IIMS Journal of Management Science
Vol. 9, No. 1, January-April, 2018, pp- 1-13

IndianJournals.com
DOI: 10.5958/0976-173X.2018.00001.5

The Relationship between Corporate Governance, Ownership Concentration and Firm Performance: Empirical Evidence from India

Shikha Mittal Shrivastav and Anjala Kalsie

www.IndianJournals.com
Members Copy, Not for Commercial Sale
Downloaded From IP - 14.139.220.130 on dated 6-Jul-2021

ABSTRACT

The paper seeks to examine the relationship between the corporate governance mechanisms (board size, board composition, board independence and CEO duality), ownership concentration (proxied by percentage of promoter's shareholding) and firm performance. The empirical analysis performed on the panel data of 178 non-financial National Stock Exchange-listed companies for 8 years, that is from 2008 to 2015. Firm performance has been measured using market-based measure Tobin's *Q* and accounting-based measure return on equity (ROE). Multiple regression analysis is performed using pooled ordinary least square regression and panel data regression models – fixed effect model and random effect model. The results of the study found that the impact of board size and board composition on the firm performance measures Tobin's *Q* and ROE is negative. Board independence is positively and significantly related to firm performance measures – Tobin's *Q* and ROE. The results revealed that ownership concentration has a positive and significant impact on firm performance. The positive influence of ownership concentration on firm performance implies that more substantial promoter stakes provide greater access to funds for initial investment and thereby lead to a larger scale of operation resulting in higher firm value. The study findings have significant implications for companies, researchers, academicians and policymakers engaged in corporate governance in emerging economies. The results of the study revealed that companies that comply with good corporate governance practices could expect to achieve higher financial performance and reduced agency costs. The results suggest that the policymakers should focus on increasing board independence, reducing board size to an extent and increasing the ownership concentration to the maximum level as stipulated by law to improve corporate governance standards.

Keywords: Board size, Board composition, CEO duality, Ownership concentration, Firm performance and Tobin's *Q*

JEL Classification Codes: G32, G34

Biographical Note: Dr. Shikha Mittal Shrivastav is currently associated with IILM Graduate School of Management, Greater Noida, Uttar Pradesh, India as an Assistant Professor. She is a PhD in Finance in Corporate Governance from FMS, University of Delhi, New Delhi, India. She has Qualified UGC NET JRF in Management and was a college topper in MBA. She can be reached at shikhamit20@gmail.com

Dr. Anjala Kalsie is working as an Assistant Professor, Faculty of Management Studies, University of Delhi, New Delhi, India. She can be reached at kalsieanjala@gmail.com

INTRODUCTION

'Corporate Governance is a process or set of systems and principles to ensure that a company is managed to suit the best interest of its stakeholders. Corporate Governance is the system by which companies are directed and controlled' (*Cadbury Committee, 1992*). It promotes corporate fairness, transparency, integrity and accountability. According to Shleifer and Vishny (1997), 'Corporate governance deals with how suppliers of finance to corporations assure themselves of getting a return on their investment'. The concept of corporate governance had emerged in Indian scenario in the last 2 decades. Though India has become one of the fastest developing nations to have aligned itself with the international principles and trends in corporate governance, still Indian companies have a long way to go to match the corporate governance practices and the standards of the developed markets to access newer and larger markets around the world and to acquire new businesses. To meet challenges arising out of the changing global environment, there is a greater need for Indian companies to adopt and sustain good corporate governance practices for value creation.

After the collapse of a large number of well-known companies, researchers examining the suitability of prevailing corporate governance practices around the world have increased considerably. Corporate governance is particularly important for emerging markets like India to secure economic development and avoid an economic crisis. This study seeks to examine the corporate governance practices followed by Indian companies and their impact on firm performance. Corporate governance mechanisms included board characteristics, namely board size, board composition, board independence and CEO duality and ownership concentration (percentage of promoter's shareholding). Firm performance has been measured using market-based measure – Tobin's *Q* – and accounting-based measure – ROE. The panel data of 178 non-financial National Stock Exchange (NSE)-listed firms for 8 years from the financial year 2007–2008 to 2014–2015 have been analysed using multiple regression. Data for the study have been collected from the Prowess database of Centre for Monitoring Indian Economy (CMIE), annual reports of the companies, NSE website and other secondary sources.

The rest of the paper is organised as follows: 'Review of Literature' section presents the review of the literature on the various aspects of corporate governance and firm performance relationship in India and abroad, 'Objectives of the Study' section discusses the objectives of the study and the hypotheses to be tested. 'Data and Methodology' section discusses the data and methodology highlighting the sample selection, variables used in the study and the statistical articulation. Empirical analysis of the data and the results are described in 'Empirical Analysis and Interpretation' section. 'Conclusion' section concludes, and 'Implications and Future Research Directions' section provides the implication of the study along with the directions for further research.

REVIEW OF LITERATURE

This section explores and discusses the related literature focusing on the relationship between corporate governance mechanisms, ownership concentration and firm performance.

Bansal and Sharma (2016) examined the role of corporate governance components (duality, board size, board composition and promoter shareholding) along with the audit committee characteristics in improving the solid performance by analysing the data of 235 non-financial NSE-listed companies for 10 years from 2004 to 2013. Fixed effect panel data regression was employed, and

www.IndianJournals.com
Members Copy, Not for Commercial Sale
Downloaded From IP - 14.139.220.130 on dated 6-Jul-2021

return on assets (ROA), ROE, Tobin's *Q* and market capitalisation were used as performance measures. The results found that board size and duality have a positive and significant relationship with firm performance. Promoter's shareholding was found to have a positive and significant impact only on ROE as a measure of firm performance.

Kalsie and Shrivastav (2016) analysed the data of 145 non-financial NSE-listed companies for 5 years from 2008 to 2012 to examine the impact of board size on firm performance using fixed effect, random effect and feasible generalised least square panel regression. Firm performance has been measured using ROA, return on capital employed (ROCE), Tobin's *Q* and MBVR (Market to Book Value Ratio). The results concluded that board size has a positive and significant impact on firm performance.

Using fixed effect within and least square dummy variable, random effect and feasible generalised least square model, Shrivastav and Kalsie (2015) examined the impact of CEO duality on the performance of non-financial listed companies in India for 5 years. The results found that CEO duality has a negative impact on firm performance supporting the agency theory of corporate governance. Tobin's *Q* and ROE were used as firm performance measures. In another paper, Shrivastav and Kalsie (2015) found that board composition has a negative and significant impact on firm performance measures – Tobin's *Q*, ROA, ROCE and ROE using pooled ordinary least square (OLS) and random effect model (REM) for a similar set of organisations.

Adhikary and Hoang (2014) analysed the panel data of 58 large publicly traded firms in Vietnam over the period 2007–2009. The paper adopted both the accounting (ROE and ROA) and the market-based (Tobin's *Q*) measures of firm performance. The findings of the empirical analysis revealed that the board size and the board independence are positive and significantly associated with the firm performance in Vietnam. However, the concentration of non-executive directors in the board is negatively associated with the firm performance.

Latif *et al.* (2013) examined the data of 12 listed sugar mills of Pakistan for the years 2005–2010 to analyse the impact of corporate governance mechanisms (board composition, board size and CEO/chairman duality) on firm performance measured using ROA. Panel data methodology as a method of estimation, arithmetic means, ANOVA (Analysis of variance) and *t*-test applied to the data were applied using SPSS. The results revealed that board size has a significant impact on ROA, board composition has an insignificant impact on ROA and CEO/chairman duality has a significant impact on ROA. Collectively, all independent corporate governance mechanisms have an impact on firm performance.

Kumar and Singh (2013) analysed the promoter ownership of 176 companies listed on the BSE for the period 2008–2009 using linear regression analysis to find the effect of promoter ownership on the firm value. Firm value is measured using Tobin's *Q*. The results of the analysis revealed that there exists a significant positive relationship between firm value and promote ownership. The regression results suggested that firms with high ownership concentration of promoters have high market valuations (Tobin's *Q*).

Yusoff and Alhaji (2012) examined a sample of 813 listed companies representing nine sectors of the main board of Bursa Malaysia from 2009 to 2011. Earnings per share and ROE were used as a measure of firm performance. The analysis of Spearman's correlation matrix is conducted to find the relationship between independent non-executive directors and firm performance, and the study

www.IndianJournals.com
Members Copy, Not for Commercial Sale
Downloaded From IP - 14.139.220.130 on dated 6-Jul-2021

reported that corporate governance components (number of independent directors on the board and board size) are the essential elements that influence solid performance as their to exist mixed relationship between the components and firm performance.

Pradhan *et al.* (2012) examined manufacturing firms of seven industries for the years 2001 and 2009 with the objective of finding out whether shareholding has any effect on firm performance. The shareholders are divided into three board categories – promoter's holding, institutional holding and individual holding. ROA was used as a performance measure. Dummy variable multiple regression analysis was employed to detect the effect of a change in ownership structure on firm performance with the passage of time. The results revealed that the model used was significant. The findings showed that promoters do not have a significant impact on firm performance.

Using multiple regression analysis, Guo and Kga (2012) examined the relationship between corporate governance structures and solid performance of 174 Srilankan firms in the financial year 2010 listed in the Colombo Stock Exchange. ROA and Tobin's *Q* were used as performance measures to find the impact. The study found that the negative correlation between the proportion of non-executive directors and ROA was not significant, rather indicated a positive relation. Also, the board size and proportion of non-executive directors on the board show a marginal negative relationship with the firm value as measured by Tobin's *Q*. However, neither the director's shareholding nor the CEO duality has any significant impact on firm performance. Firm size has a significant impact on the firm performance.

To analyse whether the board structure has an impact on financial performance, Uadiale (2010) investigated the composition of the board of directors in Nigerian firms. ROE and ROCE were used as performance measures. He selected four board characteristics (board size, board composition, board ownership and CEO duality) to find the impact on corporate financial performance and these characteristics. The OLS regression was used to estimate the relationship between corporate financial performance and the independent variables. The findings highlighted that there exists a strong positive relationship between board size and financial performance as well as between outside directors sitting on the board and corporate financial performance. However, a negative relationship was found between director's shareholding and firm performance. In the case of CEO duality, a negative association was found between ROE and CEO duality, whereas a strong positive relationship was observed between ROCE and CEO duality.

A time series and cross-sectional analysis of board size conducted by Ning *et al.* (2010) indicated that the target number of directors on the board for an average US corporation is between 8 and 11. Although the average small board (7 or less) tends to increase its number of directors, larger boards (12 or more) tend to shrink in size. The study was conducted using a panel of 473 firms on CRPS (The Centre for Research in Security Prices) from 1988 to 1999 on a yearly basis making a total of 3.858 firm years. The result suggested a significant mean reversion trend in board size over time. It thus concluded that it was the trade-off between the costs and benefits of the various board sizes that motivate the board size selection.

Guest (2009) examined the relationship between board size and firm performance for a large sample of 2,746 UK-listed firms over 1981–2002. The study concluded that board size has a negative impact on firm performance measured regarding profitability, Tobin's *Q* and share returns, and the result was found robust across econometric models

www.IndianJournals.com
Members Copy, Not for Commercial Sale
Downloaded From IP - 14.139.220.130 on dated 6-Jul-2021

that control for different types of endogeneity. However, there was no evidence that firm characteristics that determine the board size in the United Kingdom lead to a more actual board size–firm performance relation. In contrast, the study found that the negative relation is most reliable for large firms, which tend to have larger boards. The evidence from the study supports the argument that the problem of poor communication and decision-making undermine the effectiveness of large boards.

Selarka (2005) found a significant curvilinear relationship between firm value and the fraction of voting rights owned by insiders for a cross-sectional sample of 1,397 manufacturing firms traded on the Bombay Stock Exchange for the year 2001. Using OLS regression, the firm value as measured by the market to book value ratio first decreases and then increases as the ownership is concentrated in the hands of insiders. The market signalled a negative relation between inside ownership and firm value until a significantly high level of ownership is reached. Therefore, the results showed that corporate insiders expropriate corporate assets at lower levels of their ownership, hence resulting in a lower firm value in the capital market.

www.IndianJournals.com
Members Copy, Not for Commercial Sale
Downloaded From IP - 14.139.220.130 on dated 6-Jul-2021

OBJECTIVES OF THE STUDY

The objectives of the study are first to analyse the impact of corporate governance internal mechanisms, that is board size, board composition, board independence and CEO duality on firm performance of Indian listed companies, and second to analyse the impact of ownership concentration on firm performance of Indian listed companies.

Considering the mixed evidence focusing on the relationship between various corporate governance mechanisms and firm performance, the following hypotheses are developed to be tested in the study:

H1: Board size has a significant impact on firm performance.

H2: Board composition has a significant impact on firm performance.

H3: Board independence has a significant impact on firm performance.

H4: CEO duality has a significant impact on firm performance.

H5: Ownership concentration has the significant impact on firm performance.

DATA AND METHODOLOGY

The sample includes 178 non-financial companies listed in the S&P CNX NIFTY 200 Index. These companies were selected because all these companies had positive net worth and belonged to different industries. The data for the sample are taken for 8 years from the financial year 2007–2008 to 2014–2015. The year ending 31st March was considered for reporting variables of the study. The period reflects significant changes in the attitude of companies towards CG due to the global sub-prime crisis of 2008.

Data were collected from the PROWESS database of CMIE, annual reports of the sample companies and NSE's official website as the companies listed on NSE have to adhere to the guidelines of the listing agreement to submit reports on the NSE website.

Independent Variables

- ***Board Size:*** Board size refers to the total number of directors on the board of directors of a firm. It comprises of executive (inside) directors and non-executive (outside) directors.
- ***Board Composition:*** Board composition is measured regarding proportion of non-executive directors to the total number of directors in an organisation.

- ***Board Independence:*** Proportion of independent directors to the total directors is referred as board independence. The provisions of Clause 49 made it mandatory that at least one-third of the board should comprise independent directors; the chairman of the board is a non-executive director; if he is an executive director, then at least half of the board should comprise independent directors.
- ***CEO Duality:*** CEO duality refers to the board leadership structure regarding whether the CEO and the chairman are the same person or not. A dummy variable is used for CEO duality which is equal to 1 when the CEO is also the chairman of the board and 0 if the chairman and CEO position differs.
- ***Ownership Concentration:*** The shareholding of the promoter/promoter groups is used as the measure for the ownership concentration in the firm. Promoter shareholding is the percentage of shares owned by the promoters and promoter group out of the total shareholding of a company. A promoter may be an individual, firm, association of persons or a company.

www.IndianJournals.com
Members Copy, Not for Commercial Sale
Downloaded From IP - 14.139.220.130 on dated 6-Jul-2021

Dependent Variables

Tobin's Q: Academic literature on corporate governance has shown that most of the researchers have used Tobin's *Q* as a measure of firm performance. The formula for Tobin's *Q* used in this study is a modified version based on the availability of data in the Indian context.

$$\text{Tobin's Q} = \frac{\text{Market value of equity + BW of debt + BV of preference shares}}{\text{Total assets}}$$

Return on Equity (ROE): ROE is calculated by dividing a company's profit before depreciation, interest, tax and amortisation (PBDITA) to shareholders' equity (fund). Shareholders' funds are those funds that the company owes from its equity and preference shareholders. It basically reveals the rate of return for ownership interest (shareholders' equity) of stock holders.

$$\text{Return on equity (ROE)} = \frac{\text{PBDITA}}{\text{Shareholders' equity}}$$

Control Variables

- ***Firm Size:*** Firm size has been measured in terms of natural logarithm of total sales.
- ***Firm Age:*** Firm age is measured as the natural logarithm of number of years between the observation year of the study and the incorporation year of the firm.
- ***Leverage:*** Leverage is calculated as the ratio of debt to shareholders funds. It is also represented as firm debt in number of studies.
- ***Industry Dummies:*** Corporate governance practices vary between the industries due to the differences in the capital structure, ownership level, complexity of operations and mode of business. The industry effects have been controlled by introducing the industry dummy variable for each of the industry categories in the sample. However, to avoid the dummy variable trap, one industry is excluded. Thus, a total of 14 industry dummies have been added for 15 industries. The value of 1 is assigned to a firm in a particular industry and 0 otherwise.
- ***Year Dummies:*** The study investigates the relationship between corporate governance mechanisms and firm performance, considering year dummies. Year dummies have been employed to control the macroeconomic year effects for each observation year. The value of 1 is assigned to a year and 0 otherwise.

Table 1 provides the description of the variables used in the study.

Table 1: Description of variables

Variable	Symbol	Description
Board size	BS	Total number of directors in the board
Board composition	BC	Proportion of non-executive directors in the board, i.e. non-executive directors/ total directors
Board independence	BI	Proportion of independent directors in the board, i.e. independent directors/ total directors
CEO duality	Dual	Dummy variable showing 1 if chairman is also the CEO, 0 if chairman does not hold the position of CEO
Ownership concentration	Own_Conc	Percentage of shares owned by promoters/promoter groups
Tobin's *Q*	Tobin's *Q*	Market value of equity (market capitalisation) + book value of preference shares and borrowings divided by total assets
Return on equity	ROE	Ratio of profit before depreciation, interest, tax and amortisation (PBDITA) to shareholders' equity
Firm size	FS	Natural logarithm of total sales
Firm age	FA	Natural logarithm of difference between the financial year & the incorporation year
Leverage	Lev	Ratio of total debt to shareholders funds
Industry dummies	Ind_dummies	Dummy variable carrying value 1 for a particular industry and 0 otherwise
Year dummies	Year_dummies	Dummy variable carrying value 1 for the respective year and 0 otherwise

www.IndianJournals.com
Members Copy, Not for Commercial Sale
Downloaded From IP - 14.139.220.130 on dated 6-Jul-2021

Statistical Articulation

The study analysed the relationship by using panel data regression analysis where we have applied pooled least square model, fixed effect model (FEM) and REM. Foremost, redundant fixed effects likelihood ratio test was employed to determine the necessity of using FEM surpassing pooled regression. The redundant FEM was also used to establish the best restricted model. Hausman test has been conducted to identify the preferred model out of the REM and FEM. Various tests of significant heteroscedasticity, autocorrelation and multicollinearity have also been performed during the analysis.

The regression equations for the above said objectives are as follows:

$$(\text{Tobin's } Q)_{it} = \beta_0 + \beta_1 \text{BS}_{it} + \beta_2 \text{BC}_{it} + \beta_3 \text{BI}_{it} + \beta_4 \text{Dual}_{it} + \beta_5 \text{Own\_Conc}_{it} + \beta_6 \text{FS}_{it} + \beta_7 \text{FA}_{it} + \beta_8 \text{Lev}_{it} + \beta_9 (\text{Ind\_dummies})_{it} + \beta_{10} (\text{Year\_dummies})_{it} + \mu_{it}$$

$$(\text{ROE})_{it} = \beta_0 + \beta_1 \text{BS}_{it} + \beta_2 \text{BC}_{it} + \beta_3 \text{BI}_{it} + \beta_4 \text{Dual}_{it} + \beta_5 \text{Own\_Conc}_{it} + \beta_6 \text{FS}_{it} + \beta_7 \text{FA}_{it} + \beta_8 \text{Lev}_{it} + \beta_9 (\text{Ind\_dummies})_{it} + \beta_{10} (\text{Year\_dummies})_{it} + \mu_{it}$$

EMPIRICAL ANALYSIS AND INTERPRETATION

Descriptive Analysis

Results of descriptive statistics are depicted in Table 2. The sampled firms found to have an average 11 directors on their board. However, the maximum and a minimum number of directors varied with a minimum number of 4 directors and a maximum of 26 directors. The minimum board composition is less than the stipulated, whereas some companies have 100% non-executive boards. Board independence is on an average 50% in the sampled firms with a maximum of 100%. CEO duality is found in 33% of the firms implying that in these firms, CEO and the chairman are the same person. The maximum ownership concentration (promoter's shareholding) is 99.59% of the total

Table 2: Descriptive statistics

	Mean	Median	Maximum	Minimum	Std. Dev.
BS	11.12008	11	26	4	3.431333
BC	0.735686	0.727273	1	0.25	0.126382
BI	0.513601	0.5	1	0.076923	0.114324
Dual	0.338483	0	1	0	0.47336
Own_Conc	53.74225	52.79	99.59	0	18.44252
Lev	0.635068	0.367395	120.4939	–24.35896	3.541472
FS	4.602997	4.605763	6.701979	–0.154902	0.69987
FA	1.503168	1.477121	2.071882	0.30103	0.278736
Tobin's *Q*	2.483606	1.617224	69.62171	0	3.120779
ROE	0.358114	0.332309	5.282851	–5.947267	0.383587

www.IndianJournals.com
Members Copy, Not for Commercial Sale
Downloaded From IP - 14.139.220.130 on dated 6-Jul-2021

shareholding and minimum is 0. Variation in ownership concentration is quite high. Mean ownership concentration is 53%.

Correlation Analysis

The results of the correlation analysis are shown in Table 3. The results depicted that the highest correlation is 0.36 between board size and firm size. Thus, it is clear from the results that none of the variables is highly correlated. The multicollinearity has also been checked through VIF (variation inflation factor). The values of VIF are below 5 which indicated the absence of multicollinearity among the variables.

Regression Analysis Using Tobin's *Q* as a Firm Performance Measure

Based on the regression equation given above, regression analysis has been performed on panel data using pooled, FEM and REM. Both the dependent variables (Tobin's *Q* and ROE) were considered in separate models to analyse the impact of corporate governance internal mechanisms and ownership concentration on firm performance.

Table 3: Correlation analysis

	BS	BC	BI	Dual	Own_Conc	Lev	FS	FA
BS	1							
BC	–0.185677	1						
BI	–0.195032	0.276438	1					
Dual	0.106917	–0.198743	0.092657	1				
Own_Conc	0.027206	–0.139682	–0.177203	0.062632	1			
Lev	0.013591	0.008904	–0.029462	0.030579	–0.024036	1		
FS	0.362994	–0.142695	–0.087775	–0.022495	–0.011299	0.032105	1	
FA	0.170727	–0.06338	–0.022986	–0.030642	–0.136922	–0.031264	0.31516	1

The results of the regression estimates using Tobin's *Q* as a dependent variable are shown in Table 4. The results were considered at 1%, 5% and 10% level of significance. Board size is found to have a negative but insignificant impact on firm performance measure Tobin's *Q* implying that larger board size has negative impact on firm performance. Board composition is negatively and significantly associated with Tobin's *Q* under FEM and REM. The impact of board independence on Tobin's *Q* is positive and significant across different regression models implying that presence of more independent directors on the board will increase firm performance. The impact of CEO duality on firm performance is ambiguous leading to the results that both separation and duality are insignificant to firm performance. Ownership concentration has a highly significant positive impact on Tobin's *Q* implying that higher promoter's shareholding will lead to higher profitability of the firm by reducing the agency costs. Durbin–Watson statistics revolved around two in all the models indicating that there is the absence of autocorrelation among residuals of the model. The results of *F* statistics and Chi-sq. statistics of redundant FEM are significant and thus advocated the use of FEM over pooled model. Also,

Table 4: Regression analysis using Tobin's *Q* as a firm performance measure

Independent Variable	Pooled	FEM	REM
C		–3.48756	2.174021***
BS	–0.03417	–0.013868	–0.02529
BC	0.673539	–2.19739**	–1.62584**
BI	1.880977*	1.214037***	1.201617***
Dual	0.00924	0.18471	–0.00027
Own_Conc	0.041986*	0.042786*	0.03599*
Lev	–0.04074***	0.003429	–0.0035
FS	–0.37702*	0.690717*	–0.02798
FA	0.512771***	1.115102	–0.31478
Industry dummies	Yes	No	Yes
Year dummies	Yes	Yes	Yes
No. of observation	1,424	1,424	1,424
R-squared	0.080856	0.65945	0.085711
Adjusted *R*-squared	0.071724	0.606335	0.075971
F statistics		12.41534*	8.799648*
Durbin–Watson stats	0.97245	1.789372	1.681275
Redundant fixed effect (*F* statistics)		11.37174*	
Redundant fixed effect (Chi-sq. statistics)		1,379.739*	
Hausman test (Chi-sq. statistics)			27.77372*

*Significant at 1%; **Significant at 5%; ***Significant at 10%

www.IndianJournals.com
Members Copy, Not for Commercial Sale
Downloaded From IP - 14.139.220.130 on dated 6-Jul-2021

the results of Hausman test proved the superiority of FEM over REM. The *R* sq. and adjusted *R* sq. values of FEM are 60% and 65%, respectively, which shows that the relevant model explained 60% variation in corporate governance mechanisms for the study period.

Regression Analysis Using ROE as a Firm Performance Measure

The results of regression estimates using ROE as firm performance measure are depicted in Table 5. The results of the *F* statistics and Chi-sq. statistics of redundant fixed effect again advocated the use of FEM over pooled OLS model. However, the results of Hausman test which was used to select the optimum model between FEM and REM favoured the use of REM. REM was found to explain only 21% of the variation in the corporate governance mechanisms. However, the low value of *R* sq. is found in some studies for larger panels. The intercept value of REM is positive and significant implying that there are other factors also besides which we have taken for the study which influences the corporate governance mechanisms. However, we have not considered those factors due to the limited scope of our study. Durbin–Watson statistics also ignores the presence of autocorrelation.

Table 5: Regression analysis using ROE as a firm performance measure

Independent Variable	Pooled	FEM	REM
C		–0.36926	0.000282*
BS	–0.007*	–0.00187	–0.00585***
BC	–0.08311	–0.09321	–0.09117
BI	0.04024	0.00843	0.02866***
Dual	–0.07016*	0.018078	–0.05025***
Own_Conc	0.001416*	0.002648***	0.001438***
Lev	0.039875*	0.043585*	0.042384*
FS	0.046996*	0.093758*	0.050176**
FA	0.208873*	0.215239	0.189628*
Industry dummies	Yes	No	Yes
Year dummies	Yes	Yes	Yes
No. of observation	1,424	1,424	1,424
R-squared	0.186353	0.492175	0.214877
Adjusted *R*-squared	0.178268	0.41297	0.206513
F statistics		6.21388*	25.68994*
Durbin–Watson stats	1.290992	1.910345	1.699117
Redundant fixed effect (*F* statistics)		4.173318*	
Redundant fixed effect (Chi-sq. statistics)		669.341*	
Hausman test (Chi-sq. statistics)			25.645

*Significant at 1%; **Significant at 5%; ***Significant at 10%

www.IndianJournals.com
Members Copy, Not for Commercial Sale
Downloaded From IP - 14.139.220.130 on dated 6-Jul-2021

Board size and CEO duality are found to be negatively and significantly impacting the firm performance measure ROE under pooled and REM. Board composition has a negative but insignificant impact on ROE; on the other hand, board independence has a positive effect on ROE which was found to be significant only in case of REM. Like Tobin's *Q*, ownership concentration has a positive and significant impact on ROE, but the level of significance varied. Leverage, firm size and firm age all have a positive and significant impact on ROE.

CONCLUSION

The present study analysed the impact of various internal corporate governance mechanisms (board size, board composition, board independence and CEO duality) and ownership concentration on firm performance (Tobin's *Q* and ROE) of NSE-listed companies for 8 years. Beginning with the primary objective, the impact of board size is negative on the firm performance measures Tobin's *Q* and ROE. However, the impact is negative and significant with ROE under pooled and REM. The results supported the recommendations of Lipton and Lorsh (1992) and Jensen (1993) to limit the board size to the lesser number of directors. The results are in line with the initial empirical findings of Yermack (1996), which concluded an inverse relationship between board size and firm performances. Board composition has a negative and significant impact on Tobin's *Q* but the only negative impact on ROE. The negative relationship between board composition and firm performance is owing to the lack of specialist knowledge of the non-executive directors about the day-to-day internal business operations of the firm. The impact of board independence is positive and significant on Tobin's *Q* and ROE. The results are in line with findings of Kumar and Singh (2013) who suggested that Indian company boards require more representation of independent directors instead of other non-executive outside directors. With the involvement of more independent directors on the board, the firms can get independence, objectivity, experience and expertise in the management functions. CEO duality is found to have an ambiguous impact on firm performance measures implying that there is no optimal leadership structure for both separations of CEO and chairman position and duality has related costs and benefits.

Ownership concentration is positively and significantly associated with firm performance measures. The results are in consensus with the recommendations of Shleifer and Vishny (1997) who stated that ownership concentration might improve firm performance by increasing monitoring and alleviating the free rider problem. Jensen and Meckling (1976) claimed that promoters have incentives to pursue their interests of ownership held by them, which in turn are aligned to enhance firm performance.

IMPLICATIONS AND FUTURE RESEARCH DIRECTIONS

The study findings have significant implications for companies, researchers, academicians and policymakers engaged in corporate governance in emerging economies. The results of the study revealed that companies that comply with good corporate governance practices could expect to achieve higher financial performance and reduce agency costs. The study results suggest that to improve corporate governance standards, the policymakers should focus on increasing board independence, reducing board size to an extent and increasing the ownership concentration to the maximum level as stipulated by law.

Further research might also be undertaken using larger samples and for a longer period incorporating data before and after the introduction of revised

www.IndianJournals.com
Members Copy, Not for Commercial Sale
Downloaded From IP - 14.139.220.130 on dated 6-Jul-2021

Clause 49 of the SEBI's (*Securities and Exchange Board of India*) Listing Agreement and The Companies Act 2013 which brought major overhaul in the corporate governance provisions for Indian listed firms. Furthermore, the inclusion of additional corporate governance variables or control variables like chairman identity, board meetings frequency, board committees, board diversity and directors' remuneration could reveal a new relationship and are still an open ground for future research. The study here focused only on the internal corporate governance mechanisms; hence, a study of the effect of external governance mechanisms such as the market for corporate control, managerial labour market, government regulations and antitakeover provisions on performance provides potential directions for further research.

REFERENCES

Adhikary, B.K. and Hoang, L.H.G. (2014). Board structure and firm performance in emerging economies: evidence from Vietnam. *Journal of Management and Finance,* Vol. 1, pp. 53–72.

Bansal, N. and Sharma, A.K. (2016). Audit committee, corporate governance and firm performance: empirical evidence from India. *International Journal of Economics and Finance,* Vol. 8, pp. 103.

Cadbury Committee (1992). Report on the Financial Aspects of Corporate Governance. GEC, London.

Guest, P.M. (2009). The impact of board size on firm performance: evidence from the UK. *The European Journal of Finance,* Vol. 15, pp. 385–404.

Guo, Z. and Kga, U.K. (2012). Corporate governance and firm performance of listed firms in Sri Lanka. *Procedia – Social and Behavioral Sciences,* Vol. 40, pp. 664–667.

Jensen, M.C. (1993). The modern industrial revolution, exit, and the failure of internal control systems. *The Journal of Finance,* Vol. 48, pp. 831–880.

Jensen, M.C. and Meckling, W.H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics,* Vol. 3, pp. 305-360.

Kalsie, A. and Shrivastav, S.M. (2016). Analysis of board size and firm performance: evidence from NSE companies using panel data approach. *Indian Journal of Corporate Governance,* Vol. 9, pp. 148–172.

Kumar, N. and Singh, J.P. (2013). Effect of board size and promoter ownership on firm value: some empirical findings from India. *Corporate Governance: The International Journal of Business in Society,* Vol. 13, pp. 88–98.

Latif, B., Shahid, M.N., Haq, M.Z.U., Waqas, H.M. and Arshad, A. (2013). Impact of corporate governance on firm performance: evidence from sugar mills of Pakistan. *European Journal of Business and Management,* Vol. 5, pp. 51–59.

Lipton, M. and Lorsch, J.W. (1992). A modest proposal for improved corporate governance. *The Business Lawyer,* Vol. 48, pp. 59–77.

Ning, Y., Davidson III, W.N. and Wang, J. (2010). Does optimal corporate board size exist? An empirical analysis. *Journal of Applied Finance,* Vol. 20, pp. 57.

Pradhan, S., Pathak, R. and Jee, R. (2012). The role of ownership structure in firm performance: a study of Indian manufacturing firms. *The IUP Journal of Corporate Governance,* Vol. 11, pp. 36–47.

Selarka, E. (2005). Ownership concentration and firm value: a study from the Indian corporate sector. *Emerging Markets Finance and Trade,* Vol. 41, pp. 83–108.

Shleifer, A. and Vishny, R.W. (1997). A survey of corporate governance. *The Journal of Finance,* Vol. 52, pp. 737–783.

www.IndianJournals.com
Members Copy, Not for Commercial Sale
Downloaded From IP - 14.139.220.130 on dated 6-Jul-2021

Shrivastav, S.M. and Kalsie, A. (2015). Board composition and firm performance: panel-level analysis of firms in emerging market. *Journal of Contemporary Research in Management,* Vol. 10, pp. 17.

Uadiale, O.M. (2010). The impact of board structure on corporate financial performance in Nigeria. *International Journal of Business and Management,* Vol. 5, pp. 155.

Yermack, D. (1996). Higher market valuation of companies with a small board of directors. *Journal of Financial Economics,* Vol. 40, pp. 185–211.

Yusoff, W.F.W. and Alhaji, I.A. (2012). Corporate governance and firm performance of listed companies in Malaysia. *Trends and Development in Management Studies,* Vol. 1, pp. 43–65.

www.IndianJournals.com
Members Copy, Not for Commercial Sale
Downloaded From IP - 14.139.220.130 on dated 6-Jul-2021