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The Effect of Corporate Governance on the Performance of Indian Banks

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Abstract:
Making use of the functioning of a sample of forty Indian banks, a comprehensive set of board characteristics (board size, number of meetings held in the past year, executive overlaps, busy directors and women directors)was explored and their impacts on the performance of the bank was analysed. Regressive iteration was used to determine the relevance of these parameters on each of several performance indicators namely return on assets, return on equity, return on long-term funds, earnings per share and price/book value.The findings conclude that the board of directors plays an extremely significant role in the return fetched by the bank on long term funds, but the significance (although still valid) decreases, within the domain of this study, in other performance indicators.

1. Introduction

The Indian banking sector plays a role of prime importance in the context of the Indian economy. The domestic credit as a percentage of the GDP has grown substantially in the past decade and the exposure of Indian banks to the financial crisis of 2008 was greatly limited owing to the conventional policies of the Reserve Bank of India (RBI). The crisis resulted from regulators easing their grip over financial corporations, thereby leading to the high risk power-play of assets.

The significance of this sector is even more so realised when considering the inflation rates that grip the country year after year. Controlling these rates would require a substantial raise in credit, especially for the banks operating within the public sector domain. With several pieces of research already analysing how the banking industry has been, and will be influenced by factors such as the 2008 financial crisis, the Eurozone fiasco, the Basel III implementation, the Union Budget and other government initiatives, both national and international, it becomes imperative to comprehend the components of a typical bank and how each component affects the bank's performance, and to what extent.

1.1. Challenges Faced by Indian banks

As mentioned before, Indian banks, the dominant financial intermediaries in the country, have progressed leaps and bounds in the past few years, as is made evident by a good deal of on-paper parameters like annual credit growth, profitability and gross non-performing assets (NPAs) trends.

Several aspects play compartmentalised and contextualised roles in making a given bank succeed. Of these, factors like internal capital generation, active capital markets, government support etc. are easily quantifiable and hence comprehensive. However, matters like the board fluidity, confidence in strategies, interplay between members within the board and between board members and the hierarchical team network of the bank, are relatively intangible even though they play an equally important role in enabling the bank to deal with challenges and hurdles. It is such intangible facets stemming from the board composition that this paper seeks to tackle.

Currently, Indian banks face several challenges, including but most certainly not limited to:-

- Increasing interest rates on saving deposits
- Deregulation of interest rates on saving deposits
- Tighter monetary policy
- Large Government deficit
- Increased stress in specific sectors (for e.g. microfinance, airlines, state utilities etc.)
- Restructured loan accounts
- Unamortised pension/gratuity liabilities

- Increasing infrastructure loans
- Implementation of Basel III

In addition to these, there also exist several asset quality challenges:-

- *Spill-over from the 2008-09 restructuring window*: As part of the RBI's allowance of a restructuring of corporate and commercial real estate advances, banks mostly allowed deferment of principal repayment by eligible borrowers. What this essentially implied was that several corporate borrowers were open to take advantage of the scheme without necessarily having weak credit profiles.
- *Exposure to State Utilities:* The exposure of banks to state utility sectors like power and water has increased manifold in the past decade. But owing to the poor financial health of State utilities, such sectors are unlikely to gain pace swiftly aand would thus find it difficult to service debt on time, with loans given to fund their cash losses encompassing as much as 30-40% of the banks' total utility exposures. Further, any reduction in credit flow from the banking system to such entities could potentially trigger defaults.
- *Credit loss from exposure to micro-lending institutions:* This results in a substantial drop in collection efficiency.
- *Increase in gross NPA percentage:* Accruing from exposure to State power utilities, airlines, micro-lending institutions etc., a consistent increase in the sector's collective non-performing assets has increased the vulnerability of banks in the past few years.

If this wasn't enough, the overall credit profiles of borrowers can weaken due to a large number of factors that are far more generic in nature and pose hurdles that can potentially buckle the entire banking sector if not tackled efficiently across all levels of the bank hierarchy:-

- Moderation in demand
- Compression of operating profitability resulting from cost pressures
- Higher interest rates
- Dormant capital markets and the resulting refrain in equity access
- Inability of companies to pass on higher costs
- Delays in project implementation
- Low profitability of new projects funded with relatively higher leveraging
- Risks associated with fuel linkages in the power sector
- Counterparty risks
- Unamortized pension/gratuity liabilities
- Increased capital requirements in order to meet Basel III norms

The idea behind highlighting such a wide range of hurdles faced by the Indian banking sector today is to demonstrate the need to ensure quality functioning at all levels of the banks.

Hence, the board of directors, with whom lie responsibilities ranging across selection of competent executive officers, effecting supervision of bank affairs, adoption and adherence to sound policies and goals, avoidance of self-serving practices, awareness of the bank's financial conditions and management policies, maintenance of reasonable capitalization, compliance with banking laws and regulations and many more, is as important a factor as any in governing the direction that a bank takes. We thus focus on the certain aspects of the board composition and investigate their impact on the bank's fate through measurable performance indicators.

1.2. Board of Directors

Among these components, a bank's board would perhaps factor in at one of the highest priority levels in terms of worth in a bank's structure. *The 5th ICC Banking Summit, Kolkata* report (KPMG – 2013) conclusively shows how over the past few years, the Indian banking sector has displayed a formidable level of resilience in the face of issues like high domestic inflation, consistent depreciation of the rupee and considerable fiscal uncertainty in the international sectors of the US and Europe. The RBI has no doubt adopted several policy measures in order to stimulate the Indian economy and support the sector's growth, but the role that the boards have played across major players both in the public and private sector cannot be ignored.

The financial crisis has revealed in the past that management at certain financial institutions, with the knowledge and approval of their boards, took decisions and implemented actions that resulted in terrible outcomes for all stakeholders across employees, customers, shareholders and the economy in general.

Qi Liang et al (2013) reveal that the board of directors has thus shown to play a massive role in the fate of financial institutions (albeit the Chinese context), especially banks. It plays a pivotal role in bank governance through its control over the two prime factors that ultimately decide the extent of the institution's success (or failure): the choice of the strategy that drive's the bank's functioning and the assurance that the skills required to implement this very strategy are in place.

Ernst & Young's Group of Thirty report illustrates the essential tasks that typical well-functioning boards must perform:-

- Facilitate effective leadership that ensures collaboration across the board.
- Recruit a balance of expertise, skills, experience, independent ideation and fresh perspectives.
- Build a nuanced and wide understanding of all matters concerning the bank's risk capacity, strategy, conduct and resiliency.
- Gauge top talent in the firm starting right from the Chief Executive Officer (CEO)
- Focus on sustainable success and take into account long-term stakes

- Respect the distinction between the responsibilities of the board and the managements
- Reach coherent agreement with the management on consistent strategies.
- Question and challenge the management at strategic points to ensure adequate debate and discussion over all strategic proposals, risk policies and operational issues.
- Monitor organisational compliance with all applicable laws and regulations.
- Regularly asses the board's own effectiveness with the assistance of external advisors.

It is along these lines that we approach this paper, and even within the characteristics of the board of directors, we focus on a few key parameters that are usually not exposed to adequate analysis and assessment in order to give way to an articulate conclusion on the same. The parameters that we have explored keeping these considerations in mind include:-

- Board Size
- Number of women directors
- Number of busy directors
- Number of executive directors
- Number of meetings held by the board in the financial term ending 2013

The philosophy behind focussing on these parameters in order to gauge the impact control in terms of the performance indicators is to try and decipher the internal composition and interplay that exists within a board. Factors like the number of dual/external directors, role played by women in the board, and the number of times that the board members meet and discuss their strategies and assessments, contain within themselves a large multitude of several intangible and invisible parameters like the confidence of the members in their strategy, the trade-off between experience of the board and the time commitment towards the firm in consideration, the fluidity and transparency in interaction and the like (James Booth et al – 2001). These are factors that cannot be quantified in the truest sense of the term and have therefore not been adequately scrutinized in past studies.

2. Literature Review and Hypothesis Development

2.1. Literature Review

It would not be an understatement to say that the impact of the board of directors on the firm performance is underexplored even in developed countries like the US. From an international perspective, research has been mostly focused on factors like independence of board, size of boards and the number of meetings held.

Pi and Timme (1993) have used a sample space of commercial banks operating in the US from 1987 to 1990. They report that the banks' cost efficiency and the Return On Assets have a negative correlation with CEO-Chairman duality i.e. the same person being both the Cheif Executive Officer and Chairman of the company. They also report that these two indicators are unrelated to block shareholder ownership as well the proportion of independent directors. An independent director being someone who does not have any material or pecuniary relationship with the company/directors. (Independent Directors Under Companies Act, 2013 – Boon Or Bane http://www.mondaq.com/india/x/296148/Corporate+Governance/Independent+Directors+Under+Companies+Act+2013+Boon+Or+Bane (accessed April 10, 2014)). Booth et al. (2002) report that with the increase in insider ownership, the proportion of independent directors decreases and the CEO-Chairman duality is less likely to occur. Andres and Vallelado (2008) provide an international perspective on things by using a sample of 69 boards of directors of large commercial banking firms from Italy, France, Spain, the UK, Canada, and the United States from 1995 to 2005. They find that board meetings have a significantly positive relation with banking performance and factors like the board size and the proportion of outside directors have an inverted U-shaped relation with performance indicators.

Pathan (2009) works on a sample of around 212 large US bank holding companies in the period 1997 to 2004 and reports that banks with smaller and less restrictive boards have a positive impact on their risk taking abilities. Cornett et al. (2009) examine the impact of certain board structures on the earnings management in the US from 1992 to 2002. They report that board independence significantly constrains management of earnings. Adams and Mehran (2012) have used a sample of 35 publicly traded BHCs in the United States over a period of 1986–1999 to examine relationships between governance and performance. They too report that board size is positively correlated with performance.

Other recent studies attempt to further probe the issue of corporate governance in Asia. Boubakri et al. (2003) examine corporate governance features of Asian firms that have been newly privatised. Chinese literature on the topic seems to be more mature as compared to India. Using a panel data of 87 Chinese banks from 1997 to 2004 García-Herrero et al. (2009) find that less concentrated banking ownership significantly increases bank profitability. Fu and Heffernan (2009) focus on the relationship between performances in China's banking system and market structures from 1985 to 2002 and find that the joint-stock banks have higher X-efficiency and profitability as compared to the state-owned banks. For State operated commercial banks, Jia (2009) provides evidence that lending has been risky but more prudent over time based on a sample of 14 Chinese banks from 1986 to 2003.

Lin and Zhang (2009) also affirm that SOCBs are the worst performers in terms of simple measures of profitability, efficiency and, asset quality on a panel of Chinese banks from 1997 to 2004. The existing literature on bank corporate governance in India too is limited. Reddy recommended in 1998 that the positions of managing director and chairman would need to be vested in one person, unlike the private sector. Abhiman Das et al. (2004) use data on banking systems for the period 1996- 2003 and find that CEOs of poorly performing banks are more likely to face higher turnover than the CEOs of well performing ones. The study aims at extending

the existing perspectives on corporate governance by including vital parameters characterising the board and provide new insights into their impacts on firm performance.

2.2. Hypothesis Development

Past research has pointed out that the board of directors and corporate governance in general will tend to play a far more significant role in determining the performance of firms in the banking sector than in industries that are not regulated to that effect. This accrues out of a variety of factors. Primarily, the lack of transparency in the nature of the business exacerbates the information asymmetry in this sector and makes monitoring even more difficult. Further, regulators can always be perceived as additional third-party interveners running after their own interests, making regulation a governance problem rather than an administrative necessity.

As is being made gradually obvious, we have highlighted the importance of the banking sector, in a generic as well as the Indian context, and that of the board of directors within the sector. In this paper we seek to explore the extent to which certain characteristics applicable to the board of directors of a bank affect the performance of the same.

For the purpose of this study, our hypothesis is this: The board of directors, through its size, composition and internal structure, in the Indian banking system plays an important role in supervising bank management and deciding bank performance. Our aim will be to first, prove or disprove this hypothesis and second, establish its accuracy for each performance indicator.

We shall examine the correlation, whether positive or negative, for various parameters in this regard with the performance indicators, and then mathematically determine the relevance of these results. Simply put, if a parameter, say, number of meetings held, yields a positive coefficient with respect to a performance indicator, say, return on assets, then this implies that a greater number of meetings would yield a higher return on assets.

Further, if the linear regression results in a 5 percent error in this analysis, this would imply that in a sample of 100 random data sets, only 5 cases would follow this particular correlation trend and hence, the obtained result isn't simply a coincidence. On the other hand, a 60% error would imply that 60 of those 100 random data sets would yield that correlation and hence, no certifiable conclusions can be drawn from our results.

Specifically, we inspect a comprehensive set of five board characteristics that might affect the incentives and abilities at the disposal of a bank's directors to effectively advise and monitor the bank's management:-

- *Board Size:* Large corporate boards might result in less efficacy due to problems in coordination, control and swiftness in decision-making (Jensen – 1993). On the other hand, larger boards may improve firm performance by bringing in more human capital and experience.
- *Number of Meetings:* While frequent board meetings might hint on the lines of a proactive board and lead to an increased supervision of the top management, it is also understandable that there would be more meetings at the time of financial distress, thereby perhaps leading to a negative correlation. Vafeas (1999) finds that too many meetings signal a lack in confidence and might affect productivity.
- *Executive Directors:* Often a term that is applied exclusively to the CEO or the President of the board, there may be multiple executive directors too, as is often the case with banks. Again, this involves a trade-off between more manpower and a greater set of ideas governing the strategies of the bank, and conflict and coordination between the various executive directors.
- *Busy Directors:* This may refer to directors in boards of multiple banks or the cases pertaining to CEO-Chairman duality, for example. Issues that come under the umbrella of this perspective might include a trade-off between experience and time-commitment, granting too much power to single individual and increased chances of self-serving agendas. Core et al. (1999) demonstrate how the number of busy directors is correlated with less effective corporate governance.
- *Women Directors:* Gender diversity has recently gained prominence in recent times in terms of administration and direction of a firm. Adams and Ferreira (2009) conclude that female directors tend to have better attendance record than their male counterparts. Gender diversity also tends to improve performance in firms with feeble governance but decreases shareholder value in firms with strong governance.

3. Data and Methodology

3.1. Data

Our sample is an unbalanced panel of 40 banks operating in India, both from the public and private sector. While the public sector has been represented by 24 data points, only 16 data points have been taken from the private sector. These banks are the top 40 based on their present market capitalisation.

Financial Information i.e. the Returns on Long term Funds, The Return on Assets, Returns on Equity, the Price to Book Value ratio and the Earnings per Share were all obtained from two main sources, www.capitaline.com and www.moneycontrol.com. Besides the above mentioned indicators, information pertaining to the control variables, i.e. The Total Assets, Total Debt and most importantly the Shareholding pattern of the banks was taken from these online databases too.

The data on the detailed board ownership was hand collected from individual banks' annual reports which were mostly available on their websites. The revised Clause 49 of the Listing Agreement in India makes it mandatory for all listed companies to file a quarterly Corporate Governance report, (visit www.sebi.gov.in), "The key mandatory features of Clause 49 regulations deal with the followings: composition of the board of directors, the composition and functioning of the audit committee, governance and disclosures

regarding subsidiary companies, disclosures by the company, CEO/CFO certification of financial results, and reporting on CG as part of the Annual Report. Moreover, Clause 49 also requires companies to provide "specific" corporate disclosures. " (Madan LalBhasin, 2010). The data relating to board composition parameters, such as, No. of Directors, no of executive Directors, no of busy directors, no of women directors and also the number of Board meetings held during the financial term was all extracted the "Corporate Governance Report" included in the annual reports of these banks.

3.2. Empirical Methodology

3.2.1. The model

Performance Indicator$_i$= $\alpha + \Sigma\beta_j$ board variables$_i$ + $\Sigma\gamma_k$ controlvariables$_i$ + ε_i (1)

where the index 'i' goes from bank 1 to 40 and 'j' and 'k' are the subscripts representing different regression coefficients. Essentially, the β parameters capture the potential impacts of various board characteristics on the chosen bank performance indicator.

3.2.2. Bank Performance Measures

Although the modern day banking firm has become increasingly complex, and one cannot judge a bank without introducing parameters of loan quality, e.g. the nonperforming loan ratio (NPL ratio), the stock of NPLs, the net charge-off ratio (NCO ratio), and the level of NCOs (Lin and Zhang, 2009; García-Herrero et al., 2009) for the sake of simplicity, this study takes profitability measures as the main performance indicators. We consider the following for each bank in the sample

- Return on Assets
- Return On Equity
- Return on Long Term Fund
- Earnings per Share
- Price / Book Value

The Returns on Assets ratio is calculated as the net profit before interest and taxes over the total assets of the bank. It represents the banks' ability to put its assets to use for generating returns and is hence a favourite for judging firm performance. The return on equity is defined as the ratio of PBIT and equity while the long term funds, i.e. debts taken for a period of 10 years or longer, is taken as denominator to get the RLTF ratio. Both of these are similar ratios and judge bank profitability with respect to the equity and debt. The Earnings per Share ratio is the portion of the net income of a company allocated to each of its common shareholders, i.e.

$$EPS = \frac{Net\ Profit\ before\ Interest\ and\ Taxes - Preference\ Dividend}{Average\ no.of\ Outstanding\ Shares} \qquad (2)$$

The EPS too is a very important performance indicator as it has a special importance in determining the share price of a firm. Furthermore, we collected the Price to Book Value Ratio for the 40 firms. Also known as the Price to equity or the Price to Net worth ratio, it is defined as:

$$Price\ Equity\ Ratio = \frac{Stock\ Price}{Total\ Assets - Fictitious\ Assets - Current\ Liabilities} \qquad (3)$$

3.2.3. The Board Characteristics

As done in the previous work related to banking firms and corporate governance, this study identifies multiple variables pertaining to the board size, the board composition, and the board functioning. We identify as variables the following:

- No. of board members
- No. of women directors
- No. of Busy Directors
- No. of Executive Directors.
- No. of Board meetings held during the complete financial term ending 2013

The number of busy directors refers to those people on a bank's board who hold directorship in companies, foreign or Indian, other than the bank.

3.2.4. Control Variables

Following suit with previous literature (Qi Liang, Pisun Xu, PornsitJiraporn, 2013) the following basic control variables have been included in the model:

- Natural log of Total Assets
- Debt - Equity Ratio

It has been demonstrated in previous works that both, the type of ownership and the degree of ownership impact firm value. (E.g. Wang, 2005; Wei et al., 2005; Chen et al., 2009). Previous literature related to banks focuses on the impact of ownership by type of

shareholder and mainly utilises dummy variables for the ownership in the empirical analysis (e.g. Berger et al., 2009; García-Herrero et al., 2009; Fu and Heffernan, 2009; Jia, 2009; Lin and Zhang, 2009). The paper extends this approach by further introducing variables which account for the shareholding pattern of the bank.

- Share percentage of Promoter Group
- Share percentage of Public Shareholders (Institutional)
- Share percentage of Public Shareholders (Non-Institutional)

A dummy variable has also been included in the model to indicate the type of bank, i.e. to indicate whether the bank is in the private sector or the public sector. This is important as the sectors may have very different dynamics and will hence need to be differentiated in the model.

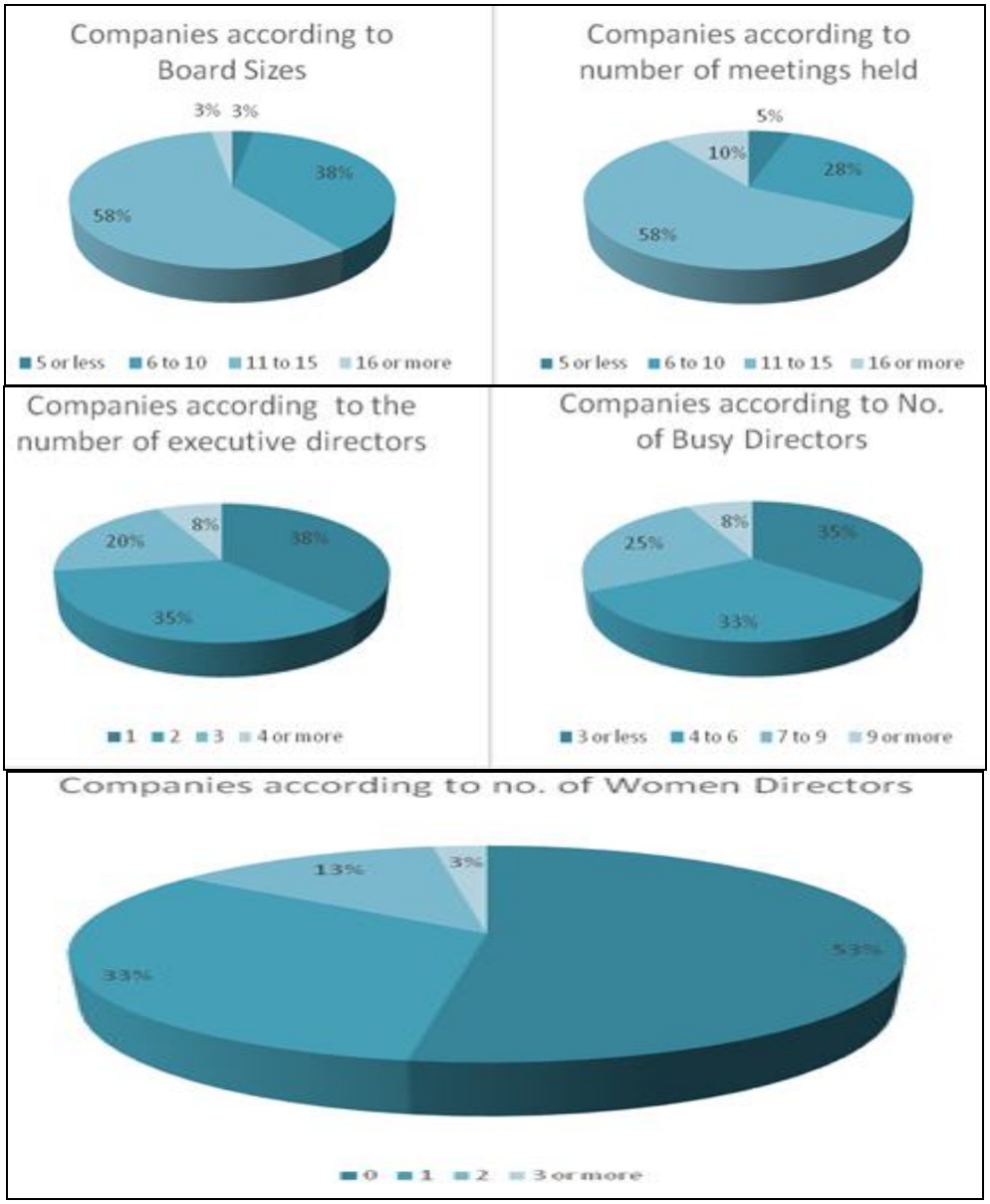
Major descriptive statistics have been reported in the Table 4A, Table 4B reports sector wise statistics.

Variables	**Mean**	**STD**	**Min**	**Max**
Panel A1 : Bank Performance variables				
Returns On Assets	0.24	0.04	0.17	0.35
Returns On Equity	14.33	5.59	0.32	24.81
Price /Book Value	1.17	1.11	0.40	5.15
Returns on Long Term Funds	112.34	26.25	56.37	163.15
Returns on Net Worth	12.87	4.91	0.35	22.39
Earnings Per Share	48.95	48.13	0.31	217.65
Panel A2 : Board Characteristic variables				
Board Size	11.25	1.99	5.00	16.00
No. Meetings held in the Term	11.70	3.46	5.00	20.00
No. of Executive Directors	2.05	0.89	0.00	8.00
No. of Busy Directors	5.23	3.12	0.00	13.00
No. of Female Directors	0.65	0.72	0.00	3.00
Panel A3 : Other Control variables				
Natural Log of Total Assets	5.11	0.41	4.05	6.19
Equity to Assets Ratio	0.10	0.03	0.07	0.18
Shareholding Percentage of Promoter Group	49.53	32.06	0.00	90.00
Public Shareholding (Institutional)	28.95	20.69	4.16	88.98
Public Shareholding (Non-Institutional)	21.52	21.50	4.54	71.26
The above table reports summary statistics on important variables. The sample is an unbalanced panel of 40 banks over the period 2012-13. Panel A1 reports the summary statistics of bank performance variables. Panel A2 reports the summary statistics of board characteristics variables. Panel A3 reports the summary statistics of other control variables. The variables are explained hereunder.				

Table 4A: Descriptive Statistics

Board Characteristics By bank Type								
	Public Sector Banks				Private Sector Banks			
	Mean	STD	Max	Min	Mean	STD	Max	Min
Board Size	11.75	10.89	16.00	9.00	10.50	7.16	14.00	5.00
No. Meetings held	13.25	8.77	20.00	6.00	9.38	8.54	15.00	5.00
No. of Executive Directors	2.38	1.47	8.00	0.00	1.56	1.96	4.00	1.00
No. of Busy Directors	5.08	3.59	11.00	1.00	5.44	3.76	13.00	0.00
No. of Female Directors	0.79	0.83	3.00	0.00	0.44	0.73	2.00	0.00
The above table reports summary statistics for board structure across Public Sector and Private sector banks.								

Table 4B: Descriptive Board Statistics according to Sector



Charts 4A: Descriptive Statistics

4. Analysis and Results

We use Ordinary Linear Regression for each of the five performance indicators chosen in accordance with the equation (1). The overall regression results have been reported in table 5A.

Overall OLR Results					
	ROA	**ROE**	**P/BV**	**RLTF**	**EPS**
F-Statistic Obtained	0.0496**	0.1282	0.0002*	0.00001*	0.3290
Multiple R	0.68	0.63	0.82	0.86	0.57
R Square	0.46	0.40	0.67	0.73	0.32
Adjusted R Square	0.25	0.16	0.54	0.63	0.05
Standard Error	0.03	4.79	0.67	14.38	51.41
Observations	40.00	40.00	40.00	40.00	40.00
** Significance at 5% error level; *Significance at 1% error level					

Table 5A: Regression results obtained for various performance indicators.

The figures reported in the first row, i.e. the F Statistic refer to the probability of finding a linear correlation similar to the one obtained for each case, with the same variables for had the inputs been completely random. This essentially means that the lower the F- value, the stronger the correlation is and we observe significant correlation in three of the five performance indicators chosen; the Return on Assets, The Price to Book Value Ratio and the Return on Long term Funds.

A comparative study of the sample averages is presented below. For each of the performance indicators we divided the 40 points into two halves of 20 data points each wherein the upper half represents the points with higher profitability and vice-versa. We then calculated the mean values of the different board characteristics for the two halves. The results for ROA, P/BV and RLTF are reported in Table 5B.

Mean Comparison Study						
Sorted by:		**Board Size**	**# Meetings**	**# Exe. Dir.**	**# Busy Dir.**	**# Female Dir.**
ROA	Upper Half	11.65	12.50	0.19	0.49	0.07
	Lower Half	10.98	11.16	0.18	0.40	0.03
P/BV	Upper Half	11.20	10.70	0.19	0.51	0.03
	Lower Half	11.40	12.71	0.18	0.39	0.07
RLTF	Upper Half	11.33	10.77	0.16	0.37	0.06
	Lower Half	11.25	12.95	0.21	0.51	0.05

Table 5B: Comparison of Average board characteristics for ROA, P/BV and RLTF

The trends obtained here are in coherence with the signs of the regression coefficients obtained which have been elaborated in the summary outputs. Concentrating on the RLTF outputs we see that the average board size and the number of female directors is higher in the upper half while the number of meetings, the number of executive directors and the number of busy directors have a negative correlation with the indicator. Similar trends are reflected in regression analyses. However, this is just a crude analysis for an intuitive feel of the relation and as has been reported in Table 5C (b), only the trends related to the Board size, the no of meetings and the number of busy directors are statistically significant which is judged by the P values of the coefficients.

Detailed summaries of the individual regression results for these three have been reported in the Tables 5C (a), (b) and (c). For each of these tables the R square value represents the extent to which the regression model explains the variation, it is essentially a measure of the correlation between the actual data and the one predicted by the model. Furthermore, since we have multiple X variables present in the model the adjusted R^2 value holds relevance for our purposes. Looking at the RLTF results we see that this is where the adjusted R square value is highest i.e. 63 % of the variations in Returns on Long Term Funds are explained by the regressed model. We also observe that no significant correlation is observed between the board parameters and the in the case of ROA and P/BV ratio. This is shown by the P values which have been enlisted in their respective tables. The P values, just like the Significant F value represent the probability of having a similar trend if we had taken completely random data. The generally accepted level for acceptance of a hypothesis is 5% or lower, we however have obtained significant results only at an acceptance level of 10% in the RLTF regression model.

SUMMARY OUTPUT (ROA)						
Regression Statistics						
Multiple R	0.68					
R Square	0.46					
Adjusted R Square	0.25					
Standard Error	0.03					
Observations	40.00					
ANOVA						
	df	**SS**	**MS**	**F**	**Significance F**	
Regression	11.00	0.02	0.00	2.16	0.05	
Residual	28.00	0.03	0.00			
Total	39.00	0.05				
	Coefficients	**Standard Error**	**t Stat**	**P-value**	**Lower 95%**	**Upper 95%**
Intercept	70.56	32.91	2.14	0.04	3.14	137.98
Board Size	0.00	0.00	-0.25	0.80	-0.01	0.01
Meetings	0.00	0.00	0.21	0.84	0.00	0.01
Executive	0.00	0.00	0.69	0.49	-0.01	0.01
Busy Director	0.00	0.00	-0.31	0.76	-0.01	0.01
Female Director	0.00	0.01	-0.57	0.58	-0.02	0.01
Log(TA)	0.00	0.02	-0.17	0.87	-0.05	0.05
E/A Ratio	0.33	0.40	0.83	0.41	-0.49	1.15
A	-0.70	0.33	-2.14	0.04	-1.38	-0.03
B1	-0.70	0.33	-2.14	0.04	-1.38	-0.03
B2	-0.70	0.33	-2.14	0.04	-1.38	-0.03
Type1	0.06	0.04	1.63	0.11	-0.01	0.13

Table 5C (a) Regression Results for Return on Assets

SUMMARY OUTPUT (RLTF)						
Regression Statistics						
Multiple R	0.86					
R Square	0.73					
Adjusted R Square	0.63					
Standard Error	14.38					
Observations	40.00					
ANOVA						
	df	**SS**	**MS**	**F**	**Significance F**	
Regression	11.00	16047.87	1458.90	7.05	0.00	
Residual	28.00	5790.86	206.82			
Total	39.00	21838.73				
	Coefficients	**Standard Error**	**t Stat**	**P-value**	**Lower 95%**	**Upper 95%**
Intercept	-25198.22	15125.59	-1.67	0.11	-56181.58	5785.14
Board Size	2.64	1.97	1.34	0.10*	-1.39	6.67
Meetings	-1.65	1.08	-1.53	0.10*	-3.86	0.55
Executive	-2.24	2.10	-1.06	0.30	-6.54	2.07
Busy Director	-1.89	1.35	-1.40	0.09*	-4.65	0.88
Female Director	1.75	3.40	0.51	0.61	-5.22	8.72
Log(TA)	6.31	11.27	0.56	0.58	-16.78	29.40
E/A Ratio	-698.78	183.79	-3.80	0.00	-1075.25	-322.31
A	253.40	151.14	1.68	0.10	-56.19	563.00
B1	253.41	151.07	1.68	0.10	-56.06	562.87
B2	253.65	151.11	1.68	0.10	-55.87	563.18
Type1	6.45	16.46	0.39	0.70	-27.26	40.16

Table 5C (b) Regression Results for Return on Long Term Funds
**Significance at 10% error level*

The values marked by asterisks represent significant correlation at 10% error level, we see that the Board size displays a positive (sign of the coefficient) correlation with the performance indicator. Jensen (1993) gives supporting evidence that due to problems of coordination, control and flexibility, large corporate boards are less effective. This also gives excessive control to CEOs. Yermack (1996) and Eisenberg et al. (1998) argue that firms with small boards have better performance in financial terms. However, many researchers argue that larger boards contribute in improving firm performances as it facilitates manager supervision and also brings in opinions from the perspectives of a larger number of people to advise the managers. Other research papers like those of Dalton et al. (1999) and Coles et al. (2008) report that large boards have a positive impact on firm performance. This is true especially for firms that require more advising, for example complex firms that operate in more than one segments. Raheja (2005) therefore argues that ‘‘optimal board size and composition are functions of the directors’ and the firm’s characteristics’’.

The number of meetings surprisingly has been found to display a negative correlation with the performance indicator. This highlights a drawback of the regression model as it fails to establish the direction of causation. One inference we can draw from the OLR results is that firms which are doing relatively well and are well established in terms of financial performance are able to manage their operations with lesser number of board meetings. Another plausible explanation for this is the existence of developed and elaborate committee structures within the boards of high performance firms. These sub groups formed by one or two directors combined with the CEOs handling relevant matters are responsible for sub departments e.g. Asset management, Risk Management, Credit Management etc. (Annual Report Dhanlaxmi Bank ’13) In such a firm a full board meeting will be required only to handle very major corporate decisions and hence we would see comparatively lesser number of board meetings.

The third statistically significant trend the paper reports is the effect of busy directors on the performance indicator. We see that the coefficient has a negative sign which essentially means that a higher proportion of directors which have commitments in multiple companies has a detrimental impact on the performance indicator.

Chart 5A highlights some important trends. It basically illustrates the mean of data points for the 5 respective parameters chosen to characterize board size, composition and functioning in 4 quadrants according to the financial performance of the firms i.e. groups of 10 ranked on the basis of increasing RLTF. The 1st quarter here has the highest RLTF of the four. One can easily observe that the number of busy directors and the number of meetings held are visibly higher in the lower quadrants, while the no of directors increases steadily as we go from the lower quadrants towards the high performance firms.

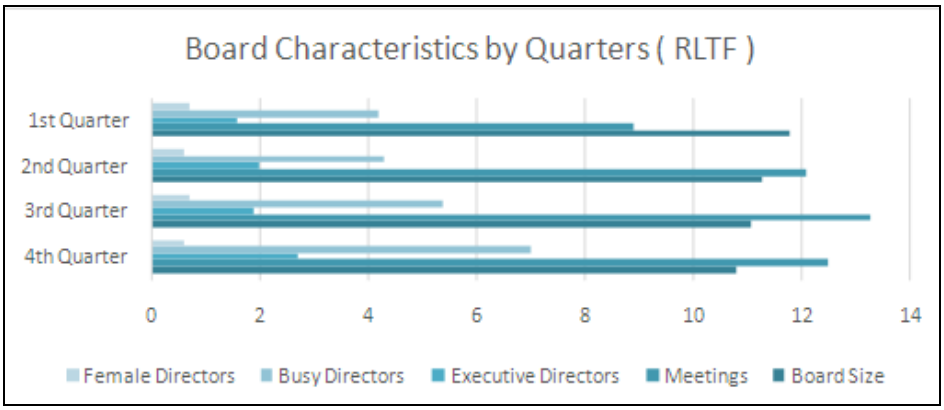


Chart 5A

SUMMARY OUTPUT (P/BV)						
Regression Statistics						
Multiple R	0.82					
R Square	0.67					
Adjusted R Square	0.54					
Standard Error	0.67					
Observations	40.00					
ANOVA						
	df	**SS**	**MS**	**F**	**Significance F**	
Regression	11.00	25.85	2.35	5.23	0.00	
Residual	28.00	12.58	0.45			
Total	39.00	38.43				
	Coefficients	**Standard Error**	**t Stat**	**P-value**	**Lower 95%**	**Upper 95%**
Intercept	-48.22	705.03	-0.07	0.95	-1492.41	1395.98
Board Size	-0.01	0.09	-0.09	0.93	-0.20	0.18
Meetings	-0.03	0.05	-0.62	0.54	-0.13	0.07
Executive	0.04	0.10	0.39	0.70	-0.16	0.24
Busy Director	0.00	0.06	0.04	0.97	-0.13	0.13
Female Director	-0.05	0.16	-0.29	0.78	-0.37	0.28
Log(TA)	0.70	0.53	1.34	0.19	-0.37	1.78
E/A Ratio	14.25	8.57	1.66	0.11	-3.30	31.80
A	0.47	7.04	0.07	0.95	-13.97	14.90
B1	0.45	7.04	0.06	0.95	-13.98	14.87
B2	0.46	7.04	0.07	0.95	-13.97	14.89
Type1	-1.72	0.77	-2.24	0.03	-3.29	-0.15

Table 5C (c) Regression Results for Price to Book Value Ratio

5. Conclusion

The paper studies an unbalanced panel of 40 Indian banks both from the public and the private sector. It tries to predict the impact of the composition of the board of directors, via ordinary linear regression applied to key performance indicators like Return on Assets, Return on Equity, Return on Long Term Funds, Price to Book Value ratio and the earnings per share. A variety of control variables namely the Natural log of assets, the Equity to assets ratio, the shareholding pattern and the type of the banking firm have been taken into account. Due to a limited sample space the regression fails to give statistically significant adjusted R^2 values for two of the three performance indices considered. For favourable cases however the study presents evidence of slight positive correlation between the number of people present in the board of a bank. It also shed some light on the negative correlation between the number of board meetings held by a company and it's financial performance. We note however that this is counter intuitive and hence conclude that the it's is not the less number of meetings which enables banks to perform better financially, rather it is their financial performance that allows them to function on pre-defined policies and hence manage without having to do as many meetings of the board members. The same can also be accounted for by the presence of more elaborate corporate governance structures in high performing banking firms.
The study also presents evidence to show that the presence of directors holding chairs in boards of other firms has a detrimental impact on indicators like Returns on Long Term Funds.

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www.capitaline.com

Annexure A: Data (Performance Variables)

Company Name	PBDIT/net assets	ROE	P/BV	RLTF	EPS
Allahabad Bank	0.23	11.77	0.60	121.78	23.70
Andhra Bank	0.28	16.19	0.63	129.40	23.04
Axis Bank	0.20	18.52	1.84	75.72	110.68
Bank of Baroda	0.23	15.07	0.90	89.81	106.37
Bank of India	0.26	12.95	0.79	108.25	46.14
Bank of Mah	0.22	16.80	0.72	114.73	10.73
Canara Bank	0.23	13.21	0.75	132.08	74.10
Central Bank	0.25	4.91	0.49	113.91	8.28
City Union Bank	0.35	22.33	1.52	114.99	5.98
Corporation Bk	0.23	16.08	0.61	142.11	93.82
DCB Bank	0.20	8.77	1.13	73.37	4.08
Dena Bank	0.21	17.62	0.64	130.96	23.15
Dhanlaxmi Bank	0.21	0.32	0.53	141.55	0.31
Federal Bank	0.23	13.90	1.29	82.22	45.41
HDFC Bank	0.23	20.34	4.10	80.09	28.27
ICICI Bank	0.20	13.10	1.81	56.37	72.22
IDBI Bank	0.21	10.16	0.55	108.74	14.12
Indian Bank	0.25	15.70	0.71	93.50	35.94
IndusInd Bank	0.28	17.78	2.86	83.03	20.30
ING Vysya Bank	0.21	14.59	1.91	91.32	39.58
IOB	0.29	22.78	0.69	120.17	6.14
JK Bank	0.19	23.56	1.19	100.22	217.65
Karnataka Bank	0.24	12.76	0.86	112.30	18.48
KarurVysya	0.26	19.00	1.57	123.47	51.35
Kotak Mahindra	0.21	15.60	5.15	72.07	18.23
Lakshmi Vilas	0.32	10.09	0.85	143.94	9.39
Oriental Bank	0.24	11.46	0.60	113.80	45.51
PNB	0.24	16.48	0.81	97.26	134.31
Punjab & Sind	0.26	9.18	0.40	134.35	12.71
SBI	0.25	15.43	1.43	96.35	206.20

South Ind Bk	0.28	20.53	1.15	126.82	3.75
State B Bikaner	0.28	16.36	0.61	118.85	104.32
State Bk Mysore	0.26	11.59	0.69	111.25	88.91
State Bk Travan	0.26	14.94	0.59	163.15	123.01
Syndicate Bank	0.29	4.92	0.69	125.50	33.30
UCO Bank	0.24	9.08	0.57	132.07	8.21
Union Bank	0.24	14.98	0.83	119.36	36.00
United Bank	0.21	7.53	0.47	121.62	8.64
Vijaya Bank	0.24	11.85	0.57	139.43	9.41
Yes Bank	0.17	24.81	2.65	137.76	36.27

Annexure B: Data (Board Characteristics)

Company Name	**Board Size**	**Meetings**	**Executive**	**Busy Director**	**Female Director**
Allahabad Bank	13	16	2	7	1
Andhra Bank	13	15	3	7	1
Axis Bank	14	11	2	13	2
Bank of Baroda	10	17	8	4	0
Bank of India	14	12	3	8	1
Bank of Mah	10	13	1	2	1
Canara Bank	11	13	2	7	3
Central Bank	10	13	3	5	0
City Union Bank	9	14	2	2	0
Corporation Bk	10	14	2	6	0
DCB Bank	13	8	1	9	0
Dena Bank	15	16	2	6	1
Dhanlaxmi Bank	5	13	1	0	0
Federal Bank	9	9	1	5	0
HDFC Bank	12	6	4	7	1
ICICI Bank	12	5	3	11	2
IDBI Bank	10	6	2	6	1
Indian Bank	11	14	3	3	0
IndusInd Bank	10	7	3	9	1
ING Vysya Bank	11	6	1	3	0
IOB	9	14	2	2	0
JK Bank	9	11	1	3	0
Karnataka Bank	11	15	1	5	0
KarurVysya	10	8	1	1	0
Kotak Mahindra	9	6	1	6	0
Lakshmi Vilas	13	15	1	7	0
Oriental Bank	13	15	2	5	2
PNB	12	12	4	3	1
Punjab & Sind	11	11	1	3	0
SBI	16	13	0	11	0
South Ind Bk	10	11	1	1	0

State B Bikaner	12	11	3	5	1
State Bk Mysore	13	11	2	6	1
State Bk Travan	11	10	3	1	0
Syndicate Bank	13	10	2	7	1
UCO Bank	9	14	2	1	0
Union Bank	14	20	2	9	0
United Bank	10	14	2	2	2
Vijaya Bank	12	14	1	6	2
Yes Bank	11	5	1	5	1

Annexure C: Data (Control Variables)

Company Name	Log(TA)	E/A Ratio	A type Shareholding	B1 Type Shareholding	B2 Type Shareholding	Type1	Total Assets	Total Debt
Allahabad Bank	5.31	0.08	58.90	27.23	13.86	1.00	204373.19	188839.19
Andhra Bank	5.17	0.08	60.14	22.43	17.43	1.00	146298.95	134914.92
Axis Bank	5.53	0.13	35.25	55.07	9.67	0.00	340560.66	296564.69
Bank of Baroda	5.74	0.09	56.26	34.20	9.55	1.00	547135.44	500462.62
Bank of India	5.66	0.08	66.70	25.64	7.60	1.00	452602.72	417207.17
Bank of Mah	5.07	0.08	85.21	7.54	7.24	1.00	116952.79	107214.42
Canara Bank	5.57	0.08	69.00	22.06	8.94	1.00	374160.20	342579.12
Central Bank	5.43	0.09	88.63	6.82	4.54	1.00	268129.54	244343.82
City Union Bank	4.36	0.10	0.00	29.98	70.02	0.00	22977.08	20781.50
Corporation Bk	5.29	0.08	63.33	29.02	7.65	1.00	193442.34	178904.30
DCB Bank	4.05	0.12	18.46	26.95	54.59	0.00	11278.83	9889.46
Dena Bank	5.05	0.07	58.01	24.20	17.80	1.00	113440.43	105620.81
Dhanlaxmi Bank	4.14	0.07	0.00	36.65	63.45	0.00	13819.49	12794.22
Federal Bank	4.78	0.12	0.00	65.77	34.23	0.00	60626.77	53178.15
HDFC Bank	5.60	0.18	27.27	52.99	19.75	0.00	400331.90	329253.58
ICICI Bank	5.73	0.18	0.00	88.98	11.02	0.00	536794.69	437955.12
IDBI Bank	5.51	0.09	76.50	14.07	9.43	1.00	322768.50	292925.34
Indian Bank	5.21	0.11	81.51	12.61	5.88	1.00	162822.60	144842.72
IndusInd Bank	4.87	0.13	17.38	55.18	27.44	0.00	73306.52	63576.28
ING Vysya Bank	4.74	0.13	43.10	43.46	13.44	0.00	54836.45	47845.26
IOB	5.39	0.08	73.80	17.14	9.06	1.00	244656.03	225458.21
JK Bank	4.86	0.09	53.17	32.80	14.03	0.00	71743.31	65295.62
Karnataka Bank	4.62	0.09	0.00	28.74	71.26	0.00	41526.38	37635.98
KarurVysya	4.67	0.09	3.04	38.36	58.60	0.00	46733.33	42652.32
Kotak Mahindra	4.92	0.15	43.65	33.58	22.77	0.00	83693.68	71439.39
Lakshmi Vilas	4.25	0.09	9.81	23.19	66.99	0.00	17666.68	16098.98
Oriental Bank	5.30	0.09	73.80	17.14	9.06	1.00	200697.20	183576.85
PNB	5.68	0.10	58.87	36.01	5.11	1.00	478877.04	431180.98
Punjab & Sind	4.91	0.09	81.42	7.54	11.05	1.00	80477.91	73181.55
SBI	6.19	0.12	59.87	31.19	8.94	1.00	1566261.03	1371922.28

South Ind Bk	4.70	0.09	0.00	53.71	46.29	0.00	49795.03	45546.85
State B Bikaner	4.93	0.09	75.07	9.51	15.42	1.00	86016.82	77958.25
State Bk Mysore	4.83	0.10	90.00	4.16	5.84	1.00	67232.76	60823.24
State Bk Travan	5.01	0.08	75.00	6.33	18.67	1.00	101579.33	93370.88
Syndicate Bank	5.33	0.08	67.39	19.83	12.78	1.00	215122.32	198169.69
UCO Bank	5.30	0.08	77.20	13.17	9.63	1.00	198651.39	182923.48
Union Bank	5.49	0.08	60.13	25.09	14.78	1.00	311860.82	287558.84
United Bank	5.06	0.08	88.00	5.55	6.45	1.00	114615.10	105594.24
Vijaya Bank	5.05	0.07	59.80	15.38	24.82	1.00	110981.76	103409.06
Yes Bank	5.00	0.11	25.56	58.82	15.63	0.00	99104.12	87877.74