



## Board Characteristics and Firm Performance: Evidence from Listed Banking Institutions of Bangladesh

Md. Mamunur Rashid ACMA

Assistant Professor

Department of Business Administration

Stamford University Bangladesh

mamunrsub@gmail.com

Rima Pervin

Assistant Professor

Department of Business Administration

Stamford University Bangladesh

rima\_du84@yahoo.com

### Abstract

The study examines the effect of board characteristics (represented by board size, board independence, and proportion of female director) on both accounting (return on assets) and market based (Tobin's Q ratio) performance of listed banking institutions of Bangladesh. To this end, the study analyzes five years data (2013 to 2017) of 30 banks listed in the Dhaka Stock Exchange. The results of the study demonstrate a significant positive effect of board independence and female directorship on market-based performance of the banks. However, the effect of board size on both return on assets (ROA) and Tobin's Q are not statistically significant. Moreover, the study finds insignificant effect of board characteristics on accounting-based performance of the banks. Unfortunately, the result demonstrates an inverse association between ROA and Tobin's Q indicating that accounting and market based performance are not going in the same direction. The results of the study may be useful to the top management of those banks who seek to influence their performance by reshaping their boards.

**Keywords:** Board characteristics, Firm performance, Board size, Board independence, Female directors, Bank.

## 1. Introduction

Corporate governance mechanisms are basically classified into two broad categories: internal (e.g., board of directors, ownership structures, audit committee) and external (e.g., legal infrastructures, market for corporate control) (Bushman and Smith, 2001; Dalwai et al., 2015). Corporate board is considered as one of the dominant internal mechanism (Brennan, 2006) since the board has the authority to monitor, supervise and endorse the activities of management (Jonsson, 2005; Terjesen et al., 2016). Several prior studies (e.g., Fields and Keys, 2003; Luan and Tang, 2007; Jackling and Johl, 2009; Kim and Lim, 2010; Kang et al., 2010; Gul et al., 2011; Terjesen et al., 2016) demonstrated significant effect of board composition on firm's performance. However, there exist inconclusive results in regard to the effect of several aspects of board composition on firm's performance (Dalton et al., 1998; Rashid, 2009; Terjesen et al., 2009, 2016).

Majority of the prior studies on the effect of board characteristics have been conducted in the context of developed economies, there still exist dearth of researches on this issue in the context of developing economies (Shleifer and Vishny, 1997; Denis and McConnell, 2003) such as Bangladesh (Rashid, 2009). Moreover, very recently, Bangladesh Securities and Exchange Commission (BSEC) has published a Notification on Corporate Governance Code on June 03, 2018 to be complied by listed companies (BSEC, 2018). This notification prescribes different regulations in regard to board composition such as the minimum and maximum number of board members, the proportion of independent directors including their qualifications and so on. The present study attempts to examine the effect of different aspects of board characteristics on firm's performance using the context of banking industry in Bangladesh. The rationale for the choice of banking industry lies in the fact that the intense regulations, complex nature, and level of risk differentiate the corporate governance of financial institutions such as banks from that of non-financial firms (Levine, 2004).

The present study is expected to contribute to the literature in a number of ways. First, the study focuses on all the banks (over five years from 2013 to 2017) listed in Dhaka Stock Exchange (DSE), therefore expected to provide an overall picture of listed banking industry. Second, the study uses

both accounting (return on assets) and market-based (Tobin's Q) performance measures that facilitates the gaining of meaningful insights and assists in isolating the effect of various aspects of board characteristics on firm's performance. Third, whereas majority of the prior studies concentrated on board size and board independence as proxy of board characteristics, the present study includes gender diversity and therefore, expected to provide additional insight. Finally, the use of the context of an emerging and developing economy- the context of Bangladesh- will facilitate the comparison with the context of other economies.

The remainder of the paper is organized as follows. Section 2 provides discussion on literature review and hypothesis development. Section 3 presents methodology of the study. Section 4 presents results and discussion of the findings of the study. Finally section 5 presents conclusion including the limitations of the study and avenues for further research.

## 2. Literature Review and Hypothesis Development

Several factors shape the characteristics of a company's board including the size of board, the proportion of independent or outside directors, gender diversity and so on. Several prior studies demonstrated diversified results in regard to the effect of these factors on performance of companies. In regard to the effect of board size (represented by the number of members on the board), majority of the studies (e.g., Yermack, 1996; Eisenberget et al., 1998; Vafeas, 2000; Terjesen et al., 2016) documented negative effect of board size on firm's performance. The possible explanation of such relationship might be due to the fact that larger board size may shift the agency problem from owners to managers to owners to owners when a particular group of shareholders (e.g., sponsor or institutional) attempted to control the actions of both managers and other shareholders (Shleifer and Vishny, 1997; Edwards and Weichenrieder, 2009; Yeh, 2018). Moreover, larger boards face the problem of disagreement due to the limited time available for the board meeting and diversified views expressed by several members on the board (Yermack, 1996). However, the opposite view that larger board can contribute positively to improve firm's performance (e.g., Mak and Li, 2001; Bonne et al., 2007; Coles et al., 2008; Rahman and Naima, 2018; Tulung and Ramdani, 2018) through

monitoring managers is also apparent in the corporate governance literature. The concentrated ownership, lack of efficient capital market and weak institutional frameworks in Bangladesh (Franks and Mayer, 1990; Sarkar, et al, 1998; Rashid, 2009) motivated the present study to hypothesize a negative association between board size and firm performance on the ground that controlling shareholders may direct the actions of management to maintain their interests. Therefore, the first hypothesis of the study is:

**H1. There is a negative association between board size and firm performance.**

In regard to the board independence, there exist two competing theories of corporate governance: stewardship theory and agency theory. Stewardship theory holds optimistic views about human being and asserts that the agents (management) are not motivated by their personal goals (Barney, 1990; Davis et al, 1997). Rather, the agents worked with integrity and maintained the interest of the principal which indicate no or few necessity of outside/independent directors. Thus, as per stewardship theory, independent directors have no effect on firm's performance. Several prior studies (e.g., Hermalin and Weisbach, 1991; Bhagat and Black, 2002; Rashid, 2009; Arosa et al., 2010; Terjesen et al., 2016; Rahman and Naima, 2018) documented results in favor of this view. Even, some other studies (e.g., Nguyen and Nielsen, 2010; Faleye et al., 2011) documented negative effect of board independence on firm's performance. Independent directors may not have detailed knowledge about the firm's daily activities and therefore their weak advice may offset the monitoring of board of directors (Faleye et al., 2011).

Agency theory, in contrast, holds less optimistic views about human behavior. The agent (management) may direct their actions to maintain their personal interests in the absence of significant interest in the firm's assets which could be detrimental for the principals (shareholders) (Deegan, 2006). Independent directors are expected to play significant role in such situations by controlling the behaviors of management since they have fewer or no potential conflicts of interest with principals (Fama, 1980) and takes a stand against the CEO and others in the event of detrimental decisions taken by them (Adams et al., 2010). Moreover, as independent directors come with expertise knowledge in diversified fields of business, economics and law, they are expected to add value by enhancing the

monitoring ability of the board (Fama and Jensen, 1983). Resource dependency theory and upper echelons theory also supports this views (Ruigrok et al. 2006; Terjesen et al., 2016). Due to their expanded networks, valuable knowledge of resources (as per Resource dependency theory), and vast experience (as per upper echelons theory), independent directors are expected to contribute positively to enhance the performance of a company. These motivate the present study to hypothesize a positive relationship between board independence and firm's performance. Therefore, the second hypothesis of the study is:

**H2. There is a positive association between board independence and firm's performance.**

Another aspect of board characteristics represented by gender diversity has attracted several researchers. Akin to board size and independence, gender diversity is also found to have positive as well as negative association with firm's performance. Carter et al. (2003), Kang et al. (2010), and Terjesen et al. (2016) are amongst the researchers who demonstrated a positive influence of female directors on firm's performance. However, the opposite results are also evident in the corporate governance literature. For example, Kang et al. (2007) and Sun et al. (2011) finds no association between gender diversity and firm's performance. Terjesen et al. (2016) suggest positive association between female directors and firm's performance using the ground of agency, resource dependency and gender role theory. The logic behind the proposition of positive influence of female directors on the board is attributed to several factors including fresh perspectives of female directors on complex issues (Francoeur et al., 2008), eager to ask questions (Bilimoria and Wheeler 2000), demonstrating participative leadership, more attending in meetings (Adams and Ferreira 2009) and better preparation for meetings. These motivate us to hypothesize a positive relationship between female directors on the board and firm's performance. Therefore, the third hypothesis of the study is:

**H3. There is a positive association between female directors on the board and firm's performance.**

## 3. Methodology of the Study

### 3.1 Sample and Data

The sample of the present study includes all the

banks listed in the Dhaka Stock Exchange (DSE). As per DSE websites, there are thirty (30) listed commercial banks operating in Bangladesh (DSE, 2018). Data gathered from the annual reports of the sample banks for the year 2013 to 2017 have been analyzed to examine the association between the hypothesized variables. These resulted in a total of 150 firms-years to meet the needs of the present study. The study collects all the data required to measure the variables of the study from the annual reports of sample companies. Share price data have been collected from the web sites of Dhaka Stock Exchange.

### 3.2 Empirical Models and Variable Definition

To test hypothesis 1, 2, and 3 the study estimates the following ordinary least squares (OLS) regression models:

$$TOBINQ = \beta_0 + \beta_1 BSIZE + \beta_2 BIND + \beta_3 FEMALE + \beta_4 FSIZE + \beta_5 FAGE + \beta_6 GROWTH + \beta_7 LEV + \beta_8 CEOPAY + \varepsilon_1$$

and

$$ROA = \beta_0 + \beta_1 BSIZE + \beta_2 BIND + \beta_3 FEMALE + \beta_4 FSIZE + \beta_5 FAGE + \beta_6 GROWTH + \beta_7 LEV + \beta_8 CEOPAY + \varepsilon_1$$

In the first equation, TOBINQ (Tobin's Q ratio) represent market-based firm performance measured by book value of total assets plus the market value of equity minus the book value of equity divided by total assets (Anderson and Reeb 2003; Ferreira and Matos, 2008; Kim and Lim 2010; Bose et al., 2017). The use of Tobin's Q as a measure of firm's performance is justified since endogeneity concerns are less apparent while using external and forward looking measurer such as Tobin's Q. Moreover, it reflects investors' perceptions and actions on firm's share in the capital market (Luo and Bhattacharya, 2006; Cahan et al., 2016; Bose et al., 2017).

The study includes three (03) independent variables (BSIZE, BIND, and FEMALE) as the representatives of board characteristics. BSIZE stands for board size and measured as the natural logarithm of the total members on the board. BIND represents the proportion of independent directors on the board, and FEMALE implies the proportion of female directors on the board.

Consistent with earlier literature, the present study also includes a number of control variables in the model to demonstrate their effect on firm's performance. FSIZE represents firm size, measured by the natural logarithm of book value of total assets; FAGE stands for firm age measured by the natural logarithm of the number of years since the

inception of firm; GROWTH represents percentage changes in the annual revenue; LEV stands for leverage measured as the ratio of total debt scaled by total assets; and CEOPAY stands for amount paid to the CEO and measured as the natural logarithm of CEO pay.

In the second equation, ROA represents return on assets and is calculated by dividing net income by total assets and expressed as a percentage (Bose et al., 2017; Yeh, 2018). All other variables in equation (2) have already been explained above.

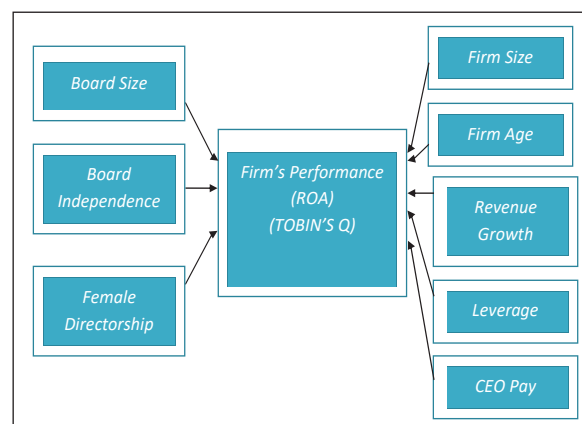


Figure 1. Conceptual framework of the study

## 4. Results and Discussion

Table I presents descriptive statistics for all the variables used in the regression models. The mean value of Tobin's Q is 1.0284 which implies that the market value of the banks' total assets, on average, is still greater than the book value of assets. However, the median value is less than 1 (0.9892), signifying the median book value is lower as compared to market value. The lowest Q ratio, as revealed by the analysis, is 0.94 and the highest one is 2.28. In respect of return on assets (ROA), the mean value is 0.78% indicating less than 1% with wide dispersion.

The lowest ROA is as poor as -4.76% and the highest one is 1.83%. The average board size is 12.74 implying that, on average, the listed banks have 13 members on their board with minimum 5 and maximum 20 members.

Table I. Descriptive statistics for variables used in the models.

Variables	N=150				
	Mean	Standard Deviation	Median	Minimum	Maximum
TOBINQ	1.0284	0.1945	0.9892	0.94	2.28
ROA	0.7885	0.8069	0.9430	-4.76	1.83

Variables	N=150				
	Mean	Standard Deviation	Median	Minimum	Maximum
BSIZE	12.74	3.83	13.00	5.00	20.00
BIND	0.2066	0.0944	0.1667	0.08	0.60
FEMALE	0.1170	0.0742	0.1182	0.00	0.43
FSIZE	224085	120983	209741	11785	899599
FAGE	23.14	7.13	21.00	13.00	36.00
GROWTH	5.51	9.39	5.44	-29.00	42.00
LEVERAGE	0.9480	0.1536	0.9194	0.87	1.89
CEOPAY	11.8534	3.7118	11.5950	0.69	26.10

In respect of board independence, the average proportion of independent directors on the banks' board is 20.66% with minimum 8 % and maximum 60%. On average, only 11.70% of the board members are female with minimum zero (0%) to maximum 43%. This implies that some banks have no female members on the board whereas some banks have as high as 43% female representation on the board. The average bank size, measured by total assets, is BDT 224,085 million, with a minimum of BDT 11,785

million and a maximum of BDT 899,599 million.

The average age of the sample banks is 23 years with the lowest age of 13 years and highest of 36 years. In regard to the growth in revenue, the mean growth rate is 5.51% with the lowest value of -29% to the highest value of 42%. The leverage ratio of the sample banks are as high as 94.80% implying that only 5% of the banks' assets are owned by shareholders. The average remuneration paid to CEO of the sample banks are BDT 11.85 million indicating that the CEOs are paid, on average, one million BDT per month (with the minimum of BDT 0.69 million to maximum BDT 26.10 million annually).

Table 2 presents correlation matrix among the variables used in the regression model. The results exhibit a significant (at 1% level of significance) negative association between return on assets (ROA) and Tobin's Q. This result implies that accounting-based performance of the banking sectors are not reflected in the market-based performance.

**Table 2. Pearson's correlation matrix.**

	TOBINQ	ROA	BSIZE	BIND	FEMALE	FSIZE	FAGE	GROWTH	LEV	CEOPAY	VIF
TOBINQ	1										
ROA	-.825**	1									
BSIZE	-.352**	.305**	1								2.029
BIND	-.021	.080	-.459**	1							2.031
FEMALE	.290**	-.233**	-.261**	.256**	1						1.192
FSIZE	-.762**	.604**	.275**	.222**	-.165*	1					4.160
FAGE	.148	-.180*	-.055	-.072	-.069	.185*	1				1.508
GROWTH	-.345**	.389**	-.089	.102	-.117	.248**	-.157	1			1.234
LEV	.984**	-.859**	-.339**	-.061	.256**	-.771**	.140	-.355**	1		3.781
CEOPAY	.049	.151	-.112	.201*	.124	-.103	-.106	.018	.005	1	1.149

\*\* Correlation is significant at the 0.01 level (2-tailed).

\* Correlation is significant at the 0.05 level (2-tailed).

In line with the first hypothesis of the study, the correlation matrix exhibits a significant negative association between board size and market-based firm's performance measured by Tobin's Q ratio. However, ROA is found to be positively associated with the size of the board. Board independence is not found to be significantly associated with both accounting and market based performance. However, female directorship demonstrates a significant positive association with market-based banks' performance. Akin to the prior results, ROA is found to be negatively associated with female directorship on the board. In respect of the control variables, leverage is significantly and positively

associated with market-based performance whereas firm size and growth have a negative association with market based performance. Nevertheless, ROA is found to be positive and significantly associated with firm's size and growth in revenue.

The matrix table presents the variance inflation factors (VIF) to test the problem of the presence of multicollinearity. The lowest VIF is 1.149 and the highest one is 4.160, all are below ten (10), indicating the absence of the problems of multicollinearity (Greene, 2008; Field, 2009).

Table 3 presents the OLS regression results of board characteristics with market-based firm's

performance measured by Tobin's Q. The coefficient of the board size is positive (though statistically insignificant) ( $\beta = 0.003$ ,  $p=0.901$ ) which indicates that board size and market-based firm's performance are not significantly associated. Even the coefficient represents the contrary results of the first hypothesis (H1) of the study. In other words, the first hypothesis of the study that there is a negative association between board size and (market-based) firm's performance is not confirmed.

**Table 3. OLS regression results of board characteristics and market-based performance (Tobin's Q).**

Variable	Expected sign	Dependent variable= TOBINQ		
		Coefficient	t-stat	Significance
BSIZE	-	.003	.125	.901
BIND	+	.075*	1.845	.067
FEMALE	+	.053**	2.154	.033
FSIZE	+	-.031	-1.543	.125
FAGE	?	.056**	2.235	.027
GROWTH	+	.016	.510	.611
LEV	?	1.193***	35.157	.000
CEOPAY	+	.025**	2.006	.047
Constant	?	-.068	-5.83	0.561
Observations		150		
R <sup>2</sup>		0.973		
Adjusted R <sup>2</sup>		0.972		
F		640.244***		

\*\*\* Significance at the 1% level.

\*\* Significance at the 5% level.

\* Significance at the 10% level.

However, in line with the second hypothesis, the regression results exhibits a positive and significant association ( $\beta=0.075$ ,  $p=0.067$ ) which confirms the acceptance of the second hypothesis of the study. This result indicates that the presence of independent director on the board of a bank is perceived as a favorable event by other investors in the capital market. This result is consistent with a number of prior studies (Luan and Tang, 2007; Jackling and Johl, 2009; Kim and Lim, 2010) which documented a positive effect of board independence on firm's performance.

In respect of the third hypothesis of the study, the results demonstrate even robust relationship

( $\beta=0.053$ ,  $p=0.033$ ). The presence of female directors on the board shows a significant and positive effect on market-based firm's performance which is in line with our third hypothesis. This finding is also consistent with several prior studies (e.g., Carter et al., 2003; Kang et al., 2010; Terjesen et al., 2016).

In regard to the effect of the control variables of the model, the study finds significant positive association of age of the bank on market-based performance ( $\beta=0.056$ ,  $p=0.027$ ), implying that matured banks are more preferable to the investors in the capital market. The effect of leverage and CEO pay also demonstrate a significant positive effect on Tobin's Q. Firm size and revenue growth do not have any significant effect on market-based firm's performance.

The model explains significant explanatory variations in market-based firm's performance as the value of Adjusted R<sup>2</sup> of the model is 0.972 indicating that 97.2% of the variations have been explained by the model. Furthermore, the model fits very well and significant since its F value is positive and significant at 1% level (F= 640.244, sig= 0.000).

Table 4 exhibits regression results of board characteristics and accounting-based firm's performance measured by return on assets (ROA). Majority of the findings are not consistent with the findings of table 3 with few exceptions. For example, board size, board independence and female directorship do not have any significant effect on accounting-based performance. Even, female representation on the board is negatively associated with ROA whereas a significant positive association between female directorship and Tobin's Q has been demonstrated in Table 3. In respect of control variables, revenue growth and CEO pay demonstrate a significant positive effect on ROA whereas firm size and leverage have significant negative effect on ROA.

Akin to the Tobin's Q model, the ROA model explains significant explanatory variations in accounting-based firm's performance as the value of Adjusted R<sup>2</sup> of the model is 0.768. Moreover, the model fits very well and significant since its F values is positive and significant at 1% level [F= 62.712, sig= 0.000].

**Table 4. OLS regression results of board characteristics and accounting-based performance (ROA).**

Variable	Expected sign	Dependent variable= Return on Assets (ROA)		
		Coefficient	t-stat	Significance
BSIZE	-	.483	1.525	.129
BIND	+	.607	1.263	.209
FEMALE	+	-.171	-.581	.562
FSIZE	+	-.439*	-1.868	.064
FAGE	?	.191	.648	.518
GROWTH	+	.968**	2.571	.011
LEV	?	-4.708***	-11.690	.000
CEOPAY	+	.503***	3.383	.001
Constant	?	6.114***	4.417	.000
Observations		150		
R <sup>2</sup>		0.781		
Adjusted R <sup>2</sup>		0.768		
F		62.712***		


\*\*\* Significance at the 1% level.

\*\* Significance at the 5% level.

\* Significance at the 10% level.

## 5. Conclusion

The aim of the study was to examine the effect of board characteristics on both accounting and market-based performance of listed banking institutions in the context of an emerging and developing economy-Bangladesh. The results of the study confirm the significant positive influence of board independence and female directorship on market-based performance (measured by Tobin's Q ratio). However, board size does not demonstrate any significant effect on both accounting and market based performance of the listed banking institutions of Bangladesh. Furthermore, accounting based performance (measured by return on assets) is not affected by board size, board independence, and female directorship. More interestingly, ROA and Tobin's Q are found to be inversely correlated which indicates that accounting based firm's performance such as ROA is not reflected on the market price of the share.

The findings of the study should not be generalized for other sectors as the study focused only on banking institutions. Further studies may be conducted to see the effect on the performance of non-banking sectors. Despite these limitations, the present study enriches the extant literatures on board characteristics and firm performance by focusing on banking institutions listed in the leading stock exchange of an emerging and developing economy like Bangladesh. 

## References

- Adams, R. B., & Ferreira, D. 2009. Women in the boardroom and their impact on governance and performance. *Journal of Financial Economics*, 94, pp.291–309.
- Adams, R.B., Hermalin, B.E. and Weisbach, M.S., 2010. The role of boards of directors in corporate governance: A conceptual framework and survey. *Journal of economic literature*, 48(1), pp.58-107.
- Anderson, R. C., & Reeb, D. M. 2003. Founding-family ownership and firm performance: Evidence from the S&P 500. *Journal of Finance*, 58, pp.1301–1327.
- Arosa, B., Iturralde, T., & Maseda, A. 2010. Outsiders on the board of directors and firm performance: Evidence from Spain. *Journal of Family Business Strategy*, 1, pp.236–245.
- Barney, J.B., 1990. The debate between traditional management theory and organizational economics: substantive differences or intergroup conflict?. *Academy of Management Review*, 15(3), pp.382-393.
- Bhagat, S., & Black, B. 2002. The non-correlation between board independence and long term firm performance. *Journal of Corporation Law*, 27, pp.231–274.
- Bilimoria, D. and Wheeler, J.V., 2000. Women corporate directors: Current research and future directions. *Women in management: Current research issues*, 2(10), pp.138-163.
- Boone, A.L., Field, L.C., Karpoff, J.M. and Raheja, C.G., 2007. The determinants of corporate board size and composition: An empirical analysis. *Journal of financial Economics*, 85(1), pp.66-101.
- Bose, S., Saha, A., Khan, H.Z. and Islam, S., 2017. Non-financial disclosure and market-based firm performance: The initiation of financial inclusion. *Journal of Contemporary Accounting & Economics*, 13(3), pp.263-281.
- Brennan, N. (2006), Boards of Directors and Firm Performance: Is There an Expectations Gap? *Corporate Governance: An International Review*, 14 (6), pp. 577-593.
- BSEC, 2018. Corporate Governance Code. Available at: [http://www.sec.gov.bd/slaws/Corporate\\_Governance\\_Code\\_10.06.2018.pdf](http://www.sec.gov.bd/slaws/Corporate_Governance_Code_10.06.2018.pdf) (Accessed February 26, 2019)
- Bushman, R.M. and Smith, A.J., 2001. Financial accounting information and corporate governance. *Journal of accounting and Economics*, 32(1-3), pp.237-333.
- Cahan, S.F., de Villiers, C., Jeter, D.C., Naiker, V., van Staden, C., 2016. Are CSR disclosures value relevant? Cross-country evidence. *European Accounting Review*, 25, pp.579–611.
- Carter, D. A., Simkins, B. J., & Simpson, W. G. (2003). Corporate governance, board diversity, and firm value. *The Financial Review*, 38, pp.33–53.
- Coles, J.L., Daniel, N.D. and Naveen, L., 2008. Boards: Does one size fit all?. *Journal of financial economics*, 87(2), pp.329-356.
- Dalton, D. R.; C. M. Daily; A. E. Ellstrand and J. L. Johnson. 1998, Meta-Analytic Review of Board Composition, Leadership Structure and Financial Performance, *Strategic Management Journal*, 19 (3), pp. 269-290.
- Dalwai, T.A.R., Basiruddin, R. and Abdul Rasid, S.Z., 2015. A critical review of relationship between corporate governance and firm performance: GCC banking sector perspective. *Corporate Governance*, 15(1), pp.18-30.
- Dahya, J. and McConnell, J.J. 2007, "Board composition, corporate performance, and the Cadbury committee recommendation", *Journal of Financial and Quantitative Analysis*, Vol. 42(3), pp. 535-564.
- Davis, J.H., Schoorman, F.D. and Donaldson, L., 1997. Toward a

- stewardship theory of management. *Academy of Management review*, 22(1), pp.20-47.
- Deegan, C. 2006, *Financial Accounting Theory*, Second Edition, Sydney: McGraw Hill Australia Pty Ltd.
- Denis, D.K. and McConnell, J.J., 2003. International corporate governance. *Journal of financial and quantitative analysis*, 38(1), pp.1-36.
- DSE (2018). "Sector wise Company List", <available at: [https://www.dsebd.org/by\\_industrylisting1.php](https://www.dsebd.org/by_industrylisting1.php)> (accessed 17.12.2018).
- Edwards, J.S. and Weichenrieder, A.J., 2009. Control rights, pyramids, and the measurement of ownership concentration. *Journal of Economic Behavior & Organization*, 72(3), pp.489-508.
- Eisenberg, T., Sundgren, S., & Wells, M.T. 1998. Larger board size and decreasing firm value in small firms. *Journal of Financial Economics*, 48(1), pp.35-54.
- Faleye, O., Hoitash, R., & Hoitash, U. 2011. The costs of intense board monitoring. *Journal of Financial Economics*, 101, pp.160-181.
- Fama, E.F., 1980. Agency problems and the theory of the firm. *Journal of political economy*, 88(2), pp.288-307.
- Fama, E.F. and Jensen, M.C., 1983. Separation of ownership and control. *The Journal of Law and Economics*, 26(2), pp.301-325.
- Ferreira, M.A. and Matos, P., 2008. The colors of investors' money: The role of institutional investors around the world. *Journal of Financial Economics*, 88 (3), pp.499-533.
- Fields, M. A. and P. Y. Keys. 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), pp.1-24.
- Francoeur, C., Labelle, R. and Sinclair-Desgagné, B., 2008. Gender diversity in corporate governance and top management. *Journal of business ethics*, 81(1), pp.83-95.
- Franks, J. and Mayer, C., 1990. Capital markets and corporate control: a study of France, Germany and the UK. *Economic policy*, 5(10), pp.189-231.
- Greene, W. (2008), "Econometric Analysis", Upper Saddle River, New Jersey, Pearson.
- Gul, F.A., Srinidhi, B., & Ng, A. C. 2011. Does board gender diversity improve the informativeness of stock prices? *Journal of Accounting and Economics*, 51, pp.314-338
- Hermalin, B.E., & Weisbach, M. 1991. The effects of board composition and direct incentives on firm value. *Financial Management*, 20, pp.101-112.
- Jackling, B., & Johl, S. 2009. Board structure and firm performance: Evidence from India's top companies. *Corporate Governance: An International Review*, 17, pp.492-509.
- Jonsson, E. I. 2005, The Role Model of the Board: A Preliminary Study of the Roles of Icelandic Boards, *Corporate Governance: An International Review*, 13 (5), pp.710-717.
- Kang, E., Ding, D. K., & Charoenwong, C. 2010. Investor reaction to women directors. *Journal of Business Research*, 63, pp.888-894.
- Kang, H., Cheng, M., & Gray, S. J. 2007. Corporate governance and board composition: Diversity and independence of Australian boards. *Corporate Governance: An International Review*, 15, pp.194-207.
- Kang, E., Ding, D. K., & Charoenwong, C. 2010. Investor reaction to women directors. *Journal of Business Research*, 63, pp.888-894.
- Kim, H., & Lim, C. 2010. Diversity, outside directors and firm valuation: Korean evidence. *Journal of Business Research*, 63, pp.284-291.
- Levine, R.E. 2004, *The Corporate Governance of Banks: A Concise Discussion of Concepts and Evidence*, World Bank, Corporate Governance Dept., Global Corporate Governance Forum, Washington, DC, available at: <http://catalog.hathitrust.org/api/volumes/oclc/56923441.htm>
- Luan, C. and M. Tang. 2007, Where is Independent Director Efficacy? *Corporate Governance: An International Review*, 15 (4), pp. 636-643.
- Luo, X., Bhattacharya, C.B., 2006. Corporate social responsibility, customer satisfaction, and market value. *Journal of Marketing*, 70 (4), pp. 1-18.
- Mak, Y.T. and Li, Y., 2001. Determinants of corporate ownership and board structure: evidence from Singapore. *Journal of Corporate Finance*, 7(3), pp.235-256.
- Nguyen, B. D., & Nielsen, K. M. 2010. The value of independent directors: Evidence from sudden deaths. *Journal of Financial Economics*, 98, pp.550-567.
- Rahman, M.M. and Saima, F.N., 2018. Efficiency of Board Composition on Firm Performance: Empirical Evidence from listed Manufacturing Firms of Bangladesh. *The Journal of Asian Finance, Economics and Business*, 5(2), pp.53-61.
- Rashid, A., 2009, July. Board composition, board leadership structure and firm performance: Evidence from Bangladesh. In Proceedings of the 2009 AFAANZ Conference. *Accounting & Finance Association of Australia and New Zealand*.
- Ruigrok, W., Peck, S., Tacheva, S., Greve, P., & Hu, Y. 2006. The determinants and effects of board nomination committees. *Journal of Management and Governance*, 10(2), pp.119-148.
- Sarkar, J., Sarkar, S. and Bhaumik, S.K., 1998. Does ownership always matter?—Evidence from the Indian banking industry. *Journal of Comparative Economics*, 26(2), pp.262-281.
- Shleifer, A. and Vishny, R.W., 1997. A survey of corporate governance. *The journal of finance*, 52(2), pp.737-783.
- Sun, J., Liu, G., & Lan, G. 2011. Does female directorship on independent audit committees constrain earnings management? *Journal of Business Ethics*, 99, pp.369-382.
- Terjesen, S., Sealy, R., & Singh, V. 2009. Women directors on corporate boards: A review and research agenda. *Corporate Governance: An International Review*, 17, pp.320-337.
- Terjesen, S., Couto, E.B. and Francisco, P.M., 2016. Does the presence of independent and female directors' impact firm performance? A multi-country study of board diversity. *Journal of Management & Governance*, 20(3), pp.447-483.
- Tulung, J.E. and Ramdani, D., 2018. Independence, Size and Performance of the Board: An Emerging Market Research. Available at: <https://virtusinterpress.org/IMG/pdf/cocv15i2c1p6.pdf>
- Vafeas, N. 2000. Board structure and the informativeness of earnings. *Journal of Accounting and Public Policy*, 19(2), pp.139-160.
- Yeh, C.M., 2018. Does board governance matter for foreign institutional investors to invest in listed tourism firms?. *Tourism Management*, 68, pp.66-78.
- Yermack, D. 1996, "Higher market valuation of companies with a small board of directors", *Journal of Financial Economics*, 40(2), pp. 185-211.