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การศึกษาสำหรับประเทศไทย

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สาขาวิชาการเงิน   ภาควิชาการธนาคารและการเงิน

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ปีการศึกษา 2552

CORPORATE GOVERNANCE AND INSIDER TRADING:
EVIDENCE FROM THAILAND
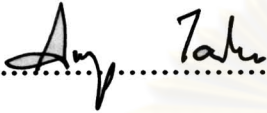
Miss Sirorat Charasrungrojkul

A Thesis Submitted in Partial Fulfillment of the Requirements
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Thesis Title	CORPORATE GOVERNANCE AND INSIDER TRADING: EVIDENCE FROM THAILAND
By	Miss Sirorat Charasrungrojkul
Field of Study	Finance
Thesis Advisor	Associate Professor Sunti Tirapat, Ph.D.

Accepted by the Faculty of Commerce and Accountancy, Chulalongkorn University in Partial Fulfillment of the Requirements for the Master's Degree

.................................Dean of the Faculty of Commerce and Accountancy

(Associate Professor Annop Tanlamai, Ph.D.)

THESIS COMMITTEE

.................................Chairman

(Associate Professor Sothitorn Mallikamas, Ph.D.)

.................................Thesis Advisor

(Associate Professor Sunti Tirapat, Ph.D.)

.................................External Examiner

(Nacha Ananchotikul, Ph.D.)

ศิโรรัตน์ จรัสรุ่งโรจน์กุล : ธรรมาภิบาลบริษัทและการเปลี่ยนแปลงการถือหลักทรัพย์ของผู้บริหาร: การศึกษาสำหรับประเทศไทย. (CORPORATE GOVERNANCE AND INSIDER TRADING: EVIDENCE FROM THAILAND) อ.ที่ปรึกษาวิทยานิพนธ์หลัก : รศ. ดร. สันติ ถิรพัฒน์, 52 หน้า

วิทยานิพนธ์ฉบับนี้ศึกษาเกี่ยวกับความสัมพันธ์ระหว่างธรรมาภิบาลบริษัทและกำไรเกินปกติจากการซื้อขายหุ้นโดยผู้บริหาร และศึกษาว่าผู้บริหารสามารถทำกำไรเกินปกติจากการซื้อขายหุ้นในช่วงก่อนการประกาศผลการดำเนินกิจการมากกว่าช่วงอื่นๆ หรือไม่ ตัวอย่างทดลองของงานวิจัยฉบับนี้คือการซื้อขายหุ้นโดยผู้บริหารทั้งหมดที่ได้รับการรายงานไปยังสำนักงานคณะกรรมการกำกับหลักทรัพย์และตลาดหลักทรัพย์ในปี 2549-2550 ผลวิจัยแสดงให้เห็นว่าความสัมพันธ์ระหว่างธรรมาภิบาลบริษัทและกำไรส่วนเกินจากการซื้อขายหุ้นโดยผู้บริหารไม่สมมาตรกันระหว่างการขายและการซื้อ โดยความสัมพันธ์ระหว่างธรรมาภิบาลบริษัทและกำไรส่วนเกินจากการขายหุ้นเป็นลบ ในขณะที่ความสัมพันธ์ระหว่างระดับธรรมาภิบาลบริษัทและกำไรส่วนเกินจากการซื้อหุ้นเป็นบวก นอกจากนี้ งานวิจัยชิ้นนี้พบว่าผู้บริหารได้รับกำไรส่วนเกินจากการซื้อและขายหุ้นในช่วงก่อนการประกาศผลการดำเนินกิจการสูงกว่าช่วงอื่น ดังนั้นกฎหมายที่ห้ามการซื้อและขายหุ้นในช่วงก่อนการประกาศผลการดำเนินกิจการจะเป็นประโยชน์ต่อตลาดทุนของประเทศไทย

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This research investigates the relationship between abnormal return from insider trading and corporate governance. It also tests whether insiders earn higher abnormal returns from trading stocks prior to earning announcements than the other periods. The samples of the study are all insider trades filed with Security Exchange Commission during the year 2006-2007. This research has found asymmetric relationship between corporate governance and abnormal return from insider trades. For insider sales, there is negative relationship between corporate governance and abnormal return. For insider purchases, there is positive relationship between corporate governance and abnormal return. Next, this study has found that insider trades prior to earning announcements yield significantly higher abnormal return than trades occurring during other periods. Thus, blackout period regulation which prohibits any insider trades during the period prior to firms' earning announcements should be valuable to Thai capital market.

Department : __Banking and Finance__ Student's Signature _____

Field of Study : __Finance__ Advisor's Signature _____

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Chapter I

Introduction

Background of the Study

As a result of many crises and collapses of some major corporations such as South East Asian Tom Yum Kung crisis in 1997 and recent collapses of Enron in 2001 in the US, market participators and scholars around the world have realized the importance of corporate governance. This has resulted in many recent studies regarding corporate governance.

One of the most interesting topics is the relationship between corporate governance and insider trading because it concerns the information asymmetry between corporate insiders and capital market which would shed a light on how to improve market efficiency. Rozanov (2008) has found that, for the UK capital market, good corporate governance, identified through board and ownership characteristics that have been linked to more effective monitoring of management in prior research, is negatively related to opportunistic insider trading. Betzer and Theissen (2007) also have found that, in Germany capital market, insider trades are associated with significant abnormal returns and that the price reactions are affected by the ownership structure and that insiders yield higher abnormal return within 60 days prior to final or interim earnings announcements and 30 days prior to quarterly earnings announcements (UK version of black-out period regulation). This provided a grounded justification of black out period regulations which prohibits insiders from trading their firms' securities within such period.

For emerging markets such as Thailand, it is even further worthwhile investigating the relationship between insider trading and corporate governance. This is because the problem of both corporate governance and insider trading is more severe in such markets. Grishchenko et al. (2002) pointed out that the corporate governance problem is more severe due to poor protection of the minority shareholder rights, unequal treatment of foreign and domestic stockholders, and underdeveloped

legal and regulatory environment. On the other side, the insider trading is more aggressive in emerging markets. One of the reasons is that the enforcement of trading rules is weaker in emerging markets. Bhattacharya and Daouk's (2002) reported that the first legal case brought against insider trading occurred in as late as 1993 in Thailand while the first case occurred in 1987 in US. An Earlier study on this topic (Hung and Trezevant (2003)) showed that firms controlled by the richest families prevalently found in South East Asia are subject to higher insider trading and higher abnormal returns. Evidence from Thailand would provide a case study for other emerging markets where weak corporate governance and insider trading rule enforcement environments prevail.

There are two primary gaps of the studies on corporate governance and insider trading. The studies above all investigate the relationship between insider trading and some aspects of a firm concerning corporate governance; however, there has never been a study on a relationship between insider trading and with a variable that could capture overall aspects of a firm's corporate governance. This study use Corporate Governance Index introduced by Ananchotikul in 2006 as a proxy corporate governance level of Thai firms.

Statement of Problem

1. In Thai capital market, is there a relationship between corporate governance and insider trading abnormal return?
2. In Thai capital market, do insiders earn higher abnormal returns from trading on securities of the firms which they are related to during blackout period?

Objectives of the Study

This paper aims to investigate the relationship between corporate governance and abnormal return from insider trading, and examines whether insiders earn higher abnormal returns from trading stocks prior to earning announcements than the other periods. The latter would provide justification whether blackout period regulation of

the UK that prohibits insiders from trading their firms' securities prior to earnings announcements would be valuable to Thai capital market.

Scope of the Study

The samples of the study are all insider trades of firms listed in SET excluding MAI occurring during the year 2006-2007.

Contribution

This paper has two contributions. First, this paper investigates the relationship between corporate governance goodness and insider trading in Thailand. This provides an insight on the determinants of informational asymmetry between corporate insider and Thai capital market. This paper tests whether there exists a significant correlation between magnitude of abnormal returns gained from insider trades and Thai firm governance goodness level as captured by CGI. In case such correlation is significant, this paper further provides the directions of the relationship.

Second, this paper provides the analysis on whether the blackout period regulation as implemented in the United Kingdom which prevents insider from trading prior to significant corporate events such as earning announcements is valuable to the Thai capital market. This is done by testing whether trading by insiders within blackout periods yields significantly higher abnormal returns. The analysis provides an implication for a policy on Thai capital market. Since this regulation is considered very rigorous (it prevents insiders from trading 8 months per year), a grounded analysis on this issue should be very useful.

Methodology in Brief

I first conduct event study to obtain the cumulative abnormal return (CARs) of insider trading (Betzer&Theissen). Then I calculate corporate governance index (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. I then run a regression of CARs on CGI, Blackout Period Dummy which specifies whether the trades occurs prior to earning announcements, and other control variables to investigate the relationship between abnormal return from insider trading and corporate governance and the period in which the trades occur.

For a robust test, I calculate Price Pattern introduced by Rozanov (2008), which is a tool to identify insider trading that is based on non-public information. I then regress Price Pattern of insider trades on CGI, Blackout Period Dummy, and other control variables.

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 insider trading 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 II
Literature Review

Corporate Governance and Insider Trading

Early researches on insider trading focus on the topic as a part of strong-form market efficiency test (Jaffe 1974, Finnerty 1976, Seyhun 1986, and Lakonishok and Lee 2001). These papers found that it is possible to gain abnormal return using private information, inferring that strong-form of market efficiency does not hold.

Very recent researches have included corporate governance variables as determinants of insider trading. The examples are the papers by Fidrmuc and Renneboog (2002), Betzer and Theissen (2007), and Ronanov (2008) which focused on mature markets such as UK and Germany, and paper by Grishchenko et al. (2002), and Hung and Trezevant (2003), which focused on emerging markets such as South East Asian.

Fidrmuc et al. (2002), using evidence from UK, have revealed that market impact depends on the firm ownership and that trades based on different types of information have different level of market impacts e.g. trades on news of merger and acquisitions and CEO replacements have less impacts.

In the study conducted by Betzer and Theissen (2007), using evidence from Germany, to which this study follow the procedure to test the determinants of insider trading, insider trading abnormal returns (as represented by CARs) are higher for firms that are widely held and for the trades occurring before earnings announcements, and are not significantly related to the position of the traders. In their tests, they have controlled for the type of trades and liquidity of the stock. In addition, they provide justification for blackout period rule which prevent insiders from trading securities of their firms 2 months prior to annual earnings announcements and 1 month prior to quarterly annual announcement as imposed in UK.

Rozanov has explored the relationship between corporate governance and insider trading. In his study, he proposed an empirical measure that relies on a

predicted pattern in stock returns to identify transactions that are more likely to be based on private information and provide evidence to validate the construct. Using Price Pattern, he has found that good corporate governance, identified through board and ownership characteristics that have been linked to more effective monitoring of management in prior research, is negatively related to opportunistic insider trading. Overall, he concludes that good corporate governance helps to attenuate opportunistic insider trading.

Grishchenko et al. (2002) have found that Southeast Asian markets present return continuation after days with high trading volumes which represents private information trading and further found that the firms which provide better investor protection and information disclosure are associated with less insider trading. Later on, Hung and Trezevant (2003) have found that stocks of South East Asian firms controlled by the richest families are associated with intensive insider trading and higher insider trades abnormal returns. Their tests are robust to sizes of firms, growth, and risk, and different measures of the information flow into stock price.

Chapter III
Sample and Data Description

3.1 Sample Selection

The samples of this study are all insider trades of firms listed in SET during 2006-2007, excluding MAI. Following Betzer and Theissen (2007), I aggregate trades in the shares of the same firm executed on the same day, regardless of whether the traders are the same persons or not. I then precede the analysis based on the net transaction of that day. If the net transaction is position (negative), I assign the trade as purchase (sale). For example, assuming on Jan 1, 2000 there are two trades reported and the net aggregate volume is positive, the trade is assigned as purchase.

3.2 Sources of data

There are the insider trade and firm characteristic data. For the insider trade characteristic data, I depend on "Change of Management Holding Report" (59-2) which is available on Thai SEC website. For firm characteristic data which includes the corporate governance data and Financial data, I use various publicly-available sources such as 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 shows the descriptive statistics of all firms which there exists insider trades on their stocks during 2006-2007. The statistics are as of the end of the year prior to the insider trades. For example, an insider trade occurring during the year 2006 shows the descriptive statistics at the end of the year 2005. The table provides

number of observations, mean, median, maximum, minimum, and standard deviation of market value, return on equity, debt to asset ratio, and market to book value of the sample firms. There are 231 firms during the year 2006 and 216 firms during the year 2007. The mean market values, return on equity, debt-to-asset ratio, market-to-book value of asset of the year 2006 are 17,020.95 Million Baht, 0.10, 0.27, and 1.59. The analogous values for the year 2007 are 17,173.70 Million Baht, 0.09, 0.25, and 1.56. The distribution of market value is heavily skewed and dispersed, as is shown by the large differences between the mean and the median, and large standard deviations. The distribution of return on equity, debt-to-asset ratio, market-to-book value of asset are not much skewed and dispersing as are shown by small differences between the mean and the median, and small standard deviations.

Table 1

Descriptive statistics of Firms: Market Value, Return on Equity, Debt to Asset Ratio, and Market to Book Value of Equity

This table shows market value, return on equity, debt to asset ratio, and market to book value of equity. The firms in the samples of 2006 are firms in SET which there is at least one insider trading their stocks during the year 2006. The firms in the samples of 2007 are firms in SET which there is at least one insider trading their stocks during the year 2007. Row 2006 and 2007 shows the statistics of the firms with at least one insider trade occurring during the year 2006 and 2007. However, the statistics are as of the end of the period prior to the trade. MV stands for Market Value of the firms. ROE stands for Return on Equity which is calculated by dividing Net Income by Book Value of Equity. DA stands for Debt to Asset Ratio which is calculated by dividing Book Value of Debt by Book Value of Asset. MTB stands for Market to Book Value which is calculated by dividing Market Value of Equity by Book Value of Equity.

	Observations	Mean	Median	Maximum	Minimum	Std. Dev.
Panel A: MV (Million Baht)						
2006	227	17,020.95	2,340.00	416,365.60	48.60	51,073.81
2007	214	17,173.70	2,632.89	416,365.60	86.00	49,628.61
Panel B: ROE						
2006	227	0.10	0.12	0.65	- 3.04	0.27
2007	214	0.09	0.12	0.51	- 1.63	0.22
Panel C: DA						
2006	227	0.24	0.22	0.80	0	0.21
2007	214	0.25	0.25	0.80	0	0.20
Panel D: MTB						
2006	227	1.59	1.13	10.39	0.22	1.30
2007	214	1.56	1.20	9.85	0.23	1.19

3.4   Research Hypotheses

Hypothesis 1: In Thai capital market, the relationship between corporate governance level of a firm and the insider trading abnormal returns is negative.

I expect negative relationship because I expect good corporate governance to decrease information asymmetry between corporate insiders and capital market. There are several studies in other markets that support this hypothesis. Rozanov (2008) has found that good corporate governance, identified through board and ownership characteristics that have been linked to more effective monitoring of management in prior research, is negatively related to opportunistic insider trading.

Hypothesis 2: In Thai capital market, higher abnormal returns are achieved during blackout periods (Blackout period is defined as within two months before final earnings announcements and within one month prior to quarterly earnings announcements as of the UK regulation).

I expect higher abnormal return during these specific periods because I expect more concentrated information asymmetry during these periods since insiders could access to earning information before public during these periods. Betzer and Theissen (2007) have confirmed hypothesis 2 for Germany capital market.

Chapter IV
Methodology

4.1 Corporate Governance Index Construction

I construct Corporate Governance Index (CGI) base on the approach of Ananchotikul (2006). This index uses 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 questions are divided into five categories: A) Board Structure, B) Conflict of Interest, C) Board Responsibilities, D) Shareholder Rights, and E) Disclosure and Transparency. Sub corporate governance indices are calculated from the total scores of each category. Finally, I calculate CGI from a weighted average of five sub indices. CGI runs from 0 to 100 with higher values indicating better corporate governance. The criteria are based on corporate governance best practice of SEC. Full detail of the questionnaire is showed on Appendix A.

Table 2 shows the descriptive statistics of Corporate Governance Index and sub-indices of all firms which there exists insider trades during the year 2006 and 2007. The statistics are as of the end of the year prior to the insider trades. That is the trades occurring during the year 2006 would shows the CGI and CG sub-indices of the year 2005 while the trades occurring during the year 2007 would shows the CGI and CG sub-indices of the year 2006. The average CGI and sub-indices increase from the year 2005 to the year 2006. The mean of CGI increase from 55.34 as of the year 2006 to 59.42 as of the year 2007. The mean CGI, Board Structure sub-index, Conflict of interest sub-index, Board Responsibilities sub-index, Shareholders' Right sub-index, Disclosure and Transparency sub-index of the year 2006 are 55.34, 55.29, 44.68, 59.46, 44.73, and 67.00. The mean CGI, Board Structure sub-index, Conflict of interest sub-index, Board Responsibilities sub-index, Shareholders' Right sub-index, Disclosure and Transparency sub-index of the year 2006 are 59.42, 60.56, 49.20,

68.54, 48.93, and 65.64. The distribution is not very skewed, as is shown by very small difference between the mean and median.

Table 3 and 4 show the descriptive statistics of all insider trades, insider trades occurring during blackout period, and the other insider trades. The table provides number of observations, mean, median, maximum, minimum, and standard deviation of insider trades volume, value, relative value, market value, price pattern, six-month holding period return, and CGI. The distribution of volume, value, relative value, and market value is heavily skewed, as is shown by the large differences between the mean and the median.

Table 3 shows that there are less insider sales occurring during blackout period comparing to the other sale trades. The mean relative sizes of insider sales occurring during and outside blackout period are not significantly different while the mean market value of firms with insider sales occurring during blackout period is higher than the other sales.

Table 4 shows that there are less insider purchases occurring during blackout period comparing to the other purchase trades. The mean relative sizes of insider purchases and market value of firm are higher for purchases during blackout period.

Table 5 and 6 show the descriptive statistics of insider sales and purchases from four different CGI quartile where quartile 1 denotes the lowest CGI scores inferring worst corporate governance and quartile 4 denotes the highest CGI scores inferring worst corporate governance. For insider sales, the means CGI of quartile 1, 2, 3, and 4 are 47.45, 57.33, 64.01, and 77.04. The standard deviation of CGI of quartile 1, 2, 3, and 4 are 5.97, 1.71, 1.97, and 5.89. The standard deviation of CGI of quartile 1 and 4 are larger than those of quartile 2 and 4.

Table 5 shows that the mean relative size of the insider sales are higher larger for sales from lower CGI quartile. The mean market values of the firms with insider sale are higher for the sale from lower CGI quartile, except for quartile 2. Table 6 shows no pattern between the relative sizes of the insider purchases and CGI. The mean market values of the firms with insider purchase are higher for the purchase from lower CGI quartile, except for quartile 2.

Table 2

Descriptive statistics of Firms: Corporate Governance Index and Sub-corporate Governance Indices

This table shows Corporate Governance Index and Corporate Governance Sub-indices statistics. The firms in the samples of 2006 are firms in SET which there is at least one insider trading their stocks during the year 2006. The firms in the samples of 2007 are firms in SET which there is at least one insider trading their stocks during the year 2007. Row 2006 and 2007 shows the statistics of the firms with at least one insider trade occurring during the year 2006 and 2007. However, the statistics are as of the end of the period prior to the trade. The sub-indices are shown in percentage of maximum raw score of each index. Corporate governance index = weighted average of the sub-indices i.e. Board Structure, Conflict of Interest, Board Responsibility, Shareholder Rights and 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.

	Observations	Mean	Median	Maximum	Minimum	Std. Dev.
Panel A: Corporate Governance Index (CGI)						
2006	227	55.34	55.74	81.91	22.70	10.91
2007	214	59.42	58.73	92.01	19.56	12.81
Panel B: Board Structure (CGI Sub Index)						
2006	227	55.29	50.00	100.00	0	21.01
2007	214	60.56	66.67	100.00	16.67	22.06
Panel C: Conflict of Interest (CGI Sub Index)						
2006	227	44.68	43.63	91.75	14.63	15.82
2007	214	49.20	46.00	100.00	12.63	17.24
Panel D: Board Responsibilites (CGI Sub Index)						
2006	227	59.46	59.56	94.74	27.68	12.98
2007	214	68.54	71.11	99.15	20.00	20.30
Panel E: Shareholder Rights (CGI Sub Index)						
2006	227	44.73	45.92	80.61	0	16.18
2007	214	48.93	50.95	83.20	6.67	16.33
Panel F: Disclosure and Transparency (CGI Sub Index)						
2006	227	67.00	70.00	100.00	30.00	15.68
2007	214	65.64	70.00	100.00	10.43	16.85

Table 3

Descriptive statistics: Insider Sales occurring during the Year 2006-2007 by Blackout Period

This table shows descriptive statistics of Insider Sales occurring during the year 2006-2007. The samples are net trades defined as inside sale. Panel A shows descriptive statistics of all insider sales. Panel B shows descriptive statistics of insider sales occurring during blackout period which is defined as 60 days prior to annual earnings announcements and 30 days prior to quarterly earnings announcements. Panel C shows descriptive statistics of the insider sales occurring outside blackout period. MV stands for the market value of the firms which there is an insider sale and is as of the end of the prior year to insider sale. CGI stands for the Corporate Governance Index of the firms which there is an insider sale and is as of the end of the prior year to insider sale.

Variables	Observations	Mean	Median	Maximum	Minimum	Std. Dev.
Panel A: All Sales						
Net Number of Shares Sold per Day	2593	1,180,424.00	50,000.00	128,000,000.00	6.00	9,319,445.00
Net Value of Shares Sold per Day	2593	9,349,028.00	666,500.00	1,210,000,000.00	- 2,124,000.00	73,894,708.00
Relative Net Value of Shares Sold per Day	2593	0.1678%	0.0099%	8.3599%	0.000001%	0.8877%
MV (Million Baht)	2593	41,668.70	5,507.57	416,365.60	48.60	90,683.06
CGI	2593	63.10	62.69	92.01	22.70	11.83
Panel B: Sales Occurring during Blackout Period						
Net Number of Shares Sold per Day	1004	1,108,325.00	50,000.00	128,000,000.00	6.00	8,525,985.00
Net Value of Shares Sold per Day	1004	9,606,240.00	672,170.00	1,210,000,000.00	25.32	73,130,500.00
Relative Net Value of Shares Sold per Day	1004	0.1943%	0.0099%	8.3599%	0.000001%	0.9518%
MV (Million Baht)	1004	41,739.08	5,302.72	416,365.60	48.60	88,283.94
CGI	1004	62.26	61.63	92.01	26.20	11.42
Panel C: Sales Occurring outside Blackout Period						
Net Number of Shares Sold per Day	1589	1,225,979.00	50,000.00	128,000,000.00	18.00	9,790,035.00
Net Value of Shares Sold per Day	1589	9,186,510.00	651,000.00	1,210,000,000.00	- 2,124,000.00	74,396,000.00
Relative Net Value of Shares Sold per Day	1589	0.1511%	0.0099%	8.3599%	0.000001%	0.8445%
MV (Million Baht)	1589	41,624.23	6,090.86	416,365.60	135.20	92,194.26
CGI	1589	63.63	62.95	92.01	22.70	12.06

Table 4

Descriptive statistics of Trades: Insider Purchases occurring during the Year 2006-2007 by Blackout Period

This table shows descriptive statistics of Insider Purchases occurring during the year 2006-2007. The samples are net trades defined as inside purchase. Panel A shows descriptive statistics of all insider purchases. Panel B shows descriptive statistics of insider purchases occurring during blackout period which is defined as 60 days prior to annual earnings announcements and 30 days prior to quarterly earnings announcements. Panel C shows descriptive statistics of the insider purchases occurring outside blackout period. MV stands for the market value of the firms which there is an insider purchase and is as of the end of the prior year to insider purchase. CGI stands for the Corporate Governance Index of the firms which there is an insider purchase and is as of the end of the prior year to insider sale.

Variables	Observations	Mean	Median	Maximum	Minimum	Std. Dev.
Panel A: All Purchases						
Net Number of Shares Purchased per Day	2301	686,611.10	21,400.00	126,000,000.00	40.00	6,856,992.00
Net Value of Shares Purchased per Day	2301	2,840,416.00	263,175.00	1,190,000,000.00	- 190,800.00	28,138,234.00
Relative Net Value of Shares Purchased per Day	2301	0.0806%	0.0089%	8.3599%	0.0000%	0.5482%
MV (Million Baht)	2301	24,391.15	2,338.27	416,365.60	86.00	68,426.18
CGI	2301	58.43	57.61	92.01	19.56	11.03
Panel B: Purchases Occurring during Blackout Period						
Net Number of Shares Purchased per Day	877	494,539.40	22,993.00	100,000,000.00	83.00	4,763,175.00
Net Value of Shares Purchased per Day	877	2,299,517.00	263,625.00	191,000,000.00	406.00	11,641,502.00
Relative Net Value of Shares Purchased per Day	877	0.0935%	0.0102%	8.3599%	0.0000%	0.6112%
MV (Million Baht)	877	21,898.49	2,270.71	416,365.60	86.00	61,640.34
CGI	877	58.54	57.74	92.01	22.70	10.99
Panel C: Purchases Occurring outside Blackout Period						
Net Number of Shares Purchased per Day	1424	804,902.50	20,200.00	126,000,000.00	40.00	7,873,532.00
Net Value of Shares Purchased per Day	1424	3,173,539.00	262,627.50	1,190,000,000.00	- 190,800.00	34,583,297.00
Relative Net Value of Shares Purchased per Day	1424	0.0727%	0.0082%	8.3599%	0.0000%	0.5055%
MV (Million Baht)	1424	25,926.31	2,338.27	416,365.60	118.75	72,267.43
CGI	1424	58.37	57.61	87.78	19.56	11.05

Table 5

Descriptive statistics: Insider Sales occurring during the Year 2006-2007 by CGI Quartile of firms

This table shows descriptive statistics of Insider Sales occurring during the year 2006-2007. The samples are net trades defined as inside sale. Panel A shows descriptive statistics of insider sales of firms with CGI Quartile 1 which specifies the worst corporate governance. Panel B shows descriptive statistics of the insider sales of firms with CGI Quartile 2. Panel C shows descriptive statistics of the insider sales of firms with CGI Quartile 3. Panel D shows descriptive statistics of the insider sales of firms with CGI Quartile 4 which specifies the best corporate governance. MV stands for the market value of the firms which there is an insider sale and is as of the end of the prior year to insider sale. CGI stands for the Corporate Governance Index of the firms which there is an insider sale and is as of the end of the prior year to insider sale.

Variables	Observations	Mean	Median	Maximum	Minimum	Std. Dev.
Panel A: Sales Trades of Firms in CGI Quartile1						
CGI	544	47.45	49.67	54.08	22.70	5.97
MV (Million Baht)	544	13,227.30	2,460.00	209,972.60	48.60	28,356.00
Relative Net Value of Shares Sold per Day	544	0.3266%	0.0128%	8.3599%	0.0000%	1.3692%
Panel B: Sales Trades of Firms in CGI Quartile2						
CGI	589	57.33	57.23	60.41	54.12	1.71
MV (Million Baht)	589	10,765.59	2,685.00	118,949.80	201.94	18,130.49
Relative Net Value of Shares Sold per Day	589	0.2463%	0.0184%	8.3599%	0.0000%	1.0129%
Panel C: Sales Trades of Firms in CGI Quartile3						
CGI	648	64.01	63.71	67.27	60.48	1.97
MV (Million Baht)	648	43,647.47	9,292.13	416,365.60	252.00	92,985.57
Relative Net Value of Shares Sold per Day	648	0.1417%	0.0113%	8.3599%	0.0000%	0.7677%
Panel D: Sales Trades of Firms in CGI Quartile4						
CGI	812	77.04	78.15	92.01	67.53	5.89
MV (Million Baht)	812	81,560.10	8,183.45	416,365.60	407.53	125,599.90
Relative Net Value of Shares Sold per Day	812	0.0253%	0.0048%	1.0995%	0.0000%	0.0825%

Table 6

Descriptive statistics of Trades: Insider Purchases occurring during the Year 2006-2007 by CGI Quartile of firms

This table shows descriptive statistics of Insider Purchases occurring during the year 2006-2007. The samples are net trades defined as inside purchase. Panel A shows descriptive statistics of insider purchases of firms with CGI Quartile 1 which specifies the worst corporate governance. Panel B shows descriptive statistics of the insider purchases of firms with CGI Quartile 2. Panel C shows descriptive statistics of the insider purchases of firms with CGI Quartile 3. Panel D shows descriptive statistics of the insider purchases of firms with CGI Quartile 4 which specifies the best corporate governance. MV stands for the market value of the firms which there is an insider purchase and is as of the end of the prior year to insider purchase. CGI stands for the Corporate Governance Index of the firms which there is an insider purchase and is as of the end of the prior year to insider sale.

Variables	Observations	Mean	Median	Maximum	Minimum	Std. Dev.
Panel A: Purchases Trades of Firms in CGI Quartile1						
CGI	675	45.90	46.83	54.08	19.56	6.90
MV (Million Baht)	675	8,786.69	2,200.00	209,972.60	164.70	24,866.86
Relative Net Value of Shares Purchased per Day	675	0.1402%	0.0134%	8.3599%	0.0001%	0.7858%
Panel B: Purchases Trades of Firms in CGI Quartile2						
CGI	649	56.67	56.51	60.41	54.12	1.48
MV (Million Baht)	649	6,267.97	1,312.94	94,115.25	86.00	11,905.15
Relative Net Value of Shares Purchased per Day	649	0.0548%	0.0107%	8.3599%	0.0000%	0.3493%
Panel C: Purchases Trades of Firms in CGI Quartile3						
CGI	579	63.55	62.84	67.39	60.55	2.18
MV (Million Baht)	579	37,498.33	1,529.66	416,365.60	333.00	90,353.69
Relative Net Value of Shares Purchased per Day	579	0.0613%	0.0077%	8.1367%	0.0000%	0.4473%
Panel D: Purchases Trades of Firms in CGI Quartile4						
CGI	398	75.13	75.18	92.01	67.53	4.83
MV (Million Baht)	398	61,340.65	11,908.09	416,365.60	667.50	106,717.30
Relative Net Value of Shares Purchased per Day	398	0.0497%	0.0031%	8.3599%	0.0000%	0.4398%

4.2 Event Study

The event study provides the basis for regression analysis to test hypothesis 1 and 2. I use the standard event study methodology to study the impact of insider trading as represented by Cumulated Abnormal Returns (CARs). Following Betzer and Theissen (2007), I take insider trading date as an event date. I calculate CARs for insider purchases and sales. In conclusion there are 2 cases of event studies

- Insider purchases
- Insider sales

Statistical tests are based on the average cumulative abnormal returns (CARs) defined as following;

$$CAR\tau,T = \sum_{t=\tau}^{T}\left[\left(\sum_{i=1}^{n} ARi,t\right)/n\right]$$

Where $CAR_{\tau,T}$ refers to an average abnormal return of a firm from the date τ to date T.

Figure 1 and Table 7 shows the cumulative abnormal return for all insider sales, insider sales occurring during blackout period and outside blackout period. Figure 1 shows that the cumulative abnormal return for insider sale continues to increase until the trading day, after which it continues to decrease. Rozanov (2008) specified this as a pattern of opportunistic trades i.e. trades with material non-public information. From Table 7, post-trade CAR(0,20) of all sales are not significant. This shows that, on average, insider sales do not yield any market-adjusted return during 20 days after the trading day. However, CAR(0,20) of sales occurring during blackout period are significantly negative. This shows that insider sales occurring during blackout period yield positive market-adjusted return during 20 days after the trade.

Figure 2 and Table 8 shows the cumulative abnormal return for all insider purchases, insider purchases occurring during blackout period and outside blackout period. Figure 2 shows that the cumulative abnormal return for insider purchase continues to decrease until the trading day, after which it continues to increase which shows that the trades are opportunistic. This is also a pattern of opportunistic trades. From Table 8, post-trade CARs of all purchases are insignificant positive number. This shows that, on average, insider sales do not yield any market-adjusted return

during 20 days after the trading day. CARs of purchases occurring during blackout period are insignificantly negative. This shows that insider sales occurring during blackout period do not yield any market-adjusted return during 20 days after the trade either.

Figure 3 and Table 9 shows the cumulative abnormal return for all insider sales and insider sales from different CGI quartile. The CARs curves from Figure 3 do not show any apparent relationship between CGI and CARs. From Table 8, only post-trade CAR(0,20) of sales from CGI quartile 2 are significant negative number which means that only insider sales from CGI quartile 2 can make positive market-adjusted return during 20 days after the trades.

Figure 4 and Table 10 shows the cumulative abnormal return for all insider purchases and insider purchases from different CGI quartile. The CARs curves from Figure 3 do not show any apparent relationship between CGI and CARs. From Table 8, only post-trade CARs of purchases from CGI quartile 2 and 3 are significant negative number which means that only insider purchases from CGI quartile 2 and 3 can make positive market-adjusted return during 20 days after the trades.

Figure 1

Cumulative Abnormal Return of Insider Sales by Blackout Period

This figure shows CAR(-20,n) of all insider sales, insider sales occurring during blackout period, and insider sales occurring outside blackout period.
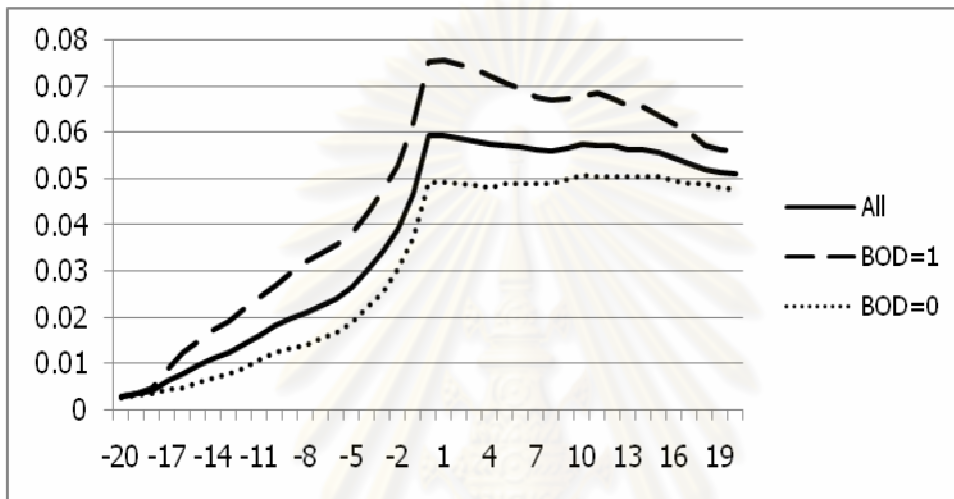
Table 7

Cumulative Abnormal Return around Insider Sales by Blackout Period

This table shows the Cumulative Abnormal Returns along with t-statistics of Insider sales for both pre-trade (-20,-10), (-20,-1) and post-trade periods (0,1), (0,5), (0,10) and (0,20). Panel A shows CARs of all insider sales. Panel B shows CARs of insider sales occurring during blackout period which is defined as 60 days prior to annual earnings announcements and 30 days prior to quarterly earnings announcements. Panel C shows CARs of the insider sales occurring outside blackout period. The star signs ***, **, * denotes significance of CARs at the 1% (5%, 10%) level.

Variables	Observations	CAR(-20,-10)	CAR(-20,-1)	CAR(0,1)	CAR(0,5)	CAR(0,10)	CAR(0,20)
Panel A: All Sales							
CAR	2593	1.81%***	4.7%***	1.25%***	1.04%***	1.05%***	0.41%
t-stat		(9.818)	(16.669)	(13.375)	(7.516)	(5.807)	(1.626)
Panel A: Sales Occurring during Blackout Period							
CAR	1004	2.7%***	6.21%***	1.36%***	0.86%***	0.59%*	-0.60%
t-stat		(8.386)	(12.387)	(7.657)	(3.52)	(1.876)	(-1.404)
Panel A: Sales Occurring outside Blackout Period							
CAR	1589	1.25%***	3.74%***	1.18%***	1.15%***	1.34%***	1.05%***
t-stat		(5.655)	(11.296)	(11.425)	(7.006)	(6.155)	(3.386)

Figure 2

Cumulative Abnormal Return of Insider Purchases by Blackout Period

This figure shows CAR(-20,n) of all insider purchases, insider purchases occurring during blackout period, and insider purchases occurring outside blackout period.

Table 8

Cumulative Abnormal Return around Insider Purchases by Blackout Period

This table shows the Cumulative Abnormal Returns along with t-statistics of insider purchases for both pre-trade (-20,-10), (-20,-1) and post-trade periods (0,1), (0,5), (0,10) and (0,20). Panel A shows CARs of all insider purchases. Panel B shows CARs of insider purchases occurring during blackout period which is defined as 60 days prior to annual earnings announcements and 30 days prior to quarterly earnings announcements. Panel C shows CARs of the insider purchases occurring outside blackout period. The star signs ***, **, * denotes significance of CARs at the 1% (5%, 10%) level.

Variables	Observations	CAR(-20,-10)	CAR(-20,-1)	CAR(0,1)	CAR(0,5)	CAR(0,10)	CAR(0,20)
Panel A: All Purchases							
CAR	2301	-0.0028	-0.0192***	-0.0044***	0.0004	0.0001	0.0007
t-stat		(-1.441)	(-6.956)	(-5.291)	(0.331)	(0.052)	(0.308)
Panel A: Purchases Occurring during Blackout Period							
CAR	877	0.0076**	0.0005	-0.0056***	0.0001	0	-0.0002
t-stat		(2.256)	(0.1)	(-3.655)	(0.026)	(-0.012)	(-0.051)
Panel A: Purchases Occurring outside Blackout Period							
CAR	1424	-0.0092***	-0.0313***	-0.0037***	0.0007	0.0002	0.0013
t-stat		(-3.94)	(-9.47)	(-3.825)	(0.445)	(0.088)	(0.497)

Figure 3

Cumulative Abnormal Return of Insider Sales by CGI Quartile

This figure shows CAR(-20,n) of all insider sale and insider sales in four different CGI quartile. CGI quartile 1 denotes the worst corporate governance while quartile 4 denotes the best corporate governance.
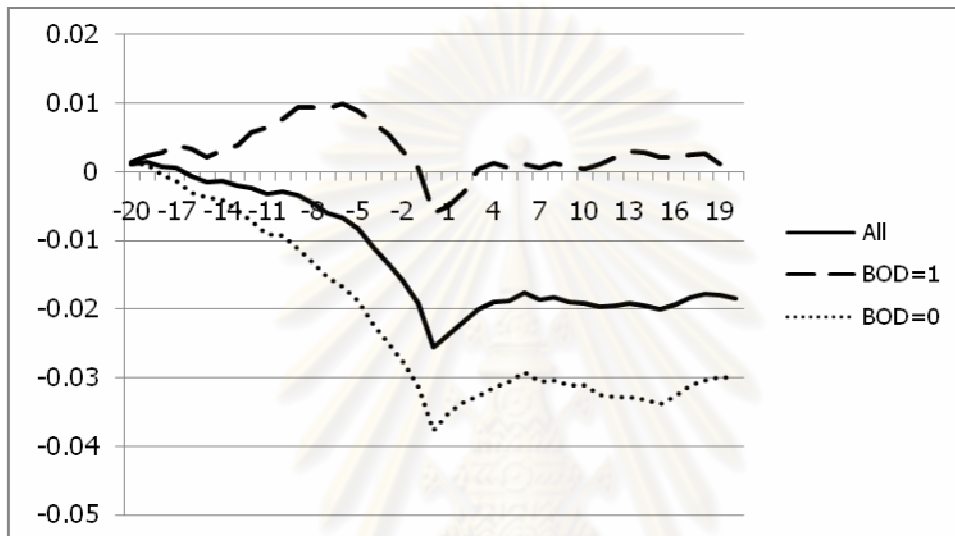
Table 9

Cumulative Abnormal Return around Insider Sales by Firms' CGI Quartile

This table shows the Cumulative Abnormal Returns along with t-statistics of Insider sales for both pre-trade (-20,-10), (-20,-1) and post-trade periods (0,1), (0,5), (0,10) and (0,20). Panel A shows CARs of all insider sales. Panel B shows CARs of insider sales in CGI Quartile1 denoting the worst corporate governance. Panel C shows CARs of insider sales in CGI Quartile 2. Panel D shows CARs of insider sales in CGI Quartile 3. Panel E shows CARs of insider sales in CGI Quartile 4 denoting the best corporate governance. The star signs ***, **, * denotes significance of CARs at the 1% (5%, 10%) level.

Variables	Observations	CAR(-20,-10)	CAR(-20,-1)	CAR(0,1)	CAR(0,5)	CAR(0,10)	CAR(0,20)
Panel A: All Sales Trades							
CAR	2593	1.81%***	4.7%***	1.25%***	1.04%***	1.05%***	0.41%
t-stat		(9.818)	(16.669)	(13.375)	(7.516)	(5.807)	(1.626)
Panel A: Sales Trades of Firms in CGI Quartile1							
CAR	544	1.49%***	4.82%***	1.22%***	1.19%***	1.28%***	1.1%*
t-stat		(4.11)	(7.848)	(6.489)	(3.919)	(3.334)	(1.926)
Panel B: Sales Trades of Firms in CGI Quartile2							
CAR	589	2.48%***	5.65%***	1.06%***	0.7%**	0.00%	-1.99%***
t-stat		(5.059)	(7.794)	(4.837)	(2.046)	(0)	(-3.675)
Panel C: Sales Trades of Firms in CGI Quartile3							
CAR	648	1.92%***	3.98%***	1.14%***	0.69%**	0.85%**	0.26%
t-stat		(5.562)	(7.452)	(5.497)	(2.551)	(2.189)	(0.503)
Panel D: Sales Trades of Firms in CGI Quartile4							
CAR	812	1.45%***	4.48%***	1.49%***	1.47%***	1.83%***	1.8%***
t-stat		(4.976)	(10.556)	(10.474)	(6.853)	(6.156)	(4.415)

Figure 4

Cumulative Abnormal Return of Insider Purchases by CGI Quartile

This figure shows CAR(-20,n) of all insider purchases and insider purchases in four different CGI quartile. CGI quartile 1 denotes the worst corporate governance while quartile 4 denotes the best corporate governance.
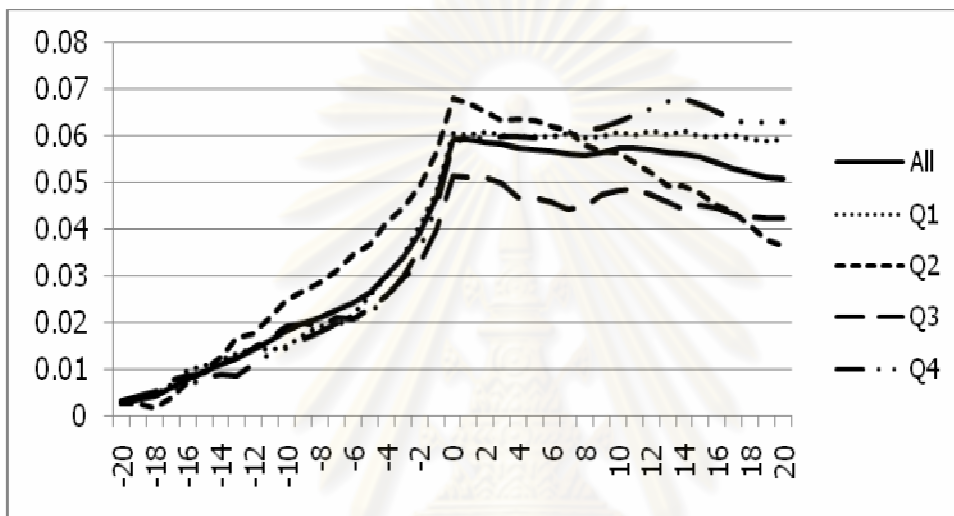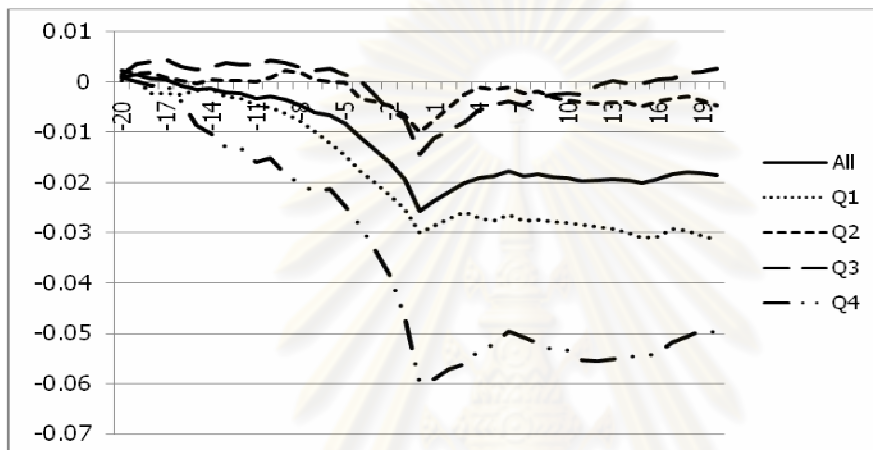
Table 10

Cumulative Abnormal Return around Insider Purchases by Firms' CGI Quartile

This table shows the Cumulative Abnormal Returns along with t-statistics of Insider purchases for both pre-trade (-20,-10), (-20,-1) and post-trade periods (0,1), (0,5), (0,10) and (0,20). Panel A shows CARs of all insider purchases. Panel B shows CARs of insider purchases in CGI Quartile1 denoting the worst corporate governance. Panel C shows CARs of insider purchases in CGI Quartile 2. Panel D shows CARs of insider purchases in CGI Quartile 3. Panel E shows CARs of insider purchases in CGI Quartile 4 denoting the best corporate governance. The star signs ***, **, * denotes significance of CARs at the 1% (5%, 10%) level.

Variables	Observations	CAR(-20,-10)	CAR(-20,-1)	CAR(0,1)	CAR(0,5)	CAR(0,10)	CAR(0,20)
Panel A: All Purchases Trades							
CAR	2301	-0.0028	-0.0192***	-0.0044***	0.0004	0.0001	0.0007
t-stat		(-1.441)	(-6.956)	(-5.291)	(0.331)	(0.052)	(0.308)
Panel A: Purchases Trades of Firms in CGI Quartile1							
CAR	675	-0.005	-0.0252***	-0.0035**	-0.0024	-0.0028	-0.0062
t-stat		(-1.304)	(-4.637)	(-2.34)	(-1.027)	(-0.966)	(-1.485)
Panel B: Purchases Trades of Firms in CGI Quartile2							
CAR	649	0.0009	-0.0066	-0.0009	0.0051*	0.0029	0.002
t-stat		(0.245)	(-1.242)	(-0.505)	(1.726)	(0.811)	(0.397)
Panel C: Purchases Trades of Firms in CGI Quartile3							
CAR	579	0.0042	-0.0073	-0.004***	0.0027	0.005*	0.0099**
t-stat		(1.121)	(-1.525)	(-2.68)	(1.171)	(1.766)	(2.397)
Panel D: Purchases Trades of Firms in CGI Quartile4							
CAR	398	-0.0152***	-0.0467***	-0.0124***	-0.0056*	-0.0068*	-0.003
t-stat		(-3.372)	(-7.167)	(-6.821)	(-1.817)	(-1.752)	(-0.566)

Chapter V
Empirical Result

Multiple Regression Analysis

This section provides the test for hypothesis one and two. In the analysis, CGI is used as a proxy of corporate governance goodness level of a firm. The methodology of this section follows Betzer and Theissen (2007). The dependent variable is $CAR_{0,20}$ since it capture complete market reaction to insider trades. For every firm and every event day, there is a $CAR_{0,20}$. I multiply the CARs for the sales by (-1) so that I could aggregate the purchase and sale trades to create a pooled data. Following analysis will be based on transformed CARs.

I proceed multiple regression separately for the following cases;

- Pooled sample, dependent variable is $CAR_{0,20}$
- Purchase sample, dependent variable is $CAR_{0,20}$
- Sale sample, dependent variable is $CAR_{0,20}$

The independent variables are as following;

- firm CGI ($CGI_{i,t}$) (Note that I use the average value of previous year and the event year CGI.)
- Blackout period Dummy ($BlackoutD_{i,t}$): takes the value of 1 if the trade occurs within black-out period, takes value of 0 otherwise

The control variables consist of

Firm Specific variables;

- Natural logarithm of the Market Capitalization in Baht of the Firm ($Lg(mktcap)_{i,t}$)
- Return on Equity of a firm ($ROE_{i,t}$)
- Debt-to-assets ratio of a firm ($DA_{i,t}$)
- Market-to-book ratio of a firm($MTB_{i,t}$)

Trade Specific Variables;

- The relative size of insider trade in Baht as based on the total market capitalization of the firm ($Resize_{i,t}$)
- Sale Dummy variable ($SaleD_{i,t}$): takes the value of 1 if the corporate insider is selling, takes value of 0 otherwise.

Interaction Terms;

- Corporate Governance Index*Blackout Dummy
- Corporate Governance Index*Sale Dummy

In the form of an equation, the model is

$$CAR_{i,t} = \beta_0 + \beta_1 * CGI_{i,t} + \beta_2 * BlackoutD_{i,t} + \beta_3 Lg(MarketCap)_{i,t} + \beta_4 * ROE_{i,t} + \beta_5 * DA_{i,t} + \beta_6 * MTB_{i,t} + \beta_7 * \mathrm{Re} Size_{i,t} + \beta_8 * SaleD_{i,t} + \varepsilon_{i,t}$$

For purchase and sale model the Sale Dummy variable is left out of the model as following;

$$CAR_{i,t} = \beta_0 + \beta_1 * CGI_{i,t} + \beta_2 * BlackoutD_{i,t} + \beta_3 Lg(MarketCap)_{i,t} + \beta_4 * ROE_{i,t} + \beta_5 * DA_{i,t} + \beta_6 * MTB_{i,t} + \beta_7 * \mathrm{Re} Size_{i,t} + \varepsilon_{i,t}$$

For each firm and each trading day, there is one set of independent variables associated.

In addition, to better capture the interaction effect between CGI and Blackout Dummy, and CGI and Sale Dummy, interaction terms are added to the models.

Interaction Terms;

- Corporate Governance Index*Blackout Dummy
- Corporate Governance Index*Sale Dummy

The results are shown in Table 11. All t-values are based on White heteroscedasticity-consistent standard errors. The The R^2 of pooled, sale, and purchase model of CGI are 0.77%, 1.28%, and 4.91%. The R^2 of pooled, sale, and purchase model of Corporate Governance Sub-indices are 0.91%, 1.68%, and 5.22%. The purchase model has the highest R^2 while the pooled model has the lowest R^2 for both cases, showing that the explanatory powers of the purchase models are the highest.

Table 11 shows that there is no significant relationship between corporate governance index and cumulative abnormal return from insider trading. However, when considering only insider sales, I have found significant negative relationship

between CGI and CARs. In addition, I have found significant positive relationship between CGI and CARs from insider purchase.

For the relationship between corporate governance sub-indices and CARs from insider trades, the regression results show that only Board Structure sub-index and Conflict of Interest sub-index have significant positive relationship with CARs while the other three sub-indices do not have significant relationship with CARs. Board Structure sub-index is negatively related to CARs while Conflict of Interest sub-index is positively related to CARs. When considering on insider sales, I have found that Board Structure sub-index is negatively related to CARs while Conflict-of-interest is positively related to CARs and the other three sub-indices do not have significant relationship with CARs from insider sales. When considering only insider purchases, I have found that only Conflict of Interest sub-index is positively related to CARs while the other four sub-indices do not have significant relationship with CARs.

The result reveals unexpected asymmetrical relationship between CGI and return from insider sales and purchases. Insiders of firms with better corporate governance gain lower returns from selling their stocks than those of firms with worse corporate governance while insiders of firms with better corporate governance gain higher returns from purchasing their stocks than those of firms with better corporate governance. This could possibly be explained by the difference in investors' behavior in taking the bad news and good news. Investors might have strong belief in firms with better corporate governance. When insiders sold the stocks of firms with better corporate governance, investors were still optimistic and thus, the stock prices did not fall as much as firms with worse corporate governance. However, when insiders purchased the stocks of firms with better corporate governance, this emphasized the belief of investors and thus, the stock prices increase more than the firms with worse corporate governance.

Table 11 also shows that insider earns significantly higher cumulative abnormal return from trading stocks prior to earning announcements. When considering only insider sales, the result is consistent. However, when considering only purchases, I have found that insider do not earn extra cumulative abnormal return from purchasing the stocks prior to earning announcements.

Table 12 shows the regression results of the models with interaction terms. The results are consistent with the previous models. From the table, CGI is not significantly related with CARs for pooled sample. CGI is negatively related to CARs for sale sample and is positively related to CARs for purchase sample. The Blackout Dummy is positively related to CARs for all models. The interaction term, CGI*Blackout Dummy, is positively related to CARs for pooled sample, is positively related to CARs for sale sample and is negatively related to CARs for purchase sample. Lastly, the interaction term, CGI*Sale Dummy, is negatively related to CARs for pooled model. This supports earlier results that the relationships between CGI and CARs for insider sales and purchases are asymmetric. The fact that an insider trade is a sale has negative impact on the effect of CGI on CARs.

Recalling the two hypotheses,

Hypothesis 1: In Thai capital market, the relationship between corporate governance level of a firm and the insider trading abnormal returns is negative.

For insider sales, the results support hypothesis 1. For insider purchases, the results does not support hypothesis 1.

Hypothesis 2: In Thai capital market, higher abnormal returns are achieved during blackout periods (Blackout period is defined as within two months before final earnings announcements and within one month prior to quarterly earnings announcements as of the UK regulation).

The results support hypothesis 2.

Table 11

Cross-sectional Regression Analysis of Insider Trades: Cumulative Abnormal Return (0,20) with Corporate Governance Index and Sub-indices, and Other Firm Characteristics

        This table presents the results of cross-sectional regressions of insider trades. For insider sales, the dependent variable is CAR(0,20)*(-1). For insider purchase, the dependent variable is CAR(0,20). The event date is the date on which trade was executed. The independent variables include firm-specific variables i.e. corporate governance index, and sub indices (Board Structure, Conflict of Interest, Board Responsibilities, Shareholder Rights, and Disclosure and Transparency), Log(Market Capitalization), Return on Equity, Debt to Asset Ratio, and Market to Book Value of Equity. The independent variables also include trade-specific variables i.e. Blackout Dummy, and Relative Size. Dummy variables are defined as following; BLACKOUTD = 1 if the trade occurs during blackout period. The t-statistic of the estimated coefficients are based on heteroscedasticity-consistent standard errors are reported in parentheses. The star signs ***, **, * denotes significance of CARs at the 1% (5%, 10%) level. The last three rows show the number of observations, R-square, and the adjusted R-square in percentage.

Independent Variables	Description	Predicted Sign	Pooled		All Sale		All Purchase	
Dependent Variable:			*CAR(0,20) and CAR(0,20)*(-1)*		*CAR(0,20)*(-1)*		*CAR(0,20)*	
CONSTANT			0.022**	0.026**	0.038**	0.042**	-0.031*	-0.025
			(2.035)	(2.275)	(2.302)	(2.408)	(-1.711)	(-1.376)
CGI	Corporate Governance Index	-	0.00003	-	-0.001**	-	0.001***	-
			(-0.166)	-	(-2.355)	-	(3.623)	-
BRDSTRUCTURE	Board Structure	-	-	-0.00002**	-	-00004***	-	0.00003
			-	(-2.331)	-	(-2.801)	-	(0.267)
CONFLICT	Conflict of Interest	-	-	0.00002*	-	0.0001	-	0.001***
			-	(1.817)	-	(0.951)	-	(3.534)
BRDRES	Board Responsibilities	-	-	-0.00002	-	-0.0004**	-	0.0002
			-	(-0.242)	-	(-2.358)	-	(1.844)
SHRRIGHT	Shareholder Rights	-	-	0	-	0	-	-0.0001
			-	(-0.053)	-	(1.048)	-	(-0.88)
DISCLOSURE	Disclosure and Transparency	-	-	0.0001	-	0.0004	-	0.0001
			-	(0.845)	-	(0.911)	-	(0.871)
BLACKOUTD	Blackout Dummy	+	0.007**	0.007**	0.017***	0.016***	-0.007	-0.007
			(2.042)	(2.066)	(3.163)	(3.058)	(-1.524)	(-1.462)
LG(MKTCAP)	Log Market Capitalization	-	-0.003**	-0.004***	-0.003	-0.005***	-0.001	-0.001
			(-2.425)	(-2.947)	(-1.636)	(-2.667)	(-0.576)	(-0.733)
ROE	Return on Equity		-0.005	-0.005	0.043**	0.043**	-0.094**	-0.093**
			(-0.241)	(-0.242)	(2.443)	(2.42)	(-2.405)	(-2.369)
DA	Debt to Asset Ratio		0.021**	0.019**	0.015	0.006	0.044***	0.044***
			(2.348)	(2.072)	(1.204)	(0.445)	(3.36)	(3.338)
MTB	Market to Book Value of Equity		-0.002	-0.002	-0.0002	0.001	-0.006**	-0.006**
			(-1.371)	(-1.192)	(-0.109)	(0.647)	(-2.138)	(-2.191)
RESIZE	Relative Size of Shares Traded	+	0.301	0.32	0.33	0.358	0.429	0.387
			(1.217)	(1.284)	(1.206)	(1.284)	(1.052)	(0.936)
SALED	Sale Dummy		-0.001	-0.002	-	-	-	-
			(-0.333)	(-0.59)	-	-	-	-
Observations			4894	4894	2593	2593	2301	2301
R²			0.77%	0.91%	1.28%	1.68%	4.91%	5.22%
Adjusted R2			0.61%	0.66%	1.01%	1.26%	4.62%	4.76%

Table 12

Cross-sectional Regression Analysis of Insider Trades: Cumulative Abnormal Return (0,20) with Corporate Governance Index (CGI), CGI*Blackout Dummy, CGI*Sale Dummy, and Other Firm Characteristics

This table presents the results of cross-sectional regressions of insider trades. For insider sales, the dependent variable is CAR(0,20)*(-1). For insider purchase, the dependent variable is CAR(0,20). The event date is the date on which trade was executed. The independent variables include firm-specific variables i.e. Corporate Governance Index, CGI*Blackout Dummy, CGI*Sale Dummy, Log(Market Capitalization), Return on Equity, Debt to Asset Ratio, and Market to Book Value of Equity. The independent variables include interaction term i.e. CGI*Blackout Dummy and CGI*Sale Dummy. The independent variables also include trade-specific variables i.e. Blackout Dummy, and Relative Size. Dummy variables are defined as following; BLACKOUTD = 1 if the trade occurs during blackout period. The t-statistic of the estimated coefficients are based on heteroscedasticity-consistent standard errors are reported in parentheses. The star signs ***, **, * denotes significance of CARs at the 1% (5%, 10%) level. The last three rows show the number of observations, R-square, and the adjusted R-square in percentage.

Independent Variables	Description	Predicted Sign	Pooled	All Sale	All Purchase
Dependent Variable:			*CAR(0,20) and CAR(0,20)*(-1)*	*CAR(0,20)*(-1)*	*CAR(0,20)*
CONSTANT			0.011	0.081***	-0.051**
			(0.7)	(4.423)	(-2.539)
CGI	Corporate Governance Index	-	0.0002	-0.001***	0.0006***
			(0.74)	(-4.327)	(4.228)
BLACKOUTD	Blackout Dummy	+	0.005**	0.095***	0.002*
			(2.043)	(3.324)	(1.952)
CGI*BLACKOUTD	Corporate Governance Index*Blackout Dummy		0.0007**	0.002***	-0.001*
			(2.51)	(4.101)	(-2.278)
LG(MKTCAP)	Log Market Capitalization	-	-0.003**	-0.004**	-0.001
			(-2.394)	(-2.027)	(-0.54)
ROE	Return on Equity		-0.006	0.044**	-0.094**
			(-0.299)	(2.473)	(-2.409)
DA	Debt to Asset Ratio		0.023**	0.017	0.043***
			(2.547)	(1.347)	(3.305)
MTB	Market to Book Value of Equity		-0.002	0.00002	-0.006**
			(-1.594)	(0.011)	(-2.116)
RESIZE	Relative Size of Shares Traded	+	0.28	0.352	0.403
			(1.132)	(1.263)	(0.948)
SALED	Sale Dummy		0.05***	-	-
			(2.7)	-	-
CGI*SALED	Corporate Governance Index*Sale Dummy		-0.0008***	-	-
			(-2.853)	-	-
Observations			4894	2593	2301
R^2			1.04%	1.89%	5.10%
Adjusted R2			0.84%	1.59%	4.77%

Robustness Test

For a robustness test, I calculate Price Pattern which is a tool to measure how opportunistic insider trades are, and then regress it on CGI, Blackout Period Dummy, and other control variables to uncover the relationship between abnormal return from material non-public information and corporate governance and Blackout Dummy.

Price Pattern is the tool to identify insider trading that is based on non-public information. It is introduced by Rozanov 2008. It is based on prior studies which suggest that the profitability of an insider trade reflects the materiality of the insider's informational advantage (Rogoff, 1964) Rozanov states that on average, firm-specific returns around opportunistic trades will follow a predictable pattern which he captures by the Price Pattern. In particular, an opportunistic insider trade, ceteris paribus, is expected to be followed by positive abnormal returns and preceded by negative abnormal returns, respectively.

Price Pattern is measured as the natural logarithm of the ratio of two excess returns. The denominator is one plus the market-adjusted gross return over the 20 trading days preceding the insider transaction, and the numerator is one plus the analogous return over the 20 trading days following the insider transaction. The larger value of Price Pattern, the more likely it is that the trade be opportunistic i.e. based on non-public information.

Table 12 the descriptive statistics of insider trades, insider trades occurring during blackout period, and the other insider trades. The table provides number of observations, mean, median, maximum, minimum, and standard deviation of Price Pattern.

For insider sales, the Price Pattern of all-sales case is equal to -4.44%. The negative sign indicates that stock price decreased after insider sale more than it increased before the sales, thus, making insider sales opportunistic on average. The Price Pattern of sales during blackout period is equal to -4.29% while the Price Pattern of the other sales is equal to -4.53%. Contradicting to first expectation, this indicates that insider sales during blackout period is less opportunistic than sales during other period.

For insider purchases, the Price Pattern of all-purchases case is equal to -1.75%. The positive sign indicates that stock price increased after insider sale more than it decreased before the sale, thus, making insider sales opportunistic on average. The Price Pattern of sales during blackout period is equal to 2.54% while the Price Pattern of the other sales is equal to 1.27%. Contradicting to first expectation, this indicates that insider sales during blackout period is less opportunistic than sales during other period.

Table 13 the descriptive statistics of insider trades by CGI Quartile. The table provides number of observations, mean, median, maximum, minimum, and standard deviation of Price Pattern. The mean Price Patterns of insider sales of firms from CGI Quartile 1, 2, 3 and 4 are -4.04%, -7.04%, -3.68%, and -3.42%. The mean Price Pattern of quartile 1 and 2 are larger in magnitude than those of quartile 3 and 4, showing that insider sales of better corporate governance firms are more opportunistic. The mean Price Patterns of insider purchases of firms from CGI Quartile 1, 2, 3 and 4 are 1.37%, 0.96%, 1.67%, and 3.80%. The mean Price Pattern of quartile 1 and 2 are smaller in magnitude than those of quartile 3 and 4, showing that insider purchases of better corporate governance firms are less opportunistic.

For insider sales, the Price Pattern of all-sales case is equal to -4.44%. The negative sign indicates that stock price decreased after insider sale more than it increased before the sales, thus, making insider sales opportunistic on average. The Price Pattern of sales during blackout period is equal to -4.29% while the Price Pattern of the other sales is equal to -4.53%. Contradicting to first expectation, this indicates that insider sales during blackout period is less opportunistic than sales during other period.

For insider purchases, the Price Pattern of all-purchases case is equal to -1.75%. The positive sign indicates that stock price increased after insider sale more than it decreased before the sale, thus, making insider sales opportunistic on average. The Price Pattern of sales during blackout period is equal to 2.54% while the Price Pattern of the other sales is equal to 1.27%. Contradicting to first expectation, this indicates that insider sales during blackout period is less opportunistic than sales during other period.

For a robustness test, I use Price Pattern as a dependent variable instead of CAR(0,20). Both are calculated from market-adjusted abnormal return from insider trades. However, the differences are that Price Pattern is a post-trade return adjusted for pre-trade return while CAR(0,20) is only calculated from post-trade return ignoring the pre-trade return.

The results are shown in Table 14. All t-values are based on White heteroscedasticity-consistent standard errors. The The R^2 of pooled, sale, and purchase model of CGI are 0.90%, 1.20%, and 1.81%. The R^2 of pooled, sale, and purchase model of Corporate Governance Sub-indices are 1.1%, 1.55%, and 2.24%. The purchase model has the highest R^2 while the pooled model has the lowest R^2 for both cases, showing that the explanatory powers of the purchase models are the highest. This is consistent with the models with CAR(0,20) as dependent variables, although the explanatory power of models with Price Pattern are, on average, lower.

Table 14 shows that there is no significant relationship between corporate governance and abnormal return from using material non-public information of all insider trades, insider sales, and insider purchases. For the relationship between corporate governance sub-indices and Price Pattern of insider trades, the regression results show that only Board Responsibility sub-index have significant negative relationship with Price Pattern while the other four sub-indices do not have significant relationship with Price Pattern. For insider sales, Board Structure sub-index are negatively related to Price Pattern and Conflict of Interest sub-index is positively related to Price Pattern, and the other sub-indices do not have significant relationship with Price Pattern. For insider purchases, Conflict of Interest sub-index is positively related to Price Pattern, while Board Responsibility sub-index is negatively related to Price Pattern, and the other sub-indices are not significantly related to Price Pattern.

Table 14 also shows that insiders do not gain higher abnormal return from using material non-public information to trade stocks prior to earning announcements than the other periods for all insider-trades case, and insider-sale case. However, they gain higher abnormal return from material non-public information when purchasing stocks

Once again, recalling the two hypotheses,

Hypothesis 1: In Thai capital market, the relationship between corporate governance level of a firm and the insider trading abnormal returns is negative.

Using CGI as a proxy for corporate governance goodness, when considering all insider trades, only insider purchases, and only insider purchases, we can reject hypothesis 1.

Hypothesis 2: In Thai capital market, higher abnormal returns are achieved during blackout periods (Blackout period is defined as within two months before final earnings announcements and within one month prior to quarterly earnings announcements as of the UK regulation).

When considering all insider trades and only insider sales, we can reject hypothesis 2. However, when considering only insider purchases, we cannot reject hypothesis 2.

Considering all insider trades, the result of the test of hypothesis 1 using Price Pattern is consistent with that using CAR(0,20). However, the result of the test of hypothesis 2 is different from using CAR(0,20). While using CAR(0,20) as a dependent variable shows that insider trades during blackout period yields higher abnormal return than insider trades during other periods, using Price Pattern as a dependent variable shows that insider trades during blackout period do not gain any extra abnormal return.

Table 13

Descriptive statistics of Price Pattern by Blackout Period

This table shows descriptive statistics of Price Pattern of insider trades occurring during the year 2006-2007. Panel A shows descriptive statistics of Price Pattern of insider sales. Panel B shows descriptive statistics of Price Pattern of insider purchases.

Sample	Observations	Mean	Median	Maximum	Minimum	Std. Dev.
Panel A: Insider Sale Trades						
All Sales	2593	-4.44%	-3.30%	194.56%	-112.47%	15.95%
Sales Occurring during Blackout Period	1004	-4.29%	-2.89%	194.56%	-112.47%	17.51%
Sales Occurring outside Blackout Period	1589	-4.53%	-3.61%	111.14%	-98.73%	14.89%
Panel B: Insider Purchase Trades						
All Purchases	2301	1.75%	1.36%	69.14%	-112.64%	13.98%
Purchases Occurring during Blackout Period	877	2.54%	3.27%	62.13%	-112.64%	15.21%
Purchases Occurring outside Blackout Period	1424	1.27%	0.42%	69.14%	-74.27%	13.14%

Table 14

Descriptive statistics of Price Pattern by CGI Quartile

This table shows descriptive statistics of Price Pattern of insider trades occurring during the year 2006-2007. Panel A shows descriptive statistics of Price Pattern of insider sales. Panel B shows descriptive statistics of Price Pattern of insider purchases.

Sample	Observations	Mean	Median	Maximum	Minimum	Std. Dev.
Panel A: Insider Sale Trades						
All Sales	2593	-4.44%	-3.30%	194.56%	-112.47%	15.95%
Sales of firms from CGI Quartile 1	544	-4.04%	-2.97%	50.48%	-88.64%	15.04%
Sales of firms from CGI Quartile 2	589	-7.04%	-5.15%	111.14%	-112.47%	19.45%
Sales of firms from CGI Quartile 3	648	-3.68%	-2.38%	194.56%	-98.73%	17.32%
Sales of firms from CGI Quartile 4	812	-3.42%	-2.84%	47.71%	-79.33%	11.90%
Panel B: Insider Purchase Trades						
All Purchases	2301	1.75%	1.36%	69.14%	-112.64%	13.98%
Purchases of firm froms CGI Quartile1	675	1.37%	0.18%	61.25%	-74.27%	13.85%
Purchases of firm froms CGI Quartile2	649	0.96%	1.66%	62.13%	-112.64%	14.87%
Purchases of firm froms CGI Quartile3	579	1.67%	1.62%	69.14%	-56.79%	13.48%
Purchases of firm froms CGI Quartile4	398	3.80%	2.39%	56.80%	-35.70%	13.22%

Table 15

Cross-sectional Regression Analysis of Insider Trades: Price Pattern with Corporate Governance Index, CGI*Blackout Dummy, CGI*Sale Dummy, and Other Firm Characteristics

This table presents the results of cross-sectional regressions of insider trades. For insider sales, the dependent variable is Price Pattern*(-1). For insider purchase, the dependent variable is Price Pattern. The event date is the date on which trade was executed. The independent variables include firm-specific variables i.e. corporate governance index, CGI*Blackout Dummy, CGI*Sale Dummy, Return on Equity, Debt to Asset Ratio, and Market to Book Value of Equity. The independent variables include interaction term i.e. CGI*Blackout Dummy and CGI*Sale Dummy. The independent variables also include trade-specific variables i.e. Blackout Dummy, and Relative Size. Dummy variables are defined as following; BLACKOUTD = 1 if the trade occurs during blackout period. The t-statistic of the estimated coefficients are based on heteroscedasticity-consistent standard errors are reported in parentheses. The star signs ***, **, * denotes significance of CARs at the 1% (5%, 10%) level. The last three rows show the number of observations, R-square, and the adjusted R-square in percentage.

Independent Variables	Description	Predicted Sign	Pooled		All Sale		All Purchase	
Dependent Variable:			*Price Pattern and Price Pattern*(-1)*		*Price Pattern*(-1)*		*Price Pattern*	
CONSTANT			0.029**	0.03**	0.084***	0.071***	0.013	0.03
			(2.108)	(2.03)	(4.044)	(3.27)	(0.606)	(1.334)
CGI	Corporate Governance Index	-	0.00008	-	-0.00006	-	-0.00002	-
			(0.407)	-	(-0.217)	-	(-0.065)	-
BRDSTRUCTURE	Board Structure	-	-	0.0001	-	0.0003*	-	-0.0001
			-	(1.067)	-	(1.858)	-	(-0.864)
CONFLICT	Conflict of Interest	-	-	-0.00009	-	-0.0005***	-	0.0004**
			-	(-0.697)	-	(-3.127)	-	(2.267)
BRDRES	Board Responsibilities	-	-	0.0003**	-	-0.0001	-	-0.0004**
			-	(-2.468)	-	(-0.693)	-	(-2.508)
SHRRIGHT	Shareholder Rights	-	-	0.0002	-	0.0002	-	0.0001
			-	(1.553)	-	(0.999)	-	(0.76)
DISCLOSURE	Disclosure and Transparency	-	-	0.0002	-	0.0001	-	0.0001
			-	(1.507)	-	(0.615)	-	(0.546)
BLACKOUTD	Blackout Dummy	+	0.004	0.005	-0.004	-0.004	0.016***	0.017***
			(1.001)	(1.067)	(-0.588)	(-0.535)	(2.701)	(2.857)
LG(MKTCAP)	Log Market Capitalization	-	-0.003*	-0.003**	-0.004*	-0.003	0.00003	-0.003
			(-1.712)	(-2.057)	(-1.936)	(-1.404)	(0.015)	(-1.212)
ROE	Return on Equity		-0.005	-0.005	-0.056*	-0.056*	0.089**	0.09**
			(-0.207)	(-0.211)	(-1.856)	(-1.848)	(2.321)	(2.316)
DA	Debt to Asset Ratio		0	-0.002	0.009	0.009	-0.017	-0.013
			(-0.028)	(-0.163)	(0.545)	(0.558)	(-1.06)	(-0.774)
MTB	Market to Book Value of Equity		0.003	0.003	0.004*	0.003	-0.004	-0.004
			(1.348)	(1.438)	(1.771)	(1.34)	(-1.175)	(-1.1)
RESIZE	Relative Size of Shares Traded	+	-0.276	-0.285	-0.419	-0.469	-0.412	-0.404
			(-0.624)	(-0.639)	(-0.723)	(-0.799)	(-0.567)	(-0.557)
SALED	Sale Dummy		0.028***	0.028***	-	-	-	-
			(5.955)	(5.935)	-	-	-	-
Observations			4894	4894	2593	2593	2301	2301
R²			0.90%	1.10%	1.20%	1.55%	1.81%	2.24%
Adjusted R2			0.74%	0.86%	0.93%	1.13%	1.51%	1.77%

Chapter VI
Conclusion

This study investigates the relationship between corporate governance and abnormal return from insider trades, and tests whether trades prior to earning announcements yield extra abnormal returns. This study use Corporate Governance Index and Sub-indices e.g. board structure, conflict of interest, board responsibilities, shareholder rights, and disclosure and transparency, which capture major aspects of corporate governance (Ananchotikul, 2006) as proxies of corporate governance.

This study has found that corporate governance and abnormal return from insider sales have negative relationship while corporate governance and abnormal return from insider purchases have positive relationship. The explanation for asymmetrical relationship is that investor might have a strong believe in firms with better corporate governance. Thus, they take bad news and good news differently. When insiders sold the stocks of firms with better corporate governance, investors were still optimistic and thus, the stock prices did not fall as much as firms with worse corporate governance. However, when insiders purchased the stocks of firms with better corporate governance, this emphasized the belief of investors and thus, the stock prices increase more than the firms with worse corporate governance.

Another finding of this study is that insider trades during blackout period yields extra abnormal return comparing to trades during other period. This gives an important implication that blackout period regulation which prohibits insider trades 1 month before quarterly earnings announcements and 2 months before annual earnings announcements would be valuable to Thai capital market.

This study is subjected to some limitations. First, I am not able to control for all variables potentially correlated with cumulative abnormal return from insider trades in emerging markets, so there remains a possibility that the results may be bias by some omitted variables. Second, the finding in this study could only capture the picture of insider trades only during the year 2006 and 2007. Finally, Corporate Governance Index is calculated based on only 56-1 and thus, might not be able to capture the other aspects of corporate governance.

For further study, other method to measure corporate governance and other sample period of insider trading are encouraged to be investigated.

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APPENDIX

Questions for corporate governance index construction

Code	Questions	Scoring Rule		Max. Score	Weight
A. Board Structure				6	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	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 director?	1/6 if b17=1	;0 otherwise		

Code	Questions	Scoring Rule		Max. Score	Weight
B. Conflict of Interest				8	25%
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 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	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		

Code	Questions	Scoring Rule		Max. Score	Weight
C. Board Responsibilities				13	20%
D. Shareholder Rights				7	10%
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	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 family/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		

Biography

Miss Sirorat Charasrungrojkul graduated with Bachelor of Art in Economics-Mathematics Emphasis from University of Wisconsin-Madison with Grade Average Point (GPA) equaled to 3.49 in 2006 and achieved Dean's Lists of students with distinguishing academic record for Spring 2006. Next 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 3.97. She now works for KASIKORN BANK Plc. As an associate relationship manager of corporate business customer.