

**Corporate Governance and Equity Returns:  
Evidence from Corporate Governance Reports of Thai Listed Companies**

**Jitipol Puksamatanan  
National Institute of Development Administration**

**November 2012**

**Abstract**

This study utilizes the Corporate Governance Report from the Thai Institute of Directors to examine the risks and long-term returns of Corporate Governance Score portfolios that consist of firms listed on the Stock Exchange of Thailand from 2006 to 2011, a period when Thailand began to score the practices of corporate governance among firms. It was found that a strong Corporate Governance Score portfolio is not exposed to market anomaly risks such as size, value, or momentum risks. In contrast, these risks factors significantly affect the weak Corporate Governance Score portfolios. Moreover, strong corporate governance portfolios were obviously found to be well-protected investments against an adverse market climate.

JEL Classification: G11, G34

Keywords: Thailand, corporate governance, risk, returns, crisis period

E-Mail Address: [Jitipol.p@gards.nida.ac.th](mailto:Jitipol.p@gards.nida.ac.th), [aeknit@nida.ac.th](mailto:aeknit@nida.ac.th)

Disclaimer: The views expressed in this working paper are those of the author(s) and do not necessarily represent the Capital Market Research Institute or the Stock Exchange of Thailand.

Capital Market Research Institute Scholarship Papers are research in progress by the author(s) and are published to elicit comments and stimulate discussion.

## Content

		<b>Page</b>
<b>Chapter 1</b>	Introduction	1
<b>Chapter 2</b>	Literature Review	5
<b>Chapter 3</b>	Data and Methodology	9
	Data	9
	Methodology	13
<b>Chapter 4</b>	Empirical Results	16
	Analysis of Corporate Governance and Equity Returns	16
	Corporate Governance during the Crisis Period	19
<b>Chapter 5</b>	Concluding Remarks	26
<b>References</b>		28

### Table

1.	Corporate Governance Scores	10
2.	Descriptive Statistics under Different Corporate Governance Scores	11
3.	Results for Corporate Governance Score Portfolios	17
4.	Results from Corporate Governance Score Portfolios on the Crisis	22
5.	Results of the Crisis for Corporate Governance Portfolios	24

### Figure

1.	Corporate Governance Score Portfolios	2
2.	Rolling Beta of Corporate Governance Score portfolios	20

## **Chapter1 Introduction**

Presently, even though corporate governance has become a more common practice among Asian firms, the benefits to firm performance are still unclear. Moreover, while it is true that the concept of corporate governance has been practiced and defined among scholars and practitioners for decades, the extent to which obtaining strong governance practices by a firm, resulting in its higher equity price, has yet to reach a definitive conclusion. The likeliest reason why this still remains a hotly debated issue is attributed to the fact that the relationship between corporate governance and equity returns is subjected to, and consequently clouded by, many other factors.

This study is therefore aimed at contributing to the discussion of corporate governance by delving into the empirical evidence on how firms with different corporate governance classes perform in Thailand. The motivation of this study stems not only from the fact that, in the past, most firms in Asia overlooked the concept of corporate governance, but also from the fact that corporate governance has become an increasingly important concern since the 1997 Asian financial crisis. A failure to fully grasp the cost and benefit of corporate governance may result in either the firm only paying lip service to corporate governance for the sake of better public relations, or the firm ending up excessively championing the cause whence their resources could better be utilized elsewhere. It is for this very reason that this study chooses to focus on improving the understanding of the effects of corporate governance on equity returns.

At present, the aftermath of the crisis has consequentially witnessed the rise of calls and enforcement of listed firms on the Stock Exchange of Thailand (SET) to participate in a good governance regime, most prominently from the Security and Exchange Commission (SEC). The SEC has mandated that listed firms on the SET develop a more professional standard of corporate governance. Therefore, the level of corporate responsibilities regarding issues such as the rights and equitable treatment of shareholders, the roles of stakeholders, disclosure and transparency, as well as board of directors' (BOD) responsibilities of the listed firms, have greatly improved during the years

from 2000 to 2005. This has led to the core question of this study: “Do firms with strong corporate governance practices give their investors better investment results than those with weaker corporate governance practices?” In fact, this broadly-defined question can be answered by Figure 1, as it demonstrates the performances of equity portfolio clustering by the Thai Institute of Directors’ Corporate Governance Score on the SET.

**Figure 1: Corporate Governance Score Portfolios**

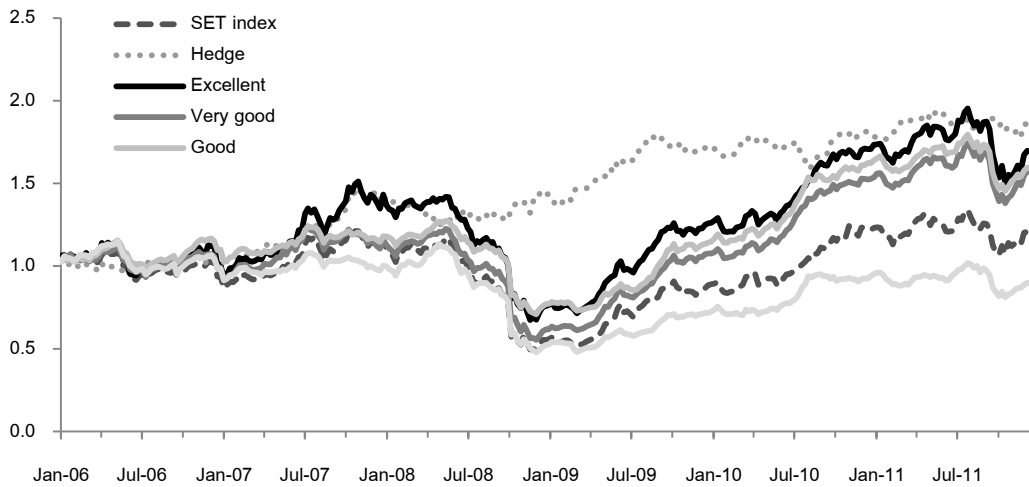


Figure 1 reports the performances of equity portfolios on the SET from January 2006 to December 2011. Corporate Governance Score portfolios are formed each year in January by using the equal-weighted performance of the firms with the same Corporate Governance Score in the same year’s Corporate Governance Report from the Thai Institute of Directors. The Hedge portfolio represents zero-cost investment, which buys the Excellent Corporate Governance Score portfolio and sells short the Poor Corporate Governance Score portfolio. All of the data were initialized with one and cumulatively multiplied with the Corporate Governance Score filtered returns from the start to the end of the analysis period, where the SET index refers to the cumulative returns of the SET Index.

Figure 1 reports the performances of Corporate Governance portfolios for the SET from January 2006 to December 2011, when an investment of \$1 in the SET’s index at the beginning of January 2006 would yield only \$1.19 at the end of December 2011 (approximately 2.94% per year). The most interesting result is that an investment of \$1 at the end of December 2006 in the Excellent, the Very Good, and the Good Corporate Governance Score portfolios yielded better cumulative returns than the market. Although the returns were not significantly different among the portfolios, an

investor would receive \$1.59, \$1.56, \$1.58 in December 2011 from the Excellent, the Very Good, and the Good Corporate Governance portfolios, respectively (average of 7.80% per year). In contrast, a \$1 investment in the Poor Corporate Governance portfolio decreased to \$0.88 over the same period (approximately -2.10% per year). In particular, the return that buying the Excellent Corporate Governance portfolio and short selling the Poor Corporate Governance portfolio, the Hedge portfolio, created was the equivalence of annualized returns of 10.37%. Implicitly, an investor that put \$1 into this Hedge portfolio at the beginning of January 2006 would gain \$1.75 in December 2011. From this result alone, the implication seems to be that investment in strong corporate governance firms could lead to superior investment returns over the market, and that investment in weak corporate governance firms would receive sub-par returns.

Nevertheless, it is too early to assume that this initial result can directly lead to any final conclusions on the effects of corporate governance on investment results, since the difference in returns might be affected by many factors, such as the differences in risk levels and other unexpected behaviors, apart from the differences in corporate governance. Until recently, there have been very few studies on the relationship between the performances of the SET's listed firms and corporate governance, the main reason being the lack of available data. Hence, this research attempts to utilize the newly-created Corporate Governance Scores of the Thai Institute of Directors (IOD) and analyze them with controlled variables in order to shed further light on the issue of the effects of corporate governance.

In order to provide a strong basis for this study, Chapter 2 then reviews the literature that explains any investing-related aspects that are relevant to corporate governance. It also provides examples of the effects of corporate governance on performances around the world. Furthermore, Chapter 3 thoroughly explains the data that this study employs in the empirical analysis with their descriptive statistics. Thus, the corporate governance measurement of this study, Corporate Governance Scores, is explained in this section. At the end of Chapter 3, standard methodologies that explain the long-term returns of firms with different Corporate Governance Scores are explained. Chapter 4 then presents the results of the findings. Firstly, this chapter exhibits that the firms with different Corporate Governance Scores are faced with different magnitudes, different types of risks,

and generate dissimilar abnormal returns. Secondly, this study further investigates the investment results in the time of a crisis when firms with stronger corporate governance should be a more trustworthy investment compared to the firms that practice weaker corporate governance. In general, the results from this study confirmed that the investment outcomes of portfolios of firms that have stronger corporate governance are better than the outcomes of the portfolios of firms that have weaker corporate governance during a crisis period. Chapter 5, which is the last section, concludes all the results. Recommendations for future research and suggestions for practitioners and academics can also be found in this section.

## Chapter 2 Literature Review

In theory, the separation of ownership and control provides opportunities and incentives for managers to take decisions to serve their own selfish ends that might destroy the firm's value for shareholders (Jensen & Meckling, 1976). Consequently, it is important that corporate governance be put in place to protect shareholders from the manager's private benefits (La Porta, Lopez-de-Silanes, & Shleifer, 1998; La Porta, Lopez-de-Silanes, & Shleifer, 1999; La Porta, Lopez-de-Silanes, Shleifer, & Vishny, 2002; La Porta, Lopez-de-Silanes, Shleifer, & Vishny, 2000). Without adequate quality of corporate governance, excessive profit overstatement (i.e. WorldCom), corporate looting (i.e. Tyco), corporate collapses (i.e. Enron), audit fraud (i.e. Arthur Andersen), and inflated reports of stock performance (in the many cases of investment analysts in the financial markets), all will contribute to lower investors' confidence, resulting in declines in stock market valuation and a higher probability of catastrophic events affecting the economy (Claessens & Yurtoglu, 2012). In the event of the 2008's financial crisis, corporate governance failures at major financial institutions, such as Lehman and AIG, contributed to the global financial turmoil and the subsequent financial crisis. While this evidence is subjective, it is safe to conclude that weak corporate governance in a firm can bring about not only a discount in the value of the firm, but also the market as a whole (Erkens, Hung, & Matos, 2012). That is why the roles of corporate governance inside and outside the firms have been discussed and investigated by many academics and practitioners for a decade.

The literature reveals that corporate governance is associated with equity performance. Notable studies on the effects of corporate governance on firms and shareholders have been performed in many countries. In the U.S., there is much evidence that supports the positive effects of corporate governance. For example, firms with strong governance have higher industry adjusted Tobin's Qs, profits, and equity returns than those with weak governance provisions (Bebchuk & Cohen, 2005; Gompers, Ishii, & Metrick, 2003), and the portfolio of going long strong corporate governance firms and selling short weak corporate governance firms yields abnormal returns

(Bebchuk, Cohen, & Ferrell, 2009). Most of the studies suggest that there is a positive relationship between governance and firm performance. In other words, improvement in governance can be an effective way to reduce agency costs and enhance firm value (Chi, 2005), regardless of the firm's specific characteristics. However, not all of the literature supports the importance of corporate governance. In fact, some literature indicates that an increase in the level of corporate governance raises the probability of takeover, which truly creates abnormal returns (Cremers & Nair, 2005). In addition, a deterioration in corporate governance may not decrease abnormal returns, as weak governance only lowers operation performance, and that what seems to be a positive relationship between corporate governance and performance might happen only at a specific time (Core, Guay, & Rusticus, 2006). Recently, some evidence has shown that the effects of corporate governance in U.S. are dwindling. The abnormal returns from strong governance have been found to disappear during the early 2000s because the market had fully priced the improvements in firms' performances in U.S. (Bebchuk, Cohen, & Wang, 2010). Moreover, some research has suggested that the abnormal returns of some firms resulted from the overall strong performance of their specific industries, and cannot be directly attributed to corporate governance (Johnson, Moorman, & Sorescu, 2009).

Apart from the U.S., the effects of corporate governance on firms' performances have been investigated throughout the world. For example, in the U.K., governance mechanisms were found to correlate with firm value and Tobin's Q (Weir, Laing, & McKnight, 2002). However, the impact of governance variables on agency costs is still unclear (McKnight & Weir, 2009). In Germany, an investment strategy that buys strong corporate governance firms and shorts weak corporate governance firms would have earned abnormal returns in the early 2000s (Drobtz, Schillhofer, & Zimmermann, 2004). In Switzerland, corporate governance is purported to correlate with firm value and Tobin's Q (Beiner, Drobtz, Schmid, & Zimmermann, 2006). When analysis turns to emerging markets, some of the emerging countries have been investigated by researchers with many local corporate governance measures. For instance, firms with better corporate governance ratings have been found to have higher firm value in Hong Kong (Song & Lei, 2008). A positive relationship between corporate governance and firm performance was found in India (Balasubramanian, Black, & Khanna, 2010). Some researchers have utilized a combination of transparency and disclosure index



as a proxy for corporate governance, and have found that its components were significantly effective in explaining accounting performance and Tobin's Q in Argentina (Bebczuk, 2005). Furthermore, a worst-to-best change in corporate governance predicts an increase in Tobin's Q, which corresponded to an increase in the share prices of firms in Korea and Brazil (Black, Jang, & Kim, 2006; Carvalhal da Silva & Leal, 2005). In Russia, a combined corporate governance index was positively related to market valuations (Black, Love, & Rachinsky, 2006). Additionally, a significant positive association between corporate governance and a firm's market value was found in Brazil, India, Korea, and Russia (Black, de Carvalho, & Gorga, 2011). Evidence was also found that a relationship between corporate governance quality and firm performance does exist in Thailand (Limpaphayom & Connelly, 2004). In addition, enhancements of some corporate governance characteristics on some types of firms in Thailand have been found to improve investment results after controlling for their different risk levels (Puksamatanan & Nittayagasetwat, 2012).

Apart from performance stories, weak corporate governance is one possible factor that contributes to the increase of risks and financial volatility. This is because when information is unclear, practitioners may not have the ability or the means to accurately analyze firms. Corporate governance issues are linked to the topic of asymmetric information due to the fact that a lack of transparency is one of the characteristics of weak corporate governance. It has been found that the stock prices of firms that do not give an investor adequate financial information are more volatile since investors feel that they cannot determine suitable prices for the stocks (Morck, Yeung, & Yu, 2000). The empirical evidence for above issue has been found in some countries. For instance, researchers have found that China-based firms with lower investor protection are traded at higher bid-ask spreads and exhibit thinner depths than their Hong Kong-based counterparts, which have higher investor protection (Brockman & Chung, 2003). A similar phenomenon has also been found in Canada, where the size of the bid-ask spreads can vary upon potential corporate governance problems (Attig, Fong, Gadhoun, & Lang, 2006). Another reason why corporate governance is an informative factor for equity returns in countries that have less investor protection is possibly the disclosure practice in those countries. Evidence of disclosing good news immediately while releasing bad news gradually has been found in this type of environment. For example, the equity performances of listed firms in Indonesia, Korea,

Malaysia, the Philippines, and Thailand have been found to be better among firms with higher accounting disclosure quality and higher outsider ownership concentration (Mitton, 2002). In summary, the established literature generally agrees that corporate governance is related to investment results. This relation has been documented in many countries using various methodologies, yet vague conclusions have been made.


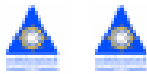
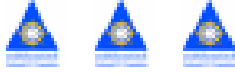
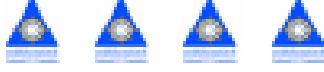

## **Chapter 3 Data and Methodology**

### **3.1 Data**

Thailand is definitely one of the most interesting places to study corporate governance, since the country itself was purportedly the epicenter of the 1997 East Asian Financial Crisis, and one of the reasons for this crisis stems from that fact that most Thai firms, at the time, lacked corporate governance (Alba, Claessens, & Djankov, 1998). Consequently, it is natural that most of the firms in Thailand have been encouraged to improve their corporate governance by regulators and laws afterward. In this study, the sample for the empirical analysis is comprised of the equity stocks listed on the SET from 2006 to 2011, when the corporate governance in Thailand was greatly improving.

The corporate governance measure in this study is the IOD's Corporate Governance Score since the usages of this secondary-data type of corporate governance were inspired by many studies (Core et al., 2006; Gompers et al., 2003). This score compares almost all listed firms with the criteria established in the principles of corporate governance. Each listed firm is scored ranging from zero to a hundred points. However, each firm's level of corporate governance is published each year through the IOD, the SET, and the SEC in Corporate Governance Score, ranging from "Good," the weakest reported level, to "Excellent," the strongest reported level. The range and description of each Corporate Governance Score are displayed in Table 1.

**Table 1: Corporate Governance Scores**

<i>Score range</i>	<i>Symbol</i>	<i>Description</i>
below 50	-	N/A
50-59		Pass
60-69		Fair
70-79		Good
80-89		Very Good
90-100		Excellent

The survey results from the IOD are presented each year through the report, "Corporate Governance Report of Thai Listed Companies." It is organized jointly by the IOD, the SET, and the SEC. In addition, the company results are announced in groups according to their scores. The results are reported in the following groups.

Although the corporate governance grades can be divided into five groups, the IOD only provides information of the firms that receive higher grades than "Fair." Hence, the public information that investors could obtain each year is only for the top three corporate governance groups. Based on this information, this study, then, classifies other listed firms that were traded in the same year but did not get their name on the IOD report under the new group labeled "Poor." Therefore, the analyses in this study will focus on the four Corporate Governance Score groups that are labeled from the strongest to weakest practice as "Excellent," "Very Good," "Good," and "Poor."

The main data can be divided into two categories, fundamental information and equity returns by the firms with the same Corporate Governance Scores. They were gathered from Bloomberg. The equity returns, in particular, were derived from the weekly total returns of each equity stock and index while all other information regarding the fundamentals of the firms was analyzed using end-of-year data. To reduce analysis biases, this study Winsorized the firms that failed to provide all relevant fundamental information.

**Table 2: Descriptive Statistics under Different Corporate Governance Scores**

## Panel A: Excellent Corporate Governance

	MKCAP	BOOK	TOBINQ	ROE	ROA	QUICK	CURRENT	RETURN
Mean	99,015 ***	0.75 ***	1.34 ***	16.11 ***	6.64	1.11 ***	2.09 ***	0.20 **
Median	19,293	0.65	1.13	14.72	5.25	0.91	1.53	0.22
Maximum	1,059,183	3.21	3.70	45.66	19.75	9.67	11.72	1.82
Minimum	169	0.16	0.58	0.29	0.12	0.05	0.21	-1.05
Std. Dev.	176,314	0.47	0.50	9.37	5.10	1.20	1.93	0.44
Observations	175	175	175	175	175	128	128	175

## Panel B: Very Good Corporate Governance

	MKCAP	BOOK	TOBINQ	ROE	ROA	QUICK	CURRENT	RETURN
Mean	16,739	0.97 ***	1.32 ***	14.38 ***	7.66 **	1.22 **	2.49	0.17 **
Median	4,190	0.82	1.10	13.11	6.61	0.73	1.61	0.17
Maximum	286,938	4.78	9.40	52.82	36.29	16.71	33.25	2.08
Minimum	154	0.08	0.42	0.03	0.00	0.00	0.18	-1.34
Std. Dev.	36,245	0.64	0.83	9.13	5.81	1.57	3.03	0.47
Observations	511	511	511	511	511	436	436	511

## Panel C: Good Corporate Governance

	MKCAP	BOOK	TOBINQ	ROE	ROA	QUICK	CURRENT	RETURN
Mean	5,090 ***	1.18	1.18	12.72	7.44 *	1.38	2.67	0.09 **
Median	1,599	0.99	1.00	11.02	6.22	0.82	1.70	0.08
Maximum	84,649	5.27	10.55	55.27	47.03	25.48	33.95	2.09
Minimum	57	0.07	0.24	0.09	0.05	0.01	0.05	-1.46
Std. Dev.	10,736	0.80	0.78	8.84	5.78	1.80	3.24	0.44
Observations	580	580	580	580	580	531	531	580

## Panel D: Poor Corporate Governance

	MKCAP	BOOK	TOBINQ	ROE	ROA	QUICK	CURRENT	RETURN
Mean	5,403 ***	1.32 ***	1.14 **	12.07 ***	6.35 ***	1.57	2.80	0.12
Median	1,223	1.11	0.95	9.78	5.24	0.73	1.53	0.10
Maximum	290,400	9.03	15.59	53.77	30.16	27.55	34.63	2.54
Minimum	38	0.05	0.16	0.08	0.04	0.00	0.07	-2.28
Std. Dev.	19,666	0.99	0.81	9.60	5.22	2.82	3.96	0.48
Observations	673	673	673	673	673	602	602	673

Values significantly different from the data of the sample firms at a significance level of 10%, 5%, and 1% are marked \*, \*\*, and \*\*\* respectively.

To summarize, the data set for explaining the fundamental behaviors of the firms under the corporate governance regime covers 379 listed firms in 2006 and increases to 428 listed firms in 2011. Table 2 reports the descriptive statistics of the fundamental variables, which are market capitalization (MKCAP<sup>1</sup>), book to market ratio (BOOK<sup>2</sup>), Tobin's Q ratio (TOBINQ<sup>3</sup>), return on equity (ROE<sup>4</sup>), return on asset (ROA<sup>5</sup>), the Quick ratio (QUICK<sup>6</sup>), the current ratio (CURRENT<sup>7</sup>), and the total return of the equity investment (RETURN<sup>8</sup>) of each Corporate Governance Score group.

The Table 2 shows that firms in each Corporate Governance Score group exhibited different characteristics. The firms with a score of Excellent Corporate Governance, with a higher average MKCAP (99,015 million Baht), were significantly larger than the average size of the firms in this study. For other fundamental characteristics, the Excellent Corporate Governance Score firms had significantly lower BOOK (0.75), a higher TOBINQ (1.34), a higher average ROE (16.11), and were funded with significantly less debt financing (QUICK and CURRENT of 1.11 and 2.09 respectively). In terms of equity returns, the Excellent Corporate Governance firms generated considerably higher average RETURN (20% per year) compared to the market during the analysis period (13% per year). Compared with other Corporate Governance Score groups, the Very Good Corporate Governance Score firms showed fundamental characteristics closely related to the Excellent Corporate Governance firms. Table 2 shows that the Very Good Corporate Governance firms had a significantly low average BOOK (0.97), a high TOBINQ (1.32), a high ROE (14.32%), and a high ROA (7.66%), with a lower liquidity measure (QUICK of 1.22). In terms of the RETURN, the 17% annual return from the Very Good Corporate Governance firms might be less than what the Excellent Corporate Governance firms provided but this is still significantly higher than the market's average return. For the groups that exhibited a lower than Very Good Corporate Governance Score, this study found that the size of the Good and the Poor Corporate Governance Score firms were relatively low compared to the average of the firms in the market. Their average MKCAP was 5,090 million Baht and 5,403 million

---

<sup>1</sup> Market capitalization (MKCAP) is EQY\_SH\_OUT multiplied by PX\_LAST.

<sup>2</sup> Book-to-market value (BOOK) is BOOK\_VAL\_PER\_SH divided by PX\_LAST.

<sup>3</sup> Tobin's Q (TOBINQ) is a summation of MKCAP, BS\_TOT\_LIAB2, BS\_PFD\_EQY, and BS\_MINORITY\_INT divided by BS\_TOT\_ASSET.

<sup>4</sup> Return on Equity (ROE) is EARN\_FOR\_COMMON divided by TOT\_COMMON\_EQY multiplied by 100.

<sup>5</sup> Return on Assets (ROA) is TRAIL\_12M\_NET\_INC divided by BS\_TOT\_ASSET multiplied by 100.

<sup>6</sup> Quick ratio (QUICK) is a summation of Cash and Near Cash Items, Marketable Securities and ST Investments, Accounts Receivable and Notes Receivable, and Restricted Bond Proceeds divided by Current Liabilities.

<sup>7</sup> Current ratio (CURRENT) is Current Assets divided by Current Liabilities.

<sup>8</sup> Total return of the equity investment (RETURN) is TOT\_RET\_INDEX at the end of period minus TOT\_RET\_INDEX at the beginning of period divided by TOT\_RET\_INDEX at the beginning of period.

Baht respectively. The Good Corporate Governance Score firms exhibited the characteristic of a higher BOOK (1.18) but not significantly higher than the market's average. However, they generated a significantly lower ROA (7.44%). These characteristics were similarly exhibited by the Poor Corporate Governance firms. Table 2 also reports that small size, a high BOOK (1.32), a low TOBINQ (1.14), and poor operating performances (i.e., ROA of 6.35%) were found among the Poor Corporate Governance Score firms. The only difference between the Good and Poor Corporate Governance Score firms was that the lower than average RETURN for the Good Corporate Governance firms (9% annually) was not found among the Poor Corporate Governance firms.

### 3.2 Methodology

In order to examine the effect of corporate governance on the equity returns, this study employed three models: Sharp-Lintner's CAPM (Lintner, 1965; Sharpe, 1964), the three-factor model (Fama & French, 1993), and the Four-factor model (Carhart, 1997). Specifically, this study gathered the set of firms with information on their MKCAP, their BOOK at the end of December, and their last forty-eight-week return at the end of each month in order to rank all of the firms based on the aforementioned aspects. Every year, firms are classified into two portfolios by the percentile ranking of their sizes (MKCAP), such that the firms with sizes ranked lower than the fiftieth percentile are classified as small (S) firms and firms with sizes ranked higher than the fiftieth percentile are classified as big (B) firms. In the second step, the firms are independently sorted, again, into three portfolios by their values (BOOK) at the end of December (Low (L), Medium (M), and High (H)). In detail, the firms are classified as having High (H)/Low (L) value when their BOOK is ranked in the top/bottom thirtieth percentile in that year, while the firms in between are classified as Medium (M). In the third step, every month, the firms are independently sorted into three portfolios by their past forty-eight cumulative return. Using these criteria, the firms are classified as Up (U)/Down (D), when their aggregated return are ranked in the top/bottom thirty percent on that month, while all of the firms in between are classified as Neutral (N). After the grouping process, the two dependent portfolios, SMB (small minus big) and HML (high minus low) were constructed in line with the Fama-French three-factors model (Fama & French, 1993). The SMB, in particular, is the simple average of the return on the small-firm portfolio minus the return on the big-firm portfolio and the HML (high minus low) is the

simple average of the return on the high BOOK portfolio minus the return on the low BOOK portfolio. For the momentum factor, the portfolio of the UMD (up minus down) was created from an equal-weighted average return of firms with cumulative return in the last forty-eight-week ranking higher than the seventieth percentile minus an equal-weighted average return of firms with cumulative return in the last forty-eight-week ranking below the thirtieth percentile.

The dependent variables in this study are the weekly return of the corporate governance portfolios. Since the firms are grouped according to their Corporate Governance Scores, equation (1) states the equal-weighted return of those firms within the same Corporate Governance Score in order to create the Corporate Governance Score portfolio for each group of scores.

$$R_{p,t} = \sum_{i=1}^I w_i R_{i,t} \quad p \in \{\text{Excellent, Very Good, Good, Poor}\} \quad (1)$$

where

$R_{i,t}$  is the return of equity  $i$  in month  $t$

$w_i$  is the weight of equity  $i$

This study calculates firm performance in terms of excess return by using the weekly return from investment, replicating Corporate Governance Score portfolios with risk-free rate funding, where the risk-free rate is from the one-week cumulative return of the Bank of Thailand's (BOT) one-day offered rate during the same period. While the weekly total returns of SET index is used for market representative, the relation between risks and return are captured by equation (2), (3) and (4).

$$R_{p,t} = \alpha_0 + \beta_1 \text{RMRF}_t + \varepsilon_t \quad (2)$$

$$R_{p,t} = \alpha_0 + \beta_1 \text{RMRF}_t + \beta_2 \text{SMB}_t + \beta_3 \text{HML}_t + \varepsilon_t \quad (3)$$

$$R_{p,t} = \alpha_0 + \beta_1 \text{RMRF}_t + \beta_2 \text{SMB}_t + \beta_3 \text{HML}_t + \beta_3 \text{UMD}_t + \varepsilon_t \quad (4)$$

where

$R_{p,t}$  is the excess return of portfolio  $p$  in month  $t$

$\text{RMRF}_t$  is the excess market return in month  $t$



- $SMB_t$  is a factor mimicking size effect or the return of small-firm portfolio minus big-firm portfolio in month  $t$
- $HML_t$  is a factor mimicking value effect or the return of high book-to-market portfolio minus low book-to-market portfolio in month  $t$
- $UMD_t$  is a factor mimicking momentum effect or the return of up portfolios minus down portfolios in month  $t$

In this sense, the coefficients on each factor,  $\beta$ , could represent the degree of associated risk regarding movement on that factor. If any corporate governance score portfolios yield an intercept coefficient,  $\alpha_0$ , of significantly more than zero, one can interpret that earning from investing in the portfolio of firms with that Corporate Governance Score have surpassed what should have been achieved by passive investment.

## Chapter 4 Empirical Results

The results in this study are divided into two parts. The first part explains the risk and return from investment in each Corporate Governance Score portfolio. The second part further investigates the evidence of those risk and return characteristics during the crisis period.

### 4.1 Analysis of Corporate Governance and Equity Returns

Table 3 shows the estimated results from equations (2), (3), and (4), where the dependent variable is the returns from the Excellent, Very, Good, Good and Poor Corporate Governance portfolio returns. This study creates another portfolio, the so-called Hedge portfolio. It contains the results of buying the Excellent Corporate Governance Score portfolio and selling short the Poor Corporate Governance Score portfolio. In sum, the risks and return of Corporate Governance Score portfolios during the entire analysis period are discussed in this section.

The interpretation begins with the Hedge portfolio. Significant coefficients of RMRF, SMB, HML, and UMD were found from Panel A to Panel C. This implies that there could be a significant difference in terms of risks between the strong and the weak corporate governance portfolios. In detail, Panel A of Table 3 shows that all Corporate Governance portfolios are significantly sensitive to the RMRF and the firms with strong corporate governance practice. That is, the Excellent and Very Good Corporate Score portfolios seem to have higher sensitivity to the market than those with weak corporate governance (those with a Good and Poor Corporate Score portfolio) do. An Excellent Corporate Governance Score portfolio is considered as a portfolio that is more sensitive to market movement than other portfolios with a coefficient of RMRF of 0.84. The Very Good Corporate Governance Score portfolio, 0.74, comes in second place, while the evidence shows that the Good, 0.56, and the Poor (0.66) Corporate Governance Score portfolios are less sensitive to the market risk factor.

**Table 3: Results for Corporate Governance Scores Portfolios**

Panel A		ALPHA		RMRF							
Hedge	COEF	0.0018	**	0.1823	**						
	SE	0.0009		0.0831							
Excellent	COEF	0.0009	*	0.8482	***						
	SE	0.0005		0.0245							
Very Good	COEF	0.0008		0.7478	***						
	SE	0.0006		0.0326							
Good	COEF	0.0008		0.5605	***						
	SE	0.0006		0.0375							
Poor	COEF	-0.0010		0.6660	***						
	SE	0.0008		0.0674							
Panel B		ALPHA		RMRF		SMB		HML			
Hedge	COEF	0.0021	**	0.0179		-0.6951	***	-0.3165	***		
	SE	0.0008		0.0798		0.1043		0.0729			
Excellent	COEF	0.0009	*	0.8449	***	-0.0154		0.0492			
	SE	0.0005		0.0270		0.0535		0.0459			
Very Good	COEF	0.0006		0.7723	***	0.0989		0.2381	***		
	SE	0.0006		0.0353		0.0706		0.0523			
Good	COEF	0.0006		0.6610	***	0.4219	***	0.3114	***		
	SE	0.0006		0.0416		0.0756		0.0581			
Poor	COEF	-0.0012		0.8272	***	0.6801	***	0.3661	***		
	SE	0.0008		0.0681		0.1069		0.0657			
Panel C		ALPHA		RMRF		SMB		HML	UMD		
Hedge	COEF	0.0012		0.0790		-0.6674	***	-0.2804	***	0.2168	***
	SE	0.0007		0.0634		0.1009		0.0743		0.0554	
Excellent	COEF	0.0007		0.8527	***	-0.0119		0.0538		0.0275	
	SE	0.0005		0.0263		0.0554		0.0474		0.0408	
Very Good	COEF	0.0011	*	0.7404	***	0.0845		0.2193	***	-0.1132	***
	SE	0.0006		0.0316		0.0654		0.0541		0.0377	
Good	COEF	0.0008		0.6479	***	0.4161	***	0.3037	***	-0.0461	
	SE	0.0006		0.0379		0.0739		0.0594		0.0408	
Poor	COEF	-0.0004		0.7738	***	0.6559	***	0.3346	***	-0.1893	***
	SE	0.0007		0.0553		0.0969		0.0699		0.0546	

This table reports the estimated results from equation (2), (3), and (4) with equal-weight weekly returns for the portfolios of firms sorted by Corporate Governance Scores in Panel A, B and C. Significance at the 10 percent, 5 percent, and 1 percent levels are indicated by \*, \*\*, and \*\*\* respectively.

However, Panel B and C, which display sensitivity regarding other risk factors such as size, value, and momentum, reveal a different story. In particular, it was further found that the portfolios of firms with different Corporate Governance Scores are faced with different types of risks. Starting from Panel B, it is shown that the Excellent Corporate Governance Score portfolio is the only one that is not exposed to other kinds of risk except market risks, at 0.84. Very Good Corporate Governance is pretty similar, as it was found that its risk exposure to size factor was not significant. In contrast, all risk factors significantly appeared to affect the weaker Corporate Governance Score portfolios. Specifically, the coefficients of the RMRF, SMB and HML for the Good Corporate Governance Score portfolio are significant at 0.66, 0.42, and 0.31, while those coefficients increased to 0.82, 0.68, and 0.36 for the Poor Corporate Governance Score portfolio. This interesting evidence was again confirmed when Panel C was examined. It was found that the Excellent Corporate Governance Score portfolio was still the only portfolio that did not bear other risks except for market risk, at 0.85. The Very Good Corporate Governance Score portfolio was found to have significant coefficients for the RMRF, at 0.74, HML, at 0.21, and UMD, at -0.10. While the Good Corporate Governance Score portfolio showed no significant finding in the UMD factor, other coefficients for the RMRF, SMB, and HML for the Good Corporate Governance Score portfolio were still significant (0.64, 0.41, and 0.30 respectively). On the other hand, all risk factors significantly affected the Poor Corporate Governance Score portfolio. Specifically, the coefficients of the RMRF, SMB, HML, and UMD for the Poor Corporate Governance portfolio were 0.77, 0.65, 0.33, and -0.18 respectively.

Regarding the return, the long-term abnormal return from investing in the Hedge portfolio seemed to be significant with the amount of about 18 basis points per week (9.80% per year) in Panel A. This comes from the fact that an Excellent Corporate Governance portfolio generates a positive abnormal return, while a Poor Corporate Governance portfolio generates a negative abnormal return, although this study could find only a significant alpha from Excellent Corporate Governance Score portfolio, with 9 basis points (4.79% per year). It was found that abnormal return from Hedge portfolio repeats in Panel B, 21 basis points (11.53% per year), but it is insignificant in Panel C. Moreover, it was found that the alpha from the Excellent Corporate Governance Score portfolio is still significant in

Panel B, with 9 basis points per week. Nevertheless this extra return vanishes in Panel C for the Excellent Corporate Governance Score portfolio.

In sum, this section exhibits different aspects of the risk-returns criteria. Although the results do not consistently support any strict patterns of risk or return behaviors in any portfolios, they display the trend that if a firm is stronger in corporate governance it does not necessary mean that its risk exposure to the market is lower. However, strong governance helps to reduce other risk exposures such as size, value, and momentum. Secondly, while weak corporate governance firms were not found to generate extra returns in excess of their degree of risk taking, the firms with strong corporate governance practices seemed to perform better than they should have.

#### **4.2 Corporate Governance during the Crisis Period**

Although the financial crisis affected all firms across the board, there could have been firms that were affected by the crisis more or less than others. In this section, the risks and return of firms with different levels of corporate governance are compared. Specifically, if corporate governance is a factor that was really important during the time of the crisis, the firms with stronger corporate governance should be a better investment compared to the firms that practice weaker corporate governance.

This study began by displaying the evidence of market risk factor for different corporate governance portfolios as time changed over the period of the crisis by utilizing a rolling time-series regression for Corporate Governance Score portfolios. Specifically, the coefficient for the market factor in equation (2) was gradually estimated by using fifty-two-week historical returns for each week. This study then plotted the results for each Corporate Governance Score portfolio and SET index in Figure 2.

According to Figure 2, the estimated results from equation (2) moved over time for all Corporate Governance Score portfolios. It was found that the risk factors shifted during the period of the declining market except for the Excellent Corporate Governance portfolio. For the Excellent Corporate Governance Score portfolio, the beta coefficient ranged between 0.65 and 1.20 from 2007 to 2011, and it was found that this sensitivity moved into the range of 0.77 and 0.86 during the

Lehman Brothers issue period, from the 15<sup>th</sup> of September, 2008 to the 15<sup>th</sup> of April, 2009. In contrast, the market coefficients of all other Corporate Governance Score portfolios shifted upward during the crisis period. For example, the coefficient for the Very Good Corporate Governance Score portfolio increased from around 0.65 to the peak of 0.80 during the same crisis period. In fact, stronger degrees of the changes in market risk sensitivities were found among the firms with weaker levels of corporate governance. The coefficients for the Good and the Poor Corporate Governance Score portfolios increased from around 0.45 to the maximum of 0.62 and 0.86, respectively, during the crisis period. In summary, the study found initial evidence for increasing risks for firms with corporate governance levels weaker than the Excellent Corporate Governance Score portfolios.

**Figure 2: Rolling Beta of Corporate Governance Portfolios**

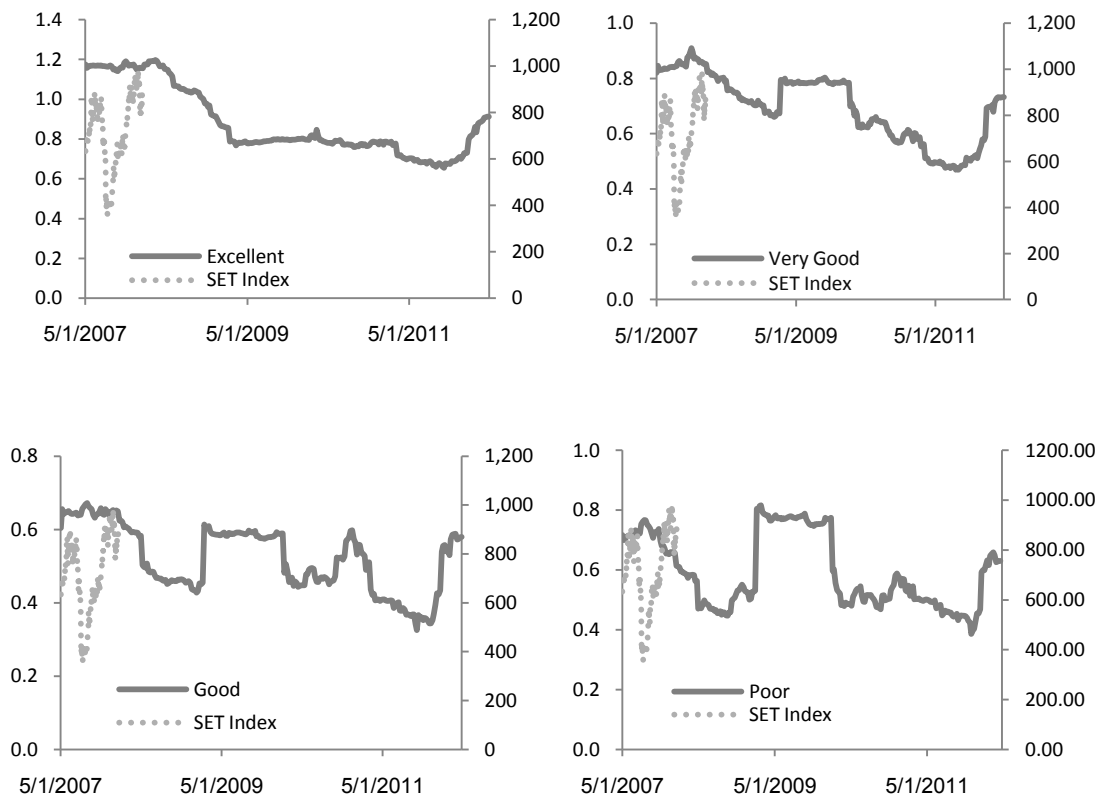


Figure 2 reports the time-series pictures of the beta and the SET index. The beta was calculated from past fifty-two-week rolling. The left vertical axis measures the degree of beta and the right vertical axis measures the SET index value.

That initial evidence seems to point out that the patterns of risks and returns for the firms with different levels of corporate governance can change during a crisis period. Therefore, the adapted versions of equation (2), (3), and (4) were created to capture those differences in risks and returns. First, this study found evidence of risk factor shifting by using the following equations in order to report the risk coefficients during the crisis.

$$R_{p,t} = \alpha_0 + \beta_1 \text{RMRF}_t + \beta_2 \delta_c \text{RMRF}_t + \varepsilon_t \quad (5)$$

$$R_{p,t} = \alpha_0 + \beta_1 \text{RMRF}_t + \beta_2 \text{SMB}_t + \beta_3 \text{HML}_t + \beta_4 \delta_c \text{RMRF}_t + \beta_5 \delta_c \text{SMB}_t + \beta_6 \delta_c \text{HML}_t \quad (6)$$

$$R_{p,t} = \alpha_0 + \beta_1 \text{RMRF}_t + \beta_2 \text{SMB}_t + \beta_3 \text{HML}_t + \beta_4 \text{UMD}_t + \beta_5 \delta_c \text{RMRF}_t + \beta_6 \delta_c \text{SMB}_t + \beta_7 \delta_c \text{HML}_t + \beta_8 \delta_c \text{UMD}_t + \varepsilon_t \quad (7)$$

where

$\delta_c$  is the dummy variable that equal to 1 during crisis, and 0 otherwise

Table 4 shows the results of estimating (5), (6), and (7), where the dependent variable is the weekly returns from the Hedge, Excellent, Very, Good, Good, and Poor Corporate Governance Score portfolio returns. It compares the risks outside the crisis period, coefficients without  $\delta_c$ , and the changes in the coefficients during the crisis period, coefficients with  $\delta_c$ , for Corporate Governance Score portfolios. Nevertheless, only the changes in the coefficients during crisis period represent the results focused on in this section.

The interpretation began with the intercept coefficient, alpha. For the Hedge portfolio, it was found that the intercept coefficients were significant in Panel A and B, with the degree of 14 and 15 basis points, respectively (average of 7.82% per year). The alphas from the Corporate Governance Score portfolios were usually insignificant, except for the Excellent Corporate Governance Score portfolios in Panel A and the Poor Corporate Governance Score portfolio in Panel C. In particular, the significant positive abnormal return was found to be 8 basis points (4.24% per year) for the Excellent Corporate Governance Score portfolio, and negative abnormal return, -7 basis points (3.70% per year) could be found for the Poor Corporate Governance Score portfolio. This interpretation could be such that strong corporate governance firms seem to have better performances compared to those of weak corporate governance during the crisis period.

**Table 4: Results from Corporate Governance Score Portfolios during the Crisis**

Panel A		ALPHA	$\delta_c$ RMRF								
Hedge	COEF	0.0014	*	-0.3264	***						
	SE	0.0008		0.1130							
Excellent	COEF	0.0008	*	-0.0614							
	SE	0.0005		0.0423							
Very Good	COEF	0.0010		0.1147	**						
	SE	0.0006		0.0508							
Good	COEF	0.0010		0.1004							
	SE	0.0006		0.0640							
Poor	COEF	-0.0006		0.2649	***						
	SE	0.0008		0.0938							
Panel B		ALPHA	$\delta_c$ RMRF		$\delta_c$ SMB	$\delta_c$ HML					
Hedge	COEF	0.0015	**	-0.4817	***	-0.1240	0.1165				
	SE	0.0007		0.1425		0.2540	0.2086				
Excellent	COEF	0.0008		-0.0572		0.0235	0.0818				
	SE	0.0005		0.0738		0.1983	0.1477				
Very Good	COEF	0.0008		0.1704	**	0.0923	0.0758				
	SE	0.0006		0.0859		0.2200	0.1543				
Good	COEF	0.0008		0.1811	*	0.0380	-0.0796				
	SE	0.0006		0.0991		0.2378	0.1544				
Poor	COEF	-0.0008		0.4247	***	0.1485	-0.0345				
	SE	0.0007		0.1421		0.3241	0.1712				
Panel C		ALPHA	$\delta_c$ RMRF		$\delta_c$ SMB	$\delta_c$ HML	$\delta_c$ UMD				
Hedge	COEF	0.0012		-0.5407	***	-0.2024	0.0797	-0.1446			
	SE	0.0007		0.2059		0.3106	0.2191	0.1249			
Excellent	COEF	0.0005		-0.1610	***	-0.1010	0.0347	-0.1656	**		
	SE	0.0005		0.0618		0.1453	0.1484	0.0776			
Very Good	COEF	0.0009		0.0443		-0.0447	0.0379	-0.1047			
	SE	0.0006		0.1215		0.1824	0.1487	0.0866			
Good	COEF	0.0005		0.1221		-0.0397	-0.1157	-0.1413			
	SE	0.0006		0.1289		0.2164	0.1598	0.0995			
Poor	COEF	-0.0007	***	0.3800	***	0.1025	***	-0.0446	***	-0.0206	***
	SE	0.0007		0.1767		0.2786		0.1935		0.1326	

This table reports a part of the estimated results from equation (5), (6), and (7) of equal-weighted weekly returns for the portfolios of firms sorted by the Corporate Governance Score, separately, for the following equations in Panel A, B and C, respectively. Significance at the 10 percent, 5 percent, and 1 percent levels are indicated by \*, \*\*, and \*\*\* respectively.



Regarding investment risks, this study also found that there were, during crisis period, significant differences in risk factors between the strong and weak corporate governance portfolios. It was found that the coefficients of factors that were used for capturing the change in systematic risk,  $\delta_c \text{RMRF}$ , were significant for the Hedge portfolio, Very Good and Poor Corporate Governance Score portfolios. It was found that the market risk for the Hedge portfolio decreased by 0.32, 0.48 and 0.54 in Panel A to C respectively. This result comes from two factors. First, it comes from a decrease in the beta of the Excellent Corporate Governance portfolio and secondly, an increase in the beta of the Poor Corporate Governance portfolio. In addition, Panel B shows that the market sensitivities of every portfolio except the Excellent Corporate Governance Score portfolio increased during the crisis. In detail, this study shows that the beta of Very Good, Good, and Poor Corporate Governance Score portfolios increased by 0.17, 0.18, and 0.42 respectively. In the other words, the degree of change seems to increase with a weaker Corporate Governance Score. Panel C of this table shows that the sensitivities of the Excellent Corporate Governance Score portfolio decreased for market coefficient -0.16 and momentum sensitivity at -0.16. In contrast, it was found that the coefficients of the Poor Corporate Governance Score portfolio were changing up and down. Precisely, the market and size factors increased by 0.38 and 0.10 respectively, where the book-to-market and momentum factors decreased by -0.04 and -0.02.

In sum, this section shows that the risks and returns of the corporate governance portfolios mostly changed during the crisis period. Although the returns of the strong corporate governance firms were not much affected by the crisis, while weak corporate governance firms were facing negative abnormal returns, the risk sensitivities of the strong corporate governance firms seemed to decrease while the risk sensitivities of the weak corporate governance firms increased when the crisis came.

Since the effect of the crisis on the firms with different Corporate Governance Scores might not have been the same, this study used another model that captured the effect of the crisis variable in equation (8), (9), and (10).

$$R_{i,t} = \alpha_0 + \beta_1 \text{RMRF}_t + \beta_2 \delta_c + \varepsilon_t \quad (8)$$

$$R_{i,t} = \alpha_0 + \beta_1 \text{RMRF}_t + \beta_2 \text{SMB}_t + \beta_3 \text{HML}_t + \beta_4 \delta_c + \varepsilon_t \quad (9)$$

$$R_{i,t} = \alpha_0 + \beta_1 \text{RMRF}_t + \beta_2 \text{SMB}_t + \beta_3 \text{HML}_t + \beta_4 \text{UMD}_t + \beta_5 \delta_c + \varepsilon_t \quad (10)$$

These sets of equations differ from the previous sets of equations in the sense that the crisis is separately viewed as another risk factor apart from other known risk factors. Therefore, if any

coefficients of the crisis variable were significant for any corporate governance portfolios, then it can be interpreted that there existed a difference between investing in a normal period and during the crisis period regarding the portfolio of firms in that Corporate Governance group. Table 5 shows the results of estimating (8), (9), and (10), where the dependent variable was the weekly returns from the Hedge, Excellent, Very, Good, Good and Poor Corporate Governance Score portfolios. The comparison of the crisis coefficient from each Corporate Governance Score portfolio was the result focused on in this sector.

**Table 5: Results of the crisis for Corporate Governance Portfolios**

Panel A		ALPHA		RMRF		$\delta_c$			
Hedge	COEF	0.0012		0.1891	**	0.0066	*		
	SE	0.0009		0.0783		0.0038			
Excellent	COEF	0.0009	*	0.8482	***	0.0000			
	SE	0.0005		0.0246		0.0018			
Very Good	COEF	0.0011	*	0.7452	***	-0.0026			
	SE	0.0006		0.0310		0.0023			
Good	COEF	0.0014	**	0.5544	***	-0.0059	**		
	SE	0.0007		0.0346		0.0023			
Poor	COEF	-0.0003		0.6592	***	-0.0066	*		
	SE	0.0008		0.0627		0.0035			

Panel B		ALPHA		RMRF		SMB		HML		$\delta_c$	
Hedge	COEF	0.0013	*	0.0233		-0.7057	***	-0.3333	***	0.0078	**
	SE	0.0008		0.0756		0.1018		0.0732		0.0037	
Excellent	COEF	0.0009	*	0.8448	***	-0.0151		0.0496		-0.0002	
	SE	0.0005		0.0271		0.0535		0.0461		0.0017	
Very Good	COEF	0.0010	*	0.7699	***	0.1036		0.2455	***	-0.0034	
	SE	0.0006		0.0340		0.0700		0.0526		0.0022	
Good	COEF	0.0013	**	0.6560	***	0.4315	***	0.3266	***	-0.0070	***
	SE	0.0006		0.0389		0.0718		0.0579		0.0022	
Poor	COEF	-0.0004		0.8217	***	0.6909	***	0.3832	***	-0.0079	**
	SE	0.0007		0.0638		0.1038		0.0648		0.0033	

Panel C		ALPHA		RMRF		SMB		HML		UMD		$\delta_c$	
Hedge	COEF	0.0003		0.0855		-0.6780	***	-0.2973	***	0.2197	***	0.0081	**
	SE	0.0007		0.0597		0.0988		0.0731		0.0561		0.0034	
Excellent	COEF	0.0008		0.8526	***	-0.0117		0.0541		0.0275		-0.0002	
	SE	0.0005		0.0264		0.0555		0.0473		0.0407		0.0018	
Very Good	COEF	0.0015	**	0.7376	***	0.0892		0.2268	***	-0.1144	***	-0.0036	*
	SE	0.0006		0.0310		0.0650		0.0541		0.0346		0.0019	
Good	COEF	0.0015	**	0.6423	***	0.4254	***	0.3186	***	-0.0487		-0.0071	***
	SE	0.0006		0.0362		0.0704		0.0589		0.0351		0.0021	
Poor	COEF	0.0004		0.7672	***	0.6667	***	0.3518	***	-0.1923	***	-0.0082	***
	SE	0.0007		0.0521		0.0938		0.0679		0.0488		0.0030	

This table reports a part of the estimated results from equation (8), (9), and (10) of equal-weighted weekly returns for the portfolios of firms sorted by the Corporate Governance Score, separately, for the following equations in Panel A, B and C, respectively. Significance at the 10 percent, 5 percent, and 1 percent levels are indicated by \*, \*\*, and \*\*\* respectively.

The results of equation (8), (9), and (10) from each Corporate Governance Score portfolio are separately displayed in Panel A, B, and C, respectively. From Panel A, where equation (8) was used as an explanatory model, it was found that the Excellent Corporate Governance Score portfolio performed better than the Poor Corporate Governance Score portfolio significantly by 66 basis points (40.78% per year) from the coefficient of the crisis in the Hedge row. This interesting difference is consistent with the following results from each corporate governance portfolio. In detail, it was found that the Excellent Corporate Governance Score portfolio did not receive an effect from the crisis, since an insignificant crisis coefficient was found; however, the Poor Corporate Governance Score portfolio was the one that received a significant negative effect from the crisis, at -66 basis points per week (-40.78% per year). The results in Panel B and C also confirm the negative impact from weaker corporate governance practices. The coefficients in the Hedge portfolio were found to be positive in both Panel B and C. In particular, the difference comes from the same fact that the Poor Corporate Governance Score portfolio received significant negative effects from the crisis factor, while the Excellent Corporate Governance Score portfolio was unaffected. For other Corporate Governance Score portfolios, significantly negative coefficients of the crisis factors were found in the Good Corporate Governance Score portfolio from Panel A to C, while these negative impacts were also found for the Very Good Corporate Governance Score portfolio in Panel C. The degree of impact varies from around -59 to -71 basis points per week (-35.78% to -44.47% per year) for the Good Corporate Governance portfolio. For the Very Good Corporate Governance, although negative impacts from the crisis were found in every Panel, it is important to note that the impact was only significant in Panel C. In the other words, a clear negative impact was found to be only -36 basis points per week (-20.55% per year) even after the market, size, value, and momentum factors were controlled for.

In summary, the result suggests that the corporate governance level of a firm can be a factor in determining the effect that a firm may have received from the crisis. It was found that the strong

corporate governance firms received less or no effect from the crisis, but the firms with weak corporate governance were negatively affected by the crisis at a higher magnitude.

## Chapter 5 Concluding Remarks

At present, fuelled by the 2008 global economic crisis and various subsequent wrongdoings that have been recently uncovered, corporate governance is arguably the *issue du jour* that rational investors take heed of when considering a sound investment. This study has examined corporate governance and its effects on equity returns in Thailand by using the sample of listed firms on the SET during the 2006 to 2011 period. This study demonstrates the ex-post effects of corporate governance, using Corporate Governance Score portfolios that were formed from the IOD's Corporate Governance Scores. Generally, the measurement not only provides a picture of a combination of the corporate governance characteristics, but also ranks the level of corporate governance practices. This study began by summarizing the characteristics of firms that exhibited different Corporate Governance Scores. In particular, the study found that the firms with an Excellent Corporate Governance Score were mostly big, low book-to-market firms that demonstrated a high operating performance with less debt financing. In contrast, the Good and the Poor Corporate Governance firms were relatively small, high book-to-market firms that showed less operating performance compared to the market average.

The main contribution of this study is on the differences between the strong and the weak corporate governance firms in terms of risks and return. The study found that all corporate governance portfolios were subjected to systematic market risk. However, the Excellent Corporate Governance Score portfolio was the only portfolio that as not exposed to market anomaly risks such as size, value, and momentum risks. In contrast, these risks factors significantly affected the Poor Corporate Governance Score portfolio. In other words, the major results in this study revealed different aspects for the risk criteria. Having strong governance is not an automatic criterion for having lower risk exposure to the market. However, corporate governance did reduce other types of risks such as size, value, and momentum risks. Regarding the returns, investing in Excellent corporate Governance Score firms and selling short of Poor Corporate Governance firms seemed to be a significantly good investment since investors could get an abnormal return of around 9.80% per year.

The study investigated the effects of corporate governance during the crisis period. It reasserts the idea that strong corporate governance not only generates abnormal return but also weak corporate governance firms perform worse when the market is facing a crisis. Through the analysis, the risk sensitivities of the strong Corporate Governance Score groups seemed to decrease while the risk sensitivities of the weak Corporate Governance Score groups increased when the crisis came. The study of the magnitude of the crisis shows that the firms with a strong Corporate Governance Score received less or no effect from the crisis but the firms with weak a Corporate Governance Score received negative effects from the crisis. In conclusion, the strong corporate governance firms were obviously found to be well-protected investments against an adverse market climate.

This study provides useful recommendations for many stakeholders that are involved in the capital market. Practitioners, for example, can gain a direct benefit from the information provided by this study. Since the risks and returns of the firms with different corporate governance are not identical, an investor should also emphatically take note of a firm's corporate governance structure when he or she analyzes its stock. Although this study does not predict that a firm with strong corporate governance will perform better than a firm with weak corporate governance, the result of this study provides ex-post examples that can lead to more deliberation and prudence when an investor incorporates corporate governance with other factors in his or her analysis. For academics and scholars, the results of this study provide recommendations for further study of the corporate governance issue. Since the evidence from this study does not cover direct causation regarding a firm's future performance, supplementary analysis on this issue would be a natural progression. In addition, a very interesting further study could also come from the thorough analysis of the cost and benefits of adopting the practices of corporate governance on a one-by-one basis. Through this suggested analysis, firms will be able to find their optimal corporate governance level, hence improving their corporate governance practice. Up to this point, the relationship between corporate governance and the effects on a firm's performance still offers plenty of future opportunities for further investigation.

### References

- Alba, P., Claessens, S., & Djankov, S. (1998). Thailand's corporate financing and governance structures. *World Bank Policy Research Working Paper No. 2003*.
- Attig, N., Fong, W. M., Gadhoun, Y., & Lang, L. H. P. (2006). Effects of large shareholding on information asymmetry and stock liquidity. *Journal of Banking & Finance, 30*(10), 2875-2892.
- Balasubramanian, N., Black, B. S., & Khanna, V. (2010). The relation between firm-level corporate governance and market value: A case study of India. *Emerging markets review, 11*(4), 319-340.
- Bebchuk, L. A., & Cohen, A. (2005). The costs of entrenched boards. *Journal of Financial Economics, 78*(2), 409-433.
- Bebchuk, L. A., Cohen, A., & Ferrell, A. (2009). What matters in corporate governance? *Review of Financial Studies, 22*(2), 783.
- Bebchuk, L. A., Cohen, A., & Wang, C. C. Y. (2010). Learning and the disappearing association between governance and returns: National Bureau of Economic Research.
- Bebczuk, R. (2005). Corporate governance and ownership: measurement and impact on corporate performance and dividend policies in Argentina. *Center for Financial Stability, Working Paper*.
- Beiner, S., Drobetz, W., Schmid, M. M., & Zimmermann, H. (2006). An integrated framework of corporate governance and firm valuation. *European Financial Management, 12*(2), 249-283.
- Black, B. S., de Carvalho, A. G., & Gorga, É. (2011). What Matters and for Which Firms for Corporate Governance in Emerging Markets? Evidence from Brazil (and other BRIC Countries). *Journal of Corporate Finance*.
- Black, B. S., Jang, H., & Kim, W. (2006). Does corporate governance predict firms' market values? Evidence from Korea. *Journal of Law, Economics, and Organization, 22*(2), 366-413.
- Black, B. S., Love, I., & Rachinsky, A. (2006). Corporate governance indices and firms' market values: Time series evidence from Russia. *Emerging markets review, 7*(4), 361-379.
- Brockman, P., & Chung, D. Y. (2003). Investor protection and firm liquidity. *The Journal of Finance, 58*(2), 921-938.

- Carhart, M. M. (1997). On persistence in mutual fund performance. *Journal of finance*, 57-82.
- Carvalho da Silva, A. L., & Leal, R. P. C. (2005). Corporate governance index, firm valuation and performance in Brazil. *Brazilian Review of Finance*, 3(1), pp. 1-18.
- Chi, J. D. (2005). Understanding the endogeneity between firm value and shareholder rights. *Financial Management*, 34(4), 65-76.
- Claessens, S., & Yurtoglu, B. (2012). Corporate Governance in Emerging Markets: A Survey. *Emerging markets review*.
- Core, J. E., Guay, W. R., & Rusticus, T. O. (2006). Does Weak Governance Cause Weak Stock Returns? An Examination of Firm Operating Performance and Investors' Expectations. *The Journal of Finance*, 61(2), 655-687.
- Cremers, K. J., & Nair, V. B. (2005). Governance mechanisms and equity prices. *The Journal of Finance*, 60(6), 2859-2894.
- Drobetz, W., Schillhofer, A., & Zimmermann, H. (2004). Corporate governance and expected stock returns: Evidence from Germany. *European Financial Management*, 10(2), 267-293.
- Erkens, D. H., Hung, M., & Matos, P. (2012). Corporate governance in the 2007–2008 financial crisis: Evidence from financial institutions worldwide. *Journal of Corporate Finance*, 18(2), 389-411.
- Fama, E. F., & French, K. R. (1993). Common risk factors in the returns on stocks and bonds. *Journal of Financial Economics*, 33(1), 3-56.
- Gompers, P., Ishii, J., & Metrick, A. (2003). Corporate governance and equity prices. *Quarterly Journal of Economics*, 118(1), 107-155.
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305-360.
- Johnson, S. A., Moorman, T. C., & Sorescu, S. (2009). A reexamination of corporate governance and equity prices. *Review of Financial Studies*, 22(11), 4753.
- La Porta, R., Lopez-de-Silanes, F., & Shleifer, A. (1998). Law and Finance. *Journal of Political Economy*, 106(6), 1113-1155.
- La Porta, R., Lopez-de-Silanes, F., & Shleifer, A. (1999). Corporate ownership around the world. *The Journal of Finance*, 54(2), 471–517.
- La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. (2002). Investor protection and corporate valuation. *The Journal of Finance*, 57, 1147-1170.



- La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. W. (2000). Investor protection and corporate governance. *Journal of Financial Economics*, 58(1-2), 3-27.
- Limpaphayom, P., & Connelly, J. T. (2004). Corporate governance in Thailand. *Asian Development Bank Institute Corporate Governance Country Paper*.
- Lintner, J. (1965). The valuation of risk assets and the selection of risky investments in stock portfolios and capital budgets. *The review of economics and statistics*, 47(1), 13-37.
- McKnight, P. J., & Weir, C. (2009). Agency costs, corporate governance mechanisms and ownership structure in large UK publicly quoted companies: A panel data analysis. *The Quarterly Review of Economics and Finance*, 49(2), 139-158.
- Mitton, T. (2002). A cross-firm analysis of the impact of corporate governance on the East Asian financial crisis. *Journal of Financial Economics*, 64(2), 215-241.
- Morck, R., Yeung, B., & Yu, W. (2000). The information content of stock markets: why do emerging markets have synchronous stock price movements? *Journal of financial economics*, 58(1), 215-260.
- Puksamatanan, J., & Nittayagasetwat, A. (2012). Determinants of Corporate Governance and Equity Returns: Evidence From the Thai Market. *Journal of International Finance and Economics*, 12(2), 35-49.
- Sharpe, W. F. (1964). Capital asset prices: A theory of market equilibrium under conditions of risk. *The Journal of Finance*, 19(3), 425-442.
- Song, F. M., & Lei, A. C. H. (2008). Corporate governance, family ownership, and firm valuations in emerging markets: evidence from Hong Kong panel data. *Unpublished working paper. SSRN*.
- Weir, C., Laing, D., & McKnight, P. J. (2002). Internal and external governance mechanisms: their impact on the performance of large UK public companies. *Journal of Business Finance & Accounting*, 29(5-6), 579-611.