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CORPORATE CASH HOLDINGS, EARNINGS MANAGEMENT AND CORPORATE GOVERNANCE: EVIDENCE FROM THAILAND

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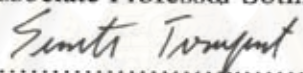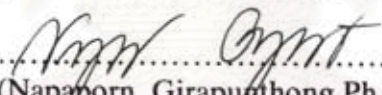
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สุชล เอี่ยมชีรางกูร: การถือเงินสดของบริษัท การจัดการกำไรและธรรมาภิบาลบริษัท: การศึกษาสำหรับประเทศไทย. (CORPORATE CASH HOLDINGS, EARNINGS MANAGEMENT AND CORPORATE GOVERNANCE: EVIDENCE FROM THAILAND) อ.ที่ปรึกษาวิทยานิพนธ์หลัก: ร.ศ. ดร. สันติ ถิรพัฒน์, 40 หน้า.

วิทยานิพนธ์ฉบับนี้ศึกษาเกี่ยวกับความสัมพันธ์ของการถือเงินสดของบริษัท, การจัดการ กำไรและธรรมาภิบาลบริษัทในปี 2002-2007 โดยมีกลุ่มตัวอย่างคือบริษัทที่จดทะเบียนในบริษัท หลักทรัพย์ของประเทศไทยจำนวน 246 บริษัท งานวิจัยฉบับนี้ใช้ดัชนีธรรมาภิบาลบริษัทเป็นตัววัด ระดับธรรมาภิบาลของบริษัท ดัชนีนี้สามารถที่จะแบ่งเป็นดัชนีรองได้ห้าดัชนีคือ โครงสร้างของ คณะกรรมการ การขัดแย้งทางผลประโยชน์ บทบาทของคณะกรรมการ สิทธิของผู้ถือหุ้น และการ เปิดเผยข้อมูลและความโปร่งใส ซึ่งดัชนีรองเหล่านี้ได้ครอบคลุมแง่มุมหลักของธรรมาภิบาลบริษัท อย่างครบถ้วน

ผลวิจัยแสดงให้เห็นว่าไม่มีความสัมพันธ์ระหว่างการถือเงินสดของบริษัท การจัดการกำไร และธรรมาภิบาลบริษัท เมื่อใช้ดัชนีธรรมาภิบาลบริษัทเป็นตัววัด อย่างไรก็ตามพบว่าสิทธิของผู้ถือ หุ้นสามารถลดระดับการจัดการกำไรได้ นอกเหนือจากประโยชน์ทางด้านวิชาการ งานวิจัยฉบับนี้ ยังเป็นแนวทางเพื่อกระตุ้นให้มีความพยายามในการลดปัญหาตัวแทนและสนับสนุนการเพิ่ม มาตรฐานด้านธรรมาภิบาลบริษัทในประเทศไทย

ภาควิชา	การธนาคารและการเงิน	ลายมือชื่อนิสิต	_สุชล เอี่ยมชีรางกูร_
สาขาวิชา	การเงิน	ลายมือชื่ออ.ที่ปรึกษาวิทยานิพนธ์หลัก	_สันติ_
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508 22098 26 : MAJOR FINANCE
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SUCHON EAMSHERANGKOON : CORPORATE CASH HOLDINGS, EARNINGS MANAGEMENT AND CORPORATE GOVERNANCE: EVIDENCE FROM THAILAND. ADVISOR: ASSOC. PROF. SUNTI TIRAPAT, Ph.D., 40 pp.

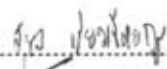This study aims to investigate the relationship of cash holdings, earnings management and corporate governance during 2002-2007 on 246 Thai listed firms. I use corporate governance index as proxy of corporate governance. This index divided into five sub-indices; board structure, conflict of interest, board responsibilities, shareholder rights, and disclosure and transparency, which capture major aspects of corporate governance.

The results show that there is no significant association either corporate cash holdings or likelihood of earning managements with the corporate governance index. However, shareholder rights, one of the sub-indices of corporate governance index, are associated with reduced levels of earnings manipulation. In addition to providing new knowledge for academic field, this study provides a useful platform for practitioners alike in an attempt to eliminate agency problem and improve corporate governance standard in Thailand.

Department : Banking and Finance   Student's Signature :

Field of Study : Finance   Advisor's Signature :

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Chapter 1
Introduction

Background of the Study

The corporate governance is important aspect concerned by both shareholders and investors because as the shareholders, one would want to maximize their own wealth through their own operating firm. However, as long as the firm is operated by managers, who in turn might waste corporate resource for their own benefits, the objective to maximize shareholders wealth might be neglected. According to Pecking order theory, firms should use cash as the first source of fund to invest because it's the lowest cost of financing. Moreover, the return from profitable project is higher than the return of cash holdings. However, the conflict of interest may occur as managers may have incentive to hold cash for building their own empire, investing in their pet projects or even spending for their own luxurious commodities. As a result, the material question of shareholders arises: whether firm hold excess cash and abandon the objective to maximize shareholders' wealth.

The demand to hold cash of managers may cause the earnings manipulation. Since managers want cash to satisfy them, they may create the financial statement to increase cash balance for their own interests. Moreover, the managers' compensations are partly tied to company's performance, while the most obvious and easiest way to evaluate company's effectiveness is through financial report. Thus, managers might have incentive to create statement to show consistently good performance. Not only shareholders are affected from this conflict of interest problem but outside investors also are influenced. Financial statements give company's information for evaluating any financial activities such as debt approval or securities trading. The manipulated financial report will not reflect company's true economic value that will lead to unreliable valuation and, in turn, wrong investment decision.

As mentioned earlier about the importance of corporate cash holding and earning management, further studies has focused on the effect of corporate governance on corporate cash holding and earning manipulation. Even though the relationships are different in each samples; non-monotonic relationship in United Kingdom (Ozkan et al., 2004), negative relationship between shareholder rights and cash holding in international (Dittmar et al., 2003), while positive relationship in United State (Harford et al., 2008), overall, the empirical results show significant relationship between corporate governance and cash holdings. For earnings management, all studies are examined using United State as the sample, the results show that firms with good corporate governance will have least likelihood to manipulate financial report (Xie et al., 2001; Chtourou et al.; 2001, Klein, 2002; Frank Yu, 2006)

There is a gap from previous studies that most of them are concern the relationship between corporate cash holdings, earnings management and corporate governance in high shareholders protection countries such as United State and United

Kingdom. However in low shareholder protection environment, the conflict of interest problem might be severe and has significant impact to shareholders, who want to maximize their own wealth. The manipulation of financial statements might becomes more serious for concerning, too, because low shareholder rights give high opportunities for manager for earnings management and investors will perceive wrong firms' information to evaluate firms' performance. As a result, I choose Thailand as the sample to investigate the relationships of corporate cash holding, earnings management and corporate governance. Not only Thailand is indicated as has low shareholder protection (Dittmar et al., 2003) but Thailand also faced crisis due to the lack of high standard in corporate governance (Tom Yum Kung crisis in 1997). Moreover, the previous studies of the relationship corporate cash holding and corporate governance show conflict results when using different samples. Hence, investigate using Thai listed companies is essential to find the conclusion of this relationship in Thailand.

Statement of Problem

Due to the conflict of interest between shareholders and managers, managers may want to hold excess cash and manipulate financial statement for their own interest. Even though cash holdings generate low rate of return, managers may want to accumulate it for satisfied them such as for building their own empire, investing in their pet projects or even spending for their own luxurious commodities. As the result, managers will accumulate cash more than is necessary especially in weak corporate governance standard environment. The need of cash and their compensation based on firm performance also lead to earnings manipulation. Nonetheless, I expect the strong corporate governance can reduce this problem. In order to investigate the linkage between corporate cash holdings, earnings management and corporate governance, it is required to find the empirical results in this study.

Objectives of the Study

To examines the empirical determinants of cash holdings and earnings management for a sample of all Thai firms over the period 2002 – 2007, as a proxy of country in weak corporate governance environment, by focus on the effect of corporate governance to cash holdings and earnings management.

Scope of the Study

For my empirical analysis, in order to analyze the relationship of corporate cash holdings, earnings management and corporate governance in period 2002 – 2007, I use a sample of all publicly traded Thai firms listed on the Stock Exchange of Thailand (SET) that have continuous financial data from 1999 to 2007.

Contribution

This paper has two main contributions:

1) This study examine the effect of corporate governance to cash holdings and earnings management in weak corporate governance environment such as Thailand: As there are many studies investigate these relationships but most are done by using high shareholder protection country (indicated by Dittmar, Mahrt-Smith, and Servaes (2003)) as the sample. However countries with low shareholder rights may or may not have the same relationship as high one. But only few studies pay attention on them. Thailand, our sample, is indicated as country with low shareholder protection. Although, the study of international corporate governance and cash holdings of Dittmar, Mahrt-Smith, and Servaes has done on Thailand already, they use shareholder rights as representative of corporate governance, which leads to another contribution.

2) This paper use CGI as the proxy of corporate governance: Previous studies use various corporate governance proxies such as ownership (Ozkan et al., 2004), anti-takeover G-Index (Harford et al., 2008), shareholder rights (Dittmar et al., 2003), and board and audit committee characteristics (Chtourou et al., 2001; Bao Xie, 2001; Klein, 2002 and Frank Yu, 2006), which I believe that these are not enough to capture all aspects of corporate governance in Thailand. Hence, I use CGI (Sudarat Ananchotikul, 2006) as the proxy of corporate governance and also developed the CGI to be better captured the main aspects of corporate governance in Thailand, for example, include scoring a controlling family member as a CEO.

Methodology in Brief

To investigate the relationship between corporate governance and cash holdings, and corporate governance and earnings management in Thailand, in analyze panel regressions by using control variables inspired by the works of Ozkan and Ozkan (2004) and Chtourou, Bedard and Courteau (2004). I estimate earnings management by using discretionary accruals, which is a product from model of Yu (2006): the modified version of the Jones model (Dechow et al., 1995). Furthermore, to fulfill the gap, I use corporate governance index (Sudarat Ananchotikul 2006), which contains 5 sub-indices that cover all major corporate governance aspects in Thailand: 1) Board Structure 2) Conflict of Interest 3) Board Responsibilities 4) Shareholder Rights, and 5) Disclosure and Transparency. This proxy of corporate governance should be well-explained the relationship in emerging country.

Organization of the Study

After the introduction that contains objectives, contributions and methodology in summary of this study, the next chapter is literature review, which contains the previous works about the relationship between corporate cash holdings, earnings management and corporate governance that inspired my works. Chapter 3 shows data

description and my hypotheses which lead to Chapter 4. The results of the tests are shown in Chapter 5. The last chapter is conclusion to summarize this study.

Chapter 2
Literature Review

2.1 The Determinants of Corporate Cash Holdings

It is irrelevant to hold liquid assets including cash in the perfect capital market because firms can raise fund whenever they need at no cost. And as there is no liquidity premium, firms don't lose opportunity when hold liquid assets. As the result shareholder wealth is unchanged from the decision of holding liquid assets.

However, the major motivation to hold cash in inefficient market focus on the transaction cost motive and the precautionary motive. The transaction cost mentioned that firms with a shortage of internal fund will raise external financing sources by selling assets, issuing new debt and/or equity, or cutting dividends. But there is a cost of rising outside funds in form of both fixed and variable cost. As the result, firms that likely to have high transaction cost such as non-public firms (Opler et al., 1999) will hold more liquid assets. On the other hand, the precautionary motive emphasizes on the cost of the forgone investment opportunity. Firm might be prevented from invest in profitable project if they does not have liquid assets. Consequently, firms accumulate cash to meet their unanticipated contingencies that may arise and to finance their investments if the costs of other sources of funding are prohibitively high. In the following sections I will discuss the major cash determinants and some features related to corporate governance.

Information Asymmetries, Agency Costs of Debt, and Liquid Asset Holdings

Information asymmetries between firms and investors play important role to make external financing costly. The outside investors have less firm's information than the managers so they will buy securities on discount to ensure that they won't get the overpriced one. Myer and Majluf (1984) mentioned that this discount sometimes will make securities underpriced than what it should be from manager's view. And it may discourage the firm to sell the securities and reduce or ignore the investment. Consequently, firms will raise fund from the lowest cost to the highest one; retained earning, then safe debt, then risky debt and finally equity, or follow the financing hierarchy theory. In other word, they want to raise fund internally than informationally sensitive external finance. Myers and Majluf also argue that the problem is more severe for firms whose values are determined by growth options. If a firm faces a shortage in cash, they may discard the profitable project, which increase firm value and shareholder wealth. Moreover from the study of Williamson (1988) show those firms with greater growth opportunities are often come with higher bankruptcy costs. This is because growth opportunities are intangible in nature and their value falls rapidly when firms face financial distress. Hence, it is imply that we expect to see more liquid assets in firm with great growth opportunities.

In the point of agency cost of debt, the conflict occurred from the different interests between shareholders and debtholders. The study of Myers (1977) refers that issuing debt is expensive in form of the required promised yield and the covenants

and most of benefit go to debtholders. So the shareholders will prefer not to raise fund even to invest in valuable projects, which in turn lead to underinvestment problem. He also mentioned that this problem is harsher for growth firms with risky debt. Using the market-to-book ratio as the proxy of investment opportunities (Jung et al., 1996), one would expect to see more cash in firm with high ratio, holding the degree of information asymmetry between managers and investors constant.

The size of firms is also material to present information asymmetry problem. The study of Brennan and Hughes (1991), show that large firms have less information asymmetry than small firms. This is agreed with a trade off model to determine optimal cash holdings developed by Kim and Stulz (1998) that small firms have higher cost of external financing than large firms. This leads to one's expectation that small firms will hold more cash.

Liquidity Constraints and Cash Substitutions

The firm with more volatile cash flow will face more chances to be short of liquid assets and lead to underinvestment problem. Consequently, firm with more volatility with hold more liquid asset due to the liquidity constraint. This is consented with, Minton and Schrand (1999) that the firm with high cash flow volatility will permanently forgo the valuable investment and the cost of raising external funds will increase with the frequency of shortage of cash flow. Thus cash flow uncertainty should has positive relationship with cash holdings

Firms may use borrowing in stead of holding cash. But the cost of debt increases as the debt to asset ratio increases (Baskin, 1987). The more leverage, the higher probability of bankruptcy faced by firms. However there will not always be negative relationship between cash holding and leverage level. The firms that have very high leverage will increase the likelihood of financial distress and hold more liquidity assets. Hence, the relationship between leverage and cash holdings is still unclear. According to the work of Ozkan and Ozkan (2004), non-cash liquid assets is also cash's substitution because firms can raise fund by turn this liquid assets into cash. So they use net working capital minus cash to total assets as a proxy. Finally, firm can cut dividend payment to rising fund. Thus they are expected to hold less cash. Opler et al. (1999) show the negative relationship between cash holdings and dividend. However, Ozkan and Ozkan(2004) argue that the dividend paying firms may hold higher cash to avoid the shortage to fund the dividend payment compared to non-dividend paying firms.

Cash Holdings and Corporate Governance: Recent Empirical

The agency cost view of corporate cash holding suggests that managers who are less concerned with shareholder will have incentives to hold excess cash. Opler et al., (1999) argued three motives; first, the risk averse manager will hold excess cash to avoid anti-takeover amendment. Second, the market discipline make debt raising take times. Therefore, managers prefer to hold cash to finance the project whenever they want. However, the return of holding liquid assets is low and may not optimize

shareholder wealth. Moreover outsiders, who don't have enough information to perceive firm behavior, will request higher cost of external financing. As they think there is the possibility that managers will use cash for their own objectives. Finally, the management may want to accumulate cash in the firm so they can choose to spend it for their own benefit or invest in poor projects when good projects are absent.

As the result of conflict of interest between shareholder and manager, many recent studies devote to the relationship between cash holdings and corporate governance. Using ownership, board structure and controlling shareholders of firms as proxies of corporate governance, Ozkan and Ozkan (2004) suggest that in United Kingdom, the ownership structure has significant effects on determination of corporate cash holdings. The relationship is non-monotonic, cash holdings first fall as managerial ownership increases up to 24%, possibly due to the alignment effects of managerial ownership dominate the entrenchment effects. Then, cash holdings rise as managerial ownership increases to 64%, then falls at higher levels of managerial ownership. This pattern does not change significantly with the board composition or ultimate controlling shareholders. The empirical result in United State of Harford, Mansi, and Maxwell (2008) also shows the relation between cash holdings and corporate governance. The firms with weaker corporate governance structures actually have smaller cash reserves. They also argue that using G-Index (Gomper et al., 2003), the firms with strong shareholders right hold more cash which inconsistent with the international studies of Dittmar, Mahrt-Smith, and Servaes (2003). Dittmar et al. argue that the countries with low shareholder protection will hold cash twice times compared to good protected ones. Moreover, some cash holdings motives from theories, such as investment opportunities and asymmetric information—difficult to access external funding, seem to be less important for counties where shareholder rights are poor protected. This contradiction encourage me to investigate the relationship between cash holdings and corporate governance in Thailand, which indicated statistics by Dittmar et al. that low shareholders right but hold less cash.

2.2 Earnings management, the Roles of the Board of Directors and the Roles of the Audit Committee

Earnings Management

According to Healy and Wahlen (1998) earnings management occurred: . . . when managers use judgment in financial reporting and in structuring transactions to alter financial reports to either mislead some stakeholder about the underlying economic performance of the company, or to influence contractual outcomes that depend on reported accounting numbers (p. 6).

The accrual accounting used under Generally Accepted Accounting Principles (GAAP), provide managers the opportunity to manipulate financial items such as artificial increase (decrease) revenue or timing recognition. This is because in many companies, manager's compensations are divided in to base salary and bonus based on firm's performance relative to a benchmark. Thus, they have incentives to make consistently good performance financial statements. Beyond the management

compensation problem, which in turn lead to agency problem, earnings management also provide false information to investors. The incorrect information leads to false securities price. Therefore investor decision will not base upon on firm's true economic value. In addition, Xie et al. (2001) argue that one can view earnings management as agency cost. And earnings management occurs around specific corporate events in which this agency conflict is most likely to occur, but the results have been mixed.

The Roles of the Audit Committee

Audit committee is an operating committee of the Board of Directors, typically charged with oversight financial report and disclosure. The members of committee are drawn from members of company's board of directors, which composed of independence and outside directors. Although the main role of the audit committee is to prevent fraudulent financial report, Klein (2002) refers to many studies show that many report numbers are the result of negotiation between firms and audit committee. Nonetheless, in general, audit committee role is to reduce the magnitude of accruals.

Audit Committee Independence

According to the Blue Ribbon Committee (1999: 22) "several recent studies have produced a correlation between audit committee independence and two desirable outcomes: a higher degree of active oversight and a lower incidence of financial statement fraud." Therefore, one would expect negative relationship between board independence and earnings management.

Competence of Audit Committee Members

The Blue Ribbon Committee (1999) also recommends that each members of the audit committee should be or become financially literate and at least one member should have accounting or related financial management expertise. McMullen and Randghun (1996) support by show that firms with CPA as one of audit committee are lease likely to be subjected by SEC enforcement actions. Hence, competences of audit committee members will be negative related to earnings manipulate.

Number of Meetings

McMullen and Randghun (1996) suggest that the number of audit committee meetings subject to the earnings management. They find that firms with lower frequent of meeting are subjected to SEC enforcement actions or restating their quarterly reports more than other firms. Best practices suggest firms to have three or four meetings a year (Cadbury Committee, 1992; Price Waterhouse, 1993).

The Roles of the Board of Directors

Since the audit committee is drawn from board, the oversight of financial process is also affected by board of directors. The Blue Ribbon Committee (1999) states that "the performance of audit committees must be founded in the practices and attitudes of the entire board of directors."

Board Size

Previous studies show contradicts results between the relationship of board size and firm performance. Dalton et al. (1999) see positive relationship between board size and effectiveness, Yermack (1996) shows that better performance comes from smaller boards, while Abbott, Parker, and Peters (2000) find no relationship between two. The prediction of board size and earning manipulation is indetermination.

Board Independence

Board independence is subject to agency problem (Fama and Jensen, 1983). The independent directors will act in the concern of shareholder right. The studies of Chtourou Bedard and Courteau (2004) concern 3 aspects of board of directors independence; the inclusion of independent directors on the board, the separation of the roles of chair and Chief Executive Officer and the presence of an independent nomination committee.

Earnings Management and Corporate Governance: Recent Empirical

The recent studies show consistent result of the relationship between earnings management, the characteristics of audit committee and board of directors. Using audit committee and board of directors' characteristics as proxies of corporate governance, Xie et al. (2001) find that firms with more independence audit committee, have financial sophisticated as the committee members and higher number of meetings, have low likelihood to manipulate financial reports. Chtourou et al. (2004), Klein (2002) and Yu (2006) show a negative relationship is found between audit committee independence and abnormal accruals. A negative relationship is also found between board independence and abnormal accruals.

Overall, the theories conclude that firms hold cash for these following main reasons: 1) Internal fund, such as cash, is low cost financing due to transaction and information asymmetries of external financing cost. 2) To prevent cost of the forgone investment opportunity when firm does not have liquid assets to invest in unexpected profitable project. However, due to conflict of interest, excess cash is still a question to be concerned by shareholders, who have wealth-maximization as the objective. Previous studies find that there is the relationship between corporate governance and cash holding but the direction is still ambiguous when using different samples and corporate governance proxies, hence the result is inconclusive. The result of conflict of interest also reflects on financial report as managers manipulate it to meet their satisfaction not reflect true firm's value. The problem seems to be more severe for firms with poor characteristics of audit committee and board of directors. Previous studies found negative relationship of earnings management and corporate governance. However, there are gaps from previous studies. The first gap is most studies concern the relationship only in high shareholders protection countries. The second one is previous studies use proxy that reflects only one aspect of corporate governance such as characteristics of audit committee and board of directors, ownership and shareholder rights. Hence, my study aims to examine the conflict of interest by testing the relationship of corporate cash holdings, earnings management

and corporate governance, using Thailand as the sample and corporate governance index as the proxy of corporate governance.

Chapter 3
Sample and Data Description

3.1 Sample Selection

For my empirical analysis, I use publicly traded Thai firms listed on the Stock Exchange of Thailand (SET). All of these firms have continuous financial data from 1999 to 2007, though the sample period of panel regression is 2002 to 2007, the reason will be discussed later in next section: regression analysis. The sample set of this study is constructed by first, exclude firm in non-performing as some calculations use market value of equity. Second, firms that are discontinued from 1999 to 2007 were dropped. From these criteria, I got 246 firms or 1,476 observations.

3.2 Sources of data

I used the financial data from Datastream and company annual report from Securities and Exchange Commissions (SEC). For construct CGI, I use the data from 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.

3.3 Data Descriptive

Table 1 presents descriptive statistics for the control variables used in corporate cash holdings and corporate governance of 246 Thai firms. In order to eliminate biasness caused by outliers, I have adjusted those observations by changing ceiling value calculated by mean + 4 std. dev. while flooring value is calculated by mean − 4 std. dev. if they fall into more or lower than mean +/- 4 std. dev. respectively. This table provides statistics of the sample including mean, median, standard deviation, and 25th and 75th percentiles. Our main analysis, cash holdings, has a mean of 9.5% and a median of 5.7% with a standard deviation of 10.4%. In terms of financial data, the average firms in the sample has cash flow ratio about 9.8%, liquidity about 14%, leverage about 31.1%, market to book of about 1.133, variability of cash flow ratio is about 4.3% and dividend payment to total assets is about 2.8%. The average size of this sample is 9,725,722 thousand Baht. and the natural log of total asset is 6.530. Profit mean shows 659,671 thousand Baht., while net profit margin is -0.023 in mean.

3.4   Research Hypotheses

I test the following two hypotheses using listed Thai firms as the sample.

H1:   There is a negative relationship between corporate governance and corporate cash holdings

Cash give low rate of return to shareholders so for publicly traded firms, which have lower asymmetric information and transaction cost, should hold cash just

for invest in unanticipated profitable project and use the rest for money-making investment to gain higher rate of return, which in turn leads to achieve managers and shareholders' objective, maximize shareholder wealth. I expect firms with strong corporate governance should have low conflict of interest. As the result, managers in weak corporate governance standard firms will accumulate cash more than is necessary. Hence, one would expect to see negative relationship between corporate governance and corporate cash holdings

H2:   There is a negative relationship between corporate governance and earnings management:

Managers' compensations are partly based on firm's performance relative to benchmark so managers have incentive to make consistently good performance financial statement. I expect that the strong corporate governance system will lower chance of earning manipulation as the results from previous studies also support this hypothesis. Hence, one would expect to see negative relationship between corporate governance and earnings management.

Table 1
Descriptive statistics on corporate cash holdings and corporate governance regression

This table shows the sample characteristics for 246 firms over period 2002 - 2007. All firms have continuous financial data from 1999 – 2007. In order to eliminate biasness caused by outliers, I have adjusted those observations by changing ceiling value calculated by mean + 4 std. dev. while flooring value is calculated by mean – 4 std. dev. if they fall into more or lower than mean +/- 4 std. dev. respectively. CASH is the ratio of total cash and equivalent items to total assets. CFLOW is the ratio of pre-tax profit plus depreciation divided by total assets. LIQ is the ratio of net working capital to total assets. LEV is measured as the ratio of total debt (short- and long-term debt) to assets. MKTBOOK is measured as (book value of assets minus book value of equity plus the market value of equity) divided by book value of assets. ln SIZE is measured as the natural log of total assets. VARIABILITY is computed using the firm's standard deviation of the cash flow ratio for the past 3 years or start the calculation from 1999, using quarterly data. DIVIDEND is the ratio of dividend payments to total assets.　　NET PROFIT MARGIN is the ratio of net income before extra ordinary items on total sales.

	Mean	Min	25%	Median	75%	Max	Std. Dev.
CASH	0.096	0.000	0.014	0.048	0.131	0.803	0.120
CFLOW	0.097	-0.647	0.040	0.090	0.145	0.682	0.403
LIQ	0.119	-0.579	0.000	0.079	0.271	0.888	0.303
LEV	0.303	0.000	0.044	0.221	0.411	4.203	0.787
MKTBOOK	1.208	0.174	0.824	1.005	1.304	29.262	1.196
SIZE (thousand Bt.)	9,725,722	51,620	1,094,069	2,498,945	6,956,582	276,000,000	25,425,863
ln SIZE	6.530	4.713	6.060	6.389	6.856	9.202	0.686
VARIABILITY	0.070	0.000	0.030	0.058	0.091	0.506	0.063
DIVIDEND	0.037	0.000	0.016	0.031	0.057	0.750	0.063
PROFIT (thousand Bt.)	659,671	-6,508,000	24,079	117,977	409,606	33,707,010	2,667,946
NET PROFIT MARGIN	0.032	-7.838	0.019	0.063	0.127	3.180	0.519

Chapter 4
Methodology

4.1 Corporate Governance Index Construction

I construct Corporate Governance Index (CGI) base on the approach of Sudarat Ananchotikul (2006). This index using information of Thai listed companies from publicly source, 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, to avoid bias from self-evaluated questionnaire. The obtained data from 62 questions, 74 questions of these will be grouped in to five governance components: A) Board Structure, B) Conflict of Interest, C) Board Responsibilities, D) Shareholder Rights, and E) Disclosure and Transparency.Scores are given to each of the governance items and taking a weighted average of the sub indexes to create CGI. As the result CGI runs from 0 to 100 with higher values indicating better corporate governance. The criteria are based on corporate governance best practice of SEC.

Board structure, one of the sub-indices of corporate governance index, contains the questions that reflect the structure of board of director such as size, numbers of board of director, numbers of audit committee, numbers of directors who also managers. Good corporate governance on board structure will allow directors be able to make decisions independently for the best interest of companies and shareholders. Next sub-index, Conflict of interest, focuses on power of chairman, CEO, and directors, and existence of committees. Chairman and CEO should not be same person as well as chairman should not be a controlling-family member to avoid power overwhelming of one person. The committees can also help solve conflict of interest problem such as remuneration committee makes transparency for setting board compensation. For board responsibilities index, the questions concentrate on basic responsibilities that directors must act or support as mentioned in corporate best practice of SEC such as existence and numbers of board meetings per year, existence of audit committee meeting, and existence of directors evaluation system. Questions of the forth sub-index, shareholder rights, show basic rights that shareholders should have such as if firm has annual shareholder meeting, what voting rule is, what the minimum dividend according to dividend policy is. The last sub-index, disclosure and transparency, shows the level of transparency the firms have by examine if firms disclose material information such as board compensations, directors and managers shareholdings, and related party transaction. Full detail of the questionnaire is showed on Appendix A.

For the proxy of corporate governance, corporate governance index, table 2 presents mean and median level of it and its sub-indices over period 2002-2007: A. Board Structure, B. Conflict of Interest, C. Board Responsibility, D. Shareholder Rights and E. Disclosure and Transparency. The sub-indices are shown in percentage of their maximum score of data collected through questionnaire. Each sub-index is given a weight of 20%, 25%, 20%, 10% and 25%, respectively, to calculate corporate governance index. The maximum score of each column is 100, the strongest corporate

governance of a firm. Panel A presents corporate governance index's statistics each year. The data can be interpret that in average corporate governance index trend to increase every year over period 2002-2007; 37.655, 43.474, 50.116, 51.753, 54.312 and 55.531, respectively. This trend also appears in all corporate governance sub-indices. The corporate governance index grows very fast in first few years (2002-2004), after that the growth rate is lower (2004-2007). In column 2002-2007, the highest average score of sub-indices of Thai firms in my sample is E. Disclosure and Transparency (59.473), while the lowest one is C. Board Responsibility (43.898). The overall mean and median levels of corporate governance index of all 246 firms in the sample is 48.845 and 48.664, respectively. These number show that on average, Thai firms have corporate governance score lower than half of maximum score (50.000) of the questionnaire.

4.2 Estimations of Discretionary Accruals

Accounting earnings have two major components: cash flows from operations and accounting adjustments called accruals. Since the determination of signs and sizes of accruals needs a practitioner's judgment and estimation, accruals are vulnerable to manipulation at the discretion of opportunistic managers.

So I use discretionary accruals as the proxy for earnings management. Since all of the accruals are not the results of earnings manipulation. Some accrual adjustments are necessary and appropriate and need to be applied on a regular basis. To detect earnings management, total accruals can be decomposed into two parts: non-discretionary accruals (NDAs) and discretionary accruals (DAs). Referred to the work of Xie et al.(2001), DAs are used as the proxy for earnings management in a variety of studies related to earnings management such as IPOs (Teoh et al., 1998), SEOs (Rangan, 1998; Teoh et al., 1998), MBOs (DeAngelo, 1986; Perry and Williams, 1994), M&A (Erickson and Wang, 1999), proxy contests (DeAngelo, 1988), debt covenants (Defond and Jimbalvo, 1994), and compensation plans (Holthausen et al., 1995)

I follow a model of Yu (2006), which is the modified version of the Jones model (Dechow et al., 1995). The model estimates discretionary accruals from regressions of total accruals on changes in sales and on property, plant, and equipment (PPE) within industries.

To get discretionary accruals, I first run the following cross-sectional OLS regression to estimate of coefficients α_1, α_2, and α_3.

$$\frac{TA_{it}}{A_{it-1}} = \alpha_1 \frac{1}{A_{it-1}} + \alpha_2 \left(\frac{\Delta REV_{it}}{A_{it-1}} - \frac{\Delta AR_{it}}{A_{it-1}}\right) + \alpha_3 \frac{PPE_{it}}{A_{it-1}} + \varepsilon_{it} \tag{1}$$

where i indexes firms, t indexes time, TA it = Net income – Cash flow from operation, ΔREV it = changes in sales revenues, ΔAR it = change in receivables, PPE it = gross property, plant, and equipment, A_{it-1} = lagged total assets

Then I use the estimated α_1, α_2, and α_3 to calculate non-discretionary accruals.

$$NDA_{it} \equiv \hat{\alpha}_1 \frac{1}{A_{it-1}} + \hat{\alpha}_2 \left(\frac{\Delta REV_{it}}{A_{it-1}} - \frac{\Delta AR_{it}}{A_{it-1}} \right) + \hat{\alpha}_3 \frac{PPE_{it}}{A_{it-1}} \tag{2}$$

So discretionary accruals can be derived as:

$$DA_{it} \equiv \varepsilon_{it} = \frac{TA_{it}}{A_{it-1}} - NDA_{it} \tag{3}$$

All the variables are scaled by total assets in the beginning of the period, and the magnitude of a firm's discretionary accruals is indicated as a percentage of firm's asset.

Table 3 shows mean and median levels of total accruals, non-discretionary accruals and abnormal accruals or discretionary accruals of the sample. Panel A shows a mean and a median of total accruals is -2.3% and -3.6% respectively, meaning that in average, the firms in my sample have cash flow from operation higher than net income. Discretionary accruals, the result of total accruals and non-discretionary accruals, has a mean of -0.7% and a median of -1.8% with standard deviation of 10.9%. The negative sign of earnings management means that firms manipulate earnings to make their financial statement look worse than actual to pay less tax. The lower net income from earnings management also implies that shareholders receive fewer dividends. Then I divided sample into 3 groups, sorting by earnings management or discretionary accruals. Each portfolio contains 490 observations. The first portfolio contains firms with highest positive discretionary accruals, named AEM+, the second portfolio contains firms with highest negative discretionary accruals, named AEM-, and the last portfolio contain firm with low discretionary accruals, name LEM. Means of AEM+, AEM-, LEM are 0.099, -0.104 and -0.017, respectively. Most of characteristics are very similar among 3 portfolios, which are non-discretionary accruals, natural log of asset, and size. However, total accruals and net profit margin shows different among AEM+, AEM-, and LEM.

Table 4 shows descriptive statistics for the control variables used in earnings management and corporate governance. The control variables are used as they are possibly correlated with the bias in the measurement of abnormal accruals (Chtourou Bedard and Courteau 2004). Earnings management is the discretionary accruals that I mentioned above, becomes dependent variable in this regression. Table 2 reports a mean and a median of earnings management about -0.7% and -1.8%, respectively, with standard deviation of 10.9%. The rest control variables has average of |CFLOW| about 11.4%, |EARNINGS| about 8.3%, size of about 6.489, return on asset about 5.2%, sales growth about 8.9% and leverage about 31.1%.

4.3 Corporate Governance and Cash Holdings

Based on the approach of Ozkan and Ozkan (2004), I examine the relationship between cash holdings and corporate governance characteristics in 2002-2007 by estimating the coefficient in the following logistic model

$$CASH_{it} = \alpha_0 + \alpha_1 CASH_{it-1} + \alpha_2 CFLOW_{it} + \alpha_3 LIQ_{it} + \alpha_4 LEV_{it} +$$
$$\alpha_5 MKTVALUE_{it} + \alpha_6 SIZE_{it} + \alpha_7 VARIABILITY_{it} + \alpha_8 DIVIDEND_{it} +$$
$$\alpha_9 CGI_{it} + \varepsilon_{it} \qquad (4)$$

where cash holding *(CASH)* is the ratio of total cash and equivalent items to total assets (see Ozkan et al., 2004) and *CGI* is a proxy of corporate governance. The remaining variables in this study are motivated by Opler et al. (1999) and Ozkan and Ozkan (2004). The cash flow ratio (*CFLOW*) is the ratio of pre-tax profit plus depreciation divided by total assets. I use net working capital to total assets as the proxy of liquidity (*LIQ*). Firm leverage (*LEV*) is measured as the ratio of total debt (short- and long-term debt) to assets. The market to book ratio (*MKTBOOK*), a proxy for growth opportunities, is measured as (book value of assets minus book value of equity plus the market value of equity) divided by book value of assets. Firm size (*SIZE*), a proxy for takeover deterrent, is measured as the natural log of total assets. The standard deviation of the firm's cash flows (*VARIABILITY*), a proxy for variability or business conditions, is computed using the firm's standard deviation of the cash flow ratio for the past three years or start the calculation from 1999. Dividend (*DIVIDEND*) is the ratio of dividend payments to total assets.

I also run another regression to divided CGI into five corporate governance components to find each contribution to corporate cash holdings.

$$CASH_{it} = \alpha_0 + \alpha_1 CASH_{it-1} + \alpha_2 CFLOW_{it} + \alpha_3 LIQ_{it} + \alpha_4 LEV_{it} +$$
$$\alpha_5 BANKDEBT_{it} + \alpha_6 MKTVALUE_{it} + \alpha_7 SIZE_{it} + \alpha_8 VARIABILITY_{it} +$$
$$\alpha_9 DIVIDEND_{it} + \alpha_{10} BRDSTUCTURE_{it} + \alpha_{11} CONFLICT_{it} +$$
$$\alpha_{12} BRDRES_{it} + \alpha_{13} SHRRIGHT_{it} + \alpha_{14} DISCLOSURE_{it} + \varepsilon_{it} \qquad (5)$$

where the additional factors represent Board structure (*BRDSTUCTURE*), Conflict of Interest (*CONFLICT*), Board responsibilities (*BRDRES*), Shareholder rights (*SHRRIGHT*), and Disclosure and transparency (*DISCLOSURE*), which are the sub-categories of CGI.

4.4 Corporate Governance and Earning Managements

I examine the relationship between earnings management and corporate governance in 2002-2007 by using control variables inspired by Chtourou et al. (2004). This relationship is observed through the following regression.

$$EARNMAN_{it} = \beta_0 + \beta_1|CFLOW|_{it} + \beta_2|EARNINGS|_{it} +$$
$$\beta_3NEG\_CF_{it} + \beta_4LOSS_{it} + \beta_5ASSET_{it} + \beta_6ROA_{it} + \qquad (6)$$
$$\beta_7GSALES_{it} + \beta_8DEBT_{it} + \beta_9CGI_{it} + \varepsilon_{it}$$

where *EARNMAN* or earnings management measures by using discretionary accruals as proxy (see equation A3). *CGI* is the measurement of corporate governance. According to Chtourou Bedard and Courteau (2004), I use the following variables as the control variables in this study. Absolute value of cash flow ($|CFLOW|$) is the absolute value of (cash flow from operation divided by lagged total asset). Absolute value of earnings ($|EARNINGS|$) is the absolute value of (net income before extraordinary items deflated by lagged total asset). Negative cash flow (*NEG_CF*) is an indicator variable code 1 if cash flow is negative. Also, code 1 on loss (*LOSS*) if earnings is negative. Firm size is represented as total assets (*ASSET*) is measured as the natural log of total assets. *ROA*, a proxy of profitability, is measured as net income before extraordinary items on asset. Sales growth (*GSALES*), a proxy of current growth, is computed by change of sales scaled by lagged sales. *DEBT* is total debt deflated by lagged total assets.

Same as cash holdings, I also run regression of control variables and sub corporate governance indexes as following

$$EARNMAN_{it} = \alpha_0 + \alpha_1|CFLOW|_{it} + \alpha_2|EARNINGS|_{it} +$$
$$\alpha_3NEG\_CF_{it} + \alpha_4LOSS_{it} + \alpha_5ASSET_{it} + \alpha_6ROA_{it} +$$
$$\alpha_7GSALES_{it} + \alpha_8DEBT_{it} + \alpha_9BRDSTUCTURE_{it} + \alpha_{10}CONFLICT_{it} + \qquad (7)$$
$$\alpha_{11}BRDRES_{it} + \alpha_{12}SHRRIGHT_{it} + \alpha_{13}DISCLOSURE_{it} + \varepsilon_{it}$$

where the additional factors represent Board Structure (*BRDSTUCTURE*), Conflict of Interest (*CONFLICT*), Board Responsibilities (*BRDRES*), Shareholder Rights (*SHRRIGHT*), and Disclosure and Transparency (*DISCLOSURE*), which are the sub-categories of CGI.

All variables used in this study are summarized in Appendix A

Table 2
Descriptive statistics on corporate governance index and sub-corporate governance indices

This table shows corporate governance index and sub-corporate governance indices statistics from the sample of 246 firms over period 2002 - 2007. All firms have continuous financial data from 1999 – 2007. Column 2002-2007 shows the statistics of period 2002-2007. The sub-indices are shown in percentage of maximum raw score of each index. Corporate governance index = weighted average of the sub-indices; A. Board Structure, B. Conflict of Interest, C. Board Responsibility, D. Shareholder Rights and E. Disclosure and Transparency; 20%, 25%, 20%, 10% and 25%, respectively. Corporate governance index runs from 0 – 100, the higher, the better corporate governance of firms.

	2002	2003	2004	2005	2006	2007	2002-2007
Panel A: Corporate Governance Index (CGI)							
Mean	37.655	43.474	50.116	51.753	54.312	55.531	48.845
Median	38.055	43.206	50.597	51.434	54.985	56.070	48.664
Maximum	66.145	78.839	82.643	85.976	87.976	83.211	87.976
Minimum	8.125	19.756	19.756	22.021	20.393	20.324	8.125
Std. Dev.	8.905	10.074	12.038	11.050	12.205	12.065	12.771
Panel B: Board Structure							
Mean	33.125	37.363	47.415	53.458	56.327	59.417	47.901
Median	33.333	33.333	50.000	50.000	50.000	66.667	50.000
Maximum	83.333	83.333	100.000	100.000	100.000	100.000	100.000
Minimum	0.000	0.000	0.000	0.000	16.667	0.000	0.000
Std. Dev.	15.359	16.589	20.191	20.116	20.066	20.160	21.176
Panel C: Conflict of Interest							
Mean	36.483	40.287	43.643	44.597	48.323	50.840	44.060
Median	35.417	35.417	41.667	41.667	45.833	47.917	41.667
Maximum	85.417	87.500	87.500	91.667	100.000	100.000	100.000
Minimum	0.000	12.500	12.500	0.000	12.083	10.417	0.000
Std. Dev.	11.971	12.799	14.516	15.706	15.984	19.053	15.900
Panel D: Board Responsibilities							
Mean	31.876	39.076	45.949	44.334	53.444	48.432	43.898
Median	33.333	38.398	46.667	44.525	54.667	50.118	43.333
Maximum	65.893	78.462	79.792	79.792	76.817	80.933	80.933
Minimum	0.000	13.333	10.000	3.333	10.000	13.333	0.000
Std. Dev.	14.116	14.330	15.297	13.884	15.637	12.838	15.914
Panel E: Shareholder Rights							
Mean	40.029	41.797	43.690	45.929	47.261	57.229	46.021
Median	42.857	42.857	46.259	47.619	49.728	60.204	49.048
Maximum	72.279	77.143	77.143	80.612	79.048	96.429	96.429
Minimum	0.000	0.000	4.762	0.000	0.000	0.000	0.000
Std. Dev.	18.058	17.050	16.695	15.398	16.377	13.100	17.093
Panel F: Disclosure and Transparency							
Mean	46.125	55.738	64.653	65.809	62.204	62.114	59.473
Median	50.000	60.000	70.000	70.000	60.000	60.000	60.000
Maximum	90.000	100.000	100.000	100.000	100.000	100.000	100.000
Minimum	10.000	10.000	10.000	10.000	10.000	10.000	10.000
Std. Dev.	13.645	16.969	18.073	16.415	17.858	16.672	17.955

Table 3

Descriptive statistics on total accruals and abnormal accruals

This table shows the sample characteristics of accruals for 246 firms over period 2002 - 2007. All firms have continuous financial data from 1999 – 2007. Total accruals is the ratio of (net income – cash flow from operation) divided by lagged total asset. Non-discretionary accruals (NDA) derived equation 2, where estimated α_1, α_2, and α_3 are 1184.652, 0.0494 and -0.045 respectively. Abnormal accruals or discretionary accruals (DA) is total accruals minus non-discretionary accruals (see equation 3). The portfolios; AEM+, AEM-, and LEM, contains 490 observations each, sorting by discretionary accruals.

	Mean	Median	Max	Min	Std.
Panel A: Overall statistics on accruals					
Total Accruals	-0.023	-0.036	0.115	-0.588	0.546
Non-discretionary Accruals	-0.016	-0.016	0.017	-0.127	0.124
Discretionay Accruals	-0.007	-0.018	0.109	-0.461	0.447
Panel B: Highest positive aggressive earnings management (AEM+)					
Discretionay Accruals	0.099	0.062	0.447	0.013	0.097
Non-discretionary Accruals	-0.015	-0.014	0.069	-0.127	0.020
Total Accruals	0.086	0.048	0.546	-0.055	0.109
Size (thousand Baht)	8,458,525	2,963,858	276,000,000	51,620	18,494,952
ln Size	6.516	6.470	8.441	4.713	0.567
Profit (thousand Baht)	523,467	158,363	9,722,800	-1,536,303	1,182,155
Net Profit Margin	0.110	0.073	3.180	-8.061	0.479
CGI	49.497	49.943	85.976	15.604	11.889
Panel C: Highest negative aggressive earnings management (AEM-)					
Discretionay Accruals	-0.104	-0.077	-0.045	-0.461	0.071
Non-discretionary Accruals	-0.015	-0.015	0.124	-0.081	0.015
Total Accruals	-0.120	-0.096	-0.030	-0.588	0.072
Size (thousand Baht)	10,281,645	2,338,425	217,000,000	79,143	27,278,341
ln Size	6.455	6.369	8.336	4.898	0.612
Profit (thousand Baht)	784,729	72,785	32,235,010	-6,508,000	3,677,131
Net Profit Margin	-0.227	0.044	0.560	-66.839	3.337
CGI	48.677	48.869	87.346	8.125	13.637
Panel D: Lowest earnings management (LEM)					
Discretionay Accruals	-0.017	-0.018	0.013	-0.045	0.016
Non-discretionary Accruals	-0.018	-0.018	0.097	-0.096	0.015
Total Accruals	-0.035	-0.036	0.077	-0.138	0.022
Size (thousand Baht)	10,500,174	2,495,592	258,000,000	121,288	29,330,800
ln Size	6.499	6.397	8.411	5.084	0.609
Profit (thousand Baht)	673,857	133,610	33,707,010	-2,242,122	2,549,541
Net Profit Margin	0.048	0.067	0.785	-2.898	0.260
CGI	48.457	47.749	87.976	14.616	12.708

Table 4

Descriptive statistics on earnings management and corporate governance regression

       This table shows the sample characteristics for 246 firms over period 2002 - 2007. All firms have continuous financial data from 1999 – 2007. In order to eliminate biasness caused by outliers, I have adjusted those observations by changing ceiling value calculated by mean + 4 std. dev. while flooring value is calculated by mean – 4 std. dev. if they fall into more or lower than mean +/- 4 std. dev. respectively. EARNMAN measured by using discretionary accruals as proxy (see equation A3). │CFLOW│ is the absolute value of (cash flow from operation divided by lagged total asset). │EARNINGS│ is the absolute value of (net income before extraordinary items deflated by lagged total asset). NEG_CF is an indicator variable code 1 if cash flow is negative. LOSS is an indicator variable code 1 if earnings is negative. ASSET is measured as the natural log of total assets. ROA measured as net income before extraordinary items on asset. GSALES is computed by change of sales scaled by lagged sales. DEBT is total debt deflated by total assets.

	Mean	Min	25%	Median	75%	Max	Std. Dev.
EARNMAN	0.050	-9.789	-0.115	-0.021	0.101	12.095	0.643
ICFLOWI	0.159	0.000	0.047	0.098	0.168	2.486	1.393
IEARNINGSI	0.093	0.000	0.031	0.066	0.114	1.394	0.206
NEG_CF	0.469	0	0	0	1	1	0.499
LOSS	0.159	0	0	0	0	1	0.365
ln SIZE	6.530	4.713	6.060	6.389	6.856	9.202	0.686
ROA	0.055	-1.776	0.015	0.051	0.092	0.858	0.417
GSALES	0.131	-10.270	-0.004	0.052	0.180	13.235	0.593

Chapter 5
Empirical Results

In this section I will present results of panel regression analysis focusing on the questions of whether corporate governance (using corporate governance index as a proxy) influence corporate cash holdings and earnings management.

Corporate Governance and Cash Holdings

I find the determinants of cash holdings by start at the question of whether corporate governance affect cash levels of firm. To do so, I estimate a panel regression on cash model of Ozkan and Ozkan (2004). The period for the regression is 2002 to 2007, however, I use firms that have continuous financial data from 1999 to 2007 because VARIBILITY, one of control variables, has to measure using past 3 years data.

Table 5 shows set of estimation results for the panel regression. In column Model 1, the regression reports the result from equation 4 that includes the control variables and corporate governance index (CGI) for our main analysis. In column (B2), I categorize corporate governance index into 5 sub-indices: A. Board Structure, B. Conflict of Interest, C. Board Responsibility, D. Shareholder Rights and E. Disclosure and Transparency (see equation (5)).

First, I show the estimation of the following panel regressions model:

$$CASH_{it} = \alpha_0 + \alpha_1 CASH_{it-1} + \alpha_2 CFLOW_{it} + \alpha_3 LIQ_{it} + \alpha_4 LEV_{it} + \alpha_5 MKTVALUE_{it} + \alpha_6 SIZE_{it} + \alpha_7 VARIABILITY_{it} + \alpha_8 DIVIDEND_{it} + \qquad (4)$$
$$\alpha_9 CGI_{it} + \varepsilon_{it}$$

All of the estimated coefficients are in line with the hypothesized signs. The result supports that firm liquidity (LIQ), leverage (LEV) and size (SIZE) has negative relationship with corporate cash holding, while lagged cash ($CASH_{t-1}$) and firm variability (VARIABILITY) exerts positive effect. Both variables are significant at the 1% level. Finally, there are no evidences supports that dividend paid (DIVIDEND), cash flow (CFLOW) and Market to book ratio (MKTBOOK) have significant influences on cash holding.

The negative effect of liquidity (LIQ) to cash holdings is consistent with the view that firm can use their net working capital as substitute for cash holdings same as leverage (LEV) that firm can use borrowing in stead. Firm size (SIZE) exerts negative effect to cash levels as the larger firms are likely to have less asymmetric information problem and trend to reach source of fund at lower cost. The regressions results also show a significant positive of firm variability, which is consistent with the view, that firm with high variability of cash flow will hold more cash to avoid shortage of cash that lead to underinvestment problem.

The result provides no evidence supports that corporate governance index (CGI) influences corporate cash holdings.

Furthermore, I divide corporate governance index into 5 sub-indices, which are the major aspect of corporate governance that this index capture. These sub-indices are A. Board Structure, B. Conflict of Interest, C. Board Responsibility, D. Shareholder Rights and E. Disclosure and Transparency. The model 2 focuses on finding each contribution to corporate cash holdings.

$$CASH_{it} = \alpha_0 + \alpha_1 CASH_{it-1} + \alpha_2 CFLOW_{it} + \alpha_3 LIQ_{it} + \alpha_4 LEV_{it} +$$
$$\alpha_5 BANKDEBT_{it} + \alpha_6 MKTVALUE_{it} + \alpha_7 SIZE_{it} + \alpha_8 VARIABILITY_{it} +$$
$$\alpha_9 DIVIDEND_{it} + \alpha_{10} BRDSTUCTURE_{it} + \alpha_{11} CONFLICT_{it} +$$
$$\alpha_{12} BRDRES_{it} + \alpha_{13} SHRRIGHT_{it} + \alpha_{14} DISCLOSURE_{it} + \varepsilon_{it}$$

$$(5)$$

The results of control variables are similar to the former regressions, all of them have same sign of coefficients and significant at the same level excluding variability (VARIABILITY) that the significant level is change from 1% to 5%.

Same as corporate governance index (CGI), all sub-indices of CGI: Board structure (BRDSTRUCTURE), conflict of interest (CONFLICT), board responsibilities (BRDRES), shareholder rights (SHRRIGHT) and disclosure and transparency (DISCLOSURE) are not influence firm cash level.

In summary, the regressions suggest that corporate governance and all sub-indices are not influence corporate cash holdings. The first hypothesis:

H1:   There is a negative relationship between corporate governance and corporate cash holdings

is rejected as corporate governance is not one of cash determinants for Thai firms.

Corporate Governance and Earnings Management

This study observes the relationship of corporate governance and earnings management of 246 Thai firms over period 2002 to 2007. The control variables are inspired by the work of Chtourou et al. (2004), which they mentioned that "the first eight control variables are included in the effort to ameliorate the measurement errors that may occur in the estimation of abnormal accruals".

Table 6 reports set of estimation results for the panel regression of earnings management, corporate governance and other control variables. Model 1 reports the result from equation 6 that include the control variables describe in the table above and corporate governance index (CGI). Column Model 2 reports the result from equation 7 that include the control variables describe in the table above and sub-indices of corporate governance index (CGI).

The model of regression in column Model 1 is shown in the following:

$$EARNMAN_{it} = \beta_0 + \beta_1 |CFLOW|_{it} + \beta_2 |EARNINGS|_{it} +$$
$$\beta_3 NEG\_CF_{it} + \beta_4 LOSS_{it} + \beta_5 ASSET_{it} + \beta_6 ROA_{it} + \qquad (6)$$
$$\beta_7 GSALES_{it} + \beta_8 DEBT_{it} + \beta_9 CGI_{it} + \varepsilon_{it}$$

Most of previous works are not include firm characteristics control variables in regression of earnings management and corporate governance. Hence, I follow the model of Chtourou et al. (2004) however they didn't mention the expected coefficients of the control variables. Nevertheless, the result in column (C1) shows that absolute value of cash flow ($|CFLOW|$), negative cash flow (NEG_CF) and debt (DEBT) exert negative effect to earning managements, which are significant at the 1%, 1% and 5% level, respectively. Return on asset (ROA) and Sales growth (GSALES) show positive relationship with earnings manipulation and are significant at the 1% level. There are no evidences supports that absolute value of earnings ($|EARNINGS|$), loss (LOSS) and firm size (ASSET) influence earnings management.

The result shows no relationship between earnings management and corporate governance.

However when I divided corporate governance into sub-indices as the following equation:

$$EARNMAN_{it} = \alpha_0 + \alpha_1 |CFLOW|_{it} + \alpha_2 |EARNINGS|_{it} +$$
$$\alpha_3 NEG\_CF_{it} + \alpha_4 LOSS_{it} + \alpha_5 ASSET_{it} + \alpha_6 ROA_{it} +$$
$$\alpha_7 GSALES_{it} + \alpha_8 DEBT_{it} + \alpha_9 BRDSTUCTURE_{it} + \alpha_{10} CONFLICT_{it} + \qquad (7)$$
$$\alpha_{11} BRDRES_{it} + \alpha_{12} SHRRIGHT_{it} + \alpha_{13} DISCLOSURE_{it} + \varepsilon_{it}$$

The result in column Model 2 is very similar to Model 1, however, firm size show positive relationship and significant at the 10% level and debt exerts positive effect and is significant at the 1% level in stead of 5% level.

Even though, corporate governance index doesn't have relationship with earnings management, when divide it into sub category, the result shows that shareholder rights exert negative effect to earnings manipulate and is significant at the 1% level. However, there are no evidences show that the rest sub-indices: Board structure (BRDSTRUCTURE), conflict of interest (CONFLICT), board responsibilities (BRDRES), and disclosure and transparency (DISCLOSURE) influence earnings manipulation.

To sum up, the corporate governance index is not one determinants of earnings management. Hence, to answer my second hypothesis:

H2:   There is a negative relationship between corporate governance and earnings management:

I reject my hypothesis if using corporate governance index as the proxy of corporate governance but if using shareholder rights, a part of corporate governance index, as a replacement for, then I cannot reject the hypothesis.

Robustness Test

I test the robustness test by sorting observations by year. The observations can divided into 2 groups using reformation of corporate governance in 2004 as the criteria. As the result, the first group contains observations during 2002-2003, while the second group contains observation during 2004-2007.

Table 7 shows result of robustness test between cash holdings and corporate governance index (see equation 4). The result show no significant relationship between cash level (CASH) and corporate governance index (CGI) in both groups. The control variables are significant varies between these groups. Only lagged cash ($CASH_{t-1}$), firm leverage (LEV) and variability (VARIABILITY) are significant in both group. Firm liquidity (LIQ), size (SIZE) and dividend payment (DIVIDEND) are significant in the first group of observation before corporate governance improvement in 2004.

Table 8 shows result of robustness test between earnings management and corporate governance index (see equation 6). The result also shows no relationship between earnings manipulation (EARNMAN) and corporate governance index (CGI). Most of significant firm characteristics variables are the same for both groups, which are absolute value of cash flow ($|CFLOW|$), negative cash flow (NEG_CF), return on asset (ROA) and Sales growth (GSALES). Just firm debt (DEBT) that is significant only in the first group.

In summary, results from the robustness test are consistent with my previous results that corporate governance index is not influence cash holdings and earnings management in Thailand.

Table 5
Dynamic panel regressions: corporate cash holding equation on corporate governance index (CGI), sub-indices of corporate governance index (CGI), and other firm characteristics

This table shows panel regressions of cash determinants. The regressions period is 2002 to 2007 for 246 Thai firms listed in SET. Dependent Variable is CASH, which is the ratio of total cash and equivalent items to total assets. CFLOW is the ratio of pre-tax profit plus depreciation divided by total assets. LIQ is the ratio of net working capital to total assets. LEV is measured as the ratio of total debt (short- and long-term debt) to assets. MKTBOOK is measured as (book value of assets minus book value of equity plus the market value of equity) divided by book value of assets. SIZE is measured as the natural log of total assets. VARIABILITY is computed using the firm's standard deviation of the cash flow ratio for the past 3 years or start the calculation from 1999, using quarterly data. DIVIDEND is the ratio of dividend payments to total assets. Corporate governance index (CGI) is the proxy of corporate governance, constructed from the data collected through the questionnaire. Board Structure (BRDSTRUCTURE), Conflict of Interest (CONFLICT), Board Responsibilities (BRDRES), Shareholder Rights (SHRRIGHT) and Disclosure and Transparency (DISCLOSURE) are the sub-indices of corporate governance index. Statistically significance notifies by ***, ** and * for 1%, 5% and 10%, respectively.

Independent Variables	Description	Predicted Sign	Model 1	Model 2
Dependent Variable: CASH	Corporate Cash Holdings			
$CASH_{t-1}$	Cash Holdings at t-1	+	0.793***	0.793***
			(47.013)	(46.870)
CFLOW	Cash Flow Ratio	+	-0.005	-0.006
			(-0.292)	(-0.324)
LIQ	Firm Liquidity	-	-0.027***	-0.027***
			(-3.400)	(-3.405)
LEV	Firm Leverage	-	-0.027***	-0.028***
			(-5.548)	(-5.641)
MKTBOOK	Market to Book Ratio	+	-0.003	-0.003
			(-0.868)	(-0.953)
SIZE	Firm Size	-	-0.009***	-0.010***
			(-2.966)	(-3.288)
VARIABILITY	Variability	+	0.074***	0.072**
			(2.671)	(2.570)
DIVIDEND	Dividend	+/-	0.020	0.026
			(0.317)	(0.415)
CGI	Corporate Governance Index	-	3.74E-05	
			(0.276)	
BRDSTRUCTURE	Board Structure	-		-4.69E-05
				(-0.556)
CONFLICT	Conflict of Interest	-		0.0002
				(1.336)
BRDRES	Board Responsibilities	-		-0.0002
				(-1.199)
SHRRIGHT	Shareholder Rights	-		-7.92E-05
				(-0.705)
DISCLOSURE	Disclosure and Transparency	-		0.0001
				(1.200)
Observations			1417	1417
R^2			0.6726	0.6736

Table 6

Dynamic panel regressions: earnings management equation on corporate governance index (CGI), sub-indices of corporate governance index (CGI), and other firm characteristics

This table shows panel regressions of cash determinants. The regressions period is 2002 to 2007 for 246 Thai firms listed in SET. EARNMAN, the dependent variable, is measured by using discretionary accruals as proxy (see equation A3). $|CFLOW|$ is the absolute value of (cash flow from operation divided by lagged total asset). $|EARNINGS|$ is the absolute value of (net income before extraordinary items deflated by lagged total asset). NEG_CF is an indicator variable code 1 if cash flow is negative. LOSS is an indicator variable code 1 if earnings is negative. ASSET is measured as the natural log of total assets. ROA measured as net income before extraordinary items on asset. GSALES is computed by change of sales scaled by lagged sales. DEBT is total debt deflated by total assets. Corporate governance index (CGI) is the proxy of corporate governance, constructed from the data collected through the questionnaire. Board Structure (BRDSTRUCTURE), Conflict of Interest (CONFLICT), Board Responsibilities (BRDRES), Shareholder Rights (SHRRIGHT) and Disclosure and Transparency (DISCLOSURE) are the sub-indices of corporate governance index. Statistically significance notifies by ***, ** and * for 1%, 5% and 10%, respectively.

Independent Variables	Description	Predicted Sign	Model 1	Model 2
Dependent Variable: EARNMAN	Earnings Management			
ICFLOWI	Absolute value of cash flow		-0.381***	-0.379***
			(-11.056)	(-11.014)
IEARNINGSI	Absolute value of earnings		-0.041	-0.050
			(-0.938)	(-1.144)
NEG_CF	Negative cash flow		-0.016***	-0.017***
			(-3.195)	(-3.227)
LOSS	Loss		-0.002	-0.003
			(-0.162)	(-0.292)
ASSET	Firm Size		0.007	0.008*
			(1.613)	(1.649)
ROA	Return on asset		0.494***	0.493***
			(11.114)	(11.096)
GSALES	Sales growth		0.040***	0.040***
			(4.295)	(4.300)
DEBT	Firm leverage		-0.016**	-0.019***
			(-2.292)	(-2.739)
CGI	Corporate Governance Index	-	-0.0002	
			(-0.833)	
BRDSTRUCTURE	Board Structure	-		0.0002
				(1.347)
CONFLICT	Conflict of Interest	-		5.78E-05
				(0.290)
BRDRES	Board Responsibilities	-		-0.0002
				(-1.181)
SHRRIGHT	Shareholder Rights	-		-0.0005***
				(-2.789)
DISCLOSURE	Disclosure and Transparency	-		0.0001
				(0.734)
Observations			1456	1456
R^2			0.1862	0.1920

Table 7
Robustness test between cash holdings and corporate governance index classified by year
   This table shows robustness test result for equation 4. The observations are categorized on year basis after the improvement of corporate governance in 2004 into 2 groups. The period before corporate governance reformation would be 2000-2003 while the period after that would be 2004-2007. Statistically significance notifies by ***, ** and * for 1%, 5% and 10%, respectively.

Symbol	Before reformation Year 2002-2003 Coefficient	After reformation Year 2004-2007 Coefficient
Dependent Variable		
CASH		
Control Variable		
$CASH_{t-1}$	0.791***	0.797***
	(22.933)	(41.525)
CFLOW	0.007	-0.004
	(0.266)	(-0.191)
LIQ	-0.044***	-0.009
	(-3.214)	(-0.983)
LEV	-0.036***	-0.031***
	(-4.422)	(-4.554)
MKTBOOK	0.007	-0.004
	(0.900)	(-1.050)
SIZE	-0.016***	-0.005
	(-3.021)	(-1.436)
VARIABILITY	0.122**	0.059*
	(2.479)	(1.752)
DIVIDEND	-0.203*	0.070
	(-1.651)	(0.954)
CGI	4.63E-04	1.31E-04
	(1.445)	(0.781)
Observations	461	956
R^2	0.62	0.71

Table 8
Robustness test between earnings management and corporate governance index classified by year

This table shows robustness test result for equation 6. The observations are categorized on year basis after the improvement of corporate governance in 2004 into 2 groups. The period before corporate governance reformation would be 2000-2003 while the period after that would be 2004-2007. Statistically significance notifies by ***, ** and * for 1%, 5% and 10%, respectively.

Symbol	Before reformation Year 2002-2003 Coefficient	After reformation Year 2004-2007 Coefficient
Dependent Variable		
EARNMAN		
Control Variable		
lCFLOWl	-0.344***	-0.412***
	(-5.673)	(-9.829)
lEARNINGSl	-0.034	-0.004
	(-0.489)	(-0.070)
NEG_CF	-0.016*	-0.016**
	(-1.955)	(-2.501)
LOSS	-0.024	0.006
	(-1.439)	(-0.490)
ASSET	0.001	0.009
	(0.099)	(1.671)
ROA	0.460***	0.467***
	(6.886)	(7.416)
GSALES	0.088***	0.026**
	(4.268)	(2.512)
DEBT	-0.029***	0.008
	(-2.823)	(-0.844)
CGI	0.0004	0.0003
	(0.779)	(-1.042)
Observations	480	976
R^2	0.28	0.15

Chapter 6
Conclusion

The results of the regressions show that there is no significant association either corporate cash holdings or likelihood of earning managements with the corporate governance, using corporate governance index as a proxy. These results are not consistent with precious studies. These may cause by some limitations of this study. First, I am unable to control for all variables potential correlated with accruals and cash level in emerging market, so there remains a possibility that the results may cause by bias caused by some omitted variable. Second, this study focuses on finding the relationships over long period (6 years). Hence, my sample, that must has continuous financial data since 1999 to 2007, may be too small and also have survivor bias. Finally, for corporate governance index, corporate governance level is based on only form56-1 thus, might not be able to capture the other aspects of corporate governance. However, when using shareholder rights, one of the sub-indices of corporate governance index, I find negative relationship between earnings management and shareholder rights. This may be because independence board of directors, the proxy of shareholders, act for the best interest for shareholders. Hence, reduce the level of earnings manipulation.

As the result show that corporate governance index is not related with cash holdings and earnings management, for further study, other methods of determine corporate governance are encourage. Moreover, this study examine the relationship by finding the evidence of a correlation between financial data, financial reporting quality and publicly report, therefore the process of the effect among corporate governance, earnings management and cash holdings is very little understandings. Hence, the further study should be concentrate more on this process

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APPENDICES

Appendix A: Variables Summary

Table 1: Estimations of Discretionary Accruals

Factor	Description	Measurement
TA	Total Accruals	Net income – cash flow from operation
NDA	Non-Discretionary Accruals	See equation A2
DA	Earning Management or Discretionary Accruals	See equation A3
ΔREV	Changes in Sales Revenues	Sales revenues at time t minus sales revenues at time t-1
ΔAR	Change in Receivables	Recievables at time t minus recievables at time t-1
PPE	Gross Property, Plant, and Equipment	Gross property, plant, and equipment
A	Total Assets	Total assets

Table 2: Corporate Governance and Cash Holdings

Factor	Description	Measurement
Dependent Variables		
CASH	Corporate Cash Holding	Total cash and equivalent items to total assets
Firm Characteristics		
CFLOW	Cash Flow Ratio	Pre-tax profit plus depreciation to total assets
LIQ	Firm Liquidity	Net working capital to total assets
LEV	Firm Leverage	Total debt (short- and long-term debt) to assets
MKTBOOK	Market to Book Ratio	(Book value of assets minus book value of equity plus the market value of equity) to book value of assets
SIZE	Firm Size	The natural log of total assets
VARIABILITY	Variability or Business Conditions	Standard deviation of the cash flow ratio from past 3 years
DIVIDEND	Dividend	Dividend payments to total assets
Corporate Governance Variables		
CGI	Corporate Governance Index	See Corporate Governance Index Construction
BRDSTUCTURE	Board Structure	See Corporate Governance Index Construction
CONFLICT	Conflict of Interest	See Corporate Governance Index Construction
BRDRES	Board Responsibilities	See Corporate Governance Index Construction
SHRRIGHT	Shareholder Rights	See Corporate Governance Index Construction
DISCLOSURE	Disclosure and Transparency	See Corporate Governance Index Construction

Table 3: Corporate Governance and Earning Managements

Factor	Description	Measurement
Dependent Variables		
EARNMAN	Earnings Management	See Estimations of Discretionary Accruals
Firm Characteristics		
$\lvert$CFLOW$\rvert$	Absolute Value of Cash Flow	Absolute value of (cash flow from operation divided by lagged total asset)
$\lvert$EARNINGS$\rvert$	Absolute Value of Earnings	Absolute value of (net income before extraordinary items deflated by lagged total asset)
NEG_CF	Negative Cash Flow	Indicator variable code 1 if cash flow is negative
LOSS	Loss	Indicator variable code 1 if earnings is negative
ASSET	Firm Size	The natural log of total assets
ROA	Return on Asset	Net income on asset
GSALES	Sales Growth	Change of sales scaled by lagged sales
DEBT	Firm leverage	Total debt to total asset
Corporate Governance Variables		
CGI	Corporate Governance Index	See Corporate Governance Index Construction
BRDSTUCTURE	Board Structure	See Corporate Governance Index Construction
CONFLICT	Conflict of Interest	See Corporate Governance Index Construction
BRDRES	Board Responsibilities	See Corporate Governance Index Construction
SHRRIGHT	Shareholder Rights	See Corporate Governance Index Construction
DISCLOSURE	Disclosure and Transparency	See Corporate Governance Index Construction

Appendix B: Questions for corporate governance index construction

Code	Questions	Scoring Rule		Max. Score
A. Board Structure				**6**
A1	What is the size of the board of directors?	1 if 5 <=a1<=12;	;0 otherwise	1
A2	What is the size of executive board?	1 if a2 <= 12	;0 otherwise	1
A3	How many directors are also managers?	1 if a3/a1 < 1/3	;0 otherwise	1
A4	How many directors are dependent?	1 if a4/a1 > 1/3	;0 otherwise	1
A5	Does the firm state the definition of independence in the disclosure report?	1 if a5=1	;0 otherwise	1
A6	How many directors have attended director training programs by the Thai Institution of Directors Association?	1 if a6/a1 >1/2	;0 otherwise	1
B. Conflict of Interest				**8**
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 director?	1/6 if b17=1	;0 otherwise	
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	

Code	Questions	Scoring Rule		Max. Score
B. Conflict of Interest				**8**
B20	Does the firm has 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				**13**
C1	Number of board meeting per year	1 if $c1>4$	;0 otherwise	1
C2	Average director's meeting attendance	$c2/c1$	;0 otherwise	1
C3	Average independent directors meeting attendance	$c3/c1$	;0 otherwise	1
C4	Is there a board meeting solely for independent directors?	1 if c4=1	;0 otherwise	1
C5	Number of audit committee meeting per year	1 if $c5=>4$	;0 otherwise	1
C6	Average audit committee meeting attendance	$c6/c5$	;0 otherwise	1
C7	Is there at least one accounting expert on the audit committee?	1 if c7=1	;0 otherwise	1
C8	How many public companies does the chairman of audit committee serve as a director or manager?	1 if $c8<=3$	;0 otherwise	1
C9	Does the firm clearly distinguish the role and responsibilities of the board and management?	1/3 if c9=1	;0 otherwise	0.33
C10	Does the firm disclose that directors evaluation system exists?	1/3 if c10=1	;0 otherwise	0.33
C11	Does the firm have an option scheme which incentivizes management?	1/3 if c11=1	;0 otherwise	0.33
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	1
C13	Has there been any sanction to the board, management, or other insider for violations of Securities and/or Corporations laws in the last two years?	$3*(1-c13)$	;0 otherwise	3

Code	Questions	Scoring Rule		Max. Score
D. Shareholder Rights				7
D1	Does the firm hold an annual general shareholder meeting?	1 if d1=1	;0 otherwise	
D2	Does the firm employ one-share-one-vote rule?	1 if d2=1	;0 otherwise	
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				13
	Does the firm disclose the following information in the disclosure report?			
E1	- Board meeting attendance of individual directors	1 if e1=1	;0 otherwise	1
E2	- Board compensation and/or benefits of individual directors	1 if e2=1	;0 otherwise	1
E3	- Directors shareholding	1 if e3=1	;0 otherwise	1
E4	- Management shareholding	1 if e4=1	;0 otherwise	1
E5	- Related party transaction in detail	1 if e5=1	;0 otherwise	1
E6	- Corporate group structure	1 if e6=1	;0 otherwise	1
E7	- Grouping of major shareholding who belong to the same family/economics unit	1 if e7=1	;0 otherwise	1
E8	Does investor relation unit exist?	1 if e8=1	;0 otherwise	1
E9	Does the firm mention its investor relations activity carried out during the past year?	1 if e9=1	;0 otherwise	1
E10	Does the firm's Annual Report include a section devoted to corporate governance principles and implementations?	1 if e10=1	;0 otherwise	1
E11	How many times in the last two years has the firm been charged for failures to publish company reports within the specified periods?	3-e23	;0 otherwise	3

Biography

Miss Suhon Eamsheragkoon graduated fro Bachelor of Economics, Thammasart University majoring in Monetary and Indurial Economics and minoring Finance with Grade Average Point (GPA) equaled t3.41, achieved Second Class Honor in 2006. Next year, she entered to Full-Time pgram in Master of Science in Finance (MS Finance) at Faculty of Commerce andAccountancy, Chulalongkorn University. She graduated in academic year 2009 with PA of 3.65.