



Corporate Governance and Firm Performance:  
Evidence from Karachi Stock Exchange

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## Abstract

We investigated whether differences in quality of firm level corporate governance can explain the firm level performance in cross-section of companies listed at Karachi Stock Exchange. Therefore we analyzed relationship between firm-level value as measured by Tobin's Q and Corporate Governance Index and three sub-indices, Board, Shareholdings and Disclosure for a sample of 50 firms. The results indicate that corporate governance does matter in Pakistan. However not all elements of governance are important. The board composition and ownership and shareholdings enhance firm performance. however disclosure and transparency has no significant effect on firm performance.

# **Corporate Governance and Firm Performance: Evidence from Karachi Stock Exchange**

## **1. Introduction**

In the developed markets the subject of corporate governance is well explored as a significant focus of economics and finance research but there is also a growing interest across emerging markets in this area. In Pakistan, the publication of the SECP Corporate Governance Code 2002 for publicly listed companies has made it an important area of research of corporate sector. According to La Porta et al. (2000) 'Corporate governance is to a certain extent a set of mechanisms through which outside investors protect themselves against expropriation by the insiders'. They define the insider as both managers and controlling shareholders

A corporate governance system is comprised of a wide range of practices and institutions, from accounting standards and laws concerning financial disclosure, to executive compensation, to size and composition of corporate boards. A corporate governance system defines who owns the firm, and dictates the rules by which economic returns are distributed among shareholders, employees, managers, and other stakeholders. As such, a country's corporate governance regime has deep implications for firm organization, employment systems, trading relationships, and capital markets. Thus, changes in Pakistani system of corporate governance are likely to have important consequences for the structure and conduct of country business.

In its broadest sense, corporate governance refers to a complementary set of legal, economic, and social institutions that protect the interests of a corporation's owners. In the Anglo-American system of corporate governance these owners are shareholders. The concept of corporate governance presumes a fundamental tension between shareholders and corporate managers (Berle and Means (1932) and Jensen and Meckling (1976)). While the objective of a corporation's shareholders is a return on their investment, managers are likely to have other goals, such as the power and prestige of running a large and powerful organization, or entertainment and other perquisites of their position. In this

situation, managers' superior access to inside information and the relatively powerless position of the numerous and dispersed shareholders, mean that managers are likely to have the upper hand. The researchers have offered a number of solutions for this agency problem between shareholders and managers which fall under the categories of incentive alignment, monitoring, and discipline. Incentives of managers and shareholders can be aligned through practices such as stock options or other market-based compensation (Fama and Jensen, 1983). Monitoring by an independent and engaged board of directors assures that managers behave in the best interests of the shareholders (Fama and Jensen, 1983). Chief Executive Officer (CEO)'s who fail to maximize shareholder interests can be removed by concerned boards of directors, and a firm that neglects shareholder value is disciplined by the market through hostile takeover<sup>2</sup> (Jensen and Ruback (1983)).

The code of corporate governance introduced by SECP in early 2002 is the major step in corporate governance reforms in Pakistan. The code includes many recommendations in line with international good practice. The major areas of enforcement include reforms of board of directors in order to make it accountable to all shareholders and better disclosure including improved internal and external audits for listed companies. However, the code's limited provisions on director's independence remain voluntary and provide no guidance on internal controls, risk management and board compensation policies.

The main focus of this study is to examine the relationship between corporate governance and firm performance for publicly listed KSE (Karachi Stock Exchange) firms. Therefore, we attempt to identify the relationship between corporate governance proxies and firm value in our sample of KSE firms. This emphasizes the importance of legal rules and the quality of their enforcement. In Pakistan, with traditionally low dispersion of ownership, the primary methods to solve agency problems are the legal protection of minority investors, the use of boards as monitors of senior management, and an active market for corporate control. In contrast to developed markets in Pakistan corporate governance is characterized by lesser reliance on capital markets and outside investors,

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<sup>2</sup> A takeover which goes against the wishes of the target company's management and board of directors

but stronger reliance on large inside investors and financial institutions to achieve efficiency in the corporate sector. In this case, outside (smaller) investors face the risk of expropriation in the form of wealth transfers to larger shareholders.

The plan of the study is as follows. Section 2 describes the construction of corporate governance index. Section 3 explores the relationship between corporate governance and performance and provides a description of the data. Section 4 presents the results for the relationship between corporate governance and firm valuation. Section 5 concludes.

## **2. Corporate Governance Index**

It is expected that better corporate governance is correlated with better operating performance and higher market valuation in case of KSE listed firms. To examine the relationship between corporate governance and firm performance, a corporate governance index (CGI) is developed as a proxy for firm-level governance quality with a variety of different governance practices adopted by listed firms.

In order to construct corporate governance index for the firms listed on KSE, a broad, multifactor corporate governance rating is done which is based on the data obtained from the annual reports of the firms submitted to SECP. The index construction is as follows: for every firm, there are 22 governance proxies or indicators are selected, these indicators are categorized into three main themes. The three categories or sub-indices consist of: eight factors for the Board, seven for ownership, shareholdings and seven for transparency, disclosure and audit.

The weighting is the greatest difficulty in the construction of index, as it is based on subjective judgments. The assigned priorities amongst and within each category is guided by empirical literature and financial experts in this area. The maximum score is 100, then, a score of 100 is assigned if factor is observed, 80 if largely observed, 50 for partially observed and 0 if it is not observed<sup>3</sup>. The average is taken out and we arrive at the rating

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<sup>3</sup> This is based on the report of World Bank, Report on the Observance of Standards and Code (ROSC), Corporate Governance country assessment: Pakistan' June 2005.

of one sub-index. By taking the average of three sub-indices we obtain CGI for a particular firm.

Each sub-index comprises of series of factors leading to measure corporate governance. Board composition index captures board autonomy, structure and effectiveness. Autonomy is measured through various indicators of board independence including percentage of nominees, outside and independent directors on board, separation of CEO and chairman, a separate CFO (Corporate Financial Officer). The various measures of board effectiveness are chair CEO split, regularity of meetings, and attendance by outside board members, and creditor's nominee on board.

The separation of role of CEO and chair dilutes the power of CEO and increases board's ability to properly execute the oversight judgment. It also critically evaluates executive directors and the presence of non-executive member on board reduces the influence of management on the board. Moreover a higher proportion of outside directors<sup>4</sup> on the board lead to higher company performance. The CEO may find a smaller board more easily dominated and more manageable due to the potential for social cohesion (Shaw 1981). A large group of directors would require more time and effort on the part of CEO to build consensus for a given course of action. Therefore if the board is large, its independence is increased in the sense that the CEO's ability to influence is diluted and it is more difficult for the CEO to dominate the board. There is also some evidence in favor of larger boards. Chaganli, Mahajam and Sharma (1983) have studied the relationship between board size and bankruptcy and have found that non-failed firms in their sample, tended to have larger boards than the failed firms. Thus larger boards may be more independent of management and that is the reason that the larger boards are associated with higher performance.

The ownership and shareholdings is the second aspect of corporate governance. The purpose of this sub-index is to measure the degree to which the board and managers have incentives that align their interest with those of shareholders. The third sub-index deals

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<sup>4</sup> Any member of a company's board of directors who is not an employee or shareholder in the company.

with disclosures. It attempts to measure the public commitment of the firm to good governance. Components following full disclosure of corporate governance practices, directors' bibliography, and internal audit committee reduce information asymmetry and it is valued by investor (Klein et al (2005)).

### **3. Data and Methodological Framework**

It is well established that country's laws of corporate governance affect firm value<sup>5</sup>. In this study, we examine whether variation in firm-specific governance is associated with differences in firm value in case of Pakistani stock market. To explore the relationship between corporate governance and firm valuation, Tobin's Q<sup>6</sup> is used as valuation measure. The sample of 50 firms<sup>7</sup> is selected: which are representative of all non-financial sectors and active in their sector, comprises more than 70% of market capitalization and listed on KSE. The data is obtained from the annual reports of these firms for the year 2003, 2004 and 2005. The Tobin Q, CGI and other control variables are constructed and average is taken out for these three years.

In exploring that good corporate governance causes higher firm valuation, an important issue is endogeneity (Black et al (2003)). The firms with higher market value would be more likely to choose better governance structure because of two reasons. First, firm's insiders believe that better governance structure will further raise firm value. Second, firms adopt good governance to signal that insider behave well. A growing firm with large need of external financing has more incentive to adopt better governance practices in an attempt to lower cost of capital (Klapper and Love (2003) and Gompers et al (2003)). These growth opportunities are reflected in the valuation of the firm, implying a positive association between governance and firm performance. This endogeneity

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<sup>5</sup> La Porta et al. [2001] show that firm value is positively associated with the rights of minority shareholders. Daines [2001] finds that firms incorporated in Delaware have higher valuations than other U.S. firms.

<sup>6</sup> Tobin's Q : (the book value of long term debt plus the market value of equity) divided by book value of assets

<sup>7</sup> List of companies is presented in Appendix A3

problem in estimation is resolved by applying Generalized Method of Moments as estimation technique.

Following Black et al (2003) and Klein et al (2005) we also add appropriate control variables, which are assumed to be associated with higher governance rating. Accordingly, we control the size of the firm by adding logarithm of book asset value, firm's age by using logarithm of number of years listed at KSE (Shin and Stulz (2000)). The measure of leverage focuses on the capital employed and best represents the effect of past financing decisions. We included a variable for debt-to-total asset ratio, defined as ratio of total debt to total capital. The growth is included as control variable and defined as average growth rate sales over last three years (Gompers et al (2003) and Klein et al. (2005)).

We have estimated a model in which firm's performance estimated by Tobin Q is regressed on corporate governance indices and other control variables (Kaplan and Zingales' (1997), Black et al (2002) and Klein et al (2005)). Along with three governance indices, board, shareholdings and disclosure, a set of control variables which include size (ln assets), leverage (debt/total asset ratio) and growth (average sale growth) are used in estimation. Firm size and growth control for potential advantages of scale and scope, market power and market opportunities. The leverage controls for different risk characteristics of firm. The empirical specification of the model becomes,

$$Q_i = a_i + b_i CGI_i + c_i X_i + \varepsilon_i \quad (1)$$

where firm  $Q_i$  is the average firm performance measure estimated for three years 2003, 2004 and 2005<sup>8</sup>. The  $CGI_i$  is a vector of governance index and  $X_i$  is a vector of firm characteristics for these three years. This model is estimated on cross-section of 50 firms using the Generalized Method of Moments. This estimation technique is adopted to cope with presence of endogeneity in governance variables (Black et al 2002). The main problem in estimating the fully specified and identified model is limited availability of instrument variables.

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<sup>8</sup> Compliance of Corporate Governance started from end of year 2002.

The potential instruments included in the estimation are dummy variables indicating foreign investment, block holding, including in the KSE 100 firms, age of firm as measure by listing year at KSE and variation in profit. A firm with foreign investment is assumed to be adopting good governance practice. In the same way the block holding firm<sup>9</sup> is associated with more monitoring and more familiar with good governance practices. The longer the period of listing, the more chances of investors to familiar with investment strategy of firm and less likely chances of information asymmetry and this limit the ability of firm to impose poor practice. The difference in profit earning opportunities is associated with difference in value of the firms, more profit earning firms need access to capital markets to raise new capital and find it optimal to improve their governance practices. Therefore natural logarithm of variation in profit is used as instrument.

#### **4. Empirical Findings**

The results for analyzing the impact of total Corporate Governance Index on firm performance are provided in table 2. The results of table 3 and Appendix table A4 are based on how sub-indices of corporate governance influence firm performance. Table 1 presents the summary statistics of total corporate governance index CGI and its sub-indices, which are Board Composition (Board), Ownership and Shareholdings (Share) and Disclosure, Transparency and auditing (Disc). These results are based on the averages of three years 2003, 2004 and 2005. The data to construct corporate governance rating are obtained from the annual reports of the listed firms from the website of SECP. The average rating of CGI is 54.30 and it ranges from 70.42 to 30.89. The sub-index with highest rating is Disc (Disclosure, Transparency and Auditing), which can be explained by the fact that this area is emphasized by regulations of SECP.

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<sup>9</sup> Block holder is defined by a investors having shareholdings more than 10%.

Table 1 Summary Statistics of Corporate Governance Index

	Mean	Max	Min	SD	CGI	Board	Rights	Disc
CGI	54.30	70.42	30.89	7.99	1.00			
Board	55.58	87.50	25.00	16.02	0.62	1.00		
Share	46.97	78.57	7.14	16.10	0.57	0.11	1.00	
Disc	60.36	94.29	30.00	10.93	0.44	0.05	0.06	1.00

This table provides the summary statistics of distribution of Corporate Governance index, and the sub-indices (Board, Shareholdings and Disclosure). The table also presents the pair-wise correlation between the indices. Appendix A1 gives detailed information on each sub-index. The maximum score is 100, which is assigned if indicator is observed, 80 if largely observed 50 for partially observed and 0 if it is not observed. The total index consist of governance proxies in three sub-categories and is constructed using the equal weighting scheme

Table 2 Evidence on Performance and Corporate Governance

	1	2	3	4
Total CGI	0.08 (2.17)	0.02 (1.59)	0.02 (1.32)	0.06 (1.55)
SIZE		0.05 (3.61)	0.03 (2.02)	0.02 (2.66)
GROWTH			0.65 (0.64)	0.10 (0.20)
LEVERAGE				0.86 (1.47)
Intercept	-3.30 (-1.71)	-1.60 (-1.83)	-1.32 (-1.36)	-2.79 (-1.02)
R Square	0.10	0.14	0.15	0.29

Notes: The results presented in this table are Generalized Method of Moments estimates for four different specifications for cross-section of 50 firms, the model is

$$Q_i = a + bCGI_i + cX_i + \varepsilon_i$$

Dependent variable is Tobin's Q is (book value of debt plus market value of common equity) divided by book value of assets. CGI is total Corporate Governance Index The control variables include: Firm size is natural logarithm of total assets; Leverage is book value of debt divided by book value of total asset; Growth is growth rate of sales.

The instruments: Age is natural logarithm of number of years of listing at KSE, IProfit is logarithm of profits, DFOR is dummy variable which is one if the firm has foreign investment and zero otherwise, DN is a dummy variable if the firms has block holder zero otherwise, DKSE, is a dummy variable if the firm is included in KSE 100 index and zero otherwise.

The results of association between total corporate governance and Tobin Q are presented in table 2. The Tobin Q is regressed on the total corporate governance index (CGI) with each of control variables add one by one. There is positive and significant relationship between CGI and Tobin's Q supporting our hypothesis that corporate governance affects

firm value. The CGI remains positive but significance level reduces with adding more explanatory variables. This shows that the inclusion of omitted variables have improved the specification of the model. Therefore we find some evidence that corporate governance effects firm's performance. This result suggests that a certain level of governance regulations in emerging market like Pakistan has not make the overall level of governance up to a point that governance remain important for investor. The inter-firm differences are matters to investor in valuing firm. This result is also conformed by several studies for developing markets as well as developed markets (La Porta et al (2002) and Drobetz et al (2004)). The financial control variables are for the most part statistically significant. The firm size is significantly related to performance. The growth and leverage are positively related but do not effect performance significantly.

The results based on total corporate governance suggest that corporate governance does matter in Pakistani stock market. However these findings do not fully reveal the importance of each category of corporate governance to firm performance. In table 3 and Appendix table A4, we present results regarding relationship of firm value with three sub-indices and all control variables. These results indicate that two sub-indices except disclosure have positive and some significant impact on firm performance. The Board composition and ownership and shareholdings have some significant influence on firm performance. However investors are not willing to pay a premium for companies that are engaged in open and full disclosure. The results based on sub-indices reveal importance of Board composition, ownership and shareholdings with firm performance and this evidence is also supported by other studies (Klein et al (2005)).

The Board Composition has a positive and statistically significant effect on firm performance and when entered in model with other sub-indices it remains positive but become insignificant but coefficient of determination has improved. This result is not unusual, as past evidence generally failed to find any significant relation between board composition and firm performance. The survey of literature concludes that the evidence on this matter is at the best ambiguous (Dalto et.al (1998) and Bahjat and Black (1999)

and 2000)) and Hermalian and Weisbach (2003)). The ownership and shareholdings sub-index has a positive effect on Tobin Q when it entered into model alone and also when

Table 3 Evidence on Performance and Corporate Governance Sub-Indices

	1	2	3	4	5
CGI	0.01 (1.04)				
Board		0.02 (2.06)			0.01 (1.13)
Share			0.01 (1.41)		0.01 (1.67)
Disc				0.01 (0.44)	0.02 (0.51)
Size	0.03 (2.02)	0.04 (1.38)	0.02 (1.40)	0.02 (0.91)	0.001 (0.05)
Leverage	1.09 (0.90)	4.56 (2.02)	3.03 (1.83)	2.21 (1.84)	0.92 (2.72)
Intercept	-0.62 (-0.71)	-2.13 (-1.50)	-0.77 (-0.81)	-0.80 (-0.38)	1.65 (0.94)
R Square	0.15	0.15	0.18	0.29	0.35

Notes: The results presented in this table are Generalized Method of Moments estimates for four different specifications for cross-section of 50 firms, The model is

$$Q_i = a + bCGI_i + cX_i + \varepsilon_i$$

Dependent variable Tobin' Q is (book value of debt plus market value of common equity) divided by book value of assets. CGI is total Corporate Governance Index, BOARD is board composition index, SHARE is ownership and shareholdings and DISC is disclosure and transparency index. The control variables: Firm size is natural logarithm of total assets; Leverage is book value of debt divided by book value of total asset; Growth is growth rate of sales.

The instruments: Age is natural logarithm of number of years of listing at KSE, IProfit is logarithm of profits, DFOR is dummy variable which is one if the firm has foreign investment and zero otherwise, DN is a dummy variable which take value one if the firm has block-holders and zero otherwise and DKSE is dummy variable which has value one if the firm includes in KSE 100 index and zero otherwise.

enter with other sub-indices but this effect is marginally significant. These results show that most of the firms have ownership with dominant block holder or have ownership concentration and in block holder firm board independence is not associated with good performance. The assumption of agency theory does not fully apply to these firms where the alignment of ownership and control is tighter thus suggesting the need of outside directors on the board of these firms. As control variables are included specification of model improves.

The results of firm performance including control variables are also consistent with prior research. The coefficient of size is positive and significant in most of the cases. This shows that the listed firms that are likely to grow faster usually have more intangible assets and they adopt better corporate governance practices. The coefficient of growth is significant and positive because higher growth opportunities are associated with higher firm valuation. The coefficient of leverage is positive and significant, is consistent with the prediction of standard theory of capital structure which says that higher leverage increase firm's value due to the interest tax-shield (Rajan and Zingales (1998)).

## **5. Conclusion**

The relationship between corporate governance variables has been widely analyzed for the developed markets but very little work has been done on how a broad range of governance mechanism factors effect the firm performance in thinly traded emerging markets. In this study we fill this gap by analyzing the relationship between corporate governance and firm performance for the Karachi Stock Market. To proxy for firm-level governance we use a rating system to evaluate the stringency of a set of governance practices and cover various governance categories: such as board composition, ownership and shareholdings and transparency. Our sample firm consists of 50 firms which are active, representative of all non-financial sectors and comprises more than 70% of market capitalization at Karachi stock market.

Our results document a positive and significant relation between the quality of firm-level corporate governance and firm performance. The possible endogeneity is tackled by estimating the model by Generalized Method of Moments is used as estimation technique with inclusion of several control variables. In general the ownership and shareholders rights that align the managers and shareholders interest are significantly valued by investors. This is also true for board composition and independence index. Both these sub-indices have positive association with firm performance. These results are consistent with agency theory which focuses on monitoring of managers whose interests are assumed to diverge from those of other share holders. However the assumptions of agency theory are not applied to block holder owned firms. Most of the firms listed on

KSE are family owned or institution owned. In these firms the alignment of ownership and control is tight and thus suggesting the need of outside directors on the board. However the results show that open and transparent disclosure mechanism that reduces the information asymmetry have no affect on firm performance. This is due to the reason that we have used the annual reports as data source and these reports do not reveal all the information required for rating corporate governance.

Our results show that Corporate Governance Code potentially improves the governance and decision making process of firms listed at KSE. Large shareholders still have a tight grip of companies. However we point out that adequate firm-level governance standards can not replace the solidity of the firm. The low production and bad management practices can not be covered with transparent disclosures and transparency standards.

## **Appendix**

### **A1: Corporate Governance Index (CGI) Components**

#### **Sub-Index 1: The board of directors**

- i) Board Size (number of directors)
- ii) Board Composition (Clear cut job description of all board members, composition of board of directors).
- iii) Chairman CEO separation (if not any lead director).
- iv) Outside directors available to board (independent directors, nominee directors)
- v) Board attendance (board meetings).
- vi) Meetings of outside director attendance.
- vii) Existence of the position of CFO.
- viii) Directors representing minority shareholders.

#### **Sub-Index:2 Ownership and Shareholdings**

- i) Presence of outside block holder (more than 10 % shareholdings).
- ii) Do the CEO owns shares.
- iii) Directors ownership (block ownership) other than CEO and Chairman.
- (iv) Chairman or CEO are Block Holder (10%).
- v) Concentration of ownership (Top five).
- vi) Dividend Policy
- vii) Staff benefits other than wages and salaries

### Sub-Index 3: Transparency, Disclosures and auditing

- i) Does the company have full disclosure of corporate governance practices
- ii) Does the company disclose how much it paid to its auditor for consulting and other work
- iii) Does the company disclose full biographies of its board members
- iv) Disclosure of internal audit committee
- vi) Disclosure of board directors and executive staff members' remuneration
- viii) Disclosure in the company's annual report) of share ownership according to the requirement of Code.
- ix) Information of the executive management staff members ownership (employees ownership)
- x) Disclosure of remuneration committee

## A 2: Review of Literature

Study	Data and Sample	Corporate Governance and other Variables	Main Findings
Gompers, Ishii and Metrick (2003)	Investor Responsibility Research Centre (IRRC) for 1990, 1993, 1995, 1998 Using incidence of 24 governance rules corporate governance index is constructed for a sample of 1500 US large firms.	Democracy and dictatorship Portfolios are formed to examine difference in performance between the strongest rights firms and weakest right firms.. The three operational measures used for analysis are profit margin, return on equity and one year sale growth. Firm valuation is measured by Tobin's Q.	The firms with stronger shareholders rights have higher firm value, higher profits, higher sales growth, lowest capital expenditures, and made fewer corporate acquisition.
Brown and Caylor (2004)	For US Firms measure of Corporate Governance Gov-Score is prepared with 51 factors, 8 sub categories for 2327 firms based on dataset of Institutional Shareholder Service (ISS).and Compstat the 51 factor ISS data is	Six performance measures are considered spread into three categories operational performance, firm valuation and shareholders payout. The operational performance is measured by return on equity profit margin and sales growth. Firm valuation is measured by Tobin's Q. The shareholders payout is	Better governed firms are relatively more profitable, more valuable and pay more cash to their shareholders. In governance sub-categories, executive and directors compensation is most highly associated with good governance. In contrast good governance measured by charter/bylaw is associated with bad performance. Out of 51 factors, those representing

	put into categories audit, board of directors, director education, executive and director compensation, ownership progressive practices	measured by dividend yield and shares repurchases. To assess which categories and factors are associated with good/bad performance Pearson and Spearman correlation is measured with 8 categories, 51 factors and 6 performance measures. In multivariate analysis performance measures are related to governance and controlled by log sales, age of firm.	good governance and positively effecting performance are governance committee meets annually and independence of nominee committee. In contrast factor representing good governance and associated with bad performance are consultation fee less than audit fee paid to auditor, absence of staggered board and absence of poison pill
Drobetz, Schillhofer and Zimmermann (2004)	For German Market Corporate Governance Rating (CGR) is based on questionnaire, 30 governance proxies are divided into five categories (corporate governance commitment, shareholders rights, transparencies, management and supervisory board matters and auditing)	The relationship of corporate governance is investigated with expected return, dividend yield, firm's valuation (Tobin Q) market-to-book value. The systematic difference in return of agent portfolio (CGR<18) and principle portfolio (CGR>21) also exists.	Non-legal governance mechanism matters and strong positive relationship between the quality of firm-level corporate governance and firm valuation exists. The expected stock returns are negatively correlated with firm level corporate governance, if dividend yields are used as proxy for cost of capital. An investment strategy that buys high-CGR-firms and shorted low-CGR firms earns abnormal returns.
Klein, Shapiro and Young (2005)	The Corporate governance index is formed for 263 Canadian firms by summing four indices, board composition, shareholding and compensation polices,	A model is estimated where firm performance is measured by Tobin's Q is regressed on the corporate governance indices, ownership indicator variables and control variables. The measure of firm size (log assets), leverage	The corporate governance does matter in Canada, not all elements of measured governance is important, and the effect of governance does differ by ownership category. For entire firm sample we find no evidence that total governance index affects the firm

	shareholders right polices and disclosure polices. Each sub-index is comprised of series of factors. The data is taken from companies balance sheets, Globe Investors.com, globe and Mail newspaper website	(debt/equity ratio), average sales growth, profit variability and a dummy for companies in the utility, financial services and resource sectors are included in the control variables.	performance. This is because no evidence is found that board independence, which is most weighted sub-index, has any positive effect on firm performance. For family-owned firms this effect is negative. In general sub-indices measuring effective compensation, disclosure and shareholders rights practices enhance performance and this is true for more ownership types. In addition no evidence is found that governance practices are endogenous.
Kaplan S. N.(1994)	Japanese 119 firm's Data sources are Fortune, Diamonds Kaisha Yoran Zenjajo Kaishaban, Diawa Institute of Research Analysts Guide. US 146 companies, financial data is taken from Compustat, CRSP. Multiple regression estimates of	Top 10 management turnover and cash compensation (salary and bonus) to earning levels, changes in earnings, stock return and sales growth in largest Japanese companies in 1980s. It is compared in these relations to those for larger US companies. This reward-relationship reflects the objective	Japanese management turnover and compensation are related to earnings, stock returns and to lesser extent sales performance. The fortune of Japanese top executives therefore is positively correlated with stock performance and current cash flows. These responses are similar to those for their US counterpart. However the fortunes of Japanese executives are more sensitive to more income but less sensitive to stock return than those of US executives.
Mitton , Todd (2001)	Korean, Malaysian, Indonesian, Philippines, data Thailand-398 firms; International Financial Corporation data,	Financial crisis period return is regressed on corporate governance variables (disclosure quality, ownership structure and corporate diversification), size, leverage and industry dummy	Better price performance is associated with firms that have indicators of higher disclosure quality, with firms that have higher outside ownership concentration and with firms that are focused rather than diversified.

	and Worldscope database for 1997-1998		
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#### Appendix A4

Table A4 Evidence on Performance and Corporate Governance Sub-Indices

	1	2	3
Board Composition			
Board	0.02 (1.22)	0.01 (1.53)	0.02 (2.06)
Size		0.05 (3.39)	0.04 (1.39)
Leverage			4.56 (2.02)
Intercept	-0.27 (-0.23)	-0.63 (-1.26)	-2.10 (-1.50)
R Square	0.10	0.17	0.19
Ownership and Shareholdings			
Share	0.01 (1.85)	0.01 (1.01)	0.01 (1.41)
Size		0.04 (3.10)	0.02 (1.08)
Leverage			3.04 (1.83)
Intercept	0.04 (2.16)	-0.51 (-0.98)	-0.78 (-0.80)
R Square	0.11	0.13	0.17
Disclosure and Transparency			
Disc	0.02 (1.60)	0.01 (1.15)	0.01 (0.18)
Size		0.04 (2.84)	0.02 (1.05)
Leverage			2.33 (1.90)
Intercept	-0.36 (-0.51)	-0.88 (-1.01)	-0.51 (-0.22)
R Square	0.14	0.14	0.16

Notes: The results presented in this table are Generalized Method of Moments estimates for four different specifications for cross-section of 50 firms, The model is

$$Q_i = a + bCGI_i + cX_i + \varepsilon_i$$

Dependent variable Tobin' Q is (book value of debt plus market value of common equity) divided by book value of assets. CGI is total Corporate Governance Index, BOARD is board composition index, SHARE is ownership and shareholdings and DISC is disclosure and transparency index. The control variables: Firm size is natural logarithm of total assets; Leverage is book value of debt divided by book value of total asset; Growth is growth rate of sales.

The instruments: Age is natural logarithm of number of years of listing at KSE, IProfit is logarithm of profits, DFOR is dummy variable which is one if the firm has foreign investment and zero otherwise, DN is a dummy variable which take value one if the firm has block-holders and zero otherwise and DKSE is dummy variable which has value one if the firm includes in KSE 100 index and zero otherwise.

### A3: List of companies

Companies	Symbles
1)Aruj Garments	ARUJG
2)Honda Atlas	HONDAA
3)Engro Chmecial	ENGRO
4)Unilever Pakistan	UNIP
5)Pakistan Gum and Chemicals Ltd	PAKGUM
6)Abbot Pakistan	ABBOT
7)Sakrand Sugar Mills	SAKSM
8)Pakistan Hotel development Ltd	PAKH
9)Bata Pakistan	BATA
10)Pakistan Petroleum mtd	PPL
11)Oil and Gas development Corp Ltd	OGDC
12)Agriauto Industries Ltd	AGRI
13)Pakistan PVC Ltd	PAKPVC
14)Pakistan Papaersack Corporation	PAKPAPC
15)Mandviwalla Mauser	MANDM
16)Shahtaj Sugar Mills	SHAHT
17) S.G. Fibre LTd	SGFL
18)Mirza Sugar Mills	MIRGAS
19)Emco Industries limited	EMCOI
20) Metropolitan Steel	METRO
21)Moonlite(Pak)	MOONLITE
22)Merit Packing Ltd	MERITP
23)Pakistan Services	PAKS
24)ICI pakistan	ICIPAK
25)Suzuki Motorcycles	SUZM
26)Mohammad Farooq Textiles	MOHFT
27)Paramount Spinning Mills	PSM
28)Azam Textiles	AZAM
29) Dar Es Salaam	DARES
30)Sindh Abadgar,s	SINDHA
31) Ellcot Spinning Mills	ELLCOTS
32) Ayesha Textile	AYSHAT
33) Brother textiles Ltd	BROTHERT
34)Mitchell's Fruit	MITCH
35) Indus polyester company	INDUSP
36) Mirpurkhas Sugar Mills	MIRS
37) Nestle Pakistan	NESTLE
38)Din Moters	DINM
39) Indus Moters	INDUSM
40) Maple Leaf cement	MAPLEL

41) National refinery	NATR
42) Pakistan Tobacco	PAKTAB
43) Dawood Hercules	DAWOODH
44) Sui Northern	SUIN
45) Fuji Fertilizer	FFC
46) Fuji Bin Quasim	FBQ
47) PTCL	PTCL
48) Ferozson LTD	FERL
49) Southern Electric	SOUTE
50) Japan Powers	JAPP

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