Asian Journal of Accounting and Governance **8**: 39–53 (2017) ISSN 2180-3838
(https://doi.org/10.17576/AJAG-2017-08-04)

Board Characteristics and Firm Performance: Evidence from Banking Industry in India

MANMEET KAUR & MADHU VIJ

ABSTRACT

The Board of Directors in a firm performs the primary role of internal control mechanism. This Study seeks to understand the relationship between internal governance and performance of banks in India. The research paper investigates the effect of board characteristics (proportion of independent directors, gender diversity, board size, meetings per year and attendance in board meetings) on the firm performance. This paper evaluates the impact of corporate governance mechanisms on bank's financial performance using panel data for 28 listed banks at National Stock Exchange of India for the period of 2008-2014. Returns on Asset, Return on Equity, Tobin's Q and Net Interest Income were used as the financial performance indicators. To estimate the relationship among governance and bank performance initially the Study uses Pooled Ordinary Least Square (OLS) Estimation and Generalized Least square (GLS) Estimation. Then a well-developed Generalized Method of Moments (GMM) Estimator is used to investigate the dynamic nature of performance and governance relationship. The Study empirically confirms that two step system GMM approach controls the problem of unobserved heterogeneity and endogeneity as compared to the OLS and GLS approach. The result suggests that banks with small board, boards with female members, and boards that meet more frequently tend to be more efficient and subsequently have a positive impact on performance of banks. The study offers insights to policy makers interested in enhancing the quality of governance of banks in India. In addition, the findings suggest that board characteristics play a vital role in the improvement of corporate governance mechanism for financial institutions. There is a great need to have efficient boards in banks to improve the overall health of the financial institutions and the economic development of the country.

Keywords: Board Characteristics; banking industry; India; GMM estimator

INTRODUCTION

The Asian financial crisis has enhanced the inspection of board governance in banks worldwide. The role of regulatory bodies and government, the board, and the credit agencies have been questioned in ensuring good corporate governance. Following the globalization, cut throat competition, the need for sustainable development, etc., are the challenges before the corporate sectors, which are turbulent and unpredictable today. These challenges have put a lot of pressure on the corporate sector for better corporate governance. Better governance requires a high degree of professionalism, the vigilant role of directors, transparency in operations and disclosures, fairness in accounting and reporting, and fixing accountabilities, etc. In recent year's corporate governance has been a contentious issue as many initiatives have been proposed by advanced and developing countries for e.g. Mandatory Codes of Governance, Disclosure Norms, listing agreements etc. In 1998, The Organization of Economic Cooperation and Development (OECD) issued its leading OECD Principles of Corporate Governance, which are trend setters worldwide as the Code of Best Practices and are associated with Cadbury Report (1992). A wide range of literature has determined that a certain type of board structure is preferred to monitor managers (Pathan & Skully 2010). The issue was further emphasized by the Basel Committee on Banking Supervision (BCBS), (2006) which set out its definition as per banking perspective, i.e. ''corporate governance involves the manner in which the business and affairs of individual institutions are governed by their Boards of Directors and senior management, which affects how banks: set corporate objectives (including generating returns to owners); run day-to-day operations of the business; meet the obligation of accountability to their shareholders and take into account the interests of other recognized stakeholders. Thus, BCBS has proposed that corporate governance of financial institutions require further studying, developing and understanding.

The banking industry has been the backbone of the Indian economy. They enable finance for commercial enterprises, various financial services to the general public and access to payment system. They act as an intermediary between those who have surplus funds and those who require funds. In addition, they are the custodian of the depositor's money and have an ethical obligation to utilize or apply depositors' funds in a cautious manner. The disorders in the banking industry affect all areas in the economy because of the interdependencies. The significance of corporate governance in banks is, therefore, special from the corporate governance point of view as compared to any other company.

The Reserve Bank of India is continually striving to ensure compliance with international standards and best practices of corporate governance in the Indian banking system. Whether the bank is a state or privately owned, governance is critical. In India, it was only in 1998, when inefficient management was identified as one of the key issues associated with bank performance that the corporate governance cropped up in the financial sector agenda. To remain in competition and perform better, it has become essential for banks to adopt effective measures of corporate governance. A few studies which focus on corporate governance of banks are Levine (2003); Macey and O'Hara (2003); Caprio et al. (2007); Adams and Mehran (2005).

Pathan and Faff (2013) insist that bank's board plays an essential role in achieving effective governance. Regulators of banks have placed huge responsibility and higher standards of accountability on board of directors than other firms. At the time of poor economic performance or financial crises regulators may lead government to sue directors to recover losses in bank failures. The effectiveness of banks board have become an important question especially with the newly adopted governance rules (Liang, Xu & Jiraporn 2013)

Regulators of banks have placed further responsibility and higher standards of accountability on the board of directors than other firms. At the time of poor economic performance or financial crises regulators may lead the government to sue directors to recover losses from bank failures. Thus the study also examines the causal effect of board structure on firm performance. Several studies attempt to explain the causal effect of board structure on firm performance (Adams & Ferreira 2007; Harris & Raviv 2008; Hermalin & Weisbach 1998; Raheja 2005). However majority of the studies exclude banks or financial firms from their studies. Thus this study aims to fill this knowledge gap by investigating whether the boards' characteristics has an effect on firm's performance in a regulated industry like India's banking Industry.

The primary contribution for the study is that it undertakes intensive overview of governance in the banking sector in particular, corporate governance in general. It would therefore contribute to the emerging importance and literature on corporate governance in India. To the best of our knowledge no study in the literature has analysed the impact of board characteristics on bank board in Indian context. Secondly, it gives a most comprehensive analysis in terms of sample size and time framework. The analysis covers 28 listed Indian banks for a period of seven years from 2008 to 2014. Thirdly, both accounting (ROA, ROE, NII) and market based (Tobin's Q) measures have been used for measures of performance. Fourth, the comparison has been made in the econometric technique used in these types of studies and then a well-developed Generalized Method of Moments (GMM) Estimator is used to investigate the dynamic nature of performance and governance relationship. The GMM estimation technique has been used to control all the important sources of endogeneity problem in governance variables and other firm characteristics. Fifth, the study uses an additional measure of board characteristics of board meeting attended which has not been used in previous literature. Finally, focusing on the board of directors as the supreme organ of the governance structure, the study is expected to bring out suggestions for improvement of board functioning; and this may go a long way to improve board function and bank performance of Indian Banks.

The paper is organized as follows: Section 2 presents the literature review and hypothesis development. Section 3 describes the sample, variables, and econometric methodology. Section 4 presents analysis and results and Section 5 concludes the study.

Literature Review

The present study reviews the corporate governance practices for the banking sector in India. Previous literature shows that the board of directors and their characteristics play an important role in the banking sector than in other firms (Levine 2003; Macey & Ohara 2003).

Levine (2003) examines the corporate governance of banks. The study states that banks are special because of their two special attributes: greater opaqueness than other industries and more government regulations. The study reviews various government policies that enhance the governance of banks. The study concluded that instead of relying exclusively on government regulators, public policy should seek to enhance private monitoring of banks. Macey and O'Hara (2003), explain the role that corporate governance plays in corporate performance. They argue that commercial banks pose unique corporate governance problems for managers and regulators, as well as for the claimants like investors and depositors. Bank directors should expand their scope of fiduciary duties beyond shareholders to include creditors also. While making decisions directors should take solvency risk explicitly and systematically into account, or else face personal liability for failure to do so.

Adams and Mehran (2003) analyzed potential differences in the way corporate governance works in banks compared to other industries. They find that board size, the number of outside directors in the board; the number of committees and the frequency of reunion of the board are larger for Bank Holding Companies than for firms in manufacturing sector. In a subsequent study, Adams and Mehran (2005) found that the larger boards are accompanied by increased performance, measured by Tobin's Q after controlling the firm size, capital structure, and uncertainty, as well as for a set of corporate governance variables.

Kim and Rasiah (2010) used descriptive and regression model analysis for the foreign and domestic commercial bank data from 1995 to 2005 to investigate the effect of corporate governance and bank performance in Malaysia for pre and post financial crises. The result indicates a

linear relationship between corporate governance and bank performance. The result also shows that when capital and asset ratios of banks have fulfilled the stipulations, it will turn the status of banks in the healthy bank category.

Ross and Crossan (2012), discuss the extent to which corporate governance structures have been a contributory factor to the recent banking crisis in either shareholder capitalism (UK) or stakeholder capitalism (Germany). They made a comparative overview of codes of governance in the UK and Germany and also measure the ability of these codes to control the actions of banks during the financial crisis. The study concluded that corporate governance only played a part in the financial crisis, and to make sure history does not repeat itself, the whole regulatory environment in both countries needs to be strengthened. The findings suggested, regardless of the type of governance approach based on shareholder capitalism (UK) or stakeholder capitalism (Germany), current corporate governance structure was not adequate and that a new set of rules is needed in both the countries.

The study by De Andres and Vallelado (2008) examined the relationship between board characteristics and bank performance and used a sample of 69 large commercial banks from six developed countries (Canada, France, the UK, Italy, Spain and the US) for the period 1995-2005. They used a system estimation econometric model to solve unobserved heterogeneity and endogeneity problems. They concluded that the addition of new directors is positively linked to a bank's performance, but the relation is inverted U-shaped i.e. when the number of directors reaches the upper limit the performance starts diminishing. They found that bank performance has a significantly positive relation with board meetings and supports the hypothesis that the information of inside directors in the board are important to perform efficiently.

Claessens and Yurtogiu (2012) found that better corporate governance benefits firm through greater access to financing, lower cost of capital, better performance, and more favorable treatment of all stakeholders in emerging markets. Empirical evidence shows that the voluntary and market corporate governance mechanism have less effect when a country's governance system is weak.

A study by Liang, Xu and Jiraporn (2013) was conducted on a sample of 50 largest banks during the period of 2003-2010. They explored comprehensive set of board characteristics (size, composition and functioning of the board) and analyzed their impact on the bank performance. They used the generalized method of moments (GMMs) to control the problem of endogeneity and found that the board size and proportion of politically-connected directors have significantly negative impact on bank performance. They concluded that the banks with small boards, boards that meet more frequently and boards with more independent and less politically connected directors are likely to be more efficient.

Pathan and Faff (2013) investigated how board structure (board size, independence and gender diversity) influences bank performance. Their study used a sample of 212 large US Bank holding companies over the period of 1997-2011. To examine the causal effect of board structure on the firm performance they employed System GMM Estimation technique to address the problem of endogeneity. They also explored the impact of Sarbanes Oxley Act (SOX) and financial crises on the relation between board structure of banks and their performance. Board structure is important especially for small banks with low market power and that are resistant to external takeover threat. They find that the presence of women director or independent director could diminish bank board performance.

Wintoki, Linck and Netter (2012) empirically examined the dynamic nature of internal board governance structure. They employed a dynamic panel generalized method of moments (GMM) estimator to overcome endogeneity problems and unobserved heterogeneity in determinants of board structure and the effect of board structure on performance in a panel of 6000 firms from 1991 to 2003. Their results suggests that it is appropriate to consider the dynamic panel GMM estimator for firm characteristics and board structure as biasness may arise if the potential effects of past governance on current values of the determinants are ignored.

Fidanoski, Mateska and Simeonovski (2014) investigated the relationship between the corporate governance with the bank's performance in Republic of Macedonia using OLS Regression. Bank performance is measured by ROA, ROE, Cost Income Ratio and Capital Adequacy Ratio whereas the board structure is described in three dimensions: board size, board composition, and CEO qualities. The empirical data used as inputs in the study for the banks have been observed for the 2008-2011 period with a total number of 60 observations. The study suggested that the appointment of new members on the board leads to stronger decision-making process that may improve bank's performance. The presence of female members in the supervisory board brings competences to improve supervision, which in return enhances bank's efficiency. The study concluded that in order to improve the decision-making abilities towards bank's risk management, CEOs that hold his position for a longer period of one four-year term are more profitable than those with CEOs serving their first term as such.

INDIAN STUDIES

Arora, Sharma (2015) investigates the impact of firm performance on board characteristics for the manufacturing firms in India for the period of 2001- 2010. To measure the firm performance following range of measures has been used: return on assets, return on equity, net profit margin, adjusted Tobin's q and stock returns. They also use a range of alternative measures of board characteristics like board size, independence and meetings in the estimation process. The study shows that firm performance has a negative impact on board characteristics. The study

concluded that the governance practices are just added to the cost of the company. They found that the larger board, outside membership and more meetings are considered as expensive affairs in the firm especially in a developing country.

Gunasekar and Dinesh (2014) analysed the relationship between board characteristics and firm performance. The study compares the board characteristics (board independence and board size) on SOE and privately owned firm performance in India with a single unified empirical framework. The study for measuring the firm performance used a market based measure, Tobin's Q. The study found that the board size, percentage of executive directors and percentage of independent directors in boards of SOEs impact their performance more negatively as compared to their private sector counter parts.

The above stated literature has raised the importance of board structure for the performance of firms. Therefore, the board characteristics (proportion of independent directors, gender diversity, board size and meetings per year) are examined in this study to know their effect on performance of banks in India.

HYPOTHESIS DEVELOPMENT

Studies by Levine (2003), Macey and Ohara (2003), have demonstrated that the board of directors and their characteristics play an important role in the banking sector than in other firms. The following section presents the hypothesis developed for the present paper.

BOARD SIZE AND PERFORMANCE

Board size is crucial in achieving the board effectiveness and improved firm performance (Kiel & Nicholson 2003). According to Jensen and Meckling (1976) firms with smaller boards of directors are more profitable as they have better monitoring role. Lipton and Lorsch (1992) argues that it is difficult for directors to express their opinions on board with large number of directors during the limited time available in board meetings. Thus, it is essential to identify the appropriate board size. Accordingly, it is widely believed that number of director on board depends upon the economic environment in which the firm is operating. For example, diversified and heavily debt – financed firms may require large boards (Adams & Mehran 2005; Coles, Daniel & Naveen 2008). Dalton et al. (1999) argue that larger boards improve firm performance by facilitating more human capital to advice managers. In case of banks, Pathan and Faff (2013) show an inverse relation between board size and bank performance. The problems of coordination control and flexibility in decision making is there in case of large corporate boards (Jensen 1993). Thus this study expects a negative association between bank board size and bank performance.

H_1: Large board size has a negative relation with bank performance

BOARD GENDER DIVERSITY AND BANK PERFORMANCE

Female representation on board has received increased attention all over the world. The literature emphasizes that gender diversity is an ingredient of the broader concept of board diversity. Accurate composition of the board is essential to provide diverse perspectives. Boyle and Ji (2011) argued that greater female representation on boards provide some additional skills and perspectives that may not be possible with all-male boards. According to Robinson and Dechant (1997), Female Directors are more hard working and have superior communication skills to improve the decision making ability of the entire board. However, Rose (2007) revealed insignificant association between number of women directors on the board and firm performance. Several studies like Farrell and Hersch (2005), Bathula (2008) believe that an increase in board diversity leads to better boards and governance as diversity facilitates boards with diligent and skilled candidates among the wide talent pool available for the role of directors. However up to date, in India women representation on boards is very small. Although according to Companies Act 2013, it is mandatory for all listed companies to have a woman director on board. However, women are still under represented on boards of banks in India. There is an absence of empirical work related to relationship between gender diversity in the board room and firm performance, especially for banks in India. Based on the literature, it is desirable for firms to have gender diversity on their boards.

H_2: There is a significant positive association between board gender diversity and bank performance

BOARD COMPOSITION AND PERFORMANCE

The objective of appointing an Independent director in a company is to enhance adherence to corporate governance. The empirical results are mixed on the relationship between independent directors and firm performance. On one hand, previous literature (Klein 2002; Rosenstein & Wyatt 1997) argued that presence of Independent directors on board reduces the conflict of interest, increases the quality of monitoring and also improves the financial performance of the firm. On the other hand, several studies (Adams & Mehran 2005; Harris & Raviv 2008; Raheja 2005) believe that the effectiveness of supervision is not maintained by simply appointing more independent directors. The special nature of banks requires additional directors, particularly non-executives, should be endowed with the firm specific or specialized knowledge, abilities required monitoring, disciplining, and advising managers, thus enabling optimal decisions. Thus corporate governance literature offers no definite evidence on the effect of appointing outside directors (Bhagat & Black 2002; Hermalin & Weisbach 1998; John & Senbet 1998).

H_3: More Independent directors have a negative association with financial performance of Banks.

Literature has only used the frequency of board meeting as variable. But in India the problem lies with the attendance of board meeting. The effectiveness of board meetings depends upon the number of board members attending the meetings. Thus we require 2 variables to represent board meetings.

Internal functioning of the board can be influenced by the numerous factors. One of the key factors is the frequency of board meetings. Previous studies such as De Andres & Vallelado (2008) and Liang et al. (2013) have differentiated the board on the bases of frequency of meetings of the board as proactive boards and reactive boards. Proactive board is the positive signal of the frequent meetings of the boards, to have better control over managers, which lead to a positive impact on performance. However, the reactive board is the negative signal towards the frequent meetings of the boards and of poor performance. Thus while examining the activity of a board, both for and against a positive relation between the frequency of meetings and performance is found. Moreover, the complexity of the banking business requires board members to come together to discuss various bank strategies and keep control over managers. Hence, the frequent meetings may lead to a positive impact on performance.

H_4: There is a significant positive association between the frequent board meetings and financial performance.

The second related and important aspect is to focus on the attendance of directors in board meetings. The effectiveness of board meetings depends upon the number of board members attending the meetings. The increasing attendance of the directors in the board meetings lead to better decision in times of controversial matters. In banking industry, the better attendance is essential to exchange ideas and prepare banks strategies for financial decisions and loans issues. Thus there should be a linear relationship between attendance of board meetings and financial performance of banks.

H_5: There is a significant positive association between the board meetings attended and financial performance.

Thus there is a need to examine the board characteristics of banks in India to evaluate the relationship among bank board characteristics and financial performance of banks.

Data and Methodology

DATA

The sample consists of balanced panel of 28 banks in India during the period of 2008 to 2014 with 196 bank-year observations. The time period has been restricted to 2008 to 2014 due to non-availability of bank board characteristics before 2008 in India. Further the time period of the study gives a comprehensive analysis as during this period the most important changes took place in terms of governance characteristics in Indian firms due to the initiating process of development of Companies Act 2013. All the listed banks on National Stock Exchange were selected. The list of 41 listed banks is available on NSE, but based on the availability of board information, market data and financial statements for the study period, only 28 banks were considered for the Study. Both public and private banks are considered for the study. The total assets of our bank sample accounted for over 60% of the total banking industry assets, equity, loans or deposits, making it a representative of the Indian banking industry.

The secondary source of data is used to prepare the panel data for the Study. Financial information and detailed board characteristics were mainly obtained from the Bloomberg database and Reserve Bank of India database. The information on the director's characteristic variable is hand-collected mostly from the individual banks annual reports and banks website. Eviews 6 and Stata 11 softwares were used for analysis and the results were presented through tables.

The bank performance is measured by Return on Asset (ROA), Return on Equity (ROE), Net Interest Income (NII) and Tobin's Q. ROA is calculated as net income before interest and tax as a percentage of the book value of the assets. ROE is calculated as the net income after tax as a percentage of the total equity. NII is calculated as the net interest income (i.e. difference between interest income and interest expenses). Various previous studies have used these variables as a dependent variable in their study (Bhagat & Black 2002; Yermack 1996). Table 1 shows the descriptions of Dependent, Independent and control variable considered for the study.

EMPIRICAL METHODOLOGY

To estimate the impact of corporate governance mechanisms on the financial performance of banks in India, Panel Data Analysis is most suitable. The empirical model aims to test the five hypotheses for the association between board characteristics and bank performance. To overcome the problem of heterogeneity and endogeneity a dynamic model has been developed. The model is specified as below

$$\begin{aligned}(PERF)_{i,t} = \ & \alpha_0 + \beta_1(BS_{i,t}) + \beta_2(Women_{i,t}) + \beta_3(IND_{i,t}) \\ & + \beta_4(ME_{i,t}) + \beta_5(MEA_{i,t}) + \beta_6(BL_{i,t}) + \\ & \beta_7(BG_{i,t}) + \beta_8(BSIZE_{i,t}) + \varepsilon_{i,t} \qquad (1)\end{aligned}$$

The subscripts i denote individual bank (i = 1, 2, …, 28) and t denotes the time period (t = 2008, 2009, …, 2014). The β parameter shows the potential impact of board characteristics on bank performance. The α is the estimated coefficient for the constant.

To estimate the relationship between governance and bank performance the study used pooled Ordinary

TABLE 1. Board structure and performance variables

Abbreviation	Variable	Description
	Performance (Dependent Variable)	
ROA	Return on Assets	Net Income to Average Total Assets
Q	Tobin's Q	Total Market Value of Firm/Total Asset Value of Firm
NII	Net Interest Income	Difference between interest income and interest expenses
ROE	Return on Equity	Net income/Shareholder's Equity
	Control Variable	
BSIZE	Bank size for i^{th} bank and time period t	Log of total assets
BL	Banks leverage for i^{th} bank and time period t	Debt/Equity
BG	Bank growth rate for i^{th} bank and time period t	Total return for last period - Total Return for current period
YEAR	Year dummies	Seven individual year dummy variables which equal zero or one for each year from 2008 to 2014.
	Board Characteristics (Independent Variable)	
BS	Number of Board Members for i^{th} bank and time period t	
Women	Percentage of Female Directors on the board for i^{th} bank and time period t	
IND	Proportion of Independent directors for i^{th} bank and time period t	
ME	No of Board meetings per year for i^{th} bank and time period t	
MEA	Percentage of meeting attended by the board of directors for i^{th} bank and time period t	

Least Square (OLS) estimation and Generalized Least square (GLS) estimation. However, some previous studies (De Andres & Vallelado 2008) and Wintoki et al. (2012) have examined if unobserved effect is correlated with independent variable the results of OLS and GLS are biased and inconsistent. Thus, a well-developed panel GMM estimator is developed to control the dynamic nature of performance and governance relationship.

THE GENERALIZED METHOD OF MOMENTS (GMM)

The Generalized Method of Moments (GMM) is a technique that aims to choose parameter estimates, such that the theoretical model is satisfied as 'closely' as possible. The estimates are selected to minimize the weighted distance between the theoretical and actual values. This method requires that the sample correlation between the explanatory variables and instruments is close to zero. The ordinary least square (OLS) or traditional fixed or random- effect estimates is improved in a series of paper by Arellano Bond (1991) which was first proposed by Holtz-Eakin, Newey and Rosen (1988). The estimation of GMM involves the use of dynamic effect by adding a lagged dependent variable to the explanatory variable. The individual effects are included in the model, with the Arellano-Bond method using differencing. This approach overcomes the problem of unobserved heterogeneity, the issue of endogenous board variables and the effects of past performance on governance variables. The problem of endogeneity occurs when the independent variable is correlated with the error term in a regression model. The approach helps to construct more efficient estimates for dynamic panel data model.

The Generalized Method of Moments (GMM) model approach has been preferred in the areas of finance and economics where problem suggest a dynamic relation between dependent and independent variables (Wintoki et al. 2012). Thus, to estimate the causal effect between corporate governance and performance of banks GMM has been used.

The dynamic panel GMM estimator is applied to the effect of board structure and bank performance and the results are also compared to those obtained from OLS or traditional fixed effects estimates. De Andres and Vallelado (2008) found the results of OLS and fixed effect is inconsistent and biased when the unobserved effect is correlated with the independent variable.

The estimation procedure consists of the following steps:

1. Specify model
2. Include individual effect in the model by using differencing.
3. Specify instruments (often lagged values of all variables in the model)
4. Choose a method for adjusting standard errors, to overcome heteroskedasticity.
5. Use the Sargan test to determine if the instruments are suitable (Test for over identifying restrictions)

Thus initially, the empirical model estimates the effect of board characteristics on the performance of banks:

$$y_{it} = y_{i,t-1} + \beta X_{it} + \gamma z_{it} + n_i + \varepsilon_{it} \quad (1)$$

Where X, Y, Z represent board structure, performance and firm characteristics, respectively, and *n* represents an unobserved firm effect.

In the next step the dynamic model Equation 2 is re written in first differenced form by eliminating the constant term and the individual effect:

$$\Delta y_{it} = \Delta y_{i,t-1} + \beta \Delta X_{it} + \gamma \Delta z_{it} + n_i + \Delta \varepsilon_{it} \quad (2)$$

First difference helps in eliminating the biasness arising from time invariant unobserved heterogeneity and omitted variable biasness. The approach allows to use explanatory variables as endogenous and uses lagged value (past value) of all variables as instruments.

Thus the past/lagged values of board structure, performance and controlled variables of specific are used as instruments. Following Wintoki et al. (2012), the use of historical values of explanatory variables as the instrument is an important aspect of the dynamic panel estimator. Therefore the instruments will be drawn from dependent and explanatory variables i.e., y_{t-k}, X_{t-k}, z_{t-k}. There are two assumptions for the criteria to be valid. Firstly, there must be some variations in the lagged values of the explanatory variable. Secondly, there should be a strong correlation between board characteristics and historical performance and other variables.

The next step after first differencing is that the lagged variables must be exogenous i.e., the lagged variables must be uncorrelated with the error in the performance (Wintoki et al. 2012). This can be explained as by using lags of performance, no information from the firm's history has an effect on current governance and firm characteristics. Thus, beyond the given time period, the firm's history should be exogenous with respect to any shocks to the dependent variable in the current or future period. Hence, GMM enables to deal with endogeneity and unobserved heterogeneity which is associated with each firm and correlated with the rest of the explanatory variables.

DYNAMIC EMPIRICAL MODEL OF FIRM PERFORMANCE

The study uses the following equation for investigating the relation between performance and board structure.

$$\begin{aligned}(PERF)_{i,t} = {} & \alpha_0 + \varphi\,(PERF)_{i,t-k} + \beta_1(BS_{i,t}) + \\ & \beta_2(Women_{i,t}) + \beta_3(NED_{i,t}) + \beta_4(ME_{i,t}) \\ & + \beta_5(MEA_{i,t}) + \beta_6(BL_{i,t}) + \beta_7(BG_{i,t}) + \\ & \beta_8(BSIZE_{i,t}) + \varepsilon_{i,t} \end{aligned} \quad (3)$$

The subscripts *i* denote individual bank (i = 1, 2, …, 28) and *t* denotes the time period (t = 2008, 2009, …, 2014). The β parameter shows the potential impact of board characteristics on bank performance. The α & φ is the estimated coefficient for the constant variable and for lag of dependent variable respectively.

The model is tested on two critical specification tests. The first test is the second order serial correlation. Both first order [AR (1)] and second order [AR (2)] autocorrelation is used. This test enables to check whether enough lags have been used to control the dynamics of the empirical relationship. The residuals of the first differences [AR (1)] may be correlated but there should be no serial correlation in the second differences [AR (2)]. This test assures the historical value of firm performance beyond those lags is strictly exogenous to current performance shocks. Hansen/ Sargan of over-identification of restrictions is the second test used for dynamic panel GMM. It enables to test the validity of the multiple lags as an instrument. At the end, the Wald test for overall significance of the model is also used.

DESCRIPTIVE STATISTICS

Table 2 presents the descriptive statistics for the various boards' structure and characteristics of banks. The table shows the mean, median, standard deviation, minimum, and maximum values of the following variables: Return On Equity (ROE), Return on Assets (ROA), Net Interest Income (NII), Board Size (BS), Percentage of Independent Directors (IND), frequency of meetings per year (ME), percentage of meetings attended (MEA), women on board (women), bank total assets in millions (BSIZE), Bank Growth rate (BG) and Bank Leverage (BL). By comparing the two financial

TABLE 2. Descriptive statistics for the various board characteristics and firm variable

	ROA	ROE	NII	TOBIN_Q	BS	IND	ME	MEA	*Women*	BSIZE	BG	BL
Mean	0.94	14.89	10.49	1.02	11.20	50.39	12.47	87.94	6.91	10.55	19.23	165.77
Median	0.91	15.56	10.50	1.00	11	50.00	13	89.47	7.69	12.10	17.92	146.06
Maximum	1.92	29.62	11.83	1.30	18	90.91	20	97.97	27.27	13.38	70.40	577.36
Minimum	-0.43	-25.37	9.11	0.95	7	0	5	58.04	0	1.03	-59.49	15.06
Std. Dev.	0.42	6.46	0.50	0.07	1.70	19.42	3.23	6.29	6.30	3.91	14.73	105.32
Observations	196	196	196	196	196	196	196	196	196	196	196	196

Return on equity (ROE), return on assets (ROA), Net Interest Income (NII), board size (BS), proportion of Independent directors (IND), number of meetings per year (ME), Percentage of meetings attended (MEA), women on board (women), total bank assets in millions (BSIZE), Bank growth rate (BG) and bank leverage (BL)

performance measures (ROA and ROE), we can say that the sample banks are relatively doing better on the Return on Equity performance measure. The mean value of Return on Equity is 14.89 percent, whereas Return on Asset is 0.94 indicating that the sample banks are superior in utilizing shareholders equity capital. On the bases of standard deviation from the mean, Return on Equity shows higher standard deviation i.e., 6.46 percent than ROA 0.42 percent. The mean of Tobin's q ratio is greater than one and NII is around 11 percent. The mean (median) of board size is 11.20 (11) with a minimum of 7 and maximum of 15. The sample mean board size is comparable to average board size of 12 in klein (2002), and Vafeas (1999). The mean (median) percentage of non executive director accounts for 51% (50%), which is much lower than the average IND of 79% in Adams and Mehran (2005). According to Table 2 the mean (median) number of meetings per year is 12 (13), which is higher while comparing to average number of meeting of 9 meetings in Adams and Mehran (2005). The mean (media) women on board are 6.9% (7.6%) for the given sample of banks in India.

To distinguish the impact of governance mechanism on types of banks, the sample is further divided into bank type (public and private) and on the basis of bank size (small and large). Large banks are defined as the banks whose total assets are above the 25 percentile of the sample bank of that year same as done by Liang et al. (2013). The remaining banks were defined as small banks. Figure 1 and Figure 2 report the time trends of board size, percentage of independent directors, percentage of board meetings held, percentage of women director on board of banks form 2008-2014. Figure 1 shows the trend on the basis of size of banks which are further bifurcated into small banks and large banks. Panel A reports the mean board size remained relatively flat for small banks while it has increased slightly for large banks. The average board size is 11 in 2008 and 11.5 in 2014. Panel B reports the mean percentage of independent directors over the time trend. There has been a remarkable increase in independent directors in small banks from 54% to 60% while in case of large banks it has remain relatively flat. Panel C shows the time trend in number of board meeting conducted. Both small and large banks have shown a swing over the sample period. On an average, the number of board meetings has increased from 12.25 to 12.88 over the period of the study. Panel D shows the trend in the mean percentage of women director on bank boards. The percentage of women on board has been very small in both types of banks. The small banks exhibits the biggest increase in over the same period in increase in number of women directors while in case of large banks there has been a small decline.

In India, banking sector has been dominated by public sector so a comparison between public and private bank was done to see the difference between their board characteristics. Figure 2 reports the time trend of bank characteristics for type of banks which are further bifurcated into public and private sector banks. Panel E shows that the mean board size has remained relatively flat in public banks except for 2014 while there has been a slightly increase for private banks. The average board size has increased from 10.8 in 2008 to 11.4 in 2014. Panel F reports that the number of women director in public banks are very less as compared to private banks in 2008 while number has been same for both types of banks in 2014. Panel G shows that the average number of meetings over the sample period has been a slightly increase from 11 in 2008 to 12.5 in 2014. There has been a general difference in the trend of conducting meeting among public and private sector banks over the sample trend period. Panel F shows the trend in the mean percentage of the independent director among public and private sector banks. There have been swings over the sample period for both public and private sector banks

BOARD CHARACTERISTICS BY BANK TYPE

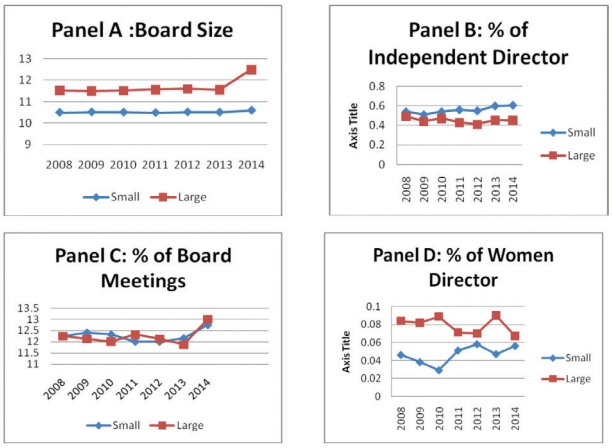

FIGURE 1. Indian Bank Board Characteristics trends: 2008-2014 for large and small banks

BOARD CHARACTERISTICS BY BANK TYPE

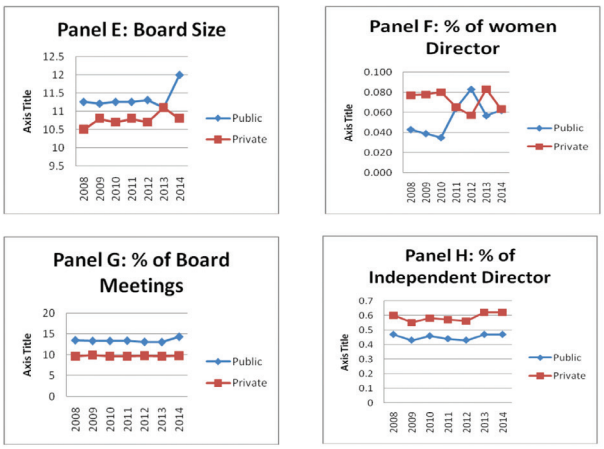

FIGURE 2. Indian Bank Board Characteristics trends: 2008-2014 for public and private banks

Results

In this section, the results of OLS and GLS estimators along with GMM estimator are included. The Study contributes to the empirical literature by facilitating the advantage of considering endogeneity: unobservable heterogeneity and simultaneity.

OLS and GLS Estimators

The results of OLS and GLS estimators are described in this section. Table 3 presents the result of OLS estimator and GLS estimator. This estimator is inconsistent and results are biased as it does not consider the unobserved heterogeneity and endogeneity (including past performance) of the independent variable. The OLS estimator results show that the board size is insignificant which is not in conferment with what we hypothesized. There is no relation between board size and performance. The result also shows that there is no statistical significant relation between gender diversity and bank performance. The OLS estimator shows a positive and significant relation between independence of board and bank performance indicating the increase in number of independent directors of bank board is directly related to the performance of banks. The frequency of board meetings is positively significant with the performance of banks. The strong positive relationship supports the hypothesis that that frequent board meetings increases the supervision control over mangers, leading to better performance of banks. The OLS results are biased because of the presence of correlation among the explanatory variables and also due to non-consideration of fixed effects. This problem is generally solved by previous studies by using GLS estimators.

Table 3 also presents the regression results by using GLS estimator and is comparable to the OLS regression model. The relation between independence and performance varies from linear to non linear moving from OLS to GLS estimation. The relation among frequency of meetings and performance is consistent between OLS and GLS model. The results with the GLS model are not statistically significant in case of board size, independence and gender diversity. De Andres and Vallelado, (2008) stated such results are due to inconsistency of estimators arising from the lack of strict exogeneity of independent variables. In our case the independent variables of the board characteristics are not exogenous. Therefore the results of OLS and GLS estimators are neither econometrically reliable nor consistent with the theoretical postulates of previous studies. Thus, an advance econometric technique is required which considers the individual characteristics of each bank and potential endogeneity of board characteristics simultaneously. The GMM estimator with adjusted standard errors considers the unobserved heterogeneity and the problem of endogeneity of independent variables simultaneously (De Andres & Vallelado 2008).

The Generalized Method of Moments (GMM) Estimator

The relationship between corporate governance and performance of banks is dynamic and needs powerful methodology to estimate the causal effect between them. The Generalized Method of Moments (GMM) helps to construct more efficient estimates for dynamic panel data model.

The study uses the above equation for estimating the relation between performance and board characteristics.

Table 4 presents the results of GMM estimation with bank performance as the dependent variable. Each performance was first regressed with all board variables (board size, independence of board, women on board, meetings per year and meetings attendance) and then

TABLE 3. Regression results for the determinants of the bank board structure

Variables	GLS Model		OLS	
ROA	Coefficient	(Prob)	Coefficient	(Prob)
Intercept	0.183	0.691	0.365	0.421
BS	-0.012	0.635	0.000	0.997
IND	0.003	0.106	0.003	0.044**
Women	0.004	0.270	0.001	0.812
ME	0.037	0.007***	0.044	0.000***
MEA	0.013	0.001***	0.011	0.014**
BSIZE	-0.004	0.397	-0.003	0.708
BG	0.004	0.006***	0.006	0.001***
BL	0.000	0.785	-0.001	0.015**
Observations	196		196	
Wald chi2	30.27		6.93	
Prob	0.00		0.00	
R-sq	0.204		0.229	

Level of Significance: ***p<0.01, **p<0.05, *p<0.1

Return on assets (ROA), board size (BS), proportion of outside directors (IND), women on board (*Women*), number of meetings per year (ME), percentage of meetings attended (MEA), total bank assets in millions (BSIZE), bank growth rate (BG) and bank leverage (BL)

adding year dummies in separate regressions. Table 4 reports the regression results of ROA as performance measure and all the other alternative performance measure (ROE, NII and Tobin's Q) are shown in Appendix 1. The specification test for the validity of dynamic model shows the desirable statistically significant AR (1) and statistically insignificant AR (2). The Sargan Test of instrument validity is insignificant for all the models which confirm the validity and choice of instrument variables. The Wald test is significant and quite high leading to all model fit.

The results confirm the significant negative relationship between board size and ROA. The estimate coefficient on BS is -0.042 and statistically significant at 1% level. The result is consistent with previous research (De Andres & Vallelado 2008; Hermalin & Weisbach 1998; Yermack 1996). Boards with many directors have to face multiple problems related to coordination, communication and decision making which effect the functioning of the banks. Thus, the result supports the sub hypothesis that.

LARGE BOARD SIZE HAS A NEGATIVE RELATION WITH BANK PERFORMANCE

The number of independent directors on board is negatively and statistically significant with performance of board. The estimate coefficient of board independence is (-0.003) and statistically significant at 1% level. The result supports the hypothesis that adding more independent directors to the board has a negative impact on the performance of the board. The result is consistent with previous studies (Bhagat Black 2002; Coles et al. 2008; Pathan 2013). It seems that the main aim of independent directors in banks is to keep an eye on regulatory compliance.

The result shows a positive and significant relationship between women on board with performance of bank. The estimated coefficient on women is (0.003) and statistically significant at 1% level. The result is also consistent with the findings of previous studies (Andres 2008; Pathan 2013). The result supports the hypothesis that there is a significant positive association between board gender diversity and financial performance. Thus presence of women facilitates with improved decision making by their superior communication skills and talent.

The Study observes a positive and statistically significant relation between the number of board meetings in a year and bank performance. The estimated coefficient is (0.018) and significant at 5% level. The result is in consistent with the previous studies (De Andres & Vallelado 2008; Liang 2013). Thus, the result supports the hypothesis that there is a significant positive association between the frequent board meetings and performance of banks. The increase in frequency of board meetings enables top management to become proactive and enhance the decision making ability by exchanging ideas frequently.

The study also reported a similar significantly positive relationship between meetings attended and performance of the banks. The estimated coefficient is (0.005) and statistically significant at 1% level. The result confirms the hypothesis that there is a significant positive association between the board meetings attended and performance of the banks. The increased attendance of the board members

TABLE 4. GMM estimation regression results

ROA	Coef.	p>|t|	Coef	p>|t|
BS	-0.042	0.006***	-0.048	0.049**
IND	-0.003	0.004***	0.001	0.047**
Women	0.004	0.036**	0.002	0.009***
ME	0.018	0.014**	-0.005	0.068*
MEA	0.006	0.000***	0.007	0.051**
BG	0.006	0.000***	0.004	0.009***
BL	0.000	0.005***	0.000	0.093*
BSIZE	-0.006	0.003***	0.055	0.002***
φ	0.701	0.000***	0.710	0.000***
Y08			-0.780	0.466
Y09			0.832	0.349
Y10			0.215	0.425
Y11			0.214	0.433
Y12			0.223	0.412
Y13			0.139	0.609
Y14			0.091	0.743
Wald	466.850	0.000***	94.340	0.000***
Sargan	23.178	0.985	14.893	1.000
AR1	-3.185	0.001***	-3.161	0.002***
AR2	0.759	0.448	0.309	0.758

Level of Significance: ***p<0.01, **p<0.05, *p<0.1

Return on assets (ROA), board size (BS), proportion of outside directors (IND), women on board (*Women*), number of meetings per year (ME), percentage of meetings attended (MEA), bank growth rate (BG, bank leverage (BL), total bank assets in millions (BSIZE), coefficient for lag of dependent variable (φ)

in the board meetings improves the discussions among top management to search for strategic options and discussions, which may subsequently enhance the bank performance. Coefficient for lag of dependent variable (φ) is positively significant. The controlling variables Bank growth rate, bank size and bank leverage showed a positive significant relation. This confirms that individual bank characteristics affect the board structure in banks. However none of the year dummy is statistically significant, which confirms that board characteristics are not affected by any of the particular year effect.

Further, the analysis has been repeated by using other performance variables, Return on Equity (ROE), Net Interest Income (NII) and Tobin's Q. There has been no significant difference in the results measured by these performance variables as shown in Appendix 1 and the original model. Appointment of new directors show a negatively significant relation with ROE and Tobin's Q as in the original model. For independence of board there is a positive significant relation with NII and Tobin's Q. However with ROE there is a negative significant relation for independence of board as in the original model which confirms that efficient boards are not affected by the presence of majority of independent directors. However, the banks require more skilled and knowledgeable executive directors whom can be complimented by non-executive director. There is significant positive relation between women on board and all alternative variables (ROE, Tobins's Q and NII). This implies that women work diligently as directors and are considered to be value relevant in board. Further both ROE and Tobins's Q show a positive significant relation with Meeting attended during the year. Coefficient for lag of dependent variable (φ) for the all alternative performance variable is also statistically significant as in the original model. The model has been estimated by controlling bank growth rate, bank size and bank leverage. The statically significant result for all the controlling variables shows that the institutional settings affect the board characteristics and composition in banks boards.

EXTENDED ANALYSIS AND ROBUSTNESS CHECK

The banks performance and board characteristics are also affected by different regulatory framework requirements and institutional characteristics across banks. The study also examines the impact of board characteristics (size, gender diversity, independence and number of meetings) on bank performance (NII) across different banks.

RESULTS FOR LARGE AND SMALL BANKS

In India, the large banks accounts for nearly 70% of the total banking assets, leading to heavily skewed. Thus there is a need to investigate, whether there is any difference for our findings on the impact of board characteristics on performance of banks between the large and small banks. Further, to address this bank size issue the relation between board characteristics and bank performance the equations are re-estimated using system GMM for the two group's namely large banks and small banks. The Large banks are defined as the banks whose total assets are above the 25th percentile of the sample banks that year. The remaining banks were defined as small banks. The regression results for the groups are reported in Table 5. The estimated coefficient on Board size (BS), the percentage of Independent directors (IND), and percentage of meeting attended by board members (MEA) are all statistically positively significant for large banks. However in case of small banks only the estimated coefficient for the percentage of independent director (IND) is statistically

TABLE 5. GMM estimator result of the board structure for small and large banks

Bank size	Small		Large	
NII	Coef.	p>|t|	Coef	p>|t|
BS	0.004	0.890	0.010	0.059*
IND	0.003	0.032**	-0.001	0.011**
Women	-0.001	0.635	0.000	0.258
ME	-0.009	0.440	0.004	0.258
MEA	-0.002	0.476	0.002	0.001***
BG	0.001	0.280	0.003	0.000***
BL	0.000	0.980	0.000	0.042**
BSIZE	0.040	0.666	0.328	0.001***
Cons	3.677	0.005***	1.796	0.000***
φ	0.603	0.000***	0.437	0.000***
Wald	220	0***	5121	0
Sargan	3.610	1.000	8.326	0.973
Ftest	0.320	0.577	1.360	0.248
AR1	-1.220	0.223	-1.489	0.136
AR2	1.346	0.178	-0.820	0.412

Level of Significance: ***p<0.01, **p<0.05, *p<0.1

Net Interest Income (NII), board size (BS), proportion of outside directors (NED), women on board (*Women*), number of meetings per year (ME), percentage of meetings attended (MEA), bank growth rate (BG), bank leverage (BL), total bank assets in millions (BSIZE), coefficient for lag of dependent variable (φ)

significant. Therefore, these results suggest that large banks have more impact of board characteristics on bank performance as compared to small banks. The first major reason may be because of competitive advantage of large banks on small banks which allows them to focus on good governance. The other reason is the intensive monitoring by regulators which force them to follow good governance in banks.

RESULT OF BANKS WITH HIGH AND LOW CAPITAL ADEQUACY RATIOS

The study also examines the impact of board characteristics on bank performance across banks on the basis of different capital adequacy ratios. The enforcement of capital adequacy requirement has a direct impact of regulatory pressure experienced by banks. Thus, banks with different capital adequacy ratio behave differently as they face different pressure for meeting the capital requirements (Q Liang 2013). The issue of different capital adequacy ratio is addressed by re-estimating Eq- (1) using two step GMM estimator for two groups: Low Cap and High Cap. The high Cap is defined as the banks whose capital adequacy ratio is above the median level of the sample banks. Those banks whose capital adequacy ratio is less than the median of the sample banks are defined as the Low Cap. Table 6 reports the sub-sample regression results. The result shows that for low capitalized banks the percentage of Independent Directors (IND), presence of women (women) and percentage of meeting attended by board members (MEA) is statistically significant at 5% and 10% level. The percentage of Independent directors (IND) is positively significant at 10% level for well capitalized banks.

The extended analysis shows that banks with different size characteristics have different impact of board characteristics on performance of banks. The bank board's plays a stronger role in large banks and banks with low capital adequacy ratios. The result confirms that board governance depends upon the bank characteristic also which is consistent with the previous research (Coles et al. 2008; Liang 2013).

CONCLUSION

The corporate governance mechanism plays an important role in banks due to its complex nature. The drastic measures to nurse the banks to sound health are rarely talked about and preference is given to the new financial regulations. However, regulations entail fresh problems for the corporate governance of banks. The painfully slow decision making by the boards is slowly taking a toll on the health of the banks in India. Banks boards are vital for bank governance monitoring managers or advising them in the design and implementation of strategies (De Andres & Vallelado 2008). The study examines the relationship between board characteristics (size, composition, gender diversity and board meetings) and performance of banks in India. Panel data of listed banks in India has been used from 2008 to 2014.

The study confirms that two step system GMM approach control the problem of unobserved heterogeneity and endogeneity as compared to the OLS and GLS approach. The results suggest that banks with small boards, boards with female members, and boards that meet more frequently tend to be more efficient and subsequently have a positive impact on performance of banks. Efficient boards are not affected by the presence of majority of independent directors. However, the banks require more skilled and knowledgeable executive directors whom can be complimented by non-executive director. Independent directors should enable discussions and debate and must

TABLE 6. Determinants of the board structure for low and high capital adequacy

Cap	Low		High	
NII	Coef.	p>|t|	Coef	p>|t|
BS	-0.002	0.832	-0.253	0.244
NED	-0.001	0.056*	0.009	0.024**
Women	-0.004	0.078*	0.001	0.653
ME	0.015	0.164	0.203	0.236
MEA	-0.002	0.041**	-0.004	0.459
BG	0.003	0.000***	0.003	0.085*
BL	0.000	0.384	0.000	0.369
BSIZE	0.005	0.003***	0.002	0.509
Cons	1.196	0.084*	-0.213	0.940
φ	0.88	0.000***	1.06	0.000***
Wald	5521	0.000***	12187	0.000***
Sargan	4.548	1.000	2.149	1.000
AR1	-2.211	0.027**	-1.118	0.264
AR2	0.924	0.355	1.053	0.292

Level of Significance: ***p<0.01, **p<0.05, *p<0.1

Net Interest Income (NII), board size (BS), proportion of outside directors (NED), women on board (*Women*), number of meetings per year (ME), percentage of meetings attended (MEA), bank growth rate (BG), bank leverage (BL), total bank assets in millions (BSIZE), coefficient for lag of dependent variable (φ)

facilitate independent judgment to the board. Thus such independent directors should be selected whose knowledge complements the ability of executive directors and not for merely conforming to regulatory requirements.

The analysis suggests that there is a need to diversify the board by employing more women director in Indian Banking sector. Gender Diversity Plan plays an important role in effective decision making in banks. At the same time, it is essential to have right person at the right job based on the specialization, qualification and experience requirements. It is essential to populate bank board with experienced and competent women who could meaningfully contribute to board performance

The study indicates that there should be an increase in the frequency of board meetings to make strategic board decisions or solve the problems of the firm, which subsequently improve the performance. Further it is emphasized that board meeting attendance, active participation, expertise required should be given high priority by the policy makers while making corporate governance policies.

The study also examines the relationship between bank boards and performance of board with different bank characteristics. The empirical results suggest that large banks and banks with high capital adequacy ratio have well governed board which is positively related to their performance.

To conclude, the findings suggest that banks with effective corporate governance mechanisms perform better as compared to the others. Bringing about effective adherence to the above parameters in the banking industry is the paramount responsibility of the banks' boards of directors and top management. It can be safely concluded that in the present form of board structure, with majority of part time and doubtful nominee directors and the irregular board meetings and the presence of absentee directors, the required justice towards effective governance is only possible if more emphasis is given towards effective governance practices. The board must accept the responsibility of any misgovernance if any and will have fixed accountability and absolute responsibility. The penal provisions concerning directors as enshrined in the Companies Act, 2013 may also be enforced.

The study suggests that it is essential to have good governance of banks in India as the health of banks in India is of concern due to alarming rise in frauds calling for an overhaul of the governance structure.

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Manmeet Kaur*
Research Scholar
Faculty of Management Studies
University of Delhi
E-mail: manmeetkbawa@gmail.com

Madhu Vij
Professor in Finance
Faculty of Management Studies
University of Delhi
E-mail: madhuvij@hotmail.com

*Corresponding author

APPENDIX 1. GMM estimation regression results for the determinants of the bank board structure

	ROE				NII				Tobin's Q			
	Coef.	p>|t|	Coef	p>|t|	Coef.	p>|t|	Coef	p>|t|	Coef.	p>|t|	Coef	p>|t|
BS	-0.955	0.023**	0.696	0.458	0.005	0.011**	-0.002	0.744	-0.004	0.004***	-0.014	0.078
IND	-0.041	0.143	-0.069	0.186	0.000	0.245	0.000	0.867	0.000	0.001***	0.000	0.193
Women	0.004	0.871	0.092	0.049**	0.000	0.881	0.001	0.411	0.000	0.293	0.000	0.065
ME	-0.146	0.340	-0.042	0.822	0.003	0.077*	-0.001	0.711	-0.004	0.000***	0.000	0.936
MEA	0.131	0.000***	0.082	0.126	-0.001	0.000***	-0.001	0.107	0.000	0.003***	0.000	0.837
BG	0.121	0.000***	0.126	0.000***	0.003	0.000***	0.002	0.000***	0.000	0.000***	0.000	0.102
BL	0.009	0.000***	0.007	0.226	0.000	0.386	0.000	0.186	0.000	0.055**	0.000	0.601
BSIZE	-0.124	0.000***	-3.758	0.039**	0.003	0.000***	-0.033	0.273	0.003	0.000***	0.007	0.206
φ	0.695	0.000***	0.541	0.000***	0.876	0.000***	0.521	0.000***	-0.13	0.000***	-0.48	0.000***
Y08			26.752	0.281			5.521	0.000***			1.014	0.000***
Y09			-30.323	0.211			-0.515	0.140			0.275	0.010
Y10			10.928	0.260			-0.103	0.170			0.221	0.003***
Y11			9.850	0.308			-0.023	0.751			0.239	0.002***
Y12			11.113	0.244			-0.006	0.929			0.220	0.004***
Y13			9.853	0.300			0.015	0.826			0.210	0.006***
Y14			7.663	0.441			0.046	0.551			0.218	0.007***
Wald	3427.120	0.000***	7723.960	0.000***			27360.700	0.000***	4812.250	0.000***	8174.040	0.000***
Sargan	25.301	0.966	11.248	1.000	20.106	0.996	14.020	1.000	19.587	0.997	10.828	1.000
AR1	-1.939	0.053	-2.073	0.038	-2.336	0.020	-2.685	0.007***	1.217	0.224	0.664	0.506
AR2	0.302	0.763	-0.195	0.845	1.718	0.086	1.235	0.217	-1.567	0.117	0.345	0.729

Level of Significance: ***p<0.01, **p<0.05, *p<0.1

Return on equity (ROE), Net Interest Income (NII), board size (BS), proportion of outside directors (IND), women on board (*Women*), number of meetings per year (ME), percentage of meetings attended (MEA), bank growth rate (BG), bank leverage (BL), total bank assets in millions (BSIZE), coefficient for lag of dependent variable (φ)