Corporate Governance and Firm Valuations in China

Chong-En Bai, Qiao Liu, Joe Lu, Frank M. Song, and Junxi Zhang*
Faculty of Business and Economics
The University of Hong Kong

April 2002 (first version)
November 2002 (revised version)

Abstract

Does a firm's corporate governance practice affect its market value? Are shareholders in China willing to pay a premium for good governance standard? How is the premium compared with that in other emerging markets? The paper examines these important corporate governance issues in China. We identify a comprehensive set of governance mechanisms for China's listed companies and construct relevant measures for each of them. We then create a rating index, named the G index, to reflect the overall level of governance practice for China's listed companies. We find that better-governed companies according to our index are associated with higher stock market valuation. We further identify the effects on valuation of each corporate governance mechanism. Our results indicate that good corporate governance matters greatly in China's emerging stock market and Chinese investors are willing to pay a significant premium for better governance standard.

Keywords: Corporate governance, firm valuation, China, the G index

JEL Classification: G34, G32

Corporate Governance and Firm Valuations in China

Abstract

Does a firm's corporate governance practice affect its market value? Are shareholders in China willing to pay a premium for good governance standard? How is the premium compared with that in other emerging markets? The paper examines these important corporate governance issues in China. We identify a comprehensive set of governance mechanisms for China's listed companies and construct relevant measures for each of them. We then create a rating index, named the G index, to reflect the overall level of governance practice for China's listed companies. We find that better-governed companies according to our index are associated with higher stock market valuation. We further identify the effects on valuation of each corporate governance mechanism. Our results indicate that good corporate governance matters greatly in China's emerging stock market and Chinese investors are willing to pay a significant premium for better governance standard.

Keywords: Corporate governance, firm valuation, China, the G index

JEL Classification: G34, G32

1. Introduction

The Asian financial crisis has rekindled worldwide interest in the issue of corporate governance. In recent years, pushing for higher governance standard has become a regular campaign with the participation of an increasing number of parties: academics, media, regulatory authorities, corporations, institutional investors, international organizations, shareholder rights watchdogs, and etc. [1] Numerous initiatives have also been proposed by Asian countries to enhance their corporate governance practice, for example, new listing/disclosure rules, mandatory training for board directors, enforced codes of governance, and etc. International organizations are also very keen on governance issues. The International Monetary Fund has demanded that governance improvements should be included in its debt relief program. In 1998, the Organization of Economic Cooperation and Development (OECD) issued its influential *OECD Principles of Corporate Governance*, which are intended to assist member and non-member countries in their efforts to evaluate and improve the legal, institutional and regulatory framework for better corporate governance. In addition, private companies, such as Standard & Poor, California Public Employees' Retirement Pension System (Calpers), CLSA, and McKinsey, are also calling for sweeping reforms of governance practice in emerging economies.

Corporate governance has also gained unparalleled importance in China. The Chinese government opened stock exchanges in the early 1990s in order to raise capital and improve operating performance for state-owned enterprises (SOEs). In fewer than 12 years, China's stock markets have grown into the eighth largest in the world with market capitalization of over US$500 billion. Chinese companies, especially SOEs, have benefited tremendously from the rapid growth in issuance and general public's enthusiasm on equity market. Meanwhile, the regulations over stock markets have been evolving to address the tradeoff between growth and control: a liberal approach that will lead to fast growth versus a controlled approach that will lead to slower growth. Even though issuance approval, pricing and placement systems

---

[1] A recent research by McKinsey finds that articles featuring 'corporate governance' in major international economics/finance newspapers or magazines, such as Financial Times, Asian Wall Street Journal, Far-East Economic Review, etc, have increased 10 fold from pre-crisis 96-97 to 2001-2001 (see, "Governance in Asia", McKinsey & Company, 2002). In academics, the rebirth has spawned a voluminous body of research on governance related issues, especially in emerging markets.

have been significantly liberalized, they are still tightly controlled compared to other Asian markets. As controlled as it is, poor governance practice is still rampant among the Chinese listed companies. For example, several listed companies have been placed on the spotlight due to their poor governance practices. In 2001, the largest shareholder of Meierya, a one-time profitable listed company, colluded with other related parties and collectively embezzled US$ 44.6 million, 41% of the listed company's total equity; in the same year, Sanjiu Pharma's largest shareholder extracted US$ 301.9 million, 96% of the listed company's total equity.[2]

While Chinese companies, especially the SOEs, acquire a huge amount of capital from the public through either banking systems or capital markets, they remain extremely inefficient. For example, recent official statistics suggest that about one-third of all SOEs are loss-makers, another third either break even or are plagued with implicit losses, while the remaining one-third are marginally profitable. Ineffective governance system has been widely believed as the root cause of corporate China's lackluster performance.

Does a firm's corporate governance practices affect its market value? The answer seems to be positive. Recently, McKinsey has conducted a series of surveys on institutional investors and private equities with investment focus on emerging markets and found that 80% of them are willing to pay a premium to well-governed firms.[3] Several other studies have also documented a positive correlation between performance measures and governance level.[4] In this study, we intend to answer this question for the largest transition and developing economy – China. We ask the following questions: are shareholders in China willing to pay a premium for a better-governed company? If yes, how is the magnitude of the premium compared to that in other emerging markets? Furthermore, we attempt to address the following more interesting and challenging questions: what exactly are Chinese companies' corporate governance problems? Are there any implementable actions that could be taken to raise Chinese companies' governance standard? To our best knowledge, this

---

[2] Liu and Lu (2002) finds that majority of Chinese listed companies manage their earnings as a response to a variety of regulatory loopholes. However, the incentives are stronger for firms with poorer governance practice.
[3] McKinsey Surveys on International Institutional Investors and Private Equities, 1999, 2000, 2001, 2002.
[4] For example, see "Saints and sinners: who's got religion?", CLSA Emerging Markets, 2001.

paper is the first study that comprehensively assesses Chinese listed companies' governance practice and relates them to firms' overall performance. More importantly, it offers, for the first time, the corporate governance-rating index, the G index, for Chinese listed firms. We believe that the governance variables used in the construction of the G index have effectively captured the corporate governance practice of the Chinese listed companies. They may serve as the basis of governance practice code for corporate China.

Most of the empirical literature on the relationship between corporate governance and firm performance focuses on a particular aspect of governance, such as board characteristics (Millstein and MacAvoy, 1998, and Bhagat and Black, 1999), shareholders' activism (Karpoff, Malatesta, and Walking, 1996, and Carleton, Nelson, and Weisbach, 1998), compensation to outside directors (Bhagat, Carey, and Elson, 1999), anti-takeover provisions (Sundaramurthy, Mahoney, and Mahoney, 1997), investor protection (La Porta, Lopez-de-Silanes, Shleifer, and Vishny, 2002), and so on. Recently, several papers study the effects of general corporate governance practices on firm value, primarily in emerging markets. Most of them either use a small single-country sample (Black, 2001, and Gompers, Ishii, and Metrick, 2001) or multi-country samples that contain only the largest firms in each country (Durnev and Kim, 2002, and Klapper and Love, 2002). Our paper is closest in sprit to the study by Black, Jang, and Kim (2002) on Korea firms in the sense that both study a full cross section of all listed firms in the respective market. In China, given the strong influence of various levels of government in determining the governance practices of listed firms, often on arbitrary basis, we believe that the endogeneity problem in estimating the effect of governance practices on firm valuation is not important.

The paper is organized as follows. Section 2 reviews the theoretical and empirical literature on corporate governance studies and summarizes the major governance mechanisms. Section 3 discusses the variables used in our construction of the ranking of corporate governance as well as its methodology. Section 4 presents the

ranking results and relates the corporate governance ranking with operating performance and stock valuations. Section 5 concludes the paper.

2. Corporate Governance Mechanisms

Over three hundred years ago, in his masterwork "*The Wealth of Nations*", Adam Smith raised the issue of the separation of ownership and stewardship in joint-stock corporations. It was therefore suggested that a set of effective mechanisms should be in place to resolve the conflict of interest between firm owners and managers. Modern academic literature on corporate governance stems from the seminal book by Berle and Means (1932), who argued that, in practice, managers of a firm pursued their own interests rather than the interests of shareholders. The contractual nature of the firm and the principal-agent problem highlighted by Berle and Means led to the development of the agency approach to corporate finance. Over the years, in particular in the last quarter of the 20th century, there has been rapid growth in both the theoretical and empirical studies.

The agency approach to corporate governance attempts to provide answers to the key question – "How can shareholders ensure that non-owner managers pursue their interests?" (see Allen and Gale, 2001). However, in recent years, another form of conflicts of interest – controlling shareholders take actions that are for their own benefits at the expense of minority shareholders - has drawn upon much attention. As La Porta, Lopez-de-Silanes, and Shleifer (1998) assert, "…the central agency problem in large corporation around the world is that of restricting expropriation of minority shareholders by controlling shareholders…" Such an expropriation from minority shareholders by controlling shareholders takes a variety of forms, such as excessive executive compensation, loan guarantees, dilutive share issues, etc. Johnson, La Porta, Lopez-de-Silanes, and Shleifer (2000) use the term "tunneling" to describe the transfer of resources out of firms for the benefits of their controlling shareholders. Much evidence emerging during the Asian financial crisis shows that "tunneling" is a much more serious agency problem in emerging markets. The recent debacles of Enron, Worldcom, and Global Crossing convince people that "tunneling" is also possible even in a developed economy.

Taking various forms of agency problems into account, corporate governance has a new and more comprehensive meaning. As suggested by Dennis and McConnell (2002), " …corporate governance is the set of mechanisms – both institutional and market based – that induce the self interested controllers of a company (those that make decisions regarding how the company will be operated) to make decisions that maximize the value of the company to its owners (suppliers of capital)…" Practitioners seem to share the same view. For example, TIAA-CREF defines corporate governance as "…the set of mechanisms that maintain an appropriate balance between the rights of shareholders… and the needs of the board and management to direct and manage the corporation's affairs."

Thus, good corporate governance is a set of mechanisms that assure suppliers of finance get a return on their investment. Having said that, our next question naturally arises: what are the set of mechanisms that should be in place to govern a company? There are two competing views: market based governance model popular in US and UK vis-à-vis control based model common in emerging economies, Japan and the continental Europe. The market based governance model has the characteristics of an independent board, dispersed ownership, transparent disclosures, active takeover markets, and well-developed legal infrastructure. On the contrary, control model emphasizes the values of insider board, concentrated ownership structure, limited disclosure, reliance on family finance and banking system, and etc. Although academic research up to date has yielded mixed results regarding the superiority of the two models, more developing countries seem to favor the market-based model.

In this paper, we do not intend to make an judgment as to which model is better in the context of China's capital markets. Instead, we choose to focus on the set of mechanisms that help resolve a variety of agency problems for Chinese companies. We then assess a company's performance in each category, based on which we come up with an overall governance score.

Broadly speaking, there are two types of mechanisms that help resolve the two sets of conflict: between owners and managers; and between controlling shareholders

and minority shareholders. The first type is internal mechanisms (e.g., ownership structure, executive compensations, board of directors, financial disclosure), while the second is external mechanisms (e.g., external takeover market, legal infrastructure, protection of minority shareholders, etc.). In this paper, we consider and assess each of them.[5]

2.1 Internal Mechanisms

There are four internal governance mechanisms: board of directors, executive compensation, ownership structure, and financial transparency.

(1) The board of directors

In theory at least, the board of directors is the first instrument through which shareholders can exert considerable influence on the behavior of managers in order to ensure that the company is run in their interests. Empirical studies, however, are complicated by the fact that due to the well-known historical, political, social, economical, cultural and legal differences across countries, the structure of boards is significantly different. Nevertheless, the evidence available suggests that countries share common features with regard to this mechanism.

The empirical literature on the relationship between board composition and firm performance obtains the following findings: (1) Firms with boards containing a majority of independent directors do not perform better than firms without such boards; (2) A moderate number of inside directors is associated with greater profitability; (3) In Japan, although the presence of outside directors on the board has no effect on the sensitivity of CEO turnover to either earnings or stock-price performance, concentrated equity ownership and ties to a main bank do have a positive effect; and (4) There is a strong inverse relationship between CEO turnover and firm performance in some countries.

(2) Executive compensation

---

[5] We understand that there are many different governance frameworks. Our framework, however, is similar to most of the recent researches on corporate governance (e.g., CSLA, S&P, Allen and Gale, 2001).

The second mechanism that ensures that managers pursue the interest of shareholders is to structure compensation appropriately, where the measures used to motivate managers include both stock valuations and accounting based performance measures. Although most of the empirical studies are constrained by data availability, the limited finding seems to suggest that there is a positive relationship between executive pay and performance in the US, Germany and Japan.

(3) Ownership structure

It is believed that one of the most important ways through which a firm maximizes its value is through well-designed ownership structure of the firm's shares. In general, concentrated equity ownership is regarded as a bad mechanism in corporate governance since it gives the largest shareholders more discretionary powers of using firm resources in the areas that only serve their own benefits. Claessens, Djankov and Lang (2000) find that cross-holding and pyramidal ownership have been common in Asian economies. One consequence of such ownership arrangement is that the controlling shareholders are able to obtain more control at minimal capital expense, which makes "tunneling" much easier. Although cross-holding, pyramidal schemes, and deviations from one-share-one-vote are not common in China, listed companies normally have one ultimate owner who holds a significant percent of total shares.[6] The existence of such a controlling shareholder makes transferring resources out of listed companies into parent or other related parties' accounts possible. Several recently disclosed corporate scandals in China's capital markets were all about unconstrained large shareholders misusing firm resources. On the other hand, since tunneling is usually inefficient for the firm as a whole, if the shareholding of the largest shareholder is very large and therefore there is high degree of congruence between his interest and the firm's interest, then ownership concentration may have a positive effect. In summary, the relationship between firm performance and ownership concentration is expected to be U-shaped.

(4) Financial transparency and adequate information disclosure

There is no doubt that financial transparency and adequate information disclosure are of ultimate importance in all countries, particularly developing ones.

---

[6] As we will show in table 1, the largest shareholder in Chinese listed companies on average holds 43.6% of total shares.

Managers play a vital role in securing the interests of not only the existing owners but also potential investors. Honest managers will attempt to provide sufficient, accurate and timely information regarding the firm's operations, financial status, and external environment.

2.2. External Mechanisms

(1) The market for corporate control

It is generally believed that the existence of an active market for corporate control is essential for efficient allocation of resources. It allows inefficient managers to be removed and replaced with able managers who can gain control of large amounts of resources in a short period of time. The market for corporate control can operate in three ways: proxy contests, friendly mergers and hostile takeovers.

Proxy fights do not usually unseat the existing board of directors successfully because share holdings are often spread among many shareholders. Friendly mergers and takeovers occur in all countries and account for most of the transaction volume that occur. In some developed countries, it ranges from 60% to 90%. For hostile takeovers, they do occur fairly frequently in the US and UK, however, much less so in Germany, France and Japan. Empirical studies suggest that takeovers in the past did significantly increase the market value of target firms, although the increase in value for bidding firms was zero and possibly even negative. Studies using accounting data find that changes and improvements in operations can at least partially explain takeover premia.

(2) Legal infrastructure and protection of minority shareholders

A series of studies by La Porta et al (1997, 1998, 2002) emphasize the role played by legal framework and legal foundation in disciplining managers and controlling shareholders' opportunistic behaviors. They find that in countries with common law tradition, governance standards are generally higher and minority shareholders are relatively better protected. In contrast, countries pursuing continental law systems normally have poor minority shareholder protection and practice lower governance standards. Interestingly, they find that cross-country differences in equity valuation, cost of capital and magnitude of external financing could be explained by a

country's legal origin. Obviously, legal infrastructure is an effective external mechanism that assures that investors get a fair return on their investment.

Chinese listed companies are regulated by the uniform legal system, therefore, this mechanism plays little role in explaining cross-sectional differences in governance practices. However, it has to be kept in mind that many Chinese companies do have shares listed and traded on stock exchanges where different jurisprudences prevail (e.g., H shares, ADRs, etc).

(3) Product market competition

Another powerful mechanism for solving a variety of agency problems is competition in product markets. If the managers of a firm waste resources, the firm will eventually fail in product markets. Hence, increased competition reduces managerial slack and may be helpful in limiting efficiency losses. The same logic implies that product competition helps curtail the "tunneling" activities of the controlling shareholder.

In sum, good corporate governance helps protect investors and ensures that investors get a fair return on their investment. The mechanisms we specified above play their roles in different ways. An effective combination of the above internal and external mechanisms, to us, delineates the essence of good corporate governance. Our assessments of Chinese companies' governance practice, therefore, are undertaken along with the two mechanisms respectively.

3. The Construction of Governance Measure - the G Index

The main purpose of this project is to quantify and evaluate the relative quality of corporate governance practice for each of the public company listed on Shanghai and Shenzhen Stock Exchanges. To accomplish this, we assess each company's governance performance in each category and construct an overall corporate governance index - the G Index. We then rank the companies by their G Index scores.

In the process of the construction of the G index, we consider various factors

that best reflect corporate governance standards in China. The choice of the variables is based on the corporate governance mechanisms discussed in Section 2. We make an effort to cover as many mechanisms as data would allow. However, due to data availability, some variables are missing. Still, we believe that we have worked out a set of governance measures that truthfully reflect Chinese listed companies' governance practice.

3.A. Definition of Variables

(1) Board of directors

(i) The CEO is the chairman or a vice chairman of the board of directors – ceo_is_top_dir dummy

The board of directors should play a role of a monitor of the management. When the top manager, the CEO, controls or partially controls the board, it is hard for the board to play an independent and active monitoring role. As many studies have shown, the best practice is that board should be outsiders-dominant. Our measure, ceo_is_top_dir, therefore, is expected to have negative impact on a company's governance level.

(ii) *The proportion of outsider directors – out_ratio*

It is defined as the ratio of the number of directors without pays with respect to the total number of directors. Paid directors are often members of the management team whom are delegated by the controlling shareholder. If they dominate the board, the board is not expected to play an effective monitoring role.

(2) Executive compensation

Stock options are rare in China. Also, the information on executive pay is not complete, and in majority cases inaccessible. However, we come up with the following alternative variable to capture executives' alignment of interest with other shareholders.

(iii) *Shareholding by the top five executives of the firm – top5*

The interests of the top managers are better aligned with the interests of other shareholders if the former have more stakes in the firm.

(3) Ownership variables

(iv) *Shareholding of the largest shareholder – top1*

This variable potentially has two conflicting effects on the quality of corporate governance, both related to the potential of tunneling. When the largest shareholder increases his holding, the constraints from other shareholders become weaker and therefore the largest shareholder is better able to engage in tunneling activities. On the other hand, when the largest shareholder holds close to 100 percent of the firm, his interest and the firm's interest are high congruent and therefore he has little incentive to engage in inefficient tunneling. We expect that the negative effect is the more important effect because the positive one only kicks in when the largest shareholding is exceedingly large.

(v) *The firm has a parent company – parent dummy*

If the largest shareholder is another firm, the scope for tunneling is wider. There are many more channels for a company than an individual to tunnel. The parent company can expropriate other shareholders of the concerned firm through various business dealings between them, or connected transactions. The most commonly observed are guaranteed loans, preferential transfer prices, the dumping of non performing assets from parent company to listed company.

(4) Financial transparency

We don't have a good measure for financial transparency. As most Chinese listed companies are audited by local accounting firms, there is no reliable information about which accounting firm is more reputable. In spite of the fact that a

number of companies have shares listed on Hong Kong or New York stock exchanges and therefore have big 5 (unfortunately, big 4 now) firms audit their financial statements, foreign auditors seldom have access to the information about those listed companies' domestic operations – due to very complicated financing and ownership arrangements.

(5) The market for corporate control

(vi) Con*centration of shareholding in the hands of the second to the tenth largest shareholders – cstr2_10*

It is defined as the *logarithm* of the sum of squares of the percentage shareholding by the 2nd to the 10th largest shareholders. This variable should have a positive effect through three channels. First, other large shareholders are the obstacles to the tunneling activities by the largest shareholder. Second, they enhance the efficiency of the market for corporate control. When the management under-performs, these large shareholders can either initiate a fight for corporate control or help an outsider's fight for control. Third, these large shareholders also serve as monitors of the management. Overall, the higher is the concentration of shareholding in the hands of these large shareholders, the stronger these roles are.[7]

(6) Legal framework and protection of minority shareholders

(*vii) hbshare dummy*

As explained before, the Chinese listed companies are unanimously regulated by Chinese jurisprudences with just a few exceptions: the firms with shares listed on Hong Kong and New York stock exchanges. The dummy variables for a listed company to have cross-listing in Hong Kong or New York will be used as a proxy for the effect of legal environment in enforcing corporate governance.

---

[7] Bai, Liu and Song (2002) estimates that the largest shareholder's private benefit of control amounts to 29% of a firm's market value. However, it is negatively correlated with the firm's concentration measure of the second to tenth largest shareholders. We interpret this as evidence that the competitive control market lowers private benefit of control and boosts a firm's overall governance performance.

(7) Product market competition variable

Unfortunately, we don't have any measure for this mechanism. It has been widely believed that most of the listed companies, especially SOEs, are from protected industries or received preferential governmental treatments. However, the situation is changing very quickly since more and more non-SOEs become public either through IPOs or purchasing a listed company.

(vii) so_top1 dummy

Finally, in addition to the above seven measures of corporate governance derived from economic theory, we also consider one additional measure – the dummy variable that measures whether the controlling shareholder is the government or not.[8] It is believed that government may have goals such as maintaining employment and social stability rather than profit-maximization. The controlling government may use the listed company as a vehicle to meet these other policy goals that may conflict with shareholders' interests. Additionally, it has been argued that soft budget constrain is a major problem facing many SOEs in transition economies. We believe the problem may be more serious for listed companies whose controlling shareholders are governments at all levels. Therefore, we use this variable to capture its potential impacts on governance practice.

3.B. Summary Statistics

We study all listed companies on both the Shanghai Stock Exchange and Shenzhen Stock Exchange during the year of 2000. We eliminated those firms with missing data for the eight variables and the remaining sample size is 1006 firms, representing more than 95% of listed firms in the two exchanges. The data source is *China Stock Market & Accounting Research Database (CSMAR)*, compiled according to the format of *CRSP* and *Compustat* by Hong Kong Poly University and GTA Information Technology Company Limited in Shenzhen.

---

[8] The so-called state-controlling shareholder also includes legal-person shares controlled by various level of governments.

In panel A, we present the summary statistics of the eight variables used in forming the corporate governance ranking. It is interesting to note that there are a number of distinctive features on the governance structure for Chinese firms: (1) More than a third of CEOs in China's listed companies are also the chairman or a vice chairman of the board of directors, blurring the monitoring role supposedly played by the board of directors; (2) The proportion of the number of outsider directors in the board for the sample companies is surprisingly high, with mean of 48.45% and standard deviation of 27.36%; (3) Top managers typically own very little of their companies' shares. The mean of *top5* variable is 0.02% with standard deviation of 0.1432%; (4) On average, the largest shareholder in each firm holds a significantly large portion of shares. Note that the mean of the top shareholder's holding, *top1*, is 45.26%, with highest value more than 88%; (5) A large majority of the publicly listed firms in China (78%) have a parent company. This can be seen from the mean for the dummy variable *parent*, which is 0.78; (6) There is a big variation of concentration of shareholding in the hands of the second to the tenth largest shareholders in China. The mean and the standard deviation for the concentration of the second to the tenth largest shareholders, *cstr2_10*, are 3.20 and 2.79, with lowest at -6.25 to highest 7.27; (7) Dual listing or multiple listing is not common for Chinese firms, with only less than 10% of them having the privilege; and (8) a large majority of companies, more than two thirds, are controlled by the government.

3.C. Ranking Methodology

According to our theoretical analysis, we divide the variables used in empirical ranking analysis into two broad sets. The first set includes variables that have negative impact on a company's governance level: (1) the CEO is the chairman or a vice chairman of the board of directors, *ceo_is_top_di;* (3) shareholding of the largest shareholder, *top1*; (2) the firm has a parent company *parent* dummy; (4) *so_top1*, that the largest shareholder is the state. The higher is the value of each variable, the lower the rank of corporate governance will be.

The second set includes variables that have positive impact on governance: (1) the proportion of outside directors, *out_ratio*; (2) shareholding by the top five officials of the firm, *top5*; (3) concentration of shareholding in the hands of the second to the

tenth largest shareholders, *cstr2_10*; (4) the dummy that captures whether a company has overseas listings or not, *hbshare*. The lower is the value of each variable, the lower the rank of corporate governance will be.

We sort the variables in the first set in descending order, and the variables in the second set in ascending order. Then the ranking of the companies is generated accordingly. Specifically, we rank each company according to each of the 8 variables. After obtaining the ranking according to each variable, we divide it by the total number of available observations in the study and multiply the resulting measure to obtain a normalized value from 0 to 100. Finally, the G index is constructed as the equally weighted average of the individual rankings for each company. We use equal weighting because, *a priori*, it is not clear what weights are more appropriate.

4. Empirical Results on Corporate Governance, Performance and Valuations

We rank all companies according to the G formula (1). The company with the highest G index is ranked number one, while the company with the lowest G is ranked as 1006th. The details of all the rankings of individual variables and the overall ranking according to the total score are available upon request.

In theory, good corporate governance should be related to high corporate valuation. A number of empirical studies on emerging markets have found that investors are willing to pay a premium averaging 10% to 12% for good corporate governance. It would be interesting to see whether better-governed Chinese companies, measured by our measure of corporate G index, are associated with higher corporate valuations. Moreover, it would be more informative to compare the magnitude of the premium in China with that in other emerging markets.

To this end, we first define a set of variables related to corporate valuation.

4.A. Valuation Measures

The following two measures are used for corporate valuation:

(1) Tobin's q, a measure widely used to measure the valuation of listed
    company. The detail of the variable-definition is in the attached appendix;
(2) Market/Book ratio, a ratio of market value to book value of total assets.

The summary statistics of the above two variables are given in Panel B of Table I. It is clear from the table that the Chinese publicly listed firms, on average, are highly valued by shareholders. The mean values of each of the two valuation variables, 3.62 and 4.05, are significantly higher than the international norm. This may be due to the fact that the Chinese stock market is in a booming stage in the year 2000 and/or it is in general the result of low flotation of shares in China (roughly about only a third for many SOEs). We consider the price discount issue due to lower floating by modifying the market value of firms' assets and find that it does not materially affect our results.[9]

4.B. Regression Results

Table II reports the regression results of the valuation measures, Tobin's q and Market/Book on the G index. In order to single out the importance of governance on valuations, we also control for the industry differences. In these regressions, we add industry dummies according to CSRC's classification (altogether 16 industries). Both regressions have shown a statistically significant (at 1% level) relationship between corporate governance and the market valuation. These results strongly suggest that better-governed companies in China are highly regarded by investors who are willing to pay a premium for high governance standard. It should be pointed out, however, that the regressions yield low R-square values and highly significant intercepts, implying that there are still many other important factors at work but missing from these regressions.

---

[9] As suggested by Chen and Xiong (2002), the illiquidity discount in China's iliquidable state-owned and legal-person shares is on the average of 70-80%. To address this concern, we adjust our measures of Tobin's q and market/book ratio by multiplying the illiquidable state and legal person shares by a discounted price at 70% and 80% respectively. The adjusted Tobin's q and market/book ratio, now with mean values between 1.82 and 2.05, seem to be more comparable with those in other major stock markets. The summary statistics and regression results are given in Tables VI-VIII.

More strictly speaking, a sound governance-valuation relationship does not automatically lend support to the plausible construction of the G index. That is, one has to run regressions to check if our theoretical prediction about the effect of the 8 variables on corporate governance is indeed reasonable. Table III reports regression results of corporate stock valuation variables on all 8 variables used in forming the ranking. Of course, running regressions with 8 regressors could encounter the possible problem of multi-collinearity. However, for illustrative purposes, we still conduct such regressions but interpret the results with special caution.

The first three regressions are done by regressing Tobin's q on all 8 variables used in our ranking analysis, with the size variable measured by logarithm of total sales as an additional control variable. We organize our independent variables according to the corporate governance mechanism discussed in the previous section. Eight interesting findings are in order.

First, if a company's CEO is also a top director (chairman or vice chairman) of the board, it will not be conducive for its valuation. This can be seen from our regression of the valuation of listed firms on one element of the effect of board composition, *ceo_is_top_dir*. Note that it is a dummy variable with value 1 if the CEO of the company is also a top director (chairman or vice chairman) of the board. As discussed before, we expect the impact of this variable on firm valuation is negative. The coefficient for this variable is indeed negative but not statistically significant.

Second, high ratios of outside directors in the board will enhance firms' market valuations. As expected, the *out_ratio* variable that measures the proportion of outside directors in the board has positive coefficient in the regressions with the significance level is at 10%.

Third, high shareholdings of top managers are not value enhancing in China. This finding arises from the regression coefficient of the variable, *top5*, which measures the shareholdings of the top five managers. Theoretically, *top5* is expected to have a positive impact on the valuation of the firms. Indeed, the coefficient of this variable is positive but statistically insignificant. The insignificant coefficient may

result from the fact that shareholdings by the top managers in China's listed companies are negligibly small.

Fourth, the shareholding of the largest shareholder affects negatively the corporate valuation measure but its effect is non-linear. To capture the potential nonlinear effect of shareholding concentration on corporate governance, we add one variable, *top1_sq*, the square of *top1,* in our regressions. It is shown that the coefficient for *top1_sq* is positive and statistically significant, indicating a U-shaped relation between corporate valuation (Tobin's q) and the concentration of its largest shareholder. This finding is consistent with other studies for China's listed companies (see Tian 2002).[10]

Fifth, it is value reducing for a listed firm to have a parent company. We introduce a dummy variable, *Parent*, to capture the idea that a parent company provides convenient vehicle for tunneling through the listed firms. The coefficient for this variable is negative and significant.

Sixth, the higher is the holding of other large shareholders, the higher the firm's market valuation will be. Note that one of the measures of ownership structure, *ctr2_10*, is a measure of concentration of the second to the tenth largest shareholder's holdings. As argued before, the concentration of large shareholders other than the controlling shareholder increases the monitoring of the management and facilitate more effective contest for corporate control.[11] It also helps reduce the possibility of tunneling by the controlling shareholder. As expected, the coefficient for the variable *cstr2_10* is consistently positive and statistically significant at the 1% level.

Seventh, cross listing helps firms adopt good governance rules and induces proper behavior of its insiders along governance-related dimensions, hence these firms have won the hearts of domestic investors. To capture the unique institutional characteristics of the Chinese stock market, we propose to use one dummy variable, *hbshare*, as an indication whether the listed company also issue shares open to foreign

---

[10] Tian (2002) finds that the overall impact of government shareholding on corporate value is negative, but it is non-monotonic. He interprets the observed U-shape relationship with his theory of two hands of the government shareholder - grabbing and helping.
[11] Also see Bai, Liu and Song (2002).

investors (B-shares) or listed overseas (H-shares). It is expected that the company will benefit from a broader base with oversea investors for B-shares and/or listing in a better-regulated market such as Hong Kong or New York. Indeed, the coefficient for this variable is positive and highly significant (at the 1% level).

Finally, state-controlled firms tend to be less efficient and subject to higher possibilities of tunneling. In our regressions, we add in onevariable, *so_top1*, a dummy variable that indicates whether the largest owner is the state or not. The coefficient for the variable is negative and also highly significant (at 1% level).

Overall, the regressions have relatively high explanatory power as R-squares between 0.30 and 0.33. The control variable of size has a negative and significant coefficient. The four regressions with Tobin's q as dependent variables are mostly consistent with the predictions of the corporate governance theories outlined in our theory section.

The second column of Table III reports the results for measures of market/book value. The results are generally consistent with those regressions with Tobin's q as a measure of the firm valuation. Notably, the R-square remains quite high.

4.C. Correlation Results Based on Ranking Groups

To shed more light into the positive governance-valuation relationship, in the following analysis, we divide all sample firms into quintiles according to our governance-ranking index (the G index). Group 1 indicates the lowest corporate governance ranking while Group 5 indicates the highest. In each group we calculate the mean, standard deviation and other summary statistics of each stock valuation measures in each group.

Panel A of Table IV reports the summary statistics for the variable of Tobin's q. It is quite striking that the average Tobin's q for the lowest ranked firms is 3.23 while the highest is 4.39, with the difference up to 36%. The difference between the best-governed firms and the average is still more than 28%. These differences lend us

to reach two useful conclusions. First, investors in China are willing to pay a significant premium to better-governed firms. This casts doubt on the popular view that the Chinese stock market is full of speculative investors who fail to value firms' fundamentals and their governance structure. Second, according to international standard, the premiums are substantially higher than those in other emerging markets in the world. It is generally true that the Chinese stock market is immature and displays some serious problems, but our result suggests that investors seem to have matured in a sense that they can still manage, to a certain degree, to distinguish the good firms from the poor ones.

Panel B of the Table IV shows that except for that between the group 1 and 2, 1 and 3, and 2 and 3, the differences of Tobin's q amongst other groups are all statistically significant. To gain visual appreciation, the corresponding figures 1 and 2 plot the mean values of Tobin's q and market/book ratio for these five groups of the firms. Both figures show a clearer upward trend, supporting the idea that better-governed firms are associated with higher market valuations of the companies.

5. Conclusion

The paper has studied an important issue of corporate governance for China's publicly listed companies. The main findings of the study can be summarized as the following:

(1) We identify several important corporate governance mechanisms stemming from the agency theory and the more recent theory of tunneling in corporate governance. The seven mechanisms are classified into internal and external dimensions. Among others, the ownership and the board structure, executive compensation, the market for corporate control, and the financial transparency are found to be the most important factors in influencing corporate governance.

(2) Based on our theory and understanding of China's capital market, we construct variables that represent each of the internal and external

governance mechanisms. We then rank our sample companies according to the logical impact of each variable. After assigning equal weights to the ranks of these variables, we obtain an index, called the G index, to reflect the overall level of governance practice for China's listed companies.

(3) We explore the possible links between corporate governance and corporate stock valuations. We find that better-governed companies are indeed associated significantly with higher stock market valuation as measured by Tobin's q and the ratio of market value and book value of the total asset. We conclude that corporate governance matters greatly in China's emerging market and Chinese investors are willing to pay a significant premium for better governance standard.

Our findings, albeit tentative, have valuable implications for both the security regulators and listed companies in China. It is known that many security regulators in the world, including both the developed and developing countries, have recognized the importance of corporate governance in enhancing firms' investment values. They have proposed various ways, known as the best practice codes, to improve a firm's overall governance standard and align the behavior of its insiders along governance-related dimensions. It is our belief that our construction of the G index together with the significantly positive governance-valuation relationship will shed more light into the compilation of the best practice codes in China. Our study identifies a set of governance mechanisms that have the most significant impact on firm's governance practices and stock market valuation. It provides guidelines for Chinese regulatory authorities to design the best practice codes tailored to the Chinese institutional background and current capital market development level. In addition, should firms strive for improving their market performance and maximizing shareholders' wealth, they would attempt to follow the general practices engaged by market leaders, make noticeable improvement in the areas that will have the largest impact on their relative corporate governance standing. There is a significant payoff for climbing up the governance ladder.

References:

Allen, Franklin and Douglas Gale, 2001, *Comparing financial systems,* Cambridge, Massachusetts: The MIT Press.

Bai, Chong-en, Qiao Liu, Frank Song, 2002, The Value of Corporate Control: Evidence from China's ST Companies, working paper, CCFR, University of Hong Kong.

Berle, Adolf and Gardiner Means, 1932, *The modern corporation and private property*, New York: Macmillan.

Bhagat, Sanjai and Bernard Black (1999), "The Uncertain Relationship Between Board Composition and Firm Performance, " *Business Lawyer* Vol. 54, pp. 921-963.

Bhagat, Sanjai, Dennis Carey, and Charles Elson (1999), "Director Ownership, Corporate Performance, and Management Turnover," *Business Lawyer* Vol.54.

Black, Bernard, 2001, Does Corporate Governance Matter? A Crude Test Using Russian Data, *University of Pennsylvania Law Review*, 149, 2131-2150.

Carleton, Willard, James Nelson, and Michaels Weisbach (1998), "The Influence of Institutions on Corporate Governance through Private Negotiations: Evidence from TIAA-CREF," *The Journal of Finance* Vol.53 No.4 pp 1335-1362

Chen, Zhiwu, and Xiong, Peng, 2002, The illiquidity discount in China, International Center for Financial Research, Yale Univeristy.

Claessens, Stijin, Simeon Djankov, and Larry Lang, 2000, The separation of ownership and control in East Asian corporations, *Journal of Financial Economics*, 58.

CLSA Emerging Markets, 2001, Saints and Sinners: Who's Got Religion?

Denis, Diane K., and John J. McConnell, 2002, International corporate governance, *Journal of Financial and Quantitative Analysis*, forthcoming

Durnev, Art & E. Han Kim (2002), "To Steal or Not to Steal: Firm Attributes, Legal Environment, and Valuation, Working Paper.

Gompers, Paul, Joy Ishii, and Andrew Metrick (2001), "Corporate Governance and Equity Prices," NBER Working Paper No. 8449.

Johnson, S., R. La Porta, F. Lopez-de-Silanes, and A. Shleifer, 2000, Tunneling, *American Economic Review Papers and Proceedings*, XC, 22-27.

Karpoff, Jonathan, Paul Malatesta, and Ralph Walkling (1996), "Corporate Governance and Shareholder Initiatives: Empirical Evidence," *Journal of Financial Economic*s, Vol. 42, pp. 365-395.

Klapper, Leora F. & Inessa Love (2002), "Corporate Governance, Investor Protection and Performance in Emerging Markets," World Bank Working Paper.

La Porta, Rafael, Flowrencio Lopez-de-Silanes, Andrei Shleifer, and Robert W. Vishny, 1997, Legal determinants of external finance, *Journal of Finance*, 52:1131-1150.

La Porta, Rafael, Flowrencio Lopez-de-Silanes, Andrei Shleifer, and Robert W. Vishny, 1998, Law and finance, *Journal of Political Economy,* 106, 1112-1155

La Porta, Rafael, Flowrencio Lopez-de-Silanes, and Andrei Shleifer, 1999, Corporate ownership around the world, *Journal of Finance*, 54:471-517.

La Porta, Rafael, Flowrencio Lopez-de-Silanes, Andrei Shleifer, and Robert W. Vishny, 2002, Investor protection and corporate valuation, *Journal of Finance,* 57, 1147-1170.

Liu, Qiao and Joe Lu, 2002, Earnings Management to Tunnel: Evidence from China's Listed Companies, working paper, CCFR, University of Hong Kong.

Millstein, Ira and Paul MacAvoy (1998), "Active Board of Directors and Performance of the Large Publicly Traded Corporation," *Columbia Law Revie*w, Vol. 98.

McKinsey & Company, *McKinsey Quarterly*, various issues in 1998-2002.

Shleifer, Andrei and Robert W. Vishny, 1997, A survey of corporate governance, *Journal of Finance*, 52:737-83.

Sundaramurthy, Chamu, James Mahoney, and Joseph Mahoney, "Board Structure, Anti-takeover Provisions, and Stockholder Wealth," *Strategic Management Journal* Vol.18:3.

Tian, Lihui, 2002, Government shareholding and the value of China's modern firms, working paper, London Business School.

Appendix: Variable Definition

(1) The CEO is the chairman or a vice chairman of the board of directors – *ceo_is_top_dir* dummy.

(2) The proportion of outsider directors – *out_ratio*– the ratio of the number of directors without pay with respect to the total number of directors.

(3) Shareholding by the top five officials of the firm – *top5*.

(4) Shareholding percentage of the largest shareholder – *top1*.

(5) The firm has a parent company – *parent* dummy, equals one if the firm has a parent company, zero otherwise

(6) Concentration of shareholding in the hands of the second to the tenth largest shareholders – *cstr2_10* = sum of squares of the percentage shareholding by the 2nd to the 10th largest shareholders, and then take logarithm.

(7) hbshare, dummy, equals one if the firm also issues foreign shares (B&H)

(8) so_top1, dummy, equals one if the controlling shareholder is also a state share owner.

(9) top1_sq, the square of top1.

(10) Tobin's q[12] is defined as

$$q = \frac{MVCS + BVPS + BVLTD + BVINV + BVCL - BVCA}{BVTA}$$

Where

> $MVCS$ = the market value of the firm's common stock shares;
>
> $BVPS$ = the book value of the firm's preferred stocks;
>
> $BVLTD$ = the book value of the firm's long-term debt;
>
> $BVINV$ = the book value of the firm's inventories;
>
> $BVCL$ = the book value of the firm's current liabilities;

---

[12] Following Chung, K. H. and S. W. Pruitt (1994) "A Simple Approximation of Tobin's *q*." *Financial Management* 23, 70 – 74.

BVCA = the book value of the firm's current assets; and

BVTA = the book value of the firm's total assets.

As there is no preferred stock in China, the above formula reduces to:

$$q = \frac{MVCS + BVLTD + BVINV + BVCL - BVCA}{BVTA}$$

(11) Price/Book ratio (MB, total market value of common equity/ book value of total asset, where market value is total equity multiplied by the year end closing price of traded A-shares).

(12) ln(sales): natural logarithm of main operation income, as a proxy of firm size.

(13) ln(total assets): natural logarithm of the book value of total assets.

Table I   Summary Statistics

This table presents the summary statistics for the governance and performance variables, which are defined in the appendix.

Panel A: Corporate Governance Variables

Variable	No. of Obs.	Mean	S.D.	Min	Median	Max
ceo_is_top_dir	1006	0.333	0.472	0	0	1
out_ratio	1006	0.485	0.274	0	0.545	1
top5	1006	0.021%	0.144%	0.000%	0.003%	3.673%
top1	1006	45.267	17.614	2.140	44.870	88.580
Parent	1006	0.787	0.409	0	1	1
cstr2_10	1006	3.207	2.794	-6.526	3.780	7.273
hbshare	1006	0.096	0.295	0	0	1
so_top1	1006	0.665	0.472	0	1	1

Panel B: Corporate Performance Variables

Variable	No. of Obs.	Mean	S.D.	Min	Median	Max
Tobin_q	1006	3.625	1.993	0.880	3.208	17.992
MB	1006	4.049	2.003	1.300	3.612	18.370

Table II   Regression Results of the Performance-Governance Relationship

The table reports slope coefficients, t-statistics (in parentheses), and adjusted-R^2s from regressions of Tobin's q and MB on the G index.

Dependent variable	Coeff. for rank	Intercept	Adj. R^2	No. of Obs
Tobin's q	1.493E-3*** (7.07)	2.873*** (23.40)	0.046	1006
MB	1.474E-3*** (6.94)	3.307*** (26.77)	0.045	1006

Note: *** indicates significance at 1% level.

Table III   Regression Results of Performance on Individual Governance Variables

The table reports slope coefficients, t-statistics (in parentheses), and adjusted-R^2s from regressions of Tobin's q and MB on individual variables in the G index.

Independent Variables	Tobin's q	MB
ceo_is_top_dir	-.073	-0.071
	(-.66)	(-.643)
out_ratio	.364*	0.333*
	(1.856)	(1.697)
top5	21.48728	25.675
	(.603)	(.721)
top1	-.033**	-0.031*
	(-2.054)	(-1.918)
top1_sq	6.779E-4***	6.621E-4***
	(3.906)	(3.816)
parent	-.270**	-0.248*
	(-1.935)	(-1.781)
cstr2_10	.200***	0.207***
	(7.467)	(7.734)
hbshare	.533***	0.482***
	(2.973)	(2.687)
so_top1	-.410***	-0.428***
	(-3.477)	(-3.631)
ln(sales)	-.859***	-0.870***
	(-19.069)	(-19.306)
Intercept	20.300***	20.861***
	(20.777)	(21.359)
No. of Obs.	1006	1006
Adj-R-square	0.335	0.342

Note: *, ** and *** indicate significance at 10%, 5% and 1% level, respectively.

Table IV   Summary Statistics of Tobin's q by Groups

This table presents the summary statistics of Tobin's q by five groups (grades) according to the G index. Grade one represents the lowest ranking in the G index, while grade five the highest ranking. This table also reports the result of a robustness test on the differentials of Tobin's between groups.

Panel A: Summary by Ranked Grade.

Grade	No. of Obs.	Mean	S.D.	Min	Median	Max
1	201	3.226	1.740	1.087	2.892	15.102
2	201	3.198	1.564	0.880	2.885	11.179
3	201	3.433	1.757	1.118	3.153	12.913
4	201	3.873	2.204	1.068	3.436	17.992
5	202	4.392	2.341	1.034	3.881	15.068
Total	1006	3.625	1.993	0.880	3.208	17.992

Panel B: A Robustness Test on the Differentials of Tobin's q between Groups.

This panel runs a T test: whether the mean of Tobin's q in grade=I is larger than that in grade=J (where I>J).

T Statistics	I=2	I=3	I=4	I=5
J=1	-0.175	1.185	3.265***	5.673***
J=2		1.419	3.544***	6.024***
J=3			2.213**	4.650**
J=4				2.290**

Note: *, ** and *** indicate significance at 10%, 5% and 1% level, respectively.

Table V   Summary Statistics of MB by Groups

This table presents the summary statistics of MB by five groups (grades) according to the G index. Grade one represents the lowest ranking in the G index, while grade five the highest ranking. This table also reports the result of a robustness test on the differentials of MB between groups.

Panel A: Summary by Ranked Grade.

Grade	No. of Obs.	Mean	S.D.	Min	Median	Max
1	201	3.654	1.749	1.466	3.351	15.304
2	201	3.626	1.600	1.300	3.291	11.224
3	201	3.860	1.769	1.551	3.622	13.314
4	201	4.295	2.229	1.577	3.856	18.370
5	202	4.805	2.323	1.375	4.279	15.406
Total	1006	4.049	2.003	1.300	3.612	18.370

Panel B: A Robustness Test on the Differentials of MB between Groups.

This panel runs a T test: whether the mean of MB in grade=I is larger than that in grade=J (where I>J).

T Statistics	I=2	I=3	I=4	I=5
J=1	-0.166	1.174	3.208***	5.618***
J=2		1.390	3.456***	5.933***
J=3			2.168**	4.593***
J=4				2.246**

Note: *, ** and *** indicate significance at 10%, 5% and 1% level, respectively.

Table VI. Summary Statistics of Tobin's q When Illiquid Shares Are Discounted

variable	N	mean	p50	sd	min	max
tq_70	1006	2.053	1.790	1.090	0.500	8.928
tq_80	1006	1.828	1.594	0.979	0.396	8.046

Note: tq_70 is the value of the Tobin's q when the market value is computed by taking a 70% discount on illiquid shares. tq_80 is similarly defined.

Table VII, Regression Results of the Performance-Governance Relationship When Illiquid Shares Are Discounted

The table reports slope coefficients, t-statistics (in parentheses), and adjusted-R^2s from regressions of tq_70 and tq_80 on the G index.

| Dependent variable	Coeff. for rank	Intercept	Adj. R^2	No. of Obs
tq_70	0.0011***	1.5090***	0.082	1006
	(9.525)	(22.899)		
tq_80	0.0010***	1.3141***	0.091	1006
	(10.074)	(22.311)		

Note: *** indicates significance at 1% level.

Table VIII   Regression Results of Performance on Individual Governance Variables When Illiquid Shares Are Discounted

The table reports slope coefficients, t-statistics (in parentheses), and adjusted-R^2s from regressions of tq_70 and tq_80 on individual variables in the G index.

Independent Variables	tq_70	tq_80
ceo_is_top_dir	-0.030	-0.023
	(-0.480)	(-0.421)
out_ratio	0.109	0.072
	(0.997)	(0.735)
top5	15.272	14.384
	(0.772)	(0.808)
top1	-0.027***	-0.026***
	(-3.021)	(-3.246)
top1_sq	0.0003***	0.0002***
	(2.952	(2.630)
parent	-0.093	-0.068
	(-1.207)	(-0.979)
cstr2_10	0.044***	0.022
	(2.944)	(1.603)
hbshare	0.455***	0.444***
	(4.565)	(4.942)
so_top1	-0.221***	-0.193***
	(-3.367)	(-3.279)
ln(sales)	-0.443***	-0.384***
	(-17.715)	(-17.027)
Intercept	11.430***	10.163***
	(21.072)	(20.798)
No. of Obs.	1004	1004
Adj-R-square	0.314	0.310

Note: *, ** and *** indicate significance at 10%, 5% and 1% level, respectively.

Figure 1, The Mean Values of *Tobin's q* for Each Grade
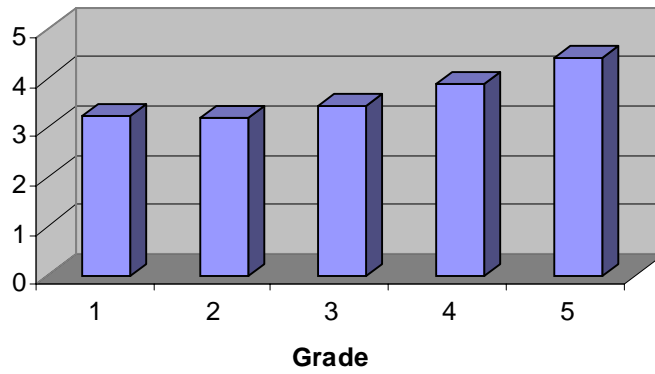
Figure 2, The Mean Values of *MB* for Each Grade