

Multiple Directorship & Interlock: An Empirical Study of its Impact on Firms' Financial Performance

** Naseem Ahamed*

Abstract

Good and fair corporate governance is the need of the hour. Steady industrialization of the economies is one of the major reasons behind the gradual awareness of investors in good corporate governance practices, as investors in the developed world expect the companies in the developing world to be following the same practices as in their own economy. In the wake of several high profile corporate scandals that broke out in the last few years across the world, and dented the confidence of investors and common shareholders, transparency along with pro investor governance has taken the driver's seat. An incidence of multiple directorship and interlock of directorship can help increase the level of transparency and fairness in the conduct of companies. Interlock of directorship helps the companies by providing an effective mechanism of scrutinizing companies coupled with the fact that interlock also helps in co-opting external resources, which would be very expensive otherwise. It is also an effective mechanism of increasing the visibility and legitimacy of the relatively new firms. Emerging economies like India provide a unique setting for conducting interlock of directorship research because of the institutional context (comprises of formal rules, informal constraints, and execution characteristics) which is in sharp contrast to its developed counterparts.

Keywords: multiple directorship, directorship interlock, corporate governance, board busyness, company performance

JEL Classification: G32,G38, L14, L22

Paper Submission Date : September 22, 2013 ; **Paper sent back for Revision :** April 9, 2014 ; **Paper Acceptance Date :** May 12, 2014

Investors have begun to play a more active and vigilant role in doing a reasonably fair analysis of the companies before putting their hard earned money into them. Good governance leads to more transparency, more disclosure, fairness in conduct of business, which eventually gets positive investor attention. It is not the purpose of good corporate governance (complying by all the regulatory protocols and recommendations and beyond of the committees formed for improving corporate governance) to ameliorate the overall health of a company (financial, reputational, visibility, etc.), but it so happens that companies adopting pro stakeholders policy of corporate governance do well in the long run for obvious reasons (Gompers, Ishii, & Metrick, 2003). Good practices of corporate governance were introduced, and these evolved afterwards in response to various corporate scandals that broke out during the past couple of decades. Various committees were formed from time to time which came out with their recommendations to improve the corporate governance practices as well as to minimize the chances of malpractices in order to restore the faith of the stakeholders in the companies. The implementation of the Sarbanes Oxley Act in 2002 was instrumental towards this end (Coates, 2007).

The purpose of the existence of a company is to maximize shareholders' wealth, and the confidence of the shareholders takes a beating after every scandal by the managements of various companies. In order to keep a watch on the activities of the management, the shareholders elect a board of directors annually. A board consists of many members who are collectively known as the board of directors or simply board and individually are known as member of the board or simply director. Directors are people with knowledge, skills, and experience in

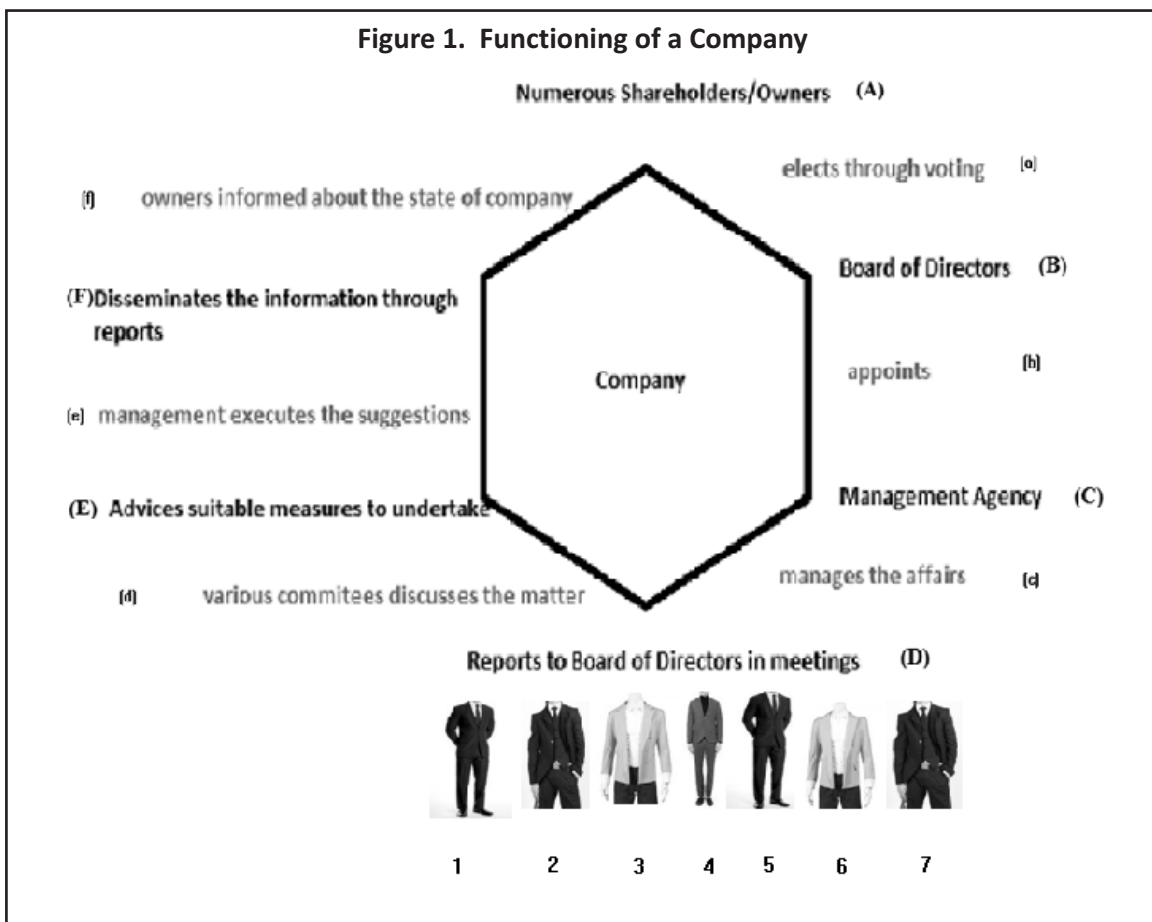
** Research Scholar, IBS Hyderabad, Survey No. 156/157, Donatnally Village, Via: Kanaka Mamidi, Shankerpally Mandal, Hyderabad - 501 203. E-mail: naseemfusion@gmail.com*

managing a company. The expectation from the board is that the directors will bring in their skills and experience together in overseeing the affairs of a company (OECD, 2004).

Up to here, the imagery that forms in the mind of the reader regarding the functioning of a company can be portrayed by a simple diagram (refer to Figure 1). The Figure is an over-simplified representation of the real scenario, in which the members of one board sit on other boards and are a constituent of all the boards on which they sit. The companies and their corresponding boards do not function in isolation and are oblivious of their surroundings. Instead, directors from one company sit on the boards of other companies. This arrangement creates an interlock of directorship across companies.

History of Directorship Interlock

The history of interlock of directorship dates back to the beginning of the 20th century, when such interlocking directorates were identified in British companies operating in their erstwhile colonies and dominions. Using data relating to 12 trans-nationals (including such iconic names as Barclays Bank ; Chartered Bank of India, Australia, and China ; Hudson Bay Company; and P & O) during 1899 - 1900 and 1829 -1830, researchers noted 713 interlocks (in a variety of business segments) in the later year as compared to 333 in the former. Legendary names like Lord Inchcape, Lord Brabourne, the Earl of Lichfield, and Sir Thomas Sutherland figure in these interlocks. The cohesive content of these corporate elites was protected by their common lineage and heritage as landowners, businessmen, and professionals, with similar schooling and social ties, often cemented by intra-marriages within the groups (Brayshay, Clearly, & Selwood, 2005).



In the United States, both as a result of integrated ownership and control of all manufacturing and marketing input materials and services under one roof, and with the evolution of the money trust concept of investment banking, owning, and controlling, vast business empires were enabled by the acceptance of the holding corporation principle (Micklethwait & Wooldridge, 2003). Board interlocks had developed so strongly, apparently to the detriment of free trade and competition in the closing years of the 19th century and into the 20th century, that they became the subject of serious and successful muckraking (Tarbell, 1904). In the Indian context, Dutta and Chatterjee (2010) discussed about the CSR initiatives for the betterment of a company.

With the banking systems largely funding corporate development in Germany and Japan, their representatives were a natural choice for board positions of the investee companies, a phenomenon that encouraged similar interlocks in those countries. In India, board interlocking received substantial fillip in the 19th and 20th centuries, with the operation of managing agencies controlling several entities concurrently and with seats on their respective boards. The largest number of managed companies by a single managing agency (Bird & Co) reportedly was 40; 17 largest managing agencies managed 350 companies with an aggregate paid up capital of INR 1140 million, or 25% of the total paid up capital of all companies managed by agencies. Ten of these managing agencies were public companies, the rest were private limited companies (Subramanian, Barua, Bhagavatula, & George, 2009).

It is also interesting to note that while the British entity, Bird & Co topped the list with 40 managed companies in terms of numbers, it was two Indian managing agencies (Tata Industries Ltd. and Birla Bros. Ltd.) that led the field in terms of aggregate paid up capital of managed companies. Such a conglomeration of corporate entities naturally demanded the involvement of key personnel from the managing agency house on their boards both for reasons of control and of reputational impact on investors and customers, and arguably, this paved the way for the smooth transition and continuation of such practices in the Indian corporate sector long after the managing agencies themselves were abolished in the latter half of the 20th century. The fact that over 90% of the Indian listed companies by market capitalization are owned and/or are controlled by dominant shareholders with at least 20% percent of voting equity further offers a fertile ground for proliferation of interlocked boards (Subramanian, et al., 2009).

There have been several provisions of governance outlined in the existing literature and reports of various corporate governance amelioration committees in different parts of the world. Some of these provisions include the presence of independent, non executive directors in the board, frequency of meeting of the board, no. of resolutions passed in a meeting, no. of committees operating, attendance of directors in the meetings, and so forth. One provision that has recently been looked from the corporate governance perspective is that of interlock of directorship (Mizruchi, 1996).

A director of a board does not necessarily sit on that board only; rather, he/she may sit on several other boards. Similarly, directors from other boards may sit on this company's board. This creates what is known as interlock of directorships (Subramanian et al., 2009). Interlocking of directorship is not a new phenomenon. In the Indian context, a similar version of this practice was in existence during the pre independence era, when companies were managed by agencies/management teams (Subramanian et al., 2009). In the backdrop of U.K., board interlock was a prevalent practice to provide a cohesive identity to those elites of the society who were associated to each other by similar backgrounds, schooling, and so forth. Often, these associations were cemented further by the institution of marriage among themselves (Brayshay et al., 2005).

Motivation

The recent past of the corporate world has been rocked by the emergence of various scandals and embezzlements time and again (Enron, Worldcom, etc to name a few). India had its fair share of experience when Satyam went down. These mishaps not only result in money and job losses, but also jeopardize investors' confidence. Directorship interlock could be a boon in this corporate environment as it ensures that more and more outsiders are sitting on the board and hence, the upper levels of executives of the company are under more scrutiny for their

actions. Being a relatively new stream of knowledge, coupled by the fact that relatively less work has been done in this field, served as a motivation to pursue this topic for research.

Literature Review

The literature on directorship is vast and is widespread, which spans several aspects of interlocking directorships. An elaborate delineation of five major and most relevant papers is presented here for more clarity on the subject at hand. Later in the text, a brief introduction to other articles is also presented.

[1] A paper by Srinivasan and Srinivasan (2011) updated the current status of research in the stream of corporate governance.

↳ **Objective:** The objective of this paper was to find out the status of corporate governance research in India (an emerging economy) during the last decade.

↳ **Research Methodology Adopted:** The methodology adopted by the authors for the above purpose was to search online databases using EBSCO integrated search engine ; other databases of different publishers like Science Direct, Online Wiley, Elsevier, and Sage Publications were also used. The word “corporate governance” was searched as primary search, and “India” was looked for as secondary search. Relevant articles emerging as a result of the above search were analyzed for their content. The authors also made a note of the journals that had published these papers.

↳ **Results :** The authors found out that during the last decade, India as an example for corporate governance research has almost been untouched. They buttressed the fact by showing that out of a total of 499 articles on corporate governance published in the last decade in top international journals, only 2% of those studies used Indian data (2000-2010) for their study. Only 11 studies out of a total of 499 were found to be on Indian data.

The top five themes that emerged in international journals on corporate governance in India were on performance, corporate social responsibility, governance origins and models, disclosure, regulatory mechanisms, and reforms. Examining these papers in international and Indian journals indicated that there has been a steady and growing interest in the field of corporate governance in India. Over time, specific topics and themes have become important in the field. The convergence of the importance of certain topics like performance and regulatory mechanisms between international and Indian journals can be seen as an indicative of the presence of a common body of knowledge in the field of corporate governance research. There is, however, a need for more empirical research in the Indian context, and also, there is a requirement for the development of theories that are embedded in local realities. Given that the institutional context of an economy impacts significantly the nature of governance practices, more papers that explore the institutional contextual realities of India are needed.

Further analysis of the paper broke down the content of those published articles under various themes like CSR and ethics, disclosure, ownership structure, regulatory mechanisms, and so forth, but it did not discuss about the interlock of directorships. This gave me an opportunity to foray into this less explored area of directorship interlock.

↳ **Critique:** This paper forms the foundation stone for other articles in the area of corporate governance. Ratifying the authors' claim of less academic exploration into the area gives a fillip to researchers (like me) to look into this area.

[2] Examining another pertinent literature [2] on the topic is the study conducted by Kiel and Nicholson (2006), who examined multiple directorships and corporate performance in Australian listed companies. Both positive as well as negative aspects of board interlocks have been highlighted in the existing literature.

Table 1. Effects of Multiple Directorship on the Board of a Company

Favourable	Unfavourable
<p>To carry out different roles, a board requires a mix of skills. Therefore, if we are to examine board effectiveness, we should be examining the board as a whole, rather than individual directors.</p>	<p>Increased workloads for the directors serving on multiple boards known as "overboarding".</p>
<p>It is the pool of talent, skills, and experience that is important (including contacts), because this pool will determine how well a board (as a group) carries out its functions.</p>	<p>Australian Shareholders' Association (ASA), claims, there is a link between companies with difficulties and the workloads of their boards (Galacho, 2004).</p>
<p>Policy guidelines which seek to limit multiple directorships also ignore the rich tradition of empirical support for the resource dependence role of directors.</p>	<p>The communication chain increases with the increase in number of members in the Board of Directors, leading to a long time in decision making.</p>
<p>The resource dependence role of directors has long been recognized (Pfeffer & Salancik, 1978) and is the role directors play when they use their external contacts and reputation to the advantage of the firm on which they serve as a director. Examples of this role include financiers supplying funds to the firm on the basis of the reputation of the directors, directors using their contacts to open new markets for the firm, or using their contacts to assist in securing new technology.</p>	<p>Agency cost increases, which leads to lowering of the firm value.</p>
<p>Directors holding more than one directorship (usually defined as interlocking directors) has been long acknowledged as a key way that firms seek to control their external environment and access vital resources.</p>	<p>Multiple directorships may lower the effectiveness of outside directors as corporate monitors (Core, Holthausen, & Larcker, 1999; Shivdasani & Yermack, 1999)</p>
<p>Boyd et al. (1993) found that, in firms facing greater environmental uncertainty, those with more interlocks (i.e. greater number of multiple directorships) exhibited superior performance as measured by sales growth and return on equity.</p>	<p>Core et al.(1999) reported that outside directorships provide CEOs with excessive compensation packages, which in turn leads to poor firm performance.</p>
<p>Advantage may come to a company via a director's formal company linkages (such as providing access to capital, reducing transaction costs between companies, addressing firm level interdependencies).</p>	<p>National Association of Corporate Directors (1996) and the Council for Institutional Investors (2003) adopted resolutions calling for limits on the number of directorships held by directors of publicly traded companies.</p>
<p>Advantage may come on a personal level (e.g., environment scanning, provision of information or access to communication channels). For instance, interlocking directors can form a formal firm link aimed at reducing the costs of coordination and resource planning.</p>	
<p>Directors with ties to strategically related firms have been found to provide better advice and counsel.</p>	
<p>Interlocking directors facilitate the dissemination of innovation through a corporate network.</p>	

↳ **Objectives:** The objective of this paper was to find out if there is high incidence of multiple directorships in firms listed on the Australian Stock Exchange. The objectives are precisely mentioned as follows : (a) to determine the extent of multiple directorships held by directors of the top 100 Australian companies, (b) to determine the extent of multiple directorships held by directors of the companies contained within the largest 200 Australian companies.

Board interlocks facilitate intermixing of directors from different companies ; in addition, the resources of the board members are also brought on board (experience, skills, connections/links, knowledge, etc.). The positive attributes of interlock of directorship include that directors can have more information about the business environment across companies and sectors, and more experience leads to better strategic thinking, which in turn leads to better decision making. However, on the flip side, directors fall short of adequate time allotment to all the

boards on which they serve, resulting in involuntary ignorance of the affairs of the company.

According to the calculation based on (Australian Shareholder's Association) ASA's view of time adequacy for directors to carry out their work properly, the time required for carrying out a director's duties requires a minimum time commitment of 360 hours (45 working days) per year (Galacho, 2004). Additionally, the ASA believes that a chairmanship requires three times the effort of this workload, while a deputy chairmanship is equal to two directorships. Thus, all chairman positions were given a workload of three times an ordinary director (under the ASA guidelines, this equals to 1080 hours or 135 working days per annum). If a director is unable to allot this much time per company because of an interlock, then he/she is not rendering his/her proper services towards the shareholders of that company. Although, no such time adequacy criteria for the directors - to properly render their services - is mentioned in any of the reports of CG committees in India, it is important to appreciate the fact that directors are humans with limited capacity and finite resources. In the present paper, I aim to find out whether interlock of directorship and a bulky board have any influence on the performance of companies in the Indian environment.

↳ **Results:** The major finding of the paper is that the incidence of multiple directorships in Australian listed companies is low. Some over commitment by the members of the board of directors is due to related entities being listed on the ASX, which share common directors, and finally, there was no conclusive evidence which supported that multiple directorships help firms' performance. So, there does not appear to be any relationship between holding multiple directorships and firms' financial performance.

↳ **Critique:** One of the major limitations of the study is that it restricted itself to the firms listed on the ASX, and hence, the obtained results could not be generalized. The data used in the study was only till the year 2003, and several changes have occurred in the corporate board structure worldwide after that, so this study also failed to capture that. The afore-mentioned paper utilized descriptive statistics to find out the incidence of multiple directorship in Australian listed companies. It found out the degree of interlock of directorship in top 100 and top 200 (in terms of market capitalization) Australian listed companies, and concluded that despite no concrete evidence against disadvantage of multiple directorship, Australian companies have less interlock of directorships. This work got extended in the present study as I set out to find the impact of the interlock on the accounting based and market based performance of firms.

[3] Subramanian et al. (2009) addressed the issue of interlocking of directorship and the impact of board interlock on performance of a firm. They took two theories of CG (agency & resource dependency) and tested for their slope coefficient using NSE 100 companies' data taken from NSE, CMIE/Prowess, annual reports, and Director's database.

↳ **Objective:** The objective of this study was to analyze the impact of interlock of board on the performance of NSE 100 companies.

↳ **Research Methodology Adopted:** Multiple regression was used to test for the impact of two prominent theories behind corporate governance, namely agency theory and resource dependency theory. The model used for the test is given below:

$$Performance_{i,t} = \alpha + \lambda Boardedness_{i,t} + \sum_k \zeta_k Connectedness + \sum_{\rho} \rho Controls_{i,t} + \varepsilon_{i,t}$$

This exploratory research attempted to identify patterns among interlocks of directors and also examined their linkage with market capitalization and performance. A key finding, which emerged, is that a small proportion of highly boarded directors control a significant portion of the market capitalization of the NSE.

↳ **Results :** Interlocking boards of directors is a predominant feature of the Indian corporate sector. Contrary to the generally held view that multiple directorships tend to militate against quality time and attention being provided to the companies, this factor turned out to be positive in relation to the performance of the companies.

Concentration of economic power in the hands of a limited few (66% of the market capitalization being controlled by 6% of the director population) is indeed a cause of concern. Adam Smith admonished the state to be cautious while considering legislative proposals emanating from the business sector with great circumspection, and even suspicion, since they came from “an order of men, whose interest is never exactly the same with that of the public” (as cited in Subramanian et al., 2009). Such powerful groups tend to first influence and then dictate public policy measures to further their own interests, which may not coincide with the interests of large segments of the country's citizenry. Experience and wisdom, therefore, suggest that such tendencies towards such concentration of power need to be discouraged and preempted at the earliest.

[4] Jiraporn, Davidson, DaDalt, and Ning (2009) found that the impact of multiple directorship on the attendance of directors in the board meetings is negative. Their study examined the following four instances:

- (1) Multiple directorships and attendance at board meetings,
- (2) Multiple directorships and director equity ownership,
- (3) Regulation and multiple directorships,
- (4) Sarbanes-Oxley and multiple directorships.

↳ **Objective:** To find out the benefits and costs of multiple directorships by investigating the impact of multiple directorships on board meeting attendance.

↳ **Approach:** This paper questioned the wisdom of holding too many board seats. Multiple directorships may lower the effectiveness of outside directors as corporate monitors.

↳ **Data/Data Sources:** The source of data was Investor Responsibility Research Center (IRRC). The IRRC collects data on corporate governance and directors for approximately 1500 firms. The sample period spanned 6 years from 1998 to 2003. There were 7261 observations from 1510 firms in the final sample.

↳ **Research Methodology Adopted:** The authors used logistic regression to assess whether the attendance of a director (a proxy for his/her performance) gets affected by the multitude of directorships that he/she holds. This was tested for four different instances mentioned above.

↳ **Results:** This paper concluded that multiple directors are indeed overstretched and are unable to meet the obligation for meetings at times. Busier directors or directors who held more outside board seats exhibited a clear tendency to be absent from board meetings, which buttresses the argument made by corporate reformers calling for placing restrictions on the number of outside directorships. Ethnicity was found to be a significant determinant in the pre-SOX years as minority directors are more inclined to be absent. Equity ownership was not found to constitute a significant motivation for directors to attend board meeting more frequently. It was also observed that the enactment of Sarbanes-Oxley appeared to have increased directors' attendance.

[5] Gutiérrez and Pombo (2011) investigated the relation of board structure through the appointments of outside directors and the role of busy directors on firms' return on assets within an environment of no regulation for privately held firms and voluntary adoption of corporate best practices for security issuers with family controlling blockholders. The study revealed that the performance of corporates is invariably linked to the phenomenon of interlock of directorship, and I attempted to find out (in the present study) to what extent it is linked to performance/other benefits.

In addition to the above elaborated papers, Baysinger and Butler (1985) examined corporate governance and the board of directors ; Sarkar and Sarkar (2006) talked about firm performance and corporate governance ; Berkman, Cole, Lee, and Veeraraghavan (2003) examined the effect of board composition and ownership structure on firm performance ; Black and Kim (2011) studied the effect of board structure on firm value ; Choi, Park, and Yoo (2007) studied the importance of outside directors on the boards of companies ; Devos, Prevost, and Puthenpurackal (2009) examined the monitoring efficiency of interlocking directorships ; Dobrzynski (1996) indicated that directors sitting on many boards spell problems for the shareholders ; Dooley (1969) and Ferris, Jagannathan, and Pritchard (2003) studied the directors' busyness and its impact on the firms' performance ; Fich and White (2005) analyzed the reasons as to why do CEOs reciprocally sit on each other's boards ; Harris and Shimizu (2004) examined the influence of overboarded and hard pressed for time directors ; Haunschild and Beckman (1998) examined the alternate sources of interlocks and their significance ; Loderer and Peyer (2002) examined board overlap, seat accumulation, and share prices ; Mizruchi (1996) examined the impact of interlock among directorships along with an analysis, critique, and assessment of research on interlocking directorates ; and Roy, Fox, and Hamilton (1994) reviewed board size and potential corporate and director interlocks in Australasia.

Gaps in the Literature

Some of the prominent gaps found after the literature review is that the literature per se is in short supply on board interlocks in CG in India, and there exists a mixed bag of results of the impact of interlocks on performance. Lack of conclusive evidence regarding the impact of multiple/interlocked directorship over the financial performance of the firms, in particular, and the overall (financial as well as non financial) performance in general, leaves the area wide open for further exploration. In addition to that, the Indian context provides a unique setting for the study, as CG implementation is relatively of a recent origin.

Contribution of the Present Paper

In order to find out the impact of board interlock on the performance of firms, I selected ROA (return on assets) as the proxy for the accounting performance of the company. The explanatory variables are as follows:

- | | | |
|--|----------------|-------|
| (1) Sum of directorships by the board | represented as | X_1 |
| (2) Average directorship by the board | represented as | X_2 |
| (3) No. of directors on the board | represented as | X_3 |
| (4) Average no of companies held by a director | represented as | X_4 |

I used the multiple regression analysis tool of multivariate analysis to fulfill the research purpose. The data used here was extracted from Prowess (CMIE) database. Companies listed on the Bombay Stock Exchange (Sensex) were selected for this study for two reasons. Firstly, the Sensex is the oldest stock exchange of India and secondly, it contains 30 large cap companies, which can be taken as a reasonably fair proxy for the Indian market. All the companies that were listed on the Sensex had been picked. All the directors of these companies sitting on various boards are mentioned in the annual reports of the companies, who, after the recommendation of different corporate governance committees, have a separate governance section. Other pertinent information mentioned in the annual reports about the board executives is about their compensation, equity holdings, relation with important executives of the company, for example, founder or CEO, and so forth.

Hypotheses

(1) H_0 : Sum of directorships by the board does not influence ROA (return on assets) of the firm.

H_a : Sum of directorships by the board does influence ROA (return on assets) of the firm.

(2) H_0 : Average directorship by the board does not influence ROA (return on assets) of the firm.

H_a : Average directorship by the board does influence ROA (return on assets) of the firm.

(3) H_0 : No. of directors on the board does not influence ROA (return on assets) of the firm.

H_a : No. of directors on the board does influence ROA (return on assets) of the firm.

(4) H_0 : Average no of companies held by a director does not influence ROA (return on assets) of the firm.

H_a : Average no of companies held by a director does influence ROA (return on assets) of the firm.

Models

First Model

↳ **ROA Chronological:** In this model, the data is arranged in chronological order starting from the year 2008 to 2012 for the 30 companies of the Sensex. First, the data for 2008 for all companies was documented followed by data for all the companies for 2009 and so on. The model formulated is:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

where, Y represents return on assets.

Going by the results of the regression analysis, none of the five explanatory variables (β_4 got excluded) used here have a significant impact on the accounting performance of the firm. The constant term (α) however turns out to be significant here. Before jumping guns over the conclusions, it is imperative to understand that the statistical tools provide results which are statistically correct and are only as good as the data itself. The economic interpretation of the data is what makes the real difference. The usage of the above mentioned explanatory variables is limited by the fact that other controlling variables have been left out in this model. The left out controlling variables would be the size, age, financial leverage of company, along with other macroeconomic factors that impact the overall economy.

The Table 1 indicates that R square is the proportion of variation in the dependent variable explained by the regression model. The values of R squared range from 0 to 1. Small values indicate that the model does not fit the data well. The sample R squared tends to optimistically estimate how well the model fits the population. Adjusted R squared attempts to correct R squared to more closely reflect the goodness of fit of the model in the population.

The Table 2 summarizes the results of the analysis of variance. The sum of squares, degrees of freedom, and mean square are displayed for two sources of variation, regression and residual. The output for regression displays information about the variation accounted for by our model. The output for residual displays information about the variation that is not accounted for by our model, and the output for total is the sum of the information for regression and residual. A model with a large regression sum of squares in comparison to the residual sum of squares indicates that the model accounts for most of the variation in the dependent variable. Very high residual sum of squares indicates that the model fails to explain a lot of the variation in the dependent variable, and you may want to look for additional factors that help account for a higher proportion of the variation in the dependent variable. The mean square is the sum of squares divided by the degrees of freedom. The F statistic is the regression mean square (MSR) divided by the residual mean square (MSE). The regression degrees of freedom is the numerator df , and the residual degrees of freedom is the denominator df for the F statistic. The total number of degrees of freedom is the number of cases minus 1. If the significance value of the F statistic is small (smaller than say 0.05), then the independent variables do a good job of explaining the variation in the dependent variable. If the significance value of F is larger than say 0.05, then the independent variables do not explain the variation in the dependent variable.

The Table 3 depicts that the unstandardized coefficients are the coefficients of the estimated regression model. The estimated model is :

Table 1. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.177	.031	.004	.077101	2.141

a Predictors: (Constant), Avg no of companies held by a director, No. of directors on the board, Avg directorship by the board, Sum of directorships by the board

b Dependent Variable: Return on assets

Table 2. ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.027	4	.007	1.148	.336(a)
	Residual	.844	142	.006		
	Total	.871	146			

a Predictors: (Constant), Avg no of companies held by a director, No. of directors on the board, Avg directorship by the board, Sum of directorships by the board

b Dependent Variable: Return on assets

Table 3. Regression Analysis

Model	Unstandardized co-efficients		Standardized co-efficients		
	B	Std error	Beta	t - value	Sig.
Constant	.191	.050		3.836	.000
Sum of directorships by the board	.001	.001	.443	1.164	.246
Avg directorship by the board	-.008	.007	-.298	-1.127	.262
No. of directors on the board	-.004	.003	-.199	-1.216	.226
Avg no of companies held by a director	-.007	.013	-.269	-.571	.569

a Dependent Variable: Return on assets

$$\text{Return on Asset} = 0.191 + 0.001 * X_1 - 0.008 * X_2 - 0.004 * X_3 - 0.007 * X_4 + \varepsilon$$

Often, the independent variables are measured in different units. The standardized coefficients or betas are an attempt to make the regression coefficients more comparable. If you transformed the data to *z* scores prior to your regression analysis, you would get the beta coefficients as your unstandardized coefficients. The *t* statistics can help you determine the relative importance of each variable in the model. As a guide regarding useful predictors, look for *t* values well below -2 or above +2. The analysis of the result/output table reveal the dismally poor impact of board interlock on the accounting performance (ROA as the proxy) of a firm. The coefficients of the independent variables are all insignificant at the 95% confidence interval. All the hypotheses in the hypotheses section fail to get rejected at the 95% confidence level. The only parameter coming out to be significant is the intercept (constant term).

Discussion

The results obtained after analyzing the data do not indicate any significant financial implication of multiple directorship or busyness of the board. This result leads us to conclude that there are some underlying non financial incentives for firms to appoint busy boards and directors ; on the other hand, firms may benefit by this simultaneously in monetary as well as non monetary terms. So, this creates a rewarding proposition for both the entities involved. This result, although is for a small sample of stocks listed on one stock exchange (BSE Sensex) of India, is an important slice of the sample by the virtue of the fact that Sensex is the oldest exchange in India, and

important large cap companies are listed on it, making it a reasonable proxy for the market. The results can be further extrapolated for other emerging economies similar to India, where albeit financial performance is not very impressive, some other non financial benefits that the firm derives out of multiple directorships of the members of the boards drives the companies to elect busy directors having good commercial connections.

Recapitulation

✍ **Research Question/Issue :** This study sought to examine the importance of directorship interlock on the accounting based performance of companies listed on the Sensex (Bombay Stock Exchange). An even distribution of power in the hands of corporates is a must for smooth functioning of any economy (Adam Smith), but by the phenomenon of interlock, the power and resources get concentrated into the hands of a few corporate elites, which leads to friction among other less resourceful corporates and the public at large. The study becomes even more interesting when conducted on an emerging economy like India, where the institutional context (formal rules, informal constraints, and execution characteristics) is way too different from that of the developed world.

↪ **Research Findings/Insights :** The usage of historical data from the year 2007 to 2011 led to the finding that interlock of directorship has a minimal impact upon the performance of firms. This was done without incorporating other relevant control variables (leverage, age of firm, etc.), which could lead to some other interesting picture. This buttresses the fact that the fundamental of a company drives its performance and its visibility in the market. Directors do help in co-opting external resources, which might be expensive to obtain otherwise, but it could not be a substitute to strong fundamentals. All in all, a company has to get its basics right for good performance.

Implications

↪ **Theoretical/Academic Implications :** This study refutes several of the earlier findings, which supported the existence of multiple directorship as a boon to the company (Boyd, Dess, & Rasheed, 1993 ; Johnson, Daily, & Ellstrand, 1996 ; Zahra & Pearce, 1989). It is of the view that interlock of directorship serves minimal when the performance of a company is the dependent variable.

↪ **Practitioner / Policy Implications :** This study offers insights to policy makers interested in enhancing the legitimacy of corporate governance within their nation. In addition, it provides a macro-level perspective for executives of multinationals if they are considering sitting on other boards to garner resources external to their board. However, sitting on too many boards would bring benefits to the directors (sitting fee and other ancillary benefits), but not to the owners. The directors, in a bid to gain more and more, would sit on too many boards, without any significant impact on the performance of the firm. They would be hard pressed for time and would not be able to allocate adequate time for each board meeting, leading to frequent absenteeism in meetings, which means lousy performance. The policy makers need to take heed and implement a ceiling on the number of boards to be addressed by a director at a time.

Limitations of the Study and Scope for Further Research

One of the limitations of this paper is that it tries to address the issue of finding out the relationship between directorship interlock and the performance of firms in a uni-dimensional manner. It has to be appreciated that the impact of interlocked directorship on the firm's performance is one of many other factors viz. state of economy, nature of business, age of the firm, extent of leverage of the firm, and so forth. These limitations provide an opportunity for further research in the area by controlling the above-mentioned factors.

The stream of multiple directorship and interlocking of directorship needs to be further explored from various angles in light of the existing corporate governance theories to see if they hold good in all situations/ all phases of an economic cycle. It would even be interesting to know the impact of reputation and connection of a director on the decision making ability and performance of the firms' board on which he/she sits. Existence of some kind of corporate nexus can also be looked for, which is made to benefit some companies, and so forth. As a whole, this stream has a long way to go in the Indian context.

References

- Baysinger, B. D., & Butler H. N. (1985). Corporate governance and the board of directors: Performance effects of changes in board composition. *Journal of Law Economics and Organization*, 1 (1), 101 -124.
- Berkman, H., Cole, R. A., Lee, A., & Veeraraghavan, M. (2003). *The effect of board composition and ownership structure on firm performance: Evidence from India* (Working Paper). Department of Accounting and Finance, The University of Auckland, Auckland.
- Black, B., & Kim, W. (2011). The effect of board structure on firm value: A multiple identification strategies approach using Korean data. *Journal of Financial Economics*, 104 (1), 203-226. DOI: 10.1016/j.jfineco.2011.08.001
- Boyd, B. K., Dess, G.G., & Rasheed, A. M. A. (1993). Divergence between archival and perceptual measures of the environment: Causes and consequences. *Academy of Management Review*, 18 (2), 204-226.
- Brayshay, M., Cleary, M., & Selwood, J. (2005). Interlocking directorships and trans-national linkages within the British Empire, 1900 1930. *Area*, 37 (2), 209-222. DOI: 10.1111/j.1475-4762.2005.00623.x
- Choi, J. J., Park, S.W., & Yoo, S. S. (2007). The value of outside directors: Evidence from corporate governance reform in Korea. *Journal of Financial and Quantitative Analysis*, 42 (4), 941 - 962. DOI: <http://dx.doi.org/10.1017/S0022109000003458>
- Coates, J. C. IV. (2007). The goals and promise of Sarbanes-Oxley Act. *Journal of Economic Perspectives*, 21 (1), 91-116. DOI: 10.1257/jep.21.1.91
- Core, J. E., Holthausen, R. W., & Larcker, D. F. (1999). Corporate governance, chief executive officer compensation, and firm performance. *Journal of Financial Economics*, 51(3), 371-406. DOI: 10.1016/S0304-405X(98)00058-0
- Devos, E., Prevost, A., & Puthenpurackal, J. (2009). Are interlocked directors effective monitors? *Financial Management*, 38 (4), 861 - 887. DOI: 10.1111/j.1755-053X.2009.01059.x
- Dobrzynski, J. H. (1996, November 17). Seats on too many boards spell problems for investors : When directors play musical chairs. *The New York Times*. Retrieved from <http://www.judithdobrzynski.com/10860/seats-on-too-many-boards-spell-problems-for>
- Dooley, P. C. (1969). The interlocking directorate. *American Economic Review*, 59 (3), 314-323.
- Dutta, P.K., & Chatterjee, S. (2010). Corporate social responsibility in the Indian context. *Prabandhan: Indian Journal of Management*, 3 (8), 33 - 43.
- Ferris, S. P., Jagannathan, M., & Pritchard, A. C. (2003). Too busy to mind the business? Monitoring by directors with multiple board appointments. *The Journal of Finance*, 58 (3), 1087-1111. DOI: 10.1111/1540-6261.00559
- Fich, E. M., & White, L. J. (2005). Why do CEOs reciprocally sit on each other's boards? *Journal of Corporate Finance*, 11, 175 - 195.

- Galacho, O. (2004,). Serial directors put under siege. *Courier-Mail* (Brisbane), 23, p. 29.
- Gompers, P.A., Ishii, J.L., & Metrick, A. (2003). Corporate governance and equity prices. *Quarterly Journal of Economics*, 118(1), 107 - 156. DOI: 10.1162/00335530360535162
- Gutiérrez, L. H., & Pombo, C. (2011). Outside directors, board interlocks and firm performance: Empirical evidence from Colombian business groups. *Journal of Economics and Business*, 63 (4), 251-277.
- Harris, I. C., & Shimizu, K. (2004). Too busy to serve? An examination of the influence of overboarded directors. *Journal of Management Studies*, 41 (5), 775-798.
- Haunschild, P. R., & Beckman, C. M. (1998). When do interlocks matter? Alternate sources of information and interlock influence. *Administrative Science Quarterly*, 43 (4), 815-844.
- Jiraporn, P., Davidson, W.N. III, DaDalt, P., & Ning, Y. (2009). Too busy to show up? An analysis of directors' absences. *The Quarterly Review of Economics & Finance*, 49(3), 1159 - 1171.
- Johnson, J. L., Daily, C .M., & Ellstrand, A. E. (1996). Boards of directors: A review and research agenda. *Journal of Management*, 22 (3), 409-438. DOI: 10.1177/014920639602200303
- Kiel, G. C., & Nicholson, G. J. (2006). Multiple directorships and corporate performance in Australian listed companies. *Corporate Governance: An International Review*, 14 (6), 530-546.
- Loderer, C., & Peyer, U. C. (2002). Board overlap, seat accumulation, and share prices. *European Financial Management*, 8(2), 165 - 192.
- Micklethwait, J., & Wooldridge, A. (2003). *The company: A short history of a revolutionary idea*. New York: Modern Library publishers.
- Mizruchi, M. S. (1996). What do interlocks do? An analysis, critique, and assessment of research on interlocking directorates. *Annual Review of Sociology*, 22, 271 - 298. DOI: 10.1146/annurev.soc.22.1.271.
- National Association of Corporate Directors. (1996). Report of the NACD blue ribbon commission on value evaluation of chief executive officers, board, and directors, Washington D.C.
- OECD. (2004). *OECD principles of corporate governance*. Retrieved from <http://www.oecd.org/corporate/ca/corporategovernanceprinciples/31557724.pdf>
- Pfeffer, J., & Salancik, G.R. (1978). *The external control of organizations*. New York, NY: Harper & Row Publishers.
- Roy, M. R., Fox, M. A., & Hamilton, R. T. (1994). Board size and potential corporate and director interlocks in Australasia. *Australian Journal of Management*, 19(2), 201-217.
- Sarkar, J., & Sarkar, S. (2009). Multiple board appointments and firm performance in emerging economies: Evidence from India. *Pacific-Basin Finance Journal*, 17(2), 271-293. DOI: 10.1016/j.pacfin.2008.02.002
- Shivdasani, A., & Yermack, D. (1999). CEO involvement in selection of board members: An empirical analysis. *Journal of Finance*, 54 (5), 1829-1853. DOI: 10.1111/0022-1082.00168
- Srinivasan, P., & Srinivasan, V. (2011). *Status of corporate governance research on India: An exploratory study* (Working Paper No 334). Indian Institute for Management Bangalore (IIMB). Retrieved from <http://www.iimb.ernet.in/research/working-papers/status-corporate-governance-research-india-exploratory-study>

- Subramanian, B. N., Barua, S. K., Bhagavatula, S., & George, R. (2009). *Coping with corporate cholesterol- Board interlocks and their impact on corporate governance : The Indian experience* (Working Paper No 342). Indian Institute for Management Bangalore (IIMB). Retrieved from <http://www.iimb.ernet.in/research/working-papers/coping-corporate-cholesterol-board-interlocks-and-their-impact-corporate-governance-i>
- Tarbell, I. (1904). *The history of Standard Oil Company* (Volume 1) New York: McClure, Phillips and CoPublishers.
- Zahra, S. A., & Pearce, J. A. (1989). Board of directors and corporate performance: A review and integrative model. *Journal of Management*, 15 (2), 291-334. DOI: 10.1177/014920638901500208