

Board Structure And Corporate Performance: A Causal Analysis Of Select Indian Companies

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INTRODUCTION

In the words of Cox (2006), *“Happy companies have robust growth in revenues, strong balance-sheets, and healthy profits that reflect genuine business success, not phony bookkeeping. And they share other important traits as well. They abide by high ethical standards, which is a key to their solid success. They don't obstruct the flow of information to shareholders, but rather, view the shareholder as the ultimate owner and the ultimate boss. They choose directors on the strength of their abilities, character, and capacity for independent judgment. And their internal controls work well, so that the company's executives can take immediate corrective action when something goes wrong.”*¹.

Undoubtedly, a lot of stress has been given on maintaining high ethical standards, thinking beyond the business, observing transparency for shareholders, bringing independent judgement and accountability from directors as well as management. This is how corporate governance has been defined since long, with the literature consistently boosting the fact that it actually leads to hike in revenues and business success. Better corporate governance is likely to improve the performance of firms, through more efficient management, better asset allocation, better labour practices, etc. (Claessens, 2006). Good corporate governance has positive effects on a firm (Lynall et al., 2003).

Governance is as old as human civilization. It means the process of decision -making and the process by which decisions are implemented. It concerns the exercise of power in corporate entities. Corporate governance has emerged and grown significantly in the last decade. Following a sequence of scandals like Enron, WorldCom, Quest, Global Crossing in different parts of the world, a series of reports were issued concerning best practices with regard to corporate governance. But it extends far beyond the confines of corporate law. The quality, quantity and frequency of financial disclosures, the extent of exercise of fiduciary responsibilities and duties by boards towards shareholders and stakeholders, accountability and transparency in corporate functioning for shareholders' wealth maximization are the progressive elements and indeed, the underlying spirit of corporate governance.

Modern economic theory analyzes corporate governance by distinguishing between two participants, i.e. principal and agent. Principals are the owners (usually the shareholders) of a firm, and are entitled to the net income (whether positive or negative) of the firm's activities. The principals, in turn, engage agents to perform some service on the principals' behalf. This relationship - known as agency relationship - exists at many levels: between shareholders and boards of directors, between boards and senior management, between senior and subordinate levels of management, and so on. There is an inherent potential for conflicts within a firm, because the economic incentives faced by the agents are often different from those faced by the principals. Firms face agency problems, and in the process of running a firm, measures to develop solutions for such problems have to be taken care of. Such measures include controls on the actions of agents, monitoring the actions of agents, financial incentives to encourage agents to act in the interests of the principals, and the separation of risk taking functions from control functions.

Cadbury Report² says that the board acts as an agent, and is accountable to the shareholders and stakeholders with regard to ensuring the strategic guidance of the company, and effective monitoring of management. The board should apply high ethical standards, and take into account the interests of all shareholders and stakeholders. The board must

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¹<http://www.infosys.com>

² The Cadbury Committee was set up in May 1991 by the Financial Reporting Council, the London Stock Exchange and the accountancy profession, to address the financial aspects of corporate governance. The Committee's objective was to help to raise the standards of corporate governance and the level of confidence in financial reporting and auditing. The report reviewed the structure and responsibilities of boards of directors, rights and responsibilities of shareholders and the role of auditors.

be prepared to act as a strategic player and take an active part in the company's forward-looking activities. It must supervise the management's decision and dispositions on behalf of the shareholders. Thus, the board should include directors with the right qualifications and skills to develop the company's strategy and to adapt the company to the present and future challenges. The board should be independent and efficient to take good decisions. Various committees, especially the Blue Ribbon Committee of USA³ and Higgs Report⁴, laid considerable stress on the role of non - executive directors⁵. The idea that the board of directors of any corporation should comprise of outside directors, with a presumed independence from management is not new. Chandler (1975) said, *"It is almost ridiculous to have to justify the importance of a strong majority of outside directors. If it is true that the board must steadfastly represent the stockholders in making a continuous evaluation of the CEO's performance, then a board of predominately outsiders logically follows."* Various committees believe that the calibre of the non-executive members of the board is of special importance in setting and maintaining standards of corporate governance. Non-executive directors should bring an independent judgement to bear on issues of strategy, performance, resources, including key appointments, and standards of conduct. An essential quality which non-executive directors should bring to the board's deliberations is that of independence of judgement. The majority of non-executives on a board should be independent of the company. This means that apart from their directors' fees and shareholdings, they should be independent of management and free from any business or other relationship, which could materially interfere with the exercise of their independent judgement. It is for the board to decide, in particular, cases, whether this definition is met or not. Information about the relevant interests of directors should be disclosed in the Directors' Report. Rosenstein and Wyatt (1990) concluded that the stock market reacts favorably to the appointment of additional outside directors. Cadbury committee report, OECD principles and many other codes stressed that the majority of board should be independent, but Kumar Mangalam Birla Committee report⁶ and Clause 49 of in listing agreement in India have fixed the minimum limit of number of independent directors. The number of independent directors would depend on the nature of the chairman of the board. In case a company has a non-executive chairman, at least one third of board should comprise of independent directors and in case a company has an executive chairman, at least half of board should be independent. However, it has been recently proposed that a provision be added to the clause 49 of listing agreement stating that if the non-executive chairman is a promoter or is related to promoters or persons occupying management positions at the board level, or at one level below the board, he would not be treated as an independent director and the company in such a case, would be required to have 50 per cent independent directors on its board. SEBI viewed that in certain companies, the promoters or promoters of the promoter company or their close relatives designate themselves as non-executive chairman of the listed company and hence, they cannot be considered truly *"non-executive"* in the sense of the term.

However, optimum size of the board finds no mention in the law. In India, the company law has specified a minimum board size of three, for a private company and five, for a public company. Various codes talked about the presence of directors to regulate the companies, but there is no mention about number of directors required in a particular company to play the monitoring role. Neither the CII Code⁷, nor the KMB Report makes any reference to this point.

³Blue Ribbon Committee was set up by the Securities and Exchange Commission (SEC), US, in 1998. In February 1999, the Committee published the Report on Improving the Effectiveness of Corporate Audit Committees (the Blue Ribbon Report). The recommendations of the Blue Ribbon Committee were adopted and declared to be mandatory by the NYSE, the American Stock Exchange (Amex), Nasdaq and the American Institute of Certified Public Accountants (AICPA). The recommendations are not mandatory for foreign issuers: these are subject to their own national laws.

⁴ The Higgs Report reviewed the role and effectiveness of non-executive directors in the UK during 2003. The review further developed the UK framework of corporate governance, which commenced with the publication of the Cadbury Report in 1992, and was taken forward by the Greenbury, Hampel and Turnbull reports.

⁵ Elsewhere in the developed world, non-executive directors, largely, are by definition also independent, but the Listing Agreement in India makes a distinction between independent and non-independent non-executive directors.

⁶ The Kumar Mangalam Birla Committee was set up in 1999 by SEBI to promote and raise the standards of Corporate Governance. The Committee's terms of reference included suggesting suitable amendments to the listing agreement executed by the stock exchanges with the companies, in order to enhance corporate governance standards of listed companies, drafting a code of corporate best practices; and suggest safeguards to be instituted within the companies to deal with insider information and insider trading. Several of the Committee's recommendations were incorporated in Clause 49 of the listing agreement of the stock exchanges.

⁷ The Confederation of Indian Industry (CII) published India's first comprehensive code on corporate governance (Desirable Corporate Governance: A Code) in 1998. This Code was well received by Corporate India, and many of its recommendations became part of subsequent regulations.

International practice also tends to leave the size issue for determination by the company. Jensen (1993) viewed that the larger the board, the greater is problem for the CEO to control them. Bhagat and Black (1999) presented inverse relationship between board size and firm performance. Various studies suggested the optimum board size of ten. Yermack (1996) observed that the increase in size leads to increase in agency problems, slow decision making and the board becomes just symbolic in nature. The Institutional Shareholders' Services have stressed on a board size of more than five, but less than sixteen. But, the Naresh Chandra Committee (2002) in India recommended a minimum size of seven board of directors. The studies related to board size suggested a negative relation with corporate performance. Haniffa and Hudaib (2006) argued that the market perceives multiple directorship as unhealthy, and do not add value to corporate performance. Limiting board size is believed to improve firm performance because the benefits of larger boards are outweighed by the poorer communication and decision making of larger groups (Lipton and Lorsch, 1992; Jensen, 1993). Anderson et al. (2004) show that the cost of debt is lower for larger boards, presumably because creditors view these firms as having more effective monitors of their financial accounting processes. Brown and Caylor (2004) add to this literature by showing that firms with board sizes of between 6 and 15 have higher returns on equity and higher net profit margins than do firms with other board sizes. Conyon and Peck (1998) also conclude that the effect of board size on corporate performance (return on equity) is generally negative. Garg (2007) concluded that smaller boards are more efficient than larger ones, and size should be limited to six to achieve better performance. Biswas and Bhuiyan (2008) found that the size of board has no significant impact on corporate governance disclosure. Similarly, studies have been conducted in the recent past, giving importance to the board independence and found different results. Beasley (1996) found that no-fraud firms have boards with significantly higher percentages of outside members than fraud firms. Moreover, the likelihood of financial statement frauds decreased when outside director ownership in the firm and outside director tenure on the board increased, and the number of outside directorships in other firms by outside directors decreased. Survey of 515 Korean firms by Black et al. (2005) show that firms with 50 per cent outside directors have 0.13 higher Tobin's Q, which is consistent with the view that greater board independence causally predicts higher share prices in emerging markets. Brickley et al. (1994) found a positive relation between the proportion of outside directors and the stock market reaction to poison pill adoptions; and Clifford and Evans (1997) analyzed the presence of independent directors on 100 companies, randomly selected from the top 500 Australian companies listed on Australian Stock Exchange as on December 30, 1993. The paper concluded that majority of the boards have been constituted by grey⁸ and insider directors and similar pattern prevailed for audit committee members. Bhagat and Black (1999) discussed the trends in proportion of independent directors vis-a-vis the total number of directors of large American public companies since 1960. The study took independence of director, board size, CEO ownership, outside director ownership as independent variables and related it with profitability and growth variables over a period. The results did not depict any evidence that increase in board independence leads to improvement in firm performance, but firms with supermajority-independent boards performed worse than other firms. Anderson et al. (2004) reported that board independence had an important effect on some corporate outcomes. They found that cost of debt is lower for firms with more board independence and is the same for the boards with fully independent audit committees. Ryan and Wiggins (2004) suggested that the boards with more outside members award the directors with higher levels of equity-based compensation, which in turn reduces the agency costs. Chhaochharia and Grinstein (2007) outlined the changing characteristics of corporate boards from 1997 to 2003. The number of independent directors have increased over a period of time. It was found that large firms tend to have a larger fraction of independent directors than smaller firms. The average board size has significantly decreased over a period of time for large firms. Similarly, Ho (2005) and Brown and Caylor (2004) proved strong and positive correlation between non-executive directors and corporate performance. On the other hand, there are empirical studies that found no convincing evidence that more outsiders on the board improve firm performance (Fosberg, 1989; Hermalin and Weisbach, 1991; Lin, 1996), but they were negatively related to performance (Agrawal and Knoeber, 1996), and they directed management effort in maximizing short-term profits (Baysinger and Hoskisson, 1990). Klein (1998) found no relation between overall board independence and operating performance. Weir et al. (2001) concluded that proportion of non-executive directors and presence of independent directors has no significant impact on performance. Garg (2007) also proved inverse relationship between board independence and

⁸ The definition of grey or affiliated directors used here is developed by Equilar (which is a combination of SEC, NYSE and NASD guidelines). Any outside directors, who were mentioned in the "certain transactions" section or a former executive were classified as grey directors.

performance, but concluded that decline in performance of the companies lead to appointment of more independent directors. Thus, it can be observed that board independence leads to better performance and larger size of board not always brings positive results. Therefore, the study aims to analyze the relation between board independence, board size and performance variables.

RESEARCH DESIGN

The study is fundamentally empirical-based constituting secondary data. The study undertook the relation between independence of board and board size with various performance variables.

HYPOTHESES

The impact of board size and their independence has been seen on firm performance. The studies carried out by Jensen (1993), Bhagat and Black (1999), Bauer et al. (2003); Gompers et al. (2003); Anderson et al. (2004), Bohren and Odegaard (2004); Brown and Caylor (2004); Black et al. (2005); Core et al. (2005); Sanda et al. (2005); Brown and Caylor (2006); Garg (2007); and Khanchel and Mehdi (2007) helped in formulating the following hypothesis:

✿ **The board size in terms of total number of directors on the board has been related with both operating performance and market valuation.**

H_0 : There is no relation between board size and performance variables.

✿ **The impact of board independence (measured through a percentage of independent directors on the board) on performance variables has been seen.**

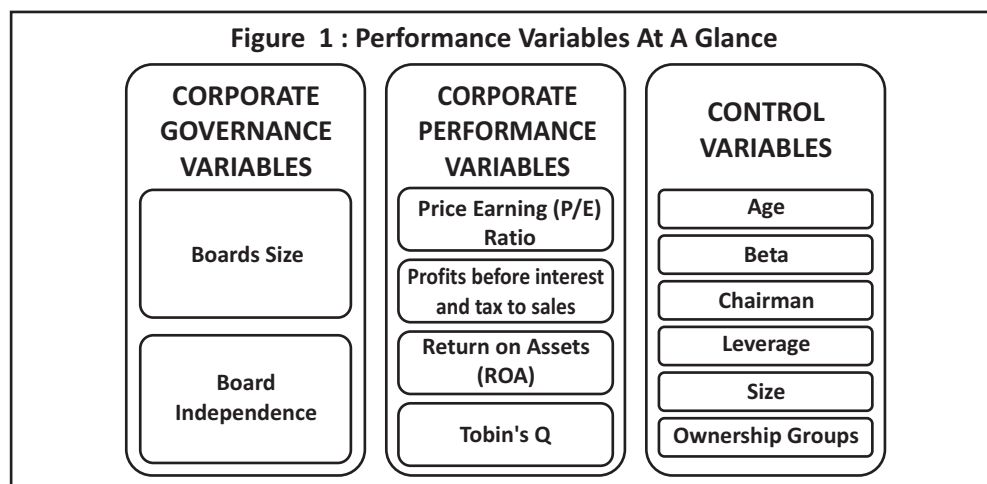
H_0 : There is no relation between independence of board and performance variables.

DATA AND SAMPLE

The sample of the study includes top 100 S&P CNX companies ranked on the basis of market capitalization. However, the selected companies belonging to financial services sector have been excluded, because they are governed by different regulations for corporate governance practices. Apart from it, there are certain companies for which data is not available. They have also been excluded. The exclusion of all the above companies left us with a sample of 77 companies. The data has been collected through annual reports, companies' websites and official website of SEBI (sebidifar.nic.in). Apart from these, the data has been sourced from PROWESS database maintained by the Center for Monitoring Indian Economy (CMIE) and business-beacon.com.

PERIOD OF THE STUDY

Corporate governance practices got a formal start in India, with the formulation of CII code in 1997 and 30 large listed companies adopted the code on voluntary basis. By 1999, the SEBI got into the act and set up a committee headed by



Kumar Mangalam Birla (KMB) to mandate international standards of corporate governance for listed companies. With effect from April 1, 2001, over 140 listed companies accounting for almost 80 per cent of market capitalization started following clause 49 of listing agreement based on KMB report. All the listed companies are now required to comply with the revised clause. The companies having a paid up share capital of ₹ 3 crore and above or net worth of ₹ 25 crore or more at any time in the history of the company have to comply with the revised clause by December 31, 2005. Thus, the study has considered five years period starting from financial year 2004-05 to 2008-09.

KEY VARIABLES

The researchers have identified and defined variables differently. Taking into account the applicability of the identified variables in the Indian context, the variables used in the study are categorized into three parts:

a. Corporate Governance Variables

1. Board Size: It is the total number of directors on the board. The cessation of any director during the year and non-appointment against his position has been considered as a vacant position. Thus, a director holding position for a complete year has been added to the number.

2. Board Independence: The proportion of independent directors to total board size has been considered for board independence. Only independent non-executive directors have been considered under independent directors.

b. Corporate Performance Variables : The performance has been interpreted in terms of operating performance and market valuation. Return on asset and profits before interest and tax to sales have been taken as a measure of operating performance, while price-earning ratio and Tobin's Q have been taken for market valuation. Variables are listed in the alphabetical order.

1. Price Earning (P/E) Ratio: Is a valuation ratio of a company's current share price compared to its per-share earnings. It has been taken as the market indicator.

2. Profits Before Interest And Tax To Sale: It measures a firm's efficiency at generating profits from every rupee of sales. It shows how well a company is growing in terms of its operations.

3. Return on Assets (ROA): Return on assets is used in finance as a measure of the returns that a company is realizing from its capital employed. It is commonly used as a measure for comparing the performance between businesses and for assessing whether a business generates enough returns to pay for its cost of capital.

4. Tobin's Q: It is again an accounting variable and depicts the value added by the management. Thus, it is a performance measure in terms of company valuation. It is calculated as (Market value of common stock+ Book value of preference stock+ Book value of borrowings+ Book value of current liabilities)/(Fixed assets+ Investments+ Current assets) at the year end. The definition has been given by Chung and Pruitt (1994) but certain modifications have been made by authors like Garg (2007) to make it more compatible in the Indian context. Figure 1 provides a brief description of the performance variables.

c. Control Variables : The regression results between governance score and firm performance were subject to control for a number of variables (cf. Figure 2), which could affect governance score or corporate performance or both. These are :

1. Age: The older firms could differ from younger firms in governance practices and performance. Therefore, log of years has been taken as control variable. It is measured as for the number of years for which the company has been in existence since incorporation.

2. Beta: Market risk in terms of beta has been considered as a control variable.

3. Chairman: The nature of chairman of the board has also been taken as a dummy control variable. A score of zero has been given if the chairman is executive, one if chairman is non-executive but is from promoters group, and two for independent chairman of the board.

4. Leverage: The Leverage can affect the governance variables. It affects access to credit and cost of debt. Thus, it has been taken as a control variable. It is considered in terms of debt-equity ratio.

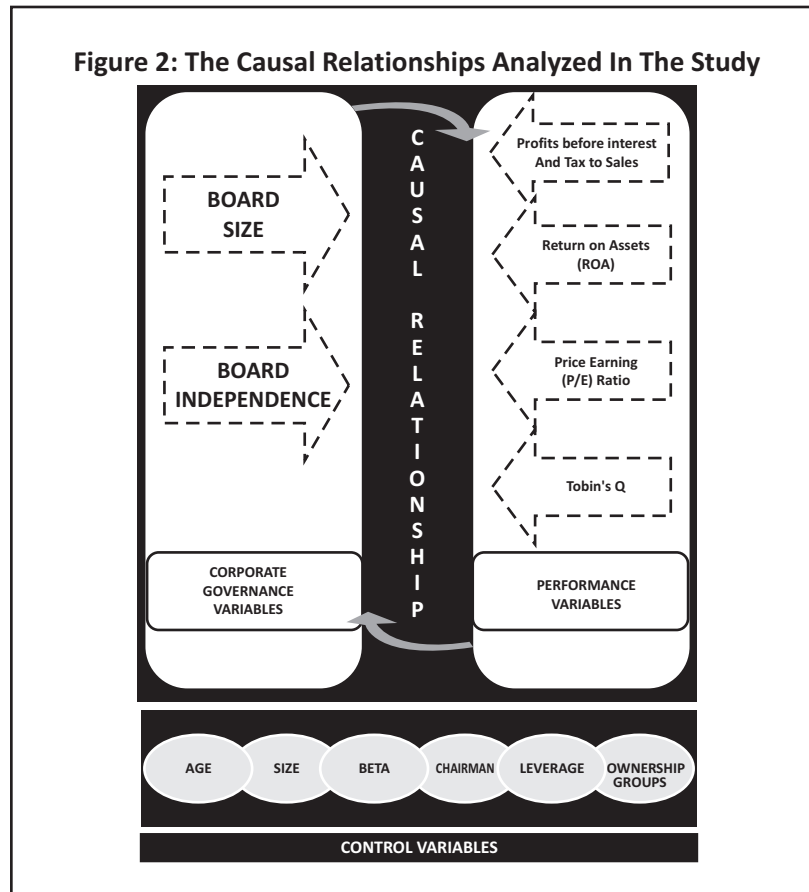
5. Size: For interpreting size as a control variable, log of sales has been considered.

6. Ownership Groups: One of the major factors which could affect the results was ownership groups. The governance

practices vary for public as well as private sector. Thus, a dummy variable has been added to control its effect. The ownership groups have been classified into four categories. These are government or public sector undertakings, large Indian business houses, Indian private and foreign sector companies. The values assigned have been one to four respectively.

REGRESSION MODELS

The board size and independence have been related with company performance. The regression equations are:



Company Performance_i = $\alpha_0 + \beta_1 \text{Ln(BoardSize)} + \beta_2 \text{Chairman} + \beta_3 \text{Ln(sales)}_i + \beta_4 \text{Ln(age)}_i + \beta_5 \text{Beta} + \beta_6 \text{leverage}_i + \beta_7 \text{Ownership}_i + \varepsilon$

Company Performance_i = $\alpha_0 + \beta_1 \text{Board Independence}_i + \beta_2 \text{Chairman} + \beta_3 \text{Ln(sales)}_i + \beta_4 \text{Ln(age)}_i + \beta_5 \text{Beta} + \beta_6 \text{leverage}_i + \beta_7 \text{Ownership}_i + \varepsilon$

Company performance being the dependent variable in the above equation has been interpreted in four ways i.e. PBIT ratio, P/E ratio, ROA and Tobin's Q.

The board composition has been taken as independent while performance measures have been taken as dependent variables, but reverse relationship can also be studied. Thus, there is a need to check endogeneity. The study has also undertaken reverse relation. The regression equations formulated are:

$\text{Ln(BoardSize)} = \alpha_0 + \beta_1 \text{Performance Variables} + \beta_2 \text{Chairman} + \beta_3 \text{Ln(Sales)}_i + \beta_4 \text{Ln(age)}_i + \beta_5 \text{Beta} + \beta_6 \text{leverage}_i + \beta_7 \text{Ownership}_i + \varepsilon$

$\text{BoardIndependence} = \alpha_0 + \beta_1 \text{Performance Variables} + \beta_2 \text{Chairman} + \beta_3 \text{Ln(Sales)}_i + \beta_4 \text{Ln(age)}_i + \beta_5 \text{Beta} + \beta_6 \text{leverage}_i + \beta_7 \text{Ownership}_i + \varepsilon$

The four performance variables have been taken together in the equations.

ENDOGENEITY CHECK

To check endogeneity, the following regression equations have been run:

Company performance $t = \alpha_0 + \beta_1$ Performance Variables $t-1 + \beta_2$ Board Size $t-1$

Board Size $t = \alpha_0 + \beta_1$ Performance Variables $t-1 + \beta_2$ Board Size $t-1$

If there is endogeneity, board size in first equation will have a significant impact on performance, and performance in second equation will affect board size significantly. Similar check has been applied for board independence.

RESULTS AND DISCUSSION

The minimum number of directors over the five years period is 4, while the maximum is 22. The average number of directors remained 11 for the sample companies. The minimum proportion of an independent board on sample companies is 8 per cent, while the maximum is 100 per cent. The mean proportion remained 47 per cent. There are four performance variables, i.e. profits before tax to sales ratio, price-earning ratio, return on assets and Tobin's q. Finally, the control variable size in terms of sales represents that the sample firms are representative of the population of firms.

Table 1 : Board Size and Sample Firms					
	Percentage of Sample Companies				
Board Size	2004-05	2005-06	2006-07	2007-08	2008-09
4-8	27	23.7	19.7	16.9	19.5
9-12	44.6	50	50	46.7	45.4
13-16	23	21	23.7	27.3	15.6
16 and above	5.4	5.3	6.6	9.1	19.5

The board size of sample firms has been divided into four categories. The First category consists of four to eight directors, the second category has nine to twelve directors, the next has thirteen to sixteen number of directors, and the last category constitutes of more than sixteen number of directors. The Table 1 disclosed that there were 27 per cent sample companies falling under the first category during 2004-05, but this percentage has reduced over the years. Most of the sample companies had appointed nine to twelve directors on their board during the period of the study. 5.4 per cent sample firms had appointed more than sixteen directors during 2004-05, but the number of firms falling under this category increased, and during 2008-09, 19.5 per cent sample companies had appointed more than sixteen directors. However, still, 65 per cent of the firms during 2008-09 fell in the first two categories, proving the large size of the board, making their functioning, slow and dysfunctional.

Table 2 : Board Independence and Sample Firms					
	Percentage of Sample Companies				
Board Independence	2004-05	2005-06	2006-07	2007-08	2008-09
Below 1/3	18.9	13.3	13.2	10.4	6.5
1/3-1/2	27	3.4	30.2	40.2	58.4
1/2 - 2/3	41	37.3	42.1	36.4	27.3
2/3 and above	12.2	16	14.5	13	14.3

Clause 49 of the listing agreement says that the proportion of independent directors should not fall below one-third in case the chairman of the board is non-executive, and it should not be less than one-half if the chairman is the executive director of the company. Thus, to verify, the board independence has been categorized into four parts. Table 2 reported the four categories and percentage of sample firms falling in these categories. The proportion of less than one-third independent directors fell under the first category, more than equal to one-third, but less than half came under the second category, more than equal to half, but less than two-third came under the third category, and two-third and above proportion of independent directors came under the last category. There were 18.9 per cent companies that had appointed less than one-third directors during 2004-05, however, this number fell. During 2008-09, there were 6.5 per

Table 3: Results of ANOVA							
		Board Size			Board Independence		
		Between Groups	Within Groups	Total	Between Groups	Within Groups	Total
YEAR	Square Of Sums	35.561	4515.015	4550.576	0.053	9.488	9.541
	df	4	375	379	4	374	378
	Mean Squares	8.89	12.04		0.013	0.025	
	F	0.738			0.524		
	Sig	0.566			0.718		
	SIGNIFICANCE	NOT SIGNIFICANT			NOT SIGNIFICANT		
CHAIRMAN	Square Of Sums	160.376	4390.201	4550.576	0.124	9.417	9.541
	df	2	377	379	2	376	378
	Mean Squares	80.188	11.645		0.062	0.025	
	F	6.886			2.475		
	Sig	0.001			0.086		
	SIGNIFICANCE	SIGNIFICANT			NOT SIGNIFICANT		
RISK	Square Of Sums	2928.827	1413.336	4342.163	4.94	4.243	9.183
	df	58	309	367	58	308	366
	Mean Squares	50.497	4.574		0.085	0.014	
	F	11.04			6.183		
	Sig	0			0		
	SIGNIFICANCE	SIGNIFICANT			SIGNIFICANT		
LEVERAGE	Square Of Sums	2928.827	1413.336	4342.163	4.94	4.243	9.183
	df	58	309	367	58	308	366
	Mean Squares	50.497	4.574		0.085	0.014	
	F	11.04			6.183		
	Sig	0			0		
	SIGNIFICANCE	SIGNIFICANT			SIGNIFICANT		
SIZE	Square Of Sums	701.486	107.167	808.653	1.942	0.355	2.296
	df	63	8	71	63	8	71
	Mean Squares	11.135	13.396		0.031	0.044	
	F	0.831			0.695		
	Sig	0.688			0.802		
	SIGNIFICANCE	NOT SIGNIFICANT			NOT SIGNIFICANT		
OWNERSHIP	Square Of Sums	469.181	4081.395	4550.576	0.955	8.586	9.541
	df	3	376	379	3	375	378
	Mean Squares	156.394	10.855		0.318	0.023	
	F	14.408			13.904		
	Sig	0			0		
	SIGNIFICANCE	SIGNIFICANT			SIGNIFICANT		
AGE	Square Of Sums	1184.322	3297.155	4481.477	1.979	7.29	9.269
	df	93	281	374	93	280	373
	Mean Squares	12.735	11.734		0.021	0.026	
	F	1.085			0.817		
	Sig	0.303			0.873		
	SIGNIFICANCE	NOT SIGNIFICANT			NOT SIGNIFICANT		

cent firms who had appointed less than 33.33 percent independent directors on the board. 53.2 per cent companies during 2004-05 had appointed more than equal to 50 per cent independent directors, but this number reduced to 41.6 per cent during 2008-09. 58.4 percent sample companies came under the second category during 2008-09. This change was due to change in the nature of chairman being appointed by firms. Secondly, firms had started considering their nominee directors as non-independent directors. Another reason can be that it is very difficult to find out true independent directors. There are firms that have appointed only independent directors on their board, which proved that the independence of the directors has been considered to be an important factor for value creation by them. The descriptive statistics also disclosed that there were around 50 per cent sample companies that had appointed executive director as the chairman of the board and the other 50 per cent had appointed non-executive or independent director as the chairman of the board. There were 13.2 per cent sample companies that had appointed an independent director as the chairman during 2005-06. This percentage fell to 11.7 per cent during 2008-09. But there was no significant variation in the board composition of 2004-05 and 2008-09, as proved by applying t-test on the data.

RESULTS OF ANOVA

The variation has been checked in board size and independence on the basis of different variables applying Analysis of Variance (ANOVA) test. Table 4 reports the results of ANOVA. The results proved that there is no significant variation in board size (F-value-0.738) and independence (F-value-0.718) on the basis of time. The mean differences are not significant over the period of time. But it is significant for board size (F-value-6.886) on the basis of different categories of the chairman. It proved that board size significantly varies when the chairman is executive, non executive or an independent director. The results also depicted that there is no significant variation in board independence (F-value-2.475) on the basis of various categories of chairman. The Table 3 proved that different categories of market risk and leverage in terms of the debt-equity ratio have a significant impact on both board size and independence. The results also proved that different ownership structures led to different board sizes (F-value-14.408) and also significantly affect independence of the boards (F-value-13.904). It can be observed from the sample that public sector undertakings have appointed larger boards and proportion of independent directors was low, while private (Indian) companies have small boards. The companies with foreign ownership have the highest proportion of independent directors. The age of firms and size in terms of total sales have no significant impact on board size and board independence.

Table 4 : Correlation Between Board Size, Independence And Performance Variables				
PARAMETERS	PBTRATIO	ROA	P/E RATIO	TOBIN'S Q
Board Independence	0.13*	0.06	0.18*	0.23*
Board Size	0.01	-0.03	-0.15*	-0.12*
*Significant at 1 per cent level.				

Table 5 : Regression Results Of Board Size, Independence And Firm Performance				
Dependent Variable→	PBT/Sales	ROA	P/E Ratio	Tobin's q
Independent Variable↓				
Board Size				
Intercept	Not Significant	Not Significant	2.323 (6.175)	6.989 (6.549)
Coeff (β)			-0.412 (-2.714)	-0.642 (2.880)
R ²			0.082	0.227
Board Independence				
Intercept	0.088 (2.259)	Not Significant	1.381 (4.358)	4.667 (5.192)
Coeff (β)	0.117 (2.146)		0.969 (3.484)	2.090 (3.265)
R ²	0.092		0.111	0.491
Values in parentheses are the t values.				
Note: Regression has been run taking age, size, leverage, chairman, ownership, and beta as control variables.				

CORRELATION RESULTS

Table 4 explained the correlation results between board size and board independence with respect to four performance variables. The board size has a significant and negative relation with the price-earning ratio and Tobin's q, proving smaller boards lead to better financial performance. But board independence is positively and significantly related with all the performance measures, except return on assets. It proved that an independent board takes better decisions, which results in better performance.

Table 6 : Change in Board Composition and Firm Performance				
Dependent Variable→	Change in PBT/Sales	Change in ROA	Change in P/E Ratio	Change in Tobin's q
Independent Variable↓				
Change in Board Size				
Intercept	Not Significant	Not Significant	Not Significant	3.990 (10.478)
Coeff (β)				-0.085 (-2.654)
R ²				0.019
Change in Board Independence				
Intercept	0.015 (0.296)	Not Significant	-0.313 (-1.617)	2.078 (5.105)
Coeff (β)	0.333 (3.336)		1.087 (2.793)	3.159 (4.575)
R ²	0.029		0.020	0.064
Values in parentheses are the t values.				
Note: Regression has been run taking age, size, leverage, chairman, ownership, and beta as control variables.				

ORDINARY LEAST SQUARE ESTIMATES

The causal analysis has been used to find out the relation between board size and firm performance and independence of board and performance.

1) Board Composition and Performance Variables : Here, corporate governance variables, i.e. board size and board independence have been taken as independent variables, while performance variables, i.e. profits before tax to sales ratio, return on assets, the price-earning ratio and Tobin's q have been taken as dependent variables. The regression results have been reported in Table 5. The table revealed that board size has no significant impact on operating performance in terms of profits before tax to sales ratio and return on assets. But it has a significant and inverse relation with price-earning ratio and Tobin's q. The value of R square for PE ratio is 0.082, proving a lesser association between the variables than Tobin's q, which has R square value of 0.227. The results are consistent with Conyon and Peck (1998), Bhagat and Black (1999) and Garg (2007). As far as the board independence is concerned, it has a significant and positive impact on firm performance except return on assets. The highest value of R square again appeared for Tobin's q. It proved that with the change in proportion of independent directors, there will be 0.491 per cent change in Tobin's q. The results support the results of Anderson et al. (2004), Brown and Caylor (2004) and Ho (2005). To check the robustness of the results, the regression has been applied on change in board composition and financial performance over the period of time. The results almost remained consistent. Table 6 explained that change in board size has a significant negative impact on Tobin's q. It can be inferred from the above results that reducing the board size will lead to increase in the value of Tobin's q. However, the level of association or coefficient of determination is low. But it is consistent with past studies. The companies should always give importance to the appointment of independent directors, as it has a positive and significant impact on firm performance.

2) Firm Performance and Board Composition : To find out whether the causal relationship between board composition and performance variables can be run both ways, a regression model has been developed, taking performance as independent and board size and board independence as dependent variables. Table 7 presents the results of reverse relationship. The coefficients of board size are negative and significant for price-earning ratio, and Tobin's q, which proved that better performance will lead to a reduction in board members or decline in profits will lead to appointment of more members. The performance variables have a significant and positive impact on board independence, which tells us that better performance will lead to the appointment of more independent directors on

Table 7 : Regression Results of Firm Performance and Board Composition		
Dependent Variable→	Board Size	Board Independence
Independent Variable↓		
PBT/Sales	Not Significant	Not Significant
ROA	Not Significant	Not Significant
P/E Ratio		
Intercept	1.916 (17.476)	0.396 (19.913)
Coeff (β)	-0.043 (-2.112)	0.032 (3.541)
R ²	0.395	0.115
Tobin's q		
Intercept	1.916 (17.476)	0.396 (19.913)
Coeff (β)	-0.015 (-2.061)	0.014 (3.614)
R ²	0.395	0.115
Values in parentheses are the t values.		
Note: Regression has been run taking age, size, leverage, chairman, ownership, and beta as control variables.		

Table 8 : Endogeneity: Board Composition and Firm Performance		
Dependent Variable→	Tobin's Q	Board Size
Independent Variable↓		
Tobin's Q _{t-1}	Significant	Not Significant
Board Size _{t-1}	Not Significant	Significant
Dependent Variable→	P/E Ratio	Board Size
Independent Variable↓		
P/E Ratio _{t-1}	Significant	Not Significant
Board Independence _{t-1}	Not Significant	Significant
Dependent Variable→	Tobin's Q	Board Independence
Independent Variable↓		
P/E Ratio _{t-1}	Significant	Not Significant
Board Independence _{t-1}	Not Significant	Significant
Dependent Variable→	P/E Ratio	Board Independence
Independent Variable↓		
P/E Ratio _{t-1}	Significant	Not Significant
Board Independence _{t-1}	Not Significant	Significant

the board.

RESULTS OF ENDOGENEITY CHECK

It can be observed from above that the reverse relationship also exists between board composition and performance variables. Thus, an endogeneity check has been applied to check its consistency. The board size and performance of previous years have been taken as independent variables, and its impact on current year's board size and performance have been seen. Similar check has been applied for board independence. The performance variables considered here are price-earning ratio and Tobin's q, which have shown significant reverse relation. Table 8 reported that performance variables of the previous year have no significant effect on board size of current year and even board size of the previous year does not affect performance variables of the current year significantly. Similar are the results with

board independence. Thus, it can be concluded that board size and performance and board independence and performance are not endogenously related.

CONCLUSION

Corporate governance is a set of relationship between board, management, shareholders and the other stakeholders. Good corporate governance induces the board and management to work for the better interests of the shareholders. It is based upon the principles of effective monitoring, promoting transparency, protecting shareholders' rights, ensuring equitable treatment of all the shareholders and disclosing timely and accurate information. It is concerned with the values, vision and visibility. Better governed companies are able to become good corporate citizens. The communities and societies at large reward better governed companies. The Asian Corporate Governance Association has ranked India third on the basis of governance practices after Singapore and Hong Kong (Bhasin, 2006). In the 'Global Investor Opinion Survey' of over 200 institutional investors, first undertaken in 2000 and updated in 2002, McKinsey found that 61 per cent of investors in Asia considered corporate governance and financial performance equally important, while 21 per cent gave corporate governance more value than financial results. According to this survey, 80 per cent of the respondents would pay a premium for well-governed companies. They defined a well-governed company as one that had mostly outside directors, who had no management ties, undertook formal evaluation of its directors and was responsive to investors' requests for information on governance issues. It can also be concluded that shareholders and stakeholders reward compliance with the best governance practices and react positively to it. Investor protection is gaining importance these days. It is one of the crucial issues under World Bank Report, 2009 and India performed relatively well on the protecting investors' indicator. The report also said that Indian regulations provide for relatively high levels of disclosure, involving company insiders and also makes it easy to sue in cases of misconduct. But rules on directors' liability for self-dealing are weak in India. Regulatory bodies in India are taking a number of initiatives to improve this. Thus, directors' role is becoming important these days to have better governance in practice. Board size and its independence are becoming critical factors in corporate governance. The research examined the impact of board size and board independence on firm performance. The independent directors have no other pecuniary relationship with the company, apart from receiving remuneration as directors. After controlling for size, age, market risk, leverage, nature of chairman and ownership structure, the results found statistically significant negative relationships between board size and performance variables i.e. price-earning ratio and Tobin's q. On the other hand, the board independence has a positive and significant impact on performance variables considered for the study, except return on assets (ROA). The study proved that larger boards make decisions and their implementation slow, but the number should be not so less, which affects their proper functioning. Presently, more emphasis is being paid on independence of directors, rather than having large boards, but selecting efficient and independent directors is still very difficult. The companies should make efforts for improvement in the quality of independent directors by providing them sufficient training and making them more aware of the organization so that they can contribute better for its growth.

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