<br><i>-2.47</i>        | -0.001***<br><i>-4.06</i>       | -0.001***<br><i>-6.39</i>       | -0.015**<br><i>-2.01</i>        |
| GROW                   | -0.009**<br><i>-2.04</i>         | 0.003<br><i>0.48</i>             | -0.216***<br><i>-3.40</i>       | -0.011<br><i>-1.90</i>          | 0.002<br><i>0.34</i>            | -0.207**<br><i>-2.37</i>        |
| DOW                    | 0.065***<br><i>4.10</i>          | 0.051***<br><i>3.92</i>          | 1.006***<br><i>4.32</i>         | 0.069***<br><i>3.17</i>         | 0.052***<br><i>2.91</i>         | 1.085***<br><i>3.83</i>         |
| INST                   | 0.009<br><i>0.72</i>             | 0.009<br><i>0.72</i>             | -0.298<br><i>-1.32</i>          | 0.014<br><i>0.76</i>            | 0.014<br><i>0.96</i>            | -0.331<br><i>-1.11</i>          |
| MB                     | 0.000<br><i>-0.81</i>            | 0.000<br><i>-1.09</i>            | 0.032*<br><i>1.72</i>           | 0.000<br><i>-1.15</i>           | 0.000<br><i>-1.28</i>           | 0.038**<br><i>1.94</i>          |
| COVID                  | -0.017<br><i>-1.20</i>           | -0.015<br><i>-1.22</i>           | 0.052<br><i>0.40</i>            | -0.017<br><i>-1.49</i>          | -0.011<br><i>-1.09</i>          | 0.016<br><i>0.12</i>            |
| Constant               | 0.008<br><i>0.14</i>             | 0.058<br><i>1.04</i>             | 4.673***<br><i>5.44</i>         | 0.024<br><i>0.28</i>            | 0.071<br><i>1.26</i>            | 5.528***<br><i>5.08</i>         |
| Year Dummies           | Yes                              | Yes                              | Yes                             | Yes                             | Yes                             | Yes                             |
| Industry Dummies       | Yes                              | Yes                              | Yes                             | Yes                             | Yes                             | Yes                             |
| Lags                   | 2 - 2                            | 2 - 2                            | 2 - 2                           | 2 - 2                           | 2 - 2                           | 2 - 2                           |
| P-value of F-statistic | 0.000                            | 0.000                            | 0.000                           | 0.000                           | 0.000                           | 0.000                           |
| P-value of AR(2)       | 0.934                            | 0.413                            | 0.571                           | 0.931                           | 0.410                           | 0.822                           |
| P-value of Hansen test | 0.352                            | 0.406                            | 0.540                           | 0.351                           | 0.317                           | 0.302                           |
| No. of instruments     | 195                              | 195                              | 189                             | 155                             | 155                             | 153                             |
| No. of observations    | 2444                             | 2444                             | 2240                            | 1899                            | 1899                            | 1793                            |
| No. of groups          | 204                              | 204                              | 198                             | 202                             | 202                             | 196                             |

Note: BEP<sub>t-1</sub>, ROA<sub>t-1</sub>, and TBQ<sub>t-1</sub> stand for the first order lag values of BEP, ROA, and TBQ respectively. TBQ<sub>t-2</sub> stands for the second order lag values of TBQ. FOWN refers to family ownership. The t-statistics, based on robust standard error, are shown in italic. \*, \*\*, and \*\*\* denote the level of significance at 10%, 5%, and 1% respectively. The coefficients of year dummies and industry dummies are not reported for the sake of brevity. TBQ and MB are winsorized at 1% in each tail to control for outlier effect. The definition and measurement of variables are presented in Table 9.

accounting-based performances, but negative influence over market-based performance. LEVR is negatively associated with all performance measures and DOW is positively associated with all performance measures. MB has positive influence over TBQ.

Table 29 displays the results of two-step system GMM regressions models following the econometric specification in equation 5.1. Model 19 and Model 22 of Table 29 show the regression estimates on BEP during full sample period and CG period respectively. Model 20 and Model 23 of Table 29 show the regression estimates on ROA during full sample period and CG period respectively. Similarly, Model 21 and Model 24 of Table 29 show the regression estimates on TBQ during full sample period and CG period respectively. In all models, the coefficient values of  $BEP_{t-1}$ ,  $ROA_{t-1}$ , and  $TBQ_{t-1}$  are significant at 1 percent level. Further to this, Model 21 and Model 24 of Table 29 show that the coefficient values of  $TBQ_{t-2}$  is significant at 1 percent level. These significant coefficient values of the lagged dependent variables imply that the current performance of firms is explained by its immediate preceding year. That is, it supports the arguments of using dynamic model in assessing the influence of family ownership on firm performance. This evidence extensively supports a dynamic relationship between board characteristics and firm performance. The p-values of  $AR(2)$  under all Models of Table 29 indicate that there is no second order serial correlation. Similarly, the p-value of the Hansen-test under all GMM models of Table 29 implies that there remains no significant over-identification problem of instrumental variables. Hence, all the instruments used in the respected models are statistically valid. In equation 5.1, this study uses a cut-off point of 20 percent family ownership (FOWN\_20) to set a dummy value. That is, this study assigns 1 when family ownership is greater than 20 percent and, otherwise it is zero.

It is observed in Table 29 that beta coefficient of FOWN\_20 is -0.017 for BEP, -0.016 for ROA and -0.235 for TBQ during 2000-2020. All these negative coefficients values are statistically significant. On the other hand, the beta coefficients of FOWN\_20 are significant for BEP, ROA, and TBQ during 2006-2020. Thus, the results remain qualitatively same when we run the same regression

**Table 29: Two-step system GMM estimates for the family control (At least 20 percent of Family Ownership: FOWN\_20) and firm performance**

| Period                 | 2000-2020 (Full Period)        |                                 |                                 | 2006-2020 (CG Period)          |                                |                                  |
|------------------------|--------------------------------|---------------------------------|---------------------------------|--------------------------------|--------------------------------|----------------------------------|
|                        | Model 19                       | Model 20                        | Model 21                        | Model 22                       | Model 23                       | Model 24                         |
|                        | BEP                            | ROA                             | TBQ                             | BEP                            | ROA                            | TBQ                              |
| BEP <sub>t-1</sub>     | 0.662****<br><i>6.65</i>       |                                 |                                 | 0.348***<br><i>3.45</i>        |                                |                                  |
| ROA <sub>t-1</sub>     |                                | 0.738***<br><i>10.67</i>        |                                 |                                | 0.916***<br><i>10.53</i>       |                                  |
| TBQ <sub>t-1</sub>     |                                |                                 | 0.453***<br><i>3.49</i>         |                                |                                | 0.464***<br><i>3.31</i>          |
| TBQ <sub>t-2</sub>     |                                |                                 | 0.117<br><i>1.34</i>            |                                |                                | 0.120<br><i>1.24</i>             |
| <b>FOWN_20</b>         | <b>-0.017*</b><br><i>-1.76</i> | <b>-0.016**</b><br><i>-2.28</i> | <b>-0.235**</b><br><i>-2.03</i> | <b>-0.028*</b><br><i>-1.78</i> | <b>-0.011*</b><br><i>-1.73</i> | <b>-0.336***</b><br><i>-2.80</i> |
| BS                     | -0.043***<br><i>-2.25</i>      | -0.043***<br><i>-2.96</i>       | 0.233*<br><i>1.94</i>           | -0.074**<br><i>-2.44</i>       | -0.037**<br><i>-2.04</i>       | 0.105<br><i>0.75</i>             |
| BIND                   | -0.049<br><i>-0.99</i>         | -0.058<br><i>-1.17</i>          | -0.618**<br><i>-2.19</i>        | -0.044<br><i>-1.26</i>         | -0.070<br><i>-1.44</i>         | -0.749***<br><i>-2.84</i>        |
| CEOD                   | -0.005<br><i>-1.35</i>         | -0.002<br><i>-0.54</i>          | 0.117<br><i>0.83</i>            | -0.016**<br><i>-2.23</i>       | 0.001<br><i>0.24</i>           | 0.079<br><i>0.44</i>             |
| AGE                    | 0.001<br><i>0.54</i>           | -0.001<br><i>-0.38</i>          | 0.082**<br><i>2.17</i>          | -0.001<br><i>-0.20</i>         | 0.001<br><i>0.76</i>           | 0.065*<br><i>1.79</i>            |
| SIZE                   | 0.008***<br><i>3.26</i>        | 0.005***<br><i>3.21</i>         | -0.109***<br><i>-4.14</i>       | 0.013***<br><i>3.47</i>        | 0.003**<br><i>2.22</i>         | -0.126***<br><i>-4.54</i>        |
| LEVR                   | -0.001***<br><i>-2.70</i>      | -0.001***<br><i>-3.50</i>       | -0.014***<br><i>-2.68</i>       | -0.001***<br><i>-7.52</i>      | -0.001***<br><i>-3.01</i>      | -0.015**<br><i>-2.13</i>         |
| GROW                   | -0.008<br><i>-1.51</i>         | 0.001<br><i>0.24</i>            | -0.260***<br><i>-2.82</i>       | -0.006<br><i>-1.20</i>         | 0.002<br><i>0.34</i>           | -0.305***<br><i>-3.25</i>        |
| DOW                    | 0.062***<br><i>3.60</i>        | 0.046***<br><i>4.34</i>         | 0.637***<br><i>3.43</i>         | 0.112***<br><i>4.54</i>        | 0.032***<br><i>2.74</i>        | 0.709***<br><i>3.60</i>          |
| INST                   | 0.011<br><i>0.69</i>           | 0.010<br><i>0.71</i>            | -0.211<br><i>-1.09</i>          | 0.025<br><i>0.94</i>           | 0.012<br><i>0.89</i>           | -0.261<br><i>-1.19</i>           |
| MB                     | 0.000<br><i>1.40</i>           | 0.000*<br><i>1.83</i>           | 0.041*<br><i>1.78</i>           | 0.001***<br><i>3.33</i>        | -0.000<br><i>-1.25</i>         | 0.039<br><i>1.55</i>             |
| COVID                  | -0.018<br><i>-1.59</i>         | -0.015<br><i>-1.31</i>          | -0.163<br><i>-0.99</i>          | -0.022*<br><i>-1.71</i>        | -0.012<br><i>-1.26</i>         | -0.206<br><i>-1.19</i>           |
| Constant               | -0.060<br><i>-0.84</i>         | -0.017<br><i>-0.40</i>          | 2.626***<br><i>4.03</i>         | -0.090<br><i>-1.20</i>         | 0.012<br><i>0.33</i>           | 3.149***<br><i>4.25</i>          |
| Year Dummy             | Yes                            | Yes                             | Yes                             | Yes                            | Yes                            | Yes                              |
| Industry Dummy         | Yes                            | Yes                             | Yes                             | Yes                            | Yes                            | Yes                              |
| Lags                   | 2 - 2                          | 2 - 2                           | 3 - 3                           | 2 - 2                          | 2 - 2                          | 3 - 3                            |
| P-value of F-statistic | 0.000                          | 0.000                           | 0.000                           | 0.000                          | 0.000                          | 0.000                            |
| P-value of AR(2)       | 0.863                          | 0.399                           | 0.908                           | 0.302                          | 0.402                          | 0.909                            |
| P-value of Hansen test | 0.289                          | 0.436                           | 0.305                           | 0.194                          | 0.277                          | 0.393                            |
| No. of instruments     | 187                            | 187                             | 144                             | 165                            | 152                            | 122                              |
| No. of observations    | 2444                           | 2444                            | 2240                            | 1899                           | 1899                           | 1792                             |
| No. of groups          | 204                            | 204                             | 198                             | 202                            | 202                            | 196                              |

Note: BEP<sub>t-1</sub>, ROA<sub>t-1</sub>, and TBQ<sub>t-1</sub> stand for the first order lag values of BEP, ROA, and TBQ respectively. TBQ<sub>t-2</sub> stands for the second order lag values of TBQ. FOWN\_20 refers to a dummy variable of family ownership where it is '1' if family ownership is greater than 20%, otherwise '0'. The t-statistics, based on robust standard error, are shown in italic. \*, \*\*, and \*\*\* denote the level of significance at 10%, 5%, and 1% respectively. The coefficients of year dummies and industry dummies are not reported for the sake of brevity. TBQ and MB are winsorized at 1% in each tail to control for outlier effect. The definition and measurement of variables are presented in Table 9.

models for the periods over 2006-2020. The results indicate that more than 20% family ownership is not beneficial to the company. This finding is parallel to the results of the Table 28.

In an attempt to get more evidence about what level of threshold of family ownership more strappingly deteriorates firm performance, this study sets a family ownership dummy by determining a cut-off point of 25% family ownership (c.f. Table 30) as well as 30% family ownership (c.f. Table 31). Model 25 and Model 28 of Table 30 show the regression estimates on BEP during full sample period and CG period respectively. Model 26 and Model 29 of Table 30 show the regression estimates on ROA during full sample period and CG period respectively. Similarly, Model 27 and Model 30 of Table 30 show the regression estimates on TBQ during full sample period and CG period respectively. In Table 30, the post-estimation results of all the models satisfy all conditions necessary for reliability and validity of the GMM regression coefficients. For example, the p-values of  $AR(2)$  of all models in Table 30 indicate that panel data does not contain the second order serial correlation. Similarly, the p-value of the Hansen-tests of all models in Table 30 implies that there remain no significant over-identification problems of instrumental variables. Hence, all the instruments used in the respected models are statistically valid. Apart from, the lagged dependent variables under all the regression models of Table 30 are statistically significant, implying that performance in the last year determines the performance in the current year and, similarly, performance in the current year will determine the performance of in the immediate next year. These results support the dynamic nature of the performance variables. Hence, the regression models of this study take account of this dynamic relationship and provide consistent relationship between family ownership and firm performance.

In all models of Table 30, family ownership is defined as dummy where it is 1 if family ownership is greater than 25 percent and, otherwise, 0. It is observed in Table 30 that beta coefficient of FOWN\_25 is -0.035 for BEP, -0.037 is for ROA and -0.359 for TBQ during 2000-2020. All these negative coefficients values for FOWN\_25 are statistically significant at 5% level, which are comparatively stronger than that of FOWN\_20 (c.f. Table 29). On the other hand, the beta

**Table 30: Two-step system GMM estimates for the family control (At least 25 percent of Family Ownership: FOWN\_25) and firm performance**

| Period                 | 2000-2020 (Full Period)          |                                  |                                 | 2006-2020 (CG Period)          |                                 |                                 |
|------------------------|----------------------------------|----------------------------------|---------------------------------|--------------------------------|---------------------------------|---------------------------------|
|                        | Model 25                         | Model 26                         | Model 27                        | Model 28                       | Model 29                        | Model 30                        |
|                        | BEP                              | ROA                              | TBQ                             | BEP                            | ROA                             | TBQ                             |
| BEP <sub>t-1</sub>     | 0.713***<br><i>7.01</i>          |                                  |                                 | 0.348***<br><i>3.37</i>        |                                 |                                 |
| ROA <sub>t-1</sub>     |                                  | 0.836***<br><i>10.12</i>         |                                 |                                | 0.906***<br><i>10.22</i>        |                                 |
| TBQ <sub>t-1</sub>     |                                  |                                  | 0.360***<br><i>5.23</i>         |                                |                                 | 0.340***<br><i>4.59</i>         |
| TBQ <sub>t-2</sub>     |                                  |                                  | 0.049**<br><i>2.00</i>          |                                |                                 | 0.055**<br><i>2.28</i>          |
| <b>FOWN_25</b>         | <b>-0.035***</b><br><i>-2.72</i> | <b>-0.037***</b><br><i>-2.76</i> | <b>-0.359**</b><br><i>-2.41</i> | <b>-0.035*</b><br><i>-1.67</i> | <b>-0.021**</b><br><i>-2.42</i> | <b>-0.441**</b><br><i>-2.29</i> |
| BS                     | -0.064**<br><i>-2.48</i>         | -0.073***<br><i>-3.06</i>        | 0.087<br><i>0.53</i>            | -0.076**<br><i>-2.26</i>       | -0.044**<br><i>-2.31</i>        | 0.006<br><i>0.03</i>            |
| BIND                   | -0.071<br><i>-1.27</i>           | -0.094*<br><i>-1.65</i>          | -2.083***<br><i>-3.01</i>       | -0.045<br><i>-1.20</i>         | -0.088*<br><i>-1.73</i>         | -2.348***<br><i>-3.01</i>       |
| CEOD                   | -0.003<br><i>-0.66</i>           | 0.001<br><i>0.34</i>             | -0.002<br><i>-0.02</i>          | -0.011<br><i>-1.50</i>         | 0.003<br><i>0.70</i>            | 0.121<br><i>0.76</i>            |
| AGE                    | 0.002<br><i>0.65</i>             | -0.001<br><i>-0.43</i>           | 0.095*<br><i>1.67</i>           | -0.001<br><i>-0.28</i>         | -0.001<br><i>-0.29</i>          | 0.073<br><i>1.08</i>            |
| SIZE                   | 0.007***<br><i>2.88</i>          | 0.004***<br><i>2.80</i>          | -0.150***<br><i>-4.49</i>       | 0.013***<br><i>3.41</i>        | 0.003**<br><i>2.10</i>          | -0.181***<br><i>-4.30</i>       |
| LEVR                   | -0.001***<br><i>-6.35</i>        | -0.001***<br><i>-7.30</i>        | -0.012***<br><i>-2.38</i>       | -0.001***<br><i>-7.60</i>      | -0.001**<br><i>-7.21</i>        | -0.015**<br><i>-2.10</i>        |
| GROW                   | -0.010*<br><i>-1.67</i>          | 0.003<br><i>0.57</i>             | -0.262***<br><i>-3.14</i>       | -0.006<br><i>-1.21</i>         | 0.001<br><i>0.24</i>            | -0.228**<br><i>-2.61</i>        |
| DOW                    | 0.071***<br><i>3.80</i>          | 0.053***<br><i>3.81</i>          | 0.927***<br><i>3.49</i>         | 0.119***<br><i>3.92</i>        | 0.040***<br><i>3.13</i>         | 1.026***<br><i>3.75</i>         |
| INST                   | 0.017<br><i>1.12</i>             | 0.009<br><i>0.63</i>             | -0.350<br><i>-1.34</i>          | 0.034<br><i>1.25</i>           | 0.010<br><i>0.64</i>            | -0.337<br><i>-1.18</i>          |
| MB                     | 0.000<br><i>-1.31</i>            | 0.000<br><i>-1.27</i>            | 0.032*<br><i>1.67</i>           | 0.001***<br><i>3.30</i>        | 0.000<br><i>-1.53</i>           | 0.038*<br><i>1.89</i>           |
| COVID                  | -0.019<br><i>-1.62</i>           | -0.018<br><i>-1.54</i>           | 0.016<br><i>0.12</i>            | -0.022<br><i>-1.47</i>         | -0.015<br><i>-1.45</i>          | -0.037<br><i>-0.28</i>          |
| Constant               | 0.007<br><i>0.09</i>             | 0.070<br><i>1.15</i>             | 4.359***<br><i>5.34</i>         | -0.088<br><i>-1.05</i>         | 0.030<br><i>0.67</i>            | 5.255***<br><i>4.60</i>         |
| Year & Industry Effect | Yes                              | Yes                              | Yes                             | Yes                            | Yes                             | Yes                             |
| Lags                   | 2 - 2                            | 2 - 2                            | 2 - 2                           | 1 - 2                          | 2 - 2                           | 2 - 2                           |
| P-value of F-statistic | 0.000                            | 0.000                            | 0.000                           | 0.000                          | 0.000                           | 0.000                           |
| P-value of AR(2)       | 0.925                            | 0.425                            | 0.542                           | 0.279                          | 0.407                           | 0.705                           |
| P-value of Hansen test | 0.405                            | 0.519                            | 0.339                           | 0.117                          | 0.334                           | 0.201                           |
| No. of instruments     | 189                              | 189                              | 182                             | 163                            | 152                             | 150                             |
| No. of observations    | 2444                             | 2444                             | 2240                            | 1899                           | 1899                            | 1792                            |
| No. of groups          | 204                              | 204                              | 198                             | 202                            | 202                             | 196                             |

Note: BEP<sub>t-1</sub>, ROA<sub>t-1</sub>, and TBQ<sub>t-1</sub> stand for the first order lag values of BEP, ROA, and TBQ respectively. TBQ<sub>t-2</sub> stands for the second order lag values of TBQ. FOWN\_25 refers to a dummy variable of family ownership where it is '1' if family ownership is greater than 25%, otherwise '0'. The t-statistics, based on robust standard error, are shown in italic. \*, \*\*, and \*\*\* denote the level of significance at 10%, 5%, and 1% respectively. The coefficients of year dummies and industry dummies are not reported for the sake of brevity. TBQ and MB are winsorized at 1% in each tail to control for outlier effect. The definition and measurement of variables are presented in Table 9.



coefficient of FOWN\_25 is -0.035 for BEP, -0.021 for ROA and -0.441 for TBQ during 2006-2020. All these negative coefficients values for FOWN\_25 are statistically significant. Thus, the results remain qualitatively same when we run the same regression models for the periods over 2006-2020. Again, the results indicate that more than 25% family ownership is not beneficial to the company. This finding is qualitatively parallel to the results of the Table 29.

The results of the control variables presented in Table 30 indicate that BS has negative association with accounting-based performance. BIND is negatively associated with ROA and TBQ. AGE has a weak positive association with TBQ. SIZE has a significant positive influence over the accounting-based performances, but negative influence over the market-based performance. LEVR is negatively associated with all performance measures and DOW is positively associated with all performance measures. GROW is negatively affecting both BEP and TBQ. MB has positive influence over accounting-based as well as market-based performance.

All models of Table 31 display the results of two-step system GMM estimations using the econometric specification of equation 5.4. On the other hand, Model 31 and Model 34 of Table 31 show the regression estimates on BEP during full sample period and CG period respectively. Model 32 and Model 35 of Table 31 show the regression estimates on ROA during full sample period and CG period respectively. Similarly, Model 33 and Model 36 of Table 31 show the regression estimates on TBQ during full sample period and CG period respectively. All models of Table 31 display the results of two-step system GMM estimations using the econometric specification of equation 5.4. In all models of Table 31, family ownership is defined as dummy where it is 1 if family ownership is greater than 30 percent and, otherwise, 0. In Table 31, the p-values of AR(2) for all models in Table 31 indicate that panel data does not contain the second order serial correlation. Similarly, the p-value of the Hansen-tests of all models in Table 31 implies that there is no significant over-identification problem of instrumental variables. Apart from, the lagged dependent variables under all the regression models of Table 31 are statistically significant, implying that the current year performance of firms is explained by the last year performance of firms. These results support the dynamic nature of the performance variables.

**Table 31: Two-step system GMM estimates for the family control (At least 30 percent of Family Ownership: FOWN\_30) and firm performance**

| Period                 | 2000-2020 (Full Period)         |                                 |                                  | 2006-2020 (CG Period)           |                                  |                                 |
|------------------------|---------------------------------|---------------------------------|----------------------------------|---------------------------------|----------------------------------|---------------------------------|
|                        | Model 31                        | Model 32                        | Model 33                         | Model 34                        | Model 35                         | Model 36                        |
|                        | BEP                             | ROA                             | TBQ                              | BEP                             | ROA                              | TBQ                             |
| BEP <sub>t-1</sub>     | 0.710***<br><i>7.12</i>         |                                 |                                  | 0.376***<br><i>2.81</i>         |                                  |                                 |
| ROA <sub>t-1</sub>     |                                 | 0.836***<br><i>10.14</i>        |                                  |                                 | 0.681***<br><i>7.76</i>          |                                 |
| TBQ <sub>t-1</sub>     |                                 |                                 | 0.362***<br><i>5.22</i>          |                                 |                                  | 0.340***<br><i>4.99</i>         |
| TBQ <sub>t-2</sub>     |                                 |                                 | 0.047*<br><i>1.66</i>            |                                 |                                  | 0.054**<br><i>2.10</i>          |
| <b>FOWN_30</b>         | <b>-0.026**</b><br><i>-2.33</i> | <b>-0.029**</b><br><i>-2.31</i> | <b>-0.462***</b><br><i>-2.69</i> | <b>-0.036**</b><br><i>-2.13</i> | <b>-0.032***</b><br><i>-2.87</i> | <b>-0.467**</b><br><i>-2.23</i> |
| BS                     | -0.052**<br><i>-2.59</i>        | -0.055**<br><i>-2.51</i>        | 0.107<br><i>0.78</i>             | -0.033**<br><i>-2.58</i>        | -0.061*<br><i>-1.86</i>          | 0.070<br><i>0.38</i>            |
| BIND                   | -0.053<br><i>-1.19</i>          | -0.055<br><i>-1.00</i>          | -2.112***<br><i>-3.52</i>        | -0.101*<br><i>-1.81</i>         | -0.045<br><i>-1.44</i>           | -2.205***<br><i>-2.79</i>       |
| CEOD                   | -0.002<br><i>-0.36</i>          | 0.002<br><i>0.48</i>            | 0.164<br><i>1.41</i>             | -0.007<br><i>-0.87</i>          | 0.001<br><i>0.17</i>             | 0.175<br><i>1.13</i>            |
| AGE                    | 0.003<br><i>1.28</i>            | 0.001<br><i>0.54</i>            | 0.076<br><i>1.49</i>             | -0.002<br><i>-0.56</i>          | -0.001<br><i>-0.45</i>           | 0.070<br><i>1.12</i>            |
| SIZE                   | 0.006***<br><i>3.03</i>         | 0.004***<br><i>2.62</i>         | -0.165***<br><i>-5.66</i>        | 0.011***<br><i>3.46</i>         | 0.004<br><i>1.51</i>             | -0.187***<br><i>-5.03</i>       |
| LEVR                   | 0.000***<br><i>-2.74</i>        | -0.001***<br><i>-4.99</i>       | -0.012**<br><i>-2.32</i>         | -0.001***<br><i>-8.34</i>       | -0.001***<br><i>-8.80</i>        | -0.016**<br><i>-1.99</i>        |
| GROW                   | -0.010**<br><i>-2.34</i>        | 0.002<br><i>0.39</i>            | -0.230***<br><i>-3.15</i>        | -0.006<br><i>-1.26</i>          | 0.004<br><i>0.72</i>             | -0.202**<br><i>-2.49</i>        |
| DOW                    | 0.060***<br><i>3.47</i>         | 0.045***<br><i>3.23</i>         | 0.965***<br><i>3.93</i>          | 0.107***<br><i>4.52</i>         | 0.075***<br><i>4.65</i>          | 0.997***<br><i>4.25</i>         |
| INST                   | 0.008<br><i>0.66</i>            | 0.004<br><i>0.39</i>            | -0.273<br><i>-1.30</i>           | 0.022<br><i>0.90</i>            | 0.026<br><i>1.49</i>             | -0.353<br><i>-1.25</i>          |
| MB                     | 0.000<br><i>0.74</i>            | 0.000<br><i>-1.33</i>           | 0.032<br><i>1.62</i>             | 0.000<br><i>0.27</i>            | 0.000***<br><i>3.36</i>          | 0.037**<br><i>2.10</i>          |
| COVID                  | -0.014<br><i>-1.30</i>          | -0.014<br><i>-1.21</i>          | 0.019<br><i>0.15</i>             | -0.018<br><i>-1.33</i>          | -0.023*<br><i>-1.68</i>          | 0.007<br><i>0.05</i>            |
| Constant               | -0.023<br><i>-0.37</i>          | 0.030<br><i>0.49</i>            | 4.666***<br><i>6.15</i>          | -0.116**<br><i>-2.00</i>        | 0.020<br><i>0.42</i>             | 5.243***<br><i>5.18</i>         |
| Year Dummies           | Yes                             | Yes                             | Yes                              | Yes                             | Yes                              | Yes                             |
| Industry Dummies       | Yes                             | Yes                             | Yes                              | Yes                             | Yes                              | Yes                             |
| Lags                   | 2 - 2                           | 2 - 2                           | 2 - 2                            | 1 - 2                           | 1 - 2                            | 2 - 2                           |
| P-value of F-statistic | 0.000                           | 0.000                           | 0.000                            | 0.000                           | 0.000                            | 0.000                           |
| P-value of AR(2)       | 0.883                           | 0.405                           | 0.552                            | 0.480                           | 0.245                            | 0.724                           |
| P-value of Hansen test | 0.614                           | 0.624                           | 0.563                            | 0.196                           | 0.217                            | 0.247                           |
| No. of instruments     | 192                             | 192                             | 183                              | 167                             | 171                              | 154                             |
| No. of observations    | 2444                            | 2444                            | 2240                             | 1899                            | 1899                             | 1899                            |
| No. of groups          | 204                             | 204                             | 198                              | 202                             | 202                              | 202                             |

Note: BEP<sub>t-1</sub>, ROA<sub>t-1</sub>, and TBQ<sub>t-1</sub> stand for the first order lag values of BEP, ROA, and TBQ respectively. TBQ<sub>t-2</sub> stands for the second order lag values of TBQ. FOWN\_30 refers to a dummy variable of family ownership where it is '1' if family ownership is greater than 30%, otherwise '0'. The t-statistics, based on robust standard error, are shown in italic. \*, \*\*, and \*\*\* denote the level of significance at 10%, 5%, and 1% respectively. The coefficients of year dummies and industry dummies are not reported for the sake of brevity. TBQ and MB are winsorized at 1% in each tail to control for outlier effect. The definition and measurement of variables are presented in Table 9.

In Table 31, the beta coefficient of FOWN\_30 is -0.026 for BEP, -0.029 for ROA and -0.462 for TBQ during 2000-2020. All these negative coefficients values of FOWN\_30 are statistically significant at not more than 5% level, which are comparatively stronger than that of FOWN\_20 (c.f. Table 29). On the other hand, the beta coefficient of FOWN\_30 is -0.036 for BEP, -0.032 for ROA and -0.467 for TBQ during 2006-2020. All these negative coefficient values of FOWN\_30 are also statistically significant at not more than 5 percent level. Thus, the results remain qualitatively same for the periods over 2006-2020. These consistencies intensify the robustness of our base results (c.f. Table 28) and support the hypothesis that family ownership does always not bring better financial outcome to the listed companies in Bangladesh.

The results of the control variables presented in Table 31 indicate that BS has negative association with accounting-based performance. BIND is negatively associated with BEP and TBQ. SIZE has a significant positive influence over the accounting-based performances, but negative influence over the market-based performance. LEVR is negatively associated with all performance measures and DOW is positively associated with all performance measures. GROW is negatively affecting both BEP and TBQ. MB has positive explanatory power in affecting ROA and TBQ during 2006-2020. COVID has a negative association with ROA in CG period.

#### **6.4.4 Impact of Audit Committee Independence (ACIND) on Firm Performance**

This section provides information about a hypothesis that audit committee independence (ACIND) significantly affects firm performance. Table 32 displays the empirical results of the GMM regression corresponding to the econometric equation 2. Model 37 and Model 40 of Table 32 show the regression estimates on BEP during full sample period and CG period respectively. Model 38 and Model 41 of Table 32 show the regression estimates on ROA during full sample period and CG period respectively. Similarly, Model 39 and Model 42 of Table 32 show the regression estimates on TBQ during full sample period and CG period respectively. Results are drawn from the samples involved in the full period ranging from 2000 to 2020 as well as the sample firms involved in the CG period ranging from 2006 to 2020. In all models of Table 32, results indicate that the previous year's performance is positively associated with the current's year performance, suggesting a dynamic panel structure of the performance variables. By design, the inclusion of lag dependent variable as a regressor in a regression model also causes a problem of endogeneity (Das, 2019). In this case,

system GMM regression can control for endogeneity and provide more consistent and unbiased estimates relative to OLS, fixed-effect, and 2SLS models (Das, 2019; Nickell, 1981). As shown in Table 32, the p-values of *AR*(2) under all performance measures suggest that panel data does not contain the second order serial correlation. Similarly, the p-value of the Hansen-tests exhibits no significant over-identification problems for the instrumental variables. Hence, instruments used in the model are statistically valid. Therefore, our GMM estimations are robust to draw the evidence on the relationship between audit committee independence (ACIND) and firm performance.

In all models of Table 32, the regression coefficient of audit committee independence (ACIND) is negatively and significantly associated with accounting-based performance (BEP, ROA) and market-based performance (TBQ). That is, the beta coefficient of ACIND is -0.012 ( $t = -2.03$ ) for BEP, -0.015 ( $t = -2.03$ ) is for ROA and -0.369 ( $t = -1.82$ ) for TBQ during 2000-2020. For the CG period, the beta coefficient of ACIND is -0.015 ( $t = -2.54$ ) for BEP, -0.018 ( $t = -2.25$ ) is for ROA and -0.456 ( $t = -2.17$ ) for TBQ during 2006-2020. Thus, the regression results do not qualitatively change between the full periods (2000-2020) and the CG periods (2006-2020). Surprisingly, the negative impact of ACIND on performance during the CG periods is stronger relative to that of the full periods. Like board independence (BIND), independent chairman of audit committee (ACIND) does not make fruitful efforts to enhance firm performance in Bangladesh. These results do not support the hypothesis that ACIND improves firm performance, though these findings are parallel to the Franks et al. (2001), Dejong et al. (2005), and Zájbojníková (2016). Overall, it might be caused by several mistakes. Firstly, as the qualifications of the independent directors were not clearly mentioned in the CG guidelines in Bangladesh till 2018, the adverse selection of independent chairman by the board frequently happened that triggers the audit committee's deficiencies in skills and ability. Secondly, an independent chairman of audit committee might have good personal relation with the apex body of the company that encourages them to be highly loyal to the board at the cost of general shareholders' interest. Finally, all these perspectives discourage board members to destabilize the existing committee settings through bringing necessary changes and to stabilize the improvements within organization. Thus, the implications of the results exhibited in Table 32 are reasonably similar to the implications of the results demonstrated in Table 26. That is, assertions

**Table 32: Two-step system GMM estimates for the relationships between audit committee independence and firm performance**

| Period                 | 2000-2020 (Full Period)   |                           |                           | 2006-2020 (CG Period)     |                          |                           |
|------------------------|---------------------------|---------------------------|---------------------------|---------------------------|--------------------------|---------------------------|
|                        | Model 37                  | Model 38                  | Model 39                  | Model 40                  | Model 41                 | Model 42                  |
|                        | BEP                       | ROA                       | TBQ                       | BEP                       | ROA                      | TBQ                       |
| BEP <sub>t-1</sub>     | 0.775***<br><i>10.64</i>  |                           |                           | 0.735**<br><i>6.72</i>    |                          |                           |
| ROA <sub>t-1</sub>     |                           | 0.643***<br><i>6.42</i>   |                           |                           | 0.571***<br><i>3.31</i>  |                           |
| TBQ <sub>t-1</sub>     |                           |                           | 0.502***<br><i>5.68</i>   |                           |                          | 0.499***<br><i>5.64</i>   |
| TBQ <sub>t-2</sub>     |                           |                           | 0.110***<br><i>2.92</i>   |                           |                          | 0.108***<br><i>2.76</i>   |
| ACIND                  | -0.012**<br><i>-2.03</i>  | -0.015**<br><i>-2.00</i>  | -0.369*<br><i>-1.77</i>   | -0.015**<br><i>-2.54</i>  | -0.018**<br><i>-2.25</i> | -0.456**<br><i>-2.17</i>  |
| BS                     | 0.000<br><i>0.01</i>      | -0.022<br><i>-1.42</i>    | 0.536*<br><i>1.82</i>     | 0.008<br><i>0.44</i>      | -0.012<br><i>-0.48</i>   | 0.566<br><i>1.59</i>      |
| CEOD                   | -0.002<br><i>-0.68</i>    | 0.000<br><i>0.06</i>      | -0.009<br><i>-0.05</i>    | -0.005<br><i>-1.03</i>    | -0.001<br><i>-0.28</i>   | 0.114<br><i>0.39</i>      |
| AGE                    | 0.000<br><i>0.19</i>      | -0.001<br><i>-0.27</i>    | 0.090**<br><i>2.51</i>    | 0.000<br><i>-0.15</i>     | -0.002<br><i>-0.73</i>   | 0.086**<br><i>2.01</i>    |
| SIZE                   | 0.001<br><i>0.97</i>      | 0.004<br><i>1.58</i>      | -0.125***<br><i>-3.87</i> | 0.000<br><i>0.30</i>      | 0.002<br><i>1.18</i>     | -0.152***<br><i>-3.94</i> |
| GROW                   | -0.012***<br><i>-3.42</i> | -0.001<br><i>-0.25</i>    | -0.234***<br><i>-2.92</i> | -0.015***<br><i>-3.88</i> | -0.003<br><i>-0.73</i>   | -0.246***<br><i>-2.86</i> |
| LEVR                   | -0.032***<br><i>-2.96</i> | -0.064***<br><i>-2.64</i> | 0.045<br><i>0.24</i>      | -0.047***<br><i>-3.12</i> | -0.091**<br><i>-2.29</i> | -0.060<br><i>-0.27</i>    |
| DOW                    | 0.039***<br><i>3.34</i>   | 0.045***<br><i>2.94</i>   | 0.704***<br><i>3.35</i>   | 0.044***<br><i>2.68</i>   | 0.058***<br><i>2.80</i>  | 0.785***<br><i>3.45</i>   |
| INST                   | 0.007<br><i>0.72</i>      | 0.008<br><i>0.65</i>      | -0.491**<br><i>-2.36</i>  | 0.009<br><i>0.60</i>      | 0.015<br><i>0.87</i>     | -0.626**<br><i>-2.44</i>  |
| MB                     | 0.000<br><i>-1.27</i>     | 0.000<br><i>-1.32</i>     | 0.013<br><i>0.77</i>      | 0.000<br><i>-1.52</i>     | 0.000<br><i>-1.40</i>    | 0.012<br><i>0.74</i>      |
| COVID                  | -0.015<br><i>-1.40</i>    | -0.020**<br><i>-2.21</i>  | -0.071<br><i>-0.53</i>    | -0.013<br><i>-1.40</i>    | -0.018**<br><i>-2.36</i> | -0.090<br><i>-0.68</i>    |
| Constant               | -0.005<br><i>-0.22</i>    | -0.011<br><i>-0.35</i>    | 2.492***<br><i>3.90</i>   | 0.016<br><i>0.44</i>      | 0.013<br><i>0.32</i>     | 2.950***<br><i>3.74</i>   |
| Year Dummies           | Yes                       | Yes                       | Yes                       | Yes                       | Yes                      | Yes                       |
| Industry Dummies       | Yes                       | Yes                       | Yes                       | Yes                       | Yes                      | Yes                       |
| Lags                   | 3 - 3                     | 3 - 3                     | 2 - 3                     | 3 - 3                     | 3 - 3                    | 2 - 3                     |
| P-value of F-statistic | 0.000                     | 0.000                     | 0.000                     | 0.000                     | 0.000                    | 0.000                     |
| P-value of AR(2)       | 0.855                     | 0.298                     | 0.846                     | 0.950                     | 0.301                    | 0.836                     |
| P-value of Hansen test | 0.534                     | 0.372                     | 0.202                     | 0.679                     | 0.606                    | 0.326                     |
| No. of instruments     | 144                       | 143                       | 57                        | 124                       | 124                      | 53                        |
| No. of observations    | 2443                      | 2444                      | 2239                      | 1899                      | 1899                     | 1791                      |
| No. of groups          | 204                       | 204                       | 198                       | 202                       | 202                      | 196                       |

Note: BEP<sub>t-1</sub>, ROA<sub>t-1</sub>, and TBQ<sub>t-1</sub> stand for the first order lag values of BEP, ROA, and TBQ respectively. TBQ<sub>t-2</sub> stands for the second order lag values of TBQ. ACIND refers to audit committee independence. The t-statistics, based on robust standard error, are shown in italic. \*, \*\*, and \*\*\* denote the level of significance at 10%, 5%, and 1% respectively. The coefficients of year dummies and industry dummies are not reported for the sake of brevity. TBQ and MB are winsorized at 1% in each tail to control for outlier effect. The definition and measurement of variables are presented in Table 9.

associated with board independence –independent directors are reasonably not claimed for better financial performance of a firm– can be retained for the audit committee independence. Of the control variables, board size (BS), growth of firms (GROW), size of firms (SIZE), age of firms (AGE), directors' shareholdings (DOW), institutional shareholdings (INS), and leverage (LEVR) are found statistically significant in influencing either the accounting-based performance or the market-based performance or both measures of performance. Reasonably, a control variable of COVID-19 pandemic (COVID) has a negative association with the accounting-based performance. On the other hand, other two control variables namely CEOD and market to book ratio (MB) are not found significant.

#### **6.4.5 Impact of Audit Committee Meetings (ACM) on Firm Performance**

This section provides empirical evidence on the hypothesis that audit committee meeting (ACM) significantly affects firm performance. Table 33 contains the GMM estimations corresponding to the econometric equation 3. Model 43 and Model 46 of Table 33 show the regression estimates on BEP during full sample period and CG period respectively. Model 44 and Model 47 of Table 33 show the regression estimates on ROA during full sample period and CG period respectively. Model 45 and Model 48 of Table 33 show the regression estimates on TBQ during full sample period and CG period respectively. Results indicate that the last year performance (lag dependent variable) is positively and significantly related to the current year performance. This is a vital indication of a dynamic panel structure of the performance variables. Thus, the relationship between corporate governance mechanism and firm performance shall be examined under a dynamic framework to get consistent and unbiased estimates (Das, 2019; Wintoki et al., 2012). As shown in Table 33, the p-value of AR(2) under all performance measures indicate that there remains no second order serial correlation in the data variables. In the same way, the p-values of the Hansen-tests reveal that instrumental variables used in the model do not suffer from over-identification problems and, eventually, they become statistically valid. Hence, our GMM estimations are robust to draw the evidence on the relationship between audit committee meeting (ACM) and firm performance.

**Table 33: Two-step system GMM estimates for the relationships between audit committee meeting and firm performance**

| Period                 | 2000-2020 (Full Period) |                    |                    | 2006-2020 (CG Period) |                    |                    |
|------------------------|-------------------------|--------------------|--------------------|-----------------------|--------------------|--------------------|
|                        | Model 43                | Model 44           | Model 45           | Model 46              | Model 47           | Model 48           |
|                        | BEP                     | ROA                | TBQ                | BEP                   | ROA                | TBQ                |
| BEP <sub>t-1</sub>     | 0.494***<br>5.30        |                    |                    | 0.381***<br>3.56      |                    |                    |
| ROA <sub>t-1</sub>     |                         | 0.597***<br>4.61   |                    |                       | 0.482***<br>3.92   |                    |
| TBQ <sub>t-1</sub>     |                         |                    | 0.446***<br>5.42   |                       |                    | 0.431***<br>5.41   |
| TBQ <sub>t-2</sub>     |                         |                    | 0.099***<br>3.19   |                       |                    | 0.095***<br>3.23   |
| ACM                    | -0.006**<br>-2.30       | -0.011**<br>-2.36  | -0.089**<br>-2.11  | -0.006**<br>-2.24     | -0.009**<br>-2.16  | -0.093**<br>-2.04  |
| BS                     | 0.002<br>0.14           | 0.024<br>1.00      | 0.425<br>1.23      | -0.005<br>-0.29       | 0.016<br>0.65      | 0.197<br>0.51      |
| CEOD                   | -0.003<br>-0.80         | 0.003<br>0.67      | -0.041<br>-0.24    | -0.008<br>-1.37       | 0.002<br>0.43      | 0.050<br>0.18      |
| AGE                    | 0.000<br>0.14           | 0.000<br>-0.14     | 0.106***<br>2.87   | 0.001<br>0.17         | -0.001<br>-0.30    | 0.119***<br>2.83   |
| SIZE                   | 0.004**<br>2.36         | 0.004*<br>1.93     | -0.109***<br>-3.66 | 0.005**<br>2.21       | 0.004*<br>1.82     | -0.127***<br>-3.86 |
| GROW                   | -0.010***<br>-2.71      | 0.000<br>-0.08     | -0.212***<br>-3.01 | -0.012***<br>-3.18    | -0.002<br>-0.45    | -0.233***<br>-2.98 |
| LEVR                   | -0.060***<br>-4.48      | -0.081***<br>-2.77 | 0.107<br>0.62      | -0.095***<br>-5.91    | -0.125***<br>-4.22 | 0.015<br>0.07      |
| DOW                    | 0.075***<br>4.99        | 0.054***<br>3.14   | 0.796***<br>3.91   | 0.103***<br>5.26      | 0.072***<br>3.92   | 0.901***<br>4.05   |
| INST                   | 0.018<br>1.55           | 0.010<br>0.75      | -0.316<br>-1.54    | 0.029*<br>1.81        | 0.022<br>1.30      | -0.402<br>-1.51    |
| MB                     | 0.000<br>-1.55          | 0.000<br>-1.31     | 0.019<br>1.13      | -0.001*<br>-1.68      | 0.000<br>-1.52     | 0.021<br>1.14      |
| COVID                  | -0.001<br>-0.14         | -0.008<br>-0.64    | -0.051<br>-0.33    | 0.000<br>-0.01        | -0.004<br>-0.27    | -0.081<br>-0.53    |
| Constant               | -0.043<br>-1.01         | -0.070*<br>-1.66   | 2.162***<br>3.40   | -0.025<br>-0.51       | -0.049<br>-1.18    | 3.061***<br>4.08   |
| Year Dummies           | Yes                     | Yes                | Yes                | Yes                   | Yes                | Yes                |
| Industry Dummies       | Yes                     | Yes                | Yes                | Yes                   | Yes                | Yes                |
| Lags                   | 3 - 3                   | 3 - 3              | 2 - 3              | 3 - 3                 | 3 - 3              | 2 - 3              |
| P-value of F-statistic | 0.000                   | 0.000              | 0.000              | 0.000                 | 0.000              | 0.000              |
| P-value of AR(1)       | 0.001                   | 0.000              | 0.000              | 0.007                 | 0.000              | 0.000              |
| P-value of AR(2)       | 0.597                   | 0.262              | 0.834              | 0.527                 | 0.223              | 0.852              |
| P-value of Hansen test | 0.254                   | 0.236              | 0.266              | 0.480                 | 0.260              | 0.599              |
| No. of instruments     | 55                      | 51                 | 53                 | 49                    | 46                 | 49                 |
| No. of observations    | 2444                    | 2444               | 2240               | 1899                  | 1899               | 1792               |
| No. of groups          | 204                     | 204                | 198                | 202                   | 202                | 196                |

Note: BEP<sub>t-1</sub>, ROA<sub>t-1</sub>, and TBQ<sub>t-1</sub> stand for the first order lag values of BEP, ROA, and TBQ respectively. TBQ<sub>t-2</sub> stands for the second order lag values of TBQ. ACM refers to frequency of audit committee meeting. The t-statistics, based on robust standard error, are shown in italic. \*, \*\*, and \*\*\* denote the level of significance at 10%, 5%, and 1% respectively. The coefficients of year dummies and industry dummies are not reported for the sake of brevity. TBQ and MB are winsorized at 1% in each tail to control for outlier effect. The definition and measurement of variables are presented in Table 9.

As displayed in Table 33, the regression coefficient of audit committee meeting (ACM) is significantly and negatively associated with both accounting-based performance (BEP, ROA) and market-based performance (TBQ). That is, the beta coefficient ( $\beta$ ) of ACM is  $-0.006$  ( $t = -2.30$ ) for BEP,  $-0.011$  ( $t = -2.36$ ) is for ROA and  $-0.089$  ( $t = -2.11$ ) for TBQ during 2000-2020. For the CG period, the beta ( $\beta$ ) is  $-0.006$  ( $t = -2.24$ ) for BEP,  $-0.008$  ( $t = -2.16$ ) is for ROA and  $-0.093$  ( $t = -2.04$ ) for TBQ during 2006-2020. Thus, the regression results remain qualitatively unchanged in the different sample periods. The negative association between ACM and firm performance accepts the hypothesis that frequency of audit committee meeting is significantly related to firm performance. This may be the case since the meeting effectiveness is largely dependent on the diligence or activities of the members, such as meeting attendance, meeting duration, and meeting agenda. Regardless of the frequency of meetings, the efficacy might also depend on how well the members are competent enough and willing to carry out their fiduciary duties. The willingness of performing their duties with care and loyalty may be deteriorated when they have familial relations with the board members or bear executive identity. Therefore, CG code 2018 makes it compulsory to all listed company that audit committee shall be composed of all non-executive members including an independent chairman. Apart from, these results suggest that firm performance could be improved by increasing the proportion of competent independent non-executive members having expertise as practicing accountants. Overall, the dedication of the audit committee's members to carry out their oversight responsibilities assiduously and the management's full cooperation and supports in granting audit committee's members to have access to the information needed for decision-making are critical components for establishing a positive relationship between audit committee meeting and firm performance. Of the control variables, growth of firms (GROW), size of firms (SIZE), age of firms (AGE), directors' shareholdings (DOW), institutional shareholdings (INS), leverage (LEVR), and market to book ratio (MB) are found statistically significant in influencing either the accounting-based performance or the market-based performance or both measures of performance.

#### **6.4.6 Interactive Effects between Board Independence and Family-CEO Duality on Firm Performance**

This section examines the interactive effect between board independence (BIND) and family-CEO duality (FCEO) on firm performance. More specifically, this study investigates the moderating effect



of family-CEO duality (FCEO) on the relationship between board independence and firm performance. This study hypothesized that the interaction variable (BIND\*FCEO) is significantly affecting firm performance. Table 34 contains the GMM estimations corresponding to the econometric equation of 6.1. Model 49 and Model 52 of Table 34 show the regression estimates on BEP during full sample period and CG period respectively. Model 50 and Model 53 of Table 34 show the regression estimates on ROA during full sample period and CG period respectively. Model 51 and Model 54 of Table 34 show the regression estimates on TBQ during full sample period and CG period respectively.

The results of Table 34 demonstrate that performance of a firm in a year is significantly explained by its immediate last year. It suggests that performance variables retain a dynamic relationship. It is observed in all models of Table 34 that there is no second order serial correlation as the AR(2) is insignificant. Moreover, Hansen-test results are statistically insignificant suggesting that instrumental variables are free from the over-identification problems. Hence, instruments are statistically valid in the all models of Table 34. Therefore, our GMM estimations are efficacious to draw the evidence on the relationship between family-CEO duality (FCEO) and firm performance.

All models of Table 34 report the direct effects of board independence (BIND) and family-CEO duality (FCEO) on firm performance are significantly negative. On the other hand, the interaction term between board independence and family-CEO duality (BIND\*FCEO) is significantly and positively associated with the accounting-based performance and market-based performance. In Model 49 and Model 52 of Table 34, the beta coefficients ( $\beta$ ) of BIND\*FCEO are 0.348 ( $t = 3.00$ ) and 0.375 ( $t = 2.23$ ) for BEP respectively. In Model 50 and Model 53 of Table 34, the beta coefficients of BIND\*FCEO is 0.213 ( $t = 2.26$ ) and 0.277 ( $t = 2.27$ ) for ROA respectively. In Model 51 and Model 54 of Table 34, the beta coefficients ( $\beta$ ) of BIND\*FCEO are 1.753 ( $t = 2.90$ ) and 2.080 ( $t = 2.54$ ) for TBQ respectively. 0.375 ( $t = 2.23$ ) for BEP respectively. Thus, the regression results observed in the full periods (2000-2020) and the CG periods (2006-2020) remain qualitatively unchanged. Thereby, it indicates that family control moderates the relationship between board independence and firm performance. Hence, the hypothesis of this study is supported. This

**Table 34: Two-step system GMM estimates for the interaction effect of family control (family-CEO duality: FCEO) and board independence on firm performance**

| Period                 | 2000-2020 (Full Period)          |                                 |                                  | 2006-2020 (CG Period)           |                                 |                                  |
|------------------------|----------------------------------|---------------------------------|----------------------------------|---------------------------------|---------------------------------|----------------------------------|
|                        | Model 49                         | Model 50                        | Model 51                         | Model 52                        | Model 53                        | Model 54                         |
|                        | BEP                              | ROA                             | TBQ                              | BEP                             | ROA                             | TBQ                              |
| BEP <sub>t-1</sub>     | 1.023***<br>32.63                |                                 |                                  | 1.014***<br>27.12               |                                 |                                  |
| ROA <sub>t-1</sub>     |                                  | 1.113***<br>32.55               |                                  |                                 | 1.243***<br>9.24                |                                  |
| TBQ <sub>t-1</sub>     |                                  |                                 | 0.398***<br>5.97                 |                                 |                                 | 0.387***<br>5.92                 |
| TBQ <sub>t-2</sub>     |                                  |                                 | 0.066**<br>2.36                  |                                 |                                 | 0.064**<br>2.25                  |
| <b>BIND</b>            | <b>-0.163*</b><br><i>-1.75</i>   | <b>-0.138**</b><br><i>-2.13</i> | <b>-2.044***</b><br><i>-2.98</i> | <b>-0.188**</b><br><i>-2.21</i> | <b>-0.200**</b><br><i>-2.29</i> | <b>-2.213***</b><br><i>-2.74</i> |
| <b>FCEO</b>            | <b>-0.080***</b><br><i>-3.10</i> | <b>-0.045**</b><br><i>-2.39</i> | <b>-0.543***</b><br><i>-3.17</i> | <b>-0.093**</b><br><i>-2.32</i> | <b>-0.061**</b><br><i>-2.39</i> | <b>-0.643***</b><br><i>-2.66</i> |
| <b>BIND*FCEO</b>       | <b>0.348***</b><br><i>3.00</i>   | <b>0.213**</b><br><i>2.26</i>   | <b>1.753***</b><br><i>2.90</i>   | <b>0.375**</b><br><i>2.23</i>   | <b>0.277**</b><br><i>2.27</i>   | <b>2.080**</b><br><i>2.54</i>    |
| BS                     | -0.018**<br><i>-2.04</i>         | -0.015**<br><i>-2.21</i>        | 0.101<br><i>0.75</i>             | -0.019*<br><i>-1.80</i>         | -0.014*<br><i>-1.76</i>         | 0.147<br><i>0.74</i>             |
| CEOD                   | -0.020***<br><i>-2.35</i>        | -0.006<br><i>-1.18</i>          | -0.210<br><i>-1.34</i>           | -0.014*<br><i>-1.68</i>         | 0.001<br><i>0.09</i>            | -0.157<br><i>-0.87</i>           |
| AGE                    | 0.002<br><i>1.22</i>             | 0.002<br><i>0.93</i>            | 0.142***<br><i>3.53</i>          | 0.003<br><i>1.35</i>            | 0.002<br><i>0.81</i>            | 0.131***<br><i>2.96</i>          |
| SIZE                   | 0.001<br><i>0.47</i>             | 0.001<br><i>0.49</i>            | -0.142***<br><i>-4.73</i>        | 0.001<br><i>0.78</i>            | -0.002<br><i>-1.29</i>          | -0.168***<br><i>-4.31</i>        |
| GROW                   | -0.014***<br><i>-2.70</i>        | -0.004<br><i>-0.84</i>          | -0.207***<br><i>-2.71</i>        | -0.012**<br><i>-2.17</i>        | -0.002<br><i>-0.57</i>          | -0.218**<br><i>-2.50</i>         |
| LEVR                   | -0.001***<br><i>-3.48</i>        | -0.001***<br><i>-5.51</i>       | 0.094<br><i>0.58</i>             | -0.001***<br><i>-7.18</i>       | 0.013<br><i>0.44</i>            | 0.004<br><i>0.02</i>             |
| DOW                    | 0.019*<br><i>1.70</i>            | 0.007<br><i>0.80</i>            | 0.886***<br><i>4.00</i>          | 0.021*<br><i>1.71</i>           | 0.001<br><i>0.05</i>            | 0.945***<br><i>4.11</i>          |
| INST                   | 0.003<br><i>0.22</i>             | -0.006<br><i>-0.51</i>          | -0.425*<br><i>-1.84</i>          | 0.009<br><i>0.46</i>            | 0.000<br><i>0.00</i>            | -0.452<br><i>-1.48</i>           |
| MB                     | 0.000<br><i>0.60</i>             | 0.000<br><i>-0.15</i>           | 0.019<br><i>1.36</i>             | 0.000<br><i>-0.21</i>           | -0.001<br><i>-1.57</i>          | 0.020<br><i>1.38</i>             |
| COVID                  | -0.290*<br><i>-1.73</i>          | -0.282**<br><i>-2.15</i>        | 0.094<br><i>0.72</i>             | -0.347**<br><i>-2.15</i>        | -0.227*<br><i>-1.96</i>         | 0.064<br><i>0.44</i>             |
| Constant               | 0.050<br><i>0.91</i>             | 0.046<br><i>1.14</i>            | 3.748***<br><i>4.56</i>          | 0.055<br><i>0.89</i>            | 0.105**<br><i>2.21</i>          | 4.432***<br><i>3.98</i>          |
| Year & Industry Effect | Yes                              | Yes                             | Yes                              | Yes                             | Yes                             | Yes                              |
| Lags                   | 3 - 3                            | 3 - 3                           | 2 - 2                            | 3 - 3                           | 3 - 3                           | 2 - 2                            |
| P-value of F-statistic | 0.000                            | 0.000                           | 0.000                            | 0.000                           | 0.000                           | 0.000                            |
| P-value of AR(2)       | 0.612                            | 0.199                           | 0.699                            | 0.773                           | 0.236                           | 0.717                            |
| P-value of Hansen test | 0.323                            | 0.237                           | 0.333                            | 0.197                           | 0.318                           | 0.297                            |
| No. of instruments     | 56                               | 60                              | 192                              | 51                              | 51                              | 181                              |
| No. of observations    | 2444                             | 2444                            | 2240                             | 1899                            | 1899                            | 1792                             |
| No. of groups          | 204                              | 204                             | 198                              | 202                             | 202                             | 196                              |

Note: BEP<sub>t-1</sub>, ROA<sub>t-1</sub>, and TBQ<sub>t-1</sub> stand for the first order lag values of BEP, ROA, and TBQ respectively. TBQ<sub>t-2</sub> stands for the second order lag values of TBQ. BIND\*FCEO refers to an interaction term between board independence (BIND) and family-CEO duality (FCEO). The t-statistics, based on robust standard error, are shown in italic. \*, \*\*, and \*\*\* denote the level of significance at 10%, 5%, and 1% respectively. The coefficients of year dummies and industry dummies are not reported for the sake of brevity. TBQ and MB are winsorized at 1% in each tail to control for outlier effect. The definition and measurement of variables are presented in Table 9.

result is parallel to the findings of Anderson and Reeb (2004) and Garcí'a-Ramos and Garcí'a-Olalla (2011), suggesting that family control moderates the independent directors to positively affect the firm performance. That is, family CEO duality influences the board independence to act as a favorable determinant of firm performance. More specifically, if board the chairman and the CEO are not the same person but come from the same family, independent directors are motivated to get more involved into their works that improve their overseeing function and mitigate the agency conflicts between shareholder groups. Thus, they can transform the family goal to economic goal. One of the possible reasons for this outcome may be that family led management tried to reform the corporate board structure in response to the underwhelming performance in the past. When the leadership (board chairmanship and CEO) is centered into the grips of family members, the board might have suffered from lack of external skills, talent, experience and networking benefits that may hinder the corporation from strategic decisions for business solutions. This fear of weakness reinforces family leadership to seek a well-diverse board through appointing some qualified independent directors who will best act as supervisor and advisor to monitor the management and make up the shortage of knowledge, skill and experience in the board. Overall, this reform of board structure enhances board's ability to make effective strategic decisions and to chase up the external challenges in a highly competitive market. This view is parallel to the arguments of the resource dependence theory and the agency theory as well.

The results of the control variables presented in Table 34 indicate that board size (BS) and CEO duality (CEOD) have negative association with accounting-based performance. Firm age (AGE) is positively related to TBQ. Firm size (SIZE) has a significant negative influence on TBQ. Firm growth (GROW) and firm leverage (LEVR) have significant negative association with firm performance. Director ownership (DOW) is positively associated with BEP and TBQ. Institutional ownership (INST) has a weak explanatory power in affecting TBQ during 2000-2020. COVID dummy (COVID) has a negative association with accounting-based performance.

#### **6.4.7 Interactive Effects between Board Independence and Family Ownership on Firm Performance**

This section examines the moderating effect of family-ownership (FOWN) on the relationship between board independence (BIND) and firm performance. The corresponding empirical results of

the two-step system GMM regression for the econometric equation 6.2 are presented in Table 35. This study hypothesized that an interaction variable between board independence and family ownership (BIND\*FOWN) significantly impacts firm performance. This study runs the GMM regression for the equation 6.2 over the two sample periods i.e. 2000-2020 (full sample period) and 2006-2020 (CG period). Model 55 and Model 58 of Table 35 show the regression estimates on BEP during full sample period and CG period respectively. Model 56 and Model 59 of Table 35 show the regression estimates on ROA during full sample period and CG period respectively. Model 57 and Model 60 of Table 35 show the regression estimates on TBQ during full sample period and CG period respectively.

All models of Table 35 exhibit that current year performance of firms is significantly influenced by the immediate past performance. That is, firm performance retains a dynamic relationship. It is observed in all models of Table 35 that there is no second order serial correlation as the AR(2) is insignificant. Moreover, Hansen-test results are statistically insignificant suggesting that instrumental variables are free from the over-identification problems. Hence, instruments are statistically valid in all models of Table 35. Therefore, our GMM estimations are to be efficacious to draw the evidence on the relationship between interactive term (BIND\*FOWN) and firm performance.

In all models of Table 35, it is observed that the direct effects of board independence (BIND) and family-CEO duality (FCEO) on firm performance are significantly negative. On the other hand, interaction term between board independence and family ownership (BIND\*FOWN) is significantly and positively associated with firm performance. More specifically, in Model 55 and Model 58 of Table 35, the beta coefficients ( $\beta$ ) of BIND\*FOWN are 0.363 ( $t = 2.94$ ) and 0.302 ( $t = 2.19$ ) for BEP respectively. In Model 56 and Model 59 of Table 35, the beta coefficients ( $\beta$ ) of BIND\*FOWN are 0.351 ( $t = 2.32$ ) and 0.389 ( $t = 2.38$ ) for ROA respectively. In Model 57 and Model 60 of Table 35, the beta coefficients ( $\beta$ ) of BIND\*FOWN are 5.196 ( $t = 2.63$ ) and 6.243 ( $t = 2.45$ ) for TBQ respectively.

**Table 35: Two-step system GMM estimates for the interaction effect of family control (Family-ownership: FOWN) and board independence on firm performance**

| Period                 | 2000-2020 (Full Period)   |                          |                           | 2006-2020 (CG Period)    |                           |                           |
|------------------------|---------------------------|--------------------------|---------------------------|--------------------------|---------------------------|---------------------------|
|                        | Model 55                  | Model 56                 | Model 57                  | Model 58                 | Model 59                  | Model 60                  |
|                        | BEP                       | ROA                      | TBQ                       | BEP                      | ROA                       | TBQ                       |
| BEP <sub>t-1</sub>     | 0.699***<br>5.80          |                          |                           | 0.759***<br>7.90         |                           |                           |
| ROA <sub>t-1</sub>     |                           | 0.579***<br>5.64         |                           |                          | 0.891***<br>5.05          |                           |
| TBQ <sub>t-1</sub>     |                           |                          | 0.401***<br>6.31          |                          |                           | 0.353***<br>5.56          |
| TBQ <sub>t-2</sub>     |                           |                          | 0.065**<br>2.38           |                          |                           | 0.053**<br>2.17           |
| <b>BIND</b>            | <b>-0.134**</b><br>-2.12  | <b>-0.139**</b><br>-2.19 | <b>-2.996***</b><br>-3.15 | <b>-0.141**</b><br>-2.05 | <b>-0.149**</b><br>-2.07  | <b>-3.067***</b><br>-2.96 |
| <b>FOWN</b>            | <b>-0.112***</b><br>-2.74 | <b>-0.103**</b><br>-2.34 | <b>-1.649***</b><br>-3.18 | <b>-0.092**</b><br>-2.26 | <b>-0.127***</b><br>-2.65 | <b>-2.029***</b><br>-2.96 |
| <b>BIND* FOWN</b>      | <b>0.363***</b><br>2.94   | <b>0.351**</b><br>2.32   | <b>5.196***</b><br>2.63   | <b>0.302**</b><br>2.19   | <b>0.389**</b><br>2.38    | <b>6.243**</b><br>2.45    |
| BS                     | -0.011*<br>-1.86          | -0.007<br>-1.04          | 0.073<br>0.61             | -0.014*<br>-1.97         | -0.053<br>-1.50           | 0.098<br>0.64             |
| CEOD                   | 0.004<br>0.80             | 0.007<br>1.50            | 0.066<br>0.41             | -0.003<br>-0.39          | 0.005<br>0.92             | 0.167<br>1.01             |
| AGE                    | 0.000<br>0.04             | -0.002<br>-1.00          | 0.086*<br>1.78            | 0.000<br>0.10            | 0.000<br>0.10             | 0.077<br>1.51             |
| SIZE                   | 0.001<br>0.75             | 0.001<br>1.08            | -0.170***<br>-5.66        | 0.002<br>0.99            | 0.002<br>0.67             | -0.190***<br>-5.14        |
| GROW                   | -0.009*<br>-1.90          | 0.001<br>0.26            | -0.238***<br>-3.30        | -0.010*<br>-1.94         | 0.003<br>0.48             | -0.246***<br>-3.01        |
| LEVR                   | -0.029<br>-0.94           | -0.085**<br>-2.47        | -0.146<br>-0.48           | -0.000*<br>-1.83         | -0.000*<br>-1.69          | -0.017**<br>-2.01         |
| DOW                    | 0.062***<br>2.76          | 0.068***<br>4.25         | 0.953***<br>3.90          | 0.061***<br>3.24         | 0.055***<br>3.20          | 1.129***<br>4.04          |
| INST                   | 0.015<br>0.98             | 0.012<br>0.94            | -0.404<br>-1.78           | 0.014<br>0.82            | 0.027*<br>1.77            | -0.458<br>-1.50           |
| MB                     | 0.000<br>-1.09            | 0.000<br>-0.85           | 0.019<br>1.34             | 0.000<br>0.28            | 0.000<br>0.42             | 0.034**<br>2.10           |
| COVID                  | -0.016<br>-1.30           | -0.020*<br>-1.66         | 0.086<br>0.64             | -0.015<br>-1.13          | -0.013<br>-1.02           | 0.032<br>0.22             |
| Constant               | 0.050<br>1.12             | 0.045<br>1.09            | 4.947***<br>6.34          | 0.028<br>0.71            | 0.085**<br>2.35           | 5.382***<br>4.98          |
| Year & Industry Effect | Yes                       | Yes                      | Yes                       | Yes                      | Yes                       | Yes                       |
| Lags                   | 2 - 2                     | 2 - 2                    | 2 - 2                     | 2 - 2                    | 2 - 2                     | 2 - 2                     |
| P-value of F-statistic | 0.000                     | 0.000                    | 0.000                     | 0.000                    | 0.000                     | 0.000                     |
| P-value of AR(2)       | 0.895                     | 0.336                    | 0.716                     | 0.943                    | 0.374                     | 0.687                     |
| P-value of Hansen test | 0.615                     | 0.563                    | 0.397                     | 0.301                    | 0.250                     | 0.248                     |
| No. of instruments     | 194                       | 194                      | 192                       | 180                      | 182                       | 181                       |
| No. of observations    | 2444                      | 2444                     | 2240                      | 1899                     | 1899                      | 1792                      |
| No. of groups          | 204                       | 204                      | 198                       | 202                      | 202                       | 196                       |

Note: BEP<sub>t-1</sub>, ROA<sub>t-1</sub>, and TBQ<sub>t-1</sub> stand for the first order lag values of BEP, ROA, and TBQ respectively. TBQ<sub>t-2</sub> stands for the second order lag values of TBQ. BIND\*FOWN refers to an interaction term between board independence (BIND) and family ownership (FOWN). The t-statistics, based on robust standard error, are shown in italic. \*, \*\*, and \*\*\* denote the level of significance at 10%, 5%, and 1% respectively. The coefficients of year dummies and industry dummies are not reported for the sake of brevity. TBQ and MB are winsorized at 1% in each tail to control for outlier effect. The definition and measurement of variables are presented in Table 9.

Thus, the regression results in the both periods are qualitatively same. Hence, the hypothesis of this study is supported. These results are parallel to the findings of Anderson and Reeb (2004), suggesting that family ownership moderates the independent directors to positively affect the firm performance. That is, family ownership influences the board independence to act as a favorable determinant of firm performance. More specifically, the independent directors get more involved into their works that increase their monitoring and advisory function as family ownership rises. Alternatively, a substantial increase in the percentage of independent directors on the board helps the family centric firm to mitigate the dispute with regard to the wealth distribution between family shareholders and non-family shareholders (Anderson & Reeb, 2004). One of the possible reasons for this outcome is that when family members are highly concerned about upholding their family legacy into the board, they become highly inclined to welcome new family members to the board irrespective of their talent, skills, and knowledge that could incur a big cost. In this effect, family members seek to create a balanced board with competent independent directors to fill up the board's knowledge, skill, and talent gaps. Overall, this development improves the board's capacity to deal with the business problems and opportunities in a highly competitive market and help to formulate effective strategic decisions. This point of view is similar to the arguments put out by both the stewardship theory and the resource dependence theory. Another reason behind this result could be that institutional pressure of appointing independent directors is implicitly severe in the family led firms compared to the non-family led firms in order to ensure checks and balances between family interests, non-family interests and firm broad objectives. That is, on the one hand, family members who sit on the board can uphold family influence and interest; on the other hand, qualified independent directors can provide this board with objectivity and talented viewpoints satisfying institutional legitimacy (Liu et al., 2016). Thus, board independence enhances firm performance when family directors hold more ownership.

In Table 35, it is also reported that among the control variables board size (BS) has negative impact on BEP. Firm age (AGE) has a weak positive relationship with TBQ. Firm size (SIZE) has a significant negative influence over the market-based performance (TBQ). Firm growth (GROW) and leverage (LEVR) are negatively associated with firm performance. Director ownership (DOW) has a significant positive relation with all performance measures. Institutional ownership (INST) has weak positive relation with ROA during 2006-2020. Market to book ratio (MB) is positively associated with TBQ during 2006-2020. COVID has a negative association with ROA.

## **6.5 Additional Analysis**

### **6.5.1 CG Code of 2018 and the relationship between Board Independence and Firm Performance**

In this section, an investigation is performed to check whether the observed negative impact of board independence (BIND) on firm performance (see Table 26) is moderated by the corporate governance code (CGC) of 2018. The CGC of 2018 precisely specifies the qualifications of independent directors, which was mostly inexplicit in its previous corporate governance guidelines issued in 2006 and 2012. According the CGC of 2018, it is compulsory for all listed companies in DSE to appoint the qualified independent directors. Therefore, this analysis provides additional evidence in regard to the influence of qualified independent directors on firm performance. In this effect, this study creates a new explanatory variable by a name of BIND\_CGC. This variable is obtained by multiplying the proportion of independent directors on the board (BIND) by CGC dummy. CGC dummy takes a value of 1 if the year is 2018 and above, otherwise it is 0.

This study gets evidence from two types of sample periods. The first type of sample period ranges from 2000 to 2020 called full sample period. The second type of sample period includes the observations from 2006 to 2020 called CG period. The later sample periods excludes the observations during 2000-2005 because corporate governance guidelines were not available in Bangladesh before 2006. Model 61 and Model 64 of Table 36 show the GMM regression estimates on BEP. Model 62 and Model 65 of Table 36 represent the GMM regression estimates on ROA. Model 63 and Model 66 of Table 36 demonstrate the GMM regression estimates on TBQ.

**Table 36: Two-step system GMM estimates for the effects of board independence, after controlling for CG Code of 2018, on firm performance**

| Period                 | 2000-2020 (Full Period)   |                          |                           | 2006-2020 (CG Period )   |                        |                           |
|------------------------|---------------------------|--------------------------|---------------------------|--------------------------|------------------------|---------------------------|
|                        | Model 61                  | Model 62                 | Model 63                  | Model 64                 | Model 65               | Model 66                  |
|                        | BEP                       | ROA                      | TBQ                       | BEP                      | ROA                    | TBQ                       |
| BEP <sub>t-1</sub>     | 0.555***<br>7.26          |                          |                           | 0.476***<br>5.72         |                        |                           |
| ROA <sub>t-1</sub>     |                           | 0.580***<br>7.82         |                           |                          | 0.487***<br>6.28       |                           |
| TBQ <sub>t-1</sub>     |                           |                          | 0.462***<br>4.93          |                          |                        | 0.468***<br>5.16          |
| TBQ <sub>t-2</sub>     |                           |                          | 0.088**<br>2.54           |                          |                        | 0.082**<br>2.32           |
| <b>BIND</b>            | <b>-0.059***</b><br>-2.64 | <b>-0.050**</b><br>-2.17 | <b>-1.896***</b><br>-2.63 | <b>-0.066**</b><br>-2.25 | -0.027<br>-0.95        | <b>-2.198***</b><br>-2.77 |
| <b>CGC</b>             | -0.037<br>-1.08           | -0.042<br>-1.57          | <b>-0.727*</b><br>-1.84   | -0.030<br>-1.41          | -0.046<br>-1.61        | <b>-0.509*</b><br>-1.92   |
| <b>BIND_CGC</b>        | <b>0.129**</b><br>2.10    | <b>0.144*</b><br>1.85    | <b>1.597**</b><br>2.19    | <b>0.109**</b><br>2.07   | <b>0.135**</b><br>2.50 | <b>1.679**</b><br>2.07    |
| BS                     | -0.004<br>-0.73           | -0.002<br>-0.53          | 0.318**<br>2.14           | -0.011<br>-1.50          | -0.004<br>-0.75        | 0.396**<br>2.03           |
| CEOD                   | -0.004<br>-0.95           | 0.000<br>-0.15           | 0.310*<br>1.73            | -0.008<br>-1.62          | 0.000<br>0.07          | 0.316<br>1.54             |
| AGE                    | 0.000<br>-0.10            | -0.002<br>-1.05          | 0.007<br>0.12             | -0.001<br>-0.22          | -0.002<br>-1.04        | 0.002<br>0.04             |
| SIZE                   | 0.003*<br>1.79            | 0.003**<br>2.28          | -0.146***<br>-3.40        | 0.003<br>1.33            | 0.002<br>1.45          | -0.174***<br>-3.48        |
| GROW                   | -0.011***<br>-2.86        | 0.001<br>0.40            | -0.230***<br>-2.97        | -0.013***<br>-3.30       | -0.003<br>-0.78        | -0.230***<br>-2.89        |
| LEVR                   | -0.058***<br>-5.19        | -0.100***<br>-4.95       | -0.170<br>-0.81           | -0.083***<br>-6.27       | -0.129***<br>-5.75     | -0.280<br>-0.98           |
| DOW                    | 0.066***<br>4.62          | 0.056***<br>5.81         | -1.042<br>-1.56           | 0.089***<br>5.28         | 0.070***<br>5.66       | -1.116<br>-1.55           |
| INST                   | 0.016<br>1.54             | 0.006<br>0.71            | -0.864**<br>-2.61         | 0.023<br>1.58            | 0.015<br>1.22          | -1.063***<br>-2.63        |
| MB                     | -0.001<br>-1.28           | -0.001<br>-1.10          | 0.027<br>1.46             | -0.001<br>-1.27          | 0.000<br>-1.04         | 0.025<br>1.50             |
| COVID                  | -0.015<br>-1.34           | -0.017<br>-1.48          | -0.148<br>-0.97           | -0.014<br>-1.15          | -0.018<br>-1.35        | -0.154<br>-1.01           |
| Constant               | -0.009<br>-0.26           | -0.018<br>-0.71          | 4.517***<br>4.05          | 0.022<br>0.47            | 0.010<br>0.27          | 5.293***<br>3.87          |
| Year & Industry Effect | Yes                       | Yes                      | Yes                       | Yes                      | Yes                    | Yes                       |
| Lags                   | 1 - 3                     | 1 - 3                    | 2 - 3                     | 1 - 3                    | 1 - 3                  | 2 - 3                     |
| P-value of F-statistic | 0.000                     | 0.000                    | 0.000                     | 0.000                    | 0.000                  | 0.000                     |
| P-value of AR(2)       | 0.604                     | 0.280                    | 0.780                     | 0.668                    | 0.254                  | 0.659                     |
| P-value of Hansen test | 0.574                     | 0.342                    | 0.300                     | 0.387                    | 0.360                  | 0.351                     |
| No. of instruments     | 59                        | 52                       | 57                        | 48                       | 47                     | 53                        |
| No. of observations    | 2328                      | 2328                     | 2240                      | 1781                     | 1783                   | 1792                      |
| No. of groups          | 203                       | 203                      | 198                       | 201                      | 201                    | 196                       |

Note: BEP<sub>t-1</sub>, ROA<sub>t-1</sub>, and TBQ<sub>t-1</sub> stand for the first order lag values of BEP, ROA, and TBQ respectively. TBQ<sub>t-2</sub> stands for the second order lag values of TBQ. BIND refers to board independence. BIND\_CGC refers to an interaction term between board independence (BIND) and corporate governance code dummy (CGC). The t-statistics, based on robust standard error, are shown in italic. \*, \*\*, and \*\*\* denote the level of significance at 10%, 5%, and 1% respectively. The coefficients of year dummies and industry dummies are not reported for the sake of brevity. TBQ and MB are winsorized at 1% in each tail to control for outlier effect. The definition and measurement of variables are presented in Table 9.



In all models of Table 36, it is observed that p-value of F-statistic is significant at 1 percent level. Test results shown in this table also reveal that there is no second order serial correlation as the AR(2) is insignificant. Moreover, the results of Hansen-test results are statistically insignificant implying that instrumental variables are free from the over-identification problems. Therefore, the GMM regression estimations are to be efficacious to examine how the relationship between board independence and firm performance is moderated by the CG code of 2018.

All models, except Model 65, of Table 36 reveal that the board independence (BIND) is significantly and negatively associated with BEP, ROA and TBQ. All models of Table 36 demonstrate that BIND\_CGC are significantly and positively associated with all performance measures. These results suggest that independent directors make a significant positive influence on accounting-based performance measure and market based performance measure when firms appoint qualified independent directors as per directions of CGC code of 2018. It supports our view that board effectiveness improves when firms appoint competent independent directors in their boards. That is, since 2018, every listed firm has been compelled to appoint qualified independent directors to their boards that promote board effectiveness to enhance their value. It is worthwhile to mention that as there is a lack of proper definitions of the qualifications of independent directors in the CGG 2006 and CGG 2012, listed companies were not legitimately forced to emphasize the qualifications of independent directors. These loopholes insist the companies to prefer the independent directors on the basis of their personal relations in lieu of their competencies. Therefore, BIND is found to have negative relationship with the firm performance. These findings provides an important piece of evidence that complying with the CG Code 2018- more specifically, with respect to the board independence- a firm can strengthen its boards effectiveness for the betterment of the general shareholders' interests.

In Table 36, it is also reported that among the control variables board size (BS) has positive impact on TBQ. CEO duality (CEOD) has positive impact on TBQ in full sample period. Firm size (SIZE) has a significant positive association with BEP and ROA and negative association with the market-based performance (TBQ). Firm growth (GROW) and leverage (LEVR) are negatively associated with firm performance. Director ownership (DOW) has a significant positive relation with accounting-based performance measures. Institutional ownership (INST) has negative relation with TBQ.

### **6.5.2 CG Code of 2018 and the relationship between Audit Committee Independence and Firm Performance**

This section provides additional evidence to examine whether the observed negative impact of audit committee independence (ACIND) on firm performance (see Table 32) is moderated by the corporate governance code (CGC) of 2018. It is earlier mentioned that the CGC of 2018 precisely specifies the qualifications of independent directors, which was not clearly mentioned in the corporate governance guidelines issued in 2006 and 2012. Hence, the CGC of 2018 makes it obligatory for all listed firms to appoint the qualified independent chairman to their audit committees. In this effect, a new explanatory variable is created by a name of ACIND\_CGC which is derived from multiplying the audit committee independence (ACIND) by CGC dummy. CGC dummy takes a value of 1 if the year is 2018 and above, otherwise it is 0. It is study hypothesized that audit committee gains strength and talent when a qualified independent chairman is appointed to audit committee. Hence, a qualified independent chairman of audit committee chairman can lead the committee more effectively to enhance firm performance.

This additional analysis provides evidence in regard to the influence of qualified independent chairman of audit committee on firm performance. This study gets evidence from two types of sample periods. The first type of sample period ranges from 2000 to 2020 called full sample period. The second type of sample period excludes the observations during 2000-2005 due to unavailability of corporate governance guidelines in Bangladesh before 2006. Hence, the second type of sample period ranges from 2006 to 2020 called CG period. Model 67 and Model 70 of Table 37 show the GMM regression estimates on BEP. Model 68 and Model 71 of Table 37 represent the GMM regression estimates on ROA. Model 69 and Model 72 of Table 37 demonstrate the GMM regression estimates on TBQ. In all models of Table 37, the p-value of F-statistic is significant at 1 percent level. Apart from, the sample data in all models are free from the second-order serial correlations as the p-value of AR(2) is greater than 0.10. The results of Hansen test under all GMM models in Table 37 are not significant, suggesting that instrumental variables do not have the over-identification problems.

**Table 37: Two-step system GMM estimates for the effects of audit committee independence, after controlling for CG Code of 2018, on firm performance**

| Period                 | 2000-2020 (Full Period) |                   |                    | 2006-2020 (CG Period ) |                    |                    |
|------------------------|-------------------------|-------------------|--------------------|------------------------|--------------------|--------------------|
|                        | Model 67                | Model 68          | Model 69           | Model 70               | Model 71           | Model 72           |
|                        | BEP                     | ROA               | TBQ                | BEP                    | ROA                | TBQ                |
| BEP <sub>t-1</sub>     | 0.678***<br>7.19        |                   |                    | 0.467***<br>4.94       |                    |                    |
| ROA <sub>t-1</sub>     |                         | 0.780***<br>7.66  |                    |                        | 0.498***<br>4.60   |                    |
| TBQ <sub>t-1</sub>     |                         |                   | 0.478***<br>6.05   |                        |                    | 0.458***<br>5.68   |
| TBQ <sub>t-2</sub>     |                         |                   | 0.097***<br>3.31   |                        |                    | 0.091***<br>3.07   |
| ACIND                  | -0.014**<br>-2.02       | -0.013**<br>-1.98 | -0.125<br>-0.87    | -0.018**<br>-2.56      | -0.015**<br>-2.45  | -0.149<br>-0.87    |
| CGC                    | -0.298<br>-1.56         | -0.261<br>-0.46   | -0.506<br>-1.15    | -0.201<br>-1.34        | -0.159<br>-1.02    | -0.551*<br>-1.67   |
| ACIND_CGC              | 0.082<br>1.09           | 0.122<br>0.45     | 0.404**<br>2.24    | 0.002<br>0.84          | 0.003<br>0.60      | 0.430**<br>2.34    |
| BS                     | 0.000<br>0.03           | 0.001<br>0.28     | 0.336**<br>2.63    | -0.010<br>-0.34        | -0.005<br>-0.18    | 0.436**<br>2.50    |
| CEOD                   | -0.003<br>-0.65         | 0.000<br>0.11     | 0.090<br>0.58      | -0.006<br>-0.96        | 0.001<br>0.13      | 0.159<br>0.59      |
| AGE                    | 0.001<br>0.51           | -0.001<br>-0.48   | 0.049<br>1.04      | 0.000<br>0.11          | -0.001<br>-0.29    | 0.050<br>1.02      |
| SIZE                   | 0.003*<br>1.84          | 0.001<br>0.94     | -0.113***<br>-3.55 | 0.003<br>1.38          | 0.003<br>1.18      | -0.137***<br>-3.71 |
| GROW                   | -0.009*<br>-1.69        | -0.003<br>-0.70   | -0.267***<br>-3.59 | -0.011***<br>-2.84     | -0.001<br>-0.18    | -0.274***<br>-3.46 |
| LEVR                   | -0.036***<br>-2.77      | -0.044*<br>-1.88  | 0.088<br>0.61      | -0.078***<br>-5.23     | -0.109***<br>-3.34 | -0.041<br>-0.24    |
| DOW                    | 0.052***<br>3.71        | 0.033***<br>2.45  | -0.687<br>-1.39    | 0.081<br>4.54          | 0.067***<br>3.51   | -0.640<br>-1.23    |
| INST                   | 0.009<br>0.83           | 0.004<br>0.31     | -0.790***<br>-2.68 | 0.020<br>1.29          | 0.024<br>1.42      | -0.984***<br>-2.72 |
| MB                     | 0.000<br>-1.05          | 0.000<br>-0.52    | 0.014<br>1.50      | 0.000<br>-0.86         | 0.000<br>-0.82     | 0.014*<br>1.66     |
| COVID                  | -0.017<br>-1.40         | -0.013<br>-1.04   | -0.221<br>-1.51    | -0.021*<br>-1.72       | -0.016<br>-1.51    | -0.217<br>-1.47    |
| Constant               | -0.037<br>-1.18         | -0.004<br>-0.18   | 2.925***<br>4.08   | 0.009<br>0.15          | -0.008<br>-0.23    | 3.438***<br>4.14   |
| Year & Industry Effect | Yes                     | Yes               | Yes                | Yes                    | Yes                | Yes                |
| Lags                   | 2 - 3                   | 3 - 3             | 1 - 2              | 2 - 3                  | 2 - 3              | 1 - 2              |
| P-value of F-statistic | 0.000                   | 0.000             | 0.000              | 0.000                  | 0.000              | 0.000              |
| P-value of AR(2)       | 0.813                   | 0.348             | 0.657              | 0.482                  | 0.244              | 0.649              |
| P-value of Hansen test | 0.236                   | 0.142             | 0.537              | 0.622                  | 0.343              | 0.567              |
| No. of instruments     | 147                     | 110               | 53                 | 166                    | 166                | 49                 |
| No. of observations    | 2444                    | 2444              | 2440               | 1897                   | 1897               | 1792               |
| No. of groups          | 204                     | 204               | 198                | 202                    | 202                | 196                |

Note: BEP<sub>t-1</sub>, ROA<sub>t-1</sub>, and TBQ<sub>t-1</sub> stand for the first order lag values of BEP, ROA, and TBQ respectively. TBQ<sub>t-2</sub> stands for the second order lag values of TBQ. ACIND refers to audit committee independence. ACIND\_CGC refers to an interaction term between audit committee independence (ACIND) and corporate governance code dummy (CGC). The t-statistics, based on robust standard error, are shown in italic. \*, \*\*, and \*\*\* denote the level of significance at 10%, 5%, and 1% respectively. The coefficients of year dummies and industry dummies are not reported for the sake of brevity. TBQ and MB are winsorized at 1% in each tail to control for outlier effect. The definition and measurement of variables are presented in Table 9.

As shown in Model 67 and Model 70, it is found that ACIND is significantly and negatively associated with BEP. Similarly, in Model 68 and Model 71 of Table 37, it is observed that ACIND is significantly and negatively associated with ROA. But, ACIND is found to be insignificant for TBQ. On the other hand, in Model 69 and Model 72, it is reported that ACIND\_CGC is significantly and positively related to TBQ. Other models of Table 37 demonstrate that ACIND\_CGC is positively but insignificantly related to BEP and ROA. Overall, these results indicate that independent chairman of the audit committee makes a significant positive contribution to the enhancement of TBQ when firms keep complying with the CG Code of 2018.

In summary, audit committee effectiveness improves when firms appoint competent independent chairman to the audit committee as a compulsory basis in complying with the requirements of CG Code of 2018. In other words, every listed firm has been compelled to appoint qualified independent chairman to their audit committees since 2018 that enhance audit committee's ability to safe guard the shareholders interest. It is worthy to mention that CGG 2006 and CGG 2012 did not include the proper definitions of the qualifications of independent directors. Hence, listed companies were not legitimately forced to accentuate the qualifications of independent directors of audit committee. These loopholes insisted the listed companies in Bangladesh to prefer the independent chairman of the audit committee on the basis of their personal relations instead of their competencies. Therefore, the regression results suggest negative relationship between ACIND and firm performance.

In Table 37, it is also reported that among the control variables board size (BS) has positive relationship with TBQ. Firm size (SIZE) has a significant positive association with BEP (see Model 67) and negative association with the market-based performance (TBQ). Firm growth (GROW) is negatively associated with BEP and TBQ. Firm leverage (LEVR) is negatively associated with accounting-based performance measures. Director ownership (DOW) has a significant positive relation with accounting-based performance measures. Institutional ownership (INST) has negative relation with TBQ. Market to book ratio is positively associated with TBQ (see Model 72). COVID is negatively associated with BEP (see Model 70).

### **6.5.3 Alternative Measure of the Frequency of Audit Committee Meeting and its Effects on Firm Performance**

This study initially measured the audit committee meetings (ACM) by the total number of meeting of audit committee held in a year. The observed results (see Table 33) indicate that frequency of audit committee meeting is negatively associated with firm performance. In this section, this study offers additional evidence on whether this negative association remains qualitatively unchanged if the variable (audit committee meeting) is measured by a binary variable rather than a number (discrete variable). This alternative measure of audit committee meeting is named as ACM\_B. To determine the threshold, this study identifies the median value of the audit committee meetings. As the median value of ACM is 3 presented in the Table 11, this study sets a value of '0' for ACM\_B if ACM is equal to or less than 3 and, otherwise, it is '1'. Surprisingly, this criterion is in line with the revised clause of audit committee meeting mentioned in the CG Code of 2018 in Bangladesh. The CG Code of 2018 mentions that audit committee of every listed company shall meet at least four times in a year to ensure transparency and fairness of the financial information. Thus, the examining the relationship between the binary variable of audit committee meetings (ACM\_B) and firm performance would be an attempt to check the robustness of the results.

This study gets evidence from two types of sample periods. The first type of sample period ranges from 2000 to 2020. The second type of sample period ranges from 2006 to 2020, which does not consider the observations during 2000-2005. It is because corporate governance guidelines were not issued in Bangladesh before the year of 2006. Model 73 and Model 76 of Table 38 show the GMM regression estimates on BEP. Model 74 and Model 77 represent the GMM regression estimates on ROA. Model 75 and Model 78 demonstrate the GMM regression estimates on TBQ. In all models of Table 38, the p-value of F-statistic is significant at 1 percent level. Apart from, there remains no second-order serial correlation in sample data as the p-value of AR(2) is not statistically significant. Further to this, the p-value of Hansen test under all GMM models is greater than 0.235, indicating that Hansan test values are not statistically significant in all GMM models of Table 38.

**Table 38: Two-step system GMM estimates for the relationships between audit committee meeting and firm performance**

| Period                 | 2000-2020 (Full Period)   |                          |                           | 2006-2020 (CG Period)     |                           |                           |
|------------------------|---------------------------|--------------------------|---------------------------|---------------------------|---------------------------|---------------------------|
|                        | Model 73                  | Model 74                 | Model 75                  | Model 76                  | Model 77                  | Model 78                  |
|                        | BEP                       | ROA                      | TBQ                       | BEP                       | ROA                       | TBQ                       |
| BEP <sub>t-1</sub>     | 0.511***<br><i>5.14</i>   |                          |                           | 0.436***<br><i>3.49</i>   |                           |                           |
| ROA <sub>t-1</sub>     |                           | 0.701***<br><i>5.14</i>  |                           |                           | 0.430***<br><i>4.21</i>   |                           |
| TBQ <sub>t-1</sub>     |                           |                          | 0.520***<br><i>8.24</i>   |                           |                           | 0.480***<br><i>7.44</i>   |
| TBQ <sub>t-2</sub>     |                           |                          | 0.216***<br><i>3.29</i>   |                           |                           | 0.172**<br><i>2.57</i>    |
| ACM_B                  | -0.028***<br><i>-2.76</i> | -0.059**<br><i>-2.00</i> | -0.447<br><i>-1.35</i>    | -0.024**<br><i>-2.41</i>  | -0.028***<br><i>-2.85</i> | -0.416<br><i>-1.26</i>    |
| BS                     | -0.004<br><i>-0.16</i>    | -0.024<br><i>-0.93</i>   | 0.791*<br><i>1.75</i>     | 0.004<br><i>0.14</i>      | -0.021<br><i>-0.75</i>    | 0.815<br><i>1.51</i>      |
| CEOD                   | -0.007<br><i>-0.72</i>    | -0.009<br><i>-0.62</i>   | 0.070<br><i>0.42</i>      | 0.000<br><i>0.05</i>      | -0.012<br><i>-1.29</i>    | 0.093<br><i>0.33</i>      |
| AGE                    | 0.001<br><i>0.25</i>      | 0.001<br><i>0.46</i>     | 0.070*<br><i>1.85</i>     | -0.001<br><i>-0.38</i>    | -0.002<br><i>-1.14</i>    | 0.084*<br><i>1.79</i>     |
| SIZE                   | 0.005**<br><i>2.31</i>    | 0.007**<br><i>2.08</i>   | -0.114***<br><i>-2.90</i> | 0.005*<br><i>1.76</i>     | 0.006***<br><i>2.63</i>   | -0.143***<br><i>-3.25</i> |
| GROW                   | -0.007*<br><i>-1.82</i>   | 0.003<br><i>0.72</i>     | -0.277***<br><i>-3.31</i> | -0.010**<br><i>-2.51</i>  | -0.001<br><i>-0.22</i>    | -0.270***<br><i>-3.08</i> |
| LEVR                   | -0.061***<br><i>-4.22</i> | -0.069**<br><i>-2.47</i> | 0.115<br><i>0.50</i>      | -0.087***<br><i>-4.60</i> | -0.134***<br><i>-4.85</i> | 0.006<br><i>0.02</i>      |
| DOW                    | 0.074***<br><i>4.32</i>   | 0.053***<br><i>2.76</i>  | 0.373*<br><i>1.66</i>     | 0.091***<br><i>3.46</i>   | 0.085**<br><i>4.39</i>    | 0.480*<br><i>1.81</i>     |
| INST                   | 0.020*<br><i>1.90</i>     | -0.002<br><i>-0.24</i>   | -0.348*<br><i>-1.75</i>   | 0.026<br><i>1.64</i>      | 0.022<br><i>1.61</i>      | -0.457*<br><i>-1.76</i>   |
| MB                     | 0.000<br><i>-0.06</i>     | 0.000<br><i>-0.47</i>    | 0.023<br><i>1.04</i>      | 0.000<br><i>0.46</i>      | 0.000<br><i>0.05</i>      | 0.024<br><i>1.02</i>      |
| COVID                  | -0.018**<br><i>-2.10</i>  | -0.017<br><i>-1.08</i>   | -0.051<br><i>-0.27</i>    | -0.018**<br><i>-2.28</i>  | -0.016*<br><i>-1.67</i>   | -0.052<br><i>-0.28</i>    |
| Constant               | -0.062<br><i>-1.38</i>    | -0.031<br><i>-0.93</i>   | 1.387*<br><i>1.82</i>     | -0.051<br><i>-0.83</i>    | -0.038<br><i>-0.82</i>    | 2.161**<br><i>2.26</i>    |
| Year Dummies           | Yes                       | Yes                      | Yes                       | Yes                       | Yes                       | Yes                       |
| Industry Dummies       | Yes                       | Yes                      | Yes                       | Yes                       | Yes                       | Yes                       |
| Lags                   | 2 - 3                     | 3 - 3                    | 2 - 2                     | 2 - 3                     | 2 - 3                     | 2 - 2                     |
| P-value of F-statistic | 0.000                     | 0.000                    | 0.000                     | 0.000                     | 0.000                     | 0.000                     |
| P-value of AR(2)       | 0.669                     | 0.288                    | 0.149                     | 0.696                     | 0.248                     | 0.389                     |
| P-value of Hansen test | 0.567                     | 0.236                    | 0.441                     | 0.539                     | 0.346                     | 0.381                     |
| No. of instruments     | 57                        | 52                       | 51                        | 52                        | 52                        | 47                        |
| No. of observations    | 2444                      | 2444                     | 2240                      | 1899                      | 1899                      | 1792                      |
| No. of groups          | 204                       | 204                      | 198                       | 202                       | 202                       | 196                       |

Note: BEP<sub>t-1</sub>, ROA<sub>t-1</sub>, and TBQ<sub>t-1</sub> stand for the first order lag values of BEP, ROA, and TBQ respectively. TBQ<sub>t-2</sub> stands for the second order lag values of TBQ. ACM\_B refers to binary variable of the frequency of audit committee meetings where it is '1' if number of audit committee meeting is greater than 3, otherwise it is '0'. The t-statistics, based on robust standard error, are shown in italic. \*, \*\*, and \*\*\* denote the level of significance at 10%, 5%, and 1% respectively. The coefficients of year dummies and industry dummies are not reported for the sake of brevity. TBQ and MB are winsorized at 1% in each tail to control for outlier effect. The definition and measurement of variables are presented in Table 9.

Model 73 and 76 of Table 38 show the GMM estimates for the dependent variable of BEP using ACM\_B as explanatory variable under 2000-2020 and 2006-2020 sample periods respectively. The Model 74 and 77 of Table 38 present the GMM estimates for the dependent variable of ROA using ACM\_B as explanatory variable. In addition, Model 75 and Model 78 demonstrate the GMM estimates for the dependent variable of TBQ using ACM\_B as explanatory variable. In Model 73 and Model 76, it is observed that ACM\_B is significantly and negatively associated with BEP. Similarly, in Model 74 and Model 77, it is reported that ACM\_B is significantly and negatively related to ROA. That is, frequency of audit committee meetings ( $ACM > 3$ ) are significantly and negatively associated with firms' accounting-based performance measures (BEP, ROA), whereas it is insignificantly associated with market-based performance measure (TBQ). Thus, it can be concluded that more number of meetings cannot be beneficial to firm's profitability. These results are mostly parallel to the base results of this study (see Table 24). However, this result supports the hypothesis that audit committee is significantly associated with firm performance.

In Table 38, it is also observed that, among the control variables, board size (BS) and firm age (AGE) has positive relationship with TBQ (see Model 75). Firm size (SIZE) has a significant positive association with BEP and ROA and a negative association with the market-based performance (TBQ). Firm growth (GROW) is negatively associated with BEP and TBQ. Firm leverage (LEVR) is negatively associated only with accounting-based performance measures. Director ownership (DOW) has a significant positive relation with accounting-based performance measures and market-based performance measure. Institutional ownership (INST) has negative relation with TBQ. Market to book ratio is positively associated with TBQ (see Model 72). COVID is negatively associated with BEP and ROA.

## **6.6 Robustness Check for Moderating Effects of Family Control on Firm Performance**

The main effects of family control (family-CEO duality, family ownership) and board independence on firm performance (BEP, ROA, TBQ) are significantly negative, but their interaction effects are significantly positive (see Table 34 and Table 35). That is, the negative impact of board independence on firm performance turns to be positive when board independence and family control interplay between each other. This outcome is very unique and interesting in the context of Bangladesh and bears significant implications of corporate governance mechanism. It is because that

none of the extent literatures provides evidence on such type of contingent effect of board independence on performance of Bangladeshi firms.

This section provides additional evidence on the robustness of our base results presented in Table 34 and 35. Here, the robustness analysis is followed by alternative econometric analysis. In alternative econometric analysis, this study uses fixed-effect regression.

### **6.6.1 Alternative Econometric Approach**

Like GMM, the FE estimations can equally be applied in the case of time invariant unobservable cross-sectional fixed effect. That is FE analysis can deal with endogeneity caused by firm-specific fixed effect. Thus, Miller et al. (2013) used both GMM and Fixed-effects estimations to check the robustness of their empirical results. The results of Hausmen test under different econometric models are presented in Table 39. Models 79 to 81 incorporate a moderating variable of family-CEO duality (FCEO) and Models 82 to 84 incorporate another moderating variable called family ownership (FOWN). Both moderating variables are separately multiplied by board independence (BIND) to examine their interaction effects on BEP, ROA, and TBQ. However, results of Hausmen test indicate that value of chi-squared ( $\chi^2$ ) is statistically significant at 1 percent level in all the aforesaid models. These results suggest that fixed-effect model is appropriate compared to random-effect model to examine the moderating effects of family control (FCEO, FOWN) on firm performance under alternative econometric regression analysis.

In this study, the sample for alternative econometric analysis is formed over a period ranging from 2000 to 2019. This sample does not take account of the observation in 2020 due to avoid the abnormal data pattern caused by the adverse economic effects of COVID-19 pandemic. Model 79, Model 80, and Model 81 of Table 40 show the FE estimates for the dependent variables of BEP, ROA, and TBQ respectively using BIND, FCEO, and BIND\*FCEO as explanatory variables. On the other hand, Model 82, Model 83, and Model 84 of Table 40 present the FE estimates for the dependent variables of BEP, ROA, and TBQ respectively using BIND, FOWN, and BIND\*FOWN as explanatory variables. As shown in Table 40, the value of F-statistic under all fixed effect models is statistically significant. It implies that all estimated models are correctly specified and statistically valid. In Model 79 and Model 82, about 56 percent of total variation in the BEP is explained by the



variation in the independent variables. Model 80 and Model 83 of Table 35 indicate that about 51 percent of total variation in the ROA is explained by the variation in the independent variables. Model 81 and Model 84 exhibit that about 50 percent of total variation in the TBQ is accounted for the variation in the independent variables.

**Table 39: Hausman test for differences in coefficients between fixed and random effects**

| Model | Dependent Variable | Moderating Variable | Key Explanatory Variable | Chi-Squared ( $\chi^2$ ) | P-value of $\chi^2$ |
|-------|--------------------|---------------------|--------------------------|--------------------------|---------------------|
| 79    | BEP                | FCEO                | BIND                     | 144.70                   | 0.000               |
| 80    | ROA                | FCEO                |                          | 79.38                    | 0.000               |
| 81    | TBQ                | FCEO                |                          | 138.66                   | 0.000               |
| 82    | BEP                | FOWN                |                          | 399.30                   | 0.000               |
| 83    | ROA                | FOWN                |                          | 92.42                    | 0.000               |
| 84    | TBQ                | FOWN                |                          | 79.41                    | 0.000               |

Note: FCEO refers to family-CEO duality. FOWN refers to the shareholdings by family directors. BIND represents board independence. BEP, ROA, and TBQ represent basic earning power, return on assets, and Tobin's Q.

**Table 40: Fixed-effect estimates for the interaction effect of family control (FCEO, FOWN) and board independence on firm performance during 2000-2019**

| Family control type    | FCEO                             |                                  |                                  | FOWN                             |                                  |                                 |
|------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|---------------------------------|
|                        | Model 79                         | Model 80                         | Model 81                         | Model 82                         | Model 83                         | Model 84                        |
|                        | BEP                              | ROA                              | TBQ                              | BEP                              | ROA                              | TBQ                             |
| BS                     | 0.006<br><i>0.81</i>             | 0.017**<br><i>2.44</i>           | 0.311**<br><i>2.09</i>           | 0.008<br><i>1.01</i>             | 0.020***<br><i>2.93</i>          | 0.391**<br><i>2.58</i>          |
| CEOD                   | -0.004<br><i>-0.69</i>           | -0.008<br><i>-1.49</i>           | 0.330**<br><i>2.35</i>           | 0.005<br><i>0.98</i>             | 0.003<br><i>0.58</i>             | 0.422***<br><i>3.59</i>         |
| <b>BIND</b>            | <b>-0.064***</b><br><i>-2.79</i> | <b>-0.062***</b><br><i>-2.68</i> | <b>-0.948**</b><br><i>-2.39</i>  | <b>-0.088***</b><br><i>-3.41</i> | <b>-0.092***</b><br><i>-3.30</i> | <b>-0.758*</b><br><i>-1.76</i>  |
| <b>FCEO</b>            | <b>-0.018**</b><br><i>-2.30</i>  | <b>-0.023***</b><br><i>-3.50</i> | <b>-0.416***</b><br><i>-2.99</i> |                                  |                                  |                                 |
| <b>BIND*FCEO</b>       | 0.066**<br><i>2.21</i>           | 0.100***<br><i>3.26</i>          | 2.651***<br><i>5.04</i>          |                                  |                                  |                                 |
| <b>FOWN</b>            |                                  |                                  |                                  | <b>-0.050*</b><br><i>-1.73</i>   | <b>-0.109***</b><br><i>-3.82</i> | <b>-1.000**</b><br><i>-2.19</i> |
| <b>BIND*FOWN</b>       |                                  |                                  |                                  | <b>0.231***</b><br><i>3.27</i>   | <b>0.295***</b><br><i>3.66</i>   | <b>2.959**</b><br><i>2.47</i>   |
| AGE                    | -0.006<br><i>-1.38</i>           | 0.000<br><i>-0.02</i>            | -0.608***<br><i>-6.50</i>        | -0.007<br><i>-1.62</i>           | -0.002<br><i>-0.41</i>           | -0.617***<br><i>-6.52</i>       |
| SIZE                   | -0.007<br><i>-1.32</i>           | -0.003<br><i>-0.48</i>           | -0.413***<br><i>-6.61</i>        | -0.006<br><i>-1.14</i>           | -0.002<br><i>-0.25</i>           | -0.395***<br><i>-6.20</i>       |
| GROW                   | 0.002<br><i>0.75</i>             | 0.005<br><i>1.59</i>             | 0.087*<br><i>1.67</i>            | 0.002<br><i>0.54</i>             | 0.004<br><i>1.37</i>             | 0.087*<br><i>1.66</i>           |
| LEVR                   | 0.000**<br><i>-2.47</i>          | 0.000**<br><i>-2.60</i>          | -0.005*<br><i>-1.80</i>          | 0.000**<br><i>-2.35</i>          | 0.000**<br><i>-2.48</i>          | -0.005*<br><i>-1.82</i>         |
| DOW                    | -0.015<br><i>-0.90</i>           | -0.009<br><i>-0.74</i>           | -0.554*<br><i>-1.81</i>          | -0.014<br><i>-0.81</i>           | 0.001<br><i>0.09</i>             | -0.510<br><i>-1.63</i>          |
| INST                   | -0.022<br><i>-1.58</i>           | -0.025*<br><i>-1.81</i>          | -1.088***<br><i>-3.39</i>        | -0.020<br><i>-1.36</i>           | -0.019<br><i>-1.36</i>           | -1.070***<br><i>-3.35</i>       |
| MB                     | 0.001***<br><i>3.87</i>          | 0.001***<br><i>3.73</i>          | 0.029***<br><i>3.49</i>          | 0.001***<br><i>3.83</i>          | 0.001***<br><i>3.72</i>          | 0.029***<br><i>3.50</i>         |
| Constant               | 0.245**<br><i>2.20</i>           | 0.099<br><i>0.70</i>             | 9.828***<br><i>7.29</i>          | 0.225**<br><i>2.08</i>           | 0.072<br><i>0.52</i>             | 9.406***<br><i>6.93</i>         |
| Year & Industry Effect | Yes                              | Yes                              | Yes                              | Yes                              | Yes                              | Yes                             |
| F-statistic            | 3.31                             | 3.34                             | 18.82                            | 3.73                             | 3.59                             | 18.27                           |
| P-value of F-statistic | 0.000                            | 0.000                            | 0.000                            | 0.000                            | 0.000                            | 0.000                           |
| Adjusted R-squared     | 0.5609                           | 0.5091                           | 0.5061                           | 0.5617                           | 0.5114                           | 0.5011                          |
| No. of observations    | 2329                             | 2329                             | 2329                             | 2329                             | 2329                             | 2329                            |
| No. of groups          | 203                              | 203                              | 203                              | 203                              | 203                              | 203                             |

Note:  $BEP_{t-1}$ ,  $ROA_{t-1}$ , and  $TBQ_{t-1}$  stand for the first order lag values of BEP, ROA, and TBQ respectively.  $TBQ_{t-2}$  stands for the second order lag values of TBQ. BIND and FCEO refer to board independence and family-CEO duality respectively. FOWN refers to family ownership. BIND\*FCEO refers to an interaction term between board independence (BIND) and family-CEO duality (FCEO). BIND\*FOWN refers to an interaction term between board independence (BIND) and family ownership (FOWN). The t-statistics, based on robust standard error, are shown in italic. \*, \*\*, and \*\*\* denote the level of significance at 10%, 5%, and 1% respectively. The coefficients of year dummies and industry dummies are not reported for the sake of brevity. TBQ and MB are winsorized at 1% in each tail to control for outlier effect. The definition and measurement of variables are presented in Table 9.

In models 79-81 of Table 40, it is observed that both BIND and FCEO are significantly and negatively associated with the accounting-based performance measures (BEP and ROA) and market

based firm performance measure (TBQ). But in the same models, it is reported that the interaction term between board independence and family-CEO duality (BIND\*FCEO) is positively associated with both accounting-based performance and market based firm performance. Similarly, in models 82-84 of Table 40, it is observed that both BIND and FCEO have significant negative relation with the accounting-based performance measures (BEP and ROA) and market based firm performance measure (TBQ). On the other hand, the interaction term between board independence and family ownership (BIND\*FOWN) is positively associated with BEP, ROA, and TBQ. Thus, the fixed-effect estimations are highly parallel to the GMM estimations. These results support a significant positive moderating role of family ownership on the relationship between board independence and firm performance, which is also qualitatively same to the findings presented in Table 34 and Table 35.

Another sample for alternative econometric analysis is formed over a period that ranges from 2006 to 2019. There are two reasons behind the selection of this sample period. First, the corporate governance guidelines for listed companies in Bangladesh were not available till 2005. Second, the worldwide economy witnessed downturn movement during the massive spread of COVID-19 and its successive effects on some industries in Bangladesh. Model 85, Model 86, and Model 87 of Table 41 show the FE estimates for the dependent variables of BEP, ROA, and TBQ respectively using BIND, FCEO, and BIND\*FCEO as explanatory variables. On the other hand, Model 88, Model 89, and Model 90 of Table 41 present the FE estimates for the dependent variables of BEP, ROA, and TBQ respectively using BIND, FOWN, and BIND\*FOWN as explanatory variables. As shown in the Table 41, the value of F-statistic under all fixed effect models is statistically significant which implies that all estimated models are statistically valid. In Model 85 and Model 88 of Table 41, it is observed that about 66 percent of total variation in the BEP is explained by the variation in the independent variables. In Model 86 and Model 89 of Table 41, it is indicated that about 60 percent of total variation in the ROA is explained by the variation in the independent variables. Model 87 and Model 90 of Table 41 demonstrate that about 51 percent of total variation in the TBQ is accounted for the variation in the independent variables.

In Table 41, the results of fixed effect analysis indicate that interaction term between board independence and family-CEO duality (BIND\*FCEO) is positively associated with both accounting-

**Table 41: Fixed-effect estimates for the interaction effect of family control (FCEO, FOWN) and board independence on firm performance during 2006-2019**

|                        | FCEO                             |                                  |                                  | FOWN                             |                                  |                                 |
|------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|---------------------------------|
|                        | Model 85                         | Model 86                         | Model 87                         | Model 88                         | Model 89                         | Model 90                        |
|                        | BEP                              | ROA                              | TBQ                              | BEP                              | ROA                              | TBQ                             |
| BS                     | 0.012<br><i>1.15</i>             | 0.019**<br><i>2.08</i>           | 0.688***<br><i>3.10</i>          | 0.013<br><i>1.22</i>             | 0.020**<br><i>2.25</i>           | 0.717***<br><i>3.19</i>         |
| CEOD                   | -0.010<br><i>-1.35</i>           | -0.010<br><i>-1.48</i>           | 0.450**<br><i>2.38</i>           | -0.002<br><i>-0.39</i>           | -0.002<br><i>-0.37</i>           | 0.562***<br><i>3.30</i>         |
| <b>BIND</b>            | <b>-0.083***</b><br><i>-3.21</i> | <b>-0.089***</b><br><i>-3.31</i> | <b>-1.006**</b><br><i>-2.12</i>  | <b>-0.103***</b><br><i>-3.33</i> | <b>-0.121***</b><br><i>-3.61</i> | <b>-1.116**</b><br><i>-1.98</i> |
| <b>FCEO</b>            | <b>-0.022**</b><br><i>-2.10</i>  | <b>-0.026***</b><br><i>-2.87</i> | <b>-0.537***</b><br><i>-2.89</i> |                                  |                                  |                                 |
| <b>BIND*FCEO</b>       | <b>0.075**</b><br><i>2.24</i>    | <b>0.112***</b><br><i>3.24</i>   | <b>2.623***</b><br><i>3.96</i>   |                                  |                                  |                                 |
| <b>FOWN</b>            |                                  |                                  |                                  | <b>-0.078**</b><br><i>-2.36</i>  | <b>-0.111***</b><br><i>-3.24</i> | <b>-1.361**</b><br><i>-2.45</i> |
| <b>BIND*FOWN</b>       |                                  |                                  |                                  | <b>0.211**</b><br><i>2.41</i>    | <b>0.326***</b><br><i>3.29</i>   | <b>4.478**</b><br><i>2.82</i>   |
| AGE                    | -0.004<br><i>-0.80</i>           | 0.003<br><i>0.68</i>             | -0.702***<br><i>-5.65</i>        | -0.004<br><i>-0.78</i>           | 0.004<br><i>0.72</i>             | -0.688***<br><i>-5.52</i>       |
| SIZE                   | -0.009<br><i>-0.96</i>           | 0.000<br><i>-0.02</i>            | -0.558***<br><i>-5.33</i>        | -0.008<br><i>-0.97</i>           | -0.001<br><i>-0.06</i>           | -0.563***<br><i>-5.33</i>       |
| GROW                   | 0.007**<br><i>2.13</i>           | 0.007*<br><i>1.86</i>            | 0.180***<br><i>3.01</i>          | 0.007**<br><i>2.05</i>           | 0.007*<br><i>1.78</i>            | 0.177***<br><i>2.98</i>         |
| LEVR                   | 0.000<br><i>-1.05</i>            | 0.000<br><i>-1.13</i>            | -0.006<br><i>-0.93</i>           | 0.000<br><i>-1.15</i>            | 0.000<br><i>-1.29</i>            | -0.008<br><i>-1.11</i>          |
| DOW                    | -0.043**<br><i>-2.43</i>         | -0.030**<br><i>-1.97</i>         | -0.484<br><i>-1.29</i>           | -0.032*<br><i>-1.92</i>          | -0.016<br><i>-1.05</i>           | -0.352<br><i>-0.92</i>          |
| INST                   | -0.012<br><i>-0.76</i>           | -0.028*<br><i>-1.93</i>          | -0.913**<br><i>-2.18</i>         | -0.007<br><i>-0.42</i>           | -0.021<br><i>-1.39</i>           | -0.871**<br><i>-2.07</i>        |
| MB                     | 0.001***<br><i>2.72</i>          | 0.001***<br><i>2.68</i>          | 0.024***<br><i>2.78</i>          | 0.001***<br><i>2.73</i>          | 0.001***<br><i>2.70</i>          | 0.025***<br><i>2.80</i>         |
| TATURN                 | 0.039***<br><i>5.41</i>          | 0.026***<br><i>3.81</i>          | 0.400***<br><i>3.48</i>          | 0.038***<br><i>5.47</i>          | 0.025***<br><i>3.79</i>          | 0.378***<br><i>3.37</i>         |
| Constant               | 0.255<br><i>1.35</i>             | 0.015<br><i>0.05</i>             | 12.551***<br><i>5.45</i>         | 0.252<br><i>1.38</i>             | 0.028<br><i>0.11</i>             | 12.646***<br><i>5.46</i>        |
| Year & Industry Effect | Yes                              | Yes                              | Yes                              | Yes                              | Yes                              | Yes                             |
| F-statistic            | 5.16                             | 4.49                             | 13.32                            | 5.42                             | 4.66                             | 13.58                           |
| P-value of F-statistic | 0.0000                           | 0.0000                           | 0.0000                           | 0.0000                           | 0.0000                           | 0.0000                          |
| Adjusted R-squared     | 0.6575                           | 0.5988                           | 0.5141                           | 0.6579                           | 0.6003                           | 0.5120                          |
| No. of observations    | 1784                             | 1784                             | 1784                             | 1784                             | 1784                             | 1784                            |
| No. of groups          | 201                              | 201                              | 201                              | 201                              | 201                              | 201                             |

Note:  $BEP_{t-1}$ ,  $ROA_{t-1}$ , and  $TBQ_{t-1}$  stand for the first order lag values of BEP, ROA, and TBQ respectively.  $TBQ_{t-2}$  stands for the second order lag values of TBQ. BIND and FCEO refer to board independence and family-CEO duality respectively. FOWN refers to family ownership. BIND\*FCEO refers to an interaction term between board independence (BIND) and family-CEO duality (FCEO). BIND\*FOWN refers to an interaction term between board independence (BIND) and family ownership (FOWN). The t-statistics, based on robust standard error, are shown in italic. \*, \*\*, and \*\*\* denote the level of significance at 10%, 5%, and 1% respectively. The coefficients of year dummies and industry dummies are not reported for the sake of brevity. TBQ and MB are winsorized at 1% in each tail to control for outlier effect. The definition and measurement of variables are presented in Table 9.

based performance and market based firm performance. Further to this, the Table 41 also reveals that the interaction term between board independence and family-ownership (BIND\*FOWN) is positively associated with both accounting-based performance and market based firm performance. Thus, the fixed-effect estimations in Table 41 are qualitatively parallel to fixed-effect estimations presented in Table 40, suggesting that the results do not vary with the different sample periods. Overall, these effects estimations are qualitatively similar to the GMM estimations presented in Table 34 and Table 35. Hence, these results support the hypothesis that family control- measured by either family-CEO duality or family ownership- has the significant positive moderating effects on the relationship between board independence and firm performance. Thus, it is concluded that board independence has contingent effect on firm performance rather than direct effect.

Overall, these results imply that family control improves the effectiveness of board independence, consistent with the findings of Anderson and Reeb (2004). It supports the hypothesis of this study that family control moderates the relationship between board independence and firm performance. These findings are equitably in the same vein of the base findings of this study (see Table 35) that family ownership is beneficial to the effectiveness of board independence. These results qualitatively support the earlier findings of this study (see Table 30).

## 6.7 Summary of the Regression Analysis

Based on the findings of regression analysis, Table 44 shows the summary of hypothesis testing of this study. In Table 44, it is reported that the first hypothesis that *'board independence is positively related to the firm performance'* is partially supported; the second hypothesis that *'audit committee independence is positively related to the firm performance'* is partially supported; and the third hypothesis that the *'frequency of audit committee meeting is significantly related to firm performance'* is supported. On the other hand, the fourth hypothesis that *'family-CEO duality is negatively related to the firm performance'* is supported; the fifth hypothesis that *'family ownership is negatively related to the firm performance'* is supported; the sixth hypothesis that *'family-CEO duality moderates the relationship between board independence and firm performance'* is supported; and finally the seventh hypothesis that *'family ownership moderates the relationship between board independence and firm performance'* is supported.

**Table 42: Summary of regression findings for hypothesis testing**

| Research Hypothesis  |                                                                                                | With/without effect of CG code of 2018 | Estimated Sign | Observed Sign | Dependent Variables |          |          | Status              |
|----------------------|------------------------------------------------------------------------------------------------|----------------------------------------|----------------|---------------|---------------------|----------|----------|---------------------|
|                      |                                                                                                |                                        |                |               | BEP                 | ROA      | TBQ      |                     |
| <b>H<sub>1</sub></b> | Board independence is positively related to the firm performance.                              | Without CG code of 2018                | +              | -             | Rejected            | Rejected | Rejected | Partially Supported |
|                      |                                                                                                | With CG code of 2018                   | +              | +             | Accepted            | Accepted | Accepted |                     |
| <b>H<sub>2</sub></b> | Audit committee independence is positively related to the firm performance.                    | Without CG code of 2018                | +              | -             | Rejected            | Rejected | Rejected | Partially Supported |
|                      |                                                                                                | With CG code of 2018                   | +              | +             | Rejected            | Rejected | Accepted |                     |
| <b>H<sub>3</sub></b> | Audit committee meeting is significantly related to firm performance                           |                                        | +/-            | -             | Accepted            | Accepted | Accepted | Robustly Supported  |
| <b>H<sub>4</sub></b> | Family-CEO duality is negatively related to the firm performance.                              |                                        | -              | -             | Accepted            | Accepted | Accepted | Robustly Supported  |
| <b>H<sub>5</sub></b> | Family ownership is negatively related to the firm performance.                                |                                        | -              | -             | Accepted            | Accepted | Accepted | Robustly Supported  |
| <b>H<sub>6</sub></b> | Family-CEO duality moderates the relationship between board independence and firm performance. |                                        | +/-            | +             | Accepted            | Accepted | Accepted | Robustly Supported  |
| <b>H<sub>7</sub></b> | Family ownership moderates the relationship between board independence and firm performance.   |                                        | +/-            | +             | Accepted            | Accepted | Accepted | Robustly Supported  |

## **6.8 Chapter Summary**

This study attempts to draw the empirical evidence from the key three development areas of corporate governance mechanisms where reforms have been made and their impacts on firm performance. First, this study investigates whether the specific reforms in corporate governance mechanisms in respect of board independence, audit committee independence, and audit committee meeting impact firm performance in Bangladesh. Second, this study examines whether the family control (family-CEO duality and family ownership) affects firm performance in Bangladesh. Third, this study inspects whether the board independence has contingent effect on firm performance. This chapter provides a systematic analysis of sample data including univariate, bivariate and multivariate and other econometric analyses. Univariate analysis contains two sample t-test for the difference of means of performance variables (BEP, ROA, TBQ) between two groups with respect to family-CEO duality, family ownership, audit committee independence, and audit committee meeting. Another part of univariate analysis includes Whitney–Wilcoxon test for the difference of medians of performance variables (BEP, ROA, TBQ) between two groups with respect to family-CEO duality, family ownership, audit committee independence, and audit committee meeting. Findings of univariate analysis suggest that firm performance varies between groups. In a series of analysis, panel unit root test, cross sectional dependence test, heteroscedasticity and autocorrelation tests, bivariate collinearity test and endogeneity test are also performed. Moreover, under the multivariate and other econometric approaches, regression estimations are derived from the two-step system GMM econometric model to examine the causal relationship between governance variables and firm performance. Finally, to check the robustness of the findings of the base model (GMM estimations) an alternative econometric approach like fixed-effect regression analysis is performed.

## Chapter 7

### Summary and Conclusions

#### 7.1 Introduction

This chapter is designed to summarize and discuss the basic findings of the study and to demonstrate the conclusion of the study. This chapter also provides comprehensive insights into the impact of corporate governance reforms and family control on firm performance in Bangladeshi firms. The remainder of this chapter is organized as follows. Section 7.2 presents the summary of the study framework. Section 7.3 makes a comprehensive discussion on the main findings of the study. In section 7.4, the implications of the findings and policy recommendations are succinctly addressed. In section 7.5, the limitations of this study and the outlines of future research are discussed. In section 7.6, the concluding remarks are presented.

#### 7.2 Summary of the Study Framework

This study empirically examines the influence of major reforms in corporate governance mechanisms on performance of non-financial firms listed in Dhaka Stock Exchange during 2000-2020. This objective is highly appropriate for the context of Bangladesh from the following aspects. *Firstly*, like many developed countries (such as United States of America, United Kingdom, Australia) where unitary board is commonly found in the corporate sector, the stock market regulatory body in Bangladesh attempts to emphasize the structural and functional development in the corporate board and its sub-committee (audit committee) as well so that their boards and sub-committees could independently and effectively work for the interests of the shareholders. For example: (a) in 2012, it becomes compulsory to all listed Bangladeshi firms that the proportion of independent directors to the board shall be increased to 1/5<sup>th</sup> from 1/10<sup>th</sup>; (b) in 2012, it becomes also compulsory to all listed firms that audit committee shall have an independent chairman; and (c) in 2018, it becomes compulsory to all listed firms that audit committee shall hold at least four meetings in a year. *Secondly*, like many Asian countries (such as India, Malaysia, Singapore, Vietnam, Indonesia), Bangladeshi firms are highly family dominated and so the monitoring role from the body of independent directors are mostly expedient to



protect the interests of the non-family (minority) shareholders. In this regard, OECD (2014) argues that the entrancement effect of family control can be mitigated through the greater participation and effective monitoring role of the independent directors. Finally, the stock market bubble in Bangladesh in 2010-2011 instigates the necessity of examining the effectiveness of the existing governance mechanism with respect to the firm performance. Therefore, this study develops seven research questions which are as follows: (a) Does any increase in the proportion of independent directors in the board lead to better firm performance? (b) Does audit committee independence enhance firm performance? (c) Is audit committee meeting significantly associated with firm performance? (d) Is there a negative relationship between family-CEO duality and firm performance? (e) Is there a negative relationship between family ownership and firm performance? (f) Is there a moderating influence of family-CEO duality on the relationship between board independence and firm performance? (g) Is there a moderating influence of family ownership on the relationship between board independence and firm performance?

To find out the answer of the research questions the following seven research hypotheses are developed. The key interest variables of these hypotheses (board independence, audit committee independence, audit committee meeting, family-CEO duality, and family ownership) are found to be endogenous (see Table 20). Hence, based on a 2655 firm-year observations for a sample of 210 firms listed in DSE during 2000-2020, this study tested the following hypotheses using two step system GMM estimates.

**Hypothesis 1:** Board independence (measured by the proportion of independent directors on the board) is positively related to firm performance.

**Hypothesis 2:** Audit committee independence (independent chairman) is positively related to firm performance.

**Hypothesis 3:** Audit committee meeting is significantly related to firm performance.

**Hypothesis 4:** Family-CEO duality is significantly and negatively related to firm performance.

**Hypothesis 5:** Family ownership is significantly and negatively related to firm performance.

**Hypothesis 6:** Family-CEO duality interacts with board independence and, in turn, influences the relationship between board independence and firm performance.

**Hypothesis 7:** Family ownership interacts with board independence and, in turn, influences the relationship between board independence and firm performance.

This study is different from any extant studies in the context of Bangladesh as well as other countries by the following ways. *Firstly*, as per corporate governance guidelines in Bangladesh the CEO duality is no more permissible for the listed firm. In other words, CEO non-duality is permissible where the chairman and CEO would be the different individuals. But many family centric firms choose the chairman of the board and CEO from the same family members. That is, chairman and CEO are different individuals but they belong to the same family, which creates a type of neo-CEO duality called family-CEO duality. There is no study in Bangladesh that empirically examined the association between family-CEO duality and firm performance. Thus, this study attempts to fill in on this knowledge gap. *Secondly*, the earlier empirical evidence of the direct effect of board independence on firm performance is not conclusive (Bhagat & Black, 2002; Mahadeo et al., 2012), even it suggests a contingent effect of board independence on firm performance (Rediker & Seth, 1995). In parallel, Mishra et al. (2001), Elsayed (2011), and Miller et al. (2013) argued that effect of corporate governance mechanisms/board composition on corporate performance is not highly independent rather it is contingent due to the moderating or interactive effects with each other. But empirical evidence is not extensive and conclusive in exploring the moderating effects of family control (measured in family-CEO duality and family ownership) on the relationship between board independence and firm performance, even no empirical evidence in the context of Bangladesh. Thus, this study provides new insights into the contingent effects of board

independence on firm performance. *Thirdly*, in Bangladesh, none of the studies has examined any directional effect of audit committee independence and audit committee meeting on firm performance. Moreover, there is scant evidence on the relationship between these characteristics of audit committee and firm performance by taking account of the effects of corporate governance guidelines issued in 2012. Thus, this study offers broad and insightful theoretical and managerial understandings. *Fourthly*, this study lays particular stress on the endogeneity issues in assessing the influence of governance mechanisms on firm performance. Bhagat and Bolton (2008) and Wintoki et al. (2012) claimed that the relationship between governance variables and firm performance is most likely subject to the endogenous issues. In this effect, this study applies dynamic panel model under two-step system GMM econometric approach to systematically control for endogeneity problem. The substantive evidence from this econometric approach has not been drawn yet by the extant studies in Bangladesh. Hence, this study seems to provide robust results compared to any other studies in Bangladesh. *Finally*, to the best of knowledge of the author, most of the studies draw evidence with regard to the effects of governance mechanism on firm performance considering the corporate governance guidelines of 2006. There are very few studies that consider the revised corporate governance guidelines of 2012 and corporate governance code of 2018 in providing the evidence with regard to the relationship between board characteristics and firm performance. Moreover, this study provides evidence from a longitudinal data panel of 21 years ranging from 2000 to 2020 from the perspective of Bangladesh. This type of longitudinal data has not been taken into account in the Bangladeshi studies yet.

### **7.3 Overview of the Findings**

#### **7.3.1 Board Independence and Firm Performance**

Supporting the arguments of stewardship theory, the findings of this study reveal that board independence is significantly and negatively associated with both accounting-based performance (BEP, ROA) and market-based performance measure (TBQ). That is, any increase in the proportion of independent directors to the board does not enhance firm performance. The direction of this association is parallel to the findings of the earlier studies which also reported a negative relation between board

independence and firm performance (Coles et al., 2001; Mishra et al., 2001; Mahadeo et al., 2012; Sheikh et al., 2013). This relationship alternatively means that a less independence board, which is composed of majority insiders, performs better. It is because that insider knows better about company's information and enjoys less asymmetric information that provides them comparative advantage relative to outside independent directors. Another reason behind this negative association can be related to the weakness of the issued corporate governance guidelines in 2006 and 2012, even though guidelines in 2012 require all listed companies to increase in proportion of independent directors to the board to 1/5<sup>th</sup> from 1/10<sup>th</sup>. That is, issued guidelines in 2006 and 2012 did not clearly mention the qualifications of the independent directors as a result many listed companies most likely selected the independent directors based on their personal relations regardless of their right qualifications.

Moreover, corporate governance code issued in 2018 in Bangladesh clearly mentions the qualification of the independent directors and requires all listed companies to comply with it. Therefore, our additional analyses presented in Table 36 provide the evidence on the fact that how independent directors influence the firm performance since 2018. The results indicate that independent directors have positive and significant association with the accounting-based measures (BEP and ROA) and market-based measure (TBQ) of performance of listed firms when firms comply with CGC of 2018. One of the possible reasons is that the listed companies have appointed independent directors to their boards on the basis of the qualifications as per requirements of corporate governance code issued in 2018 in Bangladesh. The overall evidence partially supports the first hypothesis ( $H_1$ ) of this study that board independence is positively associated with firm performance.

### **7.3.2 Audit Committee Independence and Firm Performance**

Like board independence, the overall findings reveal that audit committee independence is negatively associated with firm performance. This result is not consistent with the second hypothesis that audit committee independence is positively associated with the firm performance. But this result is parallel to the findings of Ben-Barka and Legendre (2017), Dejong et al. (2005), Franks et al. (2001), Hasan et al. (2022), and Zábojníková (2016). One of the possible reasons behind this negative

association between them that independent chairman of the audit committee might have been exposed to lack of qualifications. It is because that the eligibility of the independent directors have first time been appositely mentioned in CG Code of 2018, which was not mentioned in the earlier corporate governance guidelines issued in 2006 and in 2012 in Bangladesh. As a result, audit committees of many listed firms in Bangladesh lack of true competent audit committee chairman.

It is worthwhile to mention that, corporate governance code issued in 2018 requires all Bangladeshi listed companies to reform their audit committees by ensuring all executive directors in the audit committee along with a qualified independent chairman. In this regard, this study further examined whether audit committee's independent chairman performs better after the year of 2018. Results presented in Table 37 reveal that independent chairman of the audit committee makes a significant effort to enhance firm's market-based performance (TBQ). This positive association between audit committee independence and firm performance indicate that listed firms are legitimately forced to appoint qualified independent chairman to their audit committees in compliance with the CG Code of 2018. Therefore, a qualified independent chairman of the audit committee can make a significant positive effort to improve firm's value. The overall evidence partially supports the second hypothesis (H<sub>2</sub>) of this study that audit committee independence is positively associated with firm performance.

### **7.3.3 Audit Committee Meetings and Firm Performance**

In Bangladesh, the corporate governance guidelines of 2006 and 2012 did not mention the minimum number of audit committee meetings (ACM) in a year. But CG Code of 2018 clearly mentions that audit committee shall meet at least four times in a year. As shown in Table 12, audit committee meets, on an average, less than 1 time in a year during 2000-2005 and less than 2 times in a year during 2006-2011. But it increases to almost 4 times in a year during 2012-2020. This dramatic increase of audit committee meeting indicates that listed firms have complied with the requirements of corporate governance guidelines in Bangladesh. As it is argued in corporate governance theories that more audit committee meetings can effectively oversee the financial reporting and disclosure procedures of the firm for the best compliance of rules, it facilitates the

internal controls and risk management systems of a firm and the best practices of ethics. Overall, it ensures transparency and fairness of the financial reporting of the firm and safeguarding the shareholders' interests.

Based on the importance of audit committee meetings this study sets its third hypothesis that audit committee meeting is positively influence performance of firms. However, the findings of this study show that the frequency of audit committee meeting is negatively related to the firm performance (see Table 30). To get the additional evidence on this unexpected result, we run a regression on firm performance using a dummy value for the frequency of audit committee meeting, where it takes '0' values if the frequency of audit committee meeting is less than or equal to '3' and, otherwise, '1'. Hence, this threshold is consistent with the CG Code of 2018 that audit committee shall meet at least four times in a year. The results of this additional analysis (see Table 36) also show that firm performance deteriorates if audit committee meets at least four times in a year. Overall, this outcome is not consistent with the expectation of this study. But, it is consistent with the findings of Hasan et al. (2022), Ben-Barka and Legendre (2017), and Bazhair (2022).

### **7.3.4 Family Control and Firm Performance**

#### **7.3.4.1 Family-CEO Duality and Firm Performance**

In the context of Bangladeshi firms, none of the studies has attempted to investigate the influence of family-CEO duality (chairman and CEO are not the same person but they belong to the same family) on firm performance. In order to fill this knowledge gap, this study draws evidence on the relationship between family-CEO duality and firm performance. The corporate governance guidelines issued in 2006 notifies all listed companies to maintain such type of board where chairman and CEO are to be different individuals. That is, CEO duality becomes legitimately prohibited for the corporate boards after the issuance of corporate governance guidelines in Bangladesh. One of the inherent reasons of issuing this rule is to curb the tyrant behavior of the CEO what could be derived from the condition of CEO duality. More specifically, in an attempt to facilitate the corporate board to work for the best interests of minor shareholders, Bangladesh Securities Exchange Commission issued this rule urging all listed firms to exit from CEO duality. Thereafter, firms those have CEO duality led boards are compelled to keep their chairman and CEO separate. While doing so, many

listed firms- more specifically- many family controlled firms hire CEO who is found to be a member of the chairman's family. Thus, this separation does make the board free from the CEO duality but fails to make the board free from the family-CEO duality because chairman and CEO belong to the same family.

As shown in Table 13, the degree of CEO duality decreases to 0.8% from 41.2% and degree of family-CEO duality increases to 49.2% from 22.4% during 2020-2020. That is, the trends of CEO duality and family-CEO duality follow opposite directions (see Figure 6). Thus, family centric firms could still be able to hold family power over the board through keeping family-CEO duality and absconding CEO duality. This study expects that, like CEO duality, family-CEO duality provides the chairman and CEO with a good scope of exercising excessive family power over the board. This power promotes them to give priority to family interests over the business interests. Therefore, this study proposed a hypothesis that family-CEO duality is negatively associated with firm performance.

The observed regression estimates indicate that family-CEO duality (FCEO) is negatively related to the performance of firms (see Table 27). This result suggests that family control in terms of family leadership is not beneficial to the firm. This finding is consistent with our expectation. This negative impact of family control on firm performance is also observed in the earlier studies such as Kepner (1983), Shleifer and Vishny (1997), Morck et al. (2000), Claessens et al. (2002), and Giovannini (2010). Thus, the fourth hypothesis -family-CEO duality is negatively associated with firm performance- is supported.

#### **7.3.4.2 Family Ownership and Firm Performance**

In this study, family ownership is considered as a device of family control, whereas family-CEO duality is considered as another device of family control. According to the agency theory, family concentrated ownership lead a conflict between major and minor shareholders or family and non-family members though there remains no or less agency conflict between owners and managers. This is because family owners typically invite family members to act as managers of the firm who will later emphasize their family goals over the business goals (Westhead et al., 2001).

Resultantly, family owners enjoy a big opportunity to expropriate firm's wealth (DeAngelo & DeAngelo, 2000). In some cases, family managers are not as much competent as outside managers that indirectly increases management costs and lower profitability. In this effect, family ownership is expected to be negatively related to the firm performance.

This study finds a significant negative relationship between family ownership (FOWN) and firm performance (BEP, ROA, and TBQ) (see Table 28). This result is consistent with the findings of earlier studies (Claessens et al., 2002; Giovannini, 2010; Kepner, 1983; Morck et al., 2000; and Shleifer & Vishny, 1997). Thus, the fifth hypothesis -family ownership is detrimental to the firm performance- is supported. To check the robustness of this result, we also used three alternative dummy variables (FOWN\_20, FOWN\_25, and FOWN\_30) to measure the degree of family ownership. Then, we run three separate GMM regressions for firm performance using these three alternative measures of family ownership. The regression coefficients of FOWN\_20 (see Table 29), FOWN\_25 (see Table 30), and FOWN\_30 (see Table 31) on firm performance are found negative, implying that firm performance deteriorates if family directors hold at least 20 percent ownership or 25 percent ownership or 30 percent ownership. Overall result suggests that the costs of conflicts between family and non-family owners (principal-principal agency problem) exceed the potential benefits of family control.

### **7.3.5. Interaction effects of family control on the relationship between board independence and Firm Performance**

This study investigated that how family control moderates the influence of board independence on firm performance. In this study, family control is measured by two ways: (a) family-CEO duality and (b) family ownership.

#### **7.3.5.1 Moderating effects of family-CEO duality on the relationship between board independence and Firm Performance**

Like many businesses in Asian countries, Bangladeshi companies are mostly family centric where directors from the same family typically hold substantial ownership.



This shareholding offers the family directors to grab the opportunity of hiring top management from a family to whom the directors are affiliated. As shown in Table 11, many listed companies in Bangladesh hired their CEOs who are belonging to the board chairman's family. That is, the chairman and the CEO come from the same family. In this study, this situation is defined as Family-CEO duality (FCEO) which is amounted to about 40 percent in the listed companies in Bangladesh. Usually, family-CEO duality provides the family directors with a greater influence of choosing the independent directors for the board. According to Combs et al. (2007), CEO duality or the power of the CEO affects how independently and successfully outside independent directors operate to safeguard and maximize the interests of shareholders. Besides, family-CEO duality gives the family directors to exercise enormous power over the board to fulfill their family interests. In this situation, effective role of board independence is required curb the propensity of family members in giving more priority of family interests over the business interests (OECD, 2014). In an opposite view, it is argued in the resource dependence theory and institutional theory that family members may appoint qualified independent directors and provide them with indifferent supports for the sake of protecting the family interests like lingering the family legacy in the firm, creating favorable image of the family firms towards the stakeholders, and making the firm more profitable in the long run. Considering all these perspectives, the current study hypothesized that the interaction term (*board independence*  $\times$  *family-CEO duality*) has significant impact on firm performance.

The result of this study shows that the interaction between board independence and family-CEO duality (BIND\*FCEO) has a significant positive impact on firm performance (see Table 34). On the other hand, the independent effects (direct effects) of FCEO and BIND on firm performance are significantly negative. That is, a negative effect of board independence on firm performance turns to positive when it interacts with family-CEO duality. This result implies that independent directors can play effective role for better performance of those companies where family-CEO duality exists. Alternatively, it implies that if family-CEO duality and board independence are bunched together they can collectively put a magnificent effort to enhance the performance of firms. This study applied alternative econometric approach to check the robustness of the base result. In alternative econometric approach, this study used fixed effect regression as it is supported by Hausman test.

All these results support the sixth hypothesis that family-CEO duality moderates the relationship between board independence and firm performance and consistent with the findings of Anderson and Reeb (2004) and Garcí'a-Ramos and Garcí'a-Olalla (2011). In the context of Bangladesh, this study provides new evidence about the interaction effects of family-CEO duality (family control) on the association between board independence and accounting-based performance and market-based performance of listed companies.

#### **7.3.5.2 Moderating effects of family ownership on the relationship between board independence and Firm Performance**

As it is mentioned earlier that Bangladeshi listed companies are mostly family controlled. As shown in Table 11, about 21 percent stake of nonfinancial firms listed in DSE is held by the directors who are belonging to the same family. This study finds that on an average family directors hold 21 percent ownership. Thereby, the selection process of independent directors could be influenced by the family directors. Further to this, the role of independent directors could be influenced by the family control.

According to institutional theory, family businesses must choose independent directors in order to comply with institutional standards, but they are also very concerned with maintaining the social capital and reputation of their own family. These two factors drive the family directors to create a balanced board of directors that brings family members and independent outside directors together for the sake of the company's fortune. Similar to this, stewardship theory and resource dependence theory contend that families choose directors based on their credentials and expertise, and they seek out independent directors to join their boards in order to give them the correct direction and advice. Miller and Le Breton Miller (2006) argued that monitoring role of independent directors is extremely important in family businesses in order to protect the interests of minority non-family shareholders. According to Johannisson and Huse (2000), independent directors can reduce disagreements and conflicts between family members and non-family members by using their impartial opinions and professional expertise. Considering all these perspectives, we hypothesized that the interaction term (*family-CEO duality* × *board independence*) has significant impact on firm performance. Taking into account all of these

viewpoints, the present proposed that the interaction term (board independence  $\times$  family ownership) has a significant effect on firm performance.

The results of this study reveal that the interaction between board independence and family ownership (BIND\*FOWN) has significant positive effect on accounting-based performance (BEP and ROA) and market-based performance (TBQ) (see Table 35). Further to this, it is observed that BIND and FOWN have a direct significant negative association with firm performance. That is, a negative effect of board independence on firm performance turns to positive when it interacts with family ownership. In robustness analysis, this study employed an alternative econometric approach like fixed-effect regression models as supported by the results of Hausman test. Fixed-effect estimates reveal that the interaction term (BIND\*FOWN) has significant positive impact on firm performance (BEP, ROA, TBQ) whereas BIND and FOWN have significant negative association with firm performance (see Table 40, Table 41, and Table 43). Overall results are consistent with the seventh hypothesis of this study that family ownership significantly moderates the relationship between board independence and firm performance.

## **7.4 Implications of the Findings and Policy Recommendations**

The findings of this study offer several important implications to the theories in corporate governance, academia, practitioners, investors, regulatory bodies and policy makers.

### **7.4.1 Board Independence**

The empirical findings of this study indicate that board independence is negatively associated with firm performance. It implies that independent directors are not effectively playing supervisory and monitoring role for the betterment of the shareholders' interests. It is earlier noted that the all companies listed in DSE are compelled to increase the proportion of independent directors to their boards to at least 1/5<sup>th</sup> from 1/10<sup>th</sup> as per corporate governance guidelines issued in 2012. In addition to this, corporate governance code issued in 2018 requires all Bangladeshi listed companies to appoint the qualified independent directors. As these required

qualifications for being an independent director were not precisely mentioned in the earlier corporate governance guidelines issued in 2006 and 2012, many companies might have easily appointed less qualified independent directors. As a result, they are found to be less competent and expertise to perform their assigned duties and responsibilities and, thereby, firm performance deteriorates. This study also finds an interesting result that as the corporate governance code of 2018 enforces the listed companies to appoint qualified independent directors, board independence starts making a positive impact on firm performance just after adopting this code of 2018 by the listed companies. Thus, the overall findings partially support the view of agency theory that only qualified independent directors bring effective monitoring and better firm performance. These results also support the view of resource dependence theory that qualified directors can put significant effort to improve firm performance.

Regulatory bodies and policy makers in Bangladesh may get empirical supports from this evidence that the development of corporate governance code of 2018 with regard to the qualifications of independent directors. The observed results could support regulatory bodies and policy makers to formulate future recommendations. Investors may believe that their assets can be not be protected by only the presence of large number of independent directors in the board unless they have got qualifications as per corporate governance code of 2018. Researchers and practitioners of emerging countries like Bangladesh may get insightful evidence with regard to the negative association between board independence and firm performance as well as the positive association between board independence and firm performance. These results provide them with empirical support to explore the factors behind the poor performance of independent directors.

#### **7.4.2 Audit Committee Independence**

The findings of this study reveal that audit committee independence is significantly and negatively associated with firm performance. But this negative impact does no longer remain constant in the case of the period when firms comply with corporate governance code of 2018. As this code obligates the firms to appoint the qualified independent chairman of the audit committee, the audit committee gets capability to perform its assigned activities very effectively. Therefore, this study reports that the

negative impact of audit committee on firm performance turns positive when firms comply with the corporate governance code of 2018. Overall findings moderately support the agency theory and resource dependence theory. Indeed, it supports the arguments of stewardship theory that insiders work for the betterment of the company.

In the context of Bangladesh, the appointment of independent chairman of the audit committee was not compulsory till 2011 as it was appeared in the revised corporate governance regulations issued in 2012. Nevertheless, complying with this regulation did not make a firm able to reap the better fruits from it unless the independent chairman of audit committee holds good traits as per corporate governance code of 2018. Therefore, regulatory bodies and policy makers in Bangladesh may get important insights from these results that only an independent chairman of the audit committee is not good enough to ensure the accounting transparency of the firm unless they are well competent as per corporate governance code of 2018. Along the line, investors also may find this result important to make their investments safe.

#### **7.4.3 Frequency of Audit Committee Meetings**

It is argued that the more the frequency of audit committee meeting the more the effectiveness of the reviewing, monitoring, and overseeing the business activities for the best interest of the stakeholders. Nevertheless, this study observes that number of audit committee meetings is negatively associated with firm performance, even this results remains same in the instance when audit committee meets at least four times in a year. It implies that committee members are motivated to meet frequently for their personal benefits rather than organizational benefits. It also implies that they just put their signatures on the reports rather than oversee the financial reporting and disclosure process. Therefore, only the frequency of audit committee meeting could not be a symbol of committee's effectiveness rather it is just a symbol of compliance. It makes a question with regard to the qualifications of the audit committee members and their willingness to serve as the best interests of the shareholders. As most of the Bangladeshi listed companies are family centric, it could happen that family directors occupy the majority seats in the audit committee as well as majority seats in the management. As a result, audit committee members and managers, who belong to the same family, do not contradict each other's decisions and actions. That is, family

members of an audit committee do not charge other family members/directors/managers for their ill or under performance or using the company's assets for their personal benefits. One of the another reason behind this result that there was no legislation in Bangladesh with regard to the restriction of appointing the audit committee members from the body of executive directors till the issuance of corporate governance code of 2018. Thus, taking advantages of these loopholes, many listed companies may find coziness in the appointment of executive directors as audit committee members. Consequently, executive directors in this committee might not be sincere and willing to oversee their own operations.

Overall, these findings are not consistent with the arguments of agency theory that more meetings lead to better monitoring, better overseeing and better reviewing of financial activities and better reporting. These findings offer significant insights to policy makers, practitioners, and investors also. In the light of enhancing effective overseeing on financial activities and transparency of financial reporting, Bangladesh Securities Exchange Commissions (BSEC) has emphasized the minimum number of audit committee meetings (four times in a year). But the empirical results indicate that the audit committees who meet at least four times in a year do not outperform the audit committees who do not meet at least four times in a year. This is highly insightful to the policy makers of emerging counties like Bangladesh in order to formulate new policy and provide recommendations for the effectiveness of audit committee. This result provides meaningful insights to the general investors in light of examining the companies' internal capacity of maintaining transparency in monitoring, overseeing, and reviewing the economic activities of firms. This result also contributes to the existing knowledge of the researcher and academia through creating a new path of examining the causes behind the inefficacy of audit committees who meet frequently and identifying the potential solutions for this committee.

#### **7.4.4 Family Control (Family-CEO duality and Family Ownership)**

This study defined the family control by the two alternative measures: (a) Family-CEO duality and (b) Family ownership. In family controlled firms, family members typically hold substantial percentage of ownership that incentivizes them to hold the directorship of the company. Further to this, family controlled firms prefer the

managers from the controlling family to the non-family outside managers; even they have big incentive to fulfill the position of chairman and CEO from the same family members. All these things they do strengthen the family influence over the company. Indeed, there does not remain any factual separation between owners (principals) and managers (agents) in family controlled firms. Thus, agency theory argues that there remain a little or no conflicts between managers and owners i.e. no principal-agent agency problem. Notwithstanding, excessive power and control of family directors and managers could be detrimental to firm performance if this control is utilized to satisfy the family's benefits rather than organization's benefits. In a different view, agency theory argues that there remains an agency conflict between family and non-family owners i.e. principal-principal agency problem in family controlled firms. The findings of this study reveal that both of family-CEO duality (FCEO) and family ownership (FOWN) are negatively associated with accounting-based performance (BEP, ROA) and market-based performance (TBQ) of listed Bangladeshi companies. It implies that family control incurs high costs relative to the benefits of the firms. Overall, these results support the agency theory that family control creates a conflict between family and non-family owners and resultant deterioration of firm performance. Therefore, regulatory bodies and policy makers should be highly watchful to the firms controlled by the family. Investors also may get important insights from this result in order to make their optimal investment decisions.

#### **7.4.5 Interaction between Board Independence and Family Control and its Effects on Firm Performance**

In the context of Bangladesh, this study has firstly attempted to unveil the moderating effect of family control ((family-CEO duality (FCEO) and family ownership (FOWN)) on the relationship between board independence (BIND) and firm performance (BEP, ROA, TBQ). That is, how do the interaction terms (BIND\*FCEO, BIND\*FOWN) influence the performance of listed firms in Bangladesh? Based on the empirical nexus between family dominance and firm performance, it is argued that both of family-CEO duality and family ownership has significant impact on how independent directors influence firm performance. This study finds that board independence (BIND), family-CEO duality (FCEO), and family ownership (FOWN) have significant negative impact on the accounting-based performance (BEP, ROA)

and market-based performance (TBQ). But, when the board independence interacts with family-CEO duality or with family ownership the combined effects of this interaction on performance turn to positive. It implies that independent directors work effectively for the betterment of shareholders' interest when family-CEO duality or substantial family ownership exists in the firm. That is, family-CEO duality and family ownership could not be blamed for the underperformance of the independent directors. Moreover, family owners support the independent directors to make a positive effort for the best interest of their firms. Apart from this, the board of a family controlled firm may not be well diversified in terms of knowledge, talent, experience, and competence. Therefore, family controlled firms appoint independent directors to enhance board's talent, expertise, and social network. Thus these results support the arguments of institutional theory that family controlled firms should appoint independent directors for the sake of business reputation and sustainability. The positive association between interaction terms and firm performance also suggests that independent directors are monitoring and supervising in effective manner that help firm mitigate the conflict between family and non-family owners. From this viewpoint, these results support the argument of the agency theory that family controlled firm should appoint more independent directors to restrain the family members from the tendency of expropriating the firm's assets. This outcome bears significant insights to the policy makers and regulatory bodies, academia, researchers, and investors. OECD (2014) recommends that family centric firms should appoint more independent directors in order to mitigate the conflict between family and non-family owners or between major and minor shareholders. By this way, the significant efforts from independent directors lead a board to restrain the family members from the misappropriation of firms' assets. As most of the listed firms are family centric in Bangladesh, the policy makers and regulatory bodies should highly focus on a policy that could enlarge the true participation of independent directors in family controlled boards. Alternatively, the role of the independent directors in the non-family controlled firms should be brought under the watchful eyes of the regulatory bodies in Bangladesh. From investors' perspectives, the roles of independent directors are considered to be highly fiduciary directors who do not work for their own interest rather they work to protect or safeguard the others' interests. Here, investors find that independent directors in family controlled firms have performed their fiduciaries duties competently, which in turn makes their investments mostly safe. On the other



hand, investors could not obtain an equitable value from the independent directors in non-family controlled firms due to lack of the fulfillment of their fiduciary duties. These findings also provide unique evidence to the academia and researchers that the role of independent directors is not stationary rather it is contingent on other corporate governance mechanisms linked to family domination.

#### **7.4.6 Policy Recommendations**

Based on the findings, this study offers several policy recommendations for the regulatory body in Bangladesh. The suggested recommendations are as follows:

*Firstly*, the board structure of Bangladeshi firms is unitary where executives also served as board members along with non-executive and independent directors. Here, family control is also highly prevalent. In this corporate settings, the supervisory, monitoring and advising role of independent directors are highly desirable to protect minor shareholders' interests. Findings provide evidence that outside independent directors are not able to make significant positive effort to enhance the performance of Bangladeshi firms unless they meet qualifications under the corporate governance code of 2018. From this perspective, BSEC should uphold the current corporate governance code with few modifications. The corporate governance code in many Asian countries like India, China, Thailand, Malaysia, Singapore require that the ratio of independent directors in the board shall be at least one-third (1/3), whereas it is only one-fifth (1/5) in Bangladesh. This ratio may not be adequate to challenge the decisions of inside directors of the board and, thereby, leading its negative influence on performance of firms. Thus, the BSEC may revise this ratio time to time to keep it up in line with international standards.

*Secondly*, the present study documents that both audit committee independence and frequency of audit committee meetings are negatively associated with firm performance. But audit committee independence expectedly tends to make a positive influence on firm performance when the firm begins complying with corporate governance code of 2018. In 2018, BSEC issued a directive that all members of an audit committee shall be non-executive as well as financially literate directors. Hopefully, this attempt will contribute favorably to better firm performance in long

run. Nevertheless, these outcomes suggest that the regulatory body in Bangladesh should revise the corporate governance code focusing on the enlargement of reviewing authority of the audit committee. For example, unlike many Asian countries, there is no governance policy for receiving approval of the audit committee when the company engages in related party transactions. In addition to this reviewing capacity of audit committee, BSEC may restrict the familial relationship within the audit committee members in order to strengthen the proper monitoring and reviewing disposition of the audit committee and for better performance of firms. While doing so, regulatory body may focus on a policy that will require the audit committees to be composed of the entire or the majority numbers of independent directors from financial experts, which is also recommended in many Asian countries. This may restrict the familial relationship within the audit committee members or with any member of board of directors. Accordingly, it will strengthen their unbiased reviewing disposition and resilient overseeing capacity for better performance of firms.

*Thirdly*, on the one hand the regulatory body in Bangladesh issued a corporate governance guideline prohibiting the CEO duality for listed firms to curb the excessive power of CEO. On the other hand, a new dimension of duality called family-CEO duality has become expedient with listed firms. That is, CEO duality led firms preferred switching their leadership structure from CEO-duality to family-CEO duality. Apparently, it may be believed that the firms, those exit from CEO duality, deserve special appreciations for their compliance with this regulation. But in fact the position of board's chairman and CEO of those firms are just transferred to the different individuals of the same family. That is, both chairman and CEO are not the same person but from the same family. Hence, like CEO duality, family-CEO duality may not fully make a board free from the excessive influence of family dominance. As the findings of this study reveal that family-CEO duality has significant negative association with firm performance, the BSEC should devise the corporate governance mechanism by a way that will restrict the family-CEO duality for listed firms in Bangladesh. Otherwise, BSEC should take other effective measures with a given circumstance of family-CEO duality. For example, if family-CEO duality is merged with the controlling family ownership, the CEO will gain excessive power over the board that may increase the inclination of expropriation of firms' assets, thereby pushing the firm performance down. In this circumstance, BSEC may encourage or

require these firms to appoint more independent directors for ensuring the check and balance in the board room and reducing excessive controlling power. Here, independent directors could act as caterpillars in mitigating the adversarial effect of family-CEO duality on firm performance.

*Fourthly*, the outcome of the current study suggests that controlling family shareholdings are significantly and negatively related to firm performance. More specifically, when family directors hold at least 20 percent voting shares or at least 25 percent voting shares or at least 30 percent voting shares firm performance deteriorates. It suggests that controlling family ownership incurs more agency costs relative to its potential benefits. This is parallel to the findings of Pant and Pattanayak (2007) who find that performance of family businesses in India experience entrenchment effects when family ownership exceeds 20 percent. Therefore, taking account of the excessive level of family ownership (i.e. at least 30 percent) and its negative influence on performance, the regulatory body may encourage or require these highly family controlled firms to appoint a qualified independent director as board chairman to ensure checks and balances between family and non-family power in the board room. It is expected that it will work mitigating the entrenchment effect of family control over the firm and enhancing firm performance.

*Fifthly*, the present study suggests that the board independence and the family control individually have negative association with firm performance, but the interaction of board independence and family control has positive relation with firm performance. It implies that independent directors could make a significant positive influence on the performance of those firms where family control exists, which is also observed by the Anderson and Reeb (2004). Alternatively, it is implied that the presence of more independent directors in the less family controlled board reduces the board's effectiveness, hence deteriorating firm performance. Therefore, the regulatory body may revise the governance code requiring more number of independent directors in the more family centric board compared to the less family centric board, which is also recommended by the OECD (2014).

*Finally*, it is robustly observed that family-CEO duality and family ownership are significant determinants of firm performance in Bangladesh. Hence, the regulatory

body should make it obligatory for Bangladeshi listed firms to disclose details of the familial relationship among directors in company's annual report for the sake of the interests of general investors.

The above recommendations bear several implications for the corporate accountability, transparency and better performance of business. *Firstly*, appointing increased number of qualified and financially literate independent directors in the board can play a significant role in enhancing the effective board monitoring and protecting investors' interests. *Secondly*, audit committee's ability to conduct objective and impartial review and surveillance may be improved by making it obligatory that the audit committee shall be composed of non-family as well as qualified independent directors. Moreover, providing the audit committee with more jurisdictions over evaluating and overseeing the related party transactions may prevent any possible self-interest driven activities and possible embezzlement of company resources by controlling shareholders or family directors. *Thirdly*, this study asks for formulating an appropriate policy that will require the listed company to restrict the same family members to occupy the position of board chairman and CEO simultaneously. Such restriction may prevent the role of chairperson and CEO converging into the members of the same family, hence reducing excessive family control over the company and improving firm performance. *Fourthly*, this study suggests the regulatory body to precisely define the dominant family ownership. This attempt might be useful for non-family shareholders to find the space of gaining the strategy to secure the required votes to put the underperforming management under pressure. *Finally*, this study asks for formulating a dynamic policy on the proportion of independent directors that will require the family controlled firms to appoint more number of qualified independent directors in the board as it is observed that family controlled firms perform better when there remain more independent directors.

### 7.5 Suggestions for Further Research

There are some potential areas for further research and improvements which are as follows.

This study finds a negative relationship between board independence and firm performance, but this relationship turns into positive when the firms started complying with the corporate governance code of 2018. As corporate governance code of 2018 clearly defined the qualifications of independent directors and asked all listed firms to appoint qualified independent directors to their boards. However, to get more insights into the relationship between board independence and firm performance, future studies can be carried out investigating the impact of the qualifications of the independent directors on firm performance.

This study employs only two variables in measuring the family control such as family-CEO duality and family ownership. In which, the impact of family-CEO duality on firm performance has not been examined by the extant literatures of corporate governance. Therefore, this type of study can be extended in other developing and developed countries. Similarly, future research can also be undertaken to explore the impact of interaction term between family-CEO duality and family ownership (i.e. multiplying the family-CEO duality by family ownership) on firm performance. Moreover, other definitions of family ownership such as different levels of family shareholdings can be considered in future studies to improve the research knowledge in corporate governance area.

The findings of this study support a view that the net impact of board independence on firm performance is contingent on other governance mechanisms such as family control. Hence, future studies can also be streamlined to explore how the family control interacts with other governance variables (such as, audit committee independence, audit committee meeting, CEO non-duality, and board size) and makes moderating effects on firm performance.

This study finds that audit committee independence is negatively associated with firm performance, where audit committee independence is measured by a single variable which is independent chairman of audit committee. Therefore, future research can be underlined in examining whether the presence of more independent directors in the audit committee can enhance the effectiveness of audit committee.

This study basically uses firm performance as dependent variable. Recently, many corporate governance literatures have focused on the empirical relationship between corporate social responsibility (CSR) and investment efficiency (Benlemlih & Bitar, 2016; Bhandari & Javakhadze, 2017). As family control incurs some costs and benefits to the firm (Anderson & Reeb, 2003), it may influence the firms' tendency to perform better CSR and subsequently affects firms' investment efficiency. Hence, future studies can be delineated to examine whether the family control has significant influence on the relationship between CSR and investment efficiency of the listed companies in Bangladesh.

This study is conducted solely on the listed non-financial firms to explore the causal relationship between corporate governance variables and firm performance. Financial sectors are not included in this study. Thus, empirical investigation on financial firms may further provide improved understanding of the scenario of corporate governance practices in Bangladesh and its subsequent effects on performance.

Like business firms in many Asian countries, family dominance is highly prevalent among the Bangladeshi firms (Farooque et al., 2007b). This study finds that family control is negatively associated with firm performance. Recently, corporate governance code in many developed countries put stress on the board gender diversity. Many empirical studies document that board gender diversity is strategically important for corporations to formulate an effective business strategy (Vairavan & Zhang, 2020) and ensure better monitoring and control (Adams & Ferreira, 2009; Groening, 2019). In USA, Carter et al. (2003) conducted a study on 683 firms and found that the presence of women directors in the board is significantly and positively related to firm performance. However, a board may be well-diversified in terms of gender but may be ill-diversified in terms of family when male and female directors belong to the same family. Thus, future studies should be conducted to examine whether the performance of family controlled firms is positively affected by the board gender diversity. Further to this, future studies may also focus on whether a more-family controlled firm outperforms a less-family controlled firm through board gender diversity.

## **7.6 Conclusions**

This study examines the effect of corporate governance reforms with the aspect of board independence, audit committee independence, and audit committee meeting on the accounting-based performance measures (BEP and ROA) and the market-based performance measure (TBQ). In the area of internal corporate governance mechanisms, this study investigates the impact of family-CEO duality and family ownership on firm performance. Further to this, the moderating role of family-CEO duality and family ownership on the relationship between board independence and firm performance has also been examined. To the author's best knowledgeable understandings, this is the first study in Bangladesh that investigates the relationship between family-CEO duality and firm performance and the moderating role of family-CEO duality and family ownership on the relationship between board independence and firm performance. This study is motivated by this research gap. In addition, it is also motivated by the fact that the capital market regulatory body in Bangladesh firstly issued the corporate governance guidelines in 2006. But, the compliance with these guidelines by the listed companies was more or less inadequate to bring the desired outcomes (Rashid, 2010). Moreover, stock market in Bangladesh experienced a big shock during 2010-2011. Taking account of the lessons from the stock market crash, Bangladesh Securities Exchange Commission (BSEC) revised the corporate governance guidelines in 2012. Nonetheless, in a part of continuous development, the BSEC further revised corporate governance mechanisms and, subsequently, issued corporate governance code of 2018 that came up with many new reforms. But, the empirical evidence on how these reforms influence the firm performance is not empirically well investigated.

The non-financial firms listed in Dhaka Stock Exchange are the subjects of the present study. Based on the objectives of this study, the causal relationship between governance variables and firm performance have been examined by the two-step system GMM regression analysis controlling for any possible endogeneity problem inherently owned by the study variables. The results of GMM regression analysis show that board independence, audit committee independence, frequency of audit committee meeting, family-CEO duality, and family ownership have negative impact on both accounting-based performance (basic earnings power and return on assets)

and market-based performance (proxy of Tobin's Q). But, this negative effect of board independence and audit committee independence turn positive when firms nominate independent directors by strictly adhering to the guidance regarding the necessary qualifications for being an independent director mentioned in the corporate governance code of 2018. Further to this, the outcome of GMM regression also indicate that independent directors positively impact the performance of a firm if the firm is family controlled either by family-CEO duality or by family ownership. That is, the findings robustly support a view that family control can significantly moderate the relationship between board independence and performance of firms. The overall findings reveal that one governance mechanism might interact with another governance mechanism and their interaction term can be a significant factor determining the firm performance, which suggests a contingent effect of governance mechanism on firm performance.

This study has made several useful contributions to the knowledge of corporate governance systems specifically with regard to agency conflict control mechanisms, transparency and accountability enhancing mechanisms, firm's wealth expropriation control mechanisms and, overall, firm performance enhancing mechanisms from the perspective of Bangladesh. For example, firstly, this study documents that only increasing the number of independent directors in the board and only requiring an independent chairman for audit committee cannot be good enough to gain significant monitoring, supervising and fair reviewing roles unless they have the necessary qualifications as per corporate governance code of 2018. Secondly, this study suggests a new board leadership structure for family centric firms that only separating the CEO from the Chairperson of the board (i.e. restricting the CEO duality) could not bring benefits to the non-family shareholders unless the CEO and Chairperson belong to the different families. Thirdly, GMM estimates of this study show that family control in terms of family ownership is negatively associated with firm performance in Bangladesh; whereas Muttakin et al. (2014) found a positive relation between family ownership and firm performance using OLS regression model in the same market. OLS model could not produce unbiased and consistent estimates if there remains an endogeneity problem in the study variables. Fourthly, the findings of this study corroborate the negative relationship between frequency of audit committee meeting and firm performance. Fifthly, this study establishes a moderating role of family



control and contributes to the validation of the contingent linkage between family control, board structural independence and performance of firms. That is, this research provides an initial interaction approach between board independence and family control to improve the board effectiveness. This interaction effect suggests a more comprehensive understanding of corporate governance systems in Bangladesh because earlier studies unnoticed such an intervening variable that could have significant moderating effect on the corporate governance mechanisms. Finally, compared to any other related studies in Bangladesh, this study provides robust results as its estimations are derived from applying the two-step system GMM regression analysis which is highly useful to control for endogeneity problems between governance variables and firm performance variables.

Thus, the findings of this study have significant insights into the existing knowledge of corporate governance for policy makers, regulatory bodies, researchers, academia, corporations, investors, and government as well. In conclusion, despite the theoretical arguments of corporate governance systems and the concepts of Anglo-American governance model introduced by western developed countries, this study suggests that Bangladesh shall not simply and fully imitate the entire framework of corporate governance systems of developed countries. But, the regulatory body should strengthen the corporate governance systems by necessary reforms and innovations in accord with the institutional settings and environment in Bangladesh.

## References

- Abbott, L. J., Parker, S., & Peters, G. F. (2004). Audit committee characteristics and restatements. *Auditing: A Journal of Practice & Theory*, 23(1), 69-87.
- Abbott, L. J., Parker, S., Peters, G. F., & Raghunandan, K. (2003). The association between audit committee characteristics and audit fees. *Auditing: A Journal of Practice & Theory*, 22(2), 17-32.
- Acero I, & Alcalde, N. (2014). Controlling shareholders and the composition of the board: Special focus on family firms. *Review of Managerial Science*. 10, 61-83. doi:10.1007/s11846-014-0140-x
- Adams, R. B., & Ferreira, D. (2007). A theory of friendly boards. *Journal of Finance*, 62(1), 217–250.
- Adams, R. B., & Ferreira, D. (2009). Women in the boardroom and their impact on governance and performance. *Journal of Financial Economics*, 94(2), 291–309. <https://doi.org/10.1016/j.jfineco.2008.10.007>
- Adams, R. B., Hermalin, B. E., & Weisbach, M. S. (2010). The role of boards of directors in corporate governance: A conceptual framework and survey. *Journal of Economic Literature*, 48(1), 58-107.
- Adams, R., Almeida, H., & Ferreira, D. (2009). Understanding the relationship between founder-CEOs and firm performance. *Journal of Empirical Finance*, 16, 136-150.
- Aggarwal R., Erel, I., Stulz, R. M., & Williamson, R. G. (2007). Do U.S. firms have the best corporate governance? A cross country examination of the relation between corporate governance and shareholder wealth. Fisher College of Business working paper no. 2006-03-06.
- Agrawal, A., & Knoeber, C. R. (1996). Firm performance and mechanisms to control agency problems between managers and shareholders. *Journal of Financial and Quantitative Analysis*, 31(3), 377–397.
- Agrawal, A., & Mandelker, G. N. (1990). Large shareholders and the monitoring of managers: The case of antitakeover charter amendments. *Journal of Financial and Quantitative analysis*, 25(2), 143-161.
- Aguilera, R. V. (2005). Corporate governance and director accountability: An institutional comparative perspective. *British journal of management*, 16, S39-S53.
- Aguilera, R. V., & Jackson, G. (2003). The cross-national diversity of corporate governance: Dimensions and determinants. *Academy of management Review*, 28(3), 447-465.

- Aldamen, H., Duncan, K., Kelly, S., McNamara, R., & Nagel, S. (2012). Audit committee characteristics and firm performance during the global financial crisis. *Accounting & Finance*, 52(4), 971-1000.
- Anderson, R. C., & Reeb, D. M. (2003). Founding family ownership and firm performance: Evidence from the S&P 500. *Journal of Finance*, 58(3), 1301-1329.
- Anderson, R. C., & Reeb, D. M. (2004). Board composition: Balancing family influence in S&P 500 firms. *Administrative Science Quarterly*, 49(2), 209-237.
- Anderson, R. C., Mansi, S. A., & Reeb, D. M. (2004). Board characteristics, accounting report integrity, and the cost of debt. *Journal of Accounting and Economics*, 37(3), 315-342. doi:10.1016/j.jacceco.2004.01.004
- Anderson, T., & Hsiao, C. (1982). Formulation and Estimation of Panel Data. *Journal of Econometrics*, 18, 47-82.
- Andres, C. (2008). Large shareholders and firm performance—An empirical examination of founding-family ownership. *Journal of Corporate Finance*, 14(4), 431-445.
- Arellano, M., & Bond, S. (1991). Some tests of specification for panel data: Monte Carlo evidence and an application to employment equations. *The Review of Economic Studies*, 58(2), 277-297.
- Arellano, M., & Bover, O. (1995). Another look at the instrumental variable estimation of error-components models. *Journal of Econometrics*, 68(1), 29-51.
- Arregle, J. L., Hitt, M. A., Sirmon, D. G., & Very, P. (2007). The development of organizational social capital: Attributes of family firms. *Journal of Management Studies*, 44(1), 73-95.
- Asian Corporate Governance Association. (2012). CG Watch 2012. Retrieved from <http://www.acga-asia.org/upload/files/CG%20Watch%202012.pdf>
- Australian Securities Exchange Corporate Governance Council, 2007, Corporate Governance Principles and Recommendations (Australian Securities Exchange, Sydney).
- Bala, S. K. (2019). Corporate governance code 2018 as a catalyst for improving good governance in corporate sector of Bangladesh: A review. *DSE Monthly Review*, 30-37.
- Baliga, B., Moyer, C., & Rao, R. (1996). CEO duality and firm performance: What's the fuss? *Strategic Management Journal*, 17(1), 41-53.
- Baltagi, B. H. (2005). *Econometric Analysis of Panel Data* (3rd ed.). New York, John Wiley & Sons Inc.
- Barclay, M. J., & Holderness, C. G. (1989). Private benefits from control of public corporations. *Journal of Financial Economics*, 25(2), 371-395.

- Baysinger, B. D. & Hoskisson, R. E. (1990). The Composition of Boards of Directors and Strategic Control: Effects on Corporate Strategy. *Academy of Management Review*, 15, 72–87
- Baysinger, B. D., & Butler, H. N. (1985). Corporate governance and the board of directors: Performance effects of changes in board composition. *The Journal of Law, Economics, and Organization*, 1(1), 101-124.
- Bazhair, H. A. (2022). Audit committee attributes and financial performance of Saudi non-financial listed firms. *Cogent Economics & Finance*, 10(1), 2127238.
- Beasley, M. S. (1996). An empirical analysis of the relation between the board of director composition and financial statement fraud. *Accounting Review*, 71(4), 443-465.
- Beasley, M. S., & Salterio, S. E. (2001). The relationship between board characteristics and voluntary improvements in audit committee composition and experience. *Contemporary Accounting Research*, 18(4), 539-570.
- Beasley, M. S., Carcello, J. V., Hermanson, D. R., & Lapides, P. D. (2000). Fraudulent financial reporting: consideration of industry traits and corporate governance mechanisms. *Accounting Horizons*, 14(4), 441–454.
- 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*, 39 (2), 313-335.
- Bedard, J., & Gendron, Y. (2010). Strengthening the financial reporting system: Can audit committees deliver? *International Journal of Auditing*, 14(2), 174-210.
- Ben-Barka, H., & Legendre, F. (2017). Effect of the board of directors and the audit committee on firm performance: a panel data analysis. *Journal of Management & Governance*, 21, 737-755.
- Benlemlih, M., & Bitar, M. (2016). Corporate social responsibility and investment efficiency. *Journal of Business Ethics*, 133(1), 1–25.
- Bennedsen, M., Nielsen, K., Pérez-González, F., & Wolfenzon, D. (2007). The role of families in succession decisions and performance. *Quarterly Journal of Economics*, 122, 647-691.
- Berle, A. A. & Means, G. C. (1932). *The Modern Corporation and Private Property*. Macmillan, edn revised by Berle, A. (1967), Columbia University, Harcourt, Brace and World, New York.
- Bertrand, M., & Schoar, A. (2006). The role of family in family firms. *Journal of Economic Perspectives*, 20(2), 73-96.
- Bethel, J.F., Porter, J., Opler, T., 1998. Block share purchases and corporate performance. *Journal of Finance*, 53(1), 605 – 634.

- Bhagat, S. & Black, B. (2002). The non-correlation between board independence and long-term firm performance. *Journal of Corporation Law*, 27(2), pp. 231–273.
- Bhagat, S., & Bolton, B. (2008). Corporate governance and firm performance. *Journal of Corporate Finance*, 14(3), 257-273.
- Bhandari, A., & Javakhadze, D. (2017). Corporate social responsibility and capital allocation efficiency. *Journal of Corporate Finance*, 43(2), 354–377. <https://doi.org/10.1016/j.jcorpfin.2017.01.012>
- Bhasa, M. P. (2004). Global corporate governance: debates and challenges. *Corporate Governance*, 4(4), 5-17.
- Bhatt, R. R. & Bhattacharya, S. (2017). Family firms, board structure and firm performance. *International Journal of Law and Management*, 59(5), 699-717.
- Blair, M. M., & Stout, L. A. (2001). Director accountability and the mediating role of the corporate board. *Washington University Law Quarterly*, 79, 403.
- Blundell, R., & Bond, S. (1998). Initial conditions and moment restrictions in dynamic panel data models. *Journal of Econometrics*, 87(1), 115-143.
- Bonn, I. (2004). Board structure and firm performance: Evidence from Australia. *Journal of Management and Organization*, 10(1), 14-24.
- Booth, J. & Deli, D. (1996). Factors affecting the number of outside directorships held by CEOs. *Journal of Financial Economics*, 40, 81-104
- Bose, T. K., Uddin, M. R., & Islam, M. W. (2014). Measuring and comparing the efficiency of Dhaka Stock Exchange and Chittagong Stock Exchange. *International Journal of Scientific and Research Publications*, 4(3), 1-14.
- Bourdieu, P. (1986). The forms of capital. In J.G. Richardson (Ed.), *Handbook of theory and research for the sociology of education* (pp. 241–258). Westport, CT: Greenwood Press. (Original work published 1983)
- Boyd, B. K. (1995). CEO duality and firm performance: A contingency model. *Strategic Management Journal*, 16(4), 301-312.
- Brennan, N. (2006). Boards of directors and firm performance: Is there an expectations gap? *Corporate Governance: An International Review*, 14(6), 577-593.
- Brennan, N. and McDermott, M. (2004) Alternative Perspectives on Independence of Directors, *Corporate Governance: An International Review*, 12, 325–336.
- Brick, I. E., & Chidambaran, N. K. (2007). Board meetings, committee structure, and firm performance. SSRN Electronic Journal. DOI:10.2139/ssrn.1108241

- Brickley, J. A., Coles, J. L., & Jarrell, G. (1997). Leadership structure: Separating the CEO and chairman of the board. *Journal of Corporate Finance*, 3(3), 189-220.
- Bronson, S. N., Carcello, J. V., Hollingsworth, C. W., & Neal, T. L. (2009). Are fully independent audit committees really necessary?. *Journal of Accounting and Public Policy*, 28(4), 265-280.
- Burkart, M., Gromb, D., & Panunzi, F. (1997). Large shareholders, monitoring, and the value of the firm. *The Quarterly Journal of Economics*, 112(3), 693-728.
- Burkart, M., Panunzi, F., & Shleifer, A. (2003). Family firms. *Journal of Finance*, 58(5), 2167-2201.
- Byrd, J. W., & Hickman, K. A. (1992). Do outside directors monitor managers?: Evidence from tender offer bids. *Journal of Financial Economics*, 32(2), 195-221.
- Cai, D., Luo, J. H., & Wan, D. F. (2012). Family CEOs: Do they benefit firm performance in China?. *Asia Pacific Journal of Management*, 29(4), 923-947.
- Carcello, J. V., & Neal, T. L. (2000). Audit committee composition and auditor reporting. *The Accounting Review*, 75(4), 453-467.
- Carter, D. A., D'Souza, F., Simkins, B. J., & Simpson, W. G. (2010). The gender and ethnic diversity of US boards and board committees and firm financial performance. *Corporate Governance: An International Review*, 18(5), 396-414.
- Carter, D. A., Simkins, B. J. & Simpson, W. G. (2003). Corporate governance, board diversity and firm value. *The Financial Review*, 38(1), 33 – 53.
- Casson, M. (1999). The economics of the family firm. *Scandinavian Economic History Review*, 47(1), 10-23.
- Cernat, L. (2004). The emerging European corporate governance model: Anglo-Saxon, Continental, or still the century of diversity?. *Journal of European public policy*, 11(1), 147-166.
- Chan, K. C., & Li, J. (2008). Audit committee and firm value: Evidence on outside top executives as expert-independent directors. *Corporate Governance: An International Review*, 16(1), 16-31.
- Chandler, A. (1977). *The Visible Hand: The Managerial Revolution in American Business*. Belknap Press of Harvard University, Cambridge, MA.
- Chen, C. H., & Al-Najjar, B. (2012). The determinants of board size and independence: Evidence from China. *International Business Review*, 21(5), 831-846.
- Chen, X., Cheng, Q., & Dai, Z. (2013). Family ownership and CEO turnovers. *Contemporary Accounting Research*, 30(3), 1166–1190.

- Chen, C. J., & Jaggi, B. (2000). Association between independent non-executive directors, family control and financial disclosures in Hong Kong. *Journal of Accounting and Public Policy*, 19(4-5), 285-310.
- Cheng, S. (2008). Board size and the variability of corporate performance. *Journal of Financial Economics*, 87(1), 157-176.
- Chiang, H., He, L. J., & Yu, H. J. (2022). Family firm's succession and firm's sustainability. *Journal of Family and Economic Issues*, 43(3), 637-646.
- Choi, I. (2001). Unit root tests for panel data. *Journal of International Money and Finance*, 20(2), 249-272. [https://doi.org/10.1016/S0261-5606\(00\)00048-6](https://doi.org/10.1016/S0261-5606(00)00048-6)
- Chrisman, J. J., Chua, J. H., & Litz, R. A. (2004). Comparing the agency costs of family and non-family firms: Conceptual issues and exploratory evidence. *Entrepreneurship Theory and Practice*, 28(4), 335-354.
- Chu, W. (2011). Family ownership and firm performance: Influence of family management, family control, and firm size. *Asia Pacific Journal of Management*, 28(4), 833-851.
- Claessens, S., Djankov, S., & Lang, L. H. (2000). The separation of ownership and control in East Asian corporations. *Journal of Financial Economics*, 58(1-2), 81-112.
- Claessens, S., Djankov, S., Fan, J. P. H., & Lang, L. H. P. (2002). Disentangling the incentive and entrenchment effects large shareholdings. *Journal of Finance*, 57(6), 2741-2772.
- Coles, J. L., Daniel, N. D., & Naveen, L. (2008). Boards: Does one size fit all?. *Journal of Financial Economics*, 87(2), 329-356.
- Coles, J. W., McWilliams, V. B., & Sen, N. (2001). An examination of the relationship of governance mechanisms to performance. *Journal of Management*, 27(1), 23-50.
- Collins, L., & O'Regan, N. (2011). Editorial: The evolving field of family business. *Journal of Family Business Management*, 1(1), 5-13.
- Combs, J. G., Ketchen Jr, D. J., Perryman, A. A., & Donahue, M. S. (2007). The moderating effect of CEO power on the board composition-firm performance relationship. *Journal of Management Studies*, 44(8), 1299-1323.
- Corbetta, G., & Salvato, C. (2004). Self-serving or self-actualizing? Models of man and agency costs in different types of family firms: A commentary on "comparing the agency costs of family and non-family firms: Conceptual issues and exploratory evidence". *Entrepreneurship Theory and Practice*, 28(4), 355-362.
- Cronqvist, H., & Nilsson, M. (2003). Agency costs of controlling minority shareholders. *Journal of Financial and Quantitative Analysis*, 38(4), 695-719.

- Daily, C. M., & Dalton, D. R. (1992). The relationship between governance structure and corporate performance in entrepreneurial firms. *Journal of Business Venturing*, 7(5), 375–386.
- Dalton, D. R., Daily, C. M., Ellstrand, A. E. & Johnson, J. L. (1998). Meta-analytic Reviews of Board Composition, Leadership Structure, and Financial Performance. *Strategic Management Journal*, 19, 269–290.
- Dalton, D. R., Hitt, M. A., Certo, S. T., & Dalton, C. M. (2007). The fundamental agency problem and its mitigation. *Academy of Management Annals*, 1(1), 1-64.
- Dalton, D., Daily, C., Johnson, J., & Ellstrand, A. (1999). Number of directors and financial performance: A meta-analysis. *Academy of Management Journal*, 42, 674-686.
- Das, P. (2019). Dynamic Panel Model. In P. Das (Ed.), *Econometrics in Theory and Practice: Analysis of Cross Section, Time Series and Panel Data with Stata 15.1* (pp. 541-565). Singapore: Springer Singapore.
- 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.
- Davis, J. H., Schoorman, F. D., & Donaldson, L., (1997). Towards a stewardship theory of management. *Academy of Management Review*, 22 (1), 20-47.
- Davis, P. (1983). Realizing the potential of the family business. *Organizational Dynamics*, 12(1), 47-56.
- DeAngelo, H., & DeAngelo, L. (2000). Controlling stockholders and the disciplinary role of corporate payout policy: A study of the Times Mirror Company. *Journal of Financial Economics*, 56(2), 153-207.
- Deephouse, D. L., & Jaskiewicz, P. (2013). Do family firms have better reputations than non-family firms? An integration of socioemotional wealth and social identity theories. *Journal of Management Studies*, 50(3), 337-360.
- Deephouse, D. L., & Suchman, M. (2008). Legitimacy in organizational institutionalism. The Sage Handbook of Organizational Institutionalism, 49, 77.
- DeFond, M. L., Hann, R. N., & Hu, X. (2005). Does the market value financial expertise on audit committees of boards of directors?. *Journal of Accounting Research*, 43(2), 153-193.
- DeJong, A., DeJong D. V., Mertens, G., & Wesley, C. E. (2005). The role of self-regulation in corporate governance: Evidence and implications from the Netherlands. *Journal of Corporate Finance*, 11(3), 473-503.
- Demsetz, H., & Lehn, K. (1985). The structure of corporate ownership: Causes and consequences. *Journal of Political Economy*, 93(6), 1155-1177.



- Demsetz, H., & Villalonga, B. (2001). Ownership structure and corporate performance. *Journal of Corporate Finance*, 7(3), 209-233.
- Denis, D. K. (2001). Twenty-five years of corporate governance research... and counting. *Review of Financial Economics*, 10(3), 191-212. [https://doi.org/10.1016/S1058-3300\(01\)00037-4](https://doi.org/10.1016/S1058-3300(01)00037-4)
- Denis, D. K., & McConnell J. J. (2003). International corporate governance. *Journal of Financial and Quantitative Analysis*, 38(1), 1-36.
- Desai, A., Kroll, M., & Wright, P. (2003). CEO duality, board monitoring, and acquisition performance: A test of competing theories. *Journal of Business Strategies*, 20(2), 137-156.
- Dey, A. (2008). Corporate governance and agency conflicts. *Journal of Accounting Research*, 46(5), 1143-1181.
- Donaldson, L. (1990). The ethereal hand: Organizational economics and management theory. *Academy of Management Review*, 15(3), 369-381.
- Donaldson, L., & Davis, J. H. (1991). Stewardship theory or agency theory: CEO governance and shareholder returns. *Australian Journal of Management*, 16(1), 49-64.
- Donaldson, L., & Davis, J. H. (1994). Boards and company performance-research challenges the conventional wisdom. *Corporate Governance: An International Review*, 2(3), 151-160.
- Dormann, C. F., Elith, J., Bacher, S., Buchmann, C., Carl, G., Carré, G., ... & Lautenbach, S. (2013). Collinearity: a review of methods to deal with it and a simulation study evaluating their performance. *Ecography*, 36(1), 27-46.
- Drymiotis, G. (2007). The monitoring role of insiders. *Journal of Accounting and Economics*, 44(3), 359-377.
- Eisenberg, T., Sundgren, S., & Wells, M. (1998). Larger board size and decreasing firm value in small firms. *Journal of Financial Economics*, 48, 35-54.
- Ellington, E. P., Jones, R. T., & Deane, R. (1996). TQM adoption practices in the family-owned business. *Family Business Review*, 9(1), 5-14.
- Elsayed, K. (2007). Does CEO duality really affect corporate performance?. *Corporate Governance: An International Review*, 15(6), 1203-1214.
- Elsayed, K. (2010). A multi-theory perspective of board leadership structure: what does the Egyptian corporate governance context tell us?. *British Journal of Management*, 21(1), 80-99.
- Elsayed, K. (2011). Board size and corporate performance: The missing role of board leadership structure. *Journal of Management and Governance*, 15(3), 415-446.

- Engelen, E. (2002). Corporate governance, property and democracy: A conceptual critique of shareholder ideology. *Economy and Society*, 31(3), 391-413.
- Erickson, J., Park, Y. W., Reising, J., & Shin, H. H. (2005). Board composition and firm value under concentrated ownership: the Canadian evidence. *Pacific-Basin Finance Journal*, 13(4), 387-410.
- Essen, M., Carney, M., Gedajlovic, E. R., & Heugens, P. P. (2015). How does family control influence firm strategy and performance? A meta-analysis of US publicly listed firms. *Corporate Governance: An International Review*, 23(1), 3-24.
- Ezzamel, M., & Watson, R. (1993). Organizational form, ownership structure and corporate performance: A contextual empirical analysis of UK companies. *British Journal of Management*, 4(3), 161-176.
- Faccio, M., & Lang, L. H. (2002). The ultimate ownership of Western European corporations. *Journal of Financial Economics*, 65(3), 365-395.
- Faccio, M., Lang, L. H., & Young, L. (2001). Dividends and expropriation. *American Economic Review*, 91(1), 54-78.
- Faleye, O. (2007). Does one hat fit all? The case of corporate leadership structure. *Journal of management & governance*, 11, 239-259.
- Fama, E. F. (1980). Agency problems and the theory of the firm. *Journal of Political Economy*, 88(2), 288-307.
- Fama, E. F., & Jensen, M. C. (1983). Separation of ownership and control. *Journal of Law and Economics*, 26, 301-325.
- Fama, E. F., & Jensen, M. C. (1985). Organizational forms and investment decisions. *Journal of Financial Economics*, 14(1), 101-119.
- Fan, J. P., & Wong, T. J. (2002). Corporate ownership structure and the informativeness of accounting earnings in East Asia. *Journal of Accounting and Economics*, 33(3), 401-425.
- Farooque, O.A., Zijl, T. V., Dunstan, K., & Karim, W. (2007a). Ownership structure and corporate performance: Evidence from Bangladesh. *Asia-Pacific Journal of Accounting & Economics*, 14(2), 127-150.
- Farooque, O. A., Zijl, T. V., Dunstan, K. and Karim, W. (2007b). Corporate governance in Bangladesh: Link between ownership and financial performance. *Corporate Governance: An International Review*, 15(6), 1453-1468. <https://doi.org/10.1111/j.1467-8683.2007.00657.x>
- Fernando, A. C. (2011). Corporate Governance: Principles, Policies and Practices, 2/E. Pearson Education India.

- Ferris, S. P., Jagannathan, M., & Pritchard, A. C. (2003). Too busy to mind the business? Monitoring by directors with multiple board appointments. *Journal of Finance*, 58(3), 1087-1111.
- Fields, M. A., & Keys, P. Y. (2003). The emergence of corporate governance from Wall St. to Main St.: outside directors, board diversity and earnings management, and managerial incentive to bear risk. *The Financial Review*, 38(1), 1-24.
- Filatotchev, I., Lien, Y. C., & Piesse, J. (2005). Corporate governance and performance in publicly listed, family-controlled firms: Evidence from Taiwan. *Asia Pacific Journal of Management*, 22(3), 257-283.
- Finkelstein, S., & Hambrick, D. C. (1996). Strategic leadership: Top executives and their effects on organizations. Minneapolis, MN: West Publishing Company.
- Forbes, D., & Milliken, F. (1999). Cognition and corporate governance: Understanding boards of directors as strategic decision making groups. *Academy of Management Review*, 24, 489- 505.
- Francis, J., Schipper, K., & Vincent, L. (2005). Earnings and dividend informativeness when cash flow rights are separated from voting rights. *Journal of Accounting and Economics*, 39(2), 329-360.
- Frank, M.Z. (1988). An intertemporal model of industrial exit. *Quarterly Journal of Economics*, 103, 333-344.
- Franks, J. R., Mayer, C., & Renneboog, L. (2001). Who disciplines management in poorly performing companies? *Journal of Financial Intermediation*, 10(4), 209-248.
- García-Ramos, R., & García-Olalla, M. (2011). Board characteristics and firm performance in public founder-and nonfounder-led family businesses. *Journal of Family Business Strategy*, 2(4), 220-231.
- García-Ramos, R., Díaz-Díaz, B., & García-Olalla, M. (2017). Independent directors, large shareholders and firm performance: the generational stage of family businesses and the socioemotional wealth approach. *Review of Managerial Science*, 11(1), 119-156.
- Gersick, K. E., Davis, J. A., Hampton, M. M., & Lansberg, I. (1997). Generation to generation: Life cycles of the family business. Boston, MA: Harvard Business School Press.
- Giovannini, R. (2010). Corporate governance, family ownership and performance. *Journal of Management and Governance*, 14(2), 145-166.
- Goel, S., Mazzola, P., Phan, P. H., Pieper, T. M., & Zachary, R. K. (2012). Strategy, ownership, governance, and socio-psychological perspectives on family businesses from around the world. *Journal of Family Business Strategy*, 3(2), 54-65.

- Gómez-Mejía, L. R., Haynes, K. T., Núñez-Nickel, M., Jacobson, K. J., & Moyano-Fuentes, J. (2007). Socioemotional wealth and business risks in family-controlled firms: Evidence from Spanish olive oil mills. *Administrative Science Quarterly*, 52(1), 106-137.
- Gomez-Mejia, L. R., Nunez-Nickel, M., & Gutierrez, I. (2001). The role of family ties in agency contracts. *Academy of Management Journal*, 44(1), 81-95.
- González, M., Guzmán, A., Pombo, C., and Trujillo, M. (2014). Family involvement and dividend policy in closely held firms. *Family Business Review*, 27(4), 365–385.
- Górriz, C. G., & Fumás, V. S. (1996). Ownership structure and firm performance: Some empirical evidence from Spain. *Managerial and Decision Economics*, 17(6), 575-586.
- Groening, C. (2019). When do investors value board gender diversity?. *The International Journal of Business in Society*, 19(1), 60-79. <https://doi.org/10.1108/CG-01-2018-0012>
- Guluma, T. F. (2021). The impact of corporate governance measures on firm performance: the influences of managerial overconfidence. *Future Business Journal*, 7(1), 1-18.
- Gursoy, G., & Aydogan, K. (2002). Equity ownership structure, risk taking, and performance: an empirical investigation in Turkish listed companies. *Emerging Markets Finance & Trade*, 38(6), 6-25.
- Haijian, L., & Heng, W. (2006). Reconstruction of IDs system. *Journal of China Industrial Economy*, 4.
- Hair, J. F., Anderson, R.E. Jr., Tatham, R.L., & Black, W.C. (2009). *Multivariate data analysis* (7th ed.), Upper Saddle River, New Jersey: Prentice Hall.
- Hall, B. J., & Liebman, J. B. (1998). Are CEOs really paid like bureaucrats?. *The Quarterly Journal of Economics*, 113(3), 653-691.
- Han, K. C., & Suk, D. Y. (1998). The effect of ownership structure on firm performance: Additional evidence. *Review of Financial Economics*, 7(2), 143-55.
- Haniffa, R., & Hudaib, M. (2006). Corporate governance structure and performance of Malaysian listed companies. *Journal of Business Finance & Accounting*, 33(7-8), 1034-1062.
- Hansen, G. S., & Wernerfelt, B. (1989). Determinants of firm performance: The relative importance of economic and organizational factors. *Strategic Management Journal*, 10(5), 399-411.
- Hasan, A., Aly, D., & Hussainey, K. (2022). Corporate governance and financial reporting quality: a comparative study. *Corporate Governance: The International Journal of Business in Society*, 22(6), 1308-1326.

- Hasan, M. S., Rahman, R. A., & Hossain, S. Z. (2014). Monitoring family performance: Family ownership and corporate governance structure in Bangladesh. *Procedia - Social and Behavioral Sciences*, 145, 103-109.
- Hassan, Y., Hijazi, R., & Naser, K. (2017). Does audit committee substitute or complement other corporate governance mechanisms: Evidence from an emerging economy. *Managerial Auditing Journal*, 32(7), 658-681.
- He, X. J., Sun, S.W., Zhu, H. J., & Liu, J. J. (2014). Securities background independent directors, information superiority and brokerage shareholders. *Management World*, 3, 148–162.
- Hegde, S., Seth, R., & Vishwanatha, S. R. (2020). Ownership concentration and stock returns: Evidence from family firms in India. *Pacific-Basin Finance Journal*, 61, 101330.
- Hermalin, B. E., & Weisbach, M. S. (1991). The effects of board composition and direct incentives on firm performance. *Financial Management*, 20(4), 101-12.
- Hermalin, B. E., & Weisbach, M. S. (2003). Board of directors as an endogenously determined institution: A survey of the economic literature. *Economic Policy Review*, 9(1), 7-26.
- Heugens, P. P., Van Essen, M., & (Hans) van Oosterhout, J. (2009). Meta-analyzing ownership concentration and firm performance in Asia: Towards a more fine-grained understanding. *Asia Pacific Journal of Management*, 26, 481-512.
- Hillman, A. & Dalziel, T. (2003). Boards of directors and firm performance: Integrating agency and resource dependence perspectives. *Academy of Management Review*, 28(3), 383–396.
- Hillman, A. J., Withers, M. C., & Collins, B. J. (2009). Resource dependence theory: A review. *Journal of Management*, 35(6), 1404-1427.
- Hoitash, U., & Hoitash, R. (2009). Conflicting objectives within the board: evidence from overlapping audit and compensation committee members. *Group Decision and Negotiation*, 18, 57-73.
- Holderness, C. G., & Sheehan, D. P. (1988). The role of majority shareholders in publicly held corporations. *Journal of Financial Economics*, 20, 317–346.
- Hooy, C. W., & Tee, C. M. (2009). Directors' Pay Performance: A Study on Malaysian Government Linked Companies. Centre for Policy Research and International Studies, Working Paper No. 110/09, Universiti Sains Malaysia.
- Hossain, D. M., & Khan, A. R. (2006). Audit committee: A summary of the findings of some existing literature. *The Cost and Management*, 34(5), 40-57

- Hossain, M., Prevost, A. K., & Rao, R. P. (2001). Corporate governance in New Zealand: The effect of the 1993 Companies Act on the relation between board composition and firm performance. *Pacific-Basin Finance Journal*, 9, 119–145
- Hsu, W., & Petchsakulwong, P. (2010). The impact of corporate governance on the efficiency performance of the Thai non-life insurance industry. *The Geneva Papers on Risk and Insurance Issues and Practice*, 35(1), S28-S49. DOI: 10.1057/gpp.2010.30
- Im, K. S., Pesaran, M. H., & Shin, Y. (2003). Testing for unit roots in heterogeneous panels. *Journal of Econometrics*, 115(1), 53-74. [https://doi.org/10.1016/S0304-4076\(03\)00092-7](https://doi.org/10.1016/S0304-4076(03)00092-7).
- International Auditing and Assurance Standards Board (IAASB). 2012. Professional Skepticism in an Audit of Financial Statements. IAASB Staff Questions and Answers. New York, NY: International Federation of Accountants.
- Isakov, D., & Weisskopf, J. P. (2014). Are founding families special blockholders? An investigation of controlling shareholder influence on firm performance. *Journal of Banking & Finance*, 41, 1-16.
- Jackling, B., & Johl, S. (2009). Board structure and firm performance: Evidence from India's top companies. *Corporate Governance: An International Review*, 17(4), 492-509.
- Jaggi, B. & Leung, S. (2007). Impact of family dominance on monitoring of earnings management by audit committees: Evidence from Hong Kong. *Journal of International Accounting, Auditing and Taxation*, 16, 27–50
- Jaggi, B., Leung, S., & Gul, F. (2009). Family control, board independence and earnings management: Evidence based on Hong Kong firms. *Journal of Accounting and Public Policy*, 28(4), 281-300.
- James, Jr. H. S. (1999). Owner as manager, extended horizons and the family firm. *International Journal of Economics of Business*, 6(1), 41–55.
- Jara-Bertin, M., López-Iturriaga, F. J., & López-de-Foronda, Ó. (2008). The contest to the control in European family firms: How other shareholders affect firm value. *Corporate Governance: An International Review*, 16(3), 146-159.
- Jayaraman, J., Khorana, A., Nelling, E., & Covin, J. (2000). CEO founder and firm financial performance. *Strategic Management Journal*, 21, 1215-1224.
- Jeffrey, R. C., Lisa, M. G., Genesh K., & Arnold, M. W. (2011). The impact on auditor judgments of CEO influence on audit committee independence. *Auditing: A Journal of Practice & Theory*, 30(4), 129-147.
- Jennings, M. M. (2002). A primer on Enron: Lessons from a perfect storm of financial reporting, corporate governance and ethical culture failures. *California Western Law Review*, 39, 163.

- Jennings, P. D. (1994). Viewing macro HRM from without: Political and institutional perspectives. *Research in Personnel and Human Resources Management*, 12, 1-40.
- Jensen, M. C. (1986). Agency costs of free cash flow, corporate finance and takeovers. *American Economic Review*, 76(2), 323-329.
- Jensen, M. C. (1993). The modern industrial revolution, exit, and the failure of internal control systems. *Journal of Finance*, 48(3), 831-880.
- Jensen, M. C. (2004). The agency costs of overvalued equity and the current state of corporate finance. *European Financial Management*, 10, 549-565.
- Jensen, M., & Meckling, W. (1976). Theory of the firm: Managerial behaviour, agency cost, and ownership structure. *Journal of Financial Economics*, 3(5), 305-360.
- Jiang, Y., & Peng, M. W. (2011). Are family ownership and control in large firms good, bad, or irrelevant?. *Asia Pacific Journal of Management*, 28(1), 15-39.
- Johannisson, B., & Huse, M. (2000). Recruiting outside board members in the small family business: An ideological challenge. *Entrepreneurship & Regional Development*, 12(4), 353-378.
- Johari, N., Saleh, M. N., Jaffar, R., & Hassan, M. S. (2008). The influence of board independence, competency, and ownership on discretionary accruals in Malaysia. *International Journal of Economics and Management*, 2(2), 281-306.
- Johnson, J. L., Daily, C. M., & Ellstrand, A. E. (1996). Boards of directors: A review and research agenda. *Journal of Management*, 22(3), 409-438.
- Jones, C. D., Makri, M., & Gomez-Mejia, L. R. (2008). Affiliate directors and perceived risk bearing in publicly traded, family-controlled firms: The case of diversification. *Entrepreneurship Theory and Practice*, 32(6), 1007-1026.
- Jones, T. M., & Goldberg, L. D. (1982). Governing the large corporation: More arguments for public directors. *Academy of Management Review*, 7(4), 603-611.
- Kalbers, L. P., & Fogarty, T. J. (1998). Organizational and economic explanations of audit committee oversight. *Journal of Managerial Issues*, 10(2), 129-150.
- Kappes, I., & Schmid, T. (2013). The effect of family governance on corporate time horizons. *Corporate Governance: An International Review*, 21(6), 547-566.
- Kepner, E. (1983). The family and the firm: A coevolutionary perspective. *Organizational Dynamics*, 12(1), 57-70.
- Kesner, I. F., Victor, B., & Lamont, B. T. (1986). Board composition and the commission of illegal acts: An investigation of Fortune 500 companies. *Academy of Management Journal*, 29(4), 789-799.

- Kets-de-Vries, M. F. R. (1993). The dynamics of family controlled firm: The good and the bad news. *Organizational Dynamics*, 21(3), 59–71.
- Khanchel, I. (2007). Corporate governance: Measurement and determinant analysis. *Managerial Auditing Journal*, 22(8), 740-760.
- Kiel, G. C., & Nicholson, G. J. (2003). Board composition and corporate performance: How the Australian experience informs contrasting theories of corporate governance. *Corporate Governance: An International Review*, 11(3), 189-205.
- Klein, A. (1998). Firm performance and board committee structure. *The Journal of Law and Economics*, 41(1), 275-304.
- Klein, A. (2002). Economic determinants of audit committee independence. *The Accounting Review*, 77(2), 435-452.
- Klein, P., Shapiro, D., & Young, J. (2005). Corporate governance, family ownership and firm value: the Canadian evidence. *Corporate Governance: An International Review*, 13(6), 769-784.
- Kor, Y. Y., & Misangyi, V. F. (2008). Outside directors' industry-specific experience and firms' liability of newness. *Strategic Management Journal*, 29(12), 1345-1355.
- Kowalewski, M., Talavera, O., and Stetsyuk, I. (2010). Influence of family involvement in management and ownership on firm performance: Evidence from Poland. *Family Business Review*, 23(1), 45– 59.
- Kuo, Y. P. & Hung, J. H. (2012). Family control and investment–cash flow sensitivity: Moderating effects of excess control rights and board independence. *Corporate Governance: An International Review*, 20, 253–266.
- Kyereboah-Coleman, A. (2008). Corporate Governance and Firm Performance in Africa: A Dynamic Panel Data Analysis. *Studies in Economics and Econometrics*, 32(2), 1-24, DOI: 10.1080/10800379.2008.12106447
- Lane, S., Astrachan, J., Keyt, A., & McMillan, K. (2006). Guidelines for family business boards of directors. *Family Business Review*, 19(2), 147-167.
- Leblanc, R. W. (2004). What's wrong with corporate governance: A note. *Corporate Governance: An International Review*, 12(4), 436–441.
- Lee, J. (2006). Family firm performance: Further evidence. *Family Business Review*, 19(2), 103-114.
- Lehn, K. M., Patro, S., & Zhao, M. (2009). Determinants of the Size and Composition of US Corporate Boards: 1935-2000. *Financial Management*, 38(4), 747 – 780.



- Lemmon, M. L., & Lins, K. V. (2003). Ownership structure, corporate governance, and firm value: Evidence from the East Asian financial crisis. *Journal of Finance*, 58(4), 1445–1468.
- Leung, S., Richardson, G., & Jaggi, B. (2014). Corporate board and board committee independence, firm performance, and family ownership concentration: An analysis based on Hong Kong firms. *Journal of Contemporary Accounting & Economics*, 10, 16–31
- Levin, A., Lin, C. F., & Chu, C. S. J. (2002). Unit root tests in panel data: asymptotic and finite-sample properties. *Journal of Econometrics*, 108(1), 1-24. [https://doi.org/10.1016/S0304-4076\(01\)00098-7](https://doi.org/10.1016/S0304-4076(01)00098-7).
- Li, I.-C., & Hung, J.-H. (2013). The moderating effects of family control on the relation between managerial overconfidence and earnings management. *Review of Pacific Basin Financial Markets and Policies*, 16(2), 1-33.
- Lin, Y. (2005). Corporate governance, leadership structure and CEO compensation: Evidence from Taiwan. *Corporate Governance: An International Review*, 13(6), 824-835.
- Linck, J. S., Netter, J. M., & Yang, T. (2008). The determinants of board structure. *Journal of Financial Economics*, 87(2), 308-328. <https://doi.org/10.1016/j.jfineco.2007.03.004>
- Liu, L., Qu, W., & Haman, J. (2018). Product market competition, state-ownership, corporate governance and firm performance. *Asian Review of Accounting*, 26(1), 62-83.
- Liu, Y., Valenti, A., & Chen, J. (2016). Corporate governance and information transparency in Taiwan's public firms: The moderating effect of family ownership. *Journal of Management & Organization*, 22(5), 662-679.
- Lubatkin, M. H., Durand, R., & Ling, Y. (2007). The missing lens in family firm governance theory: A self-other typology of parental altruism. *Journal of Business Research*, 60(10), 1022-1029.
- Luoma, P., & Goodstein, J. (1999). Stakeholders and corporate boards: Institutional influences on board composition and structure. *Academy of Management Journal*, 42(5), 553-563.
- Mahadeo, J. D., Soobaroyen, T., & Hanuman, V. O. (2012). Board composition and financial performance: Uncovering the effects of diversity in an emerging economy. *Journal of Business Ethics*, 105, 375-388.
- Mak, Y. T., & Kusnadi, Y. (2005). Size really matters: Further evidence on the negative relationship between board size and firm value. *Pacific-Basin Finance Journal*, 13(3), 301-318.
- Mak, Y. T., & Li, Y. (2001). Determinants of corporate ownership and board structure: Evidence from Singapore. *Journal of Corporate Finance*, 7(3), 235-256.

- Mallin, C. (2007). *Corporate Governance*: Oxford University Press.
- Mashayekhi, B., & Bazaz, M. S. (2008). Corporate governance and firm performance in Iran. *Journal of Contemporary Accounting & Economics*, 4(2), 156-172.
- Masulis, R. W., & Mobbs, S. (2011). Are all inside directors the same? Evidence from the external directorship market. *Journal of Finance*, 66(3), 823–872.
- Maury, B. (2006). Family ownership and firm performance: Empirical evidence from Western European corporations. *Journal of Corporate Finance*, 12(2), 321-341.
- McCabe, M., & Nowak, M. (2008). The independent director on the board of company directors. *Managerial Auditing Journal*, 23(6), 545-566.
- McConaughy, D. L. (2000). Family CEO vs. nonfamily CEOs in the family controlled firm: An examination of the level and sensitivity of pay to performance. *Family Business Review*, 13(2), 121–31
- McConaughy, D. L., & Phillips, G. M. (1999). Founders versus descendants: The profitability, efficiency, growth characteristics and financing in large, public, founding-family-controlled firms. *Family Business Review*, 12(2), 123-131.
- McConaughy, D. L., Walker, M. C., Henderson Jr, G. V., & Mishra, C. S. (1998). Founding family controlled firms: Efficiency and value. *Review of Financial Economics*, 7(1), 1-19.
- McGregor, D. (1960). Theory X and theory Y. *Organization Theory*, 358(374), 5.
- McMullen, D.A. & Raghunandan, K. (1996), “Enhancing audit committee effectiveness”, *Journal of Accountancy*, 182(2), 79-81.
- Mehran, H. (1995). Executive compensation structure, ownership, and firm performance. *Journal of Financial Economics*, 38(2), 163-184.
- Menon, K., & Williams, J. D. (1994). The use of audit committees for monitoring. *Journal of Accounting and Public Policy*, 13(2), 121-139.
- De Miguel, A., Pindado, J., & De La Torre, C. (2005). How do entrenchment and expropriation phenomena affect control mechanisms?. *Corporate Governance: An International Review*, 13(4), 505-516.
- Miller, D., & Le Breton-Miller, I. (2005). *Managing for the long run: Lessons in competitive advantage from great family businesses*. MA: Harvard Business School Press. ISBN: 1-59139-415-5.
- Miller, D., & Le Breton-Miller, I. (2006). Family governance and firm performance: Agency, stewardship, and capabilities. *Family Business Review*, 19(1), 73-87.

- Miller, D., Le Breton-Miller, I., Lester, R. H., & Cannella Jr, A. A. (2007). Are family firms really superior performers?. *Journal of Corporate Finance*, 13(5), 829-858.
- Miller, D., Lee, J., Chang, S., & Le Breton-Miller, I. (2009). Filling the institutional void: The social behavior and performance of family vs non-family technology firms in emerging markets. *Journal of International Business Studies*, 40, 802-817.
- Miller, D., Minichilli, A., & Corbetta, G. (2013). Is family leadership always beneficial? *Strategic Management Journal*, 34(5), 553-571.
- Mishra, C. S., Randøy, T., & Jenssen, J. I. (2001). The effect of founding family influence on firm value and corporate governance. *Journal of International Financial Management & Accounting*, 12(3), 235-259.
- Mobbs, S. (2013). CEOs under fire: The effects of competition from inside directors on forced CEO turnover and CEO compensation. *Journal of Financial and Quantitative Analysis*, 48(3), 669–698.
- Mohiuddin, M. (2012). An empirical investigation into audit committee practices in Bangladesh: The case of companies listed on The Dhaka Stock Exchange, Cardiff University, UK.
- Morck, R., & Yeung, B. (2003). Agency problems in large family business groups. *Entrepreneurship Theory and Practice*, 27(4), 367-382.
- Morck, R., Shleifer, A., & Vishny, R. W. (1988). Management ownership and market valuation: An empirical analysis. *Journal of Financial Economics*, 20(1-2), 293-315.
- Morck, R., Wolfenzon, D., & Yeung, B. (2005). Corporate governance, economic entrenchment, and growth. *Journal of Economic Literature*, 43(3), 655-720.
- Morck, R.K., Stangeland, D.A. & Yeung, B. (2000). Inherited wealth, corporate control, and economic growth: the Canadian disease?', in R.K. Morck (ed.), *Concentrated Corporate Ownership*, Chicago: University of Chicago Press, pp. 319–71.
- Müller, V. (2014). Do corporate board compensation characteristics influence the financial performance of listed companies? *Procedia-Social and Behavioural Sciences*, 109, 983-988.
- Murray, A. I. (1989). Top management group heterogeneity and firm performance. *Strategic Management Journal*, 10(S1), 125-141.
- Murtuza, H. M. (2016, June 19). 'Sponsor-directors' minimum shareholding: BSEC order remains on paper since Nov. 2011. The New Age. <http://archive.newagebd.net/236312/sponsor-directors-minimum-shareholding/>

- Muttakin, M. D., Khan, A. and Subramaniam, N. (2014). Family firms, family generation and performance: Evidence from an emerging economy. *Journal of Accounting in Emerging Economies*, 4(2), 197 – 219.
- Nash, J. M. (1995). Boards of privately held companies: A guide. National Association of Corporate Directors Governance Series: Private Company Boards.
- Nath, S. D., Islam, S., & Saha, A. K. (2015). Corporate board structure and firm performance: The context of pharmaceutical industry in Bangladesh. *International Journal of Economics and Finance*, 7(7), 106-115.
- Newman, H. A., & Mozes, H. A. (1999). Does the composition of the compensation committee influence CEO compensation practices?. *Financial Management*, 28(3), 41-53.
- Nicholson, G. J., & Kiel, G. C. (2007). Can directors impact performance? A case-based test of three theories of corporate governance. *Corporate Governance: An international Review*, 15(4), 585-608.
- Nickell, S. (1981). Biases in Dynamic Models with Fixed Effects, *Econometrica*, 49, 1417-1426.
- OECD. (2014). Corporate governance in Asia: Asian roundtable on corporate governance. Retrieved from <https://www.oecd.org/corporate/48806174.pdf>
- Pant, M., & Pattanayak, M. (2007). Insider ownership and firm value: Evidence from Indian corporate sector. *Economic and Political Weekly*, 42(16), 1459-1467.
- Park, Y. W. and Shin, H. H. (2003) Board Composition and Earnings Management in Canada, *Journal of Corporate Finance*, 185, 1–27.
- Pastoriza, D., & Ariño, M. A. (2008, June). When agents become stewards: Introducing learning in the stewardship theory. In 1st IESE Conference, "Humanizing the Firm & Management Profession", Barcelona, IESE Business School.
- Pearce, J. A., & Zahra, S. A. (1992). Board composition from a strategic contingency perspective. *Journal of Management Studies*, 29(4), 411-438.
- Peng, M. W. (2004). Outside directors and firm performance during institutional transitions. *Strategic Management Journal*, 25(5), 453-471.
- Peng, M. W., & Jiang, Y. (2010). Institutions behind family ownership and control in large firms. *Journal of Management Studies*, 47(2), 253-273.
- Pérez-González, G. (2006). Inherited Control and Firm Performance. *The American Economic Review*, 96(5), 1559-1588.
- Pfeffer, J. (1972). Size and composition of corporate boards of directors: The organization and its environment. *Administrative Science Quarterly*, 17(2), 218-228.

- Pfeffer, J., & Salancik, G. R. (1978). The external control of organizations: A resource dependence perspective. New York: Harper & Row.
- Pieper, T. M., Klein, S. B., & Jaskiewicz, P. (2008). The impact of goal alignment on board existence and top management team composition: Evidence from family-influenced businesses. *Journal of Small Business Management*, 46(3), 372-394.
- Pierce, J. L., Kostova, T., & Dirks, K. T. (2001). Toward a theory of psychological ownership in organizations. *Academy of Management Review*, 26(2), 298-310.
- Piesse, J., Filatotchev, I., & Lien, Y. C. (2007). Corporate governance in family-controlled firms in Taiwan. *International Review of Economics*, 54, 176-193.
- Pindado, J., & Requejo, I. (2015). Family business performance from a governance perspective: A review of empirical research. *International Journal of Management Reviews*, 17(3), 279-311.
- Pindado, J., Requejo, I., & de la Torre, C. (2008). Does family ownership impact positively on firm value? Empirical evidence from Western Europe. *Documento de Trabajo*, 2(08), 1-34.
- Poutziouris, P., Savva, C. S., and Hadjielias, E. (2015). Family involvement and firm performance: Evidence from UK listed firms. *Journal of Family Business Strategy*, 6, 14-32.
- Poza, E. (2007). Family Business. New York: Thomson South-Western/Cengage.
- Prowse, S. D. (1996). Corporate finance in international perspective: Legal and regulatory influences on financial system development. Economic Review, *Federal Reserve Bank of Dallas*, 3, 2-15.
- Pucheta-Martinez, M. C., & Gallego-Alvarez, I. (2019). Do board characteristics drive firm performance? An international perspective. *Review of Managerial Science*, Retrieved from <https://doi.org/10.1007/s11846-019-00330-x>.
- Putnam, R. (2000). Bowling alone: The collapse and revival of American community. New York: Simon & Schuster.
- Raelin, J. D., & Bondy, K. (2013). Putting the good back in good corporate governance: The presence and problems of double-layered agency theory. *Corporate Governance: An International Review*, 21(5), 420-435.
- Raheja, C. (2005). The Interaction of Insiders and Outsiders in Monitoring: A Theory of Corporate Boards. *Journal of Financial and Quantitative Analysis*, 40, 283-306.
- Rahman, R. A., & Ali, F. H. M. (2006). Board, audit committee, culture and earnings management: Malaysian evidence. *Managerial Auditing Journal*, 21(7), 783-804.

- Rahmat, M. M., Iskandar, T. M., & Saleh, N. M. (2009). Audit committee characteristics in financially distressed and non-distressed companies. *Managerial Auditing Journal*, 24(7), 624-638.
- Rajan, R. & Zingales, L. (1995). What do we know about capital structure? Some evidence from international data. *The Journal of Finance*, 50(5), 1421-1460.
- Ramos, R.G., Diazl, B.D., & Olalla, R.G. (2017). Independent directors, large shareholders and firm performance: the generational stage of family businesses and the socioemotional wealth approach. *Review of Managerial Science*, 11, 119–156.
- Randøy, T., & Goel, S. (2003). Ownership structure, founder leadership, and performance in Norwegian SMEs: Implications for financing entrepreneurial opportunities. *Journal of Business Venturing*, 18(5), 619-637.
- Randøy, T., Dibrell, C. and Craig, J. B. (2009). Founding family leadership and industry profitability. *Small Business Economics*, 32(4), 397-407.
- Rashid, A. (2009, July). Board composition, board leadership structure and firm performance: Evidence from Bangladesh. The Accounting and Finance Association of Australia and New Zealand (AFAANZ) Annual Conference, Adelaide, South Australia.
- Rashid, A. (2013). CEO duality and agency cost: Evidence from Bangladesh. *Journal of Management & Governance*, 17, 989–1008.
- Rashid, A. (2018). Board independence and firm performance: Evidence from Bangladesh. *Future Business Journal*, 4, 34-49.
- Rashid, A., & Lodh, S. C. (2008). The influence of ownership structures and board practices on corporate social disclosures in Bangladesh. *Corporate Governance in Less Developed and Emerging Economies*, 8, 211-237. [https://doi.org/10.1016/S1479-3563\(08\)08008-0](https://doi.org/10.1016/S1479-3563(08)08008-0)
- Rashid, A., & Lodh, S. C. (2008). The influence of ownership structures and board practices on corporate social disclosures in Bangladesh. *Research in Accounting in Emerging Economies*, 8, 211-237.
- Rashid, A., Zoysa, A.D., Lodh, S. C., & Rudkin, K., (2010). Board composition and firm performance: Evidence from Bangladesh. *Australasian Accounting Business and Finance Journal*, 4(10), 76-95.
- Rebeiz, K. S., & Salameh, Z. (2006). Relationship between governance structure and financial performance in construction. *Journal of Management in Engineering*, 22(1), 20-26.
- Reddy, K., Locke, S., & Scrimgeour, F. (2010). The efficacy of principle-based corporate governance practices and firm financial performance: An empirical investigation. *International Journal of Managerial Finance*, 6(3), 190-219.

- Rediker, K. J., & Seth, A. (1995). Boards of directors and substitution effects of alternative governance mechanisms. *Strategic Management Journal*, 16(2), 85-99.
- Rhoades, D. L., Rechner, P. L., & Sundaramurthy, C. (2000). Board composition and financial performance: A meta-analysis of the influence of outside directors. *Journal of Managerial Issues*, 12(1)76-91.
- Roodman, D. (2009). How to do xtabond2: An introduction to difference and system GMM in Stata. *The Stata Journal*, 9(1), 86-136.
- Rose, C. (2005). The composition of semi-two-tier corporate boards and firm performance. *Corporate Governance: An International Review*, 13(5), 691-701.
- Rosenstein, S., & Wyatt, J. G. (1990). Outside directors, board independence, and shareholder wealth. *Journal of Financial Economics*, 26, 175-191.
- Sacristán-Navarro, M., Gómez-Ansón, S. & Cabeza-García, L. (2011). Family ownership and control, the presence of other large shareholders, and firm performance: Further evidence. *Family Business Review*, 24(1), 71–93.
- Saleh, N. M., Iskandar, T. M., & Rahmat, M. M. (2007). Audit committee characteristics and earnings management: Evidence from Malaysia. *Asian Review of Accounting*, 15(2), 147-163.
- Schepker, D. J., & Oh, W. Y. (2013). Complementary or substitutive effects? Corporate governance mechanisms and poison pill repeal. *Journal of Management*, 39(7), 1729-1759.
- Schulze, W. S., Lubatkin, M. H., & Dino, R. N. (2003). Toward a theory of agency and altruism in family firms. *Journal of Business Venturing*, 18(4), 473-490.
- Schulze, W.S., Lubatkin, M.H., Dino, R.N. (2002). Altruism, agency, and the competitiveness of family firms. *Managerial and Decision Economics*, 23(4-5), 247-259.
- Sciascia, S., & Mazzola, P. (2008). Family involvement in ownership and management: Exploring nonlinear effects on performance. *Family Business Review*, 21(4), 331-345.
- Sengur, D.E. (2011). Do corporate governance index companies outperform others? : Evidence from Turkey. *International Journal of Business and Social Science*, 2(14), 254-260.
- Setia-Atmaja, L., Tanewski, G. A., & Skully, M. (2009). The role of dividends, debt and board structure in the governance of family controlled firms. *Journal of Business Finance & Accounting*, 36(7-8), 863-898.
- Sharma, V., Naiker, V., & Lee, B. (2009). Determinants of audit committee meeting frequency: Evidence from a voluntary governance system. *Accounting Horizons*, 23(3), 245-263.

- Sheikh, N. A., Wang, Z., & Khan, S. (2013). The impact of internal attributes of corporate governance on firm performance: Evidence from Pakistan. *International Journal of Commerce and Management*, 23(1), 38-55.
- Shleifer, A., & Vishny, R. W. (1986). Large shareholders and corporate control. *Journal of Political Economy*, 94(3, Part 1), 461-488.
- Shleifer, A., & Vishny, R. W. (1997). A survey of corporate governance. *The Journal of Finance*, 52(2), 737-783.
- Sil Kang, W., Kilgore, A., & Wright, S. (2011). The effectiveness of audit committees for low- and mid-cap firms. *Managerial Auditing Journal*, 26(7), 623-650.
- Singh, M., & Davidson III, W. N. (2003). Agency costs, ownership structure and corporate governance mechanisms. *Journal of Banking & Finance*, 27(5), 793-816.
- Sirmon, D. G., & Hitt, M. A. (2003). Managing resources: Linking unique resources, management, and wealth creation in family firms. *Entrepreneurship Theory and Practice*, 27(4), 339-358.
- Slovin, M. B., & Sushka, M. E. (1993). Ownership concentration, corporate control activity, and firm value: Evidence from the death of inside blockholders. *The Journal of Finance*, 48(4), 1293-1321.
- Smith, A. (1776). *The Wealth of Nation*, revised edn., George J. Stigler (ed.), University of Chicago Press, Chicago.
- Smith, B. F., & Amoako-Adu, B. (1999). Management succession and financial performance of family controlled firms. *Journal of Corporate Finance*, 5(4), 341-368.
- Sobhan, F., & Werner, W. (2003). A comparative analysis of corporate governance in South Asia: Charting a roadmap for Bangladesh. Dhaka: Bangladesh Enterprise Institute. Available at. <http://bei-bd.org/wp-content/uploads/2015/03/whc4f4bb192762221.pdf>
- Sraer, D., & Thesmar, D. (2007). Performance and behavior of family firms: Evidence from the French stock market. *Journal of the European Economic Association*, 5(4), 709-751.
- Stulz, R. (1988). Managerial control of voting rights: Financing policies and the market for corporate control. *Journal of Financial Economics*, 20, 25-54.
- Subrahmanyam, V., Rangan, N., & Rosenstein, S. (1997). The role of outside directors in bank acquisitions. *Financial Management*, 26(3), 23-36.
- Sultana, N. (2015). Audit committee characteristics and accounting conservatism. *International Journal of Auditing*, 19(2), 88-102.



- TheGlobalEconomy.com (2022). Bangladesh Economic Indicators. Retrieved from <https://www.theglobaleconomy.com/Bangladesh/>
- Thomsen, S., Pedersen, T., & Kvist, H. K. (2006). Blockholder ownership: Effects on firm value in market and control based governance systems. *Journal of Corporate Finance*, 12(2), 246-269.
- Tian, J. J., & Lau, C. (2001). Board composition, leadership structure and performance of chinese shareholding companies. *Asia Pacific Journal of Management*, 18, 245-263.
- Tricker, B., & Tricker, R. I. (2015). Corporate Governance: Principles, Policies, and Practices. Oxford University Press, USA.
- Tricker, R. (1994). International corporate governance. Singapore: Prentice-Hall.
- Tsao, S. M., & Lien, W. H. (2013). Family management and internationalization: The impact on firm performance and innovation. *Management International Review*, 53, 189-213
- Uddin, S., & Choudhury, J. (2008). Rationality, traditionalism and the state of corporate governance mechanisms: Illustrations from a less-developed country. *Accounting, Auditing & Accountability Journal*, 21(7), 1026-1051.
- Uddin, S., & Hopper, T. (2003). Accounting for privatization in Bangladesh: Testing World Bank claims. *Critical Perspectives on Accounting*, 14(7), 739-774.
- Vafeas, N. (1999). Board Meeting Frequency and Firm Performance. *Journal of Financial Economics*, 53, 113-142.
- Vairavan, A. and Zhang, G. P. (2020). Does a diverse board matter? A mediation analysis of board racial diversity and firm performance. *Corporate Governance*, 20(7), 1223-1241. <https://doi.org/10.1108/CG-02-2020-0081>
- Van den Berghe, L. A. A., & Baelden, T. (2005). The complex relation between director independence and board effectiveness. *Corporate Governance: The International Journal of Business in Society*, 5(5), 58-83.
- Van den Berghe, L. A., & Carchon, S. (2002). Corporate governance practices in Flemish family businesses. *Corporate Governance: An International Review*, 10(3), 225-245.
- Van-Slyke, D. M. (2007). Agents or stewards: Using theory to understand the government-nonprofit social service contracting relationship. *Journal of Public Administration Research and Theory*, 17(2), 157-187.
- Villalonga, B. & Amit, R. (2006). How do family ownership, control and management affect firm value?. *Journal of Financial Economics*, 80(2), 385-417.

- Villalonga, B., & Amit, R. (2020). Family ownership. *Oxford Review of Economic Policy*, 36(2), 241-257.
- Volpin, P. F. (2002). Governance with poor investor protection: Evidence from top executive turnover in Italy. *Journal of Financial Economics*, 64(1), 61-90.
- Voordeckers, W., Gils, V. A., & Van den Heuvel, J. (2007). Board composition in small and medium-sized family firms. *Journal of Small Business Management*, 45(1), 137–215
- Wallison, P. J. (2006). All the rage: will independent directors produce good corporate governance?. American Enterprise Institute for Public Policy Research. [https://www.aei.org/wp-content/uploads/2011/10/20060106\\_19454FSOJan\\_06\\_g.pdf?x91208](https://www.aei.org/wp-content/uploads/2011/10/20060106_19454FSOJan_06_g.pdf?x91208)
- Wang, D. (2006). Founding Family Ownership and Earnings Quality, *Journal of Accounting Research*, 44(3), 619-656.
- Wang, Y., Jin, P., & Yang, C. (2016). Relations between the professional backgrounds of independent directors in state-owned enterprises and corporate performance. *International Review of Economics & Finance*, 42, 404-411. <https://doi.org/10.1016/j.iref.2015.10.011>
- Wang, Y., Zhao, Z., & Wei, X. (2006). Does independence of the board affect firm performance. *Economic Research Journal*, 5, 62-73.
- Ward, A. J., Brown, J. A., & Rodriguez, D. (2009). Governance bundles, firm performance, and the substitutability and complementarity of governance mechanisms. *Corporate Governance: An International Review*, 17(5), 646-660.
- Ward, J. L. (1991). Creating effective boards for private enterprises. San Francisco, CA: Jossey-Bass Publishers.
- Wasserman, N. (2006). Stewards, agents, and the founder discount: Executive compensation in new ventures. *Academy of Management Journal*, 49(5), 960-976.
- Wenerfelt, B., & Montgomery, C. A. (1988). Tobin's q and the importance of focus in firm performance. *American Economic Review*, 78, 246–250.
- Westhead, P., Cowling, M., & Howorth, C. (2001). The development of family companies: Management and ownership imperatives. *Family Business Review*, 14(4), 369-385
- Westphal, J. D. (1999). Collaboration in the boardroom: Behavioral and performance consequences of CEO-board social ties. *Academy of Management Journal*, 42(1), 7-24.
- Wintoki, M. B., Linck, J. S., & Netter, J. M. (2012). Endogeneity and the dynamics of internal corporate governance. *Journal of Financial Economics*, 105(3), 581-606.

- Wooldridge, J. M. (2010). *Introductory Econometrics: A Modern Approach* (2nd ed.)
- World Bank (1999), *Corporate governance: A framework for implementation- overview*, The World Bank, Washington D.C.
- World Bank (2012). *Malaysia - Report on the observance of standards and codes (ROSC): accounting and auditing* (English). Washington, DC: World Bank. Retrieved from <http://documents.worldbank.org/curated/en/703091468088742465/Malaysia-Report-on-the-Observance-of-Standards-and-Codes-ROSC-accounting-and-auditing>
- Xie, B., Davidson III, W. N., & DaDalt, P. J. (2003). Earnings management and corporate governance: the role of the board and the audit committee. *Journal of Corporate Finance*, 9(3), 295-316.
- Yadav, I. S., Pahi, D., & Gangakhedkar, R. (2022). The nexus between firm size, growth and profitability: new panel data evidence from Asia–Pacific markets. *European Journal of Management and Business Economics*, 31(1), 115-140.
- Yermack, D. (1996). Higher market valuation of companies with a small board of directors. *Journal of Financial Economics*, 40(2), 185–211.
- Yermack, D. (2004). Remuneration, retention, and reputation incentives for outside directors. *Journal of Finance*, 59, 2281–2308.
- Young, M. N., Peng, M. W., Ahlstrom, D., Bruton, G. D., & Jiang, Y. (2008). Corporate governance in emerging economies: A review of the principal–principal perspective. *Journal of Management Studies*, 45(1), 196-220.
- Zábojníková, G. (2016). The audit committee characteristics and firm performance: Evidence from the UK. Retrieved from <https://repositorio-aberto.up.pt/bitstream/10216/84439/2/138239.pdf>
- Zahra, S. A., & Pearce, J. A. (1989). Boards of directors and corporate financial performance: A review and integrative model. *Journal of Management*, 15(2), 291-334.

## Appendix A: Corporate Governance Guidelines (2006) in Bangladesh

### NOTIFICATION

**Dated the 20<sup>th</sup> February, 2006**

**No. SEC/CMRRCD/2006-158/Admin/02-08:** Whereas, the Securities and Exchange Commission (herein after referred to as the ‘Commission’) deems it fit that the consent already accorded by the Commission, or deemed to have been accorded by it, or to be accorded by it in future, to the issue of capital by the companies listed with any stock exchange in Bangladesh, should be subject to certain further conditions, on ‘comply or explain’ basis, in order to enhance corporate governance in the interest of investors and the capital market;

Now, therefore, in exercise of the power conferred by section 2CC of the Securities and Exchange Ordinance, 1969 (XVII of 1969), the Commission hereby supersedes its earlier Order No. SEC/CMRRCD/2006-158/Admin/02-06 dated the 9<sup>th</sup> January, 2006 and imposes the following further conditions to the consent already accorded by it, or deemed to have been accorded by it, or to be accorded by it in future, to the issue of capital by the companies listed with any stock exchange in Bangladesh:

Provided, however, that these conditions are imposed on ‘comply or explain’ basis. The companies listed with any stock exchange in Bangladesh should comply with these conditions or shall explain the reasons for non-compliance in accordance with the condition No.5.

#### **The Conditions :**

#### **1.00 BOARD OF DIRECTORS:**

##### **1.1. Board’s Size**

The number of the board members of the company should not be less than 5 (five) and more than 20 (twenty):

Provided, however, that in the case of banks and non-bank financial institutions, insurance companies and statutory bodies for which separate primary regulators like Bangladesh Bank, Department of Insurance etc. exist, the Board of those companies should be constituted as may be prescribed by such primary regulators in so far as those prescriptions are not inconsistent with the aforesaid condition.

##### **1.2. Independent Directors**

All companies should encourage effective representation of independent directors on their Board of Directors so that the Board, as a group, includes core competencies considered relevant in the context of each company. For this purpose, the companies should comply with the following:-

- (i) At least one tenth (1/10) of the total number of the company’s board of directors, subject to a minimum of one, should be independent directors.

**Explanation:** For the purpose of this clause “independent director” means a director who does not hold any share in the company or who holds less than one percent (1%) shares of the total paid-up shares of the company, who is not connected with the company’s promoters or directors or shareholder who holds one percent (1%) or more than one percent (1%) shares of the total paid-up shares of the company on the basis of family relationship; who does not have any other relationship, whether pecuniary or otherwise, with the company or its subsidiary/associated companies, who is not a member, director or officer of any stock exchange, and who is not a shareholder, director or officer of any member of stock exchange or an intermediary of the capital market.

- (ii) The independent director(s) should be appointed by the elected directors.

### 1.3. **Chairman of the Board and Chief Executive**

The positions of the Chairman of the Board and the Chief Executive Officer of the companies should preferably be filled by different individuals. The Chairman of the company should be elected from among the directors of the company. The Board of Directors should clearly define respective roles and responsibilities of the Chairman and the Chief Executive Officer.

### 1.4 **The Directors’ Report to Shareholders**

The directors of the companies should include following additional statements in the Directors’ Report prepared under section 184 of the Companies Act, 1994:-

- (a) The financial statements prepared by the management of the issuer company present fairly its state of affairs, the result of its operations, cash flows and changes in equity.
- (b) Proper books of account of the issuer company have been maintained.
- (c) Appropriate accounting policies have been consistently applied in preparation of the financial statements and that the accounting estimates are based on reasonable and prudent judgment.
- (d) International Accounting Standards, as applicable in Bangladesh, have been followed in preparation of the financial statements and any departure therefrom has been adequately disclosed.
- (e) The system of internal control is sound in design and has been effectively implemented and monitored.
- (f) There are no significant doubts upon the issuer company’s ability to continue as a going concern. If the issuer company is not considered to be a going concern, the fact along with reasons thereof should be disclosed.
- (g) Significant deviations from last year in operating results of the issuer company should be highlighted and reasons thereof should be explained.

- (h) Key operating and financial data of at least preceding three years should be summarised.
- (i) If the issuer company has not declared dividend (cash or stock) for the year, the reasons thereof should be given.
- (j) The number of Board meetings held during the year and attendance by each director should be disclosed.
- (k) The pattern of shareholding should be reported to disclose the aggregate number of shares (along with name wise details where stated below) held by:-
  - (i) Parent/Subsidiary/Associated companies and other related parties (name wise details);
  - (ii) Directors, Chief Executive Officer, Company Secretary, Chief Financial Officer, Head of Internal Audit and their spouses and minor children (name wise details);
  - (iii) Executives; and
  - (iv) Shareholders holding ten percent (10%) or more voting interest in the company (name wise details).

**Explanation:** For the purpose of this clause, the expression “executive” means top five salaried employees of the company, other than the Directors, Chief Executive Officer, Company Secretary, Chief Financial Officer and Head of Internal Audit.

## 2.00 **CHIEF FINANCIAL OFFICER (CFO), HEAD OF INTERNAL AUDIT AND COMPANY SECRETARY:**

### 2.1. **Appointment**

The company should appoint a Chief Financial Officer (CFO), a Head of Internal Audit and a Company Secretary. The Board of Directors should clearly define respective roles, responsibilities and duties of the CFO, the Head of Internal Audit and the Company Secretary.

### 2.2. **Requirement to Attend Board Meetings**

The CFO and the Company Secretary of the companies should attend meetings of the Board of Directors, provided that the CFO and/or the Company Secretary should not attend such part of a meeting of the Board of Directors which involves consideration of an agenda item relating to the CFO and/or the Company Secretary.

## 3.00 **AUDIT COMMITTEE:**

The company should have an Audit Committee as a sub-committee of the Board of Directors.

The Audit Committee should assist the Board of Directors in ensuring that the financial statements reflect true and fair view of the state of affairs of the

company and in ensuring a good monitoring system within the business.

The Audit Committee shall be responsible to the Board of Directors. The duties of the Audit Committee should be clearly set forth in writing.

### 3.1. **Constitution of Audit Committee**

- (i) The Audit Committee should be composed of at least 3 (three) members.
- (ii) The Board of Directors should appoint members of the Audit Committee who should be directors of the company and should include at least one independent director.
- (iii) When the term of service of the Committee members expires or there is any circumstance causing any Committee member to be unable to hold office until expiration of the term of service, thus making the number of the Committee members to be lower than the prescribed number of 3 (three) persons, the Board of Directors should appoint the new Committee member(s) to fill up the vacancy(ies) immediately or not later than 1 (one) month from the date of vacancy(ies) in the Committee to ensure continuity of the performance of work of the Audit Committee.

### 3.2. **Chairman of the Audit Committee**

- (i) The Board of Directors should select 1 (one) member of the Audit Committee to be Chairman of the Audit Committee.
- (ii) The Chairman of the audit committee should have a professional qualification or knowledge, understanding and experience in accounting or finance.

### 3.3. **Reporting of the Audit Committee**

#### 3.3.1. **Reporting to the Board of Directors**

- (i) The Audit Committee should report on its activities to the Board of Directors.
- (ii) The Audit Committee should immediately report to the Board of Directors on the following findings, if any:-
  - (a) Report on conflicts of interests;
  - (b) Suspected or presumed fraud or irregularity or material defect in the internal control system;
  - (c) Suspected infringement of laws, including securities related laws, rules and regulations; and
  - (d) Any other matter which should be disclosed to the Board of Directors immediately.

#### 3.3.2. **Reporting to the Authorities**

If the Audit Committee has reported to the Board of Directors about anything which has material impact on the financial condition and results of

operation and has discussed with the Board of Directors and the management that any rectification is necessary and if the Audit Committee finds that such rectification has been unreasonably ignored, the Audit Committee should report such finding to the Commission, upon reporting of such matters to the Board of Directors for three times or completion of a period of 9 (nine) months from the date of first reporting to the Board of Directors, whichever is earlier.

### **3.4. Reporting to the Shareholders and General Investors**

Report on activities carried out by the Audit Committee, including any report made to the Board of Directors under condition 3.3.1 (ii) above during the year, should be signed by the Chairman of the Audit Committee and disclosed in the annual report of the issuer company.

### **4.00. EXTERNAL/STATUTORY AUDITORS**

The issuer company should not engage its external/statutory auditors to perform the following services of the company; namely:-

- (i) Appraisal or valuation services or fairness opinions;
- (ii) Financial information systems design and implementation;
- (iii) Book-keeping or other services related to the accounting records or financial statements;
- (iv) Broker-dealer services;
- (v) Actuarial services;
- (vi) Internal audit services; and
- (vii) Any other service that the Audit Committee determines.

### **5.00 REPORTING THE COMPLIANCE IN THE DIRECTOR'S REPORT**

The directors of the company shall state, in accordance with the annexure attached, in the directors' report whether the company has complied with these conditions.



**Appendix B: Corporate Governance Guidelines (2012) in Bangladesh****NOTIFICATION**

07 August 2012

No. SEC/CMRRCD/2006-158/134/Admin/44: Whereas, the Securities and Exchange Commission (herein after referred to as the “Commission”) deems it fit that the consent already accorded by the Commission, or deemed to have been accorded by it, or to be accorded by it in future, to the issue of capital by the companies listed with any stock exchange in Bangladesh, shall be subject to certain further conditions, on 'comply' basis, in order to enhance corporate governance in the interest of investors and the capital market;

Now, therefore, in exercise of the power conferred by section 2CC of the Securities and Exchange Ordinance, 1969 (XVII of 1969), the Commission hereby supersedes its earlier Notification No. SEC/CMRRCD/2006-158/Admin/02-08 dated 20<sup>th</sup> February, 2006 and imposes the following further conditions to the consent already accorded by it, or deemed to have been accorded by it, or to be accorded by it in future, to the issue of capital by the companies listed with any stock exchange in Bangladesh:

Provided, however, that these conditions are imposed on 'comply' basis. The companies listed with any stock exchange in Bangladesh shall comply with these conditions in accordance with the condition No. 7.

**The Conditions:****1. BOARD OF DIRECTORS:****1.1 Board's Size**

The number of the board members of the company shall not be less than 5 (five) and more than 20 (twenty):

Provided, however, that in case of banks and non-bank financial institutions, insurance companies and statutory bodies for which separate primary regulators like Bangladesh Bank, Insurance Development and Regulatory Authority, etc. exist, the Boards of those companies shall be constituted as may be prescribed by such primary regulators in so far as those prescriptions are not inconsistent with the aforesaid condition.

## 1.2 Independent Directors

All companies shall encourage effective representation of independent directors on their Board of Directors so that the Board, as a group, includes core competencies considered relevant in the context of each company. For this purpose, the companies shall comply with the following:-

- (i) At least one fifth (1/5) of the total number of directors in the company's board shall be independent directors.
- (ii) For the purpose of this clause "independent director" means a director-
  - a) who either does not hold any share in the company or holds less than one percent (1%) shares of the total paid-up shares of the company;
  - b) who is not a sponsor of the company and is not connected with the company's any sponsor or director or shareholder who holds one percent (1%) or more shares of the total paid-up shares of the company on the basis of family relationship. His/her family members also should not hold above mentioned shares in the company:

Provided that spouse, son, daughter, father, mother, brother, sister, son-in-law and daughter-in-law shall be considered as family members;

- c) who does not have any other relationship, whether pecuniary or otherwise, with the company or its subsidiary/associated companies;
- d) who is not a member, director or officer of any stock exchange;
- e) who is not a shareholder, director or officer of any member of stock exchange or an intermediary of the capital market;
- f) who is not a partner or an executive or was not a partner or an executive during the preceding 3 (three) years of the concerned company's statutory audit firm;
- g) who shall not be an independent director in more than 3 (three) listed companies;
- h) who has not been convicted by a court of competent jurisdiction as a defaulter in payment of any loan to a bank or a Non-Bank Financial Institution (NBFI);
- i) who has not been convicted for a criminal offence involving moral turpitude.

- (iii) the independent director(s) shall be appointed by the board of directors and approved by the shareholders in the Annual General Meeting (AGM).
- (iv) the post of independent director(s) can not remain vacant for more than 90 (ninety) days.
- (v) the Board shall lay down a code of conduct of all Board members and annual compliance of the code to be recorded.
- (vi) the tenure of office of an independent director shall be for a period of 3 (three) years, which may be extended for 1 (one) term only.

### **1.3 Qualification of Independent Director (ID)**

- (i) Independent Director shall be a knowledgeable individual with integrity who is able to ensure compliance with financial, regulatory and corporate laws and can make meaningful contribution to business.
- (ii) The person should be a Business Leader/Corporate Leader/Bureaucrat/University Teacher with Economics or Business Studies or Law background/Professionals like Chartered Accountants, Cost & Management Accountants, Chartered Secretaries. The independent director must have at least 12 (twelve) years of corporate management/professional experiences.
- (iii) In special cases the above qualifications may be relaxed subject to prior approval of the Commission.

### **1.4 Chairman of the Board and Chief Executive Officer**

The positions of the Chairman of the Board and the Chief Executive Officer of the companies shall be filled by different individuals. The Chairman of the company shall be elected from among the directors of the company. The Board of Directors shall clearly define respective roles and responsibilities of the Chairman and the Chief Executive Officer.

### **1.5 The Directors' Report to Shareholders**

The directors of the companies shall include the following additional statements in the Directors' Report prepared under section 184 of the Companies Act, 1994 (Act No. XVIII of 1994):-

- (i) Industry outlook and possible future developments in the industry.
- (ii) Segment-wise or product-wise performance.
- (iii) Risks and concerns.
- (iv) A discussion on Cost of Goods sold, Gross Profit Margin and Net Profit Margin.

- (v) Discussion on continuity of any Extra-Ordinary gain or loss.
- (vi) Basis for related party transactions- a statement of all related party transactions should be disclosed in the annual report.
- (vii) Utilization of proceeds from public issues, rights issues and/or through any others instruments.
- (viii) An explanation if the financial results deteriorate after the company goes for Initial Public Offering (IPO), Repeat Public Offering (RPO), Rights Offer, Direct Listing, etc.
- (ix) If significant variance occurs between Quarterly Financial performance and Annual Financial Statements the management shall explain about the variance on their Annual Report.
- (x) Remuneration to directors including independent directors.
- (xi) The financial statements prepared by the management of the issuer company present fairly its state of affairs, the result of its operations, cash flows and changes in equity.
- (xii) Proper books of account of the issuer company have been maintained.
- (xiii) Appropriate accounting policies have been consistently applied in preparation of the financial statements and that the accounting estimates are based on reasonable and prudent judgment.
- (xiv) International Accounting Standards (IAS)/Bangladesh Accounting Standards (BAS)/International Financial Reporting Standards (IFRS)/Bangladesh Financial Reporting Standards (BFRS), as applicable in Bangladesh, have been followed in preparation of the financial statements and any departure there-from has been adequately disclosed.
- (xv) The system of internal control is sound in design and has been effectively implemented and monitored.
- (xvi) There are no significant doubts upon the issuer company's ability to continue as a going concern. If the issuer company is not considered to be a going concern, the fact along with reasons thereof should be disclosed.
- (xvii) Significant deviations from the last year's operating results of the issuer company shall be highlighted and the reasons thereof should be explained.
- (xviii) Key operating and financial data of at least preceding 5 (five) years shall be summarized.
- (xix) If the issuer company has not declared dividend (cash or stock) for the year, the reasons thereof shall be given.
- (xx) The number of Board meetings held during the year and attendance by each director shall be disclosed.
- (xxi) The pattern of shareholding shall be reported to disclose the aggregate number of shares (along with name wise details where stated below) held by:-

- a) Parent/Subsidiary/Associated Companies and other related parties (name wise details);
- b) Directors, Chief Executive Officer, Company Secretary, Chief Financial Officer, Head of Internal Audit and their spouses and minor children (name wise details);
- c) Executives;
- d) Shareholders holding ten percent (10%) or more voting interest in the company (name wise details).

**Explanation:** For the purpose of this clause, the expression “executive” means top 5 (five) salaried employees of the company, other than the Directors, Chief Executive Officer, Company Secretary, Chief Financial Officer and Head of Internal Audit.

(xxii) In case of the appointment/re-appointment of a director the company shall disclose the following information to the shareholders:-

- a) a brief resume of the director;
- b) nature of his/her expertise in specific functional areas;
- c) names of companies in which the person also holds the directorship and the membership of committees of the board.

## 2. CHIEF FINANCIAL OFFICER (CFO), HEAD OF INTERNAL AUDIT AND COMPANY SECRETARY (CS):

### 2.1 Appointment

The company shall appoint a Chief Financial Officer (CFO), a Head of Internal Audit (Internal Control and Compliance) and a Company Secretary (CS). The Board of Directors should clearly define respective roles, responsibilities and duties of the CFO, the Head of Internal Audit and the CS.

### 2.2 Requirement to attend the Board Meetings

The CFO and the Company Secretary of the companies shall attend the meetings of the Board of Directors, provided that the CFO and/or the Company Secretary shall not attend such part of a meeting of the Board of Directors which involves consideration of an agenda item relating to their personal matters.

## 3. AUDIT COMMITTEE:

- (i) The company shall have an Audit Committee as a sub-committee of the Board of Directors.

- (ii) The Audit Committee shall assist the Board of Directors in ensuring that the financial statements reflect true and fair view of the state of affairs of the company and in ensuring a good monitoring system within the business.
- (iii) The Audit Committee shall be responsible to the Board of Directors. The duties of the Audit Committee shall be clearly set forth in writing.

### 3.1 Constitution of the Audit Committee

- (i) The Audit Committee shall be composed of at least 3 (three) members.
- (ii) The Board of Directors shall appoint members of the Audit Committee who shall be directors of the company and shall include at least 1 (one) independent director.
- (iii) All members of the audit committee should be “financially literate” and at least 1 (one) member shall have accounting or related financial management experience.

**Explanation:** The term “financially literate” means the ability to read and understand the financial statements like Balance Sheet, Income Statement and Cash Flow Statement and a person will be considered to have accounting or related financial management expertise if (s)he possesses professional qualification or Accounting/ Finance graduate with at least 12 (twelve) years of corporate management/professional experiences.

- (iv) When the term of service of the Committee members expires or there is any circumstance causing any Committee member to be unable to hold office until expiration of the term of service, thus making the number of the Committee members to be lower than the prescribed number of 3 (three) persons, the Board of Directors shall appoint the new Committee member(s) to fill up the vacancy(ies) immediately or not later than 1 (one) month from the date of vacancy(ies) in the Committee to ensure continuity of the performance of work of the Audit Committee.
- (v) The company secretary shall act as the secretary of the Committee.
- (vi) The quorum of the Audit Committee meeting shall not constitute without at least 1 (one) independent director.

### 3.2 Chairman of the Audit Committee

- (i) The Board of Directors shall select 1 (one) member of the Audit Committee to be

Chairman of the Audit Committee, who shall be an independent director.

- (ii) Chairman of the audit committee shall remain present in the Annual General Meeting (AGM).

### **3.3 Role of Audit Committee**

Role of audit committee shall include the following:-

- (i) Oversee the financial reporting process.
- (ii) Monitor choice of accounting policies and principles.
- (iii) Monitor Internal Control Risk management process.
- (iv) Oversee hiring and performance of external auditors.
- (v) Review along with the management, the annual financial statements before submission to the board for approval.
- (vi) Review along with the management, the quarterly and half yearly financial statements before submission to the board for approval.
- (vii) Review the adequacy of internal audit function.
- (viii) Review statement of significant related party transactions submitted by the management.
- (ix) Review Management Letters/ Letter of Internal Control weakness issued by statutory auditors.
- (x) When money is raised through Initial Public Offering (IPO)/Repeat Public Offering (RPO)/Rights Issue the company shall disclose to the Audit Committee about the uses/applications of funds by major category (capital expenditure, sales and marketing expenses, working capital, etc), on a quarterly basis, as a part of their quarterly declaration of financial results. Further, on an annual basis, the company shall prepare a statement of funds utilized for the purposes other than those stated in the offer document/prospectus.

### **3.4 Reporting of the Audit Committee**

#### **3.4.1 Reporting to the Board of Directors**

- (i) The Audit Committee shall report on its activities to the Board of Directors.
- (ii) The Audit Committee shall immediately report to the Board of Directors on the following findings, if any:-

- a) report on conflicts of interests;
- b) suspected or presumed fraud or irregularity or material defect in the internal control system;
- c) suspected infringement of laws, including securities related laws, rules and regulations;
- d) any other matter which shall be disclosed to the Board of Directors immediately.

### **3.4.2 Reporting to the Authorities**

If the Audit Committee has reported to the Board of Directors about anything which has material impact on the financial condition and results of operation and has discussed with the Board of Directors and the management that any rectification is necessary and if the Audit Committee finds that such rectification has been unreasonably ignored, the Audit Committee shall report such finding to the Commission, upon reporting of such matters to the Board of Directors for three times or completion of a period of 6 (six) months from the date of first reporting to the Board of Directors, whichever is earlier.

### **3.5 Reporting to the Shareholders and General Investors**

Report on activities carried out by the Audit Committee, including any report made to the Board of Directors under condition 3.4.1 (ii) above during the year, shall be signed by the Chairman of the Audit Committee and disclosed in the annual report of the issuer company.

## **4. EXTERNAL/STATUTORY AUDITORS:**

The issuer company should not engage its external/statutory auditors to perform the following services of the company; namely:-

- (i) Appraisal or valuation services or fairness opinions.
- (ii) Financial information systems design and implementation.
- (iii) Book-keeping or other services related to the accounting records or financial statements.
- (iv) Broker-dealer services.
- (v) Actuarial services.
- (vi) Internal audit services.
- (vii) Any other service that the Audit Committee determines.



- (viii) No partner or employees of the external audit firms shall possess any share of the company they audit at least during the tenure of their audit assignment of that company.

## **5. SUBSIDIARY COMPANY:**

- (i) Provisions relating to the composition of the Board of Directors of the holding company shall be made applicable to the composition of the Board of Directors of the subsidiary company.
- (ii) At least 1 (one) independent director on the Board of Directors of the holding company shall be a director on the Board of Directors of the subsidiary company.
- (iii) The minutes of the Board meeting of the subsidiary company shall be placed for review at the following Board meeting of the holding company.
- (iv) The minutes of the respective Board meeting of the holding company shall state that they have reviewed the affairs of the subsidiary company also.
- (v) The Audit Committee of the holding company shall also review the financial statements, in particular the investments made by the subsidiary company.

## **6. DUTIES OF CHIEF EXECUTIVE OFFICER (CEO) AND CHIEF FINANCIAL OFFICER (CFO):**

The CEO and CFO shall certify to the Board that:-

- (i) They have reviewed financial statements for the year and that to the best of their knowledge and belief:
  - a) these statements do not contain any materially untrue statement or omit any material fact or contain statements that might be misleading;
  - b) these statements together present a true and fair view of the company's affairs and are in compliance with existing accounting standards and applicable laws.
- (ii) There are, to the best of knowledge and belief, no transactions entered into by the company during the year which are fraudulent, illegal or violation of the company's code of conduct.

## 7. REPORTING AND COMPLIANCE OF CORPORATE GOVERNANCE:

- (i) The company shall obtain a certificate from a practicing Professional Accountant/Secretary (Chartered Accountant/Cost and Management Accountant/Chartered Secretary) regarding compliance of conditions of Corporate Governance Guidelines of the Commission and shall send the same to the shareholders along with the Annual Report on a yearly basis.

**Explanation:** Chartered Accountant means Chartered Accountant as defined in the Chartered Accountants Act, 1949 (Act No. XXXVIII of 1949); Cost and Management Accountant means Cost and Management Accountant as defined in the Cost and Management Accountants Ordinance, 1977 (Ordinance No. LIII of 1977); “Chartered Secretary” means Chartered Secretary as defined in the (Chartered Secretaries Act, 2010).

## Appendix C: Corporate Governance Code (2018) in Bangladesh

রেজিস্টার্ড নং ডি এ-১



বাংলাদেশ

গেজেট

অতিরিক্ত সংখ্যা

কর্তৃপক্ষ কর্তৃক প্রকাশিত

রবিবার, জুন ১০, ২০১৮

### Bangladesh Securities and Exchange Commission

Securities Commission Bhaban

E-6/C Agargaon

Sher-e-Bangla Nagar Administrative Area

Dhaka-1207, Bangladesh.

### NOTIFICATION

Dated : 3 June 2018

### Corporate Governance Code

**No. BSEC/CMRRCD/2006-158/207/Admin/80:**—Whereas, the Bangladesh Securities and Exchange Commission (hereinafter referred to as the “Commission”) deems it fit that the consent already accorded by the Commission, or deemed to have been accorded by it, or to be accorded by it in future, to the issue of capital by the companies listed with any stock exchange in Bangladesh, shall be subject to certain further conditions, i.e., Corporate Governance Code in order to enhance corporate governance in the interest of investors and the capital market;

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Now, therefore, in exercise of the power conferred by section 2CC of the Securities and Exchange Ordinance, 1969 (XVII of 1969), the Commission hereby repeals its earlier Notification No. SEC/CMRRCD/2006-158/134/Admin/44, dated 07 August 2012, published in the official gazette on 30 August 2012 and the relevant Notification(s) on the same matter and, imposes the following further conditions, i.e., Corporate Governance Code to the consent already accorded by it, or deemed to have been accorded by it, or to be accorded by it in future, to the issue of capital by the companies listed with any stock exchange in Bangladesh:

Provided, however, that these conditions or Code are imposed on 'comply' basis; the companies listed with any stock exchange in Bangladesh shall comply with these conditions or Code in accordance with the condition No. 9.

**The Conditions, i.e., Corporate Governance Code:**

**1. Board of Directors.—**

**(1) Size of the Board of Directors**

The total number of members of a company's Board of Directors (hereinafter referred to as "Board") shall not be less than 5 (five) and more than 20 (twenty).

**(2) Independent Directors**

All companies shall have effective representation of independent directors on their Boards, so that the Board, as a group, includes core competencies considered relevant in the context of each company; for this purpose, the companies shall comply with the following:—

- (a) At least one-fifth (1/5) of the total number of directors in the company's Board shall be independent directors; any fraction shall be considered to the next integer or whole number for calculating number of independent director(s);
- (b) For the purpose of this clause "independent director" means a director—
  - (i) who either does not hold any share in the company or holds less than one percent (1%) shares of the total paid-up shares of the company;

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- (ii) who is not a sponsor of the company or is not connected with the company's any sponsor or director or nominated director or shareholder of the company or any of its associates, sister concerns, subsidiaries and parents or holding entities who holds one percent (1%) or more shares of the total paid-up shares of the company on the basis of family relationship and his or her family members also shall not hold above mentioned shares in the company:

Provided that spouse, son, daughter, father, mother, brother, sister, son-in-law and daughter-in-law shall be considered as family members;

- (iii) who has not been an executive of the company in immediately preceding 2 (two) financial years;
- (iv) who does not have any other relationship, whether pecuniary or otherwise, with the company or its subsidiary or associated companies;
- (v) who is not a member or TREC (Trading Right Entitlement Certificate) holder, director or officer of any stock exchange;
- (vi) who is not a shareholder, director excepting independent director or officer of any member or TREC holder of stock exchange or an intermediary of the capital market;
- (vii) who is not a partner or an executive or was not a partner or an executive during the preceding 3 (three) years of the concerned company's statutory audit firm or audit firm engaged in internal audit services or audit firm conducting special audit or professional certifying compliance of this Code;
- (viii) who is not independent director in more than 5 (five) listed companies;
- (ix) who has not been convicted by a court of competent jurisdiction as a defaulter in payment of any loan or any advance to a bank or a Non-Bank Financial Institution (NBFI); and
- (x) who has not been convicted for a criminal offence involving moral turpitude;

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- (c) The independent director(s) shall be appointed by the Board and approved by the shareholders in the Annual General Meeting (AGM);
  - (d) The post of independent director(s) cannot remain vacant for more than 90 (ninety) days; and
  - (e) The tenure of office of an independent director shall be for a period of 3 (three) years, which may be extended for 1 (one) tenure only:

Provided that a former independent director may be considered for reappointment for another tenure after a time gap of one tenure, i.e., three years from his or her completion of consecutive two tenures [i.e. six years]:

Provided further that the independent director shall not be subject to retirement by rotation as per the (Companies Act, 1994).

**Explanation:** For the purpose of counting tenure or term of independent director, any partial term of tenure shall be deemed to be a full tenure.

**(3) Qualification of Independent Director.—**

- (a) Independent director shall be a knowledgeable individual with integrity who is able to ensure compliance with financial laws, regulatory requirements and corporate laws and can make meaningful contribution to the business;
- (b) Independent director shall have following qualifications:
  - (i) Business Leader who is or was a promoter or director of an unlisted company having minimum paid-up capital of Tk. 100.00 million or any listed company or a member of any national or international chamber of commerce or business association; or
  - (ii) Corporate Leader who is or was a top level executive not lower than Chief Executive Officer or Managing Director or Deputy Managing Director or Chief Financial Officer or Head of Finance or Accounts or Company Secretary or Head of Internal Audit and Compliance or Head of Legal Service or a candidate with equivalent position of an unlisted company having minimum paid-up capital of Tk. 100.00 million or of a listed company; or

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**Explanation:** Top level executive includes Managing Director (MD) or Chief Executive Officer (CEO), Additional or Deputy Managing Director (AMD or DMD), Chief Operating Officer (COO), Chief Financial Officer (CFO), Company Secretary (CS), Head of Internal Audit and Compliance (HIAC), Head of Administration and Human Resources or equivalent positions and same level or ranked or salaried officials of the company.

- (iii) Former official of government or statutory or autonomous or regulatory body in the position not below 5th Grade of the national pay scale, who has at least educational background of bachelor degree in economics or commerce or business or Law; or
  - (iv) University Teacher who has educational background in Economics or Commerce or Business Studies or Law; or
  - (v) Professional who is or was an advocate practicing at least in the High Court Division of Bangladesh Supreme Court or a Chartered Accountant or Cost and Management Accountant or Chartered Financial Analyst or Chartered Certified Accountant or Certified Public Accountant or Chartered Management Accountant or Chartered Secretary or equivalent qualification;
- (c) The independent director shall have at least 10 (ten) years of experiences in any field mentioned in clause (b);
- (d) In special cases, the above qualifications or experiences may be relaxed subject to prior approval of the Commission.
- (4) Duality of Chairperson of the Board of Directors and Managing Director or Chief Executive Officer.—**
- (a) The positions of the Chairperson of the Board and the Managing Director (MD) and/or Chief Executive Officer (CEO) of the company shall be filled by different individuals;
  - (b) The Managing Director (MD) and/or Chief Executive Officer (CEO) of a listed company shall not hold the same position in another listed company;
  - (c) The Chairperson of the Board shall be elected from among the non-executive directors of the company;

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- (d) The Board shall clearly define respective roles and responsibilities of the Chairperson and the Managing Director and/or Chief Executive Officer;
  - (e) In the absence of the Chairperson of the Board, the remaining members may elect one of themselves from non-executive directors as Chairperson for that particular Board's meeting; the reason of absence of the regular Chairperson shall be duly recorded in the minutes.

**(5) The Directors' Report to Shareholders**

The Board of the company shall include the following additional statements or disclosures in the Directors' Report prepared under section 184 of the Companies Act, 1994 (Act No. XVIII of 1994):—

- (i) An industry outlook and possible future developments in the industry;
- (ii) The segment-wise or product-wise performance;
- (iii) Risks and concerns including internal and external risk factors, threat to sustainability and negative impact on environment, if any;
- (iv) A discussion on Cost of Goods sold, Gross Profit Margin and Net Profit Margin, where applicable;
- (v) A discussion on continuity of any extraordinary activities and their implications (gain or loss);
- (vi) A detailed discussion on related party transactions along with a statement showing amount, nature of related party, nature of transactions and basis of transactions of all related party transactions;
- (vii) A statement of utilization of proceeds raised through public issues, rights issues and/or any other instruments;
- (viii) An explanation if the financial results deteriorate after the company goes for Initial Public Offering (IPO), Repeat Public Offering (RPO), Rights Share Offer, Direct Listing, etc.;
- (ix) An explanation on any significant variance that occurs between Quarterly Financial performances and Annual Financial Statements;
- (x) A statement of remuneration paid to the directors including independent directors;
- (xi) A statement that the financial statements prepared by the



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- management of the issuer company present fairly its state of affairs, the result of its operations, cash flows and changes in equity;
- (xii) A statement that proper books of account of the issuer company have been maintained;
  - (xiii) A statement that appropriate accounting policies have been consistently applied in preparation of the financial statements and that the accounting estimates are based on reasonable and prudent judgment;
  - (xiv) A statement that International Accounting Standards (IAS) or International Financial Reporting Standards (IFRS), as applicable in Bangladesh, have been followed in preparation of the financial statements and any departure there from has been adequately disclosed;
  - (xv) A statement that the system of internal control is sound in design and has been effectively implemented and monitored;
  - (xvi) A statement that minority shareholders have been protected from abusive actions by, or in the interest of, controlling shareholders acting either directly or indirectly and have effective means of redress;
  - (xvii) A statement that there is no significant doubt upon the issuer company's ability to continue as a going concern, if the issuer company is not considered to be a going concern, the fact along with reasons there of shall be disclosed;
  - (xviii) An explanation that significant deviations from the last year's operating results of the issuer company shall be highlighted and the reasons thereof shall be explained;
  - (xix) A statement where key operating and financial data of at least preceding 5 (five) years shall be summarized;
  - (xx) An explanation on the reasons if the issuer company has not declared dividend (cash or stock) for the year;
  - (xxi) Board's statement to the effect that no bonus share or stock dividend has been or shall be declared as interim dividend;
  - (xxii) The total number of Board meetings held during the year and attendance by each director;
  - (xxiii) A report on the pattern of shareholding disclosing the aggregate number of shares (along with name-wise details where stated below) held by:—
    - (a) Parent or Subsidiary or Associated Companies and other related parties (name-wise details);
    - (b) Directors, Chief Executive Officer, Company
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Secretary, Chief Financial Officer, Head of Internal Audit and Compliance and their spouses and minor children (name-wise details);

- (c) Executives; and
- (d) Shareholders holding ten percent (10%) or more voting interest in the company (name-wise details);

**Explanation:** For the purpose of this clause, the expression “executive” means top 5 (five) salaried employees of the company, other than the Directors, Chief Executive Officer, Company Secretary, Chief Financial Officer and Head of Internal Audit and Compliance.

(xxiv) In case of the appointment or reappointment of a director, a disclosure on the following information to the shareholders:—

- (a) a brief resume of the director;
- (b) nature of his or her expertise in specific functional areas; and
- (c) names of companies in which the person also holds the directorship and the membership of committees of the Board;

(xxv) A Management’s Discussion and Analysis signed by CEO or MD presenting detailed analysis of the company’s position and operations along with a brief discussion of changes in the financial statements, among others, focusing on:

- (a) accounting policies and estimation for preparation of financial statements;
- (b) changes in accounting policies and estimation, if any, clearly describing the effect on financial performance or results and financial position as well as cash flows in absolute figure for such changes;
- (c) comparative analysis (including effects of inflation) of financial performance or results and financial position as well as cash flows for current financial year with immediate preceding five years explaining reasons thereof;
- (d) compare such financial performance or results and financial position as well as cash flows with the peer industry scenario;

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- (e) briefly explain the financial and economic scenario of the country and the globe;
  - (f) risks and concerns issues related to the financial statements, explaining such risk and concerns mitigation plan of the company; and
  - (g) future plan or projection or forecast for company's operation, performance and financial position, with justification thereof, i.e., actual position shall be explained to the shareholders in the next AGM;
  - (xxvi) Declaration or certification by the CEO and the CFO to the Board as required under condition No. 3(3) shall be disclosed as per **Annexure-A**; and
  - (xxvii) The report as well as certificate regarding compliance of conditions of this Code as required under condition No. 9.

**(6) Meetings of the Board of Directors**

The company shall conduct its Board meetings and record the minutes of the meetings as well as keep required books and records in line with the provisions of the relevant Bangladesh Secretarial Standards (BSS) as adopted by the Institute of Chartered Secretaries of Bangladesh (ICSB) in so far as those standards are not inconsistent with any condition of this Code.

**(7) Code of Conduct for the Chairperson, other Board members and Chief Executive Officer**

- (a) The Board shall lay down a code of conduct, based on the recommendation of the Nomination and Remuneration Committee (NRC) at condition No. 6, for the Chairperson of the Board, other board members and Chief Executive Officer of the company;
- (b) The code of conduct as determined by the NRC shall be posted on the website of the company including, among others, prudent conduct and behavior; confidentiality; conflict of interest; compliance with laws, rules and regulations; prohibition of insider trading; relationship with environment, employees, customers and suppliers; and independency.

**2. Governance of Board of Directors of Subsidiary Company.—**

- (a) Provisions relating to the composition of the Board of the holding company shall be made applicable to the composition of the Board of the subsidiary company;
- (b) At least 1 (one) independent director on the Board of the holding company shall be a director on the Board of the subsidiary company;

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- (c) The minutes of the Board meeting of the subsidiary company shall be placed for review at the following Board meeting of the holding company;
  - (d) The minutes of the respective Board meeting of the holding company shall state that they have reviewed the affairs of the subsidiary company also;
  - (e) The Audit Committee of the holding company shall also review the financial statements, in particular the investments made by the subsidiary company.

**3. Managing Director (MD) or Chief Executive Officer (CEO), Chief Financial Officer (CFO), Head of Internal Audit and Compliance (HIAC) and Company Secretary (CS).—**

**(1) Appointment**

- (a) The Board shall appoint a Managing Director (MD) or Chief Executive Officer (CEO), a Company Secretary (CS), a Chief Financial Officer (CFO) and a Head of Internal Audit and Compliance (HIAC);
- (b) The positions of the Managing Director (MD) or Chief Executive Officer (CEO), Company Secretary (CS), Chief Financial Officer (CFO) and Head of Internal Audit and Compliance (HIAC) shall be filled by different individuals;
- (c) The MD or CEO, CS, CFO and HIAC of a listed company shall not hold any executive position in any other company at the same time;
- (d) The Board shall clearly define respective roles, responsibilities and duties of the CFO, the HIAC and the CS;
- (e) The MD or CEO, CS, CFO and HIAC shall not be removed from their position without approval of the Board as well as immediate dissemination to the Commission and stock exchange(s).

**(2) Requirement to attend Board of Directors' Meetings**

The MD or CEO, CS, CFO and HIAC of the company shall attend the meetings of the Board: Provided that the CS, CFO and/or the HIAC shall not attend such part of a meeting of the Board which involves consideration of an agenda item relating to their personal

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matters.

**(3) Duties of Managing Director (MD) or Chief Executive Officer (CEO) and Chief Financial Officer (CFO)**

- (a) The MD or CEO and CFO shall certify to the Board that they have reviewed financial statements for the year and that to the best of their knowledge and belief:
  - (i) these statements do not contain any materially untrue statement or omit any material fact or contain statements that might be misleading; and
  - (ii) these statements together present a true and fair view of the company's affairs and are in compliance with existing accounting standards and applicable laws;
- (b) The MD or CEO and CFO shall also certify that there are, to the best of knowledge and belief, no transactions entered into by the company during the year which are fraudulent, illegal or in violation of the code of conduct for the company's Board or its members;
- (c) The certification of the MD or CEO and CFO shall be disclosed in the Annual Report.

**4. Board of Directors' Committee.—**

For ensuring good governance in the company, the Board shall have at least following sub-committees:

- (i) Audit Committee; and
- (ii) Nomination and Remuneration Committee.

**5. Audit Committee.—**

**(1) Responsibility to the Board of Directors.**

- (a) The company shall have an Audit Committee as a sub-committee of the Board;
- (b) The Audit Committee shall assist the Board in ensuring that the financial statements reflect true and fair view of the state of affairs of the company and in ensuring a good monitoring system within the business;
- (c) The Audit Committee shall be responsible to the Board; the duties of the Audit Committee shall be clearly set forth in writing.

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**(2) Constitution of the Audit Committee**

- (a) The Audit Committee shall be composed of at least 3 (three) members;
- (b) The Board shall appoint members of the Audit Committee who shall be non-executive directors of the company excepting Chairperson of the Board and shall include at least 1 (one) independent director;
- (c) All members of the audit committee should be “financially literate” and at least 1 (one) member shall have accounting or related financial management background and 10 (ten) years of such experience;

**Explanation:** The term “financially literate” means the ability to read and understand the financial statements like statement of financial position, statement of comprehensive income, statement of changes in equity and cash flows statement and a person will be considered to have accounting or related financial management expertise if he or she possesses professional qualification or Accounting or Finance graduate with at least 10 (ten) years of corporate management or professional experiences.

- (d) When the term of service of any Committee member expires or there is any circumstance causing any Committee member to be unable to hold office before expiration of the term of service, thus making the number of the Committee members to be lower than the prescribed number of 3 (three) persons, the Board shall appoint the new Committee member to fill up the vacancy immediately or not later than 1 (one) month from the date of vacancy in the Committee to ensure continuity of the performance of work of the Audit Committee;
- (e) The company secretary shall act as the secretary of the Committee;
- (f) The quorum of the Audit Committee meeting shall not constitute without at least 1 (one) independent director.

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### **(3) Chairperson of the Audit Committee**

- (a) The Board shall select 1 (one) member of the Audit Committee to be Chairperson of the Audit Committee, who shall be an independent director;
- (b) In the absence of the Chairperson of the Audit Committee, the remaining members may elect one of themselves as Chairperson for that particular meeting, in that case there shall be no problem of constituting a quorum as required under condition No. 5(4)(b) and the reason of absence of the regular Chairperson shall be duly recorded in the minutes.
- (c) Chairperson of the Audit Committee shall remain present in the Annual General Meeting (AGM):

Provided that in absence of Chairperson of the Audit Committee, any other member from the Audit Committee shall be selected to be present in the annual general meeting (AGM) and reason for absence of the Chairperson of the Audit Committee shall be recorded in the minutes of the AGM.

### **(4) Meeting of the Audit Committee**

- (a) The Audit Committee shall conduct at least its four meetings in a financial year:

Provided that any emergency meeting in addition to regular meeting may be convened at the request of any one of the members of the Committee;

- (b) The quorum of the meeting of the Audit Committee shall be constituted in presence of either two members or two-third of the members of the Audit Committee, whichever is higher, where presence of an independent director is a must.

### **(5) Role of Audit Committee**

The Audit Committee shall:—

- (a) Oversee the financial reporting process;
- (b) monitor choice of accounting policies and principles;

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- (c) monitor Internal Audit and Compliance process to ensure that it is adequately resourced, including approval of the Internal Audit and Compliance Plan and review of the Internal Audit and Compliance Report;
  - (d) oversee hiring and performance of external auditors;
  - (e) hold meeting with the external or statutory auditors for review of the annual financial statements before submission to the Board for approval or adoption;
  - (f) review along with the management, the annual financial statements before submission to the Board for approval;
  - (g) review along with the management, the quarterly and half yearly financial statements before submission to the Board for approval;
  - (h) review the adequacy of internal audit function;
  - (i) review the Management's Discussion and Analysis before disclosing in the Annual Report;
  - (j) review statement of all related party transactions submitted by the management;
  - (k) review Management Letters or Letter of Internal Control weakness issued by statutory auditors;
  - (l) oversee the determination of audit fees based on scope and magnitude, level of expertise deployed and time required for effective audit and evaluate the performance of external auditors; and
  - (m) oversee whether the proceeds raised through Initial Public Offering (IPO) or Repeat Public Offering (RPO) or Rights Share Offer have been utilized as per the purposes stated in relevant offer document or prospectus approved by the Commission:

Provided that the management shall disclose to the Audit Committee about the uses or applications of the proceeds by major category (capital expenditure, sales and marketing expenses, working capital, etc.), on a quarterly basis, as a part of their quarterly declaration of financial results:

Provided further that on an annual basis, the company shall prepare a statement of the proceeds utilized for the



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purposes other than those stated in the offer document or prospectus for publication in the Annual Report along with the comments of the Audit Committee.

## **(6) Reporting of the Audit Committee**

### **(a) Reporting to the Board of Directors**

- (i) The Audit Committee shall report on its activities to the Board.
- (ii) The Audit Committee shall immediately report to the Board on the following findings, if any:—
  - (a) report on conflicts of interests;
  - (b) suspected or presumed fraud or irregularity or material defect identified in the internal audit and compliance process or in the financial statements;
  - (c) suspected infringement of laws, regulatory compliances including securities related laws, rules and regulations; and
  - (d) any other matter which the Audit Committee deems necessary shall be disclosed to the Board immediately;

### **(b) Reporting to the Authorities**

If the Audit Committee has reported to the Board about anything which has material impact on the financial condition and results of operation and has discussed with the Board and the management that any rectification is necessary and if the Audit Committee finds that such rectification has been unreasonably ignored, the Audit Committee shall report such finding to the Commission, upon reporting of such matters to the Board for three times or completion of a period of 6 (six) months from the date of first reporting to the Board, whichever is earlier.

## **(7) Reporting to the Shareholders and General Investors**

Report on activities carried out by the Audit Committee, including any report made to the Board under condition No. 5(6)(a)(ii) above during the year, shall be signed by the Chairperson of the Audit Committee and disclosed in the annual report of the issuer company.

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## 6. Nomination and Remuneration Committee (NRC).—

### (1) Responsibility to the Board of Directors

- (a) The company shall have a Nomination and Remuneration Committee (NRC) as a sub-committee of the Board;
- (b) The NRC shall assist the Board in formulation of the nomination criteria or policy for determining qualifications, positive attributes, experiences and independence of directors and top level executive as well as a policy for formal process of considering remuneration of directors, top level executive;
- (c) The Terms of Reference (ToR) of the NRC shall be clearly set forth in writing covering the areas stated at the condition No. 6(5)(b).

### (2) Constitution of the NRC

- (a) The Committee shall comprise of at least three members including an independent director;
- (b) All members of the Committee shall be non-executive directors;
- (c) Members of the Committee shall be nominated and appointed by the Board;
- (d) The Board shall have authority to remove and appoint any member of the Committee;
- (e) In case of death, resignation, disqualification, or removal of any member of the Committee or in any other cases of vacancies, the board shall fill the vacancy within 180 (one hundred eighty) days of occurring such vacancy in the Committee;
- (f) The Chairperson of the Committee may appoint or co-opt any external expert and/or member(s) of staff to the Committee as advisor who shall be non-voting member, if the Chairperson feels that advice or suggestion from such external expert and/or member(s) of staff shall be required or valuable for the Committee;
- (g) The company secretary shall act as the secretary of the

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**Committee;**

- (h) The quorum of the NRC meeting shall not constitute without attendance of at least an independent director;
- (i) No member of the NRC shall receive, either directly or indirectly, any remuneration for any advisory or consultancy role or otherwise, other than Director's fees or honorarium from the company.

**(3) Chairperson of the NRC**

- (a) The Board shall select 1 (one) member of the NRC to be Chairperson of the Committee, who shall be an independent director;
- (b) In the absence of the Chairperson of the NRC, the remaining members may elect one of themselves as Chairperson for that particular meeting, the reason of absence of the regular Chairperson shall be duly recorded in the minutes;
- (c) The Chairperson of the NRC shall attend the annual general meeting (AGM) to answer the queries of the shareholders:

Provided that in absence of Chairperson of the NRC, any other member from the NRC shall be selected to be present in the annual general meeting (AGM) for answering the shareholder's queries and reason for absence of the Chairperson of the NRC shall be recorded in the minutes of the AGM.

**(4) Meeting of the NRC**

- (a) The NRC shall conduct at least one meeting in a financial year;
- (b) The Chairperson of the NRC may convene any emergency meeting upon request by any member of the NRC;
- (c) The quorum of the meeting of the NRC shall be constituted in presence of either two members or two third of the members of the Committee, whichever is higher, where presence of an independent director is must as required under condition No. 6(2)(h);
- (d) The proceedings of each meeting of the NRC shall duly be

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recorded in the minutes and such minutes shall be confirmed in the next meeting of the NRC.

**(5) Role of the NRC**

- (a) NRC shall be independent and responsible or accountable to the Board and to the shareholders;
- (b) NRC shall oversee, among others, the following matters and make report with recommendation to the Board:
  - (i) formulating the criteria for determining qualifications, positive attributes and independence of a director and recommend a policy to the Board, relating to the remuneration of the directors, top level executive, considering the following:
    - (a) the level and composition of remuneration is reasonable and sufficient to attract, retain and motivate suitable directors to run the company successfully;
    - (b) the relationship of remuneration to performance is clear and meets appropriate performance benchmarks; and
    - (c) remuneration to directors, top level executive involves a balance between fixed and incentive pay reflecting short and long-term performance objectives appropriate to the working of the company and its goals;
  - (ii) devising a policy on Board's diversity taking into consideration age, gender, experience, ethnicity, educational background and nationality;
  - (iii) identifying persons who are qualified to become directors and who may be appointed in top level executive position in accordance with the criteria laid down, and recommend their appointment and removal to the Board;

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- (iv) formulating the criteria for evaluation of performance of independent directors and the Board;
  - (v) identifying the company's needs for employees at different levels and determine their selection, transfer or replacement and promotion criteria; and
  - (vi) developing, recommending and reviewing annually the company's human resources and training policies;
- (c) The company shall disclose the nomination and remuneration policy and the evaluation criteria and activities of NRC during the year at a glance in its annual report.

#### **7. External or Statutory Auditors.—**

(1) The issuer company shall not engage its external or statutory auditors to perform the following services of the company, namely:-

- (i) appraisal or valuation services or fairness opinions;
  - (ii) financial information systems design and implementation;
  - (iii) book-keeping or other services related to the accounting records or financial statements;
  - (iv) broker-dealer services;
  - (v) actuarial services;
  - (vi) internal audit services or special audit services;
  - (vii) any service that the Audit Committee determines;
  - (viii) audit or certification services on compliance of corporate governance as required under condition No. 9(1); and
  - (ix) any other service that creates conflict of interest.
- (2) No partner or employees of the external audit firms shall possess any share of the company they audit at least during the tenure of their audit assignment of that company; his or her family members also shall not hold any shares in the said company:

Provided that spouse, son, daughter, father, mother, brother, sister, son-in-law and daughter-in-law shall be considered as family members.

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- (3) Representative of external or statutory auditors shall remain present in the Shareholders' Meeting (Annual General Meeting or Extraordinary General Meeting) to answer the queries of the shareholders.

#### **8. Maintaining a website by the Company.—**

- (1) The company shall have an official website linked with the website of the stock exchange.
- (2) The company shall keep the website functional from the date of listing.
- (3) The company shall make available the detailed disclosures on its website as required under the listing regulations of the concerned stock exchange(s).

#### **9. Reporting and Compliance of Corporate Governance.—**

- (1) The company shall obtain a certificate from a practicing Professional Accountant or Secretary (Chartered Accountant or Cost and Management Accountant or Chartered Secretary) other than its statutory auditors or audit firm on yearly basis regarding compliance of conditions of Corporate Governance Code of the Commission and shall such certificate shall be disclosed in the Annual Report.

**Explanation:** “Chartered Accountant” means Chartered Accountant as defined in the Bangladesh Chartered Accountants Order, 1973 (President’s Order No. 2 of 1973); “Cost and Management Accountant” means Cost and Management Accountant as defined in the Cost and Management Accountants Ordinance, 1977 (Ordinance No. LIII of 1977); “Chartered Secretary” means Chartered Secretary as defined in the (Chartered Secretaries Act, 2010).

- (2) The professional who will provide the certificate on compliance of this Corporate Governance Code shall be appointed by the shareholders in the annual general meeting.