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ABSTRACT

We investigated whether differences in quality of firm-level corporate governance can explain the firm-level performance in a cross-section of companies listed at Karachi Stock Exchange. Therefore, we analysed the relationship between firm-level value as measured by Tobin's Q and total Corporate Governance Index (CGI) and three sub-indices: Board, Shareholdings and Ownership, and Disclosures and Transparency 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, whereas disclosure and transparency has no significant effect on firm performance. We point out that those 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.

JEL classification: G12, G34, G38

Keywords: Corporate Governance, Firm Performance, Tobin's Q, Agency Problem, Board Size, Shareholdings, Disclosures, Leverage, Code of Corporate Governance.

1. INTRODUCTION

Good corporate governance contributes to sustainable economic development by enhancing the performance of companies and increasing their access to outside capital. In emerging markets good corporate governance serves a number of public policy objectives. It reduces vulnerability of the financial crises, reinforcement property rights; reduces transaction cost and cost of capital and leads to capital market development. Corporate governance concerns the relationship among the management, board of directors, controlling shareholders, minority shareholders and other stakeholders. 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.

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 organisation, 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 organisation, 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

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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 maximise 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[1] [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 Karachi Stock Exchange (KSE) firms. Therefore, we attempt to identify the relationship between corporate governance proxies and firm value in our sample of KSE firms. This emphasises 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 characterised by lesser reliance on capital markets and outside investors, 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. The review of empirical findings of previous research is presented in Section 2. Section 3 briefly reviews the corporate governance policy framework of Pakistan. The construction of corporate governance index is provided in Section 4. Section 5 explores the relationship between corporate governance and performance and provides a description of the data. Section 6 presents the results for the relationship between corporate governance and firm valuation and last section concludes.

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[1]Takeover which goes against the wishes of the target company's management and board of directors.

2. REVIEW OF LITERATURE

There is a large body of empirical research that has assessed the impact of corporate governance on firm performance for the developed markets. Studies have shown that good governance practices have led the significant increase in the economic value added of firms, higher productivity and lower risk of systematic financial failure for countries. The studies by Shleifer and Vishny (1997), John and Senbet (1998) and Hermalin and Weisbach (2003) provide an excellent literature review in this area. It has now become an important area of research in emerging markets as well.

There are some empirical studies that analyse the impact of different corporate governance practices in the cross-section of countries. A noteworthy study in this regard is done by Mitton (2001) with sample of 398 firms Korean, Malaysian, Indonesian, Philippines, data Thailand have found that the firm-level differences in variables are related to corporate governance has strong impact on firm performance during East Asian Crisis in 1997 and 1998. The results suggests that 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.

Most of the empirical work for exploring possible relationship between corporate governance and firm performance is done for single jurisdiction. For US Firms a broad measure of Corporate Governance Gov-Score is prepared by Brown and Caylor (2004) with 51 factors, 8 sub categories for 2327 firms based on dataset of Institutional Shareholder Service (ISS). Their findings indicate that better governed firms are relatively more profitable, more valuable and pay more cash to their shareholders. Gompers, Ishii, and Metrick (2003) use Investor Responsibility Research Centre (IRRC) data, and conclude that firms with fewer shareholder rights have lower firm valuations and lower stock returns. They classify 24 governance factors into five groups: tactics for delaying hostile takeover, voting rights, director/officer protection, other takeover defenses, and state laws. Most of these factors are anti-takeover measures so G-Index is effectively an index of anti-takeover protection rather than a broad index of governance. Their findings show that firms with stronger shareholders rights have higher firm value, higher profits, higher sales growth, lowest capital expenditures, and made fewer corporate acquisitions.

It is expected that limiting board size is to improve firm performance because the benefits by larger boards of increased monitoring are outweighed by the poorer communication and decision-making of larger groups [Lipton and Lorsch (1992); Jensen (1993)]. The study by Yermack (1996) provides an inverse relation between board size and profitability, asset utilisation, and Tobin’s Q which conform this hypothesis. Anderson, *et al.* (2004) document that the cost of debt is lower for larger boards, because creditors view these firms as having more effective monitors of their financial accounting processes. Brown

and Caylor (2004) add to this literature by showing that firms with board sizes of between 6 and 15 have higher returns on equity and higher net profit margins than do firms with other board sizes

The relation between the proportion of outside directors, a proxy for board independence, and firm performance is inconclusive. Fosberg (1989) finds no relation between the proportion of outsider directors and various performance measures Hermalin and Weisbach (1991) find no association between the proportion of outsider directors and Tobin's Q; and Bhagat and Black (2002) find no linkage between proportion of outsider directors and Tobin's Q, return on assets, asset turnover and stock returns. In contrast, Baysinger and Butler (1985) and Rosenstein and Wyatt (1990) show that the market rewards firms for appointing outside directors; Brickley, Coles, and Terry (1994) find a positive relation between the proportion of outsider directors and the stock market reaction to poison pill adoptions; and Anderson, Mansi and Reeb (2004) show that the cost of debt, as proxied by bond yield spreads, is inversely related to board independence. Studies using financial statement data and Tobin's Q find no link between board independence and firm performance, while those using stock returns data or bond yield data find a positive link. Hermalin and Weisbach (1991) and Bhagat and Black (2002). Brown and Caylor (2004) do not find Tobin's Q to increase in board independence, but they do find that firms with independent boards have higher returns on equity, higher profit margins, larger dividend yields, and larger stock repurchases, suggesting that board independence is associated with other important measures of firm performance aside from Tobin's Q.

The evidence on the association between audit-related governance factors and firm performance is mixed. Brown and Caylor (2004) show that independent audit committees are positively related to dividend yield, but not to operating performance or firm valuation. They also find that the consulting fees paid to auditors less than audit fees paid to auditors are negatively related to performance measures and company has a formal policy on auditor rotation is positively related to return on equity but not to their performance measures. Klein (2002) documents a negative relation between earnings management and audit committee independence, and Anderson, *et al.* (2004) find that entirely independent audit committees have lower debt financing costs. Frankel, *et al.* (2002) show a negative relation between earnings management and auditor independence (based on audit versus non-audit fees). However, Ashbaugh, *et al.* (2003) and Larcker and Richardson (2004) come up with a contradictory evidence. Kinney, *et al.* (2004) findings show no association between earnings restatements and fees paid for financial information systems design and implementation or internal audit services, and Agrawal and Chadha (2005) come up with similar conclusion in this regard.

The separation of CEO and chairman affects firms' performance because the agency problems are higher when the same person holds both positions. Yermack (1996) shows that firms are more valuable when the CEO and board chair positions are separate by analysing a sample of 452 U.S. public firms between (1984 and 1991). Core, *et al.* (1999) find that CEO compensation is lower when the CEO and board chair positions are separate. Brown and Caylor (2004) conclude that firms are more valuable when the CEO and board chair positions are separate. Botosan and Plumlee (2001) find a material effect of expensing stock options on return on assets. They use Fortune's list of the 100 fastest growing companies as of September 1999, and compute the effect of expensing stock options on firms' operating performance. Fich and Shivdasani (2004) find that firms with director stock option plans have higher market to book ratios, higher profitability and they document a positive stock market reaction when firms announce stock option plans for their directors. Brown and Caylor on the other hand come up with a contradictory conclusion and find no evidence that operating performance or firm valuation is positively related either to stock option expensing or to directors receiving some or all of their fees in stock.

In the past few years, corporate governance has become an important area of research in Pakistan. In his noteworthy work Cheema (2003) suggests that corporate governance can play a significant role for Pakistan to attract foreign direct investment and mobilise greater saving through capital provided the corporate governance system is compatible with the objective of raising external equity capital through capital markets. The corporate structure of Pakistan is characterised as concentrated family control, interlocking directorships, cross-shareholdings and pyramid structures. The concern is that reforms whose main objective is minority shareholder protection may dampen profit maximising incentives for families without providing offsetting benefits in the form of equally efficient monitoring by minority shareholders. If this happens the reform may end up creating sub optimal incentives for profit maximisation by families. They argue that a crucial challenge for policy makers is to optimise the dual objectives of minority shareholder protection and the maintenance of profit-maximising incentives for family controllers. There is a need for progressive corporates to take a lead in the corporate governance reform effort as well.

Rais and Saeed (2005) analyse the Corporate Governance Code 2002 in the light of Regulatory Impact Assessment (RIA) framework and its enforcement and application in Pakistan in order to understand the dynamics of public decision making and assess the efficacy of the regulation policy of SECP in the arena of corporate governance. The analysis shows that though the listed companies are gearing themselves up to adopt the Code, there are some constraints, and reservations about the way it was drafted and implemented. The study by Ghani, *et al.* (2002) examines business groups and their impact on

corporate governance in Pakistan for non-financial firms listed on the Karachi Stock Exchange of Pakistan for 1998-2002. Their evidence indicates that investors view the business-group as a mechanism to expropriate minority shareholders. On the other hand, the comparative financial performance results suggest that business groups in Pakistan are efficient economic arrangements that substitute for missing or inefficient outside institutions and markets. The study by Ashraf and Ghani (2005) examines the origins, growth, and the development of accounting practices and disclosures in Pakistan and the factors that influenced them. They document that lack of investor protection (e.g., minority rights protection, insider trading protection), judicial inefficiencies, and weak enforcement mechanisms are more critical factors than are cultural factors in explaining the state of accounting in Pakistan. They conclude that it is the enforcement mechanisms that are paramount in improving the quality of accounting in developing economies.

There is an increasing interest in analysing affect of corporate governance on stock market in Pakistan but many issues in this area are uncovered. In particular, firm-level corporate governance rating and its affect on the valuation of the firm which is central issue of this area needs in depth research. It is in this perspective this study aims to make contribution in the literature on corporate governance.

3. CORPORATE GOVERNANCE IN PAKISTAN

The code of corporate governance introduced by SECP in early 2002 is the major step in corporate governance reforms in Pakistan. The code is initially started as a joint effort of SECP and Institute of Chartered Accountant Pakistan (ICAP). All listed companies are required to comply with most provisions of the code.

The corporate legal framework includes the corporate Ordinance 1984 which sets the rules for the governance and regulations of companies and certain other associations and is based on common law. Banks are regulated by the banking company ordinance (BCO) 1962 and prudential issued by SBP. The key legislation of corporate governance includes the Securities and Exchange Ordinance 1969 the Companies Ordinance 1984 and Securities and Exchange Commission Act 1997 that established the SECP as principle regulator of securities markets and non-bank companies and also non-listed companies. The Securities and Exchange Ordinance 1969 is the basic securities law, and provides for investor protection, market regulation, securities delisting and related matters, and the prevention of fraud and insider trading. The Securities and Exchange Ordinance Act 1997 established SECP as regulator of capital marked and controller of corporate entities. The listed Companies (Substantial Acquisition of Voting shares and Takeovers) Ordinance 2002 establishes additional take over and ownership disclosure rules. In addition to listing rules,

disclosures, the listing rules include special regulations on transfer pricing. The listed companies must inform the exchanges about dividends, annual general meetings (AGMs), capital increases and change in boards.

The code includes many recommendations in line with international good practice. Several provisions of code were already added to Corporate Ordinance 1984, when it was amended into 2002, in order to strengthen monitory shareholders' rights. The State Bank also mandated the application of code for all listed and non-listed banks and Development Finance Institutes (DFIs). This requirement backed by State Bank considerable enforcement capacity resulted in significant changes within banking system. The SECP issued a separate code for insurance companies.

The basic shareholders rights are protected in Pakistan. The registration is secure and dematerialised through Central Depository Committee (CDC). Shareholders can demand a variety of information directly from the company and have a clear right to participate in AGM. Directors are elected using a form of cumulative voting and can remove through share holder resolution. The changes in the company articles, increasing authorised capital and sale of major corporate assets are require shareholders approval.

While more effective enforcement contributed to improve compliance, some companies do not hold AGMs or hold in places where it is difficult for shareholders to reach. The law also does not support voting by post or electronically. The concentrated control limits and influence of minority shareholders, and effectively reduce their protection from abuse. When families dominate the shareholders meeting and board, director's accountability to other shareholders become critical and currently in Pakistan this accountability is absent in many companies. The shareholder recording process for share hold in the CDC works effectively. However, although the registration's role has been reduced by the CDC's operations, some inefficiencies are still there. Some companies do not pay dividend on time, and take longer than 5 days to re-register share in the name of depository. The annual reports of SECP suggest that the percentage of companies paying dividends is 35 percent and shareholders can complain SECP about non-payment of dividends.

The quality of disclosure has improved over last four years due to increasing monitoring role of the SECP and the requirement of code. Shareholders owning 10 percent or more of voting capital disclose their ownership and the annual report includes the pattern for major shareholdings. However pyramid structure, cross holdings and the absence of joint action make it difficult for outsiders to understand the ownership structure of companies, especially in case of business groups.

The family owned companies are typically managed by owners themselves. In case of state owned enterprises and multinationals there is often direct relationship between state/foreign owners and management again bypassing the boards. Many important corporate decisions are not

made on Board AGMs level. The code explicitly mentions director's duties to act with objective an independent judgment and in the best interest of company. In business groups boards are dominated by executive and non-executive members of controlling family and by proxy directors appointed to act on their behalf. Inter-looking directorships are often used to retain majority control. Family dominated boards are less able to protect minority shareholder's rights and risk a loss of competitiveness as other boards become more professional.

The code strengthen the role of non-executive directors by restricting the percentage of executive director to 75 percent in non-financial firms and recommending that institutional investor in 75 percent in non-financial firms and recommending institutional investor be representation. However given the dominant ownership structure, this does not present controlling families from having disproportionate representation on the board.

The SECP is enforcing corporate governance regulations SECP is receiving technical assistance from Asian Development Bank to improve corporate governance enforcement programme and also from World Bank is build awareness and training. Other elements of enforcement regime are not so strong ICAP has some self-regulatory function and stock exchanges are lacked the resources and expertise to effective monitor implementation of the code. KSE has set up a Board Committee on the Code of Corporate Governance and a unit in the Company Affairs Department to monitor compliance with the code.

4. 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 categorised 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 in the construction of index 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.[2] The average is taken out and we arrive at the rating 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[3] 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 census 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 favour 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 then 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 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)].

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[2]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.

[3]Any member of a company's board of directors who is not an employee or shareholder in the company.

5. DATA AND METHODOLOGICAL FRAMEWORK

It is well established that country's laws of corporate governance affect firm value.[4] 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[5] is used as valuation measure. The sample of 50 firms[6] is selected: which are representative of all non-financial sectors and active in their sector, comprises more than 70 percent of market capitalisation 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 endogenity [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 endogeinety problem in estimation is resolved by applying Generalised 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 and it is defined debt-to-total asset ratio. 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

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[4]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.

[5]Tobin's Q: (the book value of long term debt plus the market value of equity) divided by book value of total assets.

[6]List of companies is presented in Appendix A2.

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,

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

where firm Q_i is the average firm performance measure estimated for three years 2003, 2004 and 2005.[7] 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 Generalised Method of Moments. This estimation technique is adopted to cope with presence of endogeniety in governance variables [Black, *et al*. (2002)]. The main problem in estimating the fully specified and identified model is limited availability of instrument variables.

The potential instruments included in the estimation are dummy variables indicating foreign investment, block holding, included 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[8] 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.

6. EMPIRICAL FINDINGS

The results for analysing 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.

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[7]Compliance of Corporate Governance started from the end of year 2002.

[8]Block-holder is defined by investors as having more than 10 percent shareholdings.

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 Firm Performance and Total Corporate Governance Index

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

Notes: The results presented in this table are Generalised 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, Profit is natural logarithm of net income/total assets, 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 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 emphasised by regulations of SECP.

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 A, 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); 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 is entered into model alone and also

Table 3

Evidence on Performance and Corporate Governance Sub-indices

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

Notes: The results presented in this table are Generalised 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, Profit is natural logarithm of net income/total assets, 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.

when include 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)].

6. CONCLUSION

The relationship between corporate governance variables has been widely analysed 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 analysing 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 80 percent of market capitalisation 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 Generalised 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 standard 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).
(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) Outside director attendance in Meetings.
(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 percent shareholdings).
(ii) Does the CEO own shares.
(iii) Directors ownership (block ownership) other than CEO and Chairman.
(iv) Chairman or CEO is Block Holder (10 percent).
(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.
(vii) Disclosure in the company's annual report) of share ownership according to the requirement of Code.
(viii) Information of the executive management staff members ownership (employees ownership).

Appendix A2

List of Companies

Companies	Symbols
(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 Ltd.	PPL
(11) Oil and Gas development Corp Ltd.	OGDC
(12) Agriauto Industries Ltd.	AGRI
(13) Pakistan PVC Ltd.	PAKPVC
(14) Pakistan Papersack 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 Tobaco	PAKTAB
(43) Dawod Hericules	DAWOODH
(44) Sui Nothern	SUIN
(45) Fuji Fertiliser	FFC
(46) Fuji Bin Quasim	FBQ
(47) PTCL	PTCL
(48) Ferozson LTD	FERL
(49) Southern Electric	SOUTE
(50) Japan Powers	JAPP

Appendix A3

Evidence on Performance and Corporate Governance Sub-indices

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

Notes: The results presented in this table are Generalised 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, Profit is natural logarithm of net income/total assets, 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.

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