

DOES CORPORATE GOVERNANCE IMPACT BANK PERFORMANCE? -EVIDENCE FROM INDIA

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ABSTRACT-The purpose of this paper is to examine whether corporate governance (CG) mechanisms of Indian banks affect their financial performance. This study employs panel data models for a sample of 29 Indian banks that form part of the National Stock Exchange 500 index (NSE-500 Index) for the period 2009-2016. Ten board characteristics are considered as the proxy for CG of banks. Return on Assets (ROA) is assumed to be a proxy for financial performance of banks. Our work concludes that only one out of ten board characteristics, namely number of board members positively affects accounting performance of Indian banks (measured through return on assets). This study looks at a sample of twenty nine Indian banks over a period of eight years only, the findings of the study may differ, if different time period is considered. Further other corporate governance mechanisms such as characteristics of audit committee, stakeholder relations committee, nomination and remuneration committee and risk management committee are not considered for the study.

This paper adds to the domain of corporate governance by introducing a new measure for corporate governance of banks which is constructed by collecting the relevant data from the annual reports of the sample banks. Academia, hereafter, may employ the identified board related variables, as the proxy for CG of the banks. Further, managers of banks may improve their performance by taking cognizance of those board related parameters, which have an impact on their performance. To the best of the knowledge of the authors, no study in the literature has investigated the impact of CG on the performance of banks in India. Hence, the findings of the study has major implications both for academia and managers.

Keywords- Corporate Governance, Bank Performance, Board characteristics, Indian Banks

INTRODUCTION

Corporate Governance (CG) deals with the mechanisms, through which providers of capital and other stakeholders, control the managerial actions such that managers are motivated to maximize the wellbeing of the various stakeholders of the firm (Clarke, 1998; Cooper & Owen, 2007). Corporate governance is the system used to delineate the rights and responsibilities of the board, management, shareholders, and other stakeholders in a firm (Dong et al., 2017). The positive impact of corporate governance on the performance of the firms is documented by extant literature. For instance effective corporate governance results in higher profitability (Miwa, 2002; Orbay & Yurtoglu, 2006; Balasubramanian et al., 2010; Yasser, 2011; Francis et al., 2013; Ararat et al., 2017), lower cost of capital (Anderson et al., 2004; Ghouma et al., 2017), increased firm value (Klein et al., 2004; Setia-Atmaja, 2009; Cheung et al., 2011; Connelly et al., 2012; Nini et al., 2012), enhanced market liquidity (Prommin et al., 2014; Elshandidy & Neri, 2015), increased access to the credit market (Stulz, 1999 & Funchal & Montemor, 2016), better capital structure choice (Jiraporn et al., 2012), reduced information asymmetry (Healy & Palepu, 2001; Cormier et al., 2009; Dass & Massa, 2011), minimized managerial entrenchment (Anderson et al., 2004; Morellec et al., 2012), reduced default risk (Switzer, 2013; Calomiris, 2016), higher research and development investment (Zhang et al., 2014 & Chen, 2014), better crisis management (Essen et al., 2013 & Villanueva-Villar, 2016), and increased dividend payout (Pinkowitz et al., 2006 & Harford et al., 2008). Regulation and competitiveness have a role in shaping corporate governance mechanisms (Udayasankar & Das, 2007 & Claessens & Yurtoglu, 2013). Whereas in U.S., the Sarbanes Oxley Act lays down, a set of mandatory rules and regulations concerning the governance norms, other countries such as UK, have framed voluntary guidelines (Bruno & Claessens, 2010 & Zalewska, 2014). The Cadbury report lays down, a set of procedures for the appointment of directors to the board, who are responsible for the firm's control and governance mechanisms (Brown et al., 2011).

Amongst the developing countries, particularly in India, the CG reform process started as a response to scandals in equity markets, and firms disappearing with equity market participants' wealth (Narayanaswamy et al., 2012). The Securities and Exchanges Board of India (SEBI) was set up as a statutory body, in order to protect the well-being of minority shareholders (Singh, 2015). In 2000, the Kumar Mangalam committee formed by SEBI, submitted its proposals pertaining to CG (Deb, 2013). This led to the clause 49 being introduced with regulations pertaining to shareholder rights, management and discussion analysis, board procedures, as well as board composition norms (Kumar & Singh, 2012). The Narayanamurthy committee lays down, the rules for handling of independent directors sitting on the board (Kumar & Singh, 2012). With respect to risk management strategies, the committee lays down the norms for supervision, by the board, and its norms also dealt with disclosure, and audit standards (Narayanaswamy et al., 2012). Sound corporate governance is believed to be related with an appropriate level of corporate monitoring, and corporate performance (Cadbury, 1997; Helmers, 2017). Banks are increasingly being seen as opaque (Lassoued, 2016), and operating in a complex, and regulated environment (Andres & Vallengado, 2008; Mehran et al., 2011). In developed countries, bank efficiency (a quick and convenient way of bank's ability to turn resources into revenue) is assumed to

be a proxy for quality of financial development (Koetter & Wedow, 2010; Greenwood, 2013). An understanding of corporate governance, has an impact on the financial performance, as well as asset quality of banks (Augusto, 2016). Few studies, have examined the performance of banking sector in developing economies (Tecles & Tabak, 2010).

Corporate governance of these institutions is an important issue, keeping in mind the essential role that banks play in emerging economies, and the nature of the banking reforms that these economies have implemented (Deb, 2013). To the best of the knowledge of the researchers, no study has been undertaken with an objective of measuring the impact of corporate governance on performance of banks operating in India. The research questions that come to the fore are:

- Whether corporate governance affects the accounting performance of Indian banks? , and

Hence, the paper has the following objectives:

1) To introduce a new measure of corporate governance based on ten board characteristics using data reported by sample Indian banks in their annual reports.

2) To empirically investigate the impact of corporate governance on the accounting performance of Indian banks (measured through return on assets).

This work introduces a new measure of corporate governance, which attempts to measure corporate governance using data collected from the annual reports of Indian banks. Managers can improve the performance of banks, by taking cognizance of the relationship between board indicators, and financial performance of their banks. This study is based on data related to corporate governance, and accounting measure of performance of twenty nine Indian listed banks. Data is collected for eight financial years (2009-2016) using annual reports of the sample banks and CMIE Prowess, the database of Centre for Monitoring Indian Economy. The study concludes that, the corporate governance of Indian banks has a positive and significant impact on their accounting, and market performance. The uniqueness of the study is that it develops a new corporate governance measure, using CG reports disclosed by the sample banks in their annual reports. The remainder of the study is organized as follows: the second section deals with the literature review and the development of the theoretical framework. The third section presents the methodology conveying information about the sample selection, variables used and the model specification. Analysis and discussion of the results are presented in the fourth section. The fifth section concludes the study, and spells out the scope for further research.

LITERATURE REVIEW

Corporate governance affects investment, financing (Morellec et al., 2012), and dividend pay-out decisions (Officer, 2011). Several previous studies (Fauver et al., 2006; Beltratti & Stulz, 2012), have shown that good corporate governance practices improve organizational performance under stable economic conditions. Board characteristics, are considered to be a proxy for corporate governance (Boone et al., 2007; Andres & Vallelado, 2008). Early work on boards, by Smith (1776) and Berle & Means (1932) suggests that, directors are unable to monitor shareholder wealth. The board of a company is entrusted with the duty of monitoring the performance of the firm, on behalf of the shareholders (Acharya et al., 2011). Erickson et al. (2006) quotes that a "well constituted board with an optimum number of directors, can be effective in monitoring the management, and driving value enhancement for shareholders". It is the fiduciary responsibility of the board to advise managers on a regular basis, though in practice it is often ignored by the corporate board (Barroso et al. 2011). The monitoring function of the board is intended to address the agency problem between managers and shareholders (Tuggle, 2010), whereas the advising function refers to helping management with strategic initiatives (Faleye et al., 2011).

Financial system is aided by a set of intermediaries, who contribute to the functioning, and growth of markets (Levine, 2004). As per the modern theory of financial intermediation, liquidity creation is an essential role of banks (Berger & Bouwman, 2009; Fungacova, 2013). Banks are a special set of intermediaries as not everyone can sell, and distribute financial products (Beck, 2001). In countries with poor governance, the role of banks in alleviating the lack of access to credit has been demonstrated (Ogura, 2018). In developing countries, capital markets are not well developed, hence banks play a predominant role in providing capital to the firms (Sufian & Chong, 2008). What distinguishes banks from other firms is their capital structure, which is unique in the sense that banks' liabilities are largely in the form of deposits, and their assets mainly consist of loans with longer maturities (Macey & OHara, 2003). Banks are prudentially regulated, and highly levered (Pathan et al., 2008). They stimulate productivity growth through mobilization, and allocation of funds as well as lowering the cost of capital of firms (Levine, 2003). Bank managers and owners have various disputes over risk, and Leaven & Levine (2009) have demonstrated that the risk taking ability varies with the relative power of the equity holders within the CG structure of the banks. It becomes imperative to understand, whether bank performance is determined by bank-level governance, or country level governance, or both (Beltratti, 2009). Banks possess certain characteristics that are different from non-financial firms, which make it quite important, and relevant to undertake an exploration of differences in CG practices of banks (Macey, 2006). Evidence seems to suggest that informational asymmetries are larger with banks (Borio et al. 2001). It is to be noted that bank board of directors play an immense role in the execution of corporate governance while compared to non-banking firms, as banks have become larger, complex and more diversified. The literature consists of studies with mixed results on the association between corporate governance and bank performance. A number of studies, have established a positive relationship between board parameters, and bank performance (Crawford et al., 1995; Adams & Mehran, 2005; Pathan et al. 2007; Andres & Vallelado, 2008; Pathan et al., 2009; Belkhir, 2009; Lin & Zhang, 2009; Adams & Mehran, 2012). On the contrary, some studies highlight how corporate governance mechanisms may affect performance of banks adversely (Shehzad et al., 2010; Ferreira et al., 2010; Mehran et al., 2011; Bertray, 2012; Bopkin, 2013; Nyamongo & Temesgen, 2013; Berger, 2014). However, some researchers have concluded that these two variables are not related (Laeven, 2013; Nyamongo & Temesgen, 2013; Alemu & Negasa, 2015; Qian & Yeung, 2015; Srivastav & Hagendorff, 2015; John et al. 2016; de Haan et al. 2016).

Cornett et al.(2009) have related corporate governance mechanisms to improvements in performance, employing a sample of publicly traded U.S. commercial banks from 1994 to 2002. Based on a study of U.S. banking firms, over the period 1997-2011, CG positively impacts performance especially for banks with lower market capitalization (Pathan & Faff, 2013).

Pathan et al. (2007) in their study on thirteen Thai banks (during the period 1999-2003), indicate that board characteristics negatively influence bank performance. Ferreira et al.(2010) explained, how bank board characteristics negatively impact bank performance. For a sample of U.S. commercial banks, and saving companies, the risk taking behaviour of banks is studied, and it is established that CG adversely impacts bank performance, and that there exists differences between banks and saving institutions (Switzer, 2013).

The relationship between corporate governance and bank efficiency is studied for Malaysian listed banks, and it is pointed out that corporate governance mechanisms do not have a significant impact on their performance (Adnan et al., 2011). Jiang (2009) examines Chinese banks, during the period 1994-2005, and identifies the static selection, and dynamic governance effects concluding that the corporate governance effects of banks may have neither positive, nor negative impact on bank performance, as the static and dynamic effects of reforms differ. Beltratti & Stulz(2012) find no evidence for the existence of a relationship between corporate governance, and bank performance.

Therefore, this work aims to understand the theory of corporate governance in the context of banks, and its' relationship with bank performance. Sound corporate governance can protect the well-being of the depositors of the banks in general, and that of banks in emerging economies in particular, besides enhancing the wealth of their shareholders. The extant literature consists of a number of studies that have examined the impact of corporate governance on the financial performance of banks operating in developed nations. Few number of studies, have investigated the impact of corporate governance on performance of banks in developing countries. For instance, Berger et al .(2005) establish that corporate governance positively affects bank performance, employing data from Argentinian banks in 1990s .On the other hand, Love & Rachinsky (2007) ,in their study on 107 Russian banks, and 50 banks in Ukraine (2007) find that corporate governance has a second order importance, where bank performance is concerned. Jiang et al. (2012) reveal that corporate governance positively influences bank performance based on a sample of Chinese banks during the period 1995 to 2008. To the best of the knowledge of the researchers, the literature is silent on the examination of the relation between corporate governance and the performance of banks in India. Therefore, this study aims to investigate the impact of CG measured through board characteristics on the financial performance of Indian banks through the theoretical framework which is presented below.

Figure 1: Theoretical Framework



Statement of Research Hypotheses

Hypothesis: Corporate Governance has a positive impact on the accounting performance of Indian banks measured by return on assets.

Data and Methodology

This study investigates the influence of corporate governance on the performance of Indian banks. The initial sample consists of banks that are included in the National stock Exchange 500 index. While finalizing the sample, we have not included those banks, whose reports are not available during the period 2009-2016, and hence, the final sample contains 29 banks (see Appendix 1 for list of banks).

The data pertaining to corporate governance features of banks have been extracted from the annual reports of banks that are readily available on their respective websites. The data pertaining to the bank performance variables for the study has been sourced from CMIE Prowess, the database of Centre for Monitoring Indian Economy (Khanna & Palepu, 2000). This is a reliable source of information which many researchers have employed, as part of their empirical works (Mishra & Mohanty, 2014; Halder & Rao, 2015; Arora & Sharma, 2016 and Saravanan et al., 2017). This database contains detailed information about the financial statements of Indian listed firms, such as balance sheet, income statement and cash flow statements.

Dependent Variable

The dependent variable related to bank performance used by this study and their measurements are presented below. Return on assets (ROA) is defined as the ratio of profit after tax and interest to total assets (Aebi et al. 2012).

Independent variables

In order to understand the effect of CG on bank performance, we consider a set of ten corporate governance indicators. The following are the independent variables used by the study.

- 1) Proportion of non-executive directors is computed as the ratio of number of non-executive directors to the total board strength (Armstrong et al. 2014).
- 2) Number of board members is the total number of members on the board of directors of banks (Johl et al. 2015).
- 3) CEO Duality depicts the separation of the roles of the chairman and CEO and we assigned a dummy variable of 1 if CEO and chairman are separated and 0 if they are combined (Jizi et al. 2013).
- 4) Proportion of women directors is computed as the ratio of total number of women directors to total board strength (Abdullah et al. 2016).
- 5) Annual remuneration per board member is computed as the ratio of total salary of the board of directors to the board strength (Tremblay, 2003).
- 6) Annual remuneration per executive director is the ratio of the total salary of executive directors to the strength of executive directors in the board (Basu et al. 2007).
- 7) Annual remuneration per non-executive director is the ratio of the total salary of non-executive directors to the strength of non-executive directors on the board (Main, 1995; Murphy, 2009).
- 8) Number of board meetings is taken as the total number of board meetings in a year (Jizi et al., 2013).
- 9) Average no of meetings attended by directors is measured as the ratio of grand total of meetings attended by directors to the board strength (Chou et al. 2013).
- 10) Average number of boards served measures the multiple directorship aspect of the board and is measured by the ratio of the total number of boards each director serves on to the total number of directors on the bank's board (Barros et al. 2013).

Control Variables

Firm performance is affected by variables, such as age, (Anderson & Eshima, 2013) and size. Bank age is computed as the total number of years since inception date of the bank. Bank size is computed as the natural logarithm of the total assets of the bank (Qian & Yeung, 2015). Bank age and bank size are hence taken as the control variables for the study.

A number of approaches are available for panel data analysis. The most common approaches are ordinary least squares (OLS), fixed effects model (FEM), and random effects model methodologies (Greene, 2005). The OLS methodology as suggested by Wintoki (2012), is used in this study. OLS methodology is concerned with portraying and empirically examining the functional/causal relationship among variables (Bhounik, 2015). Multiple regression analysis is used after satisfying all five assumptions (i.e. the normality assumption, homoscedasticity assumption, linearity assumption, no autocorrelation assumption, and no multicollinearity assumption: see Appendix 2a, 2c). This study follows panel data methodology as employed by Matthews et al. (2007). Panel data has both cross sectional and time series elements, and is more informative allowing us to construct, and test more complicated behavioural models than pure cross section, or time series models (Baltagi, 2005). This study employs balanced panel data procedures, because sample contains data across banks, and over time. By combining cross sectional, and time elements, it is possible to address a broader range of issues, and tackle far more complex problems than would be possible with pure time series, or cross section alone (Brooks, 2008). Our present sample contains, data across banks, and over time and hence, there might be cross sectional effects on each bank or a set of banks. The models that are estimated using panel data are so specified that the heterogeneity among cross sectional units is taken care of (Baltagi, 2003). The tests conducted on the panel data include static panel data of fixed effects, and static panel data of random effects. A rigorous method of selection between fixed effects model, and random effects model is through the application of Hausman test (Bhounik, 2015). Hausman test helps in deciding, whether Fixed or Panel data model is suitable for the empirical analysis.

$$\text{Model I } ROA_{it} = \alpha + \beta_1 \text{AVERAGE_NO_OF_BOARDS_SER}_{it} + \beta_2 \text{AVERAGE_NUMBER_OF_MEETINGS_ATTENDED}_{it} + \beta_3 \text{CEO_DUALITY_SCORE}_{it} + \beta_4 \text{NO_OF_BOARD_MEETINGS}_{it} + \beta_5 \text{NO_OF_BOARD_MEMBERS}_{it} + \beta_6 \text{PROPORTION_OF_NON_EXECUT}_{it} + \beta_7 \text{PROPORTION_OF_WOMEN_DIRE}_{it} + \gamma_1 \text{BANK_AGE}_{it} + \gamma_2 \text{L_BANK_ASSETS}_{it} + \varepsilon_{it}$$

Where;

ROA refers to Return on Assets,

AVERAGE_NO_OF_BOARDS_SER refers to the average number of boards each director serves on

AVERAGE_NUMBER_OF_MEETINGS_ATTENDED refers to the average number of meetings attended by each director

CEO_DUALITY_SCORE refers to the separation of the roles of the chairman and CEO for the banks

NO_OF_BOARD_MEETINGS refers to the number of meetings of the bank's board in a year

NO_OF_BOARD_MEMBERS refers to the strength of the board.

PROPORTION_OF_NON_EXECUT refers to the proportion of non-executive directors on the bank's board

PROPORTION_OF_WOMEN_DIRE refers to the proportion of women directors on the bank's board.

The control variable BANK_AGE refers to age of the particular bank and L_BANK_ASSETS refers to logarithm of bank assets.

Note that, the study has excluded three independent variables namely, annual remuneration per board member, annual remuneration per executive board member, and annual remuneration per non-executive board member because they lead to the

problem of multicollinearity(refer Appendix 2c) .Hence, the study has employed seven board characteristics, as the proxy for corporate governance.

Results and Discussion

This section presents the various estimation results.

a) Descriptive Statistics

Table 1.1 presents the descriptive statistics of corporate governance indicators of the sample banks. We can observe from the table that, the mean annual remuneration of the non-executive directors of the sample banks is Rs 2,15,243.3, and the standard deviation for the same is Rs 4,80,186. The mean annual remuneration of the executive directors is Rs. 7,38,052.6, and the standard deviation is Rs 14,94,014. The mean annual remuneration of the board is Rs 9,53,295.9, and the standard deviation for the same is Rs. 18,98,218. The board members serve on an average 1.756 banks, and the average attendance in board meetings conducted by sample banks is 87% .The average score for CEO duality is 0.52. The sample banks have conducted on an average 12.70 board meetings per year .The sample banks have a mean number of board members of 11.06, and the average proportion of non-executive directors is 0.77. The average proportion of women directors, for the sample banks is observed to be 0.07. Standard deviation of the variables can be observed from table 1.1. As seen from table 1.1, the distributions of average number of meetings attended, CEO Duality_Score, and proportion of non-executive directors are negatively skewed. On the other hand, the distributions of annual remuneration per non-executive director, annual remuneration per executive director , annual remuneration per board member, average number of boards served ,number of board members , number of board meetings and the proportion of women directors are positively skewed. The values of kurtosis for annual remuneration per non-executive director, annual remuneration per executive director and the annual remuneration per board member are high, thus indicating departure from normality. The average number of boards served, average number of meetings attended, number of meetings conducted and the proportion of non-executive directors exceed three, and hence, represent minor departure from normality. Whereas, the distributions of CEO Duality and proportion of women directors have kurtosis values less than three, indicating lighter tails. The coefficient of variation for the independent variables can be observed from table 1.1.

Table 1.1
Descriptive Statistics for independent variables (Board Characteristics)

	ARNED	ARPE	ARPB	ANBS	ANMA	CDS	NBME	NBM	PNED	PWD
Mean	215243.3	738052.6	953295.9	1.756626	0.871255	0.517241	12.69828	11.06897	0.772452	0.07229
Median	111751.4	393939.6	505939.1	1.3465	0.88405	1	13	11	0.777	0.083
Maximum	5229797	14816397	17786791	7.3	1	1	28	19	1	0.222
Minimum	0	25755	31781.53	0	0.52	0	4	7	0.3636	0
Standard Deviation	480186.3	1494014	1898218	1.583273	0.077955	0.50078	4.304875	2.009	0.092076	0.06125
Skewness	6.961531	6.240804	5.972309	1.240555	-1.015265	-0.069007	0.473509	0.47945	-0.548747	0.27956
Kurtosis	61.6958	48.76969	44.13213	4.176223	4.442335	1.004762	4.244107	3.845078	4.204763	2.26277
COV	223.09002	1	8	8	7	3	3	2	11.919968	5

From Table 1.2, we can observe that, the average return on assets for the sample banks is 0.79%. The standard deviation for the same is 0.63%. The sample banks have an average age of 73.94 years with a standard deviation of 35.26 years. The log of assets for sample banks has a mean of 6.19, and a standard deviation of 0.46. As seen from table 1.2, the distributions of ROA, logarithm of bank assets and bank age are negatively skewed. The kurtosis for ROA is close to five, hence, it is non normal. Whereas, log of bank assets, and bank age have kurtosis values less than three, indicating lighter tails.

Table 1.2
Descriptive Statistics for the dependent variables and control variables

Descriptive Stat	Bank_Age	L_Bank_Assets	ROA
Mean	73.944	6.18676	0.00785
Median	81.5	6.25042	0.00738
Maximum	151	7.43322	0.01759
Minimum	6	5.02155	-0.0199
Std Dev	35.2634	0.45927	0.00626
Skewness	-0.31723	-0.08463	-1.04603

Prior to estimation, we performed a number of diagnostic tests which aid in the model selection and accuracy of the estimated parameters. The Durbin Watson statistic, which is 0.93 for model 1, and 1.03 (see table 4.2 and table 5.2). The results from Panel-data unit root tests using the Levin Lin Chu method indicate the absence of unit roots (refer Appendix 2B). Because the Levin Lin Chu test states that the ratio of number of panels to time periods approaches zero asymptotically, it is quite suitable for our current dataset. We find evidence against the null hypothesis of a unit root as suggested by Baltagi (2003), and therefore, conclude that our data is stationary. Further, variance inflation factor analysis was done for all independent variables used by the study to check for multicollinearity. The test scores range from 1 to infinity and values greater than 10 are indications of severe

multicollinearity problems (Baltagi,2012).The values obtained by our results indicate lower levels of multicollinearity(See Appendix2C).

Correlation Analysis

To avoid the possibility of spurious regression coefficients from the presence of multicollinearity in the regressors, pairwise correlation was run .The Pearson pairwise correlations are calculated for the dependent, independent and control variables. From table 2, it is evident that,the proportion of non-executive directors is negatively correlated with the annual remuneration per executive director (-0.217**) at 1% significance level. The number of board members on the one hand, is negatively correlated with the annual remuneration per board member (-0.134*), and the annual remuneration per executive director (-0.142*) at 5% significance level, on the other hand, it is positively correlated with the number of board meetings (0.195**) ,and negatively correlated with the annual remuneration per non-executive director (-0.189 **) at 1% significance level. The CEO Duality variable is negatively correlated with the number of board meetings(-0.206**) at 1% significance level .The number of board meetings is positively correlated with the annual remuneration per executive director(-0.215**),the annual remuneration per non-executive director(-0.253**), and with the number of board members(0.195**) at 1 % significance level and it is negatively correlated with the average number of boards served(-0.538*), and with the proportion of women directors(-0.190**) at 1% significance level. The average number of meetings attended is negatively correlated with the average number of boards served(-0.265*) at 5% significance level .Also, the average number of boards served is positively correlated with the annual remuneration per non-executive director(0.161*) at 5% significance level, and it is negatively associated with the number of board meetings(-0.538**) at 1% significance level. The proportion of women directors is negatively correlated with the number of board meetings (-0.190**) at 1% significance level, and with the average number of boards served(0.156*) at 5% significance level. The results given in table2 indicate that, most correlations excepting the annual remuneration per executive director, the annual remuneration per non-executive director, and the annual remuneration per board member have strong correlation values(0.213**,0.434** and 0.795**). In order to avoid statistical inconsistency, we construct the panel with seven of the ten corporate governance variables originally proposed ,omitting the annual remuneration explanatory variables(refer Appendix 2c).

Table 2 Correlation coefficient matrix

Column1	ROA	ARPB	Proportion of non executive directors	ARPE	ARPNED	No of board members	CEO Duality_score	No of board meetings	Average no of meetings attended	Average no of boards served	Proportion of women directors	l_bank_assets	bank_age
ROA	1	0.081	0.069	0.105	.180**	-0.011	.204**	-.313**	-.141*	.342**	0.007	-.193**	-.404**
ARPB	0.081	1	0.061	.213**	.434**	-.134*	-.068	-0.118	0.06	0.07	-0.078	0.021	-0.116
Proportion of non executive directors	0.069	0.061	1	-.217**	0.082	-0.064	0.031	0.051	0.08	-0.126	-0.021	-.409**	0.037
ARPE	0.105	.213**	-.217**	1	.795**	-.142*	0.019	-.215**	-0.062	0.124	.132*	.134*	-.235**
ARPNED	.180**	.434**	0.082	.795**	1	-.189**	-0.007	-.253**	-0.037	.161*	0.097	0.05	-.282**
No of board members	-0.011	-.134*	-0.064	-.142*	-.189**	1	-0.049	.195**	-0.081	0.106	0.081	.296**	0.074
CEO Duality_score	.204**	-.068	0.031	0.019	-0.007	-0.049	1	-.206**	0.025	0.055	0.018	-.165*	-0.068
No of board meetings	-.313**	-0.118	0.051	-.215**	-.253**	.195**	-.206**	1	0.039	-.538**	-.190**	-.141*	.601**
Average no of meetings attended	-.141*	0.06	0.08	-0.062	-0.037	-0.081	0.025	0.039	1	-.265**	0.065	-0.128	0.061
Average no of boards served	.342**	0.07	-0.126	0.124	.161*	0.106	0.055	-.538**	-.265**	1	.156*	.345**	-.598**
Proportion of women directors	0.007	-0.078	-0.021	.132*	0.097	0.081	0.018	-.190**	0.065	.156*	1	.243**	-.196**
l_bank_assets	-.193**	0.021	-.409**	.134*	0.05	.296**	-.165*	-.141*	-0.128	.345**	.243**	1	-0.096
bank_age	-.404**	-0.116	0.037	-.235**	-.282**	0.074	-0.068	.601**	0.061	-.598**	-.196**	-0.096	1

The values for heteroskedasticity for the OLS estimator for model 1 are high (See Appendix 2a).Thus we employ robust regression, as an alternative to least squares regression. When errors are found to be heteroskedastic, robust regression handles the violation of OLS assumptions, and does not get overly affected by the violations. We can observe from table 3.1 that only one out of the seven corporate governance indicators namely, the average number of boards served impacts the accounting performance of banks measured through ROA.

In addition to this, the coefficient for the average number of boards served is 0.0009, hence indicating that ROA increases by 0.09% for an increase in the busyness of the board. This is in line with the findings of Jackling & Juhl,(2009).We can also observe that, the bank age, and the bank size have a significant, and negative impact on ROA of the banks .The other six independent variables are observed to be insignificant in determining the accounting performance of Indian banks. Further, the entire model is significant at 1% significance level (see Table 3.1). Therefore, hypothesisH1 is partially accepted based on the results of robust regression estimation.

Table 3.1
Robust regression results for Model 1

Robust regression				
F(9, 222) = 12.40				
Prob > F = 0.0000				
ROA	Coef	Std. Err.	t	P> t
PNED	0.0012721	0.0035995	0.35	0.724
NBM	-0.0001052	0.0001647	0.64	0.523
CDS	0.0010166	0.0006292	1.62	0.108
PWD	-0.0070899	0.0052086	-1.36	0.175
NBME	-0.0000551	0.0000973	-0.57	0.571
ANMA	-0.0062091	0.0040603	-1.53	0.128
ANBS	0.0009687	0.0002763	3.51	0.001
bank_age	-0.0000425	0.0000119	-3.57	0
l_bank_assets	-0.003317	0.0008341	-3.98	0
_cons	0.0367552	0.0076023	4.83	0

Panel data analysis of this study may be conducted through the Fixed Effects, and Random Effects models.To make this decision, we employ the specification test ,proposed by Hausman (Hausman,1978),which is based on the difference between, fixed and random effects estimators(Baltagi,2011).The Hausman test may help to detect,if the original least squares estimator employed is likely to fail, because of presence of correlation between the predictor variables and the error terms(Hair etal.2010).We conduct the Hausman test(refer Table 4.1) to determine whether return on assets may be modelled with Random effects, or Fixed effects model.Based on the value of the Hausman test statistic, the Random Effects model (REM) is more appropriate for the Return on Assets estimation (model 1).

We can observe from table 4.2 that, there is a positive and significant relationship between the number of board members and the return on assets of the sample banks. With the Random Effects Model panel estimation, the number of board members is the only CG variable that determines the accounting performance of Indian banks .The coefficient of the number of board members is 0.0003, which indicates that the ROA increase by 0.03 % for every 1 unit increase in number of board members. The result is in support of previous studies which reveal that, larger boards benefit the banks as they bring in a wealth of expertise (Haniffa&Hudaib, 2006). We can also observe that the bank age has a significant and negative impact on ROA, while the bank size does not impact the accounting performance of Indian banks. The other six independent variables are observed to be insignificant in determining the accounting performance of Indian banks (see Table 4.2).As we can see from table 4.2, the r^2 value for the model is 0.3944, thus indicating that 39.44 percent of the variation in ROA is explained by the identified corporate governance variables.Further, the entire model is significant at 1% significance level (see Table 4.2). Therefore the hypothesis H1 is partially accepted as per the results of the panel data analysis.

Table 4.1 Results of Hausman Test

Hausman Test			
Correlated Random Effects -			
Test cross-section random effects			
Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	17.340421	7	0.0153

Table 4.2
Results of random effects panel estimation for model 1

Method: Panel EGLS (Cross-section random effects)		
Dependent Variable: ROA		
Sample: 1 232		
Periods included: 8		
Cross-sections included: 29		
Swamy and Arora estimator of component variances		
Variable	Coefficient	Std. Error
C		
ANBS	-0.000393	0.000266
ANMA	-0.00216	0.003277
CDS	0.001461	0.000908
NBME	-0.000144	9.98E-05
NBM	0.000339	0.00014
PNED	0.001398	0.002978
PWD	0.005351	0.004258
L_BANK_ASSETS	-0.000271	0.001216
BANK_AGE	-6.62E-05	1.69E-05
R-squared	0.394472	
F-statistic	8.753871	

Notes:

ARPNED is the average remuneration per non-executive director.
 ARPED is the average remuneration per executive director.
 ARPBM is the average remuneration per board member
 ANBS is the average number of boards served per board member.
 ANMA is the average number of meetings attended per board member
 CDS is the CEO Duality Score
 NBME is the number of board meetings conducted.
 NBM is the number of board members
 PNED is the proportion of non-executive directors
 PWD is the proportion of women directors
 Bank_Age is the age of the bank measured since the date of inception
 L_Bank_Assets is logarithm of the total assets of the bank
 ROA is the ratio of (Profit after tax of the bank/Total Assets of the bank)

The present study has measured corporate governance of Indian banks using data reported by them in their annual reports for ten board characteristics namely, the annual remuneration per board member, annual remuneration per executive director, annual remuneration per non-executive director, proportion of non-executive directors, number of board members, CEO duality, proportion of women directors, number of board meetings, and the average number of meetings attended. The research work has used both accounting in order to, investigate the impact of corporate governance on the performance of Indian banks. This study concludes that, only one out of ten board characteristics, namely number of board members positively affects the accounting performance of Indian banks (measured through return on assets). This means that larger boards contribute positively to the enhancement of accounting performance of the Indian banks.

CONCLUSION, IMPLICATIONS AND SCOPE FOR FURTHER RESEARCH

The contribution of this study to the domain of corporate governance, and bank performance are many folds. Firstly, this study measures corporate governance through perusal of annual reports of the sample banks, and considers ten characteristics of the boards as proxies for corporate governance. Researchers hereafter may use these variables, as proxy for corporate governance in their research works. Finally, Indian banks may improve their ROA, through increase in board size.

As the current study looks at a sample of twenty nine Indian banks over a period of eight years only, the results of the study may differ, if time window is enhanced. In addition to this, other corporate governance mechanisms (for instance characteristics of

audit committee ,nomination and remuneration committee, stakeholder relations committee, corporate social responsibility committee, risk management committee and so on) could be considered. Further, research can be carried over, on the relationship between corporate governance and other financial decisions such as dividend payouts and capital structure decisions of the banks. This study can be extended to other sectors of the economy apart from the banking sector.

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- Appendix
- Appendix 1
- List of Banks

• Allahabad Bank
• Andhra Bank
• Axis Bank
• Bank Of Baroda
• Bank Of India
• Canara Bank
• City Union Bank Ltd.
• Corporation Bank
• Federal Bank Ltd.
• ICICI Bank Ltd
• HDFC Bank Ltd
• Indian Bank
• Indusind Bank
• Indian Overseas Bank
• Jammu and Kashmir Bank
• Laxmi Vilas Bank
• Karnataka Bank
• KarurVysya Bank
• Kotak Mahindra Bank
• Oriental Bank of Commerce
• Punjab National Bank
• South Indian Bank
• State Bank Of India
• Syndicate Bank
• UCO Bank
• Union Bank of India
• United Bank of India
• Vijaya Bank
• Yes Bank

- Appendix 2 A
- Test for heteroscedasticity
- ROA:

• Breusch-Pagan / Cook-Weisberg test for heteroskedasticity	•	•
• Ho: Constant variance	•	•
• Variables: fitted values of ROA		
•	•	•
• chi2(1)	•	= 4.84
• Prob> chi2	•	= 0.0278

- Appendix 2 B
- Panel-Data Unit-root test

Variable	Levin Lin Chu statistic	Probability
PROPORTION_OF_WOMEN_DIRE	-15.1165	0.0000
PROPORTION_OF_NON_EXECUT	-8.56326	0.0000
NO_OF_BOARD_MEMBERS	-12.0021	0.0000
NO_OF_BOARD_MEETINGS	9.10198	0.0000
AVERAGE_NO_OF_MEETINGS_ATT	-7.73284	0.0000
AVERAGE_NO_OF_BOARDS_SER	-4.33972	0.0000
ROA	2.00429	2.00429

Appendix 2 C
Test for multicollinearity

Variable	VIF	1/VIF
ARPED	56.27	0.017771
ARPNED	55.74	0.017941
ARPBM	55.74	0.017941
ANBS	2.15	0.465785
CDS	1.11	0.902655
NBME	1.96	0.510767
PNED	1.56	0.641980
NBM	1.26	0.795952
PWD	1.14	0.873619
ANBA	1.12	0.893554
bank_age	2.02	0.494505
l_bank_assets	1.65	0.606420
Mean VIF		11.45

