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CORPORATE GOVERNANCE AND FIRM PERFORMANCE : EVIDENCE FROM THAILAND

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Thesis Submitted in Partial Fulfillment of the Requirements

for the Degree of Master of Science in Finance Program in Finance

Department of Banking and Finance

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การศึกษาฉบับมีวัตถุประสงค์เพื่อทดสอบความสัมพันธ์ระหว่างบรรษัทภิบาลและผลการดำเนินงานของบริษัทจดทะเบียน ตามทฤษฎีความขัดแย้งทางผลประโยชน์ของตัวแทน กลุ่มตัวอย่าง คือ บริษัทจดทะเบียนในประเทศไทยที่จดทะเบียนตั้งแต่ปี พ.ศ. 2543-2550 ดัชนีชี้วัดระดับความมีบรรษัทภิบาลของบริษัทในการศึกษาครั้งนี้ ทำการสร้างจากข้อมูลที่มีการเปิดเผยสู่สาธารณชน โดยดัชนีสามารถแยกย่อยได้เป็นห้าดัชนีย่อย คือ โครงสร้างของคณะกรรมการ การขัดแย้งทางผลประโยชน์ บทบาทของคณะกรรมการ สิทธิของผู้ถือหุ้น และการเปิดเผยข้อมูลและความโปร่งใส ซึ่งครอบคลุมคุณสมบัติของบรรษัทภิบาลไว้อย่างครบถ้วน มาถ่วงน้ำหนักที่แตกต่างกันเพื่อนำมาสร้างดัชนีบรรษัทภิบาลอีกครั้ง ผลการศึกษาแสดงให้เห็นว่าบริษัทที่มีระดับบรรษัทภิบาลที่ดี จะมีผลการดำเนินงาน มูลค่าทางการตลาด รวมถึงการจ่ายเงินปันผลที่ดี อย่างไรก็ตามจากการศึกษาพบว่าระดับบรรษัทภิบาลไม่มีผลต่อกำไรส่วนเกินที่ผู้ลงทุนจะได้รับจากการซื้อหุ้นที่มีระดับบรรษัทภิบาลและขายหุ้นที่มีบรรษัทภิบาลที่แย่

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SIRIN CHOKCHAIUSAHA: COPORATE GOVERNANCE AND FIRM PERFORMANCE: EVIDENCE FROM THAILAND. THESIS ADVISOR: ASSOC. PROF. SUNTI TIRAPAT, Ph.D., 47pp.

The primary objective of this paper is to investigate the relationship between level of governance standard and firms' performance based on agency theory. Sample used in this study is listed firms in the Stock Exchange of Thailand (SET) during 2000-2007. Regarding corporate governance measurement, I apply corporate governance index (CGI), which is constructed base on publicly available data. The index can be sub-divided into five categories; board structure, conflict of interest, board responsibilities, shareholder rights, and disclosure and transparency, that cover all major aspects related to corporate governance in the case of Thailand. The evidences indicate that better governance practice is associated with higher ROA, Tobin's Q and dividend yield. However there is no evidence that investors earned abnormal return during the sample period by using the investment strategy that bought high-governed firms and shorted low-governed firms.

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CHAPTER I
INTRODUCTION

Background of the Study

Any discussion on corporate governance is considered base basically on a principal-agent theory. In agency models, a divergent in the interest of managers and shareholders make managers to expropriate a firm's assets by undertaking projects that benefit to themselves but impact the shareholders' wealth adversely. This management behavior cannot be precluded by signing the contract if shareholders still cannot observe the managerial behavior directly. It should be note that agency problem may have two effects on a firm's stock price; first it may lead to lower stock price since investors expect that cash flow will be diverted and second, a firm's cost of capital may be higher as it increases shareholders' monitoring and auditing cost.

Pushing for higher governance standard has become a regular campaign in recent year. For example, International Monetary Fund (IMF) requires that governance improvements should be included in its debt relief program. The OECD Principles of Corporate Governance, issued by the Organization of Economic Cooperation and Development (OECD) in 1998, aims to assist all countries to evaluate and improve the legal, institutional and regulatory framework for higher governance standard.

Many empirical studies, both in across country and across firm within a single country, have been concerning on the impact of governance as if it is one of the determination of the firms' performance, in the sense that firms with better corporate governance standard will have lower costs of capital and higher share values, for example, La Porta, Lopez-de-Silanes, Shleifer, and Vishny (1997, 1998, 1999, 2000) demonstrate that, across countries, corporate governance is an important factor in financial market development and firm valuation; Durnev and Kim (2002) cite that in developing country, larger effects of corporate governance improvement are likely to be found because of weaker rules and larger variations in corporate governance practices. They also document that better-governed firm are valued higher in the stock markets and the relation is stronger in less governance-developed countries.

Even most of the empirical evidences claim that higher level of governance standard resulting in better firms' performance, some of them still have a limitation and inconclusive since they concern mostly on one particular aspect of governance. For example, 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 et al., 1999), and ignore other potential indicators for higher governance standard. This may be problematic since the result of empirical studies diverge substantially and depend strongly on sample, sample periods, and the most import, proxies for governance standard[1].

Statement of Problem

Asymmetric information also exists in many developing markets because of an imperfect monitoring and hierarchy. Developing capital markets are often incompetent of acting as an effective monitoring and disciplining company managers. Consequently, managers tend to act response for their private benefits, invest in too risky activities and over extended borrowing. Base basically on this supposition, corporate governance is one significant factor in the financial crisis and the difference in level of governance should explain not just across-country differences in firms' performance but also across-firm differences within countries also.

Thailand is one of the interesting countries to investigate the level of corporate governance for several reasons; first, many studies document that Thailand still has a low level of governance standard as indicated by no channel for shareholders to monitor management behavior and concentration of ownership by individual or family (Alba, Stijn and Simeon, 1998). Second, it is claimed as the cause of financial crisis in 1997 (Tom Yum Kung Crisis), which lead to a big associated investors losses

[1] See Carleton, W. T.; J. M. Nelson.; and M. S., Weisbach (1998). The Influence of Institutions on Corporate Governance through Private Negotiations: Evidence from TIAA-CREF. Journal of Finance 53: 1335-1362

Klein, A. (2002). Audit Committee, Board of Director Characteristics, and Earnings Management. Journal of Accounting and Economics 33: 375–400.

Morck, R.; A. Shleifer; and R. W., Vishny (1988). Management Ownership and Market Valuation: An Empirical Analysis. Journal of Finance Economics 20: 293-315.

Bhagat, S., and B. S., Black (1999). The Uncertain Relationship between Board Composition and Firm Performance. Business Lawyer 54: 921-963.

and last, it is also important since it would shade the light on how to improve capital market straight in Thailand.

Objective of the Study

The primary objective in this study is to investigate and provide evidence for a possible relationship between corporate governance and firm performance and investors return by using Thai listed firm during 2000-2007 as the sample.

Contribution

While the existing studies of corporate governance in Thailand concern mostly on one particular aspect of governance mechanism (this is absolutely inappropriate since corporate governance consists of various components and those components must be combined together to capture the actual firm's governance) such as ownership concentration (Wiwattanakantang, 2001), board of directors structure (Peng, Au and Wang, 2001), structure of ownership and control (Dhnadirek and Tang, 2003) and stakeholders' structure interaction frame work (White, 2004), I follow the way to constructs Corporate Governance Index (CGI) which is originally created by Anachotikul (2006) to measure the level of governance. The index can capture all majors' aspects of governance standard which are board structure, board responsibility, conflict of interest, shareholders' right, and disclosure and transparency. The study is also expanded to eight year. This would provide more thorough and updated picture of Thai firms' corporate governance. My results not only address the general question of whether improved governance can pay off in greater firm value, they are important for the debate within Thailand on the need of corporate governance reform.

Methodology and Result in Brief

Firstly I analyze the correlation between the levels of firms' corporate governance and performance. Tobin's Q is used to capture for market performance and Return on Assets (ROA) is used to capture for operating performance. Tobin' Q is regressed directly on CGI and other control variables while ROA is regressed directly on the past level of governance standard and other control variables to better serve the clear picture of the direction of its correlation.

Secondly, I analyze the impact of governance standard on investor's abnormal return. Four portfolios are constructed and rebalanced every beginning of the year base on CGI score. Fama-French model (1993) is applied to capture the abnormal return for each portfolio.

Lastly, I analyze the association between governance standard and another measurement of invertors' return, dividend yield, by regress dividend yield directly on CGI and other control variables.

The evidence support the agency theory since it states that firms with better governance standard have higher dividend yield and higher firms' performance, which can be measure by both market and accounting valuation. Moreover; investors' can receive higher abnormal return when they invest in better-governed firms also. This result is robust to the use of extensive set of control variables and choice of specification of sample periods.

Organization of the Study

This paper is organized as follow: Chapter II review of literature, Chapter III describes the data and methodology used in this study, Chapter IV the regression analysis and Chapter V conclusion.

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CHAPTER II
REVIEW OF THE LITERATURE

Most empirical studies analyze the impact of different corporate governance practices in a cross-section of developed and emerging market countries and claim that it is one of the important factors for capital market development, for example, La Porta, Lopez-de-Silanes, and Shleifer (1999) find that higher legal environment, as described by legal rule and enforcement, lead to larger securities markets relative to Gross Domestic Product (GDP), frequency of initial public offerings, less concentrated share ownership, and a higher value for minority shares increase substantially overtime. Similar to Dyck and Zingales (2001) and Nenova (2003), they study the relation between private benefits and controlling blocks vote and state that the level of controlling blocks vote varies across countries, higher private benefits of control are associated with less developed capital markets, more concentrated ownership, and more privately negotiated privatizations. The developing country may offer more ground for study. As cited by Durnev and Kim (2002) that larger effects of corporate governance improvement are likely to be found in developing countries, because these countries often have weaker rules and larger variations in corporate governance practices. Firms with higher governance and better transparency are valued higher in the stock markets and the relation is stronger in less governance-developed countries.

Evidence from Developed Countries

In developed countries, higher level of stock market development can be predicted by strong protection of minority shareholder as measure by a large premium on high voting share (Modigliani and Perotti, 2000), high creditors' priority to receive the full present value of their claims on corporations, effective enforce contracts and higher accounting standard (Levine, 1999). The relationship between corporate governance and firm valuation is also studied by focusing on a particular aspect of governance. Millstein and MacAvoy (1998) state a positive association between a professional board, a board that is active and independent of management, and returns to investors, as measure by economic profit. There are also the positive correlation

between firm performance and compensation to outside directors (Bhagat, Carey and Elson, 1999). Gompers, Ishii, and Metrick (2003) report for a broad sample of US firms that firms with stronger shareholder rights receive higher valuations and have higher profits, higher sales growth, and lower capital expenditures. Lombardo and Pagano (1999) suggest that the expected rate of return should compensate for expected monitoring, auditing, and other private costs associated with different corporate governance systems. In their model stronger protection of minority shareholders' property rights reduces the expected return on equity to the extent that it reduces the shareholders' monitoring and auditing costs.

Even a lot of evidences indicate the positive correlation between level of corporate governance and various measures of capital market strength in developed countries, many evidences state the opposite way. Klein (2002) tests the correlation between the levels of governance practice, as measure by firm's audit committee and board characteristics, and earning management, the evidence shows a negative relation. Similarly, Carleton et al. (1998) study the process of private negotiations between financial institutions (TIAA-CREF) and the companies that they try to influence; most of the cases are successful without shareholders voting on the proposal. Using the independent boards as a governance standard measurement, Morck, Shleifer and Vishny (1988), Bhagat and Black (1999) and Gillan, Hartzell and Starks (2006) find no its significant relationship with the firm value. Core, Guay and Rusticus (2005) document that in the current decade share returns of companies with strong shareholder rights do not outperform those with weak shareholder rights. Moreover Bhajat and Bolton (2008) cite that none of the governance measures are correlated with future stock market performance. There is also a significantly negative relation between the GIM index and next year's Tobin's Q. After taking into account the endogenous nature of the relation between governance and performance, a statistically insignificant positive relationship can be found. The result is also inconclusive in Germany, since for both listed and non-listed firms, ownership concentration affects profitability significantly negatively on the other hand bank ownership improves performance (Lehmann and Weigand, 2000)

Evidence from Developing Countries

In emerging market, a positive association between corporate governance and operating performance is also stated. Moreover, firm-level corporate governance

provisions are mattered more in countries with weak legal environments (Klapper and Love, 2004). Black, Jang, and Kim (2006) find that corporate governance is important for explaining the market value of a complete set of Korean public companies. Their results also shed some light on endogeneity testing. They show that even a moderate increases in the quality of firm-specific corporate governance causes substantial increases in Tobin's Q and the market-to-book ratio.

It is still difficult to generalize the result in the emerging markets since previous studies have many limitations. Durnev and Kim (2002) use CLSA corporate governance index and the S&P disclosure score to measure the corporate governance practice for 859 large firms in 27 developing countries. However using CLSA and S&P index may bring the biasness to the result since CLSA base mainly on subjective judgment and S&P index is used only disclosure index to explain market value. Due to that some aspects of corporate governance are possibly correlated to disclosure practice, the estimated coefficient of disclosure index is biased. Black (2001) finds that overall corporate governance behavior does affect market value of Russian firms; however, the result has many restrictions due to small samples size of 21 firms. Millton (2002) shows significantly positive association between stock price performance and disclosure quality (ADRs and auditors from BigSix accounting firms), with firms that had higher outside ownership concentration, and with firms that were focused rather than diversified. However, the result may not be reliable since the association result represents only during the crisis period and he study is an out-of-equilibrium response to an economic shock.

Evidence from Thailand

A lot of studies of corporate governance in Thailand have been done base on listed firms in the Stocks Exchange of Thailand especially after Asia financial crisis period in 1997. Wiwattanakantang (2001) find that about 80% of Thai firms traded on Stock Exchange of Thailand are family-owned. Peng et al. (2001) compare whether individual board of directors in multinational enterprises performance differ from those of non-multinational enterprise and using the interlocking directorates as the explanatory description for corporate governance, they find that multinational enterprises in Thailand have more densely connected interlocks, occupy more central locations in the interlocks network, have more ethic Chinese directors and appoint more military. White (2004) uses the stakeholder structure interaction frame work as

the analytic tool to structure the analysis of the outcomes of corporate governance reform in Thailand in post-crisis. He finds that there is no change in the system of corporate governance dominant in Thailand.

Some papers consider the concentration of the board of director as the indicator for bad governance and link it with other characteristics of the firm such as firm valuation or the form of investment from aboard. Wiwattanakantang (2001) investigates the effects of controlling shareholders on firms' performance measured by return on assets and sale on asset ratio in non-financial sector. She finds that family-controlled firms, foreign controlled and firms with more than one controlling shareholders display higher performance as compare to the firm with no controlling shareholders. Focusing on the financial industry, Dhnadirek and Tang (2003) find that Thai system lacks diversity in governance mechanisms; managerial ownership beyond a certain level, debt pressure and bank ownership have a significant negative effect on firm valuation. Ananchotikul (2006) developed a comprehensive question to measure the quality of corporate governance for Thai listed firms to see the linkage between corporate governance and foreign direct investment. She finds that form of foreign investment matters.

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CHAPTER III
DATA AND METHODOLOGY

Sample and Data

This study uses firm-level data of all listed firms on the Stock Exchange of Thailand (SET) during 2000-2007. According to the SET, all firms can be divided into 9 main industries: Agro&Foods Industry, Consumer Products, Financials, Industrial, Property&Construction, Resources, Services, Technology, and Investment (Medium-Sized Enterprises (MAI)). Non-Performing Group—which is the group that did not follow Securities and Exchange Commissions (SEC) regulation and as a consequence this group were halted for trading transactions—are excluded from the sample. I use only 256 firms that exist during 2000-2007 as the sample. Firms that were listed but later became unlisted during the sample period are dropped from my sample. All financial data are collected from DataStream. To construct CGI, I collect only the publicly available data, which is from the mandatory Annual Disclosure Report (From 56-1), annual report from the SEC, corporate websites, the web-based SET Market and Analysis and Reporting Tool (SETSMART), and the SET's Director Database.

Research Hypotheses

There are three main hypotheses in my study:

Hypothesis 1: Firms with higher governance standard as measured by CGI have better performance.

Since the manager has an incentive to expropriate a firm's assets by undertaking projects that benefit themselves but impact the shareholders' wealth adversely. Effective corporate governance reduces the probability of management's expropriation and increases the probability that the manager will invest in the best interest of the shareholder. This suggests that better-governed firms should have better operating performance and a market premium should exist for relatively well-governed firms.

Hypothesis 2: Investors can make positive abnormal returns by holding stocks with good corporate governance in their portfolio.

The basic principle for the relation between corporate governance and stocks return is that if corporate governance matters for the firms' performance, stock prices should adjust for any changes in the governance practice on a particular firm. In the case that the market cannot immediately adjust, which is normally assumed for an underdeveloped stock market, stock returns should differ systematically.

Hypothesis 3: Firms with better governance standard pay investors with higher dividend.

The higher the dividends are, the lower the free cash flow on managers' hands to spend on projects that are not in the best interest of the shareholder, the grater the need to go to the capital market for new outside funds and the greater the effectiveness of monitoring.

Methodology

Corporate Governance Index Construction

I follow the methodology used by Ananchotikul (2006) to construct quantitative measures of corporate governance, a Corporate Governance Index (CGI). The reasons are as follows; first, the index is positively correlated to alternative measures of corporate governance such as the board of director independence and the number of board meetings. Second, it reduces the survey bias since it uses only publicly available information of each company. Third, it incorporates all crucial elements of standard governance principles, applicable to Thailand. The index runs from 0 to 100, the higher value indicating better corporate governance. All questions are classified into five governance components: 1) Board Structure 2) Conflict of Interest 3) Board Responsibilities 4) Shareholder Rights, and 5) Disclosure and Transparency. The information for each company is collected from various sources including the mandatory Annual Disclosure Report (Form 56-1), company annual reports, corporate websites, the web-based SET Market Analysis and Reporting Tool (SETSMART), and the SET's Director Database, and Securities and Exchange Commission (SEC)'s database. Scores are given to each governance item differently and are grouped into five categories to create sub indexes. The CGI is then computed as a composite index by taking a weighted average of the sub indexes.

There are 62 questions used to measure the level of corporate governance practice for an individual firm. The scoring and weighting are as follows; an indicator variable takes value of 1 whenever the answer is associated with best practice and 0 otherwise for the qualitative question. For quantitative questions, the answers are translated into continuous values from 0-1. Each category carries a weight as follow; board structure 20%; conflict of interest 25%; board responsibility 20%; shareholder rights 10%; and disclosure and transparency 25%. (See Appendix A for the questions and weighting scheme used to calculate CGI)

Table 1 shows the rating of governance proxies by CGI and five categories. The static for 2000 CGI is divided into 2 columns, in column (1); CGI score is calculated by excluding 15 questions as the original paper done then the maximum score for each category is differ from the other year. In column (2); I included those 15 questions in the calculation to make the scoring comparable over the sample period. As the statistic shown in Panel A, listed firms have improved their governance practice over the sample period. The mean of CGI has been increased from 28.97 in 2000 to 59.06 in 2007. The maximum level of CGI has been increased from 39.05 in 2000 to 92.01 in 2007 and minimum score has been increased from 18.98 in 2000 to 20.35 in 2007. Referring to the mean for each sub-category, governance proxies related to the firm's disclosure and transparency receives have the highest rating, while those are related to conflict of interest and shareholder's right receives the lowest rating.

Panel B and panel C report the descriptive statistic for CGI divided by size and industry respectively. The table states that corporate governance quality improves with company size. This is not surprising given that larger companies have more resources to devote to improving their governance. They also may have more incentive to do so than smaller firms since they have a greater need to access external capital. CGI also vary significantly across industry. Resource industry has highest average CGI score with 56.63 points and Agro&Food industry has lowest CGI score with 46.93 points.

Corporate Governance and Firms' Performance

To explore whether the variation in firm-level corporate governance is associated with differences in firms performance, I employ two measurement of firm

performance, first, Tobin's Q to capture the market performance, and second, return on assets to capture the accounting/operating performance.

Tobin's Q[2] is specified as

$$Q = \frac{MVCS + BVPS + BVLTD + BVINV + BVCL - BVCA}{BVTA} \quad (1)$$

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;

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

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

All values are taken at the end of year in the sample period. The higher the Tobin's Q, the higher is the firm value.

One way to mitigate the potential bias is to add appropriate control variables. To test whether the relationship between our governance rating and firm valuation could be caused by some omitted variables, I control for:

Firm size, I use logarithm of book asset value, at the end of year, denoted as **LN(ASSETS)**. As cited by Black, Jang and Kim (2003), the firm size can plausibly affect both Tobin's q and governance practice.

Profitability, defines as return on asset (**ROA**), which is possible that the investor value the listed companies base on their profitability. I calculate ROA as ratio of earnings before interest and tax to total assets to avoid the effect of firm's choice of capital structure.

Firm age is calculated by using the logarithm of the number of years listed on the Stock Exchange of Thailand, labeled as **LN(AGE)**.

Financing decision, debt-capital ratio (**D/A**), is defined as the ratio of total debt to capital, where capital is total debt plus equity.

Growth prospect, labeled as **GROWTH**, is proxied by the percentage of annual change in sales/revenues.

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

Ease of trading, defined as turnover by volume (**TURN**) equal to total share trade divided by total share held by public shareholders. The market value of common stock may be higher for the firms with more easily to trade shares.

The panel data can be estimated both by using a simply pooled regression and panel regression. Since using pooled regression may distort the true picture of the relationship between market valuation and CGI across the listed firms, to test the relation between firm's value and corporate governance in each year, I employ the panel regression (2000-2007) in an attempt to reduce omitted variable bias. The panel data model can be specified as:

$$Q_{i,t} = \beta_0 + \beta_1 CGI_{i,t} + \Sigma^{k}_{k=2}\beta_k x'_{k,i,t} + \varepsilon_{i,t} \quad (2)$$

where Q is the measurement of market valuation in year t, CGI is corporate governance index, x' is a vector of control variables specified earlier, the subscript i denote individual firm i, and ε denotes i.i.d., The main null hypothesis here is $\beta_1 > 0$, that is, there is a positive relationship between individual firm's corporate governance practice and market valuation. To see the effect of each component of CGI on firm's performance, I also run other regression to see each component contribution.

$$Q_{i,t} = \lambda_0 + \lambda_1 SUB\ A_{i,t} + \lambda_2 SUB\ B_{i,t} + \lambda_3 SUB\ C_{i,t} + \lambda_4 SUB\ D_{i,t} + \lambda_5 SUB\ E_{i,t} + \Sigma^{k}_{k=6}\lambda_k x'_{k,i,t} + \varepsilon_{i,t} \quad (3)$$

where the additional factors represent board structure (SUB A), conflict of interest (SUB B), board responsibility (SUB C), shareholder rights (SUB D), and disclosure and transparency (SUB E).

To assess the correlation between level of governance practice and ROA, I follow methodology used by Core, Guay and Rusticus (2005), which is regress measure of firm future operating performance (measured at time t), as measured by return on assets (ROA), directly on the past level of governance standard (CGI) and control variables (measured at time t-1). The equation is specified as;

$$ROA_{i,t} = \gamma_1 + \gamma_2 CGI_{i,t-1} + \Sigma^{k}_{k=3}\gamma_k x'_{k,i,t-1} + \varepsilon_{i,t} \quad (4)$$

where ROA is ratio of earnings before interest and tax to total assets. CGI is corporate governance index, x' is a vector of control variables; the subscript i denotes individual firm i, and ε denotes i.i.d. I use return on assets as the measurement of operating performance because it is not affected by extraordinary items such as valuation change due to a change in exchange rate. It is also more desirable than the return on equity since total assets are strictly positive while equity can be zero or negative. In this equation I control the effect of financing decision (debt-capital ratio, **D/A**), firm size (natural log of total assets of the firms, **LN(ASSETS)**), and market valuation (book-to-market ratio, **BTM)**.

To mitigate the effect of outliers in my sample, the observations that are identified as outliers will be adjusted to equal the upper bound and the lower bound cut off at $\pm$ 1.96 of a studentized distribution. Firm-fixed effect model is used to ensure that my result is unaffected by heterogeneity problem.

Corporate Governance and Abnormal Return

In this section, I examine the relationship between level of governance practice by the firm and its returns. As mention earlier, if corporate governance matter for the firms' performance, stocks price should adjust for any changes in the governance practice and if the market cannot immediately adjust, stocks return should differ systematically. To investigate these different, five portfolios are constructed based on the level of CGI; **PORT1** contains all stocks with CGI in the first quartile, **PORT2** contains all stocks with CGI in the second quartile, **PORT3** contains all stocks with CGI in the third quartile, **PORT4** contains all stocks with CGI in the fourth quartile, and **PORT5** is the return difference between long good portfolio (PORT4) and short bad portfolio (PORT1).

I apply the three-factor model originally proposed by Fama and French (1993) to explain the level of cross-sectional expected returns. The following time-series regression is regressed to account for the characteristic difference in style between these portfolios:

$$r_t = \alpha + \beta_1 RMRF_t + \beta_2 SMB_t + \beta_3 HML_t + \varepsilon_t \quad (5)$$

where r_t is the value-weighted excess total return of each portfolio in month t, $RMRF_t$ is the month t value-weighted market return minus risk-free rate. At the

beginning of each month, stocks are sourced into 3 portfolios on the basis of market capitalization (size) and growth (book-to-market ratio) in the previous month. SMB_t is calculated as month t excess return of small caps portfolio over big caps portfolio and HML_t is calculated as month t excess return of high book-to-market ratio and low book-to-market ratio. Alpha (α) in this estimation should be interpreted as the abnormal return in excess of what could have been achieving by passive investment strategy. I calculate buy-and-hold return of all constructed portfolios beginning at January, 1 2000 until December, 31 2007. All portfolios are reset every January, which is the month after data on CGI becomes available.

To better capture the effect of governance standard and return, I change some aspects of portfolio construction and return calculation according to the level of improvement in governance standard, which is measure as the different between CGI score in 2007 and CGI score in 2000. The worst to the best improvement portfolio are identified as PORT1 to PORT4. PORT5 is the return difference between two strategies: long the most improvement portfolio (PORT4) and short the worst improvement portfolio (PORT1). All portfolios are not re-adjusted: stocks in each portfolio are holding at the beginning of the sample period to the end of the period and no new stocks are added to the portfolio[3].

Corporate Governance and Dividend Yield

For the second aspect of my empirical strategy to investigate the effect of CGI on investors' return, I regress dividend yield on level of governance practice and control variables specified as;

$$YLD_{i,t} = \mu_0 + \mu_1 CGI_{i.t} + \Sigma^{k}_{k=2} \mu_k x'_{k,i,t} + \varepsilon_{i,t} \quad (6)$$

where dividend yield (YLD) is defined as the ratio of dividends in the previous year to the market capitalization measured at the calendar year end, CGI is corporate governance index, x' is a vector of control variables specified below, the subscript i denotes individual firm i, and ε denotes i.i.d. Dividend yield is appropriate for return measurement for at least two reasons: first, from the accounting standpoint, a firm's profitability is often measured by fundamental ratio, e.g. dividend yield;

[3] A firm that does not trade during each year is dropped out from the calculation.

second, it is directly observable and is a stationary variable. I also control for the other firm characteristics which are

SIZE is the market capitalization in million baths at the end of month t-2.

TURN is the volume of trading in month t-2 estimated as total share trade in month t-2 divided by total share held by public shareholders in month t-2

RET2-3 is the average total return on month t-3 through t-2.

RET4-6 is the average total return on month t-6 through t-4.

RET7-12 is the average total return on month t-7 through t-12.

Table 2 Panel A shows statistics descriptive characteristic for 256 firms listed in SET and MAI during sample period, 2000-2007. The table states that average Tobin's Q has increased over time from 0.67 in 2000 to 0.93 in 2007, consistent with the change of price-to-book value. Panel B show the descriptive characteristic for four portfolios constructed based on the level of CGI. The worst to best portfolio are identifies as PORT1 to PORT4. After dropping out non-traded stock during sample periods the remaining observation used to contract portfolio are as follow: 201 observations, 224 observations, 254 observations, 282 observations, 304 observations, 347 observations, 410 observations and 435 observations in year 2000-2007 respectively. Tobin's Q, price-to-book value and return-on-assets are steadily increase from PORT1 to PORT4.

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Table 1: Descriptive Statistics for Corporate Governance Index

The table shows descriptive statistics for corporate governance index (CGI) and five governance components, which are SUB A, SUB B, SUB C, SUB D and SUB E acts for board structure, conflict of interest, board responsibility, shareholder rights and disclosure and transparency, for 256 firms that exist during 2000 to 2007. Each governance components scores is expressed in 100 percent, calculated by divided each firm's score by maximum score and then multiplies by 100. To construct CGI, each category carries a weight as follow; board structure 20%, conflict of interest 25%, board responsibility 20%, shareholder rights 10% and disclosure and transparency 25%. The static for 2000 CGI is divided into 2 columns, in column (1); CGI score is calculated by excluding 15 questions as the original paper done then the maximum score for each category is differ from the other year. In column (2); I included those 15 questions in the calculation to make the scoring comparable over the sample period (see Appendix A). To mitigate the effect of outliers, the observations that are identified as outliers will be adjusted to equal the upper bound and the lower bound cut off at $\pm$ 1.96 of a studentized distribution.

Panel A: Annual Corporate Governance Index and Sub Indices

	2000		2001	2002	2003	2004	2005	2006	2007
	(1)	(2)							
CGI: Corporate Governance Index (%)									
Mean	47.23	28.97	38.53	42.70	48.22	54.68	53.48	57.22	59.06
Median	47.61	28.99	38.43	42.21	47.78	54.86	53.35	57.88	60.19
Maximum	73.16	39.05	64.09	69.58	80.90	85.54	81.91	92.01	92.01
Minimum	23.85	18.98	16.48	18.64	21.51	21.51	11.58	19.56	20.35
Std. Dev.	8.21	4.89	6.63	8.53	10.17	12.26	11.49	13.95	13.62
SUB A: Board Structures (%)									
Mean	47.03	39.18	38.83	34.11	36.78	47.33	52.25	57.49	60.66
Median	40.00	33.33	33.33	33.33	33.33	50.00	50.00	50.00	66.67
Maximum	80.00	64.44	83.33	83.33	83.33	100.00	100.00	100.00	100.00
Minimum	20.00	14.23	8.55	3.49	5.01	8.09	14.27	16.67	18.97
Std. Dev.	15.46	12.35	15.14	15.32	17.15	21.30	21.12	21.37	21.27
SUB B: Conflict of Interest (%)									
Mean	33.06	31.68	39.38	37.60	40.98	44.05	43.78	48.46	51.21
Median	34.77	33.33	39.25	35.50	35.50	41.75	40.56	45.75	48.13
Maximum	63.02	49.80	64.63	85.63	87.75	87.75	91.75	100.00	100.00
Minimum	8.69	3.60	14.13	10.50	10.50	12.63	12.63	12.63	10.50
Std. Dev.	9.63	8.83	9.20	12.62	12.94	14.94	15.58	16.16	19.37
SUB C: Board Responsibilities (%)									
Mean	68.26	25.13	33.33	51.85	59.07	65.32	58.69	66.25	61.55
Median	63.58	23.33	33.33	53.33	58.82	64.33	58.42	66.53	63.33
Maximum	99.91	36.67	78.77	90.43	92.38	96.04	95.93	99.29	96.03
Minimum	27.25	12.24	0.00	16.67	23.33	23.33	10.00	10.00	13.33
Std. Dev.	17.80	6.36	12.00	13.67	14.40	14.90	13.62	21.78	17.82
SUB D: Shareholder Rights (%)									
Mean	51.68	7.38	30.45	42.41	44.40	45.94	44.44	48.33	58.78
Median	50.00	7.14	35.71	45.24	46.39	49.05	46.05	50.83	61.43
Maximum	93.33	13.33	64.76	72.28	77.14	77.14	80.61	83.20	100.00
Minimum	0.00	0.00	3.60	7.54	10.02	14.52	13.38	28.69	3.60
Std. Dev.	27.44	3.92	14.55	17.15	16.25	16.05	16.95	16.99	13.62
SUB E: Disclosure and Transparency (%)									
Mean	42.86	30.09	44.67	47.50	57.50	66.21	63.71	62.03	63.63
Median	42.86	30.00	40.00	50.00	60.00	70.00	65.00	60.00	60.00
Maximum	85.71	52.02	90.00	90.00	100.00	100.00	100.00	100.00	100.00
Minimum	0.00	0.00	0.00	10.00	10.00	10.00	0.00	10.00	10.00
Std. Dev.	16.05	10.87	16.88	13.78	16.87	17.80	16.75	18.51	16.70
Observations	256	256	256	256	256	256	256	256	256

Panel B: Corporate Governance Index by Size

Market Capitalization (in million baht)	**Mean**	**Median**	**Maximum**	**Minimum**	**Std. Dev.**	**No. of firms**
Less than 500	43.78	43.74	75.82	11.58	10.98	54
500 – 1,400	45.23	44.23	82.19	18.98	13.14	57
1,400 – 4,000	47.65	47.54	87.78	18.64	14.54	69
Greater than 4,000	52.74	51.87	92.01	21.16	15.96	76
All	47.86	46.83	92.01	11.58	14.43	256

Panel C: Corporate Governance Index by Industry

Industry	**Mean**	**Median**	**Maximum**	**Minimum**	**Std. Dev.**	**No. of firms**
Agro & Food Industry	46.93	46.20	81.31	23.58	12.77	35
Consumer Products	43.09	42.07	80.64	18.98	13.43	34
Financials	51.35	51.46	87.20	18.98	16.14	35
Industrials	45.60	44.39	87.50	18.64	12.27	35
Property & Construction	48.20	47.44	82.02	11.58	14.00	35
Resources	56.63	57.67	92.01	27.85	19.06	10
Services	47.39	46.60	87.78	16.48	14.09	53
Technology	52.27	52.05	85.17	27.04	14.23	18
MAI	48.63	47.85	64.93	29.36	12.67	1
All	47.86	46.83	92.01	11.58	14.43	256

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Table 2: Descriptive Statistics for Other Variables

Panel A shows statistics descriptive characteristic for 256 firms listed in SET and MAI during sample period, 2000-2007. Panel B show the descriptive characteristic for four portfolios constructed based on the level of CGI; **PORT1** contains all stocks with CGI in the first quartile, **PORT2** contains all stocks with CGI in the second quartile, **PORT3** contains all stocks with CGI in the third quartile, **PORT4** contains all stocks with CGI in the fourth quartile. Firms that were not traded during the year are dropped out form the calculation. The remaining observation in each year is as follow: 201 observations, 224 observations, 254 observations, 282 observations, 304 observations, 347 observations, 410 observations and 435 observations in 2000 – 2007 respectively. Tobin's Q is calculated by following Chung, K. H. and S. W. Pruitt (1994), Price-to-Book Ratio is identified as price per share divided by book value of equity per share at the year end, Debt-to-Assets Ratio is identified as total debt divided by total assets at the year end, Growth is proxy by the percentage of annual change in sales/revenues, Return on Assets is the percentage of the ratio of earnings before interest and tax to total assets at the year end and Dividend Yield is percentage in the ratio of dividends in the previous year to the market capitalization measured at the calendar year end. To mitigate the effect of outliers, the observations that are identified as outliers will be adjusted to equal the upper bound and the lower bound cut off at $\pm$ 1.96 of a studentized distribution.

Panel A: Descriptive Statistic by Year

	2000	2001	2002	2003	2004	2005	2006	2007
Tobin's Q (Times)								
Mean	0.67	0.72	0.81	1.14	0.92	0.87	0.89	0.93
Median	0.66	0.70	0.77	1.02	0.86	0.77	0.80	0.77
Maximum	1.60	1.59	1.86	2.92	2.12	1.98	2.15	3.25
Minimum	0.06	0.03	0.04	0.12	0.10	0.11	0.10	0.11
Std. Dev.	0.33	0.33	0.38	0.61	0.44	0.44	0.48	0.61
Price-to-Book Ratio (Times)								
Mean	0.51	0.59	0.73	1.24	0.91	0.84	0.87	0.91
Median	0.40	0.49	0.62	1.02	0.76	0.69	0.67	0.67
Maximum	1.58	1.63	2.05	4.01	2.42	2.22	2.89	3.45
Minimum	0.02	0.01	0.01	0.09	0.06	0.07	0.07	0.08
Std. Dev.	0.40	0.40	0.48	0.87	0.57	0.57	0.65	0.75
Debt-to-Assets Ratio (Times)								
Mean	0.31	0.29	0.27	0.25	0.24	0.24	0.22	0.21
Median	0.30	0.26	0.24	0.20	0.20	0.21	0.19	0.17
Maximum	0.96	0.81	0.76	0.71	0.68	0.67	0.65	0.64
Minimum	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Std. Dev.	0.27	0.25	0.24	0.23	0.21	0.21	0.20	0.20
Growth (%)								
Mean	12.13	11.58	11.22	15.81	13.78	11.13	9.97	3.52
Median	8.77	6.40	5.89	10.14	12.00	9.70	9.08	3.11
Maximum	121.78	180.00	117.31	151.27	68.08	86.19	55.33	72.76
Minimum	-55.64	-83.84	-83.33	-25.82	-37.44	-59.22	-35.02	-61.63
Std. Dev.	28.02	32.72	28.52	26.95	20.96	22.84	19.04	20.43
Return on Assets (%)								
Mean	2.72	4.23	4.87	6.14	6.12	5.32	4.80	4.25
Median	3.17	4.23	4.92	5.60	5.73	5.08	4.95	4.06
Maximum	23.44	19.16	19.98	22.91	19.29	19.41	21.39	21.29
Minimum	-19.00	-10.88	-10.64	-10.18	-7.15	-8.78	-12.38	-13.74
Std. Dev.	8.63	6.66	6.34	6.21	5.60	5.78	6.71	6.88
Dividend Yield (%)								
Mean	3.91	3.69	4.01	3.08	4.08	4.48	3.97	3.85
Median	0.00	0.50	3.45	2.72	3.97	4.46	3.97	3.75
Maximum	19.76	21.28	17.63	11.10	15.90	11.81	10.48	10.71
Minimum	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Std. Dev.	5.57	4.94	4.25	2.85	3.38	3.44	3.06	3.17
Observations	256	256	256	256	256	256	256	256

Panel B Descriptive Statistic by Portfolio

	PORT1	PORT2	PORT3	PORT4
Tobin's Q (Times)				
Mean	0.92	0.93	0.95	1.00
Median	0.79	0.82	0.85	0.93
Maximum	2.84	2.53	4.36	3.23
Minimum	0.06	0.17	0.07	0.08
Std. Dev.	0.51	0.49	0.54	0.51
Price-to-Book Ratio (Times)				
Mean	1.31	1.30	1.28	1.63
Median	0.94	1.00	1.04	1.29
Maximum	9.32	4.91	5.92	7.87
Minimum	-5.35	-1.81	-1.77	-1.98
Std. Dev.	1.39	0.99	1.00	2.59
Debt-to-Assets Ratio (Times)				
Mean	0.30	0.26	0.26	0.30
Median	0.28	0.23	0.25	0.29
Maximum	0.96	0.97	0.92	0.93
Minimum	0.00	0.00	0.00	0.00
Std. Dev.	0.23	0.23	0.23	0.24
Growth (%)				
Mean	8.71	17.09	12.47	14.64
Median	5.75	10.88	8.46	11.10
Maximum	134.99	273.64	337.47	112.92
Minimum	-92.48	-83.84	-72.14	-60.58
Std. Dev.	27.98	37.85	33.95	26.95
Return on Assets (%)				
Mean	3.93	4.99	4.62	5.55
Median	4.29	5.36	4.93	5.38
Maximum	39.44	26.90	31.34	25.82
Minimum	-62.90	-23.09	-40.23	-20.22
Std. Dev.	8.97	7.32	8.07	6.68
Dividend Yield (%)				
Mean	3.34	3.84	4.11	3.99
Median	2.60	3.39	3.78	3.38
Maximum	15.93	21.58	24.51	29.61
Minimum	0.00	0.00	0.00	0.00
Std. Dev.	3.70	3.81	4.05	4.29
Observations	615	613	613	616

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CHAPTER IV
EMPIRICAL EVIDENCE

The empirical evidences to examine my first, second and third hypothesis are provided in this chapter. All panel regression analysis are divided into 3 panels, univariate analysis, analyze of the overall governance level and analyze of individual sub index, to better serve the clear picture of the correlation between level of governance and interested variable. For all panel data analysis, I employ firm fixed-effect model, since it eliminates the heterogeneity problem and resulting in higher explanatory power of the model and more reliable coefficient value.

Corporate Governance and Firm valuation

Table 3 show the association of six governance measurement categories, which are CGI, sub index A, sub index B, sub index C, sub index D and sub index E, with market valuation, which is measure by Tobin's Q. The overall results are supportive of my hypothesis that market premium exist for relatively well-governed firms. Panel A shows the result of univariate analysis of Tobin's Q on each governance measurement. Tobin's Q is positively correlated with all six governance measurements with 99% confident interval.

To mitigate the potential bias, the appropriate control variables are added to the regression. In panel B column (1) – (6) state the regression result in different sample period and different number of control variables. The results indicate the positive association between level of governance standard and firms' performance. They are robust to the use of extensive set of control variables and different sample period. One percent increases in CGI increase Tobin's Q by 0.004. The result is significant with 99% confident interval. To mitigate plausible endogeneity, I also regress the first difference on Tobin's Q on first difference on CGI and other control variables, the result support the evidence of positive correlation between corporate governance and Tobin's Q.

To better see the effect of each corporate governance categories, I regress Tobin's Q directly on each sub index categories as shown in column (1) - (5) in panel C. Surprisingly, the result changes a bit as compare to the result stated in panel A

since sub index A is significantly associated with Tobin's Q with negative sign but the coefficient on sub index B is not associated with Tobin's Q. After putting all governance categories together as shown in column (6), sub index E turn to be insignificant.

The result of my second measurement of firm performance measurement, ROA, is stated in Table 4. As before panel A shows the result of univariate analysis of ROA on each governance measurement. The result supports my hypothesis only for sub index D while the others are not correlated with ROA. To mitigate the potential bias three control variables are added to the model. The coefficient term of CGI turns to be positive and significant with 95% level of confidence as shown in panel B columns (1)-(2). However; the result is not consistent for year 2000-2003. Panel C states the regression result for the effect of individual index on ROA. There is only sub index D that has a positive correlation with ROA and as before sub index A still has a negative correlation.

Corporate Governance and Return

The alpha (α) in Table 6 indicates the abnormal return received by using buy and hold strategy for each portfolio in different criteria over the sample period 1 January 2000 – 31 December 2007 (96 months). The result of my first aspect of portfolio construction is stated in panel A of table 6. The result indicates only the negative abnormal return for PORT2. Panel B of table 6 shows the result of my second aspect of portfolio construction. The result indicates that investors can receive higher abnormal return when they invest in higher governance improved stocks. The worst to the best improvement portfolio indicates the abnormal return of -0.016% per month to 0.025% per month. However, this strategy is not applicable in real word since investors cannot know that which firm will have higher governance improvement in the future.

Corporate Governance and Dividend Yield

Table 5 reports the result of the third aspect of my interest, the correlation of dividend yield and the level of governance practice. For univariate analysis, all governance categories are positively correlated with dividend yield with 99% confident interval (see panel A). As previous regression, I add 5 control variables to mitigate the potential bias. The correlation of CGI and dividend yield is still positive

with 99% confident interval but the effect is less emphasize when higher number of control variables are add to the model, CGI's coefficient is reduced from 0.021 to 0.014, as shown in column (1)-(2) in panel B. The result for each sub index is still robust when all control variables are added to the model. My result is consistent with the finding of La Porta et al. (2002). They state that with better legal protection, more of the firm's profits would come back to the investors as interest or dividends instead of being expropriated by the entrepreneur who control the firm. The agency theory predicts substantial and stable dividends. The higher dividends, the less free cash flow there is, ceteris paribus, in managers' hands to spend on negative net present value projects.

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Table 3: Corporate Governance and Tobin's Q

This table shows the panel regression result of Tobin's Q on corporate governance index (CGI) and five sub indices. Panel A states the regression result for univariate analysis of Tobin's Q on CGI and individual sub index. Panel B states the regression result of Tobin's Q on CGI and 5 firm's characteristic control variables. Panel C states the regression result of first difference of Tobin's Q on first difference of CGI and 5 firm's characteristic control variables. Panel D states the regression result of Tobin's Q on sub indices. Each sub index is identified as SUB A, SUB B SUB C, SUB D and SUB E, acts for board structure, conflict of interest, board responsibility, shareholder rights and disclosure and transparency.. In this equation I control for firm's portability (the ratio of earnings before interest and tax to total assets at the year end, **ROA**), firm size (natural log of total assets at the year end, LN(ASSETS)), listed year (natural log of listed year (LN(AGE)), financing decision (ratio of total debt to total assets at the year end, **D/A**), Growth prospect (the last year change in sales/revenues, GROWTH), and Ease of trading (total share trade divided by total share held by public shareholders at year end, TURN). Firm-fixed effect model is used to mitigate the heterogeneity problem. *, **, *** indicate significant levels at 10%, 5% and 1% respectively.

Panel A: Univariate Analysis

Sample Period	2000-2007					
	(1)	(2)	(3)	(4)	(5)	(6)
Dependent Variable						
Tobin's Q ($Q_{i,t}$)						
Independent Variables						
Intercept	0.567***	0.801***	0.694***	0.641***	0.711***	0.644***
	(20.966)	(38.174)	(25.371)	(32.370)	(43.551)	(28.683)
$CGI_{i,t}$	0.006***					
	(11.483)					
SUB $A_{i,t}$		0.001***				
		(3.380)				
SUB $B_{i,t}$			0.004***			
			(6.575)			
SUB $C_{i,t}$				0.004***		
				(12.167)		
SUB $D_{i,t}$					0.004***	
					(10.573)	
SUB $E_{i,t}$						0.004***
						(10.450)
No. of Firms	256	256	256	256	256	256
Observations	2,048	2,048	2,048	2,048	2,048	2,048
R^2	0.664	0.642	0.648	0.667	0.661	0.660
Adjusted R^2	0.616	0.590	0.598	0.620	0.612	0.612
F-Statistic	13.842	12.528	12.875	14.019	13.623	13.595

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Panel B: Tobin's Q and CGI

Sample Period	2000-2007		2000-2003		2004-2007	
	(1)	(2)	(3)	(4)	(5)	(6)
Dependent Variable						
Tobin's Q ($Q_{i,t}$)						
Independent Variables						
Intercept	-0.563	-0.145	0.027	0.207	0.703***	0.647***
	(-1.460)	(-0.375)	(0.129)	(1.029)	(3.187)	(3.096)
$CGI_{i,t}$	0.003***	0.004***	0.010***	0.010***	0.002	0.002**
	(3.702)	(4.608)	(7.455)	(8.149)	(1.326)	(2.142)
$ROA_{i,t}$	0.018***	0.022***	0.022***	0.031***	0.037***	0.047***
	(13.121)	(14.880)	(11.057)	(14.559)	(16.450)	(20.017)
$LN(ASSETS)_{i,t}$	0.054**	0.001	0.027**	-0.007	0.018	-0.007
	(1.964)	(0.036)	(2.127)	(-0.578)	(1.420)	(-0.569)
$LN(AGE)_{i,t}$	0.149***	0.229***	-0.034	0.001	-0.126***	-0.057
	(3.053)	(4.612)	(-0.883)	(0.040)	(-2.664)	(-1.260)
$D/A_{i,t}$		0.505***		0.701***		0.723***
		(7.505)		(10.326)		(9.753)
$GROWTH_{i,t}$		-0.0001		-4.25E-05		-0.003***
		(-0.428)		(-0.091)		(-4.367)
$TURN_{i,t}$		0.001		0.001		0.004**
		(1.386)		(0.394)		(2.404)
No. of Firms	256	256	256	256	256	256
Observations	2,048	2,048	1,024	1,024	1,024	1,024
R^2	0.698	0.708	0.425	0.489	0.547	0.597
Adjusted R^2	0.654	0.665	0.340	0.411	0.480	0.536
F-Statistic	15.879	16.420	5.001	6.291	8.216	9.832

Panel C: ΔTobin's Q and ΔCGI

Sample Period	2001-2007		2001-2003		2004-2007	
	(1)	(2)	(3)	(4)	(5)	(6)
Dependent Variable						
ΔTobin's $Q_{i,t}$						
Independent Variables						
Intercept	-0.440	-0.187	0.007	0.164	0.664***	0.342**
	(-0.460)	(-0.579)	(0.208)	(1.015)	(2.664)	(2.465)
$\Delta CGI_{i,t}$	0.001	0.002*	0.077**	0.008**	0.0003	0.0003*
	(1.302)	(1.877)	(2.145)	(2.149)	(1.323)	(1.927)
$\Delta ROA_{i,t}$	0.011***	0.029***	0.025***	0.030***	0.033***	0.036***
	(11.322)	(15.780)	(8.027)	(10.009)	(12.674)	(18.390)
$\Delta LN(ASSETS)_{i,t}$	0.039**	0.001	0.030*	-0.004	0.009	-0.0001
	(1.812)	(0.604)	(1.785)	(-0.137)	(1.080)	(-0.315)
$\Delta LN(AGE)_{i,t}$	0.404***	0.034***	0.020	0.002	-0.011***	-0.052
	(5.087)	(6.418)	(-0.616)	(0.407)	(3.967)	(-1.610)
$\Delta D/A_{i,t}$		0.332***		0.467***		0.592***
		(9.510)		(8.559)		(10.864)
$\Delta GROWTH_{i,t}$		-0.0001		-2.25E-05		-0.024***
		(-0.032)		(-0.085)		(-3.367)
$\Delta TURN_{i,t}$		0.001		0.001		0.002*
		(1.221)		(0.554)		(1.777)
No. of Firms	256	256	256	256	256	256
Observations	1,792	1,792	768	768	1,024	1,024
R^2	0.545	0.680	0.429	0.476	0.542	0.575
Adjusted R^2	0.521	0.595	0.358	0.431	0.493	0.496
F-Statistic	10.894	12.423	4.998	5.332	7.984	9.390

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Panel D: Tobin's Q and sub indices

Sample Period	2000-2007					
	(1)	(2)	(3)	(4)	(5)	(6)
Dependent Variable						
Tobin's Q ($Q_{i,t}$)						
Independent Variables						
Intercept	-0.806**	-0.596	-0.082	-0.273	-0.350	-0.093
	(-2.137)	(-1.580)	(-0.218)	(-0.719)	(-0.929)	(-0.242)
SUB $A_{i,t}$	-0.001**					-0.001***
	(-2.552)					(-2.875)
SUB $B_{i,t}$		0.001				-0.0001
		(1.085)				(-0.188)
SUB $C_{i,t}$			0.003***			0.002***
			(6.764)			(4.501)
SUB $D_{i,t}$				0.002***		0.001**
				(4.603)		(2.054)
SUB $E_{i,t}$					0.002***	0.001
					(4.480)	(1.414)
$ROA_{i,t}$	0.023***	0.022***	0.022***	0.023***	0.022***	0.022***
	(14.933)	(14.870)	(15.067)	(15.041)	(14.827)	(15.058)
$LN(ASSETS)_{i,t}$	0.031	0.020	0.0002	0.012	0.011	0.004
	(1.086)	(0.706)	(0.006)	(0.415)	(0.377)	(0.134)
$LN(AGE)_{i,t}$	0.404***	0.351***	0.216***	0.250***	0.278***	0.206***
	(9.527)	(8.308)	(4.782)	(5.313)	(6.271)	(4.043)
$D/A_{i,t}$	0.461***	0.475***	0.508***	0.503***	0.489***	0.509***
	(6.841)	(7.053)	(7.620)	(7.472)	(7.289)	(7.612)
GROWTHi,t	-8.58E-05	-7.03E-05	-0.0002	-0.0001	-0.0002	-0.0002
	(-0.296)	(-0.242)	(-0.522)	(-0.492)	(-0.518)	(-0.680)
$TURN_{i,t}$	0.001	0.001	0.001	0.001	0.001	0.001
	(1.146)	(1.239)	(1.306)	(1.083)	(1.461)	(1.202)
No. of Firms	256	256	256	256	256	256
Observations	2,048	2,048	2,048	2,048	2,048	2,048
R^2	0.705	0.704	0.712	0.708	0.707	0.714
Adjusted R^2	0.662	0.661	0.669	0.665	0.664	0.671
F-Statistic	16.228	16.159	16.738	16.419	16.405	16.649

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Table 4: Corporate Governance and Return on Assets

This table shows the panel regression result of return on assets (ROA) on corporate governance index (CGI) and five sub indices. Panel A states the regression result for univariate analysis of ROA on CGI and individual sub index. Panel B states the regression result of return on assets, which is identified as the ratio of earnings before interest and tax to total assets at the year end on CGI and 3 control variables. In this equation I control the effect of financing decision (debt-capital ratio, D/A), firm size (natural log of total assets of the firms, LN(ASSETS)), and market valuation (book-to-market ratio, BTM). Panel C states the regression result of return on assets and sub indices. Both governance measurement and control variable are lagging for 1 period to see the causality of the variable. Firm-fixed effect model is used to mitigate the heterogeneity problem. *, **, *** indicate significant levels at 10%, 5% and 1% respectively.

Panel A: Univariate Analysis

Sample Period	2000-2007					
	(1)	(2)	(3)	(4)	(5)	(6)
Dependent Variable						
Return on Assets ($ROA_{i,t}$)						
Independent Variables						
Intercept	4.723***	5.607***	5.131***	4.687***	4.627***	4.585***
	(11.084)	(17.219)	(11.391)	(15.473)	(18.531)	(13.520)
$CGI_{i,t-1}$	0.008					
	(0.923)					
SUB $A_{i,t-1}$		-0.012				
		(-1.629)				
SUB $B_{i,t-1}$			-0.001			
			(-0.059)			
SUB $C_{i,t-1}$				0.008		
				(1.467)		
SUB $D_{i,t-1}$					0.013**	
					(2.102)	
SUB $E_{i,t-1}$						0.010
						(1.610)
No. of Firms	256	256	256	256	256	256
Observations	2,048	2,048	2,048	2,048	2,048	2,048
R^2	0.592	0.593	0.592	0.593	0.593	0.593
Adjusted R^2	0.524	0.525	0.524	0.525	0.525	0.525
F-Statistic	8.707	8.725	8.699	8.720	8.742	8.724

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Panel B: Return on Assets and CGI

Sample Period	2000-2007		2000-2003		2004-2007	
	(1)	(2)	(3)	(4)	(5)	(6)
Dependent Variable						
Return on Assets ($ROA_{i,t}$)						
Independent Variables						
Intercept	7.295***	29.137***	6.018***	8.699***	4.980***	4.881*
	(13.011)	(4.314)	(6.252)	(2.590)	(5.137)	(1.875)
$CGI_{i,t-1}$	-0.007	0.009**	-0.005	-0.007	0.032*	0.030*
	(-0.802)	(2.316)	(-0.205)	(-0.296)	(1.940)	(1.746)
$D/A_{i,t-1}$	-7.094***	-6.425***	-4.435***	-4.455***	-7.938***	-9.336***
	(-6.919)	(-6.124)	(-4.113)	(-3.967)	(-7.168)	(-8.519)
$LN(ASSETS)_{i,t-1}$		-1.512***		-0.158		0.181
		(-3.232)		(-0.679)		(0.955)
$BTM_{i,t-1}$		-0.013		-0.078**		-1.152***
		(-0.511)		(-2.243)		(-9.215)
No. of Firms	256	256	256	256	256	256
Observations	2,048	2,048	1,024	1,024	1,024	1,024
R^2	0.605	0.607	0.307	0.313	0.442	0.498
Adjusted R^2	0.538	0.541	0.190	0.195	0.348	0.412
F-Statistic	9.128	9.151	2.633	2.651	4.705	5.792

Panel C: Return on Assets and sub indices

Sample Period	2000-2007					
	(1)	(2)	(3)	(4)	(5)	(6)
Dependent Variable						
Return on Assets ($ROA_{i,t}$)						
Independent Variables						
Intercept	23.748***	26.435***	30.319***	30.950***	30.226***	29.720***
	(3.797)	(4.221)	(4.600)	(4.785)	(4.674)	(4.386)
$SUB\ A_{i,t-1}$	-0.013*					-0.016**
	(-1.763)					(-2.092)
$SUB\ B_{i,t-1}$		-0.001				-0.007
		(-0.065)				(-0.524)
$SUB\ C_{i,t-1}$			0.009			0.003
			(1.448)			(0.301)
$SUB\ D_{i,t-1}$				0.013*		0.010*
				(1.927)		(1.901)
$SUB\ E_{i,t-1}$					0.011	0.010
					(1.618)	(1.076)
$D/A_{i,t-1}$	-7.008***	-6.731***	-6.294***	-6.161***	-6.295***	-6.272***
	(-6.971)	(-6.674)	(-6.082)	(-5.963)	(-6.135)	(-5.961)
$LN(ASSETS)_{i,t-1}$	-1.076**	-1.296***	-1.596***	-1.641***	-1.598***	-1.528***
	(-2.546)	(-3.040)	(-3.548)	(-3.743)	(-3.622)	(-3.258)
$BTM_{i,t-1}$	-0.021	-0.018	-0.011	-0.012	-0.010	-0.010
	(-0.814)	(-0.686)	(-0.430)	(-0.469)	(-0.368)	(-0.376)
No. of Firms	256	256	256	256	256	256
Observations	2,048	2,048	2,048	2,048	2,048	2,048
R^2	0.608	0.607	0.608	0.608	0.608	0.610
Adjusted R^2	0.542	0.541	0.541	0.542	0.542	0.542
F-Statistic	9.174	9.143	9.164	9.180	9.180	9.073

Table 5: Corporate Governance and Dividend Yield

This table shows the panel regression result of dividend yield (YLD) which is defined as the percentage of the ratio of dividends in the previous year to the market capitalization measured at the calendar year end, on corporate governance index (CGI) and five sub indices. Panel A states the regression result for univariate analysis of Tobin's Q on CGI and individual sub index. Panel B states the regression result of dividend yield on CGI and 6 control variables. Panel C states the regression result of dividend yield and sub indices. In this equation I control for market valuation (the ratio of price per share to book values of common equity per share, PTBV), market capitalization (market capitalization in million baths at the end of month t-2, SIZE), east of trading (volume of trading in month t-2 estimated as total share trade in month t-2 divided by total share held by public shareholders in month t-2, TURN) and past return **(**the average total return on month t-3 through t-2, RET2-3; average total return on month t-6 through t-4, RET4-6 and average total return on month t-7 through t-12, RET7-12)Firm-fixed effect model is used to mitigate the heterogeneity problem. *, **, *** indicate significant levels at 10%, 5% and 1% respectively.

Panel A: Univariate Analysis

Sample Period	2000-2007					
	(1)	(2)	(3)	(4)	(5)	(6)
Dependent Variable						
Dividend Yield ($YLD_{i,t}$)						
Independent Variables						
Intercept	3.057***	3.499***	2.949***	3.268***	3.621***	3.511***
	(40.690)	(61.908)	(39.776)	(59.164)	(80.124)	(56.504)
$CGI_{i,t}$	0.017***					
	(11.365)					
SUB $A_{i,t}$		0.008***				
		(7.228)				
SUB $B_{i,t}$			0.022***			
			(13.037)			
SUB $C_{i,t}$				0.012***		
				(11.856)		
SUB $D_{i,t}$					0.007***	
					(6.415)	
SUB $E_{i,t}$						0.007***
						(6.317)
No. of Firms	256	256	256	256	256	256
Observations	21,504	21,504	21,504	21,504	21,504	21,504
R^2	0.473	0.471	0.474	0.473	0.471	0.471
Adjusted R^2	0.467	0.465	0.468	0.467	0.465	0.465
F-Statistic	85.150	84.579	85.453	85.235	84.497	84.488

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Panel B: Dividend Yield and CGI

Sample Period	2000-2007		2000-2003		2004-2007	
	(1)	(2)	(3)	(4)	(5)	(6)
Dependent Variable						
Dividend Yield ($YLD_{i,t}$)						
Independent Variables						
Intercept	3.130***	2.293***	3.482***	0.823**	3.176***	4.130***
	(40.877)	(10.850)	(29.909)	(2.174)	(19.769)	(8.389)
$CGI_{i,t}$	0.017***	0.014***	0.008***	0.005*	0.016***	0.012***
	(11.225)	(7.381)	(2.841)	(1.777)	(5.802)	(4.315)
$RET2\text{-}3_{i,t}$	-0.020***	-0.024***	-0.017***	-0.026***	-0.026***	-0.036***
	(-9.534)	(-11.171)	(-6.766)	(-9.598)	(-9.289)	(-12.372)
$RET4\text{-}6_{i,t}$	-0.014***	-0.023***	-0.009***	-0.021***	-0.032***	-0.043***
	(-5.527)	(-9.448)	(-2.988)	(-6.460)	(-11.156)	(-14.706)
$RET7\text{-}12_{i,t}$	-0.004	-0.019***	-0.001	-0.014***	-0.014***	-0.030***
	(-1.357)	(-6.404)	(-0.174)	(-3.774)	(-4.104)	(-8.396)
$SIZE_{i,t}$		0.959***		0.718***		0.992***
		(27.893)		(11.970)		(15.710)
$TURN_{i,t}$		-0.134***		-0.038		-0.104**
		(-6.244)		(-1.482)		(-2.454)
No. of Firms	256	256	256	256	256	256
Observations	21,504	21,504	10,752	10,752	10,752	10,752
R^2	0.475	0.493	0.641	0.645	0.624	0.632
Adjusted R^2	0.470	0.488	0.633	0.637	0.616	0.624
F-Statistic	85.087	90.626	82.828	83.729	77.027	79.032

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Panel C: Dividend Yield and Sub Indices

Sample Period	2000-2007					
	(1)	(2)	(3)	(4)	(5)	(6)
Dependent Variable						
Dividend Yield ($YLD_{i,t}$)						
Independent Variables						
Intercept	2.027***	1.890***	2.159***	2.382***	2.254***	2.598***
	(9.851)	(9.240)	(10.073)	(11.187)	(10.822)	(11.914)
SUB $A_{i,t}$	0.007***					0.006***
	(5.585)					(4.714)
SUB $B_{i,t}$		0.004**				0.015***
		(2.235)				(7.443)
SUB $C_{i,t}$			0.005***			0.003**
			(4.107)			(1.986)
SUB $D_{i,t}$				0.009***		0.008***
				(8.094)		(5.525)
SUB $E_{i,t}$					0.011***	0.011***
					(8.767)	(6.763)
RET2-$3_{i,t}$	-0.024***	-0.023***	-0.023***	-0.023***	-0.024***	-0.024***
	(-11.131)	(-10.571)	(-10.875)	(-10.880)	(-10.990)	(11.206)
RET4-$6_{i,t}$	-0.023***	-0.022***	-0.023***	-0.023***	-0.023***	-0.023***
	(-9.422)	(-8.835)	(-9.164)	(-9.114)	(-9.230)	(9.426)
RET7-$12_{i,t}$	-0.017***	-0.014***	-0.016***	-0.019***	-0.018***	-0.020***
	(-5.808)	(-4.695)	(-5.503)	(-6.419)	(-6.217)	(6.647)
$SIZE_{i,t}$	0.876***	0.788***	0.883***	0.932***	0.943***	0.964***
	(28.905)	(26.119)	(26.775)	(29.374)	(29.675)	(27.858)
$TURN_{i,t}$	-0.133***	-0.126***	-0.128***	-0.130***	-0.135***	-0.133***
	(-6.198)	(-5.881)	(-5.971)	(-6.048)	(-6.295)	(6.227)
No. of Firms	256	256	256	256	256	256
Observations	21,504	21,504	21,504	21,504	21,504	21,504
R^2	0.493	0.492	0.492	0.493	0.494	0.496
Adjusted R^2	0.487	0.487	0.487	0.488	0.488	0.490
F-Statistic	90.449	90.250	90.340	90.710	90.796	90.088

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Table 6: Corporate Governance and Abnormal Return

The tale shows result of time-series regression of four portfolios, which are constructed base on the level of CGI. Alpha (α) is identified as the abnormal return for a specific portfolio. There are two main aspect of portfolio construction and return calulation to analyze the level of abnormal return. The regression result of each criterion is shown in each panel as follows; Panel A states my first aspect, I construct each portfolio based on the level of CGI; **PORT1** contains all stocks with CGI in the first quartile, **PORT2** contains all stocks with CGI in the second quartile, **PORT3** contains all stocks with CGI in the third quartile, **PORT4** contains all stocks with CGI in the fourth quartile, and **PORT5** is the return difference between long good portfolio (PORT4) and short bad portfolio (PORT1). I calculate buy-and-hold return of all constructed portfolios beginning at January, 1 2000 until December, 31 2007. All portfolios are reset every January, which is the month after data on CGI becomes available. Panel B state the regression result of my second aspects, I construct each portfolio according to the level of improvement in governance standard, which is measure as the different between CGI score in 2007 and CGI score in 2000. The worst to the best improvement portfolio are identified as PORT1 to PORT4. PORT5 is the return difference between two strategies: long the most improvement portfolio (PORT4) and short the worst improvement portfolio (PORT1). All portfolios are not re-adjusted: stocks in each portfolio are holding at the beginning of the sample period to the end of the period and no new stocks are added to the portfolio. Firms that were not traded during the year are dropped out form the calculation. The remaining observation in each year is as follow: 201 observations, 224 observations, 254 observations, 282 observations, 304 observations, 347 observations, 410 observations and 435 observations in 2000 – 2007 respectively. *, **, *** indicate significance levels at 10%, 5% and 1% levels respectively.

Panel A: Investment Strategy - CGI Score

	PORT1	PORT2	PORT3	PORT4	PORT5
Three Factors Model					
Alpha (α)	-0.001	-0.007**	0.001	0.002	0.003
	(-0.206)	(-2.608)	(0.256)	(0.682)	(0.503)
RMRF	1.165***	0.978***	1.019***	0.973***	-0.192**
	(17.705)	(15.414)	(15.599)	(18.742)	(-1.968)
SMB	0.692***	0.185	0.203*	-0.251***	-0.943**
	(2.739)	(1.530)	(1.808)	(-2.718)	(-2.791)
HML	0.043	-0.007	0.245	-0.015	-0.059
	(0.325)	(-0.094)	(1.613)	(-0.232)	(-0.355)
R^2	0.759	0.838	0.823	0.932	0.308
Adj. R^2	0.751	0.833	0.817	0.930	0.286
F-Statistic	96.418	158.527	142.827	423.106	13.670
Jensen's Alpha					
Alpha (α)	5.52E-05	-0.007**	-0.004	0.002	0.002
	(0.009)	(-2.004)	(-1.089)	(0.706)	(0.206)
RMRF	0.933***	0.921***	0.886***	1.057***	0.123
	(8.808)	(14.376)	(10.942)	(32.727)	(0.794)
R^2	0.666	0.828	0.798	0.918	0.020
Adj. R^2	0.663	0.033	0.035	0.025	0.009
F-Statistic	187.634	0.828	376.379	1071.048	1.878
Observations	96	96	96	96	96

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Panel B: Investment Strategy- Improvement in CGI Score

	PORT1	PORT2	PORT3	PORT4	PORT5
Three Factors Model					
Alpha (α)	-0.016***	-0.004	-0.011**	0.009***	0.025***
	(-3.492)	(-0.479)	(-2.413)	(3.680)	(4.557)
RMRF	0.686***	1.050***	0.863***	1.116***	0.430***
	(14.792)	(15.441)	(17.624)	(37.388)	(7.625)
SMB	0.248**	0.113	-0.117*	0.055	-0.193
	(2.417)	(1.587)	(-1.767)	(0.676)	(-1.643)
HML	0.151	0.020	-0.056	0.158***	0.007
	(1.451)	(0.135)	(-0.851)	(3.690)	(0.056)
R^2	0.642	0.885	0.866	0.958	0.502
Adj. R^2	0.631	0.881	0.862	0.957	0.486
F-Statistic	55.103	235.954	198.006	698.197	30.904
Jensen's Alpha					
Alpha (α)	-0.025***	-0.006	-0.008	0.002*	0.027***
	(-4.626)	(-1.309)	(-1.450)	(1.748)	(5.912)
RMRF	0.563***	1.009***	0.917***	1.052***	0.489***
	(10.317)	(18.135)	(15.268)	(22.438)	(10.021)
R^2	0.604	0.882	0.862	0.953	0.482
Adj. R^2	0.600	0.881	0.860	0.952	0.476
F-Statistic	143.418	702.884	585.711	1885.791	87.438
Observations	96	96	96	96	96

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CHAPTER V
CONCLUSION

Many empirical studies have been concerning on the impact of governance as if it is one of the determination of the firm performance, in the sense that firms which practice good corporate governance will have lower costs of capital, higher share values and higher operating performance. Even though; the empirical evidences have some conflictions and limitations according to the differences in samples, sample period, and the most important proxy for corporate governance.

This paper has investigated the effects of level of governance standard on firms' performance and return using firm-level data set on Thailand during 2000-2007. Follow Ananchotikul (2006), a comprehensive index – Corporate Governance Index (CGI) was constructed from detailed company information to measure the corporate governance quality of each of the sample firms.

There are three main hypotheses in my study; first, higher-governed firms have better operating performance and market premium since effective corporate governance reduces the probability of management's expropriation and increases the probability that the manager will invest in the best interest of the shareholder. To test this hypothesis, I employ two measurement of firms' performance, Tobin's Q (Q, use to capture market valuation) and return-on-assets (ROA, use to capture operating performance). My result indicates a strong positive relationship between the overall quality of firm-level corporate governance, CGI, and firm valuation as measure by both Tobin's Q and return on assets. This result is still robust to the inclusion of various firm characteristics.

Second, if corporate governance matters for the firms' performance, stock prices should adjust for any changes in the governance practice on a particular firm. In the case that the market cannot immediately adjust, which is normally assumed for an underdeveloped stock market, stock returns should differ systematically. To investigate this hypothesis I constructed four portfolio bases on CGI score and rebalancing each portfolio every year and apply three-factor model to capture level of abnormal in each portfolio. The evidence shows no significant correlation.

Last, I expand my study to see the correlation between level of governance and other measure for investor's return, dividend yield. All governance categories are positively correlated with dividend yield with 99% confident interval. However, the correlation of CGI and dividend yield is less emphasizing when control variables are gradually add to the model.

There are some limitations in my study also. First, there might be some other variables related to firm performance and stock return which is not included in my study caused trouble in omitted factor. Next, some corporate governance questions need information on corporate website for every year but I cannot track that information back for all sample periods (eight years). That is because corporate website have adapted annually while I need the past information in the website. Thus, I have to leave those questions in the index construction. The existing limitation is that the reliable of the 56-1. The actual management of the company may not be the same as their report to the S.E.C. For example, firms may add outside directors to signal the insiders' intent to treat outside shareholders fairly, even though outside directors in fact do not affect insiders' behavior.

The results from this paper raise several issues for further study. The corporate governance measurement will probably bring a big change in regression result since the public information may not indicate the real behavior of the firm and may lead to a miss corporate governance measurement. Some regulation should make clear criteria to justify firms' operating business rather than specified description. Since the governance measurement is the crucial factors for all study of the relation between corporate governance and many importance factor. An improvement in the corporate governance measurement should be done overtime.

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APPENDICES

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APPENDIX A: CORPORATE GOVERNANCE CONSTRUCTION

I follow the method and detail used to score answers corresponding to corporate governance question originally created by Ananchotikul (2006). Some questions are dropped out to make the CGI scores comparable during the sample period, 2000-2007. There are 64 questions, instead of 84 questions, used to measure the level of corporate governance practice for each individual firm. In this appendix I provide only the questions and scoring method used in my study. As cited by the original paper, 15 questions are excluded from 2000 CGI calculation (remarked as *). The scoring and weighting scheme are the same as the original method. An indicator variable takes value of 1 whenever the answer is associated with best practice and 0 otherwise for the qualitative question. For quantitative question, the answers are translated into continuous values from 0-1. Each category carries a weight as follow; board structure 20%; conflict of interest 25%; board responsibility 20%; shareholder rights 10%; and disclosure and transparency 25%. The index runs from 0 to 100 the higher the value the better the corporate governance practices. (See the full edition in “Does Foreign Investment Really Improve Corporate Governance; Evidence from Thailand” (Ananchotikul, 2006))

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Code	Questions	Scoring Rule		Max. Score	Weight
A. Board Structure				**6.00**	**20%**
A1	What is the size of the board of directors?	1 if 5 <=a1<=12;	;0 otherwise		
A2	What is the size of executive board?	1 if a2 <= 12	;0 otherwise		
A3	How many directors are also managers?	1 if a3/a1 < 1/3	;0 otherwise		
A4	How many directors are dependent?	1 if a4/a1 > 1/3	;0 otherwise		
A5	Does the firm state the definition of independence in the disclosure report?	1 if a5=1	;0 otherwise		
A6	How many directors have attended director training programs by the Thai Institution of Directors Association?	1 if a6/a1 >1/2	;0 otherwise		
B. Conflict of Interest				**8.00**	**25%**
B1	Is the chairman is the same person as CEO?	1 if b1=1	;0 otherwise		
B2	Is the chairman independent?	1 if b2=1	;0 otherwise		
B3	How many public companies dose the chairman currently serve as a director or a manager?	1 if b3<=3	;0 otherwise		
B4	Does an audit committee exist?	1/2 if b4=1	;0 otherwise		
B5	- Chair by independent director?	1/6 if b5=1	;0 otherwise		
B6	- Role and responsibilities clearly stated?	1/6 if b6=1	;0 otherwise		
B7	- Performance or meeting attendance disclosure?	1/6 if b7=1	;0 otherwise		
B8	Does a nominating committee exist?	1/2 if b8=1	;0 otherwise		
B9	- Chair by independent director?	1/6 if b9=1	;0 otherwise		
B10	- Role and responsibilities clearly stated?	1/6 if b10=1	;0 otherwise		
B11	- Performance or meeting attendance disclosure?	1/6 if b11=1	;0 otherwise		
B12	Does a remuneration committee exist?	1/2 if b12=1	;0 otherwise		
B13	- Chair by independent director?	1/6 if b13=1	;0 otherwise		
B14	- Role and responsibilities clearly stated?	1/6 if b14=1	;0 otherwise		
B15	- Performance or meeting attendance disclosure?	1/6 if b15=1	;0 otherwise		
B16	Does a corporate governance committee exist?	1/2 if b16=1	;0 otherwise		
B17	- Chair by independent	1/6 if b17=1	;0 otherwise		

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	director?				
B18	- Role and responsibilities clearly stated?	1/6 if b18=1	;0 otherwise		
B19	- Performance or meeting attendance disclosure?	1/6 if b19=1	;0 otherwise		
B20*	Does the firm have a policy that specifies a minimum number of independent directors?	1/3 if b20=1	;0 otherwise		
	Does the firm discuss the following internal-control issues in the disclosure report?				
B21	- Organization and control environment	2/15 if b21=1	;0 otherwise		
B22	- Risk management	2/15 if b22=1	;0 otherwise		
B23	- Management control activities	2/15 if b23=1	;0 otherwise		
B24	- Information and communication	2/15 if b24=1	;0 otherwise		
B25	- Monitoring and evaluation	2/15 if b25=1	;0 otherwise		
C. Board Responsibilities				**10.00**	**20%**
C1*	Number of board meeting per year	1 if c1>4	;0 otherwise		
C2*	Average director's meeting attendance	c2/c1	;0 otherwise		
C3*	Average independent directors meeting attendance	c3/c1	;0 otherwise		
C4*	Is there a board meeting solely for independent directors?	1 if c4=1	;0 otherwise		
C5*	Number of audit committee meeting per year	1 if c5=>4	;0 otherwise		
C6*	Average audit committee meeting attendance	c6/c5	;0 otherwise		
C7	Is there at least one accounting expert on the audit committee?	1 if c7=1	;0 otherwise		
C8	How many public companies does the chairman of audit committee serve as a director or manager?	1 if c8<=3	;0 otherwise		
C9	Does the firm clearly distinguish the role and responsibilities of the board and management?	1/3 if c9=1	;0 otherwise		
C10	Does the firm disclose that directors evaluation system exists?	1/3 if c10=1	;0 otherwise		
C11	Does the firm have an option scheme which incentivizes management?	1/3 if c11=1	;0 otherwise		
C12	Has there been any legal dispute where the firm was claimed to be a fault during the past year?	1 if c12=0	;0 otherwise		
D. Shareholder Rights				**7.00**	**10%**
D1*	Does the firm hold an annual general shareholder meeting?	1 if d1=1	;0 otherwise		
D2*	Does the firm employ one-share-	1 if d2=1	;0 otherwise		

	one-vote rule?				
D3*	Is cumulative voting allowed in electing directors?	1 if d3=1	;0 otherwise		
D4*	Is voting by mail allow?	1 if d4=1	;0 otherwise		
D5*	How many days in advance does the company send out a notice of general meetings to shareholders?	d5/14	;0 otherwise		
D6*	Is proxy voting allowed?	1 if d6=1	;0 otherwise		
D7	Does the firm disclosure a dividend policy?	1/3 if d7=1	;0 otherwise		
D8	What is the minimum dividend (as a percentage of net profit) according to the dividend policy?	1/3*d8/100	;0 otherwise		
D9	Does the firm provide an explanation/rationale for setting dividend at the specified level?	1/3 if d9=1	;0 otherwise		
E. Disclosure and Transparency				**10.00**	**25%**
	Does the firm disclose the following information in the disclosure report?				
E1	- Board meeting attendance of individual directors	1 if e1=1	;0 otherwise		
E2	- Board compensation and/or benefits of individual directors	1 if e2=1	;0 otherwise		
E3	- Directors shareholding	1 if e3=1	;0 otherwise		
E4	- Management shareholding	1 if e4=1	;0 otherwise		
E5	- Related party transaction in detail	1 if e5=1	;0 otherwise		
E6	- Corporate group structure	1 if e6=1	;0 otherwise		
E7	- Grouping of major shareholding who belong to the same economics unit	1 if e7=1	;0 otherwise		
E8*	Does investor relation unit exist?	1 if e8=1	;0 otherwise		
E9*	Does the firm mention its investor relations activity carried out during the past year?	1 if e9=1	;0 otherwise		
E10	Does the firm's Annual Report include a section devoted to corporate governance principles and implementations?	1 if e10=1	;0 otherwise		

Notes:

* The original paper exclude from 2000 CGI calculation

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APPENDIX B: VARIABLES DESCRIPTION

In this appendix I provide a brief description and definition for all variables used in this study. All accounting data are measured at the fiscal year end. Source for accounting data: Data Stream

TableB1: Corporate Governance and Firm valuation

Variable	Description	Measurement
Firm valuation Measurement		
Q	Tobin's q	(market value of common stock share + book value of preferred stock + book value of long term debt + book value of inventory + book value of current liability – book value of current assets)/Book value of total assets
ROA	Return on Assets	Ratio of profit before interest and tax to total assets
Control Variable		
LN(ASSETS)	Assets Value	Natural log of total assets at the end of fiscal year
BTM	Book-to-market ratio	Ratio of book value per share to price per share
LN(AGE)	Firm Age	Natural log of the number of years listed on the Stock Exchange of Thailand
D/A	Debt-to-Capital ratio	Ratio of total debt to capital, where capital is total debt plus equity
GROWHT	Sale Growth	The percentage of annual change in last year sale
TURN	Turn Over	Ratio of total share traded to total share held by public shareholders
Corporate Governance Measurement		
CGI	Corporate Governance Index	See APPENDIX A: Corporate Governance Index Measurement
SUBA	Board Structure	See APPENDIX A: Corporate Governance Index Measurement
SUBB	Conflict of Interest	See APPENDIX A: Corporate Governance Index Measurement
SUBC	Board Responsibilities	See APPENDIX A: Corporate Governance Index Measurement
SUBD	Shareholder Rights	See APPENDIX A: Corporate Governance Index Measurement
SUBE	Disclosure&Transparency	See APPENDIX A: Corporate Governance Index Measurement

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TableB2: Corporate Governance and Stock Returns

Variable	Description	Measurement
Portfolio Construction		
PORT1	First Portfolio	Contain all stock with CGI score in the first quartile
PORT2	Second Portfolio	Contain all stock with CGI score in the second quartile
PORT3	Third Portfolio	Contain all stock with CGI score in the third quartile
PORT4	Fourth Portfolio	Contain all stock with CGI score in the fourth quartile
Return on Stock		
TR	Total Return	(Current stock price plus dividend receive minus last stock price) divided by last stock price
YLD	Dividend yield	Ratio of dividends in the previous fiscal year to the market capitalization measured at the calendar year end
Control Variable		
RMRF	Risk premium	Month t value-weighted market return minus risk-free rate
HML	Book-to-Market Characteristics	Realization on month t return of factors mimicking portfolios designed to capture book-to-market characteristics
SMB	Size Characteristics	Realization on month t return of factors mimicking portfolios
SIZE	Firm size	Market capitalization at the end of month t-2
TURN	Turn Over by Volume	Total share trade divided by outstanding share
RET1-2	Past return	The average total return on month t-2 through t-1
RET3-4	Past return	The average total return on month t-4 through t-3
RET5-6	Past return	The average total return on month t-6 through t-5

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Biography

Miss Sirin Chokchaiusaha graduated from Faculty of Economics, Chulalongkorn University majoring in Monetary Economics and minoring Managerial with Grade Average Point (GPA) equaled to 3.53, achieved Second Class Honor in 2007. In the same year, she entered to Full-Time program in Master of Science in Finance (MS Finance) at Faculty of Commerce and Accountancy, Chulalongkorn University. She graduated in academic year 2009 with GPA of 3.75.

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