

# Board Structure and Firm Performance: Evidence from Emerging Market

Shubhanker Yadav, Anindita Chakraborty, Yashmita Awasthi



**Abstract:** *This paper fulfils the purpose by studying the effect of corporate board structure i.e., board size and independent director on firm financial performance for selected focused and diversified Indian companies. This study analyses the corporate governance structure of 76 Indian companies (60 focused and 16 diversified companies) listed on the BSE-Sensex for ten years from the year 2007-2016 using panel data analysis. The empirical findings showed a positive relationship of board size with firm performance and significant negative association of independent director with the corporate performance of focused Indian firms, while in the diversified Indian firm, board size found to be positively related to financial performance and independent director found to be negatively related to corporate performance. The result has shown that board structure has seemed to be significant in listed focused firm with firm performance while board structure of diversified firm seems to be insignificant with firm performance, it might be because of small sample size and dynamics of an emerging economy in India which is different from the developed economies of the world. This study implied that in emerging or developing economy like India, lower independent director usually boost company value, and adequate board size will significantly impact on firm performance both in case of focused and diversified firms. This research paper contribute and fill existing gap in literature on corporate governance by examining and establishing relation between firm performance and board structure with focused and diversified Indian firms.*

**Keywords:** Board Size, Corporate Governance, Firm Performance, Focused Companies, Independent director, Panel data Econometrics

## I. INTRODUCTION

The conflict between interests of management and ownership i.e. shareholders have been at the highly researched at developed economies but it has been becoming forefront of research in emerging economies, Jensen and Meckling (1976). Investigation focuses on the method of corporate governance adopted by companies to alleviate management-ownership divergence. Prior literature on this issue suggested that management-ownership conflicts arises basically due to following reasons: firstly, management prefer ploughing back of profit into investment opportunities rather than going for dividened pay-out, even if investment

prospects involve high amount of risk. This shows that management takes into consideration their benefit over shareholders value. As better social status and higher compensation comes with managing the larger firm. Secondly, management is prone to take more risk by assigning higher stake on single investment opportunities, while shareholders can diversify their risk by investing in some other opportunities, but management cannot, since they have a significant human capital investment in their firm (the risk aversion problem). Thirdly, managers are more prejudiced while taking business decisions than shareholders, because of pressure of giving high performance with immediate result (the horizon problem). Moving at this pace may impel management to forgo with basic safe guardians and huge investment is R and D expenditures, and high-technology will lead to blocking of amount for longer duration, with long time period for return. Hence, sound internal governance can be seen as proof of highly disciplined directors present at corporate board. These director at corporate boards are hired by the owners i.e. shareholder during annual general meeting, through their voting right.' (Fama, 1980).

The non-executive director plays a crucial role in monitoring corporate management. They are those directors who have capabilities to make better decision even in intense and critical situation and even in an un-organized firm. These directors, not only have to safeguard the interest of shareholders but also safeguard their own reputation in the firm. Additionally, this goes same for executive directors too. These directors are the one who are important in entire chain of ownership-management chain where he or she is important link between the two. Time to time several training, workshop and evaluation technique been used by board towards these director.

This research study endeavor to scrutinize the association among board structure in BSE listed companies performance, which is measured by Return on Equity (ROE), Return on Assets (ROA), Return on Capital Employed (ROCE), Share Price Return (SPR) and Cash Flow (CF). Board structure been independent variable in this study includes two parts number of person sitting at board (board size), and number of independent director sitting at board (independent director), this study also includes control variables which has significant impact on dependent variables, as found in previous studies these are firm's size, and age, hence to remove its effect, this variables has to be used. In-depth, this research study aims to inspect difference in impact of board structure on the performance of listed focused and diversified companies in India (ROE, ROA, ROCE, SPR, and CF). Results founded between board structure and performance will reveal useful information to Indian companies, investors, and wide stakeholder.

Manuscript published on January 30, 2020.

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### II. LITERATURE REVIEW

Study on board structure and performance of firm is still found to be very nascent stage in emerging economies (Amran and Che-Ahmad, 2011; Razak et al., 2008). Market ratio like return per share (EPS), share price return and cash flow, and ratios like return on assets, return on equity, and growth of sales are the most common preference for performance indication in literature. Among all these literature roe, roa, and cash flow is the widely used as performance indicator (Amran and Che-Ahmad, 2009; Babatunde and Olaniran, 2009; Ibrahim and Samad, 2011; Maury, 2006; Arouri et al., 2011; San and Gan, 2013; Rashid et al., 2010), however limited studies used share price return as performance indicator for firms (Bhagat and Black, 2000; Guest, 2009). Mak and ksnadi (2005) founded that board size negatively correlated with cash flow, they also said that firm having five board member leads to increase in firm performance many folds. This same result has also been shared with Shakir (2008), Apart from this; he also studied the number of executive directors present at company board and founded that the percentage of an executive director at board has significant and positive impact on cash flow. However, when seen this with presence of non-independent executive director, found to be significant and negative impact on performance indicators (return on assets and return on equity). With the Similar performance indicators (roe and roa) used by Ibrahim and Samad (2011), Hussin and Othman (2012) founded that board size has significant and negative impact on return on equity. Hussin and Othman (2012) also suggested that increase in board size has negative impact on return on assets; they also found that present of independent director at board who also found to be chairman had positive impact on return on assets and return on equity. However, not much literature been found on share price return where it would have been taken as performance indicator for measuring corporate governance.

Ibrahim and Samad (2011) studied corporate governance structure in family business and non family business, and founded that in case of family business; board size and independent director has negative impact on return on equity, whereas in case of non family-business independent director, and board size found to be have positive impact on return on assets. However, the control variable firm size has a adverse impact on roa and roe for the family-owned business.

Lipton and Lorsch (1992) founded that an independent director who do not have any relation with the company, except sitting at board and observing the function of board and company. They recommend that at-least two independent directors should be present on board and committee should be formed of only independent direct at company, who should also chair the board. Rosenstein and Wyatt (1990) founded that the declaration of appointment of non-executive director at board, improves the market sentiments towards company and thus attract positive excess return. Byrd and Hickman (1992), and Brickley *et al.* (1994) founded that adoption of tender offer biding and poison pill bring forth more positive responses from the market, when it is seen that more non-executives director have control on the board through their voting right. In the same way, Cotter *et al.* (1997) founded that when majority of outsider has control in board then it leads to higher declaration time return on tender bid targets. Weisbach (1988) and Borokovich *et al.* (1996)

founded, when managing director of adverse performing firm is replaced with independent non-executive on board has positive impact on the percentage of non-executives directors.. Finally, Lee et al. (1997) founded mutual life insurers are linked with high fraction of outside directors on their corporate boards than stock life insurers. In addition, Lipton and Lorsch (1992) and Jensen (1993) suggested, larger boards are lesser efficient than smaller boards. The idea is that boards inclined to become more emblematic and lesser in management process due to the overboarding of members. Yermack (1996) tested this empirically and founded in support with this. He also looked at the relation between return on equity, return on assets and return on capital employed with board size on blue-chip US firms, accounting for other factors that may influence these accounting performance indicator. He also suggested that increase board size has negatively impacted on performance indicators like return on assets, return on capital employed.

Independent director has positive impact on return per share but found to insignificant in explaining the variation is return on equity (Hussain and Othman, 2012; Yusoff and Alhaji, 2012). Also, the percentage of non-executive independent directors' relations with various other performance indicators is found to be mixed, insignificant with return on equity but significant with return per share. Apart from this, they also indicated that firm size has negative impact on return on assets and return on equity. San and Gan (2013) founded that in family-business, the size of the board, number of independent member at board has negative impact on cash flow and return on equity, but effect positively on return on assets, which been similar to earlier studies (Hussain and Othman, 2012; Amran 2011; Ibrahim and Samad, 2011)

### III. OBJECTIVE

1. To study impact of board structure on firm performance of focused and diversified companies.

### IV. RESEARCH METHODOLOGY

#### Data Collection and Period of Study

The study will be using BSE 500 listed companies, which is further segregated into focused and diversified companies, corporate governance will be measured using sample from this population on the period of a 10-year study (2007-2016). The data will be analyzed using the following performance indicator, i.e., return on equity, return on assets, return on capital employed, share price return, and cash flow. After going through a detailed study for sample selection from BSE 500 listed companies, excluding financial and banking companies and also companies whose data were unavailable. Final population shrink to 304 companies. Later these companies were segregated into focused (288 companies) and diversified categories (16 companies), using specialization ratio (Remult 1974) and were also cross-checked with proress databases. Finally, sample selection from pool of focused companies was made by random selection with the help of SPSS.20, and the same process was followed for diversified companies too.

There will be 60 focused and 16 diversified companies from the pool of 304 companies (288 focused companies and 16 diversified companies). Hence these 76 companies will be selected as samples for the study.

The Board structure served as the base of this study; this study will use two independent variables (Board size – Number of member on corporate board. Independent director– proportion of independent member to total member on corporate board. Five dependent variable (Return on assets, Return on equity, Return on Capital employed, Share-price Return – [(Share price t – Share price t-1)/ Share price t-1] \* 100, Cash flows – Log of Cash and cash equivalent at the end of the year), and lastly two control variables (Firm Size – logarithm value of total assets, Firm Age – Number of year since incorporation). The cash flows will be ‘log’ on its amount before taken for analysis to minimize the cash flow volatility among each focused and diversified company.

**Table 1: Description of Research Variable**

Variable	Acronym	Description
<b>Dependent Variable</b>		
Return on Assets	ROA	An indicator ratio of how profitable a company is relative to its total assets. Measured by net profit before taxes / total assets
Return on Equity	ROE	An indicator ratio of how that operating efficiency is translated into benefits to the owner. Measured by earn after taxes/owners fund
Return on Capital Employed	ROCE	An indicator ratio of how efficiently and effectively capital is invested in different investment opportunity, thus it determine company profitability
Share Price Return	SPR	This indicates the increase in capital revenue from previous year
Cash Flow	CF	This indicate the volatility in the company
<b>Explanatory Variable</b>		
Board Size	BS	Number of member on corporate board
Independent Director	ID	proportion of independent member to total member on corporate board
Firm Age	FA	Number of year since incorporation
Firm Size	FS	logarithm value of total assets

**Methodology**

The descriptive analysis will determine the maximum, minimum, standard deviation, and means on focused companies’ performance. The following is the regression models constructed for the study:

$$Performance = \beta_0 + \beta_1BSIZ + \beta_2BIND + \beta_3FS + \beta_4FA$$

(Notes- ROE: Return on equity, ROA: Return on assets, ROCE: return on capital employed, SPR: share-price Return, and CF: cash flow has been used as performance indicators)

Test for stationary of data:

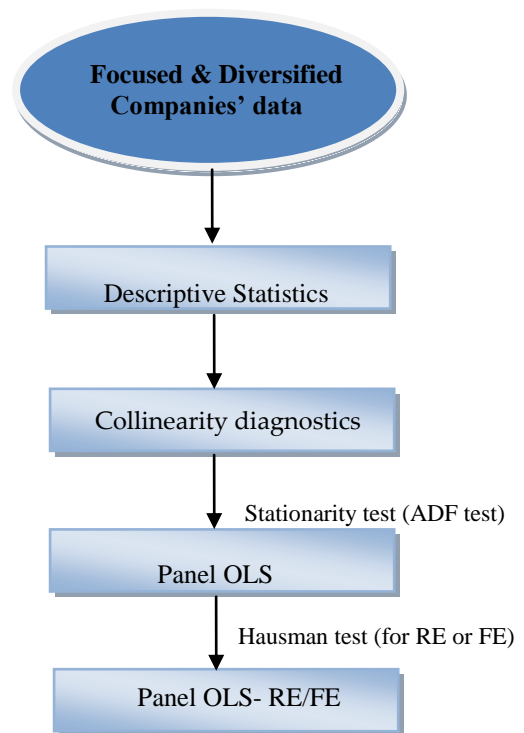
Before commencing the regression analysis, a Unit root test had to be conducted to know that whether data used for study is stationarity or non-stationarity; however, presence of unit root or non-stationary data lead to unauthentic estimate (Granger and Newbold, 1974). Panel data found to be stationary through this test, states that, meaningful economic regression will exist. Under the unit root test, an augmented-dickey fuller test is used for finding stationarity or non-stationarity in data, the following hypothesis is been made as follows:

H0 – The variable is non-stationary

H1- The variable is stationary

P-value < 5 percent significance, alternate hypothesis been accepted, which indicate data found to be stationary for further analysis.

**Table 2: Concept Diagram of Methodology**



**Panel Data Econometrics Analysis**

Panel data analysis describes the individual variable behaviour both across the time and across other variables. Panel data has three approaches for its estimation i.e., pooled regression, fixed effect, and random effect. The fixed-effect analyzes impact of variable that varies over time; all time-invariant features are unique to individuals and should not be related with other individual features.

In the random effect model, the variation across individuals is assumed to be random and uncorrelated with predictor or independent variables, which are included in the regression model. All the independent variables (ROA, ROE, ROCE, SPR, and CF) will be examined using the Hausman test; this test is applied for the purpose of identifying the relationship between the predictor variable and outcome variable within the sample companies is fixed or random.

If p-value found to be less than 5 percent significance values, model will have fixed-effect, indicating model significance for sample but when p-value greater than 5 percent significance value, then the model will be random effect, indicating finding can be generalise to whole population. Ordinary least square (OLS-PLS) has been used in analysing the panel data regression analysis and explained the variation in dependent variable (roe, roa, roce, spr, cf) caused due to variation in predictor variable (board size, independent director, firm size, firm age)..

V. RESULT ANALYSIS

Table 3- Descriptive Statistics of focused companies Variable (2007-2016)

Parameter	Min	Max	Mean	SD	Var
BS	5	26	12.09	3.61	13.034
ID	0.00	0.75	0.44	0.12	0.014
FA	7	114	42.35	22.42	503.016
FS	2.41	5.99	4.46	0.61	0.366
ROA	-15.93	45.33	9.06	7.39	54.64
ROCE	-24.10	69.38	14.42	12.59	158.74
ROE	-117.14	94.04	18.86	16.10	259.28
SPR	-9.84	16.55	0.74	1.81	3.30
CF	0.52	4.89	2.79	0.77	0.65

(BS = Board Size; ID = Independent director; FA = Firm Age; FS= Firm Size; CF= Log of Cash and cash equivalent; ROA= Return on Assets; ROCE= Return on Capital Employed; ROE= Return on equity; SPR= Share price return).

Under the governance characteristics we found the mean value of board size for focused firms found to be 12.09, and for diversified firms found to be 12.05, which found to be greater than average board size of total companies in S and P 500 i.e. 10.7 (CG Report Review 2014). This board size is higher than average European board size and US board size 8.5, UK board size 10.5 (CG Report 2013). From this table, it can be interpreted that minimum board size for any given year is 5 and maximum 26 in focused firms and minimum 6 maximum 19 in diversified firms as it has been said that member excess than 10-12 at board level hamper the decision-making process, whereas less member at the board has focused discussions. The mean age year is 42 years for the focused firm and 59 years for diversified firms, which indicates maximum companies in sample consist of young focused firms, and diversified firms are in the market for a longer duration. The company size measure is a log of total assets. We found that the average firm size of the focused firm is Rs 79644.03 million and of diversified firms is Rs 57168.39 million exist in the sample taken for the study from BSE 500.

Table 4- Descriptive Statistics of diversified companies Variable (2007-2016)

Parameter	Min	Max	Mean	SD	Var
BS	6	19	12.05	2.52	6.38

BI	0	0.69	0.43	0.14	0.02
FA	18	153	58.63	32.2	1038.34
FS	3.3	6.36	4.30	0.57	0.32
ROA	-14	29	7.04	6.45	41.67
ROCE	-30	42	11.61	10.92	119.29
ROE	-432	53	10.03	43.43	1886.64
SPR	-0.91	8.29	0.26	0.93	0.86
CF	1.32	4.54	2.85	0.66	0.44

(BS = Board Size; BI = Independent director; FA = Firm Age; FS= Firm Size; CF= Log of Cash and cash equivalent; ROA= Return on Assets; ROCE= Return on Capital Employed; ROE= Return on equity; SPR= Share price return).

Mean value of return on assets 9.06 and 7.04 here signifies that focused firms and diversified firms which are taken as sample are providing positive returns and creating shareholder value during the sample period. It can also be said that focused firms are much better effectively utilizing the assets employed in the business in generating surplus than diversified firms. Return on capital employed mean value was 14.42 percent, and 11.61 percent indicates that focused firms are providing a better return than diversified firms to their shareholders and stakeholders. Similarly Return on equity signifies here that focused firms are in better condition in generating 18.86 return than diversified firm generating the return 10.03 percent, this also indicates that companies are positive in its return and creating higher value for their shareholder but focused companies tend to be better than diversified firms, apart from this it also indicate that operating efficiency is positively translated into benefit to the owner. In terms of share price return focused companies share value to return are better than diversified companies, however better the return to the shareholder, better the goodwill and worthiness of company in the market.

Table 5: Collinearity diagnostics

Variable	Focused Companies		Diversified Companies	
	VIF	1/VIF	VIF	1/VIF
BS	1.2	0.97	1.05	0.94
ID	1.02	0.83	1.15	0.86
FA	1.15	0.86	1	0.99
FS	1.29	0.77	1.08	0.92

However, for both focused and diversified companies, the variance inflation factor (VIF) values in the multi-co linearity analysis are below 10, and tolerances are below 1. Table 1(c) indicates that all predictor variables are unrelated with each other and also they cannot have strong influence on each other, which could have created multi-co linearity problem.

Panel Data Econometrics Analysis-

In the case of both the categories firm i.e., focused firms and diversified firms it was found that the P-value result from the Augmented Dickey-Fuller test shows the most variable (BS, BI, FS, FA, ROE, ROCE, ROA, CF, and SPR) are significance at 5% level.



The P-value with the trend and intercept and trend are lesser than 0.05 which signifies that unit root is not present in data,

**Table 6: Panel Data Analysis for focused companies**

DV	IV	B	p	Remark
ROE (FE*)	BS (FE*)	<b>0.96</b>	<b>0.00</b>	<b>Sig +</b>
	BI (FE*)	<b>-12.28</b>	<b>0.04</b>	<b>Sig</b>
	FA (FE*)	-0.17	0.58	Insig -
	FS (FE*)	<b>-18.01</b>	<b>0.00</b>	<b>Sig -</b>
ROCE (RE*)	BS (RE*)	<b>0.59</b>	<b>0.00</b>	<b>Sig +</b>
	BI (RE*)	<b>-11.38</b>	<b>0.00</b>	<b>Sig -</b>
	FA (RE*)	<b>0.12</b>	<b>0.04</b>	<b>Sig +</b>
	FS (RE*)	<b>-10.68</b>	<b>0.00</b>	<b>Sig -</b>
ROA (FE*)	BS (FE*)	<b>0.30</b>	<b>0.02</b>	<b>Sig +</b>
	BI (FE*)	<b>-6.46</b>	<b>0.01</b>	<b>Sig -</b>
	FA (FE*)	<b>0.40</b>	<b>0.00</b>	<b>Sig +</b>
	FS (FE*)	<b>-12.56</b>	<b>0.00</b>	<b>Sig -</b>
SPR (RE*)	BS (RE*)	<b>-0.05</b>	<b>0.05</b>	<b>Sig -</b>
	BI (RE*)	-0.38	0.56	Insig -
	FA (RE*)	0.00	0.24	Insig -
	FS (RE*)	<b>0.36</b>	<b>0.02</b>	<b>Sig +</b>
CF (FE*)	BS (RE*)	-0.02	0.13	Insig -
	BI (FE*)	<b>-0.49</b>	<b>0.03</b>	<b>Sig -</b>
	FA (FE*)	<b>-0.09</b>	<b>0.00</b>	<b>Sig -</b>
	FS (FE*)	<b>1.35</b>	<b>0.00</b>	<b>Sig +</b>

**Table 7: Panel Data Analysis for diversified companies**

DV	IV	B	p	Remark
ROE (RE*)	BS (RE*)	<b>3.15</b>	<b>0.03</b>	<b>Sig +</b>
	BI (RE*)	<b>-61.87</b>	<b>0.02</b>	<b>Sig -</b>
	FA (RE*)	0.12	0.26	Insig +
	FS (RE*)	0.66	0.91	Insig +
ROCE (RE*)	BS (RE*)	0.24	0.64	Insig +
	BI (RE*)	<b>-27.00</b>	<b>0.00</b>	<b>Sig -</b>
	FA (RE*)	0.00	0.92	InSig +
	FS (RE*)	-1.88	0.39	Insig -
ROA (RE*)	BS (RE*)	0.11	0.71	Insig +
	BI (RE*)	<b>-15.98</b>	<b>0.00</b>	<b>Sig -</b>
	FA (RE*)	0.01	0.78	Insig +
	FS (RE*)	-1.75	0.16	Insig -
SPR (RE*)	BS (RE*)	-0.02	0.56	Insig -
	BI (RE*)	0.13	0.84	Insig +
	FA (RE*)	0.00	0.77	Insig -
	FS (RE*)	-0.17	0.37	Insig -
CF (RE*)	BS (RE*)	0.05	0.26	Insig -
	BI (RE*)	0.32	0.62	Insig +
	FA (RE*)	0.00	0.52	Insig -
	FS (RE*)	0.11	0.51	Insig +

The p-value (F-statistics) under the Wald test for return on equity fixed effect model is 0.00, (<0.05 sig), accepting the fixed effect in generated model for return on equity model. The fixed-effect model indicates that independent director, board size, and firm size is significant in predicting return on

equity. R-square 0.5438 explains that 54.38 percent of deviation in return on equity can be explained by predictor variable. Apart from this firm's age proves to be insignificant in the prediction of return on equity of firm. Further, in case of the diversified firm p-value of Hausman test shown, the cross-section random (return on equity) is 0.2109; thus random effect model is appropriate for return on capital equity model. The random effect model indicates that independent director and board size significantly predict the return on equity, while the firm's age and firm size are insignificant in predicting the return on equity. R-square 0.0618 explains predictor variables explain the variation caused to return on equity around 6.18 percent.

Focused firm (FEM) – ROE = 100.1776 - 12.2823\*BI + 0.9614\*BS - 0.1684\*FA - 18.0145\*FS (Proposed Model)

Diversified firm (REM) – ROE = -11.1934 - 61.8671\*BI + 3.1509\*BS + 0.1169\*FA + 0.6635\*FS (Proposed Model)

Similarly, in the case of return on assets in focused firms, p-value of Hausman test shows the cross-section random 0.0017 and wald test 0.00, indicating and accepting the fixed effect model as an appropriate model for return on equity model. R-square 0.6188 explains that predictor variable explains about 61.88 percent variation in return on assets. While in the case of the diversified firm p-value of Hausman test shown, the cross-section random (return on assets) is 0.3420, indicates the random effect model is appropriate for return on capital assets model. The random effect model indicates that independent director, the board size, and firm's age has a significant impact in predicting return on assets, while firm size is insignificant in predicting return on assets. R-square 0.1210 explains that 12.10 percent of variation in return on assets can be explained by the predictor variable.

Focused firm (FEM) ROA = 47.4894 - 6.4648\*BI + 0.2989\*BS + 0.3981\*FA - 12.5613\*FS (Proposed Model)

Diversified firm (REM) ROA = 2.6936 - 10.5586\*BI + 0.6468\*BS + 0.0299\*FA - 0.1533\*FS (Proposed Model)

In focused firms, in case of return on capital employed, the p-value of the Hausman test shown the cross-section random (return on capital employed) is 0.1307; thus random effect model is appropriate for return on capital employed model. The random effect model indicates that independent director, board size, firm's age, and firm size is significant in predicting the return on capital employed. R-square 0.1001 explains that 10.01 percent of the variation in return on capital employed can be explained by the predictor variable.

However, in the case of the diversified firm The p-value of Hausman test shown the cross-section random (return on capital employed) is 0.4337, indicates the random effect model is appropriate for return on capital employed model. The random effect model indicates that only independent director has a significant and + impact in predicting the return on capital employed, while board size, firm's age, and firm size is insignificant in predicting the return on capital employed.

R-square 0.1350 explains that 13.50 percent of the variation in return on capital employed can be explained by the predictor variable.

Focused firms (REM) ROCE = 55.0050 - 11.3811\*BI + 0.5862\*BS + 0.1189\*FA - 10.6822\*FS

Diversified firm (REM) ROCE = 4.3439 - 21.6911\*BI + 0.9675\*BS + 0.0542\*FA + 0.4138\*FS

The p-value of the Hausman test in focused firm showed the cross-section random (return on share price return) is 0.1234, which is greater than 0.05; this indicates that the null hypothesis is to be accepted; thus random effect model is appropriate for return on capital employed model. The random effect model indicates that only board size and firm size significantly predict share price returns, but inversely. R-square 0.0131 explained predictor variable explained the variation around 1.31. While independent director and firm's age proves to be insignificant in predicting share price return. The p-value of Hausman test in diversified firms showed cross-section random (share price return) is 0.9178, which is greater than 0.05; hence null hypothesis been accepted; model has random effect. The random effect model indicates predictor variables are insignificant in the predicting model. R-square 0.0062 explains that predictor variable can explain only 0.62 percent variation in share price return.

Focused firm (REM)  $SPR = 0.0704 - 0.3758*BI - 0.04820*BS - 0.004491*FA + 0.3615*FS$  (Proposed Model)

Diversified firm (REM)  $SPR = 0.5191 + 0.0385*BI + 0.0129*BS + 0.0006*FA - 0.1051*FS$  (Proposed Model)

In the case of cash flow in a focused firm, the p-value of Hausman test states cross section random 0.0000, which found to be a fixed-effect model. Further, to verify whether the fixed effect model or pooled regression model is appropriate, the Wald test is used. The p-value (F-statistics) found to be 0.00, which accepts a fixed-effect model as an appropriate model for the cash flow model. The fixed-effect model indicates that independent director, firm's age, and the firm's size are significant in predicting cash flow. R-square 0.7143 explains that the predictor variable can explain 71.43 percent of the variation in cash flow. Apart from this, board size proves to - and insignificant in predicting the cash flow. However, in a diversified firm p-value of the Hausman test shown, the cross-section random is 0.6974, which is more than 0.05, hence null hypothesis been accepted; i.e. model has random effect. Random effect model indicated that all predictor variables are insignificant in the prediction of cash flow. R-square 0.024 explains that the predictor variable has explained 2.43 percent of the variation in cash flow.

Focused firm (FEM)  $CF = 0.8155 - 0.4889*BI - 0.0175*BS - 0.0854*FA + 1.3502*FS$  (Proposed Model)

Diversified Firm (REM)  $CF = 2.2931 + 0.6266*BI + 0.0188*BS - 0.0002*FA + 0.0202*FS$  (Proposed Model)

## VI. CONCLUSION

This study resulted positive and significant relation between board size and company performance indicators (roe, roce, roa) founded to be consistent with Babatunde and Olaniran (2009), Marte and State (2010) and, Amran and Ahmed (2011). San and Gan (2013), Moscu (2013). The result from panel data indicated that board size had positive impact on performance of focused companies of BSE 500 companies, while at the same time, other company performance indicator (spr, cf), indicated that board size had significant but negative relationship on performance of focused companies of BSE 500. However, in case of diversified company panel data analysis result indicated board size had positive impact on firm financial performance (roe, roce, roa) diversified companies of BSE 500 companies; however, spr and cf indicated that number of member present at board has negatively impacted on performance of diversified companies of BSE 500. An independent board is an effective corporate governance mechanism that has a better impact on

performance growth (Yusuff and Alhaji, 2012). This study showed that independent director in term of focused companies has significance but inverse relation to firm performance and this could be due to higher proportion of outside and independent director on the corporate board (Aziz et al. 2013). However, in the case of diversified companies, some performance parameter showed positive and significant with an independent board which leads us to new finding that a larger board does help in creating shareholder value in diversified companies. There are many independent directors on corporate board who not only hold position in current company but also in multiple companies where they are required on to exercise monitoring and supervisory control, as they are also not involve in day to day activities of business. Hence they perform with efficiently and effectively (Mohamad et al., 2012) (Hussin and Othman, 2012), However taking this as advantage, inside director may hide some important fact and figures which should have been brought to meeting and knowledge to all board member (Aziz et al., 2013).

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