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Abstract

We construct a Corporate Governance Index for 500 large listed Indian firms for the period from 2003 to 2008 in this paper. The index construction uses information on four important corporate governance mechanisms: the board of directors, the ownership structure, the audit committee, and the external auditor. The construction of the index for six years allows an examination of the evolution of corporate governance in India in a period when there have been a large number of corporate governance reforms. The analysis documents a rising trend in the level of the Corporate Governance Index of Indian companies. There is a strong association between the Corporate Governance Index and the market performance of companies, where companies with better corporate governance structures earn substantially higher rates of return in the market. This analysis shows that Indian markets tend to reward companies that carry out governance reforms. It provides an impetus to regulators as well as to push for further reforms.

Keywords: Corporate Governance Index, board of directors, ownership structure, audit committee, external auditors

JEL Code: C43, G18, G34, M41, M42

1 Introduction

Governance reforms have become the corner stone of corporate sector development in India in recent years. As Indian companies begin to access international capital and as foreign investors begin to acquire stakes in Indian companies, the design of a well laid out governance structure has become increasingly important for corporate sector growth. To this extent a large number of governance reforms have taken place in the India, beginning with the implementation of the Clause 49 of the Listing Agreement in February 2000 and continuing with the drafting of the New Companies Bill of 2009 which is awaiting approval of the parliament. It is envisaged that institution of these reforms is likely to lead to better governance of Indian companies.

However, quantifying the state of corporate governance of companies is not easy. In part the difficulty comes from the encompassing nature of the definition of corporate governance. A scanning of the academic literature suggests a plethora of definitions. Of these, perhaps the ones that most adequately capture the overarching reach of corporate governance is contained in the following two definitions:

1. Corporate governance refers to the "the whole set of legal, cultural, and institutional arrangements that determine what public corporations can do, who controls them, how that control is exercised, and how the risks and return from the activities they undertake are allocated." (Blair, 1995).

2. Corporate governance is the system by which business corporations are directed and controlled. The corporate governance structure specifies the distribution of rights and responsibilities among different participants in the corporation, such as, the board, managers, shareholders and other stakeholders, and spells out the rules and procedures for making decisions on corporate affairs. By doing this, it also provides the structure through which the company objectives are set, and the means of attaining those objectives and monitoring performance (OECD, 1999).

Thus corporate governance covers a wide range of arrangements. Scholars classify these arrangements into internal and external mechanism. With internal mechanisms, the ownership structure of the firm, the board of directors, the auditor and the audit committee, other committees of the board like nomination committee, remuneration committee acquire special significance. Within external mechanisms, the market for corporate control and product market competition play a significant role in improving corporate governance. The internal and external mechanisms in turn are shaped by the overall legal and institutional structures of the country.

Given the large number of facets that are covered by corporate governance it is not easy to understand the overall state of corporate governance of a company. There are too many variables and too much information which need to be processed for this understanding. In this context an overall Corporate Governance Index that can adequately summarize the different aspects of governance with a few numbers may be highly useful.

In this paper we construct such a Corporate Governance Index for 500 large listed firms in the Indian corporate sector using information on four important corporate governance mechanisms namely, the Board of Director, Ownership Structure, Audit Committee, and the external Auditor. We construct the indices for six years for the period 2003 to 2008. Construction of the index for six years allows us to examine the evolution of the state of corporate governance in India over a time period when a large number of corporate governance reforms have taken place and continue to do so. Our empirical analysis shows an increasing trend in the corporate governance structure of Indian companies. We also examine the relation of the Corporate Governance Index with the market performance of companies and find a very strong association between the two. Companies with better corporate governance structures appear to earn substantially higher rates of return in the market. The empirical analysis shows that that good governance practices are rewarded by the market which provides an added incentive to companies to carry out governance reforms. It provides an impetus to regulators as well as to push for further reforms. To our knowledge this is one of the first attempts to construct a Corporate Governance Index for a wide range of companies spanning a large number of years.

We believe the Index would be useful to a wide range of participants in the capital market. To begin with, it will be helpful to regulators to judge how the corporate governance reforms are working. Second, the index would be helpful to companies to realize the benefit of adopting good governance practice - the Index can work as a rating tool. Finally, the index would be helpful to investors to pick well governed companies. Above all, the extensive database that is created in the process of creating the Index will provide valuable information for conducting research in various fields of governance.

The rest of the paper is organized as follows. Section 2 describes the importance of the four governance mechanisms used to construct the Index, and the attributes considered to construct each sub index. Section 3 discusses the methodology of Index construction and Section outlines the sample and the data source. Empirical analysis of the cross-sectional distribution of the Index and its components, its time behavior and its relation to market performance are presented in Section 5. Section 6 concludes the paper.

2 Components of the Corporate Governance Index

As outlined in the introduction, corporate governance covers a numbers of internal and external mechanisms that reduce agency cost within a corporation and thereby lead to an increase in firm value. We consider four important governance mechanisms to capture the overall state of corporate governance of a company. These four governance mechanism are the (1) Board of Directors, (2) Ownership Structure, (3) Audit Committee and (4) Auditor.

2.1 The Board of Directors

The board of directors acts as one of the most important governance mechanisms in aligning the interests of managers and shareholders. A typical board of modern corporations consists of inside or executive directors who are full time employees of the company and are involved in its day to day operations and non-executive or outside directors who do not have any executive responsibilities and play mostly an advisory role. The outside directors are generally further classified as affiliated directors (or grey directors) who are former company officers, relatives of the company officers, or those who have existing business relationships with the company such as investments bankers and lawyers; and non-affiliated directors who are outside directors with no such affiliation. It is the non-affiliated outside directors, commonly referred to as non executive independent directors or simply as independent directors who are envisaged to perform the monitoring role and are widely regarded as the fiduciaries of the shareholders interest.

Apart from board independence there are number of other issues that relate to the efficient functioning of the board of directors, especially in the case of emerging economies including India, where family owned corporations belonging to business groups dominate the corporate landscape. These issues relate to the influence that owners can potentially exert through their presence on corporate boards, often through having substantial equity ownership in the company as well as by holding important managerial positions. Influence can also be exercised by combining the role of CEO and Chairman (CEO-Duality) which might lead to reduced board oversight. Coupled with the influence of insiders, the effectiveness of independent directors to discharge their fiduciary duties also depends on their ability to devote sufficient time to discharge their functions. In this respect, multiple directorships by independent directors acquire special significance. While multiple directorships at one level might signal the quality of directors, a large number of directorships is likely to hamper the ability to discharge their functions effectively. Accordingly, regulations in some countries, and certainly in India, try to limit multiple directorships beyond a point. In addition to board independence, ceo-duality and multiple directorships, there is one more important issue that is relevant for board of directors in India. This pertains to the presence of nominee directors on board and the debate as to whether these directors should be considered as independent directors. While the current Clause 49 regulations consider nominee directors as independent directors, almost all academic discourse as well as recommendations of corporate governance committees in India tend to suggest otherwise given that these directors are most likely to look after the interest of the financial institutions they represent. Since most these financial institutions are providers of debt capital, it is argued that nominee directors as more likely to protect debt-holders interest which might often run counter to the interest of the equity holders.

Keeping the above discussions in perspective, we consider ten important attributes that describe sate of governance with respect to the Board of Directors. These ten attributes are:

1. Board size
2. Percentage of outside directors
3. Percentage of independent directors
4. Presence of nominee directors
5. Presence of non-executive or promoter chairman
6. Presence of promoter on board
7. Total number of directorships held by independent directors
8. Number of board meetings held
9. Percentage of board meetings attended by independent directors
10. Percentage of independent directors who attended AGM

2.2 The Ownership Structure

The ownership structure of a publicly held corporation is one of the internal mechanisms of corporate governance that has been extensively studied in the developed countries, particularly the US and UK, and has more recently been the subject of much research in emerging economies. While the ownership and control structure of a firm is the source of agency costs in firms and is at the root of all corporate governance problems, the literature on ownership as a governance mechanism focuses on how the ownership structure per se, i.e., stock ownership by different shareholders, can separately or in conjunction mitigate agency costs in a firm.

The role of ownership as a mitigating mechanism first came into focus in the context of agency costs arising from separation of ownership and control in widely held firms. In owner-controlled firms with concentrated ownership, while there may be separation of ownership and management, owners have strong incentives to monitor managers. It is argued that higher shareholding by controlling insiders of family controlled firms, by strengthening the link between the value of the firm and the wealth of controlling insiders, can help align their interests with that of outside minority shareholders. However, in such firms, agency problems could manifest on account of conflict of interest between controlling shareholders and minority shareholders. Extant literature suggests that one way of reducing this agency cost is to have outside blockholders with relatively large equity positions.

These large shareholders have substantial investments at stake, as well as the voting power to ensure that the investments are not lost. Large shareholders can also help alleviate the free rider problem associated with small shareholders. Moreover, blockholders like foreign institutional investors and domestic financial institutions can engage in "relational investing" and are likely to be more committed to the company, which will benefit the company in the long run. Finally, given the size of block-holdings, the costs of governance by the large investors is likely to be less as these can be spread across more investments, and enhancing the influence of blockholders like institutional investors would benefit society at large as their interests tend to coincide with the interests of the society.

We use four attributes to capture the ownership structure of the firm that has a bearing on corporate governance. These are:

1. Percentage of promoter ownership
2. Percentage of foreign institutional ownership
3. Percentage of domestic financial institution ownership
4. Percentage of dispersed ownership

2.3 The Audit Committee

Information is basic input for governance. It is the primary ingredient for enabling shareholders to exercise their voting rights in the general meetings of the company. Indeed important decisions like ratification of mergers, approval of crucial corporate decisions, holding management accountable for their actions and deciding if the current board of directors is duly discharging their fiduciary duties depend on shareholders getting the correct and right amount of information from the company. In turn, the ability of the board of directors to discharge their fiduciary duties and monitoring the management as well as carrying out their responsibilities in the various committees of the board depend crucially on these directors getting the right picture about the operations of the company. Within the external corporate governance mechanisms, the workings of the market for corporate control, the ability of the capital market to allocate external finance to the most productive use, the operation of the managerial labor market, and the fixation of managerial compensation all depend on the availability of correct information. Further, adequate and relevant information enable scrutiny of the companys action by outside investors and analysts and ensure that the company puts the scarce resources of the shareholders to the most productive use. Thus information is the key pillar of corporate governance as it enables both direct and indirect monitoring of the corporate managers by both insiders as well as outsiders.

The audit committee is one of the most important governance mechanisms that is designed to ensure that a company produces relevant, adequate and credible information that investors as well as independent observers can use to assess the performance of the company.

The audit committee ensures that the external auditor receives all the necessary information that are required to carry out the audit process independently and effectively and that the functioning of the external auditor is not subjected to the pulls and pressures of the inside management. The audit committee sets the scope of audit and terms of engagement of the external auditor and continually monitors its functioning and progress. Given the importance of the audit committee in corporate governance, it is not surprising to find that regulations all over the world to have placed a major emphasis on the structure, role and powers and the functioning of the audit committee.

A major issue with respect to audit committees is its independence from the management. The management, with help of the internal auditors prepares the financial statements in accordance with the established accounting principles. The external auditor has the responsibility to audit these financial statements. For verification of these financial statements, the auditor requires access to all necessary documents and a truthful explanation of all procedures. It is unlikely that this can be expected from the inside management whose very actions is the subject of the auditing process. Even granted management is truthful, there is a need to insulate the verification process from the influence of the inside management so that outsiders perceive the audit process as independent as they cannot directly observe the managers truthfulness. Under these circumstances, the independence of the audit committee becomes crucial. Accordingly, regulations in most countries require the audit committee to comprise only of independent directors. In India though, the Clause 49 regulations only require the audit committee to have two-thirds of its members as independent directors. The Clause 49 regulations also require the audit committee to be a minimum size of three and that its chairman be an independent director.

We consider four important attributes of the audit committee to construct the Audit Committee Index. These are:

1. Size of audit committee
2. Percentage of independent directors
3. Presence of executive directors in audit committee
4. Number of meetings held

2.4 The Auditor

The auditors are the lead actors in the auditing process and provide independent oversight to the financial reporting by companies. Modern day corporations are huge and their operations are complex. Though accounting standards and norms are specified by the regulators for proper accounting, yet many areas require judgments by management, assumptions, and choice among alternative accounting principles. Consistency of applications in preparing accounts and coverage of all relevant financial aspects are required. Auditors scrutinize and verify the accounts and certify that the financial statements are

prepared in accordance to the prescribed principles and that the accounts are free from material misstatements and give a true and fair view of the companys financial status. In discharging its functions, the auditor verifies and certifies that the information produced by the company are in accordance with the various disclosure statutes prescribed under the countrys legal framework and are in accordance to the accounting and auditing standards prescribed by the regulators. It ensures that various management assumptions regarding the recognition of revenue and expenses are in conformity with the established procedures and standards.

Like the audit committee, independence is the key issue with respect to the auditor functioning. Accordingly, regulations in all countries tend to specify strict conditions relating to non-audit services that an auditing firm can render, auditor rotation, and independence of the employees of the audit firm as well as the audit client from each other. In addition, regulations require the auditor to report directly to the audit committee and the terms of engagement and scope of services of the auditor to be decided by the audit committee rather than by the management. Auditor independence has been an important area of research in the accounting literature. Studies on auditor independence have focused on the extent of non-audit services provided by the external auditor as well audit firm tenure, both of which are generally seen as hindrances to auditor independence. The extant literature provides strong empirical support that higher audit independence has a significant beneficial effect on enhancing the quality of disclosures, in reducing discretionary earnings management, increasing the informativeness of earnings, and in general enhancing the value of the firm.

Keeping in view the above discussion, we consider four attributes of the external auditor to construct the Auditor Index. These are:

1. Percentage of non-audit fees to total payment to auditors
2. Top auditor in terms of audit fees
3. Top auditor in terms of audit clients
4. Change in auditor from last year

3 Methodology of Index Construction

We construct the Corporate Governance Index in two steps. In the first step we construct a sub index for each of the four corporate governance components namely, the Board Index, the Ownership Index, the Audit Committee Index and the Auditor Index. In the second step we average the values of the four sub-indices to arrive at the overall Corporate Governance Index.

To construct the Board Index, the Ownership Index, the Audit Committee Index and the Auditor Index we take the attributes within a specified governance mechanism and score each attribute on a scale of 0 to 5. We then aggregate the score across all the attributes within that specific governance mechanism, divide it by the maximum possible score and multiply it by 100. The simple aggregation of scores implies that we construct an unweighted index. The unweighted index has the advantage of treating all attributes of the a specific sub-index symmetrically without having to make arbitrary or data-driven judgments on the relative importance of each attribute as is the characteristics of weighted indices and those that are formed through principal component analysis. Unweighted indices are widely used in the literature for index construction (Cooke, 1989; Hossain and Hammami, 2009). Note that though the maximum value for each sub index is thus set to 100, none of the sample firms may earn the maximum score. In other words, we normalize the maximum score to 100 rather than normalizing the best firm in the sample to 100. This ensures that improvements over time in a particular governance mechanism will be adequately captured by the index.

We use the standards specified in the Clause 49 regulations as well as insights from various academic studies to score each attribute within a particular corporate governance mechanism.1 For example, with respect to percentage of independent directors, we penalize companies that do not meet the Clause 49 requirements of having at least one third of its board members as independent directors (in case the company has non-executive chairman) or 50 percent (in case the company has an executive/promoter chairman). Likewise, we penalize companies that do not have an audit committee with majority of independent directors and that do not conduct at least four meetings a year as per the Clause 49 regulations. For scoring attributes that do not have specified standards in the Clause 49 regulations, we take help of existing academic studies. For example to score the attribute board size, we use the finding that large boards may not be good for companies (Yermack, 1996). So we divide companies into quintiles based on board size, and give the highest score to companies in the middle and lower points to companies at the lower and higher quintiles.

4 Sample and Data Source

We construct the Corporate Governance Index and the index for the various components for 500 large listed companies in the Indian corporate sector for the years 2003 to 2008. For this we sort all the companies listed on the Bombay Stock Exchange in terms of their average daily market capitalization for the year 2008 and select the top 500 companies. For these companies, we then scrutinize the Corporate Governance Reports contained in the annual reports to tabulate the information on board composition, board size, and number of multiple directorships, promoter presence, and presence of nominee directors, attendance of board and annual general meetings, size of the audit committee, number of meetings held and other related information. We collect the name of the external auditor, and information on total audit and non-audit fees from the annual reports of the companies. We source these annual reports from SANSCO. We source the equity ownership information and stock market details of companies from the Prowess database created by the Center for Monitoring Indian Economy. Though are focus is on the top 500 companies, we are unable to find the annual reports for some companies even after extensive searching. This is especially true for the earlier years. Accordingly in the empirical analysis, the sample becomes unbalanced. However, we believe that the missing companies are fairly random so that the sample gives a fair representation of the top 500 firms in the Indian corporate sector[1].

[1]Clause 49 was introduced by SEBI in February 2000 based on the recommendations of the Kumara Mangalam Birla Committee on Corporate Governance. The Clause required all listed companies with paid up capital of Rs 3 crore or above to comply with a broad set of corporate governance standards by the March 2003. Standards were specified with respect to (i) the Board of Directors (ii) the Audit Committee (iii) Subsidiary Companies (iv) Disclosures including those on related party transactions (v) CEO/CFO Certification (vi) Report on Corporate Governance, and (vii) Compliance. Apart from the mandatory regulatory requirements, Clause 49 also contained certain non-mandatory requirements such as the option of setting up a remuneration committee, shareholder rights, training of board members, audit qualifications, etc. Companies were required to disclose their compliance with these regulations in a separate section on Corporate Governance in their Annual Reports.

5 Results

Table 1 presents the descriptive statistics of the Corporate Governance Index along with its components for the year 2008. The mean value of the Corporate Governance Index is 64.09 which is two-thirds of the maximum value for the Index. The mean and median are similar suggesting that the distribution of the Corporate Governance Index is symmetric (Figure 1). However, the range is quite high at 52 suggesting that there both well and poorly governed companies in the sample. The minimum value of the Index is 31 while the maximum value is 83. Given a standard deviation of 8, the lowest company lies about 6.5 standard deviations away from the best company in the sample.

The Board Index as well as the Ownership Index exhibit similar characteristics. The distribution is symmetric and the separation of the highest and lowest companies is about six standard deviations. Compared to these two indices, the Audit Committee Index and Auditor Index exhibit much more variation. In particular, the Audit Committee Index is skewed to the right suggesting that companies with lower values of the index outnumber the companies with higher values of the index. The standard deviation is much higher at 14.55 and the range is 70. The Auditor Index exhibit even more variation, with a standard deviation of 16 and a range of 75.

Table 1: Descriptive Statistics of the Corporate Governance Index and its Components Financial year 2008

	N	Range	Min	Max	Mean	Median	std
Board Index	425	57.00	32.00	89.00	66.03	67.00	8.48
Ownership Index	496	61.00	22.00	83.00	61.97	61.00	10.34
Audit Committee Index	456	70.00	30.00	100.00	71.84	75.00	14.55
Auditor Index	458	75.00	15.00	90.00	59.38	60.00	15.90
Corporate Governance Index	498	52.00	31.00	83.00	64.09	66.00	8.05

Source: Authors computation.
Sample: Top 500 listed companies

Table 2: Descriptive Statistics of the Corporate Governance Index and its Components Financial year 2003

	N	Range	Min	Max	Mean	Median	Std
Board Index	269	55.00	36.00	91.00	66.48	67.00	9.31
Ownership Index	356	56.00	27.00	83.00	57.77	61.00	10.25
Audit Committee Index	170	80.00	15.00	95.00	69.32	75.00	16.49
Auditor Index	374	75.00	15.00	90.00	56.34	60.00	14.50
Corporate Governance Index	428	70.00	15.00	85.00	59.91	60.00	9.65

Source: Authors computation
Sample: Top 500 listed companies

Given the large number of corporate governance reforms that have taken place in India since 2000, it is natural to ask if the Corporate Governance Index and its components show an improvement over the years. Table 2 presents the descriptive statistics of the Corporate Governance Index and its components for the year 2003. One might recall, that March 2003, was the cut-off date for all listed companies (with share capital of Rs. 3 crore or above) to comply with the Clause 49 Regulations. It is apparent that the corporate governance standard has improved over the years. The value of Corporate Governance Index has increased from 59.91 in 2003 to 64.09 in 2008. Noticeably, both the range and the standard deviation in 2008 are lower than in 2003, suggesting that there is an improvement across the board with the distribution of the Index become tighter. In particular, the minimum value of the Index has increased from 15.00 in 2003 to 31.00 in 2008 which is more than a hundred percent improvement. Looking at the different components, it is clear that all components of the Index, except for the Board Index have contributed to the improvement of the Corporate Governance Index. In particular, the Audit Committee Index shows the maximum improvement when judged in terms of reduction in the range and standard deviation.

Table 3: Correlations: The Corporate Governance Index and Its Components

Pearson Correlation Coefficients Prob > |r| under H0: Rho=0					
	bod_index	own_index	ac_index	aud_index	CG_index1
Board Index	1.00000	0.02732 0.2307	0.10684 <.0001	0.132897 <.0001	0.45804 <.0001
Ownership Index	0.02732 0.2307	1.00000	0.19855 <.0001	0.10295 <.0001	0.58070 <.0001
Audit Commitee Index	0.10684 <.0001	0.19855 <.0001	0.100000	0.13824 <.0001	0.67830 <.0001
Auditor Index	0.13897 <.0001	0.10295 <.0001	0.13824 <.0001	1.00000	0.70576 <.0001
Corporate Governance Index	0.45804 <.0001	0.58070 <.0001	0.67830 <.0001	0.70576 <.0001	1.00000

Source: Authors computation
Sample: Top 500 listed companies

Table 3 presents the correlation between the Corporate Governance Index and it components based on the last six years from 2003 to 2008. The Pearsons correlation coefficient is statistically significant for all pairs except for the correlation between the Board Index and the Ownership Index. The correlations are all positive implying that companies in general strive to have better governance structures with respect to each mechanism.

However, the magnitude of the correlation coefficients between the individual components is relatively low suggesting that each aspect of corporate governance can be independently chosen to arrive at the right mix of the overall governance structure. This is in line with the academic discourse which points out that the governance structure that is most appropriate for a company depends on its characteristics. A company that has a highly concentrated ownership structure with large insider presence, perhaps to safeguard owner-capital, might compensate it by having a board with large presence of independent directors. The individual components however, display a strong correlation with the overall Corporate Governance Index as expected.

As highlighted earlier, complying with corporate governance norms is costly for companies as it involves the use of large amount of resources to comply with the regulations. However, if compliance leads to an overall increase in the performance of the firm as well as to a lowering of the cost of capital thereby leading to higher rates of return on the companys stock, then it provides an incentive for companies to comply with the governance

norms. Corporate governance regulation all over the world is based on this fundamental premise that good corporate governance makes business sense both with respect to existing shareholders as well as prospective investors.

We explore this idea by analyzing the relation between the Corporate Governance Index and the market return on the stock of the company. Specifically, we take the financial year-ending monthly return i.e., the return in the month of March, on the stock of the company in the year (t) and regress it on the value of the Corporate Governance Index in the year (t-1) and other control variables. The use of lagged values of the Index reduces the sample to the period 2004 to 2008. We use a panel data fixed effects model with year specific intercepts to examine this relation. As noted earlier, corporate governance reforms in India has been a gradual and continual process since early 2000. To capture this idea, we interact the Corporate Governance Index (CG Index) with year specific dummy variables. The year 2004 which marks the first full year of compliance by all listed companies is taken as the reference year. The coefficient on the interaction terms therefore shows the difference in the effect of the Corporate Governance Index in that particular year compared to the base year of 2004. The total effect of the Corporate Governance Index in a particular year is the sum of the coefficient on the Index in the base year plus the coefficient of the interaction terms. We include fixed year effects to take into account the fact the years 2007 and 2008 represent the years of the financial crisis. Finally we include the return variance as a proxy of the risk of the company and average market capitalization to proxy for company size.

The returns regression that we estimate to examine the relation between the Corporate Governance Index and return is different in spirit than the familiar Fama-French (1993) return regression. The Fama-French three factor model is a regression equation to explain how different risk factors are related to return in equilibrium. In this scenario the future stream of cash flow is fixed (pre-determined) and only the relation between risk and return is explored. In our case the setup is one of disequilibrium where the future stream of cash flow depends on the evolving corporate governance norms practiced by a company. Until the optimal corporate governance framework is chosen, we postulate that any improvement in corporate governance practices would lead to an increase in the future stream of cash flow, or more generally, to a betterment in the performance of the company (Demsetz and Lehn, 1985). Thus, in disequilibrium both governance standards as well as risk would causally influence the price of the security and hence its rate of return. The positive effect of corporate governance on the rate of return, if any, can be interpreted as a higher alpha for a better governed company.

Table 4: The Corporate Governance Index and Average Rate of Return Regression Analysis

Dependent Variable: Thirty Days Return in the Financial Year-ending Month of March

Parameter Estimates				
Variable	Parameter Estimate	Standard Error	t Value	Pr> $\|t\|$
Intercept	0.26119	0.27505	0.95	0.3424
Lag of CG Index	-0.00759	0.00448	-1.70	0.0901
y2005	0.13132	0.35255	0.37	0.7096
y2006	0.40121	0.37479	1.07	0.2845
y2007	-0.80493	0.35893	-2.24	0.0250
y2008	-1.85995	0.33834	-5.50	¡.0001
CG Index X y2005	0.00096	0.00574	0.17	0.8662
CG Index X y2006	0.00320	0.00596	0.54	0.5913
CG Index X y2007	0.01401	0.00573	2.44	0.0146
CG Index X y2008	0.01598	0.00543	2.95	0.0033
Return Variance	0.00879	0.00089624	9.81	¡.0001
Average Market Cap.	0.00000225	7.924927E-7	2.84	0.0046

Total observations: 2091
R-Squared: 0.346

Table 4 presents the results of the return regression on the Corporate Governance Index. Consistent with our expectation we find the years fixed effects to be significant. In particular the fixed effects for the years 2007 and 2008 are negative and highly significant. Also as expected, the coefficient on the return variance is positive and significant confirming that companies with higher risk has to compensate the investor with higher rates of return. The coefficient on the size variable is positive and significant suggesting that bigger companies earn higher rates of return perhaps because of better diversification or perhaps because of their ability to negotiate lower rates of capital.

The coefficient on the CG Index and its interactions offer an interesting story. The coefficient on the CG Index pertains to the base year 2004 (ending March 31st, 2004). As noted earlier, corporate governance regulations came into effect on a widespread basis on

31st of March of 2003. Accordingly, this coefficient captures the relation mostly in the first year of the post-Clause 49 era. The coefficient is negative and significant, but only at the 10 percent level. However, the coefficients on the interaction terms suggest a gradual and a monotonic increase in the effect of the Corporate Governance Index in the subsequent years. All the four coefficients on the interaction terms are positive. The coefficient on the first two years are however insignificant. Recall that several modifications to the Clause 49 regulations were carried out in the years following 2003 culminating with the new notification in August 2004 that required listed companies to comply with new governance standards from January 1, 2006. Accordingly the year 2005 and most part of the financial year 2006 can be taken as adjustment phase in the Indian corporate sectors as far as governance reforms are concerned. The positive but insignificant coefficients are consistent with these developments as companies were still in the process of meeting the new regulations and accordingly there could be large variations within companies regarding their compliance standards.

However, there is strong positive trend since the year 2007. Both the coefficients on the interaction terms are positive and highly significant. The coefficients also increase monotonically suggesting a stronger and stronger correlation with governance structure and rate of return on the stock. Note that the positive magnitude in each of these two years is higher is than the negative magnitude attached to the Index in the base year 2004, suggesting that the total effect is positive. Thus the regression results point to a strong positive correlation between governance structures and rates of return.

The magnitudes of the coefficients are also economically large. For example, for the year 2008, the net coefficient of 0.00839 (0.01598 0.00759) implies that an of improvement of about 52 points in the Corporate Governance Index which is equal to the difference of the observed minimum and maximum value of the Index, leads to an increase of about 5.3 percent increase in the annual raw return of the company. Similarly, an improvement of about 30 points in the Index, which is equal to the observed minimum value and the mean value of the Index in 2008, leads to an increase of 3.0 percent in annual raw returns. For the year 2007, the corresponding figures are 4.0 and 2.3 percent respectively. These numbers are economically significant.

A better proxy of the effectiveness of corporate governance mechanisms in improving the operation of the company and hence its future valuation and consequent increase in its stock price, is the excess return of the companys stock over and above the market. We therefore, rerun the return regression replacing the raw return on the stock with the thirty day excess return on the stock over the market index Nifty. These results are presented in Table 5. The results of this regression strongly corroborate the findings obtained in the previous regression. Again, the coefficients on the interaction terms are highly significant for the years 2007 and 2008 and are economically large in magnitude suggesting the emergence of a strong relation between the governance of companies and excess return in the later years. Given the coefficients of 0.26807 in 2007 and 0.35129 for 2008, a 10 point increase in the Corporate Governance Index implies an increase of 7.5 percent and 18.6 percent annual

excess return over the Nifty, respectively.

To explore further the effect of an increase in the Corporate Governance Index on market performance, we divide the companies into six broad groups based on their Corporate Governance Index ranks for the year 2008, and then estimate a regression with five group dummy variables along with the proxies for market risk and company size. The base or control group is Group 6 which comprise of companies with Corporate Governance Index rank between 251 and 500. The coefficient on the group dummy variables therefore represents the difference in the 30 day return of the companies in that group to the base group. We estimate this regression for the year 2008.

Table 5: The Corporate Governance Index and Excess Rate of Return Regression Analysis

Dependent Variable: Thirty Days Excess Return over Nifty in the Financial Year- ending Month of March

Parameter Estimates				
Variable	Parameter Estimate	Standard Error	t Value	Pr> $\|t\|$
Intercept	2.38903	5.81694	2.13	0.0333
Lag of CG Index	-0.20772	0.09471	-2.19	0.0284
y2005	-1.92155	7.45585	-0.26	0.7966
y2006	-5.64389	7.92625	-0.71	0.4765
y2007	-21.17002	7.59084	-2.79	0.0053
y2008	-32.05711	7.15522	-4.48	<.0001
CG Index X y2005	0.07074	0.12145	0.58	0.5603
CG Index X y2006	0.09665	0.12610	0.77	0.4435
CG Index X y2007	0.26807	0.12118	2.21	0.0271
CG Index X y2008	0.35129	0.11474	3.06	0.0022
Return Variance	0.18981	0.01895	10.01	<.0001
Average Market Cap.	0.00003639	0.00001676	2.17	0.0300

Total observations: 2091
R-Squared: 0.114

The results of this regression are presented in Table 6. All the coefficients on the group

dummy variables are positive and four of them are statistically significant (one tail test) at the 10 percent level. Considering the coefficient attached to the Group 1 dummy variables, companies in this group earned about 2.3 higher annual raw returns in the year 2008 compared to the base group2. These qualitative results are confirmed if we estimate the regression using the 30 day excess returns over Nifty (Table 7). Here again, all the coefficients are positive and four of them are significant at the 10 percent level (for a one tailed test).

Table 6: Corporate Governance Index Groupings and Average Rate of Return Regression Analysis Year 2008

Dependent Variable: Thirty Days Return in the Financial Year-ending Month of March

Parameter Estimates						
Variable	Lable	DF	Parameter Estimate	Standard Error	t Value	Pr> |t|
Intercept		1	-0.49594	0.09081	-5.46	<.0001
Group1 Top 50		1	0.19432	0.11059	1.76	0.0795
Group2 51 to 100		1	0.16534	0.11014	1.50	0.1339
Group3 101 to 150		1	0.11413	0.11046	1.03	0.3020
Group4 151 to 200		1	0.22896	0.11001	2.08	0.0379
Group5 201 to 250		1	0.17098	0.11059	1.55	0.1227
Return Variance		1	-0.02665	0.00486	-5.49	<.0001
Return Variance Squared		1	0.00021789	0.00005545	3.93	<.0001
Average Market Cap.		1	0.00000249	0.00000123	2.02	0.0436

Total observations: 498
R- Squared: 0.10
Control Group: Companies with CG Index Rank 251-500[2]

[2]A significant proportion of government companies appear in the base group. An inclusion of a Public dummy in the returns regression produces a highly significantly negative coefficient. This suggests that apart from lower corporate governance standards there may be additional maladies of public ownership which make government companies earn lower rates of return. Put differently, even if government companies were given high quality governance structures, other aspects of public ownership like political connections, social networking, rent seeking etc. might continue to make government companies to be valued lower in the market place.

Table 7: Corporate Governance Index Groupings and Excess Rate of Return Regression Analysis - Year 2008

Dependent Variable: Thirty Days Excess Return over Nifty in the Financial Year-ending Month of March

Parameter Estimates						
Variable	Lable	DF	Parameter Estimate	Standard Error	t Value	Pr> $\|t\|$
Intercept		1	1.34623	1.34146	1.00	0.3161
Group1 Top 50		1	2.83177	1.63372	1.73	0.0837
Group2 51 to 100		1	2.38857	1.62700	1.47	0.1427
Group3 101 to 150		1	1.37360	1.63176	0.84	0.4003
Group4 151 to 200		1	3.07880	1.62505	1.89	0.0587
Group5 201 to 250		1	2.46950	1.63365	1.51	0.1313
Return Variance		1	-0.47687	0.07177	-6.64	<.0001
Return Variance Squared		1	0.00334	0.00081918	4.07	<.0001
Average Market Cap.		1	0.00003598	0.00001819	1.98	0.0485

Total observations: 498
R- Squared: 0.16
Control Group: Companies with CG Index Rank 251-500

6 Conclusion

In this paper we have outlined the construction of a corporate governance index for the large listed firms in India. The Index is based on four major corporate governance mechanisms namely the Board of Directors, the Ownership Structure, the Audit Committee, and the External Auditor. For each of the four governance mechanisms several important attributes as identified in the academic literature were used to construct an overall Corporate Governance Index as well the four sub-indices.

Empirical analysis of the Corporate Governance Index and the its components for the last six years namely 2003 to 2008, shows an upward trend in the governance practices of the large listed firms in India. At the same time there is a tightening of the distribution of the

Index over the years implying that companies are moving close to each other in terms of their governance standards. However, there is sufficient scope for improvement.

Our regression results show a strong correlation between the Corporate Governance Index and the market performance of the company whether judged in terms of raw returns or excess returns. Companies with higher values of the Corporate Governance Index earn higher economically meaningful raw and excess returns in the market. This should provide an added incentive for companies to undertake the various governance reforms even if doing so requires the allocation of additional resources. The positive relation also implies that prospective investors perceive a well governed company as less risky and are willing to lend capital at lower cost. Our results also provide strong evidence of strengthening of the relation between the Corporate Governance Index and market performance over the years as corporate governance reforms continue to be enacted in the Indian corporate sector. Coupled with this, the fact that the general level of corporate governance is showing an increasing trend over the years, should provide encouraging news to the regulators about the success of the already instituted governance reforms as well as those that are slated in the years to come.

In conclusion, the real corporate governance crises in India came from the 2008 period onwards starting notably with the Satyam fiasco. Post Satyam, corporate governance issues came into the forefront and companies with poor corporate governance practices came into limelight with many such companies experienced an exodus of independent directors from their boards (Chakrabarti et. al, 2011). However, the data in this paper stops at 2008 and hence misses many of these interesting cases. As we extend the Index for the later years and bring other important corporate governance mechanisms like related party transactions, remuneration patterns and accounting quality into the picture, it would be interesting to see if the corporate governance index is able to identify the good and poorly governed companies which in turn should provide a test for the acceptability of the Index.

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Appendix I
Grouping of Companies Based on the Overall Corporate Governance Index

Mean value of CG Index:	64.18
Standard Deviation of CG Index:	7.93

Groups:	Classification	Value of CG Index	No. of Companies
Group 1:	> Mean + 1.5*SD	(>= 77)	14
Group 2:	Mean + 0.5*SD to Mean + 1.5*SD	(69 − 76)	144
Group 3:	Mean 0.5*SD to Mean + 0.5*SD	(61 − 68)	195
Group 4:	Mean 1.5*SD to Mean 0.5*SD	(53 − 60)	102
Group 5:	<= Mean 1.5*SD	(<= 52)	45

Names within a group are in alphabetical order.

Company Name	Group
Colgate-Palmolive (India) Ltd.	1
Crisil Ltd.	1
Gateway Distriparks Ltd.	1
Glenmark Pharmaceuticals Ltd.	1
Graphite India Ltd.	1
H C L Technologies Ltd.	1
H D F C Bank Ltd.	1
Hexaware Technologies Ltd.	1
Hindustan Unilever Ltd.	1
Infosys Technologies Ltd.	1
Piramal Healthcare Ltd.	1
Punjab Tractors Ltd.	1
South Indian Bank Ltd.	1
Tata Steel Ltd.	1
3I Infotech Ltd.	2
A B B Ltd.	2
A C C Ltd.	2
Aban Offshore Ltd.	2
Aditya Birla Nuvo Ltd.	2
Alstom Projects India Ltd.	2

Amtek Auto Ltd.	2
Amtek India Ltd.	2
Andhra Bank	2
Aptech Ltd.	2
Areva T & D India Ltd.	2
Ashok Leyland Ltd.	2
Asian Electronics Ltd.	2
Aurobindo Pharma Ltd.	2
Axis Bank Ltd.	2
Bajaj Auto Finance Ltd.	2
Bajaj Hindusthan Ltd.	2
Bajaj Holdings & Invst. Ltd.	2
Balaji Telefilms Ltd.	2
Balkrishna Industries Ltd.	2
Bank Of Baroda	2
Bank Of Rajasthan Ltd.	2
Bata India Ltd.	2
Bharat Bijlee Ltd.	2
Bharat Forge Ltd.	2
Britannia Industries Ltd.	2
C E S C Ltd.	2
Carborundum Universal Ltd.	2
Castrol India Ltd.	2
Chambal Fertilisers & Chemicals Ltd.	2
Cholamandalam D B S Finance Ltd.	2
Cipla Ltd.	2
Coromandel Fertilisers Ltd.	2
Cranes Software Intl. Ltd.	2
Cummins India Ltd.	2
Development Credit Bank Ltd.	2
Dishman Pharmaceuticals & Chemicals Ltd.	2
Dr. Reddy'S Laboratories Ltd.	2
E I D-Parry (India) Ltd.	2
Eicher Motors Ltd.	2
Electrosteel Castings Ltd.	2
Entertainment Network (India) Ltd.	2
Essel Propack Ltd.	2
Exide Industries Ltd.	2
Federal Bank Ltd.	2
Financial Technologies (India) Ltd.	2
Fortis Healthcare Ltd.	2

G M R Infrastructure Ltd.	2
G T L Ltd.	2
G V K Power & Infrastructure Ltd.	2
Geojit Financial Services Ltd.	2
Glaxosmithkline Consumer Healthcare Ltd.	2
Glaxosmithkline Pharmaceuticals Ltd.	2
Great Eastern Shipping Co. Ltd.	2
Gujarat Alkalies & Chemicals Ltd.	2
Gujarat Gas Co. Ltd.	2
Gujarat N R E Coke Ltd.	2
H C L Infosystems Ltd.	2
Hero Honda Motors Ltd.	2
Himatsingka Seide Ltd.	2
Hinduja Ventures Ltd.	2
Hindustan Oil Exploration Co. Ltd.	2
Housing Development Finance Corpn. Ltd.	2
I F C I Ltd.	2
I N G Vysya Bank Ltd.	2
I T C Ltd.	2
I V R C L Infrastructures & Projects Ltd.	2
Idea Cellular Ltd.	2
India Cements Ltd.	2
Indiabulls Financial Services Ltd.	2
Indian Hotels Co. Ltd.	2
Infotech Enterprises Ltd.	2
Ispat Industries Ltd.	2
J S W Steel Ltd.	2
Jagran Prakashan Ltd.	2
Jaiprakash Associates Ltd.	2
Jaybharat Textiles & Real Estate Ltd.	2
Jyoti Structures Ltd.	2
K E C International Ltd.	2
K S L & Industries Ltd.	2
Karur Vysya Bank Ltd.	2
Kesoram Industries Ltd.	2
Kirloskar Oil Engines Ltd.	2
Kotak Mahindra Bank Ltd.	2

M R F Ltd.	2
Mahindra Lifespace Developers Ltd.	2
Max India Ltd.	2
Motherson Sumi Systems Ltd.	2
N I I T Ltd.	2
N I I T Technologies Ltd.	2
Nagarjuna Construction Co. Ltd.	2
Nava Bharat Ventures Ltd.	2
Nestle India Ltd.	2
Northgate Technologies Ltd.	2
Novartis India Ltd.	2
Nucleus Software Exports Ltd.	2
Oracle Financial Services Software Ltd.	2
Orchid Chemicals & Pharmaceuticals Ltd.	2
Orient Paper & Inds. Ltd.	2
P T C India Ltd.	2
Panacea Biotec Ltd.	2
Pantaloon Retail (India) Ltd.	2
Parsvnath Developers Ltd.	2
Peninsula Land Ltd.	2
Prakash Industries Ltd.	2
Procter & Gamble Hygiene & Health Care Ltd.	2
Punj Lloyd Ltd.	2
Rajesh Exports Ltd.	2
Ranbaxy Laboratories Ltd.	2
Reliance Capital Ltd.	2
Reliance Industries Ltd.	2
Reliance Infrastructure Ltd.	2
Reliance Natural Resources Ltd.	2
Sasken Communication Technologies Ltd.	2
Satyam Computer Services Ltd.	2
Sesa Goa Ltd.	2
Shriram Transport Finance Co. Ltd.	2
Siemens Ltd.	2
Simplex Infrastructures Ltd.	2
Strides Arcolab Ltd.	2
Sun Pharma Advanced Research Co. Ltd.	2
Sun Pharmaceutical Inds. Ltd.	2
Sun T V Network Ltd.	2
Sundram Fasteners Ltd.	2

Taj G V K Hotels & Resorts Ltd.	2
Tata Consultancy Services Ltd.	2
Tata Investment Corpn. Ltd.	2
Tata Motors Ltd.	2
Tata Power Co. Ltd.	2
Tech Mahindra Ltd.	2
Titan Industries Ltd.	2
Trent Ltd.	2
Tube Investments Of India Ltd.	2
Tulip Telecom Ltd.	2
United Breweries (Holdings) Ltd.	2
United Breweries Ltd.	2
United Spirits Ltd.	2
Usha Martin Ltd.	2
Varun Shipping Co. Ltd.	2
Voltas Ltd.	2
Welspun-Gujarat Stahl Rohren Ltd.	2
Wipro Ltd.	2
Wockhardt Ltd.	2
Yes Bank Ltd.	2
A B G Shipyard Ltd.	3
A I A Engineering Ltd.	3
Adani Enterprises Ltd.	3
Adhunik Metaliks Ltd.	3
Adlabs Films Ltd.	3
Alembic Ltd.	3
Alok Industries Ltd.	3
Ambuja Cements Ltd.	3
Anant Raj Inds. Ltd.	3
Ansal Properties & Infrastructure Ltd.	3
Apollo Hospitals Enterprise Ltd.	3
Apollo Tyres Ltd.	3
Ashapura Minechem Ltd.	3
Asian Hotels Ltd.	3
Asian Paints Ltd.	3
Aventis Pharma Ltd.	3
B F Utilities Ltd.	3
Balrampur Chini Mills Ltd.	3
Bayer Cropscience Ltd.	3
Berger Paints India Ltd.	3

Binani Cement Ltd.	3
Biocon Ltd.	3
Birla Corporation Ltd.	3
Blue Dart Express Ltd.	3
Blue Star Ltd.	3
Bombay Dyeing & Mfg. Co. Ltd.	3
Bongaigaon Refinery & Petrochemicals Ltd.	3
Bosch Ltd.	3
C M C Ltd.	3
Cadila Healthcare Ltd.	3
Century Textiles & Inds. Ltd.	3
Container Corpn. Of India Ltd.	3
Core Projects & Technologies Ltd.	3
D C M Shriram Consolidated Ltd.	3
Dabur India Ltd.	3
Dalmia Cement (Bharat) Ltd.	3
Deccan Chronicle Holdings Ltd.	3
Deepak Fertilisers & Petrochemicals Corpn. Ltd.	3
Dish T V India Ltd.	3
Divi'S Laboratories Ltd.	3
Emco Ltd.	3
Escorts Ltd.	3
Ess Dee Aluminium Ltd.	3
Essar Oil Ltd.	3
Essar Shipping Ports & Logistics Ltd.	3
F A G Bearings India Ltd.	3
Finolex Cables Ltd.	3
Finolex Industries Ltd.	3
Fresenius Kabi Oncology Ltd.	3
Future Capital Holdings Ltd.	3
G H C L Ltd.	3
G T L Infrastructure Ltd.	3
Gillette India Ltd.	3
Gitanjali Gems Ltd.	3
Godrej Consumer Products Ltd.	3
Godrej Industries Ltd.	3
Grasim Industries Ltd.	3
Great Offshore Ltd.	3
Gujarat Fluorochemicals Ltd.	3
Gujarat Industries Power Co. Ltd.	3
Gujarat Narmada Valley Fertilizers Co. Ltd.	3
Gujarat State Fertilizers & Chemicals Ltd.	3

Gujarat State Petronet Ltd.	3
Gulf Oil Corpn. Ltd.	3
H E G Ltd.	3
H F C L Infotel Ltd.	3
H T Media Ltd.	3
Havells India Ltd.	3
Himachal Futuristic Communications Ltd.	3
Hindalco Industries Ltd.	3
Hinduja Global Solutions Ltd.	3
Hindustan Construction Co. Ltd.	3
Hindustan Zinc Ltd.	3
Honeywell Automation India Ltd.	3
I C I C I Bank Ltd.	3
I C I India Ltd.	3
I C R A Ltd.	3
I C S A (India) Ltd.	3
I D B I Bank Ltd.	3
I L & F S Investsmart Ltd.	3
I S M T Ltd.	3
I V R Prime Urban Developers Ltd.	3
Indiabulls Real Estate Ltd.	3
Indian Oil Corpn. Ltd.	3
Indian Overseas Bank	3
Indraprastha Gas Ltd.	3
nfo Edge (India) Ltd.	3
Infrastructure Development Finance Co. Ltd.	3
Ipca Laboratories Ltd.	3
J K Cement Ltd.	3
J S L Ltd.	3
Jaiprakash Hydro Power Ltd.	3
Jammu & Kashmir Bank Ltd.	3
Jet Airways (India) Ltd.	3
Jindal Drilling & Inds. Ltd.	3
Jindal Saw Ltd.	3
Jindal South West Holdings Ltd.	3
Jindal Steel & Power Ltd.	3
Jubilant Organosys Ltd.	3
K P I T Cummins Infosystems Ltd.	3
K S Oils Ltd.	3
Kalyani Steels Ltd.	3

Kansai Nerolac Paints Ltd.	3
Kennametal India Ltd.	3
Kirloskar Brothers Ltd.	3
Koutons Retail India Ltd.	3
L I C Housing Finance Ltd.	3
Lakshmi Energy & Foods Ltd.	3
Lakshmi Machine Works Ltd.	3
Lanco Infratech Ltd.	3
Madras Aluminium Co. Ltd.	3
Maharashtra Seamless Ltd.	3
Mahindra & Mahindra Financial Services Ltd.	3
Mahindra & Mahindra Ltd.	3
Marico Ltd.	3
Maruti Suzuki India Ltd.	3
Matrix Laboratories Ltd.	3
Mercator Lines Ltd.	3
Micro Inks Ltd.	3
Mindtree Ltd.	3
Monnet Ispat & Energy Ltd.	3
Monsanto India Ltd.	3
Moser Baer India Ltd.	3
Motilal Oswal Financial Services Ltd.	3
Mphasis Ltd.	3
Nesco Ltd.	3
New Delhi Television Ltd.	3
Nirma Ltd.	3
Onmobile Global Ltd.	3
Opto Circuits (India) Ltd.	3
P S L Ltd.	3
P V P Ventures Ltd.	3
Patel Engineering Ltd.	3
Petronet L N G Ltd.	3
Pidilite Industries Ltd.	3
Polaris Software Lab Ltd.	3
Praj Industries Ltd.	3
Prism Cement Ltd.	3
Provogue (India) Ltd.	3
Pyramid Saimira Theatre Ltd.	3
Radico Khaitan Ltd.	3
Raymond Ltd.	3

Redington (India) Ltd.	3
Reliance Communications Ltd.	3
Reliance Industrial Infrastructure Ltd.	3
Reliance Petroleum Ltd.	3
Religare Enterprises Ltd.	3
Rolta India Ltd.	3
Rural Electrification Corpn. Ltd.	3
S K F India Ltd.	3
S R E I Infrastructure Finance Ltd.	3
S R F Ltd.	3
Sadbhav Engineering Ltd.	3
Sanghi Industries Ltd.	3
Shaw Wallace & Co. Ltd.	3
Shipping Corpn. Of India Ltd.	3
Shopper'S Stop Ltd.	3
Shree Cement Ltd.	3
Shree Renuka Sugars Ltd.	3
Shriram E P C Ltd.	3
Sintex Industries Ltd.	3
Spicejet Ltd.	3
State Bank Of Bikaner & Jaipur	3
State Bank Of India	3
State Bank Of Travancore	3
Sterlite Industries (India) Ltd.	3
Subex Ltd.	3
Subhash Projects & Mktg. Ltd.	3
Sundaram Finance Ltd.	3
Sundaram-Clayton Ltd.	3
Suzlon Energy Ltd.	3
Swan Energy Ltd.	3
T V S Motor Co. Ltd.	3
Tanla Solutions Ltd.	3
Tata Chemicals Ltd.	3
Tata Communications Ltd.	3
Tata Tea Ltd.	3
Tata Teleservices (Maharashtra) Ltd.	3
Techno Electric & Engg. Co. Ltd.	3
Television Eighteen India Ltd.	3
Texmaco Ltd.	3
Thermax Ltd.	3

Torrent Pharmaceuticals Ltd.	3
Triveni Engineering & Inds. Ltd.	3
U T V Software Communications Ltd.	3
Ultratech Cement Ltd.	3
Union Bank Of India	3
United Phosphorus Ltd.	3
Videocon Industries Ltd.	3
Vipul Ltd.	3
Vishal Retail Ltd.	3
Walchandnagar Industries Ltd.	3
Wire & Wireless (India) Ltd.	3
Wyeth Ltd.	3
Zee Entertainment Enterprises Ltd.	3
3M India Ltd.	4
Ahluwalia Contracts (India) Ltd.	4
Ajmera Realty & Infra India Ltd.	4
Akruti City Ltd.	4
Alfa Laval (India) Ltd.	4
Allahabad Bank	4
Allied Digital Services Ltd.	4
Arshiya International Ltd.	4
Arvind Ltd.	4
Asahi India Glass Ltd.	4
Asian Star Co. Ltd.	4
Astrazeneca Pharma India Ltd.	4
B E M L Ltd.	4
B L Kashyap & Sons Ltd.	4
Ballarpur Industries Ltd.	4
Bank Of India	4
Bank Of Maharashtra	4
Bharat Heavy Electricals Ltd.	4
Bharti Airtel Ltd.	4
Bhushan Steel Ltd.	4
Bilcare Ltd.	4
Bombay Rayon Fashions Ltd.	4
Brigade Enterprises Ltd.	4
Cals Refineries Ltd.	4
Canara Bank	4
Central Bank Of India	4
Century Plyboards (India) Ltd.	4

Chettinad Cement Corpn. Ltd.	4
Consolidated Construction Consortium Ltd.	4
Corporation Bank	4
Crompton Greaves Ltd.	4
D L F Ltd.	4
Dena Bank	4
Dredging Corpn. Of India Ltd.	4
E I H Ltd.	4
Edelweiss Capital Ltd.	4
Educomp Solutions Ltd.	4
Elecon Engineering Co. Ltd.	4
Emami Ltd.	4
Era Infra Engg. Ltd.	4
Everonn Systems India Ltd.	4
Firstsource Solutions Ltd.	4
Gammon India Ltd.	4
Ganesh Housing Corpn. Ltd.	4
Godfrey Phillips India Ltd.	4
Greaves Cotton Ltd.	4
Gujarat Mineral Devp. Corpn. Ltd.	4
H M T Ltd.	4
Himadri Chemicals & Inds. Ltd.	4
Hotel Leelaventure Ltd.	4
Housing Development & Infrastructure Ltd.	4
I O L Netcom Ltd.	4
Ibn18 Broadcast Ltd.	4
India Infoline Ltd.	4
Indian Bank	4
Indusind Bank Ltd.	4
Ingersoll-Rand (India) Ltd.	4
J M Financial Ltd.	4
Jai Corp Ltd.	4
Jain Irrigation Systems Ltd.	4
Kalpataru Power Transmission Ltd.	4
Karnataka Bank Ltd.	4
Kolte Patil Developers Ltd.	4
Larsen & Toubro Ltd.	4
Lupin Ltd.	4
M I C Electronics Ltd.	4
Madhucon Projects Ltd.	4

Madras Cements Ltd.	4
Mahanagar Telephone Nigam Ltd.	4
Maytas Infra Ltd.	4
Mundra Port & Special Economic Zone Ltd.	4
Nagarjuna Fertilizers & Chemicals Ltd.	4
National Fertilizers Ltd.	4
Network 18 Media & Invst. Ltd.	4
Neyveli Lignite Corpn. Ltd.	4
Oil & Natural Gas Corpn. Ltd.	4
Orbit Corporation Ltd.	4
Oriental Bank Of Commerce	4
Patni Computer Systems Ltd.	4
Phoenix Mills Ltd.	4
Punjab National Bank	4
Puravankara Projects Ltd.	4
Ratnamani Metals & Tubes Ltd.	4
Rei Agro Ltd.	4
Reliance Power Ltd.	4
Ruchi Soya Inds. Ltd.	4
S Kumars Nationwide Ltd.	4
Sarda Energy & Minerals Ltd.	4
Shriram City Union Finance Ltd.	4
Steel Authority Of India Ltd.	4
Sterlite Technologies Ltd.	4
Syndicate Bank	4
Teledata Informatics Ltd.	4
Thomas Cook (India) Ltd.	4
Time Technoplast Ltd.	4
Torrent Power Ltd.	4
Uco Bank	4
Uflex Ltd.	4
Unitech Ltd.	4
Vijaya Bank	4
Voltamp Transformers Ltd.	4
Zee News Ltd.	4
Advanta India Ltd.	5
Allcargo Global Logistics Ltd.	5
Atlas Copco (India) Ltd.	5
B G R Energy Systems Ltd.	5
Bharat Electronics Ltd.	5

Bharat Petroleum Corpn. Ltd.	5
Bharati Shipyard Ltd.	5
Cairn India Ltd.	5
Cambridge Solutions Ltd.	5
Chennai Petroleum Corpn. Ltd.	5
Engineers India Ltd.	5
Everest Kanto Cylinder Ltd.	5
Fertilisers & Chemicals, Travancore Ltd.	5
G A I L (India) Ltd.	5
Geodesic Ltd.	5
Hindustan Copper Ltd.	5
Hindustan Petroleum Corpn. Ltd.	5
I R B Infrastructure Developers Ltd.	5
I T I Ltd.	5
Jai Balaji Inds. Ltd.	5
Jyothy Laboratories Ltd.	5
Kingfisher Airlines Ltd.	5
Maharashtra Elektrosmelt Ltd.	5
Mangalore Refinery & Petrochemicals Ltd.	5
M M T C Ltd.	5
N M D C Ltd.	5
N T P C Ltd.	5
National Aluminium Co. Ltd.	5
Omaxe Ltd.	5
Pfizer Ltd.	5
Plethico Pharmaceuticals Ltd.	5
Power Finance Corpn. Ltd.	5
Power Grid Corpn. Of India Ltd.	5
Prime Focus Ltd.	5
Rashtriya Chemicals & Fertilizers Ltd.	5
Shiv-Vani Oil & Gas Exploration Services Ltd.	5
Sobha Developers Ltd.	5
Spice Communications Ltd.	5
State Bank Of Mysore	5
State Trading Corpn. Of India Ltd.	5
Sterling Biotech Ltd.	5
Sterling International Enterprises Ltd.	5
Take Solutions Ltd.	5
Bosch Chassis Systems India Ltd.	NA
Centurion Bank Of Punjab Ltd.	NA

Note: This Corporate Governance Index is based on Board, Audit Committee, Auditor, and Aggregate Ownership characteristics. Other important aspects of governance like Related Party Transactions, Accounting and Earnings Quality, Meetings and Procedures, and Ownership Opacity etc. need to be incorporated. The grouping of companies is likely to change with these incorporations. To this extent, the current groupings should be taken as interim. This is a preliminary version of the Index. Comments welcome.