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Abstract

This study develops a model to assess the corporate governance practices of listed companies in Hong Kong. We find that corporate governance is an important factor in explaining the market value of companies listed in Hong Kong. Based on the Revised OECD Principles of Corporate Governance (OECD, 2004) and the Recommended Best Practices (HKEx, 1999), we construct a corporate governance index (*CGI*) for 168 listed companies. The evidence shows that the companies' market value (market-to-book ratio, *MTBV*) is positive and significantly associated with their *CGI*. The effect is robust to the inclusion of control variables such as performance indicators. Our results imply that companies with better corporate governance are associated with higher market value in Hong Kong. A significant and positive relationship is further found between the transparency index and market value. Our results also suggest that investors are more concerned with corporate governance practices of China-related companies than they are for Hong Kong companies. In summary, this study provides strong evidence that good corporate governance practices are associated with higher firm value in Hong Kong.

Keywords: Corporate governance, firm profitability, Hong Kong.

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1. Introduction

The financial crisis of 1997-1998 that swept through most of East Asia highlighted the need for corporate governance reform in the region. There have been numerous corporate governance reform initiatives including regional (PECC, 2001) and international (OECD, 2004) efforts. The question is whether good corporate governance practice matters in Asia. The empirical evidence on the relationship between corporate governance practice and firm performance is inconclusive and most prior research has focused on developed markets. This study attempts to address this question in one of the important Asian markets – Hong Kong.

Hong Kong is an international financial centre which combines an Asian family-controlled business environment, characterized by high family ownership of listed corporations, and an Anglo-Saxon legal and corporate governance system. The traditional agency problem is not applicable in Hong Kong because there is seldom a separation of management and ownership. It is common to find the chairman of the board is also the chief executive officer in Hong Kong listed companies. In addition, market discipline mechanisms such as hostile takeovers cannot function properly in Hong Kong because of the concentrated or family ownership. Thus, Hong Kong is a good testing ground to examine whether the Anglo-Saxon legal and corporate governance system works in a market in which the corporate sector is dominated by family ownership (or majority shareholders).

This study has three aims. The first aim is to examine whether investors are concerned with the good corporate governance practice of firms in Hong Kong. In other words, do good corporate governance practices pay? The second aim is to examine which are the determining factors for good corporate governance practices. This addresses the policy issue of which factors concern most investors. The final aim is to examine the corporate governance practice of China-related companies listed in Hong Kong.

The instrument for measuring corporate governance practice in this study is derived from the Revised OECD Principles of Corporate Governance (OECD, 2004) and the Code of Best Practices (HKEx, 1999). There are 86 questions (including sub-questions) that are classified into five categories: rights of shareholders; equitable treatment of (minority) shareholders; role of stakeholders; disclosure and transparency; and board responsibilities and composition.

The procedure for measuring corporate governance practice used in this study differs from that commonly found in previous work. Instead of awarding one mark for the presence and zero for the absence of an item of information in firms' annual reports and accounts, this study gives credit to the 'amount' of information for some criteria under study. We use 2002 data for a sample of 168 companies listed on the Hong Kong stock market. There was a wide disparity in the quality of corporate governance practices in the surveyed companies; overall scores range from 32 to 77 out of 100.

The empirical findings offer compelling evidence that good corporate governance practice matters in Hong Kong. A positive and significant relationship is found between the market-to-book ratio (*MTBV*) and the corporate governance index (*CGI*) even after the inclusion of such control variables as performance, risk factors, board characteristics, and ownership structure. The results are robust to the

number of criteria used in the index compilation and the choice of performance indicators. When we construct two sub-indices on transparency and non-transparency, a positive and significant relationship is also found between the transparency index and *MTBV*. We further divide the sample into two groups: China-related companies and local firms. The result shows that investors pay more attention to the corporate governance practice of China-related companies than they do that of local firms.

The remainder of this paper is organized as follows. Section 2 presents a literature review. Data and methodology are given in Section 3. Section 4 illustrates the results, and Section 5 concludes the paper.

2. Literature Review

Numerous studies that have focused on the relationships between corporate governance practice and firm performance have shown mixed results, indicating that good corporate governance practices may not necessarily lead to better firm performance. Most of this literature focuses on developed countries and on particular aspects of governance such as board composition, ownership structure, executive compensation, disclosure, etc. One body of literature has found that concentrated shareholder ownership can lead to more active monitoring, thereby leading to better corporate governance. This active monitoring effectively reduces the probability of management expropriating shareholders' wealth (Weiss and Nikitin, 1998; Hill and Snell, 1998). Bhagat et al. (2004), however, do not find supporting evidence regarding the positive association between ownership concentration and firm performance.

Morck et al. (1988) and McConnell and Servaes (1990) document a non-linear relation between insider ownership and firm value. They find that the alignment effects of inside ownership dominate the entrenchment effects over some ranges of managerial ownership. However, as inside ownership increases beyond some level, the entrenchment effects of inside ownership dominate and higher inside ownership is associated with lower firm value. In contrast, Himmelberg et al. (1999) suggest that managerial ownership and firm performance are determined by a common set of characteristics and question the causal relationship from ownership to firm performance implied by Morck et al. (1988). Filbeck and Preece (2003) find companies' share prices are associated with a statistically significant positive response to the announcement of '100 best companies to work for' by Fortune. The rating is done by workers based on several criteria including trust in management, pride in work, and camaraderie.

Another major topic in the corporate governance literature is board composition, especially the impact of independent non-executive directors (outsiders). Agency theory suggests that outsiders are important monitors of management and providers of relevant expertise that is central to the effective resolution of agency problems between managers and shareholders (Fama and Jensen, 1983; and Fama, 1980). For example, Young (2000) finds that appointment of additional non-executive directors by UK firms has helped to improve board structure. In contrast, concerns that outside directors lack the necessary time, expertise and incentives have generated doubts about their ability to make a meaningful contribution to shareholder wealth creation (Mace, 1986; and Patton and Baker, 1987). Rosenstein and Wyatt (1990) present evidence that, under certain conditions, the appointment of additional executive directors is associated with an increase in firm value. Lin et al. (2003), however, claim that the UK stock market does not react much to the announcement of appointment of outside directors. Weir et al. (2002) argue that the market for corporate control is effective in reducing agency costs and question the efficacy of

imposing internal governance mechanism on companies. This is, however, not the case in Asia because of the concentrated and family ownership.

In the US, evidence of the association between a firm's corporate governance attributes and its value is mixed. For example, Weisbach and Hermalin (1991) and Bhagat and Black (2002) investigate the effects of board composition on firm value and find no significant relationship. Neither activism of institutional investors (Carleton et al., 1998), nor ownership by outside block holders (Bhagat et al., 2004) is found to have an important effect on firm value. Klein (1998) finds no association between firms' committee structures and firm value.

The divergence of findings may be because different proxies are used for corporate governance. A detailed literature review can be found in Patterson (2000). The lack of significance mentioned above can also be caused by scholars only focusing on a particular component of corporate governance instead of a composite measure. Studies on the association between overall corporate governance practice and firm market value are limited. Related papers include Gompers et al. (2003), Gillan et al. (2003), Black (2001), Black et al. (2003), and Drobetzet al. (2003).

Bebchuk et al. (2005) construct an entrenchment index based on six provisions – staggered boards, limited to shareholders bylaw amendments, supermajority requirements for mergers, supermajority requirements for charter amendments, passion pills, and golden parachute arrangements. The four provisions measure the rights and participation of shareholders and the last two on the hostile takeover. These are selected from a total of 24 governance provisions developed by the Investor Responsibility Research Center (IRRC). They find that increases in the level of the entrenchment index are monotonically associated with economically significant reductions in firm valuations. Gompers et al. (2003) construct a governance index to proxy the level of shareholder rights. They find evidence that firms with stronger shareholder rights have higher firm value, higher profits and lower capital expenditure. However, they only consider takeover defense provisions and other provisions related to shareholder rights. The paper makes an important contribution to the literature on takeover defenses in the US but is of limited relevance to Asia markets, especially where hostile takeovers seldom happen because of concentrated ownership. Gillan et al. (2003) consider aspects of board composition, state law and charter provisions to construct the index. Their study examines endogenously what factors determine corporate governance mechanisms. But they do not study the relationship between their governance index and operating performance.

Compared with US market studies, recent research on emerging markets generates more affirmative results. Black et al. (2003) create a governance score using a survey conducted by the Korea Stock Exchange and find that firms with higher scores have higher market value. However, their survey relies on companies' responses that could generate selection bias in the results. For Russian firms, Black (2001) finds a positive relationship between corporate governance behavior and the market. However, his result is based on a small sample of 21 firms. Drobetz et al. (2003) follow the approach of Gompers et al. (2003), develop a governance index and link it to the performance of German firms. Similarly, this takeover defense study throws limited light on Asian markets.

Other related studies for emerging markets include Durnev and Kim (2003) and Klapper and Love (2003). Durnev and Kim (2003) use the Credit Lyonnaise Securities Asia (CLSA) governance index and the S&P disclosure score to measure corporate governance practices for a sample of 859 large firms in 27 countries. They identify three firm attributes that relate to corporate governance and also conclude that firms with higher scores are valued higher in the stock market. There is a limitation to the CLSA index because it includes analysts' subjective judgment, which may create bias in the data. Klapper and Love (2003) also use the CLSA governance index and find a positive correlation between market value and corporate governance for 374 firms in 14 countries. They document a positive relationship between governance and operating performance as well measured by return on assets.

Another body of the literature considers board responsibilities and composition as an important determinant of corporate governance. Fama and Jensen (1983) show that the board of directors is regarded as an elementary channel for shareholders to exercise control over senior managers. Various studies on board composition and responsibilities have been carried out. For example, Rosenstein and Wyatt (1990) claim that independent non-executive directors are perceived as a tool for monitoring management behavior. Black et al. (2003) point out that board composition predicts firm value in Korea.

3. Data and Methods

Our database consists of the 168 largest companies (see Appendix I) that are constituent stocks of four major indices in the Hong Kong Exchange and Clearing Limited (HKEx): HSI (Hang Seng Index), HSHKCI (Hang Seng Hong Kong Composite Index), HSCCI (Hang Seng China Affiliated Corporate Index), and HSCEI (Hang Seng China Enterprise Index).

The HSI has become the most widely-quoted indicator of the performance of the Hong Kong stock market. It currently has 33 constituent stocks, which cover about 70% of the market capitalization of all eligible stocks listed on the Main Board of the HKEx. Constituents of the HSHKCI are the largest Hong Kong companies beside the HSI constituent stocks.

The HSCCI and HSCEI constituent stocks are China-related companies; HSCCI accounts for red-chip companies and HSCEI for H-share companies.[1] Both H-share and red-chip companies are listed in Hong Kong. H-share companies are incorporated in mainland China while red-chip companies are incorporated in Hong Kong but are controlled (at least 35%) by state-owned (or provincial or municipal) organizations in China. Our overall sample represents almost 90% of the total capitalization and almost 80% of the Hong Kong market's turnover.

Based on Revised OECD Principles (OECD, 2004) and the Code of Best Practices (HKEx, 1999) we develop an instrument constructed by 86 questions (including sub-questions).[2] The questions are classified into the five OECD corporate governance principles: rights of shareholders; equitable treatment

[1] China-related firms account for 28% of the total number of listed companies in Hong Kong and more than 49% of the total market turnover in 2004.

[2] The questionnaire consists of 47 major questions. Some major questions contain several sub-questions. If we include sub-questions, we ask a total of 86 questions.

of (minority) shareholders; role of stakeholders; disclosure and transparency; and board responsibilities and composition. We develop the questions from the five corporate governance principles recommended by the OECD and modify them according to the Code of Best Practices (HKEx, 1999) to make the questionnaire more relevant to Hong Kong.

The full questionnaire is attached in Appendix II. We highlight some thoughts in the questionnaire design. For the rights of shareholders, we examine how shareholders can participate in the major company decisions. For example, can shareholders ask questions in annual general meetings and can they nominate or remove directors? We also examine the amount of information disclosed in the notice to shareholders. For the equitable treatment of shareholders, we examine whether the companies explicitly mention one-share, one-vote in their articles of association and facilitate proxy voting by minority shareholders. We also include questions on the disclosure on insider trading and related-party transactions. The third part of our survey is on the role of stakeholders in corporate governance. We examine company disclosure on employee benefits, welfare and long-term incentive schemes and environmental issues. The fourth part is on disclosure and transparency. We assess the amount of information (financial and non-financial) disclosed in the company's annual report and website. Do they disclose a transparent ownership structure? The last part is on the responsibilities of the board. We assess the quality of the audit committee report included in the annual report. Does the company set up a nomination and compensation subcommittee?

The corporate governance practices of listed companies are examined from the public shareholders' perspective, using publicly available information that they can obtain when making their investment decisions. Our data sources include annual reports, articles of association, memorandums of association, notices to call shareholders' meetings, annual general meeting minutes, company websites, analyst reports, and other sources.

Companies are rated for each of the 86 questions. Each question within a specific survey category carries a weight, as does each category: rights of shareholders (15%); equitable treatment of shareholders (20%); role of stakeholders (5%); disclosure and transparency (30%); and board responsibilities and composition (30%). Major questions under each category are equally weighted, and sub-questions under each major question are equally weighted as well. We combine question scores into a sub-index for each category and combine sub-indices into an overall score. Finally a total corporate governance rating is calculated for each company, and this ranges from zero to 100.

The first two categories primarily relate to investor protection, especially for minority shareholders, which is the essence of corporate governance in the Hong Kong market because of the prevalence of family ownership. Therefore, these two categories together are assigned a weight of 35%. Information disclosure and board responsibilities are commonly regarded as major topics in governance practice and are weighted equally at 30%. The role of stakeholder category has a limited number of questions and receives a lower weight of 5%.[3]

[3] There are debates on the weights assigned to these questions. The weighting scheme used in this study is based on the number of questions in each category. It is difficult to determine which questions are more important and should carry more weight. We repeat our analysis by assigning equal weights to the five categories; the results are similar to those reported in this paper.

Most questions (87%) have strictly binary answers (yes/no). For the remaining questions, we also have clear standards to identify good, fair or poor. For example, question E.12 asks "Among the board of directors, how many are independent non-executive directors?" If the percentage of independent non-executive directors is above 50%, then the company will be classified as "good". If the percentage is below 25%, the company will get "poor". The companies where the percentage of independent non-executive directors ranges between 25% and 50% are ranked "fair". In addition, each company is assessed by two different raters to ensure consistency. Final results are cross-checked by the project leaders.

Furthermore, we construct another index to access firms' disclosure performance by including all questions related to transparency. For example, Question A.4 evaluates the quality of annual general meeting notice; Question B.4 asks whether the company provides any rationale for related-party transactions affecting the corporation; Question E.3 assesses the quality of the audit committee report; and Question E.15 examines whether firms disclose how much they pay their independent non-executive directors. Therefore, we include all disclosure-related questions to construct a transparency index. We then combine the non-disclosure-related questions in a non-transparency index.

Other accounting information and firm performance data are obtained from Datastream and Bloomberg. We download monthly data for 2002 and use geometric averaging to calculate the annual data. All data are processed according to the firm's fiscal date.

4. Results

A. Descriptive Statistics

A major contribution of this study is to construct a corporate governance index for the largest 168 listed companies in Hong Kong. The index ranges from 32.86 to 76.34 on a scale from zero to 100 in ascending order of good corporate governance. The average score is 48.33. Panel A in Table 1 contains some descriptive statistics of the CGI and its five sub-indices. These results indicate that companies do best in Section B (equitable treatment of shareholders) and Section D (disclosure and transparency) on average, with mean scores of 82.78 and 74.88, respectively. Specifically, there are no incidents of non-compliance or insider trading by company directors or managers in the two years preceding the survey. Most companies also try to make proxy voting easy for their shareholders and send notice of annual general meetings to stockowners well before the meeting date. In terms of disclosure, all companies conduct an annual audit using qualified external auditors. Companies also offer the general public and investors many channels through which they can obtain company information such as their annual reports, company websites and analyst briefings.

Companies perform well in Section C (role of stakeholders) and Section E (board responsibilities and composition). These sections have mean scores of 69.54 and 60.70 respectively. Well-governed firms are aware of their responsibilities to their stakeholders. To this end, many Hong Kong firms recognize their employee obligations and provide long-term incentives for workers through share-option/share-ownership schemes. However, few companies mention their environmental activities. For board

responsibilities and composition, all firms issue a board-of-directors report. There have been no cases of non-compliance with the Hong Kong Exchange rules during the past two years. However, a significant number of companies do not include an audit committee report in their annual reports.

Firms perform relatively poorly in Section A (rights of shareholders): this section has a mean score of 42.96. Few companies make the minutes of their annual general meetings available to the public. Few companies provide a thorough breakdown of the compensation paid to each board member. Improvement is required in this section.

The results also show that the H-share companies have the lowest CGI scores (mean score = 44.54). The Hang Seng Index constituent stocks perform best (mean score = 52.26), as shown in Panel B of Table 1. The CGI scores grouped by industrial sector are summarized in Panel C of Table 1. Companies in the finance and utilities sectors have the highest average scores of 52.86 and 51.68, and companies in the property sector have the lowest average scores of 45.12.

Table 2 shows the descriptive statistics of companies included in our sample. The average firm size is HK$20,396 million; the return on assets is 4%; the current ratio is 2.05; and the debt-equity ratio is 1.39. On average, the top five shareholders control more than 50% of the shares of the company. Among these companies, 56 firms have the same person serving as both CEO and board chairman; 134 have an audit committee; 38 have a compensation committee; securities in 91 of them are traded in the US as ADRs; 36 are included in the Morgan Stanley Capital International Index (MSCI) index; and 58 are either H-shares or red chips.

B. Regression Results

This section examines the correlation coefficient between the *CGI* and the market value of Hong Kong companies. We use the market-to-book ratio as a proxy for a company's market value. Figure 1 shows the relationship between the *CGI* and market-to-book ratio of Hong Kong companies. We find a positive and statistically significant correlation between good corporate governance practice and the market-to-book ratio. This implies that companies with higher corporate governance scores are associated with higher market-to-book ratios or vice versa. Our results support the conclusion that good corporate governance is positively related to market value. One potential explanation for this finding is that investors are more likely to invest in companies with better information disclosure and more transparency since they can gain a better understanding of the companies' current operations and future prospects, which in turn could lead to higher market values.

The endogeneity problem is always a concern for studies dealing with the relationship between firm value and corporate governance attributes (Black, 2001). For example, a firm that practices good corporate governance is more likely to make a high profit; it can be the high profit that investors value rather than the corporate governance. To avoid misspecification of the equation used to explain how investors value corporate governance, we tackle this problem using two approaches. First, we include a comprehensive set of control variables to mitigate the omitted-variable bias and the possibility that our results are affected by endogeneity problem. Second, we include an instrumental variable to minimize the endogeneity problem.

Our control variables cover performance (asset size, return on asset); risk factors (debt-equity ratio, current ratio); board characteristics and shareholding structure (the numbers of independent non-executive directors and executive directors and the shareholdings of the top five shareholders); and some corporate governance variables (CEO duality, audit committee, compensation committee, H-shares or red chips, ADR stock, MSCI stock). The set of control variables is listed in Table 3 and the correlation coefficients of these variables are also shown in Table 4. The regression model is given by:

$$\begin{aligned} MTBV = {} & \alpha + \beta_1 CGI + \beta_2 ROA + \beta_3 Ln(TA) + \beta_4 Current + \beta_5 D/E + \beta_6 BOUT \\ & + \beta_7 BEXC + \beta_8 Top5 + \beta_9 DummyCEO\ \&\ Chairman + \beta_{10} DummyAudit \\ & + \beta_{11} DummyCompensation + \beta_{12} DummyADR + \beta_{13} DummyMSCI \\ & + \beta_{14} DummyHshares\ \&\ redchips + \varepsilon \end{aligned} \quad (1)$$

Table 5 displays regression results for *CGI* with control variables. We exclude the 19 financial institutions in the sample because of their capital structure. The results of the full sample are not reported here, but are similar to those of the non-financial institution sample reported in this study. The first column in Table 5 shows the result of regressing *MTBV* on *CGI*. The *CGI* slope coefficient is 0.0330 and is statistically significant at the 5% level. We progressively add control variables from regressions (2) to (5), and obtain a similar result: that *CGI* is positively and significantly associated with *MTBV*. The coefficient is 0.0337 and is significant at the 5% level after including all the control variables.

C. Results of Control Variables

From regressions (2) to (5) in Table 5, consistent results show that several control variables are important in explaining the variation in *MTBV*.

Return on Assets

It is reasonable to expect that investors evaluate listed companies based on their profitability. Therefore, the return on assets (*ROA*) is likely to be associated with *MTBV*. In this study, we use *ROA* as an indicator for firm profitability. We find ROA is positively and significantly related to *MTBV* in all four regression models (coefficient = 2.2866, t = 2.25 with all the control variables). This implies that investors value Hong Kong listed companies based on their profitability.

Firm Size

Black et al. (2003) claim that firm size can plausibly affect both a firm's market value and its governance practices. We follow the common practice of using the natural logarithm of total assets to control for firm size. Consistent with prior research (e.g., Lang and Stulz, 1994), the coefficient on ln (*TA*) is significantly negative (coefficient = -0.3583, t = -3.37 with all the control variables).

Risk Factors

Both capital structure and leverage can affect a firm's *MTBV* and *CGI*. We include the current ratio and debt/equity ratio as control variables. The coefficients are not significant.

Board Structure and Shareholding Structure

Both board structure and shareholding structure are important elements of corporate governance practice. This is particularly important in Hong Kong because most Hong Kong listed companies are dominated by a single person or a family group.[4] Companies with a high proportion of executive directors on the board may be an indicator for bad corporate governance practice and these firms may be undervalued by investors. Companies with a dispersed ownership could be an indicator of good corporate governance practice. However, the results become insignificant when all control variables are included.

Other Governance Practice Dummies

CEO duality, audit committee and compensation committee are considered to be the recommended best practice: however these are not mandatory in Hong Kong. Companies with these practices could send a good signal to investors. The result shows that the relationships between these corporate governance variables and the MTBV are not significant, indicating that these variables are not able to explain the variation in MTBV among Hong Kong companies.

Listing on Foreign Exchanges

Whether companies are also traded in the US market is included as one of the control variables. These dually-listed firms may need to comply with more stringent corporate governance rules, which could be valued by investors. The result does not support this view.

MSCI Stock Index

Another control variable is companies' inclusion in the MSCI, which is a principal international stock index. The index includes 36 major Hong Kong firms. The result shows a significantly positive relationship (coefficient = 1.4939, t =3.26 with all control variables) suggesting that inclusion in the MSCI index is important for investors.

China-related Firms

We also include a dummy variable to separate China-related firms (H-share or red-chip companies) from Hong Kong firms. Investors may have different criteria for these firms because their core business is in China or they are controlled by Chinese state-owned enterprises. The result is, however, not significant.

D. Robustness

To check the robustness of our findings, we perform some additional tests. The first section addresses whether the ranking of companies is dominated by any question(s). In other words, if we omit some question(s) in the questionnaire, will this omission change the findings substantially? The second question is the choice of performance indicator in the analysis. Could the positive relation between corporate

[4] In Hong Kong, most listed companies tend to be controlled by families. According to a survey of the ownership structure of 553 listed companies in the economy in 1995 and 1996 (Hong Kong Society of Accountants [HKSA] 1997), in 53% of cases either one shareholder or one family group of shareholders owns more than half of the entire issued capital. Control by a single shareholder or family group extends to more than 35% of issued capital in 77% of the companies, and more than 25% of issued capital in 88% of the companies.

governance practices and company performance be extended to other performance indicators? The third question is on the validity of the regression model. We propose using the instrumental variable approach and two-stage regression model to correct for the endogeneity problem.

Number of Questions

To ensure the result is not dominated by any specified question(s), we remove question(s) from the questionnaire randomly and rank the companies by the new CG index. If there is(are) no question(s) that play(s) a dominating role, then the new ranking will be similar to the old ranking. This experiment includes three steps. First, we compute a new CG index by randomly removing one question from the 86 questions and ranking the 168 companies. Second, the Spearman rank correlation coefficient between the new and the original rankings of companies is calculated. Third, we repeat the above procedure ten times. Furthermore, we extend our experiment by removing two, five and ten questions randomly. From Table 6, we can see that the new and original rankings are highly and significantly correlated. Most rank correlations are close to 0.9, even when we remove 10 questions. This provides evidence that the ranking of companies is not dominated by any question(s).

Operating Performance

The above analysis uses *MTBV* as a performance indicator for companies. This section will further examine the relationship between operating performance and corporate governance practices. The return on equity (*ROE*) is widely used in the market as a way of assessing firm profitability. We replace *MTBV* with *ROE* in the regression model and the result is reported in Table 7. The simple regression of *ROE* on *CGI* shows that *ROE* is positively related to *CGI* (coefficient = 0.0043, t = 2.48). This relation still holds when we add control variables progressively. These results are consistent with those obtained by Gompers et al. (2002), who find US firms with weaker corporate governance tend to have lower profits. Our study provides evidence that this is also true in Hong Kong and that companies with good corporate governance practices tend to have a higher profit.

H-share Dummy as Instrument Variable

An increasing number of mainland China-incorporated companies have listed in Hong Kong since 1993. At the end of 2004, there were 109 H-shares listed in the Hong Kong market, accounting for 10% of all listed companies and 28% of the total market turnover. Four of the largest 10 IPOs of 2004 were H-shares (HKEx, Market Statistics 2004).

The legal system in China differs from that of Hong Kong. Existing Chinese law imposes various restrictions on the use of foreign exchange in the PRC and its remittance out of China. To deal with these differences, certain additional requirements, modifications and exceptions to the Listing Rules are necessary in order for a Chinese issuer to obtain and to maintain a listing of its securities on the Hong Kong Stock Exchange (HKEx, Listing Rules, 1999). The content is presented in Chapter 19A of Exchange Listing Rules (Listing Rules, 1999).

H-share and non-H-share (Hong Kong) companies have different characteristics because they are registered under different legal systems. In our sample of 31 H-share companies, the state owns an average of 51.93% of the companies. For non H-share companies, families own 46.36%. Shleifer and Vishny (1997) claim that firms whose controlling shareholder is the state differ from firms whose controlling

shareholders are private institutions or families. For example, most of the executive directors and the managers of the H-shares firms are mainland Chinese who do not have the right to buy H-shares. Therefore, H-share companies do not have an employee share option program (ESOP) for employees from China in 2002. However, 81% of non-H-share companies have an ESOP for their employees. There is also a big difference in the treatment of top management between H-share and non-H-share companies. Only two of 31 H-share companies have an ESOP for top management who are Hong Kong residents, while 65% of non-H-share companies have long-term incentive schemes for top management.[5] The difference in corporate governance between H-shares and non-H-shares caused by the H-share regulatory framework is exogenous.

The H-share dummy (*Dummyh*) needs to satisfy two conditions in the regression model in order to be a valid instrumental variable. First, the covariance between *Dummyh* and the residual (ε) from regression model (1) should equal zero:

$$Cov\ (Dummyh,\ \varepsilon) = 0 \tag{2}$$

The second condition is that the covariance between the H-share dummy and *CGI* should not be zero:

$$Cov\ (Dummyh,\ CGI)\ \neq\ 0 \tag{3}$$

We calculate the correlation between *Dummyh* and ε and the correlation between *Dummyh* and *CGI*. Results given in Table 8 show that we do not have evidence to reject the null hypothesis of zero correlation between *Dummyh* and residual ε (coefficient = -0.0100, P-value = 0.9081). This infers that *Dummyh* and residual ε are not related. For the correlation between *Dummyh* and *CGI*, the null hypothesis is rejected (coefficient = -0.2593, P-value = 0.0007) implying that *Dummyh* and *CGI* are related. Therefore, the validity of *Dummyh* as the instrumental variable is confirmed.

Introducing *Dummyh* as the instrumental variable, the Durbin-Wu-Hausman test is used to check whether our model suffers from the endogeneity problem. The Dubin-Wu-Hausman test is a two-stage-least squares model. In the first stage, *CGI* is regressed on *Dummyh* and the set of control variables (except *Dummya*, because of the high and significant correlation between *Dummyh* and *Dummya*). In the second stage, we regress *MTBV* on *CGI* and the control variables and the residual term from the first stage regression. The residual from the first stage regression represents the variation in *CGI* that cannot be explained by *Dummyh* and the control variables. In the second stage regression, if the coefficient on the residual is significant, this implies that factors other than *CGI* and the control variables can explain a variation in *MTBV*. Therefore, a significant coefficient on the first-stage residual is evidence of endogeneity.

Table 9 shows the Dubin-Wu-Hausman test results. In the first stage regression, the coefficient on *Dummyh* (coefficient = -6.2718, t = -4.54) is significantly negative. This indicates that H-share companies perform significantly worse than the non-H-share companies in terms of corporate governance practices. In the second stage regression, the coefficient on the residual (ε) is negative but not significant and the

[5] As required by Listing Rules of Hong Kong Stock Exchange, normally, listed firms must have at least two executive directors who are residents in Hong Kong. Therefore, these Hong Kong executive directors of H-share companies are able to buy company shares legally.

coefficient on *CGI* is significantly positive (coefficient = 0.0636, t = 1.99). The results show that the original ordinary least squares model does not suffer from the endogeneity problem.

E. Regression Result for the Transparency Index

We further decompose the *CGI* into two components: the transparency index and non-transparency index. Table 10 presents the regression results using these two indices as independent variables. Control variables are progressively added from regression (1) to regression (4). Both the transparency index and the non-transparency index are found to be positive and significantly related to *MTBV* in models 1 and 2. The non-transparency index is not significant in models 3 and 4 with all control variables. The results are similar to those reported in the previous section: ROA has a positive effect on *MTBV*; large firms tend to be undervalued; and investors value the firm more if it is included in the MSCI index. The results show that a firm's transparency is important in explaining the variation of *MTBV* among Hong Kong companies.

F. Comparison between Mainland-related Firms and Local Firms

China-related companies (H-shares and red chips) have a lower average *CGI* score. An increasing number of China-related companies have been listed in Hong Kong since Hong Kong's return to China in 1997. On one hand, the high growth rate of the Chinese economy makes Chinese companies attractive to investors. On the other hand, their corporate governance practice is a matter of concern to investors.

We separate the sample into two sub-samples – China-related and Hong Kong companies – and rerun the regression (with control variables). The MSCI dummy is not included in the regression model because no China-related companies are included in the MSCI index. The results are presented in Table 11. The *CGI* score is not statistically significant for local companies. A positive and significant relationship between *CGI* and *MTBV* is found for China-related companies (coefficient = 0.0572, t = 2.40). This implies that investors value corporate governance more when firms are China-related. As well as considering overall corporate governance, we find that for China-related companies, firms with more executive directors on the board tend to be undervalued by investors (coefficient = -0.1327, t = -2.53). For Hong Kong companies, investors seem to have different criteria such as firm profitability (coefficient = 4.5531, t = 2.48), leverage ratio (coefficient = 0.1882, t = 3.75), and the existence of an audit committee (coefficient = 0.5584, t = 1.69).

5. Conclusion

This study constructs a corporate governance index *CGI* to measure the overall corporate governance performance of the 168 largest firms in Hong Kong. Based on the Revised OECD Principles of Corporate Governance (OECD, 2004) and the Recommended Best Practices (HKEx, 1999) we develop an instrument to assess firms' corporate governance practice. The instrument consists of five sub-sections, which include shareholders' rights, equitable treatment of shareholders, stakeholders' role, disclosure and transparency, and board responsibilities and composition. A significant and positive relationship is found between *CGI* and market-to-book ratio (*MTBV*) after taking into account a comprehensive set of

control variables. Results show that a worst-to-best change in *CGI*, from 32.86 to 76.34, implies a 147% increase in *MTBV*. The transparency-related performance is significant in explaining variations in firm value as well. After comparing the regression results between China-related firms and Hong Kong firms, we find that corporate governance practice matters more for China-related firms.

The consistency of the *CGI* is further tested by removing some question(s) randomly. The evidence shows that the difference between rankings (new and original) of companies is minimal. We also find a significant positive relationship between firm profitability (*ROE*) and corporate governance practice. The instrumental variable approach is also used to correct for the endogeneity problem. This study cannot draw any inference on the causal relationship between firm performance and its corporate governance because we do not have time series data on the corporate governance practices of Hong Kong companies. A possible and interesting future study would be to consider incremental increases in *CGI* and the change in market value of the firm.

The major contribution of this study is to construct a corporate governance measure for companies listed in Hong Kong. The result indicates that the market value of Hong Kong listed companies is directly related to their corporate governance indexes. This implies that Hong Kong companies with good corporate governance practices are associated with higher market values. This serves as an important incentive for corporate managers to improve their corporate governance practice. We also find that the average *CGI* of Hong Kong-based companies is higher than that of China-related companies. The result is reasonable because corporate governance reform in China is a recent phenomenon. More interestingly, investors seem to care more about corporate governance practice among China-related companies than they do for Hong Kong companies.

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Table 1. Descriptive Statistics presents the summary statistics of the CG Index

This table presents the descriptive statistics of the corporate governance index (CGI) for the 168 companies included in the sample in 2002. Panel A shows the descriptive statistics of the CGI and the five sub-indexes for the companies. Panel B shows the descriptive statistics of the CGI for the companies by listing categories. Panel C shows the descriptive statistics of the CGI for the companies by industries.

Panel A. Descriptive Statistics of CGI and Sub-indices

All the indices are ranged from 0 to 100

	Total CGI	Sub-index A	Sub-index B	Sub-index C	Sub-index D	Sub-index E
Mean	48.33	42.96	82.78	69.54	74.88	60.70
Minimum	32.86	27.79	63.33	41.67	64.01	41.67
Maximum	76.34	84.49	93.33	100.00	90.33	81.67
Standard Deviation	6.98	9.10	6.53	13.03	5.20	7.89
No. of Observations	168.00	168.00	168.00	168.00	168.00	168.00
Sub-index A	Rights of shareholders					
Sub-index B	Equitable treatment of shareholders					
Sub-index C	Role of stakeholders					
Sub-index D	Disclosure and transparency					
Sub-index E	Board responsibilities and composition					

Panel B. CGI by Listing Category

All the indices are range from 0 to 100

	Total CGI	HSI	HSHKCI	HSCCI	HSCEI
Mean	48.33	52.26	49.23	49.00	44.54
Minimum	32.86	35.52	35.52	40.56	32.86
Maximum	76.34	76.34	76.34	65.83	59.01
Standard Deviation	6.98	9.15	7.07	5.68	6.59
No. of Observations	168	33	110	27	31
HIS	Hang Seng Index				
HSHKCI	Hang Seng Hong Kong Composite Index				
HSCCI	Hang Seng China Affiliated Corporate Index				
HSCEI	Hang Seng China Enterprise Index				

Table 1. (Continued)

Panel C. CGI by Industry Sector

All the indices are range from 0 to 100

	Total CGI	Industrial	Properties	Finance	Utilities	Consolidated Enterprises	Hotel & Miscellaneous
Mean	48.33	46.39	45.12	52.68	51.68	49.66	49.32
Minimum	32.86	32.86	35.52	40.32	36.95	35.34	39.53
Maximum	76.34	61.05	56.87	71.96	76.34	65.83	60.65
Standard Deviation	6.98	5.41	5.97	7.54	13.86	5.89	10.64
No. of Observations	168.00	62.00	21.00	19.00	9.00	54.00	3.00

Table 2. Descriptive Statistics for Other Variables for Each Index Category

		All	HSI	HSHKCI	HSCCI	HSCEI
Market Value						
(in million HK$)	Mean	20,395.87	88,227.87	27,870.77	25,754.78	3,920.87
	Min.	575.32	11,767.79	575.32	890.12	810.59
	Max.	832,653.75	832,653.75	832,653.75	416,826.03	27,369.95
	S.D.	76,356.70	156,370.02	90,962.89	80,826.03	5,899.57
ROA						
(Return on Assets)	Mean	0.04	0.07	0.04	0.05	0.05
	Min.	(0.42)	(0.15)	(0.42)	(0.34)	0.00
	Max.	0.62	0.18	0.62	0.28	0.21
	S.D.	0.10	0.07	0.12	0.10	0.04
Ln(TA)						
(Total Assets)	Mean	16.18	17.88	16.16	16.04	16.63
	Min.	11.57	15.27	11.57	13.61	14.94
	Max.	22.50	22.50	22.50	19.41	20.00
	S.D.	1.66	1.58	1.85	1.26	1.19
Current ratio						
	Mean	2.05	1.61	2.11	1.89	2.03
	Min.	0.32	0.36	0.32	0.37	0.38
	Max.	12.44	3.43	8.02	4.97	12.44
	S.D.	1.68	0.95	1.47	1.06	2.39
D/E						
(Debt/Equity)	Mean	1.39	1.92	1.61	0.98	0.79
	Min.	0.06	0.15	0.06	0.11	0.07
	Max.	13.60	13.60	13.60	2.93	3.36
	S.D.	2.23	3.59	2.61	0.69	0.79

Table 2. (Continued)

		All	HSI	HSHKCI	HSCCI	HSCEI
BOUT						
(Outside Directors)	Mean	4.97	6.76	5.33	3.74	4.57
	Min.	2.00	2.00	2.00	2.00	2.00
	Max.	14.00	14.00	14.00	7.00	13.00
	S.D.	2.83	3.39	3.01	1.29	2.53
BEXC						
(Executive Directors)	Mean	5.95	7.06	5.54	7.67	6.30
	Min.	1.00	3.00	1.00	3.00	2.00
	Max.	15.00	15.00	15.00	14.00	10.00
	S.D.	2.87	3.41	2.92	3.20	2.09
Top5 (in%)						
(Top 5 shareholders')	Mean	0.53	46.79	49.58	55.15	65.63
	Min.	0.01	3.06	1.06	23.54	41.74
	Max.	0.99	77.72	98.20	75.69	98.97
	S.D.	0.19	19.22	19.15	13.63	16.01
No. of firms with the committee						
Dummy CEO & Chairman		56.00	13.00	43.00	8.00	8.00
Dummy Audit committee		134.00	30.00	99.00	24.00	17.00
Dummy Compensation		38.00	12.00	30.00	4.00	8.00
Dummy ADR		91.00	28.00	63.00	11.00	22.00
Dummy MSCI		36.00	22.00	36.00	–	–
Dummy H Share & Red Chips		58.00	6.00	6.00	27.00	31.00

Table 3. Variables Definitions

This table provides a brief description of the variables used in the paper. Accounting data and firm performance information are downloaded from DataStream and Bloomberg. For the firm performance variables, we take geometric average of monthly data based on company fiscal year. For accounting variables, we use the annual data.

Variables	Description
CGI	Corporate Governance Index constructed based on OECD principles.
TINDEX	Transparency Index constructed based on all disclosure related questions in the survey.
NONTINDEX	Non-transparency Index constructed based on non-disclosure related questions.
MTBV	Defined as market value of common stock/ book value of common stock. We drop 2 firms with negative book value of common stock.
ROA	Return on Asset
Ln(TA)	Natural Log of Total Asset
Current	Current Ratio
D/E	Debt to Equity Ratio
BOUT	Number of outsider directors in the board (Including independent non-executive directors, non-executive directors and honorable directors)
BEXC	Number of Executive Directors in the board
Top5	Percentage of total outstanding shares held by five largest shareholders
Dummy CEO & Chairman (Dummycc)	Whether CEO of the firm and Chairman of the board is the same person. 1 is yes, 0 is no.
Dummy Audit Committee (Dummya)	Whether the firm has Audit Committee. 1 is yes, 0 is no.
Dummy Compensation (Dummyc)	Whether the firm has Compensation Committee. 1 is yes, 0 is no.
Dummy H Share & Red Chips (Dummyhr)	Whether the firm belongs to H Share / Red Chips. 1 is yes, 0 is no.
Dummy ADR (Dummyadr)	Whether the firm is available for American Depository Receipts (ADRs) trading. 1 is yes, 0 is no.
Dummy H Share (Dummyh)	Whether the firm belongs to H Share. 1 is yes, 0 is no.
Dummy MSCI (Dummymsci)	Whether the firm is in Morgan Stanley Capital International Index. 1 is yes, 0 is no.

Table 4. Correlation Matrix of All Variables

This table provides correlation coefficients between dependent variables, independent variables and control variables. Statistically significant correlations (at 5% level or better) are shown in bold.

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	Total CGI	1.000															
2	MTBV	**0.190**	1.000														
3	Ln(TA)	**0.196**	**-0.282**	1.000													
4	ROA	0.084	**0.305**	-0.056	1.000												
5	Current	-0.062	0.131	**-0.386**	0.139	1.000											
6	BEXC	-0.151	**-0.248**	**0.258**	0.020	**-0.180**	1.000										
7	BOUT	**0.355**	0.043	**0.460**	0.027	-0.067	**-0.190**	1.000									
8	Top_5	-0.116	-0.093	0.097	0.005	-0.154	0.067	**-0.190**	1.000								
9	Dummya	**0.370**	0.040	0.025	-0.056	0.082	-0.004	0.147	-0.118	1.000							
10	Dummyc	**0.556**	0.135	**0.203**	0.138	-0.091	**-0.203**	**0.186**	-0.096	**0.272**	1.000						
11	Dummycc	-0.037	0.079	-0.048	0.016	-0.025	-0.130	-0.102	-0.016	-0.052	0.040	1.000					
12	Dummymsci	**0.227**	**0.169**	**0.392**	0.088	-0.088	-0.072	**0.402**	**-0.321**	0.010	0.134	0.062	1.000				
13	Dummyadr	0.107	-0.096	**0.436**	0.045	-0.130	0.025	**0.314**	0.002	-0.017	0.126	0.068	**0.247**	1.000			
14	Dummyhr	**-0.179**	-0.127	0.078	0.073	-0.043	**0.255**	**-0.205**	**0.291**	**-0.164**	-0.033	-0.089	**-0.379**	0.040	1.000		
15	D/E	0.085	**0.302**	**0.245**	-0.037	-0.025	-0.030	**0.212**	0.078	0.014	0.142	-0.150	0.066	-0.026	-0.049	1.000	
16	Dummyh	**-0.259**	0.093	-0.042	0.091	**0.569**	-0.075	**0.086**	**-0.075**	**-0.708**	0.087	-0.130	0.205	**-0.362**	0.084	-0.111	1.000

Table 5. OLS Results for CGI with Control Variables

This table shows the regression result using the book-to-market value (MTBV) as dependent variable. The MTBV is regressed with different groups of control variables. The t-statistics, based on White's Heteroskedasticity-Consistent Standard Errors & Covariance, are reported in parentheses. Two observations with negative MTBV are dropped from the sample.

	MTBV				
	(1)	(2)	(3)	(4)	(5)
CGI	0.0330**	0.0428**	0.0475***	0.0356**	0.0337**
	(1.98)	(2.51)	(2.86)	(2.47)	(1.98)
ROA		2.5282**	3.0430***	3.0431***	2.2866**
		(2.45)	(2.67)	(2.67)	(2.25)
Ln(TA)		-0.3081***	-0.2043**	-0.2209**	-0.3583***
		(-4.90)	(-2.56)	(-2.45)	(-3.37)
Current		-0.042	-0.0317	-0.0209	0.0098
		(-0.79)	(-0.71)	(-0.47)	(0.23)
D/E		-0.0441	-0.0190	0.0347	0.1423
		(-0.44)	(-0.18)	(0.32)	(1.22)
BOUT			-0.0249	-0.0070	-0.0193
			(-0.51)	(-0.13)	(-0.38)
BEXC			-0.1089***	-0.0941**	-0.0622
			(-2.97)	(-2.31)	(-1.39)
Top5			-0.0128***	-0.0126***	-0.0011
			(-2.85)	(-2.70)	(-0.17)
Dummy CEO & Chairman				0.1837	0.1738
				(0.80)	(0.85)
Dummy Audit committee				0.1353	0.2321
				(0.73)	(1.31)
Dummy Compensation				0.2794	0.3000
				(0.81)	(0.90)
Dummy ADR					-0.1421
					(-0.61)
Dummy MSCI					1.4939***
					(3.26)
Dummy H Share & Red Chips					0.3374
					(1.65)
Adjusted R-squared	0.0258	0.1867	0.2653	0.2589	0.3816
F-Stat	4.87**	6.60***	6.37***	4.78***	6.24***

* represents significance level at 10% (two-tailed test)
** represents significance level at 5% (two-tailed test)
*** represents significance level at 1% (two-tailed test)

Table 6. Spearman Ranking Correlation Coefficients

This table presents Spearman correlation coefficients between new and original ranking. We take out one, two, five or ten questions randomly from the questionnaire, and generate new ranking for companies. Spearman correlation between new and original ranking is calculated. We then repeat the procedure ten times. All of the correlation coefficients below are significant at the 1% level (P-value <0.0001).

	Trial 1	Trial 2	Trial 3	Trial 4	Trial 5	Trial 6	Trial 7	Trial 8	Trial 9	Trial 10
Remove One Question	0.9162	0.9129	0.9153	0.9127	0.9149	0.9143	0.9100	0.9148	0.9080	0.9152
Remove Two Questions	0.9080	0.9149	0.9094	0.9164	0.9128	0.9105	0.9099	0.9131	0.9113	0.9251
Remove five Questions	0.9015	0.9010	0.9014	0.9042	0.9061	0.9084	0.8979	0.9271	0.9145	0.9059
Remove Ten Questions	0.8956	0.8852	0.8929	0.8933	0.9101	0.8802	0.9287	0.9230	0.8914	0.8687

Table 7. OLS Results with ROE as Dependent Variable

This table shows the regression result using the return on equity (ROE) as the dependent variable. The ROE is regressed with different groups of control variables. The t-statistics, based on White's Heteroskedasticity-Consistent Standard Errors & Covariance, are reported in parentheses.

	ROE				
	(1)	(2)	(3)	(4)	(5)
CGI	0.0043**	0.0040*	0.0029*	0.0049**	0.0044*
	(2.48)	(1.83)	(1.87)	(2.45)	(1.92)
Ln(TA)		0.0058	0.0214*	0.0188*	0.0113
		(0.31)	(1.71)	(1.68)	(0.83)
Current		0.0074	0.0090	0.0092	0.0101
		(0.63)	(0.76)	(0.77)	(0.83)
D/E		-0.0851***	-0.0832***	-0.0870***	-0.0832***
		(-3.91)	(-3.65)	(-3.97)	(-3.74)
BOUT			-0.0057	-0.0060	-0.0081
			(-1.05)	(-1.14)	(-1.57)
BEXC			0.0008	0.0011	0.0035
			(0.15)	(0.19)	(0.51)
Top5			-0.0002	-0.0003	0.0004
			(-0.26)	(-0.30)	(0.36)
Dummy CEO & Chairman				-0.0159	-0.0192
				(-0.44)	(-0.50)
Dummy Audit committee				-0.0669*	-0.0606*
				(-1.84)	(-1.72)
Dummy Compensation				-0.0120	-0.0085
				(-0.33)	(-0.22)
Dummy ADR					0.0230
					(0.79)
Dummy MSCI					0.0601
					(1.23)
Dummy H Share & Red Chips					-0.0171
					(-0.34)
Adjusted R-squared	0.0208	0.2620	0.2751	0.2765	0.2686
F-Stat	4.48**	11.83***	7.45***	5.55***	4.12***

* represents significance level at 10% (two-tailed test)
** represents significance level at 5% (two-tailed test)
*** represents significance level at 1% (two-tailed test)

Table 8. Correlation Test of Instrumental Variable

This table shows that we do not have evidence to reject the null hypothesis of zero correlation between *Dummyh* and residual ε (coefficient = -0.0100, P-value = 0.9081), it is inferred that *Dummyh* and residual ε are not related. For the correlation between *Dummyh* and *CGI*, null hypothesis is rejected (coefficient = -0.2593, P-value = 0.0007), which implied that *Dummyh* and *CGI* is related.

	Residual ε	***CGI***
Dummyh	-0.0100	-0.2593
(P-value)	(0.9081)	(0.0007)

Table 9. Durbin-Wu-Hausman Test Results

This table shows the results of Durbin-Wu-Hausman test. The two-stage regression model is applied to correct for the endogeneity problem. The t-statistics, based on White's Heteroskedasticity-Consistent Standard Errors & Covariance, are reported in parentheses.

	CGI (1st Stage)	MTBV (2nd Stage)
CGI		0.0636**
		(1.99)
Dummy H-shares	-6.2718***	
	(-4.54)	
ROA	-2.5002	2.2580**
	(-0.69)	(2.18)
Ln(TA)	1.2846**	-0.3953***
	(1.99)	(-3.46)
Current	0.2128	0.0054
	(0.78)	(0.12)
D/E	0.0193	0.0899
	(0.25)	(0.81)
BOUT	0.4803	-0.0469
	(1.46)	(-0.89)
BEXC	-0.3981*	-0.0475
	(-1.76)	(-1.07)
Top5	0.0344	-0.0002
	(1.15)	(-0.04)
Dummy CEO & Chairman	-0.4331	0.1766
	(-0.44)	(0.87)
Dummy Compensation	8.2853***	0.0435
	(5.27)	(0.11)
Dummy ADR	-0.3999	-0.0461
	(-0.36)	(-0.20)
Dummy MSCI	-0.9342	1.4728***
	(-0.60)	(3.17)
Dummy H-Shares & Red Chips	-0.0877	0.3897
	(-0.08)	(1.52)
Residual of First Stage Regression		-0.0358
		(-0.97)
Adjusted R-squared	0.4574	0.3693
F-Stat	8.35***	6.02***

* represents significance level at 10% (two-tailed test)
** represents significance level at 5% (two-tailed test)
*** represents significance level at 1% (two-tailed test)

Table 10. OLS Results for Transparency Index with Control Variables

This table shows the regression result using the book-to-market value (MTBV) as the dependent variable. The CGI is divided into two sub-indexes: transparency and non-tranparency indexes. The MTBV is regressed with different groups of control variables. The t-statistics, based on White's Heteroskedasticity-Consistent Standard Errors & Covariance, are reported in parentheses.

	MTBV			
	(1)	(2)	(3)	(4)
TINDEX	0.0371**	0.0414**	0.0373**	0.0388***
	(2.32)	(2.45)	(2.56)	(2.80)
NONTINDEX	0.0179*	0.0202**	0.0136	0.0108
	(1.81)	(2.19)	(1.47)	(0.89)
ROA	2.3482**	2.8850***	2.8973***	2.1137**
	(2.30)	(2.63)	(2.63)	(2.15)
Ln(TA)	-0.3414***	-0.2419***	-0.2540**	-0.3850***
	(-4.85)	(-2.72)	(-2.60)	(-3.60)
Current	-0.0575	-0.0496	-0.0416	-0.0108
	(-1.05)	(-1.08)	(-0.92)	(-0.25)
D/E	-0.0589	-0.0319	0.0164	0.1205
	(-0.58)	(-0.29)	(0.15)	(1.08)
BOUT		-0.0277	-0.0106	-0.0267
		(-0.56)	(-0.19)	(-0.54)
BEXC		-0.1046***	-0.0902**	-0.0558
		(-2.87)	(-2.23)	(-1.27)
Top5		-0.0140***	-0.0138***	-0.0017
		(-3.10)	(-2.94)	(-0.27)
Dummy CEO & Chairman			0.2084	0.1935
			(0.91)	(0.95)
Dummy Audit committee			0.1642	0.2637
			(0.88)	(1.51)
Dummy Compensation			0.1997	0.2254
			(0.59)	(0.68)
Dummy ADR				-0.1382
				(-0.61)
Dummy MSCI				1.4847***
				(3.30)
Dummy H Share & Red Chips				0.2346
				(1.14)
Adjusted R-squared	0.1896	0.2734	0.2661	0.3943
F-Stat	5.76***	5.97***	4.60***	6.16***

* represents significance level at 10% (two-tailed test)
** represents significance level at 5% (two-tailed test)
*** represents significance level at 1% (two-tailed test)

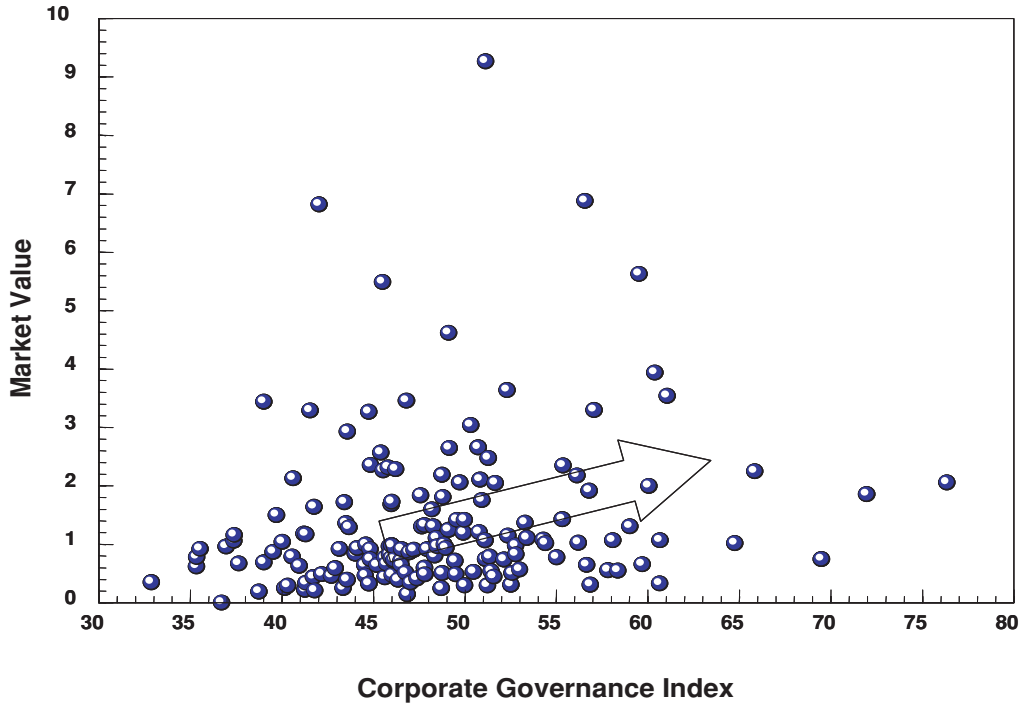
Table 11. Comparison of OLS Results between Mainland-related Firms and Local Firms

The overall sample is divided into two sub-samples: local and China-related companies. The MTBV is regressed with the control variables and CGI. The t-statistics, based on White's Heteroskedasticity-Consistent Standard Errors & Covariance, are reported in parentheses.

	MTBV	
	China-related Firms	**Local Firms**
CGI	0.0572**	0.0273
	(2.40)	(0.99)
ROA	1.1930	4.5531**
	(0.33)	(2.48)
Ln(TA)	-0.0318	0.0662
	(-0.45)	(0.53)
Current	0.0704	0.1208
	(1.36)	(1.25)
D/E	0.1192	0.1882***
	(1.12)	(3.75)
BOUT	-0.0309	-0.0601
	(-0.84)	(-0.55)
BEXC	-0.1327**	-0.1401
	(-2.53)	(-1.21)
Top5	-0.0051	-0.0111
	(-1.15)	(-1.31)
Dummy CEO & Chairman	0.1984	0.1391
	(0.88)	(0.3)
Dummy Audit committee	-0.0322	0.5584*
	(-0.18)	(1.69)
Dummy Compensation	0.0791	0.3003
	(0.33)	(0.48)
Dummy ADR	-0.1142	-0.5526
	(-0.60)	(-1.36)
Adjusted R-squared	0.3057	0.3015
F-Stat	2.60**	4.13***

* represents significance level at 10% (two-tailed test)
** represents significance level at 5% (two-tailed test)
*** represents significance level at 1% (two-tailed test)

Figure 1. The relationship between the market value and corporate governance index (CGI). The correlation is statistically significant at the 5% level.



Appendix I. List of Sample Firms

Allied Group (373)
Allied Ppt (HK) (56)
Angang Newsteel (347)
Anhui Conch (914)
Anhui Expressway (995)
Artel Group (931)
Asia Satellite (1135)
ASM Pacific (522)
Bank of E Asia (23)
Beijing Airport (694)
Beijing Ent (392)
Beijing N Star (588)
Beijing Yanhua (325)
BOC Hong Kong (2388)
Brilliance Chi (1114)
BYD Company (1211)
Cafe De Coral H (341)
Cathay Pac Air (293)
Chalco (2600)
Cheung Kong (1)
China Aerospace (31)
China East Air (670)
China EB Ltd (165)
China Insurance (966)
China Mer Hold (144)
China Mobile (941)
China Oilfield (2883)
China Overseas (688)
China Pharma (1093)
China Res Land (1109)
China Res Logic (1193)
China Resources (291)
China Ship Dev (1138)
China South Air (1055)
China Telecom (728)
China Travel HK (308)
China Unicom (762)
Chinese Est H (127)
CIFH (183)
Citic Pacific (267)
PetroChina (857)
Qingling Motors (1122)
CKI Holdings (1038)
CLP Holdings (2)
CNAC (1110)
CNOOC (883)
CNPC (Hong Kong) (135)
COFCO Intl (506)
COSCO Intl Hold (517)
COSCO Pacific (1199)
Culturecom Hold (343)
Dah Sing (440)
Datang Power (991)
Denway Motors (203)
Digital China (861)
Dream Int'l (1126)
E&E Int'l (33)
Eganagoldpfeil (48)
Esprit Holdings (330)
First Pacific (142)
Fong's Ind (641)
Forefront Int'l (885)
Founder Hold (418)
Fountain Set (420)
Giordano Int'l (709)
Glorious Sun (393)
Great Eagle H (41)
Guangdong Inv (270)
Guangnan (Hold) (1203)
Guangshen Rail (525)
Guangzhou Inv (123)
Guoco Group (53)
GZI Transport (1052)
HAECO (44)
Hang Lung Group (10)
Hang Lung Ppt (101)
Hang Seng Bank (11)
Henderson Inv (97)
Henderson Land (12)
HK & China Gas (3)
HK Chinese Ltd (655)
HK Electric (6)
Singamas Cont (716)
Sino Land (83)
HK&S Hotels (45)
HKEx (388)
HKR Int'l (480)
Hopewell Hold (54)
HSBC Holdings (5)
Huadian Power (1071)
Huaneng Power (902)
Hung Hing Print (450)
Hutch Harb Ring (715)
Hutchison (13)
Hysan Dev (14)
i-Cable Comm (1097)
ICBC (Asia) (349)
IDT Int'l (167)
Interchina Hold (202)
Intl Bk of Asia (636)
JCG Holdings (626)
Jiangsu Express (177)
Jiangxi Copper (358)
Johnson Elec H (179)
K M Bus Hold (62)
K. Wah Int'l (173)
Kerry Ppt (683)
Kingmaker (1170)
LCH Bank (1111)
Lenovo Group (992)
Lerado Group (1225)
Li & Fung (494)
Linmark Group (915)
Lippo China Res (156)
Maanshan Iron (323)
Moulin Int'l (389)
MTR Corporation (66)
New Asia Realty (49)
New World Dev (17)
Next Media (282)
Ngai Lik Ind (332)
Oriental Press (18)
Pac Centry Ins (65)
PCCW (8)
Truly Int'l (732)
Tsingtao Brew (168)

Appendix I. List of Sample Firms (Continued)

QPL Int'l (243)
RoadShow (888)
SaSa Int'l (178)
SCMP Group (583)
Shanghai Ind H (363)
Shanghai Pechem (338)
Shangri-la Asia (69)
Shenzhen Express (548)
Shenzhen Int'l (152)
Shenzhen Invest (604)
SHK Ppt (16)
Shui On Cons (983)
Shun Tak Hold (242)
Silver Grant (171)
Sino-I Tech (250)
Sinopec Corp (386)
Sinopec Kantons (934)
Smartone Tele (315)
SW Kingsway (188)
Swire Pacific A (19)
Swire Pacifice B (87)
TCC Int'l Hold (1136)
TCL Int'l Hold (1070)
Techtronic Ind (669)
Texwinca Hold (321)
Tianjin Dev (882)
TPV Techonology (903)
Travelsky Tech (696)
TVB (511)
Varitronix Intl (710)
Vitasoy Int'l (345)
Vtech Holdings (303)
Wharf Holdings (4)
Wheelock (20)
Wing Hang Bank (302)
Wing Lung Bank (96)
Wong's Int'l (99)
Yanzhou Coal (1171)
Yizheng Chem (1033)
Yue Yuen Ind (551)
Zhejiang Express (576)
Zhenhai Refin (1128)

Appendix II. Corporate Governance Questionnaire

Question Number	Survey Question
	Section A — Rights of Shareholders
A.1	Does the company offer other ownership rights beyond voting? (i) Dividend (ii) Share-repurchase
A.2	Is the decision on the remuneration of board members or executives approved by the shareholders annually?
A.3	How is the remuneration of the board presented?
A.4	Quality of Notice to call Shareholders Meeting in the past one year. (i) Appointment of directors, providing their names and background. (ii) Appointment of auditors, providing their names and fees. (iii) Dividend policy, providing the amount and explanation.
A.5	Did the Chairman of the Board attend the last AGM?
A.6	(i) Did the CEO/Managing Director attend the last AGM? (ii) Is a name list of board attendance available?
A.7	Do AGM minutes record that there was an opportunity for shareholders to ask questions/ raise issues in the past one year? (i) Is there a record of answers and questions? (ii) Is any resolution being solved?
A.8	Does the company have anti-takeover defenses? (i) Cross shareholding (ii) Pyramid holding (iii) Board members hold more than 25% of share outstanding
	Section B — Equitable Treatment of Shareholders
B.1	Does the company offer one-share, one-vote?
B.2	Is there any mechanism to allow minority shareholders to influence board composition?
B.3	Have there been any cases of insider trading involving company directors and management in the past two years?
B.4	Does the company provide rationales/explanations for related-party transactions affecting the corporation?
B.5	Is the company a part of an economic group where the parent/controlling shareholder also controls key suppliers, customers, and/or similar businesses?
B.6	Has there been any non-compliance case regarding related-party transactions in the past two years?
B.7	Does the company facilitate voting by proxy?
B.8	(i) Does the notice to shareholders specify the documents required to give proxy? (ii) Is there any requirement for a proxy appointment to be notarized?
B.9	How many days in advance does the company send out the notice of general shareholder meetings?

Appendix II. Corporate Governance Questionnaire (Continued)

Question Number	Survey Question
	Section C — The Role of Stakeholders in Corporate Governance
C.1	Does the company explicitly mention the safety and welfare of its employees?
C.2	Does the company explicitly mention the role of key stakeholders such as customers or the community at large (or creditors or suppliers)?
C.3	Does the company explicitly mention environmental issues in its public communications?
C.4	Does the company provide an ESOP (employee share option program), or other long-term employee incentive plan linked to shareholder value creation, to employees?
	Section D — Disclosure and Transparency
D.1	Does the company have a transparent ownership structure? (i) Breakdown of shareholdings. (ii) Is it easy to identify beneficial ownership? (iii) Is director shareholdings disclosed? (iv) Is management shareholding disclosed?
D.2	Does the company have a dispersed ownership structure?
D.3	Is the company's actual ownership structure obscured by cross-shareholdings?
D.4	Assess the quality of the annual report. In particular, the following: (i) Financial performance (ii) Business operations and competitive position (iii) Board member background (iv) Basis of the board remuneration (v) Operating risks
D.5	Is there any statement requesting the directors to report their transactions of company stock?
D.6	Does the company use an internationally recognized accounting standard?
D.7	(i) Does the company have an internal audit operation established as a separate unit in the company? (ii) To whom does the internal audit function report, please identify?
D.8	Does the company perform an annual audit using independent and reputable auditors?
D.9	Are there any accounting qualifications in the audited financial statements apart from the qualification on Uncertainty of Situation?
D.10	Does the company offer multiple channels of access to information? (i) Annual report (ii) Company website (iii) Analyst briefing (iv) Press conference/ press briefing
D.11	Is the financial report disclosed in a timely manner?

Appendix II. Corporate Governance Questionnaire (Continued)

Question Number	Survey Question
D.12	Does the company have a website, disclosing up-to-date information? (i) Business operation (ii) Financial statement (iii) Press release (iv) Shareholding structure (v) Organization structure (vi) Corporate group structure (vii) Annual report downloadable (viii) Provided in both Chinese and English
	Section E — Responsibilities of the Board
E1.1	Does the company have its own written corporate governance rules?
E1.2	Does the board of directors provide a code of ethics or statement of business conduct for all directors and employees?
E1.3	Does the company have a corporate vision/mission?
E.2	Does the regulatory agency have any evidence of the firm's non-compliance with rules and regulations over the last three years?
E.3	Assess the quality and content of the Audit Committee Report in the annual report. (i) Attendance (ii) Internal control (iii) Management control (iv) Proposed auditors (v) Financial report review (vi) Legal compliance (vii) Conclusion or opinion
E.4	Have board members participated in the Hong Kong Institute of Directors (or equivalent) training on corporate governance?
E.5	How many board meetings are held per year?
E.6	(i) Is the chairman an independent director? (ii) Is the chairman also the CEO?
E.7	Does the company have an option scheme which incentivizes top management? (i) Did the company have the option (and/ or other performance incentive) schemes in the past but still in effect? (ii) Does the company currently have option (and/or other performance incentive) schemes?
E.8	Does the board appoint independent committees with independent members to carry out various critical responsibilities such as: audit, compensation and director nomination? (i) Audit (ii) Compensation (iii) Director nomination committee

Appendix II. Corporate Governance Questionnaire (Continued)

Question Number	Survey Question
E.9	What is the size of the board?
E.10	How many board members are non-executive directors?
E.11	Does company state in its annual report the definition of 'independence'?
E.12	Among directors, how many are independent directors?
E.13	Does the company provide contact details for a specific investor relations person?
E.14	Does the company have a board of directors report?
E.15	Does the company disclose how much they paid the independent non-executive directors?
E.16	Does the company provide training to directors (including executive and nonexecutive directors)?