

**CORPORATE GOVERNANCE AND EQUITY RETURNS**

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**A Dissertation Submitted in Partial  
Fulfillment of the Requirements for the Degree of  
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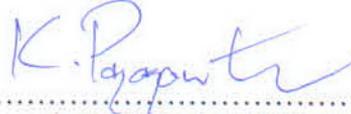
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## ABSTRACT

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This study explains the concept of corporate governance and its effects on equity returns. It explains the differences between strong and weak corporate governance firms in term of risks and returns. From the theoretical point of view, the study incorporates the model of corporate governance and firms' performances to explain the effects from different levels of corporate governance practice on the firms. From the empirical view point, it finds that the stronger corporate governance firms are exposed to lower magnitude and fewer types of systematic risks, as opposed to the weaker corporate governance firms. In general, the strong corporate governance firms are generating significantly better return compares to the weak governance firms. In addition, the risks and returns of firms with strong corporate governance are mostly unaffected by the crisis, while most firms in the market suffered from worsen performances. Lastly, on average the risks and returns of the firms seem to become worse, when the firms are downgraded to the lower levels of corporate governance.

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## TABLE OF CONTENTS

	<b>Page</b>
<b>ABSTRACT</b>	iii
<b>ACKNOWLEDGMENTS</b>	iv
<b>TABLE OF CONTENTS</b>	v
<b>LIST OF TABLES</b>	vi
<b>LIST OF FIGURES</b>	vii
<b>ABBREVIATIONS AND SYMBOLS</b>	viii
<b>CHAPTER 1 INTRODUCTION</b>	1
<b>CHAPTER 2 LITERATURE REVIEWS</b>	6
2.1 The Theory of Corporate Governance	6
2.2 Empirical Studies in Corporate Governance	7
<b>CHAPTER 3 MODEL, DATA, AND METHODOLOGY</b>	17
3.1 Model of Corporate Governance and Firm	17
3.2 Data	20
3.3 Methodology	56
<b>CHAPTER 4 FINDINGS AND RESULTS</b>	63
4.1 Analysis of Corporate Governance Portfolios	63
4.2 Corporate Governance during Crisis Period	75
4.3 Migration of Corporate Governance	84
4.4 Robustness Test	88
<b>CHAPTER 5 CONCLUSIONS, DISCUSSIONS, AND RECOMMENDATIONS</b>	100
5.1 Conclusions	100
5.2 Discussions	107
5.3 Recommendations	109
<b>BIBLIOGRAPHY</b>	111
<b>BIOGRAPHY</b>	120

## LIST OF TABLES

<b>Tables</b>	<b>Page</b>
3.1 Firm Value in the Model	17
3.2 Firm Value in the Model with Insiders' Private Benefits	18
3.3 Descriptive Statistics of Sample Firms	22
3.4 The Corporate Governance Characteristics	23
3.5 Descriptive Statistics under Different CGC Firms	25
3.6 Ownership of Board Members	31
3.7 Descriptive Statistics under Different Ownership of Board Members	33
3.8 Corporate governance scores	36
3.9 Descriptive Statistics under Different Corporate Governance Scores	37
3.10 CGC and Industry	40
3.11 Ownership of Board Members and Industry	45
3.12 Corporate Governance Scores and Industry	50
3.13 Corporate Governance Scores in Financial Industry	52
3.14 Descriptive Statistics of Performance Measurement Model	59
3.15 Descriptive Statistics of Corporate Governance Score Portfolios	61
4.1 Results for Corporate Governance Characteristics	65
4.2 Results for Ownership of Board Members	70
4.3 Results for Corporate Governance Scores	72
4.4 Corporate Governance Portfolios and Risks on Crisis	79
4.5 Corporate Governance Portfolios and Returns on Crisis	82
4.6 Migration to Higher Corporate Governance Score	85
4.7 Migration to Lower Corporate Governance Score	87
4.8 Robustness Results for CGC Portfolios	91
4.9 Robustness Results for BOD Portfolios	95
4.10 Robustness Results for IOD Portfolios	98

## LIST OF FIGURES

<b>Figures</b>	<b>Page</b>
1.1 Corporate Governance Portfolios	2
3.1 CGCs and Corporate Governance Score	54
3.2 Ownership of Board Members and Corporate Governance Score	55
4.1 Rolling Beta of Corporate Governance Portfolios	77
4.2 Industry-Adjusted Corporate Governance Score Portfolios	89

## ABBREVIATIONS AND SYMBOLS

### Abbreviations

CGC	Corporate Governance Characteristics
BOD	Board of Directors
BOT	the Bank of Thailand
SET	the Stock Exchange of Thailand
MKCAP	Market capitalization
BOOK	Book to market ratio
TOBINQ	Tobin's Q ratio
ROE	Return on equity
ROA	Return on asset
QUICK	Quick ratio
CURRENT	Current ratio
RETURN	Total returns of the equity investment
GICS	Global Industry Classification Standard

### Equivalence

### Symbols

$A$	Firm's asset in place
$r$	Firm's rate of return
$V$	Firm's value at the end of period
$\alpha$	Insider's cash flow right
$x$	Amount of insider's private benefits
$C$	Cost of insider's private benefits
$g$	The level of corporate governance
$U$	Insider's utility function
$r_e$	Investor's required rate of returns
$\delta_c$	Dummy variable for crisis

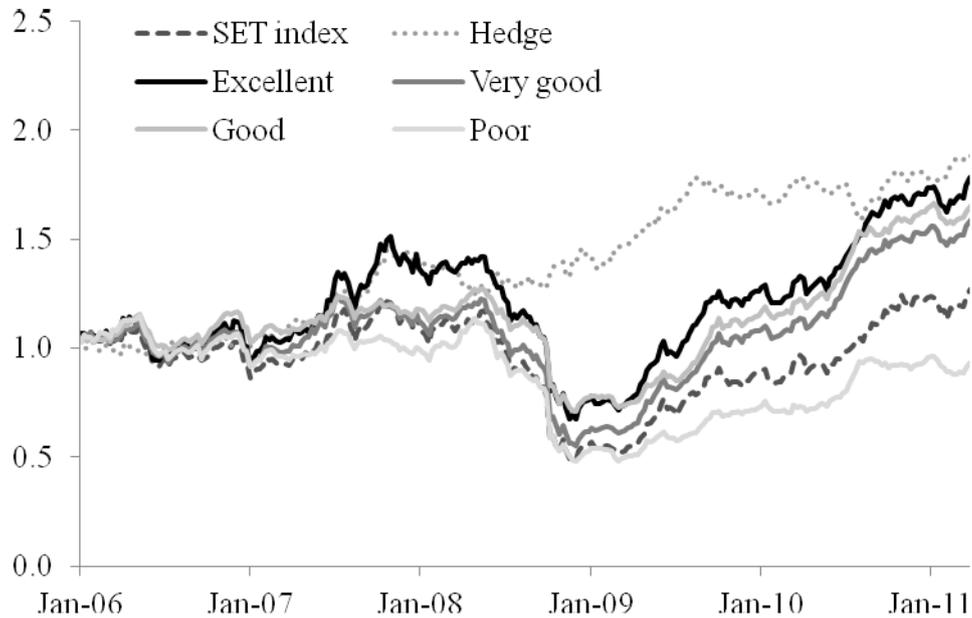
### Equivalence

## **CHAPTER 1**

### **INTRODUCTION**

If a firm is to be perceived as a group of investments supported by thousands of shareholders and driven by the skills of the managers, then corporate governance is the grand mechanism that ensures the firm's motor runs smoothly for the general good of the shareholders. 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 adopting governance practices will result in higher equity value 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 to contribute into the discussion of corporate governance by delving into two main topics. The first one is related to the effects corporate governance has on the firm, which should provide a clearer picture of how corporate governance can influence a firm's equity return. The second issue focuses on the empirical evidence on how the firms with different corporate governance 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. Presently, even though corporate governance has become a more common practice among Asian firms, but the benefits to the firms' performances are still unclear. A failure to fully grasp this causal relationship may result in either firms only pay lip service to the corporate governance for the sake of better public relations or firms end up excessively championing the cause whence their resources could better 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 the firms' performances in Thailand, as well as highlighting the differences from other developed markets.



**Figure 1.1** Corporate Governance Portfolios

**Note:** Figure 1.1 Reports the Performances of Equity Portfolios in the Stock Exchange of Thailand from January 2006 to December 2011. All Data are Initialized with One and Cumulatively Multiplied by Asset Returns from the Start to the End of Analysis Period. SET Index Refers to the Cumulative Returns of the Stock Exchange of Thailand Index. 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 that Buys Long the Excellent Corporate Governance Score Portfolio and Sells Short the Poor Corporate Governance Score Portfolio.

Thailand was probably not the most fertile ground for corporate governance and the issue was not commonly discussed, as the country was in itself, the epicenter, if not the origin, of the 1997 Asian financial crisis. However, since there is a reaction to every action, the aftermath of the crisis consequentially witnesses the rise of calls and enforcement for listed firms in the Stock Exchange of Thailand (SET) to participate in good governance regime, most prominently from the Security and

Exchange Commission (SEC). SEC has mandated that listed firms in the SET develop a more professional standard of corporate governance. Therefore, the level of corporate responsibilities on 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 Thai listed firms have greatly improved. This leads to the core question of this study: "Do firms with strong corporate governance give their investors better investment returns than those with weaker corporate governance?" In fact, this broadly defined question can be answered by Figure 1 below as it demonstrates the performances of equity portfolios clustering by Thai Institute of Director's Corporate Governance Score in the SET.

It reports the performances of equity portfolios in 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 \$1.19 at the end of December 2011. The most interesting result is that an investment of \$1 on the end of December 2006 in the Excellent, the Very Good and the Good Corporate Governance Score portfolios yield better returns than the market. Although the returns are not significantly different among each portfolio, an investor would receive \$1.59, \$1.56, \$1.58 in December 2011 from the Excellent, the Very Good, and the Good Corporate Governance Score portfolios, respectively. In contrast, a \$1 investment in the Poor Corporate Governance Score portfolio decreases to \$0.88 over the same period. Lastly, the return from buying the Excellent Corporate Governance Score portfolio and short selling the Poor Corporate Governance portfolio the Hedge portfolio is the equivalence of annualized return of 10.37%. Implicitly, an investor who puts \$1 in 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 equity returns, since the different in returns might be affected by many factors such as the differences in risk levels and any 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 many data sets of corporate governance 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 to this study, Chapter 2 of this study explains the theoretical aspects of corporate governance in details, so that a reader can have a clear understanding of what constitutes corporate governance. It then reviews the literatures that explain any firm-related aspects that are relevant to corporate governance. It also provides examples of the effects of corporate governance to equity returns around the world. It is this study's aim that at the end of Chapter 2, a reader can get a clear picture of how the concept of corporate governance has been developing from the beginning up until the present time and is able to perceive the linkage between corporate governance and equity returns. In Chapter 3, the theoretical evidences between corporate governance and firms are illustrated. This model of corporate governance and firm performance lead to the idea that corporate governance is important to firms but the effects of corporate governance to firms' performances can diminish when the firms reach certain level of corporate governance. Furthermore, Chapter 3 thoroughly explains the data that this study employs in empirical analysis with their descriptive statistics. Thus, the Corporate Governance measurements of this study, Corporate Governance Characteristics, Ownership of Board Members, and Corporate Governance Scores are explained in this section along with the relationship among each corporate governance measures. At the end of Chapter 3, standard methodologies to explain firms with different corporate governance practices are explained. Chapter 4 then presents the results of findings. Firstly, Chapter 4 exhibits that the firms with different corporate governance practices are faced with different magnitudes and different types of risks and abnormal returns. Most of the results show that the stronger corporate governance firms are exposed to lower magnitude and fewer types of risks, as opposed to the weaker corporate governance firms. The abnormal returns from investing in different corporate governance portfolios are also shown in this Chapter 4. It is found that portfolios of firms that have stronger corporate governance perform better than the firms that have weaker corporate governance. This study searches for further results during the crisis

period and concludes that weak corporate governance firms are dramatically affected in both risks and returns in adverse economic climate, while these factors remain largely unchanged for strong corporate governance firms. In addition, the result shows that average risks and returns of the firms could change when their Corporate Governance Scores are downgraded. At the end of this section, this study create robustness test and confirm that weak corporate governance can be linked to poor abnormal returns even after industry adjustment. Chapter 5, which is the last section, caps all the results, and discusses the limitation of the study. The recommendation for future researches and suggestions for practitioners and academics can also be found in this section.

## **CHAPTER 2**

### **LITERATURE REVIEWS**

#### **2.1 The Theory of Corporate Governance**

In light of the recent global recession, corporate governance has perhaps become a rather common term at present. The term itself, however, can be defined through various dimensions, depending on the contexts and needs of each practitioner and academic. For instance, in some literatures, corporate governance is defined as followed: “the system by which companies are directed and controlled” (Governance and Cadbury, 1992). A broader theoretical concept can cover and define most of corporate governance characteristics. However, its generalization inherently makes it difficult to scope the study. Hence, when academics compare the corporate governance practices across different environmental aspects, such as difference in country, they mostly apply a normative theoretical viewpoint, since the view allows more focus for a study. Such narrowed down definition is as followed: Corporate governance mechanisms are economic and legal institutions that can be altered through political process. (Shleifer and Vishny, 1997: 737). As previously stated, this normative theory seems to be a more appropriate definition when an academic is comparing the set of conducts that a firm is operating under with other firms who are playing with different rules, such as listing requirement, insider dealing arrangement, disclosure and accounting rules, and protection of minority shareholder. Nevertheless, many academics also find that the theoretical concept does not make much sense when they try to explain the effects of corporate governance among firms within the same environment. Consequentially, when the study is focused on comparing different corporate governance among firms within the same environment, operating on a level playing field, the characteristics framework is preferred. The framework is cited by established literatures as followed: The complex set of constraints that shape ex post bargaining over quasi rent generated by firm (Zingales, 1998: 499).

This academic concept-the characteristics framework-refers to the allocation of value-adding determinants among stakeholders that have relationship with the firms. In other words, corporate governance can be specific rules or practices within the firms that might be different from other firms within the same environment. That is to say, theory of corporate governance can be classified into three categories that are broad, normative framework and characteristic framework concepts. These three categories of corporate governance definitions can lead to different perspectives of the corporate governance concept, although the definitions mean essentially the same. For example, the normative definition can frame the readers to perceive that corporate governance is determined by rules and institutions related to a particular market, insiders' forces and outsiders' forces that might be different across economic and geographic environments. In reality, although both institutions and rules distinctively matter as determinants of corporate governance, but one can also argue that both institutions and rules are endogenous to other factors and conditions. As such, when every market reach the Anglo-Saxon standards, institutions and rules can become irrelevant. Hence, a study on the corporate governance issue needs to focus on one perspective of the definitions in order to establish a framework and build on further analysis that matches the study's direction.

Although this study does not aim to interpret the theories or make the case for any corporate governance theories over the others, the analysis in this study builds on the corporate governance characteristics framework's point of view, meaning that, in this study, corporate governance should be theoretically defined as the function that guides firms to generate high-quality monitoring processes to shareholders and provide transparent information to the market.

## **2.2 Empirical Studies in Corporate Governance**

In theory, according to the agency theory (Jensen and Meckling, 1976: 305-360), the separation of ownership and control provides opportunities and incentives for managers to take decisions to serve their own interests that might destroy the firm's value to shareholders. Consequently, it is important that corporate governance must be put in place to protect shareholders from the realization of manager's private

benefits (La Porta, Lopez-de-Silanes and Shleifer, 1998: 1113-1155; 1999: 471-517; La Porta, Lopez-de-Silanes and Vishny, 2002: 3-27; 2002. 1147-1170.). Without adequate quality of corporate governance, profit overstatement (in the case of WorldCom), corporate looting (in the case of Tyco), corporate collapses (in the case of Enron), audit fraud (in the case of Arthur Andersen), and inflated reports of stock performance (in the many cases contributed by investment analysts in the financial markets) all contribute to lower investors' confidence, resulting in the declines of stock market valuation and higher probability of catastrophic events affecting the economy (Claessens and 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 firm's value, but also the market as a whole (Erkens, Hung and Matos, 2012). Therefore, that is why the roles of corporate governance inside and outside the firms have been discussed and investigated by many academics and practitioners for more than a decade. This study reviews literatures and finds that the corporate governance effects lead to better access to external financing and lowering the cost of capital, which is the factor that associates with higher firm valuation, better equity performance and reduced risks in the time of financial crisis.

Better financial access from overall market development is the first benefit from corporate governance that this study finds from various literatures across the world. In the normative framework, there are fundamental papers that emphasize the importance of law and legal enforcement on the governance of firms, the development of markets, and economic growth (La Porta 1998; La Porta, Lopez-de-Silanes, Shleifer and Vishny, 1997: 1131-1150). Following their studies, many more researchers document that stronger legal foundations can lead to higher development of the market as a whole (Ang, 2008: 536-576 Laeven and Majnoni, 2005: 1791-1812; Rathinam and Raja, 2010: 106-118). Supposed that firms in the market have a greater supply of financing available in an environment with better property rights, it is unsurprising that those firms can invest more and grow quicker (Rajan and Zingales, 1998: 40-48). Although there are some disagreements on how important corporate

governance and legal aspects can be the mechanisms that drive financial and economic development (Armour, Deakin, Sarkar, Siems and Singh, 2009: 343-380), many literatures support that a better corporate governance should create more benefits than costs. Needless to say, firms in weaker legal environments not only obtain less financing, but also invest less than optimal in intangible assets (Claessens and Laeven, 2003: 2401-2436). The quality of a country's legal system does not only influence its financial improvement, but also increase economic growth as documented in prior literatures (Beck, Levine and Loayza, 2000: 261-300). There are also researches that create a measurement of legal protection for minority shareholders - the anti-self-dealing index - and find that the index is associated with higher valued stock markets, more domestic firms, more initial public offerings, and lower benefits of control (Djankov, La Porta, Lopez-de-Silanes and Shleifer, 2008: 430-465). In conclusion, most of the studies support that development in corporate governance environment can create effects such as higher valued stock markets, more domestic firms, more initial public offerings and lower benefits of control (Claessens and Yurtoglu, 2012).

Apart from the effects on market and economic developments, another benefit of corporate governance, established by prior literatures, is the effect on the cost of capital. Firstly, literatures have shown that better creditors' and shareholders' rights are associated with more profound and more developed corporate governance practices. An improved creditors' rights is purported to be one of the byproducts of improvement in financial development (Djankov et al., 2008: 430-465). A similar relationship also exists between the quality of shareholder protection from legal enforcement and the development of countries' capital markets, even when the analysis is conducted with variety of control variables (Jackson and Roe, 2009: 207-238), leading to firms enjoying a greater supply of financing available from the development of shareholders' rights (Fisman and Love, 2007: 470-479). Secondly, researchers have found that firms with strong corporate governance practices have a lower cost of capital after controlling for risk and other factors. The effect on the cost of capital is more pronounced for firms that have more severe agency problems and/or facing greater threats from hostile takeovers compare to normal firms (Chen, Chen and John Wei, 2011: 171). The cost of debt for strong corporate governance firms has also

been shown to be lower than those of weak corporate governance firms the in U.S (Anderson, Mansi and Reeb, 2004: 315-342). However, literature finds that divergence of control and cash-flow rights can lead to a higher cost of debt financing because too much control rights facilitates potential tunneling and other moral hazard activities (Lin, Ma, Malatesta and Xuan, 2011: 1-23). However, stronger creditors' rights and enforceability still result in loans with longer maturities and lower spreads, lowering the cost of debt (Bae and Goyal, 2009: 823-860; Qian and Strahan, 2007: 2803-2834). The reduction on the cost of debt may also come from the fact that higher sensible efficiency and enforcement of debt contracts can help the firms to reduce monitoring costs, which is true for many countries (Laeven and Majnoni, 2005: 1791-1812). That is why it is rather common that bond contracts with covenants seem to be viewed as more favorable when creditor protection laws are weak (Miller and Reisel, 2012: 408-438). This effect is magnified in countries that provide relatively poor legal protection, or weak corporate governance. In other words, corporate governance, in this case, the country-level shareholder protection seems to be one of the key factors in reducing the cost of equity.

Other evidences showing that corporate governance affects the cost of capital and firm valuations are also found in many literatures. Since it is already established that weak corporate governance settings lead to a divergence between cash-flow and voting rights, conflicts between the major and the minority shareholders in that environment are to be expected. Logically, with weak corporate governance setting, financial institutions may be less willing to provide financing when they are less assured that they will get their loans paid with interests. Even in the cases that they have to provide, such institutions are likely to charge high rates for the firms that are likely to default. In this sense, investors could receive lower returns than what they should get from the profits that the firms make. Hence, a case can be made that strong corporate governance can add value to the firms. For instance, corporate governance can improve firm's performance by creating efficiency improvements in both management and asset allocation. For the empirical evidences, academics have found that internal corporate governance practices significantly lowers the cost of equity capital in emerging markets (Chen et al., 2011; Chen, Chen and Wei, 2009: 273-289).

The empirical evidences are very convincing when academics investigate the firm value filtered by corporate governance practices. It is found that firm's value, typically measured by Tobin's Q, becomes lower than those of average firms when the gap between the shareholders' control and equity stake is larger (Claessens, Djankov, Fan and Lang, 2002: 2741-2771; Lins, 2003; Mitton, 2002: 215-241). Other governance aspects such as block holdings and large non-management control rights are also positively relate to firm's value (Heugens, Van Essen and van Oosterhout, 2009: 481-512). Some literatures analyze the effects of corporate governance and operating performance, and generally find the results to be positive. This is because agency issues decrease when corporate governance improves. In other words, it has been established that well developed financial markets contribute to the improvement of the allocations of capital (Wurgler, 2000: 187-214). These effects are more pronounced in the weak corporate governance environment. For example, researchers find that decreasing in the degree of divergence between voting right and control right is associated with an increase in Tobin's Q in emerging countries (Black, Jang and Kim, 2006: 366-413; Yurtoglu, 2003: 72-86). However, it might not be an absolute solution for some emerging countries, since a contradictory research finds that the added benefits of practicing strong corporate governance are nullified in the presence of pyramidal ownership structures (Connelly, Limpaphayom and Nagarajan, 2012: 1722-1743). Productivity and asset allocation quality can also be improved by corporate governance inherited by institutional and foreign ownership. For example, researchers find evidence that institutional ownership is positively related to total factor productivity, while negative impact is found from insiders' ownership (Yeh, Lee and Woidtke, 2001: 21-48). In addition, researches in some countries document that institutional investors and foreign financial institutions ownership create positive impact on firms' performances (Douma, George and Kabir, 2006: 637-657; Filatotchev, Lien and Piesse, 2005: 257-283). Unsound corporate governance structure, such as that of unbalance control of ownership, creates too much limitation on the shareholders' involvement and negatively impacts the firms' performances in many countries such as Brazil, Turkey, and Thailand (da Silva and Leal, 2006: 300-308; Orbay and Yurtoglu, 2006: 349-363; Yupana Wiwattanakantang, 2001: 323-362).

Theoretically, better corporate governance means more financial transparency, thereby bringing about more competition. In the case of strong governance environment, it would be preferable for banks to expand lending and thereby, enhancing overall performance (Hellmann, Murdock and Stiglitz, 2000: 147-165). These results from more coordination among firms, a factor that helps to reduce excessive risk taking (Boyd and De Nicolo, 2005). However, it should be noted that limited competition, created by excessive rules, can inherently hurt the competition (Abiad, Oomes and Ueda, 2008: 270-282).

Another area where corporate governance affects firms and their equity returns is in the acquisitions (M&A) activity. This is important because the premium paid for acquisitions are found to be significantly larger in weak corporate governance during the last two decades (Rossi and Volpin, 2004: 277-304). This indicates that corporate governance regime is a market determinant factor for M&A. The abnormal returns are also found to be positively correlated with corporate governance measures for target firms (Starks and Wei, 2004) and a higher takeover premium are reported when investor protection in the acquirer's environment is stronger than the protection in the target firm's environment (Bris and Cabolis, 2008: 605-648). Furthermore, literature shows that foreign institutional ownership in poor corporate governance environment can increase the probability of a takeover by a foreign bidder (Ferreira, Massa and Matos, 2010: 601-641).

Literatures also find that corporate governance is associated with equity performance. Notable literatures on the effects of corporate governance on firms and shareholders have been performed in many countries. In the U.S., there are many evidences that support the positive effects of corporate governance. For example, firms with good governance have higher industry adjusted Tobin's Qs, profits, and abnormal returns than those with poor governance provisions (Bebchuk and Cohen, 2005: 409-433; Gompers, Ishii and Metrick, 2003: 107-155) and that the portfolio of going long on good governance firms and shorting on bad governance firms yields abnormal returns (Bebchuk, Cohen and Ferrell, 2009: 783). 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: 65-76), regardless of the

firm's specific characteristics. Hence, this is the key reason why corporate governance is important for firm valuation (Brown and Caylor, 2006: 409-434). However, not all literatures support the importance of corporate governance. In fact, some literatures find that an increase in governance raises the probability of becoming a takeover target, which creates abnormal returns (Cremers and Nair, 2005: 2859-2894). In addition, 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 might not be consistent and occur only at a specific time (Core, Guay and Rusticus, 2006: 655-689). Recently, some evidences show that the effects of corporate governance in the U.S. have already decreased. The abnormal returns from good governance have not been found during the early 2000s because the market had fully priced the improvements in firms' performances (Bebchuk, Cohen and Wang, 2010). Moreover, some research suggested that the abnormal returns of some firms are resulted from the overall strong performance of their specific industries, and cannot be directly attributed to good governance (Johnson, Moorman and Sorescu, 2009: 4753).

Apart from the U.S., the effects of corporate governance on firms' performances are investigated throughout the world. For example, in the U.K., governance mechanisms are found to correlate with firm's value and Tobin's Q (Weir, Laing and McKnight, 2002: 579-611). However, the impact of governance variables on agency costs is still unclear (McKnight and Weir, 2009: 139-158). In addition, an investment strategy for the U.K. market that buys strong corporate governance firms and shorts weak corporate governance firms would have earned abnormal returns of around 12% per year in the early 2000s (Drobetz, Schillhofer and Zimmermann, 2004: 267-293). In emerging markets, not all of the relationships between corporate governance and firms' performances are investigated. This is because researchers usually filtered out many countries that the data made available are deemed inadequate (Ammann, Oesch and Schmid, 2011: 36-55). Although some of emerging countries are investigated by many researchers, they provide both supporting and contradicting evidences. For instance, firms with better corporate governance ratings are found to have higher firm's value in Hong Kong (Song and Lei, 2008). There are evidences found that relationship between corporate governance

quality and firm performance does exist in Thailand (Limpaphayom and Connelly, 2004) and that a standard deviation increase in a firm's level of corporate governance adoption index is related to an increase in the firm's value (Kouwenberg, 2006). Some researchers utilize a combination of transparency and disclosure as a proxy for corporate governance, and finds that its components are 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 corresponds to an increase in the share prices of firms in Korea and Brazil (Black et al., 2006; Carvalhal da Silva and Leal, 2005: 1-18). In Russia, a combined corporate governance index is positively related to market valuations (Black, Love and Rachinsky, 2006: 361-379). Furthermore, a significant positive association between corporate governance and firm's market value is found in Brazil, India, Korea, and Russia (Black, de Carvalho and Gorga, 2011: 934-952). In addition, improvements in some corporate governance characteristics on some types of firms in Thailand do improve investment results after controlling for their different risk levels (Puksamatanan and Nittayagasetwat, 2012). On the other hand, some literature reveals contradictory evidence. For example, there is no relationship between the change in corporate governance rating and a firm's share performance in Thailand (Aekkachai Nittayagasetwat and Wiyada Nittayagasetwat, 2006: 35-49). There is no statistically significant relationship found between corporate governance and market valuation among firms in China (Cheung, Jiang, Limpaphayom and Lu, 2008: 460-479).

At present, the evidence has shown that firms with strong and weak corporate governance practices are not equally distributed among industries. Thus, the inference on the corporate governance, without a controlling approach or any adaption in independent variables could be misleading. In most of the studies on corporate governance, the industry clustering is usually examined (Lyon, Barber and Tsai, 1999: 165-201). Often times, firms are clustered into industries by their two-digit Standard Industrial Classification (SIC) Code. From that point, researchers extend results from that industry clustering in order to explain the long term abnormal returns (Ahn, Conrad and Dittmar, 2003: 459-485; Fama and French, 1997: 153-193; Hou and Robinson, 2006: 1927-1956; Moskowitz and Grinblatt, 1999: 1249-1290). Academics suggest that some industries might have their own specific characteristics and those

would affect overall results without proper controlling process. For other controlling methods, some literature conducts formal test to determine whether industry clustering is a general problem in the governance-sorted samples, using industry classification based on the 48 industry definitions in (Fama and French, 1997: 153-193), or based on narrower three-digit SIC Codes (Lewellen and Metrick, 2010), or two-digit and four-digit GIC Codes (Brown and Caylor, 2009: 409-434). Still researchers demonstrate the importance of corporate governance to stocks returns even after allowing for industry clustering adjustment (Johnson et al., 2009: 4753).

Weak corporate governance is one possible factor that contributes to the increasing of financial volatility. This is because when information is unclear, investors and analysts may not have the ability and the means to accurately analyze firms. Corporate governance issues are linked to that asymmetric information, due to the fact that a lack of transparency is considered to be one of the characteristics of weak corporate governance. It has been found that for low financial transparency firms, stocks prices are more volatile since investors feel that they cannot determine the suitable prices for the stocks (Morck, Yeung and Yu, 2000: 215-260). Empirical evidences have been found in many 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, a common trading requirement in Hong Kong Stock Exchange (Brockman and Chung, 2003: 921-938). Similar phenomenon has also been found in Canada, the size of the bid-ask spreads can vary upon potential corporate governance problems (Attig, Fong, Gadhoun and Lang, 2006; 2875-2892). Another reason why the corporate governance is an informative factor for equity returns in countries that have less investor protection is possibly the disclosures practice in those countries. The evidences of massaging information, disclosing good news immediately, while releasing bad news gradually, are found in this type of environment. The equity performances of listed firms in Indonesia, Korea, Malaysia, the Philippines, and Thailand are found to be better among firms with higher accounting disclosure quality and higher outsiders' ownership concentration (Mitton, 2002: 215-241). Evidences from financial crises suggest that quality of corporate governance affects stock return distributions. During the 1997 East Asian financial crisis, cumulative stock returns of

weak corporate governance firms, which their managers have high levels of control rights, are affected negatively by the crisis between minus 10% to minus 20%, while firms with smaller management's ownership received lower negative impact (Lemmon and Lins, 2003: 1445-1468).

In summary, established literatures generally agree that there exist the positive effects of corporate governance on firms including better access to financing, lowering of the cost of capital and improvement of valuation and performance. These effects have been documented in many countries and using various methodologies. In many empirical evidences, better corporate governance leads to higher operating performance and greater efficiency. Across countries, the importance of the roles of institutions in enforcing the contractual and legal commitments, including corporate governance, has been highlighted. Furthermore, on a specific country level, economic and finance literatures document differences in firms and their stock performances caused by different levels of corporate governance.

## CHAPTER 3

### MODEL, DATA, AND METHODOLOGY

#### 3.1 Model of Corporate Governance and Firm

In this study, the total value of a firm is assumed to be derived from the asset in place, denoted  $A$ , plus the net present value of investment opportunities with the rate of return, denoted  $r$ , that will be realized at the end of the firm's life. With this assumption, a single-period model is utilized to value the firm (Johnson et al., 2000). In this model, the shareholders' money is invested at the beginning of the period and return is realized at the end when the firm liquidates and shareholders collect their shares of the proceeds and dividends, denoted  $V=A(1+r)$ . The shareholders are categorized into two groups, the insiders, representing controlling shareholders and managers, and the outsiders, representing the rest. If the insiders' cash flow rights to the firm is denoted by  $\alpha$  percent, the amount they would expected to earn would be  $\alpha A(1+r)$  at the end of the period, under the assumption that tax is zero and the insiders are risk neutral. The stakes and returns for both insiders and outsiders can be illustrated in Table 3.1.

**Table 3.1** Firm Value in the Model

	Insider's portion	Outsider's portion	Firm value
Beginning period	$\alpha A$	$(1-\alpha)A$	$A$
Ending period	$\alpha A(1+r)$	$(1-\alpha)A(1+r)$	$V = A(1+r)$

This study also assumes that the insiders can choose either to extract private benefits at the beginning period, denoted by  $x \geq 0$  from the firm, or forego the extraction and invest the amount to earn the return of  $r \geq 0$ . If the private benefits

have been extracted, the firm's value at the ending period then becomes  $V = (A-x)(1+r)$ . Clearly, the insiders have an incentive to extract the private benefits, rather than foregoing and investing the amount, which will be shared with the rest of the shareholders. Hence, the outsiders, who are rational, would not be sitting idly and would therefore, demand a process to control the insiders' extraction. Consequently, it is assumed that corporate governance would be the process that is imposed to reduce this private benefit by creating costs for insiders to extract the private benefits. To clarify further, the firm with stronger corporate governance is the firm that has better control over the insiders' extraction by imposing costs and, thereby, preventing the insiders to freely reap the private benefits. These insiders' costs to obtain private benefits are further assumed to be non-negative amounts that are increasing proportionately with the amount of private benefits to be extracted, hence, effectively control the insiders. From these assumptions, the cost of private benefits can be expressed as equation (1).

$$C(x) = gx^2/2 \quad (1)$$

where  $g$  denotes the level of corporate governance  
 $x$  denotes the insider's private benefits

Therefore, the firm's value and shareholders' return when having the presence of corporate governance and private benefits can be illustrated in Table 3.2

**Table 3.2** Firm Value in the Model with Insiders' Private Benefits

	Insider's portion	Outsider's portion	Firm value
Beginning period	$x + a(A-x)$	$(1-a)(A-x)$	$A-x$
Ending period	$(x - C(x)) + a(A-x)(1+r)$	$(1-a)(A-x)(1+r)$	$V = (A-x)(1+r)$

Referring to the existing literature (Johnson et al., 2000), the insiders' optimization problem can be expressed as equation (2).

$$\text{Max}U_x(x, g, r, \alpha) = \text{Max}[(x - C(x)) + \alpha(A - x)(1 + r)] \quad (2)$$

Thus, the optimal insiders' optimal private benefits amount, denoted  $x^*$ , can be derived by

$$\partial U_x / \partial x = 1 - \alpha(1 + r) - gx^* = 0 \quad (3)$$

Or explicitly,

$$x^* = (1 - \alpha(1 + r))g^{-1} \quad (4)$$

From equation (4), the optimal amount of insiders' private benefits can be discovered if  $\alpha$ ,  $r$ , and  $g$  can be determined at the beginning period. This model also relies on the assumption that  $1 - \alpha(1 + r) \leq 1$ , which signifies that the insiders would not further invest in the firm unless the investment has positive effects on the cash flow. The resulting model suggests that the maximum amount of insiders' private benefits may increase (or decrease) when the firm has lower (or higher) percentage of the insiders' cash flow rights, lower (or higher) level of corporate governance, and higher (or lower) rate of return on investment.

The outsiders' or the rest of the shareholders' perspective with the presence of cooperate governance and private benefits can be examined using the prior established framework. Suppose that the outsiders and other investors in the market are aware of the existence of private benefits, investors with expected return of  $r_e$  would certainly value the firm after private benefits extraction by discounting the value of the firm to the present value. Thus, the value of the firm with the optimal private benefits can be found by substituting  $x^*$  into  $V$ .

$$V = \left( A - \left( (1 - \alpha(1 + r))g^{-1} \right) \right) (1 + r)(1 + r_e)^{-1} \quad (5)$$

From equation (5), the rational investor expects that the value of the firm is related to the asset in place, proportion of the insider's cash flow rights, the rate of return on the firm, investor's expected return, and the level of the firm's corporate

governance. The change in the expected value of the firm vis-à-vis the firm's corporate governance level,  $g$ , can be displayed as the following two derivative equations.

$$\frac{\partial V}{\partial g} = \alpha(1+r)^2(1+r_e)^{-1}g^{-2} \quad (6)$$

$$\frac{\partial^2 V}{\partial^2 g} = -2\alpha(1+r)^2(1+r_e)^{-1}g^{-3} \quad (7)$$

If  $\alpha$  and expected return of  $r_e$  are assumed to be positive, equation (6) reveals that  $\partial V/\partial g$  is going to be a positive term. Taking into account equation (6) in tandem with equation (7), the relation between the firm's value and corporate governance level generates a positive concave function. Therefore, everything else being equal, a better market value can be expected from a firm with better corporate governance. However, when the firm already has the high level of corporate governance, the value of increasing the level of corporate governance diminishes. From this model, the analysis of corporate governance and equity return can be conducted by further assuming that the insider's optimum level of  $x^*$  is unconditionally determined, regardless of the firm performance and whether the outsiders are assumed to be aware of the insiders' behaviors.

### 3.2 Data

In this study, the sample of empirical analysis is the equity stocks listed in the Stock Exchange of Thailand (SET) from 2006 to 2011. 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. Literature states that one of the reasons for this crisis stems from the fact that most Thai companies, at the time lack corporate governance (Alba, Claessens and 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. Although the quality of corporate governance among Thai listed firms have been developing markedly in

highly regulated industries, such as the banking industry (Pathan, Skully and Wickramanayake, 2008: 345-362), these improvements in the level of corporate governance are yet to be equally applied across all industries (Kouwenberg, 2010).

In this study, the data can be divided into three categories: fundamental information; equity returns; and corporate governance measurements. The fundamental information and equity returns in this study are gathered from Bloomberg. The equity returns, in particular, are derived from the total returns of each equity stock and index, which cover market appreciation or depreciation from stock's movements and dividends that investors may receive during the analysis period. All other information regarding the fundamentals of the firms is analyzed using end-of-year data. To reduce analysis biases, this study winsorizes the firms that fail to provide all relevant fundamental information. To summarize, the data set for explaining fundamental behaviors of the firms under each corporate governance regime covers 379 listed firms in 2006 and increases to 428 listed firms in 2011.

Table 3.3 reports descriptive statistics of the 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>), Quick ratio (QUICK<sup>6</sup>), Current ratio (CURRENT<sup>7</sup>), total return of the equity investment (RETURN<sup>8</sup>) for all firms in the analysis period in firm-year-data. While Table 3.3 alone only provides snapshots of the firms, the information from the table will be used for comparison with corporate governance subsample groups.

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<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

**Table 3.3** Descriptive Statistics of Sample Firms

	MKCAP	BOOK	TOBINQ	ROE	ROA	QUICK	CURRENT	RETURN
Mean	16,745	1.13	1.22	13.24	7.05	1.39	2.63	0.13
Median	2,120	0.93	1.03	11.67	5.93	0.76	1.60	0.12
Maximum	1,059,183	9.03	15.59	55.27	47.03	27.55	34.63	2.54
Minimum	38	0.05	0.16	0.03	0.00	0.00	0.05	-2.28
Std. Dev.	63,260	0.83	0.79	9.31	5.57	2.14	3.39	0.46
Observations	1,939	1,939	1,939	1,939	1,939	1,697	1,697	1,939

**Note:** This Table Reports Mean, Median, Maximum, Minimum, Standard Deviation, and Number of Observations of the Variables. The Sample Period is from 2006 to 2011. Firms without Market Capitalization and Book-to-Market Ratio and Firms with Negative Returns-on-Asset and Returns-on-Equity are Excluded. For Quick and Current Ratios, Firms in the Financial Industry are Omitted (GICS Code of Financial Industry). All Variables are Winsorized at the Bottom and Top 1% Level.

For the corporate governance measurements of the sample firms, information is derived from the three subsets of corporate governance measures: Corporate Governance Characteristics; Ownership of Board Members; and Thai Institute of Directors' Corporate Governance Score. The rationales and descriptions of all three sets of corporate governance measures are provided in section 3.2.1, 3.2.2, and 3.2.3.

### 3.2.1 Corporate Governance Characteristics

The fact that there is no ultimate characteristic that signifies strong corporate governance encourages this study to use various features of the firm to represent corporate governance. In this study, the data set of Corporate Governance Characteristics (CGC) is used because it provides insightful information on the internal governance purpose of the firms. Each CGC is supported by literatures signifying the importance of each characteristic.

The first set of determinants of CGC, focused in this study, involves the structure of the Board of Directors. Existing literature suggests that a firm with independent directors on the Board of Directors (BOD) is in a better position to protect shareholders' interest from managerial opportunism due to their independence from management influence (Fama and Jensen, 1983: 301). Many researchers also find that independent directors are effective in mitigating agency cost and creating firm's value (Dahya and McConnell, 2005: 37-60; Dalton, Daily, Johnson and Ellstrand, 1999: 674-686; Johnson et al., 2000: 141-186). Another structure of BOD that affects corporate governance includes the separation of the roles between chairman and the chief executive officer, hereafter CEO. Literature suggests that the duality of chairman and CEO bestowed to the same person causes poor governance by providing insiders with more opportunities to extract private benefits from the firm's profits (Boyd, 2006). The second set of determinants of the CGC relates to the presences and involvement of various committees in the firm. Researchers have found that having various committees is important in a sound corporate governance system, because committees can protect the interests of shareholders by ensuring that adequate and reliable financial reporting, internal controls, and risk management are all in place. Committees can also protect shareholders by preventing the insiders from creating their own private benefits on one hand and approving them on the other (Dallas, 2004; Klein, 2002: 375-400; Williamson, 1998: 75-79). The third determinant of CGC is the transparency that is reflected by disclosures of the firm's information, especially on the compensation received by directors and the management.

**Table 3.4** The Corporate Governance Characteristics

Determinant	Characteristic	Description
Board of Directors	IND	1: The firm has at least one-third of independent directors on the board (measured by the number of independent directors divided by total number of directors) 0: otherwise
	CCS	1: Chairman and CEO separation (measured by difference in the name of chairman of board of directors and the name of CEO) 0: otherwise

**Table 3.4** (Continued)

Determinant	Characteristic	Description
Committee	AUD	1: The firm has an audit committee. 0: otherwise
	REM	1: The firm has a remuneration committee. 0: otherwise
	NOM	1: The firm has a nomination committee. 0: otherwise
	CGC	1: The firm has a corporate governance committee. 0: otherwise
Disclosures	DIS	1: The firm discloses director's fees and individual remuneration for executives this year. 0: otherwise
CG Policies	CGP	1: The firm has written corporate governance policy this year. 0: otherwise

**Note:** This Study Focuses on Four Groups of Determinants of Corporate Governance: the Board of Directors, Board Committees, the Level of Remuneration Disclosures, and the Publicity of Corporate Governance Policies. These Determinants of the Firms are Analyzed by Using the Corporate Governance Characteristics Linked with Each Determinant. All Data on the Characteristics are Collected in Binary Term. Indicators are Recorded at the Value of one Whenever the Data Fits the Condition that Conforms with one of the Corporate Governance Characteristics. These Data on Corporate Governance Come from Publicly Available Annual Reports and Registration Forms (Form 56-1) That can be Found on the SET's Database.

The level of remuneration disclosure is an essential corporate governance characteristic since firms with weak level of disclosure for director's fees and executive remunerations have greater agency problems (Core, Holthausen and Larcker, 1999: 371-406). The last determinant of CGC, focused in this study, is the public announcement of the firm's governance policy. This signifies the firm's commitment to corporate governance, when BOD provides a public summary of the corporate governance policy, as approved by the board, through various channels such

as the firm's annual reports or the firm's website (OECD, 2004). Table 3.4 summarizes the eight CGCs used in this study. In the actual process of data collection, all CGCs are collected as if they are binary (zero and one). Indicators are taken at the value of one whenever the data shows that a firm exhibits one of the CGCs. This study partly uses the data that are collected by existing literature and collects more information to match the analysis period (Kouwenberg, 2010). These data on corporate governance come from publicly available annual reports and registration forms (Form 56-1) that can be found on the SET's database. The sample consists of 546 firms in total in the analysis period.

Further details regarding descriptive statistics of the firms grouped by CGCs can be found in Table 3.5. It reports mean, median, maximum, minimum, standard deviation, and number of observations of firms that conform to each CGC. Each CGC's descriptive statistics is reported by using two panels: Panel A, reporting the results for firms that score one on each CGC; and Panel B, reporting the results for firms that score zero on each CGC. The means of fundamental information are compared with the mean in Table 3.3.

**Table 3.5** Descriptive Statistics Under Different CGC Firms

Panel A: The firm has at least one-third of independent directors on the board

	MKCAP	BOOK	TOBINQ	ROE	ROA	QUICK	CURRENT	RETURN
Mean	18,642	1.15	1.19	13.12	6.96	1.40	2.77	0.12
Median	2,000	0.96	1.02	11.53	5.77	0.77	1.65	0.12
Maximum	1,059,183	6.61	15.59	55.27	47.03	27.55	34.63	2.54
Minimum	53	0.05	0.30	0.08	0.04	0.00	0.05	-2.28
Std. Dev.	72,610	0.79	0.72	9.12	5.56	2.30	3.77	0.47
Observations	1,387	1,387	1,387	1,387	1,387	1,209	1,209	1,387

Panel B: The firm has less than one-third of independent directors on the board

	MKCAP	BOOK	TOBINQ	ROE	ROA	QUICK	CURRENT	RETURN
Mean	13,068 **	1.15	1.30 *	13.51	7.57 *	1.37	2.30 ***	0.15
Median	2,980	0.91	1.04	11.88	6.53	0.80	1.59	0.11
Maximum	248,158	7.34	10.55	47.43	36.29	11.56	15.13	2.09
Minimum	43	0.07	0.16	0.10	0.07	0.04	0.07	-1.15
Std. Dev.	30,029	0.92	1.05	9.45	5.90	1.54	2.07	0.42
Observations	410	410	410	410	410	377	377	410



**Table 3.5 (Continued)**

Panel A: The firm has a remuneration committee

	MKCAP	BOOK	TOBINQ	ROE	ROA	QUICK	CURRENT	RETURN
Mean	29,601 ***	1.03 ***	1.22	13.41	7.02	1.19 ***	2.37 ***	0.13
Median	3,784	0.85	1.06	12.10	6.01	0.74	1.59	0.13
Maximum	1,059,183	4.96	10.55	52.83	47.03	25.48	29.90	1.82
Minimum	113	0.07	0.31	0.09	0.05	0.00	0.11	-1.46
Std. Dev.	90,833	0.70	0.61	8.76	5.39	1.72	2.57	0.46
Observations	877	877	877	877	877	745	745	877

Panel B: The firm does not have a remuneration committee

	MKCAP	BOOK	TOBINQ	ROE	ROA	QUICK	CURRENT	RETURN
Mean	5,466 ***	1.26 ***	1.21	13.00	7.18	1.56 **	2.95 **	0.12
Median	1,313	1.04	0.98	10.98	5.90	0.81	1.66	0.11
Maximum	232,520	7.34	15.59	55.27	36.29	27.55	34.63	2.54
Minimum	43	0.05	0.16	0.08	0.04	0.00	0.05	-2.28
Std. Dev.	14,600	0.92	0.98	9.67	5.90	2.48	4.12	0.46
Observations	883	883	883	883	883	808	808	883

Panel A: The firm has a nomination committee

	MKCAP	BOOK	TOBINQ	ROE	ROA	QUICK	CURRENT	RETURN
Mean	32,937 ***	1.03 ***	1.25	13.64	7.15	1.26 *	2.50	0.12
Median	4,020	0.85	1.06	12.21	5.93	0.79	1.67	0.12
Maximum	1,059,183	4.96	9.40	52.83	47.03	25.48	29.90	1.54
Minimum	113	0.08	0.31	0.09	0.05	0.00	0.14	-1.46
Std. Dev.	97,157	0.70	0.72	9.08	5.85	1.80	2.70	0.45
Observations	755	755	755	755	755	636	636	755

Panel B: The firm does not have a nomination committee

	MKCAP	BOOK	TOBINQ	ROE	ROA	QUICK	CURRENT	RETURN
Mean	5,890 ***	1.24 ***	1.19	12.88	7.06	1.47	2.79	0.13
Median	1,469	1.02	0.99	11.01	6.00	0.77	1.59	0.12
Maximum	232,520	7.34	15.59	55.27	31.99	27.55	34.63	2.54
Minimum	43	0.05	0.16	0.08	0.04	0.00	0.05	-2.28
Std. Dev.	15,433	0.90	0.88	9.32	5.50	2.37	3.92	0.46
Observations	1,005	1,005	1,005	1,005	1,005	917	917	1,005



**Table 3.5 (Continued)**

Panel A: The firm has written corporate governance policy

	MKCAP	BOOK	TOBINQ	ROE	ROA	QUICK	CURRENT	RETURN
Mean	16,781	1.15	1.21	13.19	7.11	1.39	2.66	0.13
Median	2,099	0.95	1.02	11.55	5.97	0.77	1.63	0.12
Maximum	1,059,183	7.34	15.59	55.27	47.03	27.55	34.63	2.54
Minimum	43	0.05	0.16	0.08	0.04	0.00	0.05	-2.28
Std. Dev.	64,657	0.82	0.81	9.20	5.65	2.15	3.46	0.46
Observations	1,779	1,779	1,779	1,779	1,779	1,574	1,574	1,779

Panel B: Panel A: The firm does not have written corporate governance policy

	MKCAP	BOOK	TOBINQ	ROE	ROA	QUICK	CURRENT	RETURN
Mean	75,633 **	0.73 ***	1.17	15.05	6.52	1.17 **	2.28 *	0.13
Median	12,497	0.72	1.08	15.04	5.60	1.13	2.46	0.11
Maximum	300,354	1.09	1.74	35.40	16.07	1.92	3.06	1.09
Minimum	2,170	0.40	0.93	5.57	1.10	0.65	1.24	-0.96
Std. Dev.	106,059	0.25	0.26	8.77	5.21	0.35	0.66	0.50
Observations	18	18	18	18	18	12	12	18

**Note:** This Table Reports Mean, Median, Maximum, Minimum, Standard Deviation, and Number of Observations of the Variables. The Sample Period is from 2006 to 2011. CGC for Each year is Gathered from Publicly Available Annual Reports and Registration forms (Form 56-1) of the year from 2006 to 2011. The Details of Each Characteristic can be found in Table 3.4. This Table Reports the Descriptive Statistics in Panels – Panel A and B for Each CGC Report the Results from Firms that Score one and Zero for that CGC, Respectively. For Quick and Current ratio, Financial-Industry Firms are Omitted (two-digit GICS is Financial). All Variables are Winsorized at the Bottom and Top 1% Level. Values Significantly Different from data of Sample Firms in Table 3.3 at a Significance Level of 10%, 5%, and 1% are Marked \*, \*\*, and \*\*\* Respectively.

Table 3.5 reveals significant information on the subject of different practices in CGC. For market capitalization, it finds that the average MKCAP of firms with less than one-third of independent directors on the Board of Directors (13,068 million

Baht), the firms that have no chairman and CEO separation (8,085 million Baht), the firms that do not have audit committee (396 million Baht), remuneration committee (5,466 million Baht), nomination committee (5,890 million Baht), corporate governance committee (7,672 million Baht), and the firms that do not disclose their director's fees and individual remuneration for executives (2,141 million Baht) are significantly lower than the average MKCAP of the firms in the analysis period. However, it should be noted that the firms with corporate governance committee can only be found in significantly larger firms (90,765 million Baht) and some of those firms use the committee as a function to control corporate governance, a substitute for regular corporate governance policy (75,663 million Baht).

The mean of the book-to-market ratio, BOOK, is another aspect that shows significant differences. This study finds that the firms without chairman and CEO separation (1.39), the firms that do not have remuneration committee (1.26), nomination committee (1.24), and corporate governance committee (1.20) have significantly higher BOOK. Conversely, firms that have remuneration committee (1.03), nomination committee (1.03), corporate governance committee (0.76), firm that do not disclose their director's fees and individual remuneration for executives (0.55), and firms that do not have written corporate governance policy (0.73) have significantly lower BOOK. Liquidity measurements such as quick ratio (QUICK) and current ratio (CURRENT) are the last aspect that displays the variances. Significantly low liquidity is found in firms that have less than one-third portion of independent directors (CURRENT of 2.30), the firms that have no chairman and CEO separation (QUICK of 1.11), the firm that do not have audit committee (QUICK of 0.16 and CURRENT of 0.38), the firms that have remuneration committee (QUICK of 1.19 and CURRENT of 2.37), nomination committee (QUICK of 1.26), corporate governance committee (QUICK of 0.70 and CURRENT of 1.55), and the firms that do not have written corporate governance policy (QUICK of 1.17 and CURRENT of 2.28). The firms without remuneration committee (QUICK of 1.56 and CURRENT of 2.95) are the group of firms that the liquidity measures are found to be significantly high. Table 3.5 concludes that the firms that practice more CGCs are generally bigger firms with lower book-to-market ratio.

### 3.2.2 Ownership of Board Members

The ownership of board members is the second corporate governance measurement in this study. The rationale to measure the level of corporate governance with the ownership of board members emerges from the duty that BOD needs to protect the shareholders' benefits. Thus, without significant stake of ownership by the board members, it is questionable whether the board members are properly incentivized to protect the shareholders' interests. There is a related strand of literatures that consider this corporate board characteristic as an important corporate governance determinant (Bhagat and Bolton, 2008: 257-273; Bhagat, Carey and Elson, 1999: 885-920). This study looks into six groups of firms categorized by different degrees of board members' ownership. Both amount and percentage of BOD ownership are collected from publicly available annual reports and registration forms. When a firm does not publish the actual percentage, this study calculates the percentage as an amount of ownership divided by company market capitalization at the end of the year. On the other hand, the amount is calculated from the percentage of ownership multiplied by company market capitalization at the end of the year, if the firm does not publish actual percentage. The firms that publish neither the amount nor the percentage of ownership, less than 3% of the sample space, are excluded from this analysis.

**Table 3.6** Ownership of Board Members

Ownership	Group	Description
Amount	OAL	Amount of Board of directors' ownership is less than 30 percentile this year
	OAM	Amount of Board of directors' ownership is among 30 percentile and 70 percentile this year
	OAH	Amount of Board of directors' ownership is more than 70 percentile this year
Percentage	OPL	Percentage of Board of directors' ownership is less than 30 percentile this year

**Table 3.6** (Continued)

Ownership	Group	Description
	OPM	Percentage of Board of directors' ownership is among 30 percentile and 70 percentile this year
	OPH	Percentage of Board of directors' ownership is more than 70 percentile this year

**Note:** This Study Categorizes Firms into Six Groups Based on Different Concentration of the BOD Ownership. Both Amount and Percentage of BOD Ownership are Collected from Publicly Available Annual Reports and Registration Forms (Form 56-1) that can be found on the SET's Database. This Study Calculates the Percentage as an Amount of Ownership Divided by Company Market Capitalization at the end of the Year, When the Firms do not Publish Actual Percentage. On the Other Hand, the Amount is Calculated from Percentage of Ownership Multiplied by Company Market Capitalization at the End of the Year, When the Firms do not Publish Actual Percentage. The Firms that Publish Neither Amount nor Percentage of Ownership are Excluded from this Analysis.

Then, the amount and percentage of ownership are ranked on an annual basis. This study categorizes the firms into six groups based on their amount/percentage of ownership of board members. The firms that have amount (percentage) of board members ownership higher than 70 percentile are grouped as high ownership concentration (OAH for amount of ownership and OPH for percentage of ownership). Conversely, the firms that have amount/percentage of board members ownership lower than 30 percentile are grouped as low ownership concentration (OAL for amount of ownership and OPL for percentage of ownership). The rest of the firms are grouped as moderate ownership concentration (OAM for amount of ownership and OPM for percentage of ownership). Detailed information of the groups can also be found in Table 3.6.

Descriptive statistics of firms in all different ownership by BOD are shown in Table 3.7. The table reports mean, median, maximum, minimum, standard deviation, and number of observations of variables. The amounts and the percentages of ownership by BOD are displayed in three panels. Panel A, B and C illustrate the statistics for high, moderate, and low ownership concentration for both amount and percentage respectively. The means of fundamental information are compared with the mean in Table 3.3.

**Table 3.7** Descriptive Statistics Under Different Ownership of Board Members

Panel A: Amount of Board of directors' ownership is more than 70 percentile

	MKCAP	BOOK	TOBINQ	ROE	ROA	CURRENT	QUICK	RETURN
Mean	21,644 *	0.86 ***	1.45 ***	15.74 ***	8.32 ***	2.49	1.25	0.14
Median	4,165	0.69	1.19	14.13	6.78	1.47	0.63	0.13
Maximum	910,661	5.84	9.40	52.83	47.03	29.90	25.48	2.09
Minimum	352	0.08	0.31	0.29	0.05	0.14	0.00	-2.28
Std. Dev.	69,585	0.64	0.92	10.33	6.63	3.23	2.07	0.48
Observations	626	626	626	626	626	581	581	626

Panel B: Amount of Board of directors' ownership is among 30 percentile and 70 percentile

	MKCAP	BOOK	TOBINQ	ROE	ROA	CURRENT	QUICK	RETURN
Mean	13,771	1.27 ***	1.08 ***	12.28 ***	6.60 **	2.64	1.40	0.13
Median	1,296	1.08	0.96	10.70	5.70	1.68	0.86	0.12
Maximum	697,111	7.34	5.81	55.27	24.97	33.95	27.55	2.26
Minimum	100	0.14	0.16	0.08	0.04	0.05	0.00	-1.53
Std. Dev.	59,348	0.88	0.52	8.38	4.81	3.18	2.03	0.44
Observations	701	701	701	701	701	610	610	701

Panel C: Amount of Board of directors' ownership is less than 30 percentile

	MKCAP	BOOK	TOBINQ	ROE	ROA	CURRENT	QUICK	RETURN
Mean	17,742	1.24 ***	1.14 *	11.85 ***	6.39 ***	2.62	1.38	0.14
Median	2,126	1.02	0.98	10.24	5.20	1.66	0.88	0.14
Maximum	1,059,183	4.59	15.59	51.92	35.15	29.22	22.68	2.54
Minimum	43	0.05	0.30	0.03	0.00	0.18	0.01	-1.23
Std. Dev.	67,117	0.81	0.92	8.66	5.10	3.43	1.76	0.48
Observations	489	489	489	489	489	412	412	489

**Table 3.7 (Continued)**

Panel A: Percentage of Board of directors' ownership is more than 70 percentile

	MKCAP	BOOK	TOBINQ	ROE	ROA	CURRENT	QUICK	RETURN
Mean	5,280 ***	1.07 *	1.33 ***	14.24 **	8.07 ***	2.83	1.33	0.13
Median	1,715	0.84	1.10	12.00	6.31	1.66	0.65	0.12
Maximum	90,000	6.61	9.40	55.27	47.03	33.95	25.48	2.26
Minimum	126	0.08	0.31	0.08	0.04	0.14	0.00	-2.28
Std. Dev.	10,269	0.82	0.94	10.59	6.88	3.80	2.11	0.49
Observations	572	572	572	572	572	542	542	572

Panel B: Percentage of Board of directors' ownership is among 30 percentile and 70 percentile

	MKCAP	BOOK	TOBINQ	ROE	ROA	CURRENT	QUICK	RETURN
Mean	11,106 ***	1.16	1.13 ***	12.80	6.58 ***	2.48	1.35	0.13
Median	2,036	0.98	1.01	11.53	5.80	1.58	0.75	0.12
Maximum	300,354	7.34	4.57	53.77	28.00	31.87	27.55	1.63
Minimum	43	0.12	0.16	0.11	0.05	0.05	0.00	-1.53
Std. Dev.	33,937	0.81	0.52	8.29	4.60	2.94	2.06	0.43
Observations	727	727	727	727	727	635	635	727

Panel C: Percentage of Board of directors' ownership is less than 30 percentile

	MKCAP	BOOK	TOBINQ	ROE	ROA	CURRENT	QUICK	RETURN
Mean	40,202 ***	1.11	1.24	13.17	6.88	2.40	1.35	0.14
Median	3,941	0.89	1.05	12.07	5.95	1.59	0.91	0.15
Maximum	1,059,183	4.51	15.59	51.92	35.15	29.21	22.68	2.54
Minimum	141	0.05	0.30	0.03	0.00	0.18	0.01	-1.23
Std. Dev.	111,653	0.79	0.95	9.15	5.31	2.96	1.67	0.48
Observations	517	517	517	517	517	426	426	517

**Note:** This Table Reports Mean, Median, Maximum, Minimum, Standard Deviation, and Number of Observations of the Variables. The Sample Period is from 2006 to 2011. The Amounts and the Percentages of Ownership by BOD for Each Year are from the Publicly Available Annual Reports and Registration Forms (Form 56-1) of the Year from 2006 to 2011. The Definitions of Each Group can be Found in Table 3.6. This Table Reports the Descriptive Statistics in Panels. Ownerships by BOD are Separately Reported for the Amount of Ownership and the Percentage of Ownership. For Quick and Current Ratios, Financial-Industry Firms are Omitted (two-digit GICS is Financial). All

Variables are Winsorized at the Bottom and top 1% level. Values Significantly Different from data of Sample Firms at a Significance Level of 10%, 5%, and 1% are Marked \*, \*\*, and \*\*\* Respectively.

The descriptive statistics can be explained separately for both the amount and the percentage of ownership. For the categorization of firms by different amount of ownership, Table 3.7 shows that the average firm size in the OAH group is significantly larger than the average size of firms in the market (MKCAP of 21,644 million Baht). Average BOOK also divides firms into two groups. Specifically, the OAH firms have significantly lower BOOK (0.86), while the OAM group and the OAL group have meaningfully higher BOOK (1.27 and 1.24 respectively). The TOBINQ of OAH group is reported to be significantly higher (1.45), while the OAM group (1.08) and the OAL group (1.14) have significantly lower TOBINQ. The profitability measures such as ROE and ROA paint a picture that the OAH is the only group that performs better than the market's average. Specifically, the OAH group's ROE (15.74) and ROA (8.32) are significantly higher than common firms. In contrast, the ROE and ROA indicators are significantly lower than the market's average for the OAM group (ROE of 12.28 and ROA of 6.60) and the OAL group (ROE of 11.85 and ROA of 6.39). However, Table 3.7 shows no differences in the level of debt usage and the RETURN among the groups of firm with varying amount of BOD ownership.

For the groups of firms categorized by different percentage of ownership, Table 3.7 also shows that the average of the firms with OPH and OPM are significantly smaller than the average size of firms in the market. The OPH's and the OPM's MKCAP are 5,280 and 11,106 million Baht respectively. On the other hand, significantly high MKCAP (40,202 million Baht) is found in the OPL group. Average BOOK does reveal much difference among the firms with different percentage of BOD ownership. Specifically, the OPH group shows significantly low BOOK (1.07). However, for the OPM and the OPL groups, BOOK does not distinguish them from average firms in the market. TOBINQ of the OPH group is reported to be significantly high, 1.35. In contrast, the OPM group (1.13) has significantly lower TOBINQ. The profitability measures such as ROE and ROA seem to indicate that the OPH is the only group that performs better than the market's average with ROE of 14.24 and ROA 8.07, while the OPM and the OPL groups seem to be as profitable as

the market's average. Similarly, as with the study of characteristics among the groups of firms with different amount of ownership, Table 3.7 also shows no differences in the level of debt usage and the RETURN among the groups of firm with different percentages of director ownership. In sum, the initial findings show that the firms with significant amount of BOD ownership are larger firms with lower BOOK and have higher profitability. Basing on the percentage of BOD ownership, the OPH and the OPM firms are smaller, while the firms that belong in the OPL group are generally larger. It is also found that the OPH firms seem to perform significantly better.

### 3.2.3 Corporate Governance Score

The last corporate governance measurement in this study is the Thai Institute of Director (IOD)'s Corporate Governance Score. The usage of this secondary-data type is inspired by many literatures (Core et al., 2006: 655-687; Gompers et al., 2003: 107-155). The score compares all listed firms with the criteria established in the OECD's principles of corporate governance. Each listed firms is scored ranging from 0-100 points. However, each firms' level of corporate governance is published each year through IOD, the SET, and the SEC in grades ranging from "Good" to "Excellent". The range and description of each IOD corporate governance scores are displayed in Table 3.8.

**Table 3.8** Corporate Governance Scores

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

**Note:** The Survey Results from 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 Excellent, Very Good, Good, and Poor Groups.

The information regarding the IOD corporate governance scores is directly from the IOD’s website. Although the corporate governance grades can be divided into five groups, IOD only provides information of the firms that receive higher grades than “Fair”. Hence, the public information that investors could get each year is only for the top three corporate governance groups. Based on this information, this study classifies other listed firms that are currently traded in the same year but do not get their name on the IOD report under a new group labeled “Poor”. Therefore, the analyses in this study will focus on the four IOD corporate governance groups that are labeled as “Excellent”, “Very Good”, “Good”, and “Poor”. This study summarizes the descriptive statistics of each IOD corporate governance group in Table 3.9. The means of fundamental information are compared with the mean in Table 3.3.

**Table 3.9** 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

**Table 3.9** (Continued)

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	

**Note:** This Table Reports Mean, Median, Maximum, Minimum, Standard Deviation, and Number of Observations of the Variables. The Sample Period is from 2006 to 2011. Corporate Governance Scores for Each Year are from Corporate Governance Report of IOD that is Published Around the End of the Year from 2006 to 2011. Poor Corporate Governance Score Group Includes the Firm that their Names do not Appear in the Corporate Governance Report. Firms without Market Capitalization and Book-to-Market Ratio and Firms with Negative Return-on-Asset and Return -on-Equity are Excluded. For Quick and Current Ratio, Financial-Industry Firms are Omitted (two-digit GICS is Financial). All Variables are Winsorized at the Bottom and Top 1% Level. Values Significantly Different from Data of Sample Firms in Table 3.3 at a Significance Level of 10%, 5%, and 1% are Marked \*, \*\*, and \*\*\* Respectively.

The table shows that firms in each IOD Corporate Governance types exhibit different characteristics. The Excellent Corporate Governance firms, with their higher average MKCAP (99,015 million Baht) are significantly larger than the average size of the firms in this study. In other words, the data indicates that the firms with strong

corporate governance are larger firms. For other fundamental characteristics, the Excellent Corporate Governance firms have significantly lower BOOK (0.75), higher TOBINQ (1.34), higher average ROE (16.11), and are funded with significantly less debt (QUICK and CURRENT of 1.11 and 2.09 respectively). In term of equity return, the Excellent Corporate Governance firms generate higher average annual return (20% per year) compare to the market during analysis period (13% per year). Compare with other Corporate Governance grade groups, the Very Good Corporate Governance firms show closely related fundamental characteristics to the Excellent Corporate Governance firms. Table 3.9 shows that the Very Good Corporate Governance firms have significantly lower average BOOK (0.97), higher TOBINQ (1.32), higher ROE and ROA (14.38% and 7.66% respectively), with lower liquidity measure (QUICK of 1.22). In term of the equity return, the 17% annual return from the Very Good Corporate Governance firms might be less than what the Excellent Corporate Governance firms provide but the return is still significantly higher than the market's average return.

For the lower than the Very Good Corporate Governance grades groups, this study finds that the Good and the Poor Corporate Governance firms are relatively smaller compare to the average firms in the market. Their average MKCAP are 5,090 and 5,403 million Baht, respectively. The Good Corporate Governance firms exhibit the characteristic of higher BOOK (1.18) but not significantly higher than the market's average. However, they generate significantly lower ROA (7.44%). These characteristics are similarly exhibited by the Poor Corporate Governance firms. Table 3.9 reports that small size, high BOOK (1.32), low Tobin's Q (1.14), and poor operating performances, ROA of 6.35%, are found among the Poor Corporate Governance firms. The only difference between the Good and the Poor Corporate Governance firms is that the lower than average equity return for the Good Corporate Governance firms (9% per year) is not found among the Poor Corporate Governance firms.

#### **3.2.4 Corporate Governance and Industry Concentration**

The different industries each firm belongs to are examined in this study as they can be a factor that plays an important role when investors are looking at

corporate governance issue (Johnson et al., 2009: 4753). In this study, two-digit Global Industry Classification Standard (GICS) Codes are used for industry clustering.

Examining the relation between CGC and Industry, Table 3.10 describes the statistics for each industry and its firms' CGCs. The first row in Table 3.10, %Industry, shows the percentage of firms in the specific industry that exhibits CGCs. The second row, %GOV, shows the percentage of firms that exhibits specific CGCs, residing in that industry.

**Table 3.10** CGC and Industry

2-Digit GICS		IND (0)	IND (1)	Total	CCS (0)	CCS (1)	Total
Consumer Discretionary	%Industry	42.16	57.84	100	18.28	81.72	100
	%GOV	38.05	15.43	20.59	33.5	18.98	20.62
Consumer Staples	%Industry	26.47	73.53	100	11.27	88.73	100
	%GOV	13.17	10.81	11.35	11.68	11.65	11.65
Energy	%Industry	0	100	100	6.67	93.33	100
	%GOV	0	3.24	2.5	1.52	2.7	2.57
Financials	%Industry	17	83	100	8.84	91.16	100
	%GOV	16.83	24.3	22.59	17.77	23.23	22.62
Health Care	%Industry	32.31	67.69	100	9.52	90.48	100
	%GOV	5.12	3.17	3.62	3.05	3.67	3.6
Industrials	%Industry	13.64	86.36	100	8.55	91.45	100
	%GOV	8.05	15.07	13.47	10.15	13.77	13.36
Information Technology	%Industry	9.24	90.76	100	10.34	89.66	100
	%GOV	2.68	7.79	6.62	6.09	6.69	6.62
Materials	%Industry	22.26	77.74	100	11.47	88.53	100
	%GOV	15.37	15.86	15.75	16.24	15.89	15.93
Telecommunication Services	%Industry	3.7	96.3	100	0	100	100
	%GOV	0.24	1.87	1.5	0	1.54	1.37
Utilities	%Industry	5.56	94.44	100	0	100	100
	%GOV	0.49	2.45	2	0	1.87	1.66
Total	%Industry	22.82	77.18	100	11.25	88.75	100
	%GOV	100	100	100	100	100	100

**Table 3.10 (Continued)**

2-Digit GICS		AUD (0)	AUD (1)	Total	REM (0)	REM (1)	Total
Consumer Discretionary	%Industry	0	100	100	54.29	45.71	100
	%GOV	0	20.53	20.51	22.2	18.81	20.51
Consumer Staples	%Industry	0	100	100	59.8	40.2	100
	%GOV	0	11.6	11.59	13.82	9.35	11.59
Energy	%Industry	0	100	100	6.67	93.33	100
	%GOV	0	2.56	2.56	0.34	4.79	2.56
Financials	%Industry	0.5	99.5	100	38	62	100
	%GOV	100	22.64	22.73	17.21	28.28	22.73
Health Care	%Industry	0	100	100	31.75	68.25	100
	%GOV	0	3.58	3.58	2.27	4.9	3.58
Industrials	%Industry	0	100	100	50.21	49.79	100
	%GOV	0	13.59	13.58	13.59	13.57	13.58
Information Technology	%Industry	0	100	100	57.76	42.24	100
	%GOV	0	6.6	6.59	7.59	5.59	6.59
Materials	%Industry	0	100	100	69.53	30.47	100
	%GOV	0	15.87	15.85	21.97	9.69	15.85
Telecommunication Services	%Industry	0	100	100	4.17	95.83	100
	%GOV	0	1.37	1.36	0.11	2.62	1.36
Utilities	%Industry	0	100	100	27.59	72.41	100
	%GOV	0	1.65	1.65	0.91	2.39	1.65
Total	%Industry	0.11	99.89	100	50.17	49.83	100
	%GOV	100	100	100	100	100	100

2-Digit GICS		NOM (0)	NOM (1)	Total	CGC (0)	CGC (1)	Total
Consumer Discretionary	%Industry	58.73	41.27	100	95.29	4.71	100
	%GOV	21.09	19.74	20.51	22.16	8.17	20.51
Consumer Staples	%Industry	61.76	38.24	100	89.22	10.78	100
	%GOV	12.54	10.33	11.59	11.73	10.58	11.59
Energy	%Industry	13.33	86.67	100	28.89	71.11	100
	%GOV	0.6	5.17	2.56	0.84	15.38	2.56
Financials	%Industry	45	55	100	81.5	18.5	100
	%GOV	17.91	29.14	22.73	21.01	35.58	22.73
Health Care	%Industry	57.14	42.86	100	100	0	100
	%GOV	3.58	3.58	3.58	4.06	0	3.58

**Table 3.10** (Continued)

2-Digit GICS		NOM (0)	NOM (1)	Total	CGC (0)	CGC (1)	Total
Industrials	%Industry	54.39	45.61	100	92.47	7.53	100
	%GOV	12.94	14.44	13.58	14.24	8.65	13.58
Information Technology	%Industry	62.93	37.07	100	92.24	7.76	100
	%GOV	7.26	5.7	6.59	6.89	4.33	6.59
Materials	%Industry	79.93	20.07	100	96.42	3.58	100
	%GOV	22.19	7.42	15.85	17.33	4.81	15.85
Telecommunication Services	%Industry	20.83	79.17	100	16.67	83.33	100
	%GOV	0.5	2.52	1.36	0.26	9.62	1.36
Utilities	%Industry	48.28	51.72	100	79.31	20.69	100
	%GOV	1.39	1.99	1.65	1.48	2.88	1.65
Total	%Industry	57.1	42.9	100	88.18	11.82	100
	%GOV	100	100	100	100	100	100

2-Digit GICS		DIS (0)	DIS (1)	Total	CGP (0)	CGP (1)	Total
Consumer Discretionary	%Industry	1.62	98.38	100	1.62	98.38	100
	%GOV	54.55	20.38	20.59	33.33	20.46	20.59
Consumer Staples	%Industry	0	100	100	0	100	100
	%GOV	0	11.42	11.35	0	11.47	11.35
Energy	%Industry	0	100	100	0	100	100
	%GOV	0	2.52	2.5	0	2.53	2.5
Financials	%Industry	0	100	100	1.48	98.52	100
	%GOV	0	22.73	22.59	33.33	22.48	22.59
Health Care	%Industry	0	100	100	0	100	100
	%GOV	0	3.64	3.62	0	3.65	3.62
Industrials	%Industry	2.07	97.93	100	0.83	99.17	100
	%GOV	45.45	13.27	13.47	11.11	13.49	13.47
Information Technology	%Industry	0	100	100	0	100	100
	%GOV	0	6.66	6.62	0	6.69	6.62
Materials	%Industry	0	100	100	1.41	98.59	100
	%GOV	0	15.85	15.75	22.22	15.68	15.75
Telecommunication Services	%Industry	0	100	100	0	100	100
	%GOV	0	1.51	1.5	0	1.52	1.5
Utilities	%Industry	0	100	100	0	100	100
	%GOV	0	2.02	2	0	2.02	2

**Table 3.10** (Continued)

2-Digit GICS		DIS (0)	DIS (1)	Total	CGP (0)	CGP (1)	Total
Total	%Industry	0.61	99.39	100	1	99	100
	%GOV	100	100	100	100	100	100

**Note:** This Table Reports Number of Firms that Practice Each CGC in Firm-Year Data. The Firms are Classified into Industries Using the Two-Digit Global Industry Classification Standard (GICS) data. It Reports Ten Industries, Which are Consumer Discretionary, Consumer Staples, Energy, Finance, Health Care, Industrials, Information Technology, Materials, Telecommunication Services, and Utility. The First row, % Industry, Shows the Percentage of Firms in the Specific Industry that Exhibit Corporate Governance Characteristics .The Second Row, % GOV, Shows the Percentage of Firms that Exhibit Specific Corporate Governance Characteristic, Residing in that Industry.

Table 3.10 illustrates the percentages of firms in each industry in three columns for each CGC. The column Total shows the percentage of the firms that resides in each industry vis-à-vis the total number of the firms in all industries. It approximately shows that, during 2006 to 2011, 20% of all firms are Consumer Discretionary, 11% are Consumer Staples, 2.5% are Energy, 23% are Finance, 4% are Health Care, 13% are Industrials, 7% are Information Technology, 16% are Materials, 1.5% are Telecommunication Services and 2% are Utility. These proportions are used as the base line for the entire analysis. This study indicates the information of CGC in each industry in the columns CGC(0) and CGC(1), which the descriptions of CGCs can be found in Table 3.4.

For the IND characteristic, the firms in the Energy industry provide the highest percentage of IND adoption (100%), while the firms in Consumer Discretionary industry give the lowest percentage of IND (57.84%). For all industries, it shows that 77.18 % of the firms have at least one-third independent directors on the BOD. Among these groups of firms, the Finance, the Industrials and the Information Technology industry are the groups that have extra concentration of the firms practicing IND (defined by the industry having %GOV significantly higher than the

percentage of total firms that represent the industry). For example, the Financial industry firms are accounted for only 22% of the total firms but the industry is accounted for 24% of all the firms that practice IND. This study finds that there is not much extra concentration of the firms that practice CCS in the industries. In particular, the Telecommunication Services Utilities industry is the industry that has all the firms practicing Chairman and CEO separation. For the AUD characteristic, the result shows that almost all of the firms are practicing the characteristic and only less than 1% of the firms in the Financial industry do not have an audit committee. Therefore, there is no difference in concentration of the characteristic in any industries. As for the REM characteristic, the firms in Energy industry provide the highest percentage of REM adoption, 93.33% while the firms in Materials industry give the lowest percentage of REM, 30.47%. For other industries, it shows that 49.83% of all the firms have a remuneration committees put in place, with extra concentration in the Finance, Health Care, Energy and Telecommunication Service industries. For the NOM characteristic, the firms in the Energy industry provide the highest percentage of REM adoption at 86.67%, while the firms in the Materials industry have the lowest percentage of REM adoption at 20.07%. Among these groups of firms, Finance, Energy and Telecommunication Service industry have the highest extra concentration of the firms with a nomination committee. For the CGC characteristics, the highest percentage of CGC adoption among the firms is found in Telecommunication Services industry at 83.33% of the firms. In contrast, the firms in Materials industry give the low percentage of REM adoption at 3.58% and none of the firms in Health Care industry have corporate governance committee. Among these group of firms, Finance, Energy and Telecommunication Service industry are the groups that have extra concentration of the firms with corporate governance committee. As for the DIS characteristic, almost all of the firms, regardless of their industries, disclose director's fees and individual remuneration for executives. Only less than 3% of the firms in Consumer Discretionary and Industrials industries fail to oblige. Lastly for the CGP characteristic, almost all of the firms publish their corporate governance policies. Only less than 3% of the firms in Materials, Financials and Consumer Discretionary industries do not perform this task.

**Table 3.11** Ownership of Board Members and Industry**Panel A: Amount of Board of Directors' ownership**

2-Digit GICS		OAH	OAM	OAL	Total
Consumer Discretionary	Count	155	149	81	385
	%Industry	40.26	38.7	21.04	100
	%GOV	24.76	21.26	16.56	21.2
Consumer Staples	Count	89	73	45	207
	%Industry	43	35.27	21.74	100
	%GOV	14.22	10.41	9.2	11.4
Energy	Count	13	18	14	45
	%Industry	28.89	40	31.11	100
	%GOV	2.08	2.57	2.86	2.48
Financials	Count	134	159	115	408
	%Industry	32.84	38.97	28.19	100
	%GOV	21.41	22.68	23.52	22.47
Health Care	Count	31	28	9	68
	%Industry	45.59	41.18	13.24	100
	%GOV	4.95	3.99	1.84	3.74
Industrials	Count	69	95	72	236
	%Industry	29.24	40.25	30.51	100
	%GOV	11.02	13.55	14.72	13
Information Technology	Count	41	54	23	118
	%Industry	34.75	45.76	19.49	100
	%GOV	6.55	7.7	4.7	6.5
Materials	Count	90	100	91	281
	%Industry	32.03	35.59	32.38	100
	%GOV	14.38	14.27	18.61	15.47
Telecommunication Services	Count	3	8	21	32
	%Industry	9.38	25	65.63	100
	%GOV	0.48	1.14	4.29	1.76
Utilities	Count	1	17	18	36
	%Industry	2.78	47.22	50	100
	%GOV	0.16	2.43	3.68	1.98
Total	Count	626	701	489	1816
	%Industry	34.47	38.6	26.93	100
	%GOV	100	100	100	100

**Table 3.11 (Continued)****Panel B: Percentage of Board of Directors' ownership**

2-Digit GICS		OPH	OPM	OPL	Total
Consumer Discretionary	Count	133	176	76	385
	%Industry	34.55	45.71	19.74	100
	%GOV	23.25	24.21	14.7	21.2
Consumer Staples	Count	74	84	49	207
	%Industry	35.75	40.58	23.67	100
	%GOV	12.94	11.55	9.48	11.4
Energy	Count	5	12	28	45
	%Industry	11.11	26.67	62.22	100
	%GOV	0.87	1.65	5.42	2.48
Financials	Count	101	190	117	408
	%Industry	24.75	46.57	28.68	100
	%GOV	17.66	26.13	22.63	22.47
Health Care	Count	30	29	9	68
	%Industry	44.12	42.65	13.24	100
	%GOV	5.24	3.99	1.74	3.74
Industrials	Count	79	83	74	236
	%Industry	33.47	35.17	31.36	100
	%GOV	13.81	11.42	14.31	13
Information Technology	Count	54	45	19	118
	%Industry	45.76	38.14	16.1	100
	%GOV	9.44	6.19	3.68	6.5
Materials	Count	91	97	93	281
	%Industry	32.38	34.52	33.1	100
	%GOV	15.91	13.34	17.99	15.47
Telecommunication Services	Count	3	1	28	32
	%Industry	9.38	3.13	87.5	100
	%GOV	0.52	0.14	5.42	1.76
Utilities	Count	2	10	24	36
	%Industry	5.56	27.78	66.67	100
	%GOV	0.35	1.38	4.64	1.98
Total	Count	572	727	517	1816
	%Industry	31.5	40.03	28.47	100
	%GOV	100	100	100	100

**Note:** This Table Reports Number of Firms in Different Industries with Different Degrees of BOD Ownership in the Firm Year Data. The Firms are Classified

into Industries Using the 2-digit Global Industry Classification Standard (GICS) Data. It Reports Ten Industries that are Consumer Discretionary, Consumer Staples, Energy, Finance, Health Care, Industrials, Information Technology, Materials, Telecommunication Services, and Utility. Panel A Reports the Amount of BOD Ownership Characteristics by Industries, While Panel B Reports the Percentage of BOD Ownership Characteristics. The First Row for Each Panel, Count, Reports the Number of the Firms. The Second Row, % Industry, Shows the Percentage of the Firms in the Specific Industry that Exhibit Different Degrees of Board Members Ownership. The Third Row, % GOV, Shows the Percentage of the Firms that Exhibit Different Degrees of BOD Ownership, Residing in that Industry.

Table 3.11 illustrates the degrees of board members in the firms based on their industries. Panel A reports the amount of BOD ownership characteristics by industries, while Panel B reports the percentage of BOD ownership characteristics. Each Panel breaks degrees of ownership by BOD into three groups: high; moderate; and low degrees of ownership based on the definition that can be found in Table 6. Similar to Table 3.10, the first row for each industry group in Table 3.11, Count, shows the number of the firms in the industry that belong to each degree of BOD ownership groups. %Industry shows the percentage of firms in the specific industry that exhibit different degrees of BOD ownership. %GOV shows the percentage of firms that exhibit specific degrees of BOD ownership, residing in that industry.

For overviews of firms in different industries based on their amount of BOD ownership, Table 3.11 shows that 34.47% of the firms have amount of BOD ownership higher than the 70<sup>th</sup> percentile, 26.93% of the firms have amount of BOD ownership lower than the 30<sup>th</sup> percentile, and the rest, 38.6% are in between. The results of all industries, interestingly, reveal that the portions of firms with OAH, OAM, and OAL are each approximately closed to one-third. For OAH, Table 3.11 shows that Health Care (45.59%), Consumer Staples (43%), and Consumer Discretionary (40.26%) are the three industries with the highest portion of the firms belonging to the OAH group, while Energy (28.89%), Telecommunication Services (9.38%), and Utility (2.78%) have the lowest percentage of the firms inside the OAH

group. The Table finds that Consumer Discretionary industry has high concentration of the firms with OAH. 24.76% of the firms with OAH are in the industry, while only 21.2% of the sample firms are in the industry. On the other hand, Utilities (0.16%) Telecommunication Services (0.48%) and Energy (2.08) are the industries that have low concentration of the firms with OAH. These unbalances in concentrations are also reflected in the OAL group. Table 3.11 shows that Health Care (2.86%), Information Technology (4.7%) and Consumer Discretionary (16.56%) are among the industries with low concentration of OAL. The findings seem to be robust when examining the portions within each industry. The analysis turns to look at the percentage of the group of firms that their amounts of BOD ownership are lower than the 30<sup>th</sup> percentile. It is found that Telecommunication Services (65%), Utility (50%), and Materials (32.38%) are the top three industries with the highest portions of the firms inside the OAL group while Consumer Discretionary (21.04%), Information Technology (19.49%), and Health Care (13.24%) have the lowest percentages of the firms inside the OAL group.

For the percentage of BOD ownership, Table 3.11 Panel B shows that 31.50% of the firms have percentage of BOD ownership higher than the 70<sup>th</sup> percentile, 28.47% of the firms have percentage of BOD ownership lower than the 30<sup>th</sup> percentile, and the rest, 40.03% are in between. For OPH, it finds that Information Technology industry (9.44%), Health Care (5.24%), and Consumer Staples (12.94%) have the highest concentrations (they represent 6.5%, 3.74% and 11.40% of the total firms in all industries respectively). On the other hand, Utilities (0.35%) Telecommunication Services (0.52%) and Energy (0.87%) are the industries that have low concentrations of the firms with OPH. These concentrations help to explain the balance found in the OPL group. Table 3.11 shows that Health Care (1.74%), Information Technology (3.68%) and Consumer Discretionary (14.70%) are among the industries group that have low concentrations of the firms with OAL, while Telecommunication Services (5.42%), Utilities (4.64%), and Energy (5.42%) are the industries group that have high concentrations of the firms with OAL. This information is supported with the analysis of fractions within each industry. Table 3.11 shows that Information Technology (45.76%), Health Care (44.12%), and Consumer Staples (35.75%) are the top three industries with the highest portions of

the firms inside the OPH group, while Energy (11.11%), Telecommunication Services (9.38%), and Utility (5.56%) have the lowest percentage of the firms inside the OPH group. The breakdown of the percentage of the group of firms that their percentages of BOD ownership are less than the 30<sup>th</sup> percentile (OPL) within different industries is also conducted. It is found that Telecommunication Services (87.50%), Utility (66.67%), and Energy (62.22%) are the top three industries with the highest portions of the firms inside the OPL group, while Consumer Discretionary (19.74%), Information Technology (16.10%), and Health Care (13.24%) have the lowest percentages of the firms inside the OAL group.

Industry analysis has been done the same way for the IOD corporate governance measure in Table 3.12. In this Table, the groups of firms with different Corporate Governance Scores are separated by column ranging from Excellent, Very Good, Good, and Poor, where all the details for each group can be found in Table 3.8. Similar to Table 3.10 and Table 3.11, the first row for each industry group in Table 3.12, Count, shows the number of firms by Corporate Governance Score in each industry. %Industry shows the percentage of firms in the specific industry with different Corporate Governance Scores. %GOV shows the percentage of firms with specific Corporate Governance Score, residing in that industry.

In contrary to what one might expect that the percentage of each group in each Corporate Governance Score might be distributed evenly, Table 3.12 reports that the largest number of firms in this study is grouped in the Poor Corporate Governance (34.71%). The group with the lowest number of firms is, unfortunately the, Excellent Corporate Governance (9.03%), while the other groups, the Very Good and the Good Corporate Governance, account for about one-fourth of total number of firms each (26.35% and 29.91% respectively). The insight revealed by this Table seems to be that firms in Thailand have weak corporate governance practices.

**Table 3.12** Corporate Governance Scores and Industry

2-Digit GICS		Excellent	Very Good	Good	Poor	Total
Consumer Discretionary	Count	21	96	131	159	407
	%Industry	5.16	23.59	32.19	39.07	100.00
	%GOV	12.00	18.79	22.59	23.63	20.99
Consumer Staples	Count	7	65	79	63	214
	%Industry	3.27	30.37	36.92	29.44	100.00
	%GOV	4.00	12.72	13.62	9.36	11.04
Energy	Count	29	8	4	12	53
	%Industry	54.72	15.09	7.55	22.64	100.00
	%GOV	16.57	1.57	0.69	1.78	2.73
Financials	Count	65	137	111	133	446
	%Industry	14.57	30.72	24.89	29.82	100.00
	%GOV	37.14	26.81	19.14	19.76	23.00
Health Care	Count	1	9	34	29	73
	%Industry	1.37	12.33	46.58	39.73	100.00
	%GOV	0.57	1.76	5.86	4.31	3.76
Industrials	Count	19	69	82	90	260
	%Industry	7.31	26.54	31.54	34.62	100.00
	%GOV	10.86	13.50	14.14	13.37	13.41
Information Technology	Count	6	47	35	38	126
	%Industry	4.76	37.30	27.78	30.16	100.00
	%GOV	3.43	9.20	6.03	5.65	6.50
Materials	Count	9	56	100	127	292
	%Industry	3.08	19.18	34.25	43.49	100.00
	%GOV	5.14	10.96	17.24	18.87	15.06
Telecommunication Services	Count	7	12	1	12	32
	%Industry	21.88	37.50	3.13	37.50	100.00
	%GOV	4.00	2.35	0.17	1.78	1.65
Utilities	Count	11	12	3	10	36
	%Industry	30.56	33.33	8.33	27.78	100.00
	%GOV	6.29	2.35	0.52	1.49	1.86
Total	Count	175	511	580	673	1939
	%Industry	9.03	26.35	29.91	34.71	100.00
	%GOV	100.00	100.00	100.00	100.00	100.00

**Note:** This Table Reports Number of Firms that Receive Different Corporate Governance Scores from Corporate Governance Report of IOD in the Firm-Year Data. The Firms are Classified into Industries Using the GICS Data. It

Reports Ten Industries that are Consumer Discretionary, Consumer Staples, Energy, Finance, Health Care, Industrials, Information Technology, Materials, Telecommunication Services, and Utility. Count, Shows the Number of Firms from by Corporate Governance Score in Each Industry. % Industry Shows the Percentage of Firms in the Specific Industry with Different Corporate Governance Scores. %GOV Shows the Percentage of Firms with Specific Corporate Governance Score, Residing in that Industry

This study further investigates within each group with different Corporate Governance Scores. For the group with the best Corporate Governance level, the Excellent Corporate Governance, the highest population of firms is from the Financials industry (37.14%), while the second largest population is the members of the Energy industry (16.57%). Firms from the Health Care industry get the smallest share of the number in the Excellent Corporate Governance group. Interestingly, about one half of firms with Excellent Corporate Governance Score are from the Financials and Energy industries, while the two industries only represent 25.73% of the number of all firms. On the other hand, the Poor Corporate Governance group provides a very different picture. Consumer Discretionary (23.63%), Financials (19.76%), and Materials (18.87%) are the three groups that have the highest percentage of the firms with Poor Corporate Governance Score. When analyzing each industry the Energy (54.72%), Utilities (30.56%), and Telecommunication Services (21.88%) industries are the three industries that have highest percentage of the firms that belong to the Excellent Corporate Governance Score group, while Materials (43.49%), Health Care (39.73%), and Consumer Discretionary (39.07%) industries are the three sectors with the highest percentage of firms in the Poor Corporate Governance Score group.

**Table 3.13** Corporate Governance Scores in Financial Industry

4-Digit GICS		Excellent	Very Good	Good	Poor	Total
Capital Markets	%Industry	4.41	35.29	23.53	36.76	100.00
	%GOV	4.62	17.52	14.41	18.80	15.25
Commercial Banks	%Industry	69.39	28.57	0.00	2.04	100.00
	%GOV	52.31	10.22	0.00	0.75	10.99
Consumer Finance	%Industry	0.00	30.19	32.08	37.74	100.00
	%GOV	0.00	11.68	15.32	15.04	11.88
Diversified Financial Services	%Industry	0.00	0.00	80.00	20.00	100.00
	%GOV	0.00	0.00	3.60	0.75	1.12
Insurance	%Industry	13.70	28.77	20.55	36.99	100.00
	%GOV	15.38	15.33	13.51	20.30	16.37
Real Estate Management	%Industry	9.09	31.31	29.80	29.80	100.00
	%GOV	27.69	45.26	53.15	44.36	44.39
Total	%Industry	14.57	30.72	24.89	29.82	100.00
	%GOV	100.00	100.00	100.00	100.00	100.00

**Note:** This Table Reports Number of Firms that Receive Different Corporate Governance Scores from Corporate Governance Report IOD in the Firm-Year Data. The Industry for Each Firm Comes from Global Industry Classification Standard (GICS) Data. Within the Financial Industry, it Subcategorizes Six Sub-Sectors, Which are Capital Market, Commercial Banks, Consumer Finance, Diversified Financial Services, Insurance, and Real Estate Management. % Industry Shows the Percentage of Firms in the Specific Sector with Different Corporate Governance Scores. % GOV Shows the Percentage of the Firms with Specific Corporate Governance Score, Residing in that Sector

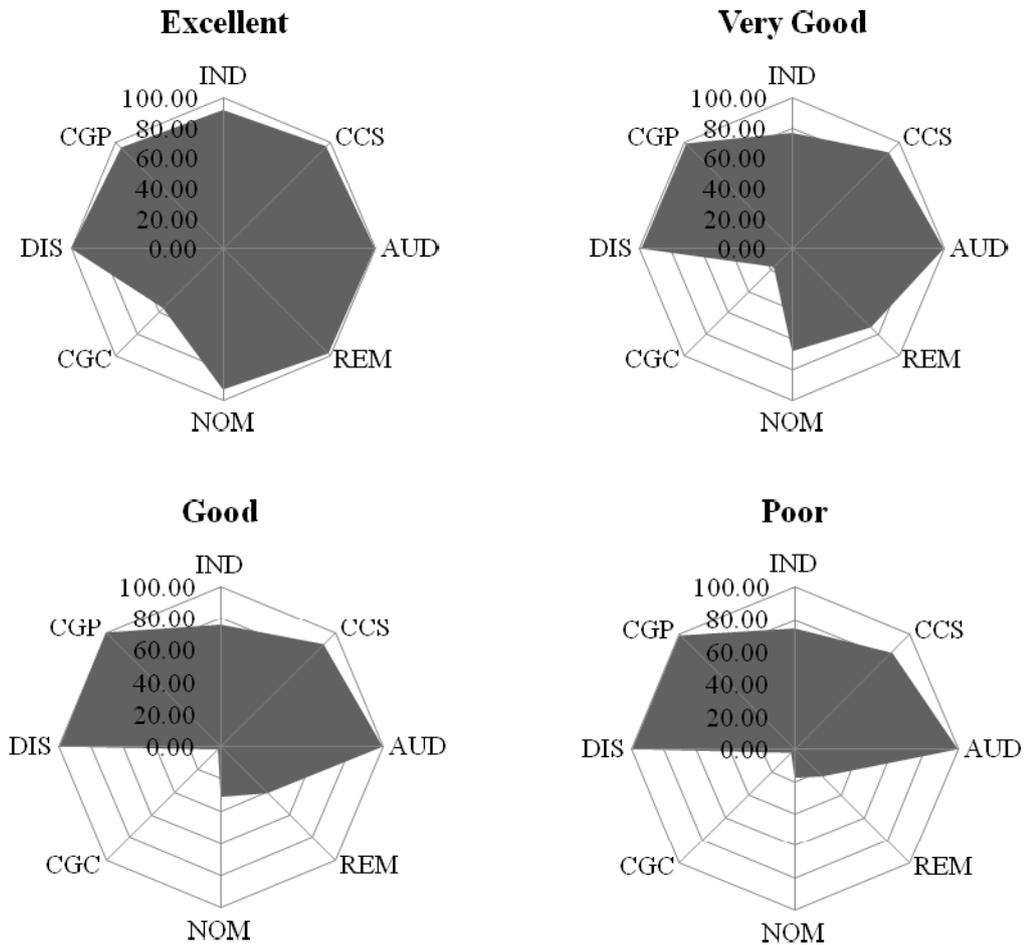
Table 3.13 focuses further on the information inside the Financials industry since the industry has a large percentage of firms belonging to both the Excellent and the Poor Corporate Governance Score groups. It shows that 52.31% of the firms with Excellent Corporate Governance Score are from the Commercial Banks sector. On the other hand, the largest number of firms with Poor Corporate Governance in the

finance industry can be found in the Insurance (20.30%) and Real Estate Management (44.36%) sectors. In conclusion, the Energy industry seems to have the best corporate governance practices among all industries in Thailand. In contrast, the Consumer Discretionary and Materials industries seem to exhibit signs of poor corporate governance practices. For the Financials industry, the Commercial Banks sector seems to have far better corporate governance practices than those Insurance and Real Estate Management firms do.

### **3.2.5 Relation between Corporate Governance Measurements**

The relations between the three types of corporate governance measurements are shown in this section. If a firm has strong or weak corporate governance by one measurement, perhaps this could imply that the firm also has strong/weak corporate governance by another measurement. The analysis of the relation between those two corporate governance measures should reveal that result. This study uses IOD Corporate Governance Scores as a baseline and compares between the CGCS and Ownership by BOD among the groups of firms with different IOD Corporate Governance Scores. For example, comparison of CGCs between the firms with weak and strong corporate governance is done by assuming that firms with strong corporate governance belong to the Excellent Corporate Governance Score group and firms in the Poor Corporate Governance group implies weak corporate governance.

Based on the eight CGCs, Figure 3.1 shows that the Excellent Corporate Governance Score group seems to exhibit almost all of the eight CGCs. In particular, more than 80% of the firms in this group have at least one-third independent directors on the BOD, Chairman and CEO separation, audit committee, remuneration committee, nomination committee, written corporate governance policy, and disclosure of director's fees and individual remuneration for executives. However, it is found that only 55% of the Excellent Corporate Governance firms have a corporate governance committee. These CGCs adoptions seem to decrease when looking into the lower level of IOD Corporate Governance Scores. For instance, Figure 3.1 shows that the Poor Corporate Governance group adopts only a few Characteristics and only 3% of the firms in the group have a corporate governance committee. In summary, it can be interpreted that CGCs are linked to Corporate Governance Scores.

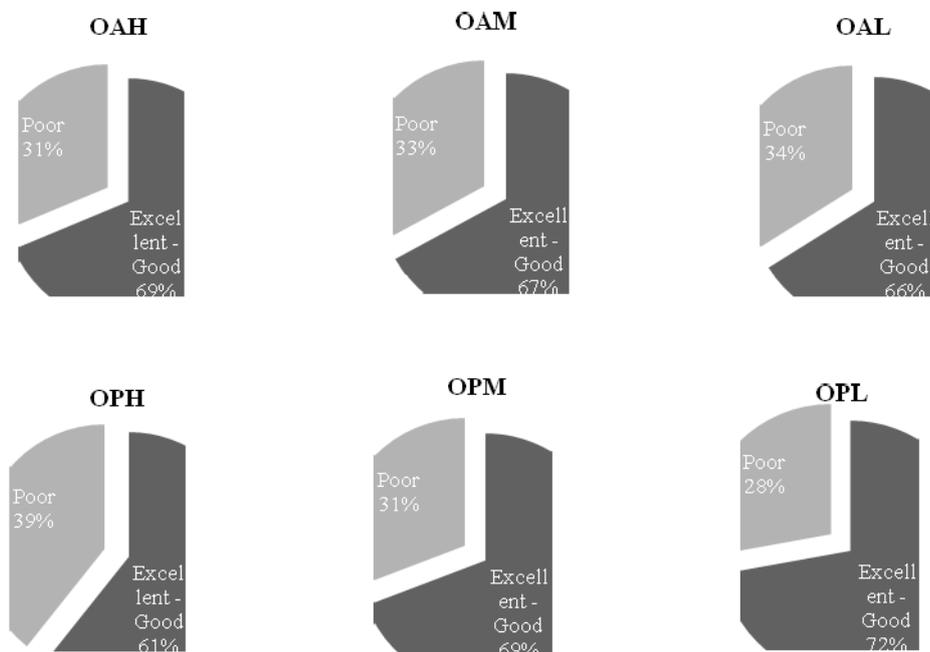


**Figure 3.1** CGCs and Corporate Governance Score

**Note:** Figure 3.1 Shows Percentage of Firms in Each Group of Corporate Governance Score that Adopt Each CGCs in Radar Charts. It Displays Four Charts for Firms in the Excellent, Very Good, Good, and Poor Corporate Governance Score Groups. Each Adoption is Floored at 0%, When all Firms in the Group do not Practice the CGC and is Capped and 100%, When all Firms in the Group Practice the CGC.

Based on amount and percentage of BOD Ownership, Figure 3.2 shows that the firms in the higher amount of BOD ownership group seems to exhibit lower proportion of firms with weak corporate governance. On the other hand, the firms in the higher percentage of BOD ownership group are likely to have weak corporate governance practice. Figure 3.2 also shows that 34% of the firms in the OAL group

received Poor Corporate Governance Score, while the percentage is reduced to 31% when the OAH group is examined. On the other hand, the firms with high percentage of BOD ownership show signs of weak corporate governance, as 39% of firms in the OPH group received Poor Corporate Governance Score, while the weak governance portion is decreased to only 28% in the OPL group. In summary, it could be interpreted that Ownership of Board Members is linked to Corporate Governance Score from this information.



**Figure 3.2** Ownership of Board Members and Corporate Governance Score

**Note:** Figure 3.2 Shows Percentage of Firms Belonging to Different Ownership of Board Members Grouped as Specified in Table 6 in Pie Chart. It Displays Six Charts for OAH, OAM, OAL, OPH, OPM, and OPL Where the Firms Inside those Groups are Classified into Two Groups, the Poor Corporate Governance Score Group and the Excellent-Good Corporate Governance Score group.

### 3.3 Methodology

In order to examine the effect of corporate governance on the equity return, this study employs three models which are Sharp-Lintner's CAPM (Lintner, 1965: 13-37; Sharpe, 1964: 425-442), Three factor model (Fama and French, 1993: 3-56), and three factors plus momentum model (Carhart, 1997: 57-82). Specifically, this study gathers the set of firms with information on their size, value, and their historical returns at the end of December, in order to rank all the firms based on the aforementioned aspects. Next, 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 value (BOOK) at the end of December each year (Low (L), Medium (M), and High (H)). In details, the firms are classified as High (H)/Low (L) book-to-market when their book-to-market ratios are 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-week cumulative return (Up (U), Neutral (N), and Down (D)). Using the 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 the firms in between are classified as Neutral (N).

After the grouping process, the six intersection portfolios, SL, SM, SH, BL, BM, and BH are created at the end of December for each year and these six intersection portfolios are used to create size and book-to-market factors (Fama and French, 1993). For the momentum factor model, this study follows existing literature to create four intersection portfolios, SU, SD, BU, and BD at the end of each month to capture the effect of past return (Carhart, 1997). SMB (small minus big) and HML (high minus low) are constructed in line with the Fama and French's three factors model. The SMB, in particular, is the simple average of the return on the small-firm portfolio minus the return on the big-firm portfolio as shown in equation (8).

$$SMB = ((SL - BL) + (SM - BM) + (SH - BH))/3 \quad (8)$$

Similarly, HML (high minus low) is the simple average of the return on the high book-to-market portfolio minus the return on the low book-to-market portfolio as shown in equation (9).

$$HML = ((SH - SL) + (BH - BL))/2 \quad (9)$$

For the momentum factor, the portfolio of UMD (up minus down) is created as described in equation (10) from an equal-weighted average return of firms with cumulative return in 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.

$$UMD = ((SU - SD) + (BU - BD))/2 \quad (10)$$

The dependent variables in this study are the return of corporate governance portfolios. The three groups of corporate governance portfolios are classified by the firms' corporate governance measures. All portfolios are formed each year at the end of December and the weekly average return of the firms in each group will be used as dependent variables. Specifically, the return of CGC portfolios are described in equation (11) and equation (12).

$$R_{p,t} = \sum_{i=1}^I w_i R_{i,t} \quad p \in \{IND_1, CCS_1, \dots, CGP_1\} \quad (11)$$

$$R_{p,t} = \sum_{i=1}^I w_i R_{i,t} \quad p \in \{IND_0, CCS_0, \dots, CGP_0\} \quad (12)$$

where

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

$w_i$  denotes the weight of equity  $i$  in month  $t$

The same process is done for Ownership of Board members groups and the detailed equation is shown in equation (13).

$$R_{p,t} = \sum_{i=1}^I w_i R_{i,t} \quad p \in \{OAL, OAM, OAH, OPL, OPM, OPH\} \quad (13)$$

For IOD Corporate Governance Score portfolios, equation (14) repeats the same process as with other corporate governance measurement by using the equal-weighted return of the firms within the same Corporate Governance Score group.

$$R_{p,t} = \sum_{i=1}^I w_i R_{i,t} \quad p \in \{Excellent, Very Good, Good, Poor\} \quad (14)$$

This study calculates the firm performance in term of excess return by using the weekly return from investment, replicating corporate governance portfolios with risk-free rate funding. All weekly return are captured by capital gain plus gross dividend per share of each week and the risk-free rate is from one-week cumulative return of the Bank of Thailand (BOT) one-day offered rate, while the weekly total return of Stock Exchange of Thailand Index (SET) is used for market representative. The relation between risks and return are captured by equation (15), (16) and (17).

$$R_{p,t} = \alpha_0 + \beta_1 RMRF_t + \varepsilon_t \quad (15)$$

$$R_{p,t} = \alpha_0 + \beta_1 RMRF_t + \beta_2 SMB_t + \beta_3 HML_t + \varepsilon_t \quad (16)$$

$$R_{p,t} = \alpha_0 + \beta_1 RMRF_t + \beta_2 SMB_t + \beta_3 HML_t + \beta_4 UMD_t + \varepsilon_t \quad (17)$$

where

- $R_{p,t}$  denotes the excess return of portfolio i in month t  
 $RMRF_t$  denotes the return of investing in market minus risk-free in month t  
 $SMB_t$  denotes a factor mimicking size effect or the return of small-firm portfolio minus big-firm portfolio in month t

- HML<sub>t</sub>** denotes a factor mimicking value effect or the return of high book-to-market portfolios minus low book-to-market portfolios in month t
- UMD<sub>t</sub>** denotes a factor mimicking momentum effect or the return of up portfolios minus down portfolios in month t

The summary statistics of independent variables is shown in Table 3.14. It shows that the market return is higher than the risk-free rate by around 3.17% per year (or 6 basis points per week) during the study period. SMB, HML, and UMD that are used to capture size, book-to-market, and momentum characteristics of listed stocks in SET show different returns and variances. Their average weekly returns (standard deviation) are -1 basis point (3.33%), 8 basis points (1.28%), and 39 basis points (2.06%), respectively. For the correlations among the factors, there are small correlations between each factor. The largest correlation is between RMRF and SMB at -0.61.

**Table 3.14** Descriptive Statistics of Performance Measurement Model

Factor Portfolio	RMRF	SMB	HML	UMD
Mean	0.0006	-0.0001	0.0008	0.0039
Median	0.0030	0.0000	0.0000	0.0040
Maximum	0.1070	0.0740	0.0650	0.1160
Minimum	-0.2670	-0.0400	-0.0470	-0.1220
SD	0.0333	0.0128	0.0134	0.0206
Observations	313	313	313	313

Cross-correlations	RMRF	SMB	HML	UMD
RMRF	1.00			
SMB	-0.61	1.00		
HML	-0.01	-0.35	1.00	
UMD	-0.41	0.24	-0.07	1.00

**Note:** This Table Reports Descriptive Statistics of Factors for Performance Measurement Model. RMRF is the Stock Exchange of Thailand Index (SET)

Return Over One-Week Cumulative Return of the Bank of Thailand (BOT) Offered Rate. SMB, HML, and UMD are Fama and French's factor-Replicating Portfolios for Size, Book-to-Market, and Momentum. SMB is the Simple Average of the Return on the Small-Firm Portfolio Minus the Return on the Big-Firm Portfolio. Similarly, 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, this Study Create the Portfolio of UMD (up minus down) as an Equal-Weighted Average of Firms in the Highest 30<sup>th</sup> Percentile of Forth-Eight-Week Return Lagged Minus the Return of the Firms within the Lowest 30<sup>th</sup> Percentile of Forth-Eight-Week Return Lagged. This Portfolio is Re-Formed Monthly. Regarding Descriptive Statistics, this following Table Reports Mean, Median, Maximum, Minimum, Standard Deviation, and Number of Observations of Independent Variables and their Correlation Coefficients.

The summary statistics of Corporate Governance Score portfolios are shown in Table 3.15. This study generates one more portfolio return, so-called "Hedge" portfolio, from the return of the Excellent Corporate Governance Score portfolio minus the return of the Poor Corporate Governance Score portfolio. That is to say, Hedge portfolio is representing a portfolio of buying long good corporate governance firms and selling short poor corporate governance firms. The interesting result from Table 3.15 is that the hedge portfolio shows the highest average weekly return of 19 basis points per week (10.37% per year). The descriptive statistics of other corporate governance score portfolios are shows in column Excellent, Very Good, Good, and Poor along with their correlations.

**Table 3.15** Descriptive Statistics of Corporate Governance Score Portfolios

<i>Factor Portfolio</i>	<i>HEDGE</i>	<i>EXCELLENT</i>	<i>VERYGOOD</i>	<i>GOOD</i>	<i>POOR</i>
<i>Mean</i>	0.0019	0.0014	0.0013	0.0012	-0.0006
<i>Median</i>	0.0015	0.0044	0.0044	0.0049	0.0024
<i>Maximum</i>	0.0558	0.0705	0.0646	0.0479	0.0602
<i>Minimum</i>	-0.0419	-0.2048	-0.2332	-0.1893	-0.2605
<i>Std. Dev.</i>	0.0168	0.0296	0.0270	0.0219	0.0266
<i>Observations</i>	313	313	313	313	313

<i>Correlation</i>	<i>MARKET</i>	<i>EXCELLENT</i>	<i>VERYGOOD</i>	<i>GOOD</i>	<i>POOR</i>
<i>MARKET</i>	1.00				
<i>EXCELLENT</i>	0.95	1.00			
<i>VERYGOOD</i>	0.89	0.89	1.00		
<i>GOOD</i>	0.78	0.80	0.90	1.00	
<i>POOR</i>	0.76	0.78	0.87	0.88	1.00

**Note:** Corporate Governance Portfolios are Formed Each Year at the 1<sup>st</sup> January of Each Year by Using the Equal-Weighted Performance of the Firms within the Same Corporate Governance Score Group, Based on the Corporate Governance Report from the IOD in the Same Year. The Corporate Governance Scores are “Excellent”, “Very Good”, and “Good”. The Rest of the Firms in the Same Period, Unclassified in the Three Groups are Scored as “Poor”, as the IOD does not Report the Firms with Lower Level of Corporate Governance Score. “Hedge” Portfolio is the Return on the Excellent Corporate Governance Score Portfolio Minus the Return on the Poor Corporate Governance Score Portfolio. This Table Reports Mean, Median, Maximum, Minimum, Standard Deviation, and Number of Observations of Dependent Variables and their Spearman Rank-Order Correlation Coefficients of Corporate Governance Score Portfolios.

On the subject of their correlations, the study uses Spearman rank-order covariance analysis to calculate the correlation. It is found that all Bonferroni multiple comparison adjusted probabilities are less than 0.01. Table 3.15 confirms that there are high correlations between each pair of Corporate Governance Score portfolios. It

shows that all Corporate Governance Score portfolios are significantly correlated with the market. The strong corporate governance portfolio seems to move closely with the market while the weak corporate governance portfolio tracks the market by lower degree. Their correlations to market are 0.95, 0.89, 0.78, and 0.76 for Excellent, Very Good, Good and Poor, respectively. High correlations between each Corporate Governance Score portfolios are expected and have been found since they are all formed from equities in the same market. The largest correlation is the correlation between the Very Good and the Good Corporate Governance portfolios that is 0.96. On the other hand, the lowest correlation, 0.78, comes from Excellent and Poor Corporate Governance portfolios.

## **CHAPTER 4**

### **FINDINGS AND RESULTS**

This section, separated into four parts, reports and describes the effects of corporate governance on equity returns. In the first part, the associated risks and returns that are related to investments in equities are explained by using portfolios of firms with different corporate governance practices. In particular, the first part reveals that investors are faced with different types of risks, hence unequal returns when they invest in the equities of firms with different level of corporate governance practices. The second part explains the analysis of corporate governance and risks during the financial crisis period as compared to normal economic climate. Next, this study further investigates for the effects that the firms might get when their Corporate Governance Scores are decreased or increased. At the end of this section, robustness test are performed to check returns that the investors receive from their investments. This robustness part reports the differences in abnormal returns from investing in the equities of firms with different level of corporate governance, while filter out more on the firms' specific industry returns. In summary, the four parts show that investors get different types of risks and unequal abnormal returns when they invest in stocks with different corporate governance classes.

#### **4.1 Analysis of Corporate Governance Portfolios**

One possible explanation for differences in equity returns is the difference in the risks of each Corporate Governance portfolio. This section reports the association between corporate governance measures and risks. The three sets of Corporate Governance measurements, which are Corporate Governance Characteristics (CGC), Ownership of Board Members, and Corporate Governance Scores, are used to create the portfolios with samples firms with varying degrees of their corporate governance

practices. The portfolios returns are then regressed with risk factors as per equation (15), (16), and (17). The results are separately reported for each corporate governance measurements, for CGCs in section 4.1.1, Ownership of Board Members in section 4.1.2, and IOD Corporate Governance Score in section 4.1.3.

#### **4.1.1 Corporate Governance Characteristics**

The relations between risks and portfolios with different CGCs are reported in Table 4.1. It reports estimated results from three regression equations of equal-weighted weekly returns for portfolios of firms in Panel A for equation (15), Panel B for equation (16), and Panel C for equation (17). The coefficients and standard errors of independent variables are reported in the first and the second row of each regression by using the acronyms COEF and SE, respectively.

The results can be explained for each CGC and each performance-attribution model respectively. Specifically, this study compares the degrees of coefficients, if significant, from portfolios with and without each CGC and reports the differences and similarities between each model.

For the firms that have at least one-third independence of BOD, Panel A shows that IND(1), 0.68, is more sensitive to market risk than IND(0), 0.54. This behavior is reported in Panel B and C for size, value, and momentum risk factors. Regarding the abnormal returns, it is found that intercept term of IND(0) seems to be the only significant result with the maximum of 12 basis points per week from Panel A. In other words, the firms that have at least one-third independence of BOD are comparatively more sensitive to risk factors than the firms that have less than one-third independence of BOD without generating any supplementary offsetting. A possible explanation is, perhaps, the fact that independent directors are hired by most of the big firms in Thailand and those big firms are more active than the smaller firms in the SET.

**Table 4.1** Results for Corporate Governance Characteristics

Panel A		ALPHA		RMRF				
IND (1)	COEF	-0.0002		0.6850	***			
	SE	0.0007		0.0463				
IND (0)	COEF	0.0012	**	0.5455	***			
	SE	0.0006		0.0252				
CCS (1)	COEF	0.0002		0.6516	***			
	SE	0.0006		0.0407				
CCS(0)	COEF	-0.0003		0.6412	***			
	SE	0.0009		0.0495				
AUD(1)	COEF	-0.0001		0.4362	***			
	SE	0.0004		0.0257				
AUD(0)	COEF	-0.0041		1.5367	***			
	SE	0.0050		0.1417				
REM(1)	COEF	0.0002		0.7334	***			
	SE	0.0006		0.0461				
REM(0)	COEF	0.0001		0.5758	***			
	SE	0.0007		0.0359				
NOM(1)	COEF	0.0002		0.7374	***			
	SE	0.0006		0.0446				
NOM(0)	COEF	0.0001		0.5930	***			
	SE	0.0007		0.0382				
CGC(1)	COEF	0.0005		0.9566	***			
	SE	0.0006		0.0515				
CGC(0)	COEF	0.0001		0.6125	***			
	SE	0.0006		0.0398				
DIS(1)	COEF	0.0001		0.6534	***			
	SE	0.0006		0.0407				
DIS(0)	COEF	-0.0002		0.7703	***			
	SE	0.0021		0.2192				
CGP(1)	COEF	0.0001		0.6524	***			
	SE	0.0006		0.0423				
CGP(0)	COEF	0.0007		0.8309	***			
	SE	0.0012		0.0656				

Panel B		ALPHA		RMRF		SMB		HML	
IND (1)	COEF	-0.0004		0.7878	***	0.4316	***	0.3235	***
	SE	0.0006		0.0485		0.0809		0.0539	
IND (0)	COEF	0.0009	*	0.6191	***	0.3071	***	0.2890	***
	SE	0.0005		0.0294		0.0701		0.0494	
CCS (1)	COEF	0.0000		0.7391	***	0.3670	***	0.2962	***
	SE	0.0005		0.0427		0.0747		0.0486	
CCS(0)	COEF	-0.0007		0.7911	***	0.6297	***	0.4385	***
	SE	0.0008		0.0546		0.1019		0.0763	

Table 4.1 (Continued)

Panel B		ALPHA	RMRF		SMB		HML		
AUD(1)	COEF	-0.0003	0.5013	***	0.2729	***	0.2113	***	
	SE	0.0004	0.0277		0.0490		0.0334		
AUD(0)	COEF	-0.0059	2.0975	***	2.3424	***	0.8191	**	
	SE	0.0049	0.2182		0.6117		0.3263		
REM(1)	COEF	0.0001	0.7909	***	0.2403	***	0.2260	***	
	SE	0.0006	0.0455		0.0732		0.0485		
REM(0)	COEF	-0.0002	0.7098	***	0.5629	***	0.3964	***	
	SE	0.0006	0.0415		0.0814		0.0557		
NOM(1)	COEF	0.0000	0.7875	***	0.2088	***	0.2160	***	
	SE	0.0005	0.0440		0.0715		0.0495		
NOM(0)	COEF	-0.0002	0.7230	***	0.5464	***	0.3854	***	
	SE	0.0006	0.0431		0.0814		0.0540		
CGC(1)	COEF	0.0004	0.9669	***	0.0421		0.0816		
	SE	0.0006	0.0491		0.0800		0.0548		
CGC(0)	COEF	-0.0002	0.7201	***	0.4518	***	0.3440	***	
	SE	0.0006	0.0429		0.0762		0.0514		
DIS(1)	COEF	-0.0001	0.7500	***	0.4050	***	0.3155	***	
	SE	0.0006	0.0431		0.0753		0.0500		
DIS(0)	COEF	-0.0003	0.7596	***	-0.0472		0.0616		
	SE	0.0021	0.1957		0.2653		0.1877		
CGP(1)	COEF	-0.0001	0.7486	***	0.4033	***	0.3159	***	
	SE	0.0006	0.0444		0.0759		0.0504		
CGP(0)	COEF	0.0006	0.9063	***	0.3191	**	0.1344		
	SE	0.0012	0.0632		0.1353		0.1167		

Panel C		ALPHA	RMRF		SMB		HML		UMD	
IND (1)	COEF	0.0002	0.7470	***	0.4131	***	0.2994	***	-0.1447	***
	SE	0.0006	0.0400		0.0725		0.0567		0.0423	
IND (0)	COEF	0.0010	0.6178	***	0.3066	***	0.2882	***	-0.0043	
	SE	0.0006	0.0281		0.0696		0.0513		0.0389	
CCS (1)	COEF	0.0004	0.7068	***	0.3524	***	0.2772	***	-0.1146	***
	SE	0.0005	0.0357		0.0682		0.0511		0.0391	
CCS(0)	COEF	-0.0002	0.7602	***	0.6157	***	0.4203	***	-0.1096	*
	SE	0.0008	0.0480		0.0988		0.0805		0.0589	
AUD(1)	COEF	0.0000	0.4810	***	0.2637	***	0.1993	***	-0.0719	***
	SE	0.0004	0.0237		0.0450		0.0352		0.0266	
AUD(0)	COEF	-0.0027	1.8975	***	2.2943	***	0.7653	**	-0.7295	**
	SE	0.0049	0.2016		0.5416		0.3349		0.2870	
REM(1)	COEF	0.0006	0.7551	***	0.2241	***	0.2050	***	-0.1267	***
	SE	0.0006	0.0376		0.0659		0.0522		0.0428	
REM(0)	COEF	0.0002	0.6832	***	0.5509	***	0.3807	***	-0.0943	**
	SE	0.0006	0.0365		0.0762		0.0580		0.0417	

**Table 4.1** (Continued)

Panel C		ALPHA	RMRF		SMB		HML		UMD	
NOM(1)	COEF	0.0005	0.7518	***	0.1926	***	0.1949	***	-0.1267	***
	SE	0.0005	0.0360		0.0637		0.0527		0.0417	
NOM(0)	COEF	0.0002	0.6951	***	0.5337	***	0.3689	***	-0.0990	**
	SE	0.0006	0.0378		0.0762		0.0566		0.0417	
CGC(1)	COEF	0.0009	0.9300	***	0.0253		0.0598		-0.1311	***
	SE	0.0006	0.0404		0.0722		0.0592		0.0486	
CGC(0)	COEF	0.0003	0.6893	***	0.4379	***	0.3258	***	-0.1093	***
	SE	0.0006	0.0366		0.0702		0.0540		0.0404	
DIS(1)	COEF	0.0003	0.7178	***	0.3905	***	0.2965	***	-0.1141	***
	SE	0.0006	0.0363		0.0686		0.0528		0.0403	
DIS(0)	COEF	0.0012	0.6631	***	-0.0909		0.0046		-0.3422	*
	SE	0.0020	0.1617		0.2740		0.2037		0.1859	
CGP(1)	COEF	0.0003	0.7160	***	0.3885	***	0.2966	***	-0.1155	***
	SE	0.0006	0.0372		0.0693		0.0533		0.0407	
CGP(0)	COEF	0.0010	0.8813	***	0.3078	**	0.1196		-0.0889	
	SE	0.0013	0.0615		0.1347		0.1155		0.0674	

**Note:** This Table Reports Estimated Results from the three Regression Equations of Equal-Weighted Weekly Returns for Portfolios of Firms Sorted by the Eight Corporate Governance Characteristics Separately in Panel A, B and C. Details of Each Row can be found in Table 3.4. The Portfolios are Reset every January by Reviewing Firms' End-of-the-Year Corporate Governance Characteristics. The Explanatory Variables are RMRF, SMB, HML, and UMD Depending on the Estimation Models. The Sample Period is from January 2006 through December 2011. Coefficients and Standard Errors are Reported in the First and the Second Row of Each Regression by Using the Acronyms COEF and SE, Respectively. Significant at the 10 Percent, 5 Percent, and 1 Percent Levels are Indicated by \*, \*\*, and \*\*\* Respectively.

On the outset, there is almost no differences in term of riskiness for portfolios with/without Chairman and CEO separation, 0.65 for CCS(1) and 0.64 for CCS(0). However, thorough analysis of the results in Panel B and C, finds that CCS(0) portfolio is riskier than CCS(1). The RMRF, SMB, and HML coefficients for CCS(0) are 0.79, 0.62, and 0.43, while for CCS(1), those coefficients are reduced to 0.73, 0.36, and 0.29, respectively. It can be concluded then that the firms with Chairman

and CEO-separation have relatively lower risks than the firms that have one person assuming both the roles of Chairman and CEO.

Next, obvious difference in risk characteristics is found between the portfolios of firms with and without an audit committee. The firms without an audit committee seem to be a riskier investment than the firms that have an audit committee in every performance-attribution models. It is found that the coefficient of AUD(1), 0.43, is dramatically lower than AUD(0), 1.53, and this trend is repeated for Panel B and C for size, value, and momentum risk factors.

The portfolio of firms that have a remuneration committee and the portfolio of firms that do not have a remuneration committee are then compared. Although Panel A in Table 4.1 shows that REM(1), 0.73, is more sensitive to market risk than REM(0), 0.57, the risk sensitivities report mix evidences in Panel B and C for size, value, and momentum risk factors. It is found that the RMRF, 0.75, and UMD coefficients, -0.12, for REM(1) are higher than those of REM(0), 0.69 and -0.09, respectively. However, the coefficients of SMB and HML of REM(1), 0.22 and 0.20, are lower than those of REM(0), 0.55 and 0.38, respectively. Hence, this study finds unclear difference in term of riskiness between firms that have and do not have a remuneration committee. This inconclusive evidence is repeated when the analysis is turned to the Nomination Committee Characteristic. Although Panel A shows that NOM(1), 0.73, is more sensitive to market risk than NOM(0), 0.59, the risk sensitivities report mix evidences in Panel B and C for size, value, and momentum risk factors. It is found that the RMRF, 0.75, and UMD coefficients, -0.12, for NOM(1) are higher than those of NOM(0), 0.68 and -0.09, respectively. However, coefficients of SMB and HML of NOM(1), 0.19 and 0.19, are lower than those of NOM(0), 0.53 and 0.36, respectively. In the other word, this study finds that there is no clear cut difference in term of riskiness between firms with a nomination committee and firms without one.

From the findings, it seems that the firms with a corporate governance committee are less exposed to different risk types compared to the firms without a corporate governance committee. To elaborate, while the riskiness of the portfolios are 0.95 for CGC(1) and 0.59 for CGC(0) in Panel A, the result shows that CGC(1) is only exposed to market and momentum risks in Panel C. When Panel C is examined,

it is found that the coefficients of SMB, and HML for CGC(1) are not significant, while those coefficients become significant for CGC(0), 0.43 and 0.32, respectively. Hence, the findings imply that although the firms with a corporate governance committee are more sensitive to market than the firms without a corporate governance committee, but they are not exposed to sizes and value risks like other firms.

Lastly, it is found that the market risk of the firms that disclose director's fees and individual remuneration for executives, 0.65, is lower than those of the firms that do not disclose director's fees and individual remuneration for executives, 0.77. However, Panel C reports that the coefficients of SMB, and HML for DIS(1) are significant at, 0.39 and 0.29, respectively, while those coefficients become insignificant for DIS(0). This synthesized evidence is repeated when the analysis is turned to the adoption of written corporate governance policy. Panel A shows that the market risk of the firms that disclose director's fees and individual remuneration for executives, 0.65, is lower than those of the firms that do not disclose director's fees and individual remuneration for executives, 0.83. Nevertheless, Panel C for DIS shows that coefficients of HML, and UMD for CGP(1) are significant, 0.29 and -0.11, respectively, while those coefficients become insignificant for DIS(0). Therefore, the analysis can only conclude that firms with and without the last two CGCs can be exposed to different types of risks.

#### **4.1.2 Ownership of Board Members**

Table 4.2 shows the estimated results of the same group of equations, which the dependent variable is the equal-weighted weekly returns from portfolios of firms with different amount and percentage of BOD ownership. The riskiness of each Corporate Governance portfolios, or the coefficients of RMRF, SMB, HML, and UMD factors are discussed in this section.

The results can be explained separately for amount and percentage of BOD's ownership. For the amount, Panel A of Table 4.2 shows that portfolios with different amount of BOD ownership are significantly sensitive to market, RMRF, and the coefficients of RMRF for OAH, OAM, and OAL are 0.67, 0.63, and 0.72, respectively. From this result, it can be interpreted that the firms with high amount of BOD ownership, OAH, seems to have lower sensitivity to the market than those with

low amount of BOD ownership, OAL. The difference in term of risk is repeated as reported in Panel B and C. The RMRF, SMB, HML, and UMD coefficients are reported as 0.69, 0.16, 0.18, and -0.09 for OAH, respectively, and are reported as 0.79, 0.49, 0.33, and -0.17 for OAL, respectively. With regard to abnormal returns, alpha, the result in this section only indicates the significant abnormal returns from investing in OAH portfolio. The alpha is significant in Panel B and Panel C with the maximum of about 13 basis points per week (6.99% per year). Hence, it is found that the portfolio of firms with low amount of BOD ownership is viewed as a riskier investment without additional abnormal returns for investors compared to the portfolio of firms with high amount of BOD ownership.

**Table 4.2** Results for Ownership of Board Members

Panel A		ALPHA		RMRF					
OAH	COEF	0.0010	*	0.6753	***				
	SE	0.0006		0.0397					
OAM	COEF	-0.0001		0.6319	***				
	SE	0.0006		0.0412					
OAL	COEF	-0.0004		0.7208	***				
	SE	0.0008		0.0586					
OPH	COEF	0.0004		0.6350	***				
	SE	0.0007		0.0449					
OPM	COEF	0.0004		0.6120	***				
	SE	0.0006		0.0370					
OPL	COEF	-0.0004		0.7893	***				
	SE	0.0007		0.0592					
Panel B		ALPHA		RMRF		SMB		HML	
OAH	COEF	0.0009		0.7179	***	0.1770	**	0.2027	***
	SE	0.0006		0.0410		0.0751		0.0545	
OAM	COEF	-0.0004		0.7343	***	0.4291	***	0.3527	***
	SE	0.0006		0.0439		0.0758		0.0512	
OAL	COEF	-0.0007		0.8439	***	0.5170	***	0.3688	***
	SE	0.0007		0.0602		0.1000		0.0606	
OPH	COEF	0.0001		0.7410	***	0.4448	***	0.3385	***
	SE	0.0006		0.0477		0.0814		0.0609	
OPM	COEF	0.0001		0.6998	***	0.3670	***	0.3331	***
	SE	0.0006		0.0399		0.0739		0.0493	
OPL	COEF	-0.0006		0.8662	***	0.3225	***	0.2584	***
	SE	0.0007		0.0589		0.0965		0.0581	

**Table 4.2** (Continued)

Panel C		ALPHA		RMRF		SMB		HML		UMD	
OAH	COEF	0.0013	**	0.6911	***	0.1648	**	0.1869	***	-0.0951	**
	SE	0.0006		0.0357		0.0709		0.0566		0.0398	
OAM	COEF	0.0001		0.7038	***	0.4153	***	0.3347	***	-0.1082	***
	SE	0.0006		0.0378		0.0707		0.0540		0.0399	
OAL	COEF	0.0001		0.7947	***	0.4948	***	0.3398	***	-0.1743	***
	SE	0.0007		0.0483		0.0892		0.0638		0.0531	
OPH	COEF	0.0006		0.7102	***	0.4309	***	0.3204	***	-0.1093	**
	SE	0.0006		0.0404		0.0754		0.0647		0.0463	
OPM	COEF	0.0005		0.6747	***	0.3557	***	0.3183	***	-0.0887	**
	SE	0.0006		0.0356		0.0712		0.0516		0.0368	
OPL	COEF	0.0002		0.8150	***	0.2993	***	0.2282	***	-0.1817	***
	SE	0.0006		0.0468		0.0838		0.0600		0.0505	

**Note:** This Table Reports Estimated Results from the three Regression Equations of Equal-Weighted Weekly Returns for Portfolios of Firms Sorted by Amount and Percentage of Ownership by Board Members Separately in Panel A, B and C. Details of Each Row can be found in Table 3.6. The Portfolios are Reset every January by Using the Firms' End-of-the-Year BOD Ownership Information in Form 56-1. The Explanatory Variables are RMRF, SMB, HML, and UMD Depending on the Estimation Models. The Sample Period is from January 2006 to December 2011. Coefficients and Standard Errors are Reported in the First and the Second Row of Each Regression by Using Acronyms COEF and SE Respectively. Significant at the 10 Percent, 5 Percent, and 1 Percent Levels are Indicated by \*, \*\*, and \*\*\* Respectively.

For the percentage of ownership by board members, Panel A of Table 4.2 shows that portfolios with different percentage of BOD ownership are significantly sensitive to market, RMRF, and the coefficients of RMRF for OPH, OPM, and OPL are 0.63, 0.61, and 0.78, respectively. From the findings, although it can be interpreted that the firms with low percentage of BOD ownership, OPL, seem to have higher sensitivity to the market than firms with other degrees of the percentage of BOD ownership, conclusion cannot be drawn that the firms with higher percentage of BOD ownership are the any less risky, as the risk of OPH, 0.63, is still higher than

those of OPM, 0.72. This pattern of risk is repeated and reported in Panel B and C. It is found that OPM generates the lowest risks from both equations, while OPH and OPL are ranked in the second and the last place, respectively. The RMRF, SMB, HML, and UMD coefficients are reported as 0.67, 0.35, 0.31, and -0.08 for OPM are recounted as 0.71, 0.43, 0.32, and -0.10 for OPH and 0.71, 0.43, 0.32, and -0.10 for OPL, respectively. In conclusion, it is found that the firms with moderate percentage of BOD ownership, ranking between the 30<sup>th</sup> to 70<sup>th</sup> percentile, is viewed as the least risky investment for investors compared to the firms with higher and lower percentage of BOD ownership.

#### 4.1.3 Corporate Governance Score

Table 4.3 shows the estimated results from equations (15), (16), and (17), which the dependent variable is the equal-weighted weekly returns from Hedge, Excellent, Very, Good, Good and Poor Corporate Governance portfolios' returns. The risk of each Corporate Governance portfolio is discussed here.

**Table 4.3** Results for Corporate Governance Scores

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	***

**Table 4.3** (Continued)

	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		
<hr/>									
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

**Note:** This Table Reports Estimated Results from the three Regression Equations of Equal-Weight Weekly Returns for Portfolios of Firms Sorted by Corporate Governance Scores in Panel A, B and C. The Hedge Row Contains the Results of Buying the Excellent Corporate Governance Portfolio and Selling Short the Poor Corporate Governance portfolio. The Portfolios are Reset every January by Using the Firms' Corporate Governance Scores in the Same Year. The Explanatory Variables are RMRF, SMB, HML, and UMD Depending on the Estimation Models. The Sample Period is from January 2006 to December 2011. Coefficients and Standard Errors are Reported in the First and the Second Row of Each Performance-Attribution Regression. Significant at the 10 Percent, 5 Percent, and 1 Percent Levels are Indicated by \*, \*\*, and \*\*\* Respectively.

The interpretation starts from the Hedge row that contains the results of buying the Excellent Corporate Governance portfolio and selling short the Poor Corporate Governance portfolio. Significant coefficients of RMRF, SMB, HML, and UMD are found from Panel A to Panel C. This implies that there could be a significant difference in term of risks between the strong and the weak corporate governance portfolios. In details, Panel A of Table 4.3 shows that all Corporate

Governance portfolios are significantly sensitive to the market risk factor, RMRF, and the firms with strong corporate governance practice seem to have higher sensitivity to the market than those with weak corporate governance do. From this result, Excellent Corporate Governance Score portfolio is considered as the portfolio that is more sensitive to market movement than other portfolios with the coefficient of RMRF of 0.84. The Very Good Corporate Governance Score portfolio, 0.74, comes in the second place, while the evidence shows that the Good, 0.56, and the Poor Corporate Governance Score portfolios, 0.66, are less sensitive to the market risk factor. In addition, abnormal return from investing in Hedge portfolio seems to be significant with the amount of about 18 basis points per week or around 9.8% per year. It comes from the fact that Excellent Corporate Governance portfolio generates positive abnormal return while Poor Corporate Governance portfolio generates negative abnormal return.

However, Panel B and C of Table 4.3 that display sensitivity regarding other risk factors such as size, value, and momentum reveal a different story. In particular, it is found that the portfolios of firms with different Corporate Governance Scores are faced with different types of risks. Start 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 risk, 0.84. Very Good Corporate Governance Score portfolio is pretty similar as it is found that its risk exposure to the size factor is not significant. In contrast, all risk factors significantly affect weaker corporate governance portfolios. Specifically, the coefficients of RMRF, SMB and HML for Good Corporate Governance Score portfolio are 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 is again confirmed when Panel C is examined. It is found that the Excellent Corporate Governance portfolio is still the only portfolio that does not bear other risks except for the market risk, 0.85. The Very Good Corporate Governance Score portfolio is found to have significant coefficients for RMRF, 0.74, HML, 0.21, and UMD, -0.10, while the Good Corporate Governance Score portfolio shows no significance finding in the UMD factor. However, the Good Corporate Governance Score portfolio's other coefficients for RMRF, SMB, and HML are still significantly higher than zero, 0.64, 0.41, and 0.30, respectively. On the

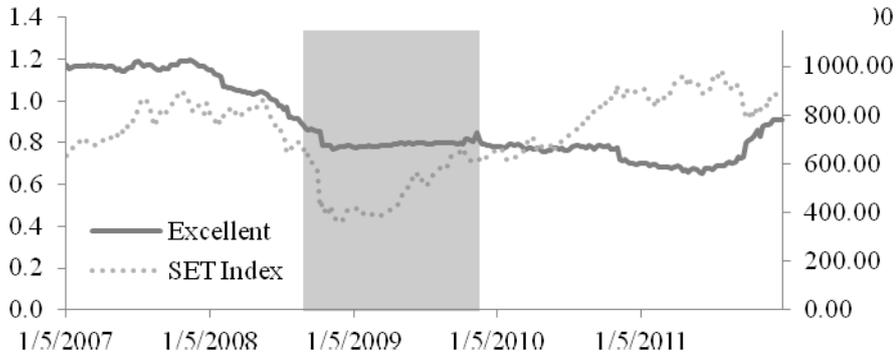
other hand, all risk factors significantly affect the Poor Corporate Governance portfolio. Specifically, the coefficients of RMRF, SMB, HML, and UMD for the Poor Corporate Governance Score portfolio are 0.77, 0.65, and 0.33, respectively. Regarding their alphas, it is found that abnormal returns from Hedge portfolio are shown in Panel A, 18 basis points, and B, 21 basis points, but it is found to be insignificant in Panel C. This could be interpreted that the difference in returns between Excellent and Poor corporate governance Score portfolios can be explained with equation (17).

In sum, this section exhibits different aspects of risk-returns criteria. The fact that a firm is stronger in corporate governance does not necessary mean that its risk exposure to the market is lower. However, the strong governance helps reduce other risk exposures such as size, value, and momentum.

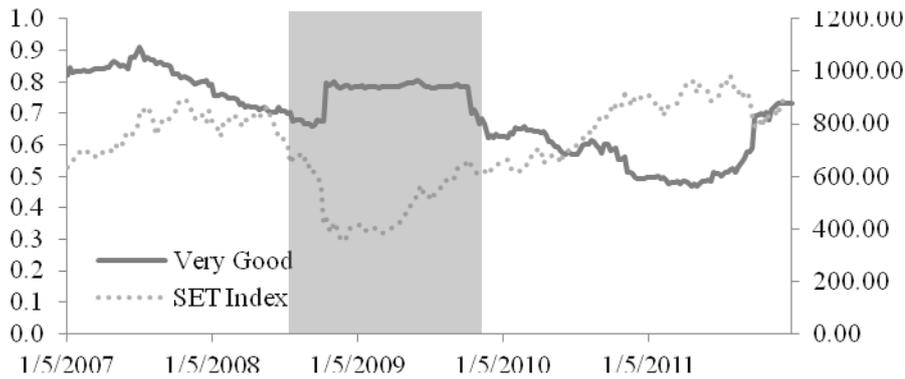
## **4.2 Corporate Governance During Crisis Period**

Although financial crisis affects all firms across the board, there could be firms that are affected by the crisis more or less than other firms. In this section, the risks of firms with different level of corporate governance are compared. Specifically, if corporate governance is a factor that is makes any differences during the time of crisis, the firms with stronger corporate governance should be a better investment compare to the firms that practice weaker corporate governance. This study begins by displaying the evidence of market risk factor for different corporate governance portfolios as time changes over the period of crisis. Instead of finding the estimated result from a whole sample period, this study utilizes a rolling time-series regression for corporate governance portfolios and market returns. Specifically, the coefficient for market factor in equation (15) is gradually estimated by using fifty-two-week historical returns for each week. This study then plots the results for each IOD Corporate Governance portfolios and SET index in Figure 4.1.

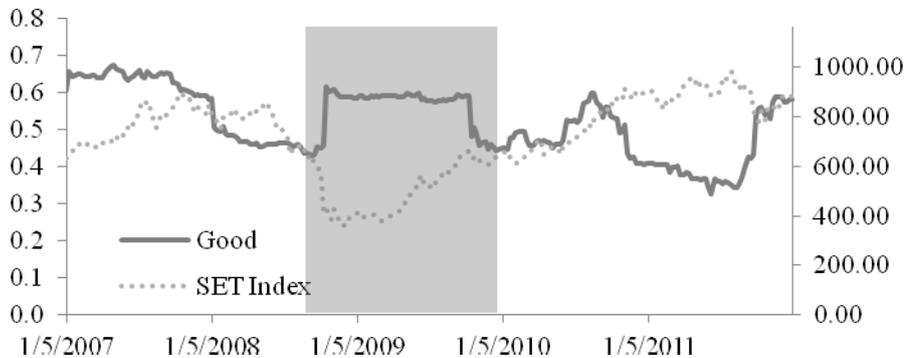
The beta coefficient is ranged between 0.65 and 1.20 during 2007 to 2011. This sensitivity is moving in the range of 0.77 and 0.86 during crisis the period, 15 September 2008 to 15 April 2009.



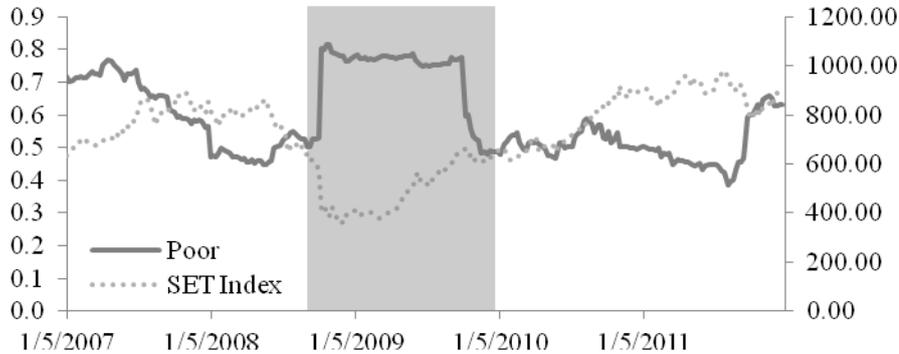
For Very Good Corporate Governance Portfolios, the beta move from average of 0.65 in 2007 to 2010 to the peak of 0.80 during the crisis period, 15 September 2008 to 15 April 2009.



For Good Corporate Governance Portfolios, the beta move from average of 0.45 in 2007 to 2010 to the peak of 0.62 during the crisis period, 15 September 2008 to 15 April 2009.



For Poor Corporate Governance Portfolios, the beta move from average of 0.45 in 2007 to 2010 to the peak of 0.82 during the crisis period, 15 September 2008 to 15 April 2009.



**Figure 4.1** Rolling Beta of Corporate Governance Portfolios

**Note:** Figure 4.1 Reports Time-Series Data of, Beta, Slope between Market Returns and Returns of Corporate Governance Score portfolio and the SET Index, and the SET Index itself is Pictured in Order to give a Picture of Movement in Beta when the Market is Facing Crisis Period. The Beta is Calculated from Past Fifty-Two-Week Rolling. Thus, the Horizontal Period in this Figure is During January 2007 to December 2011. The Left Vertical Axis Measures the Degree of Beta and the Right Vertical Axis Measure

From Figure 4.1, it seems that the estimated results from the Sharp-Lintner's CAPM are moving over time for all portfolios. However, the risk factors are shifting during the period of declining market except for the Excellent Corporate Governance portfolio. Since the sample period allows this study to classify Lehman Brothers issue during 15 September 2008 to 15 April 2009 to be used as the sample crisis period, the results from the figure can be explained as follows. For the Excellent Corporate Governance Score portfolio, the beta coefficient is ranging between 0.65 and 1.20 during 2007 to 2011 and it is found that this sensitivity is moving in the range of 0.77 and 0.86 during the crisis period. In contrast, the market coefficients of all other portfolios are shifting upward during crisis period. For example, the coefficient for the Very Good Corporate Governance Score portfolio increases from around 0.65 to the peak of 0.80 during crisis period. The stronger degrees of the changes in market risk sensitivity are found among the firms with weaker levels of corporate governance. In

details, the coefficients for the Good and the Poor Corporate Governance Score portfolios increase from around 0.45 to the maximum of 0.62 and 0.86, respectively during the crisis period. In summary, the study finds the evidence of increasing risks for the firms with corporate governance level weaker than the Excellent Corporate Governance firms.

This 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 crisis period. Therefore, the adapted versions of equation (15), (16), and (17) are created to capture those differences in risks and returns. Firstly, this study finds the evidence of risk factors shifting by using the following equations, in order to report the risk coefficients during the crisis.

$$R_{p,t} = \alpha_0 + \beta_1 RMRF_t + \beta_2 \delta_c RMRF_t + a_t \quad (18)$$

$$R_{p,t} = \alpha_0 + \beta_1 RMRF_t + \beta_2 SMB_t + \beta_3 HML_t + \beta_4 \delta_c RMRF_t + \beta_5 \delta_c SMB_t + \beta_6 \delta_c HML_t + a_t \quad (19)$$

$$R_{p,t} = \alpha_0 + \beta_1 RMRF_t + \beta_2 SMB_t + \beta_3 HML_t + \beta_4 UMD_t + \beta_5 \delta_c RMRF_t + \beta_6 \delta_c SMB_t + \beta_7 \delta_c HML_t + \beta_8 \delta_c UMD_t + a_t \quad (20)$$

where

$\delta_c$	is the dummy variable that equal to 1 during crisis, and 0 otherwise
$R_{p,t}$	is the excess return of portfolio i in month t
$RMRF_t$	is the return of investing in market minus risk-free rate 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 returns of high book-to-market portfolios minus low book-to-market portfolios in month t
$UMD_t$	is a factor mimicking momentum effect or the returns of up portfolios minus down portfolios in month t

Table 4.4 shows the results of estimating (18), (19), and (20), which the dependent variable is the weekly returns from Hedge, Excellent, Very, Good, Good and Poor Corporate Governance portfolios' returns. The comparison of the riskiness between the entire period, Table 4.3, and the crisis period for each Corporate Governance portfolio is the focused result in this section.

**Table 4.4** Corporate Governance Portfolios and Risks on Crisis

Panel A		ALPHA		$\delta_1 RMRP_t$		
HEDGE	COEF	0.0014	*	-0.3264	***	
	SE	0.0008		0.1130		
EXCELLENT	COEF	0.0008	*	-0.0614		
	SE	0.0005		0.0423		
VERYGOOD	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		$\delta_1 RMRP_t$	$\delta_2 SME_t$	$\delta_3 HML_t$
HEDGE	COEF	0.0015	**	-0.4817	***	-0.124099
	SE	0.0007		0.1425		0.254062
EXCELLENT	COEF	0.0008		-0.0572		0.023574
	SE	0.0005		0.0738		0.198399
VERYGOOD	COEF	0.0008		0.1704	**	0.092319
	SE	0.0006		0.0859		0.220064
GOOD	COEF	0.0008		0.1811	*	0.038076
	SE	0.0006		0.0991		0.237842
POOR	COEF	-0.0008		0.4247	***	0.148582
	SE	0.0007		0.1421		0.324115

Panel C		ALPHA		$\delta_1 RMRP_t$	$\delta_2 SME_t$	$\delta_3 HML_t$	$\delta_4 UMD_t$
HEDGE	COEF	0.0012		-0.5407	***	-0.2024	0.0797
	SE	0.0007		0.2059		0.3106	0.2191
EXCELLENT	COEF	0.0005		-0.1610	***	-0.1010	0.0347
	SE	0.0005		0.0618		0.1453	0.1484
VERYGOOD	COEF	0.0009		0.0443		-0.0447	0.0379
	SE	0.0006		0.1215		0.1824	0.1487
GOOD	COEF	0.0005		0.1221		-0.0397	-0.1157
	SE	0.0006		0.1289		0.2164	0.1598
POOR	COEF	-0.0007	***	0.3800	***	0.1025	***
	SE	0.0007		0.1767		0.2786	0.1935

**Note:** This Table Reports the Estimated Results from the three Regression Equations of Equal-Weighted Weekly Returns for Portfolios of Firms Sorted by Corporate Governance Score, Separately for the Following Equations in Panel A, B and C, Respectively.

$$R_{i,t} = \alpha_0 + \beta_1 RMRP_{i,t} + \beta_2 \delta_1 RMRP_{i,t} + \varepsilon_{i,t} \quad (18)$$

$$R_{i,t} = \alpha_0 + \beta_1 RMRP_{i,t} + \beta_2 SME_{i,t} + \beta_3 HML_{i,t} + \beta_4 \delta_1 RMRP_{i,t} + \beta_5 \delta_2 SME_{i,t} + \beta_6 \delta_3 HML_{i,t} \quad (19)$$

$$R_{i,t} = \alpha_0 + \beta_1 RMRP_{i,t} + \beta_2 SME_{i,t} + \beta_3 HML_{i,t} + \beta_4 UMD_{i,t} + \beta_5 \delta_1 RMRP_{i,t} + \beta_6 \delta_2 SME_{i,t} + \beta_7 \delta_3 HML_{i,t} + \beta_8 \delta_4 UMD_{i,t} + \varepsilon_{i,t} \quad (20)$$

In Fact, it does not Repeat to Report the Coefficients of Factors that Already are Explained by Others Table but the Coefficients of Factors that Incorporate the Crisis Effect only. The Crisis Period is Captured by the Crisis Variable that Takes the Value of 1 During Crisis Period and 0 Otherwise. The Hedge Row Contains the Results of Buying the Excellent Corporate Governance Portfolio and Selling Short the Poor Corporate Governance portfolio. The Portfolios are Reset every January by Using the Firms' Corporate Governance Score at the end of the Same Year. Significant at the 10 Percent, 5 Percent, and 1 Percent Levels are Indicated by \*, \*\*, and \*\*\* Respectively.

The interpretation is started from the Hedge row that contains the results of buying the Excellent Corporate Governance portfolio and selling short the Poor Corporate Governance portfolio. It is found that intercept coefficients are significant in Panel A and B with the degree of 14 and 15 basis points respectively. This interpretation could be such that strong corporate governance firms seem to have better equity returns compare to those of weak corporate governance firms during crisis period. However, the result is changed in Panel C. The result does not suggest to us that this difference in returns is not persisted when equation (20) is used as a performance measurement model. In particular, significant negative abnormal return, -7 basis points can be found for the Poor Corporate Governance portfolio.

Regarding the investment risks, this study also find that there are, during crisis period, significant differences in risk factors between the strong and the weak corporate governance portfolios. Starting from Panel A, it is found that the coefficient of factors that is used for capturing the change in systematic risk,  $\delta_{\epsilon}RMRF$ , is significant for the Hedge portfolio, the Very Good, and the Poor Corporate Governance Score portfolios. It is found that the market risk for the Hedge portfolio is decreased by -0.32 during crisis period. In fact, it comes from decreasing in the beta of the Excellent Corporate Governance portfolio and increasing in the beta of the Poor Corporate Governance portfolio. In addition, Panel B shows that market sensitivity of every portfolio except the Excellent Corporate Governance Score portfolio is increasing during crisis. In details, this study shows that the beta of the Very good, the Good, and the Poor Corporate Governance portfolios could increase by 0.17, 0.18,

and 0.42, respectively. In other words, the degree of change seems to be increasing with weaker Corporate Governance Scores. Panel C also provides us with interesting evidence. This table shows that the sensitivities of the Excellent Corporate Governance Score portfolio are decreased for market coefficient, -0.16, and momentum sensitivities, -0.16. Sensitivities of the portfolios that their Corporate Governance Score are lower than Excellent tend to increase but mostly insignificant. In contrast, it is found that the coefficients of the Poor Corporate Governance portfolio are changing up and down. Precisely, RMRF and SMB factors are increased by 0.38 and 0.10, respectively, while the HML and UMD factors are decreasing -0.04 and -0.02. In sum, this section shows that the risks and returns of corporate governance portfolios are mostly changed during crisis period. The returns of strong corporate governance firms are not affected by crisis, while weak corporate governance firms are facing with negative abnormal returns. The risk sensitivities of strong corporate governance firms seem to decrease while risk sensitivities of weak corporate governance firms increase at the time of crisis.

Since the effect of crisis to the firms in different corporate governance portfolios might not be the same, this study performs another model that captures this effect of crisis variable in equation (21), (22), and (23).

$$R_{i,t} = \alpha_0 + \beta_1 RMRF_t + \beta_2 \delta_c + a_t \quad (21)$$

$$R_{i,t} = \alpha_0 + \beta_1 RMRF_t + \beta_2 SMB_t + \beta_3 HML_t + \beta_4 \delta_c + a_t \quad (22)$$

$$R_{i,t} = \alpha_0 + \beta_1 RMRF_t + \beta_2 SMB_t + \beta_3 HML_t + \beta_4 UMD_t + \beta_5 \delta_c + a_t \quad (23)$$

These set of equations differ from the previous set 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 crisis variable is significant for any corporate governance portfolios, then it can be interpreted that there exists a difference between investing in normal period and investing in the crisis period for the portfolio of firms in that Corporate Governance group. Table 4.5 shows the results of estimating (21),

(22), and (23), which the dependent variable is the weekly returns from the Hedge, the Excellent, the Very Good, the Good and the Poor Corporate Governance portfolios. The comparisons of the crisis coefficients from each corporate governance portfolio are the focused results in this section.

**Table 4.5** Corporate Governance Portfolios and Returns on Crisis

Panel A		ALPHA		RMRF		$\beta_2$			
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			
VERYGOOD	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		$\beta_2$	
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	
VERYGOOD	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		$\beta_2$	
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	
VERYGOOD	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	

**Note:** This Table Reports Estimated Results from the Equations (21), (22), and (23) of Equal-Weighted Weekly Returns for Portfolios of Firms Sorted by Corporate Governance Score, Separately for the following Equations in Panel

A, B and C, Respectively. The Crisis Period is Captured by the Variable,  $\delta_c$ , that Take the Value of 1 During Crisis Period and 0, Otherwise. The Hedge Row Contains the Results When of Buying the Excellent Corporate Governance Portfolio Selling Short Poor Corporate Governance Portfolio. The Portfolios are Reset every January by Using the Firms' Corporate Governance Score at the end of the Same Year. Significant at the 10 Percent, 5 Percent, and 1 Percent Levels are Indicated by \*, \*\*, and \*\*\* Respectively.

Time-series regression results of equation (21), (22), and (23) from each corporate governance portfolio are separately displayed in Panel A, B, and C, respectively. From Panel A, which Sharp-Lintner's CAPM is used as an explaining model, it is found that the stronger corporate governance portfolio performs better than the weaker corporate governance portfolio significantly by 66 basis points per week from the coefficient of crisis in the Hedge row. This interesting difference is consistent with the following results from each corporate governance portfolio. In details, it is found that the Excellent Corporate Governance Score portfolio does not take the effect of crisis, since insignificant crisis coefficient is not found, but the Poor Corporate Governance Score portfolio is the one that receives a significant negative effect from crisis, -66 basis points per week. The results in Panel B and C also confirm the negative impact from weaker corporate governance practices. Coefficients in the Hedge portfolio are found to be positive in both Panel B and C. In particular, the difference comes from the fact that the Poor Corporate Governance portfolio receives significant negative effects from the crisis factor, while Excellent Corporate Governance portfolio is unaffected. For other corporate governance portfolios, significantly negative coefficients of the crisis factors are founded in the Good and the Poor Corporate Governance Score portfolio from Panel A to C, while this negative impact is also found for the Very Good Corporate Governance portfolio in Panel C. The degree of impact varies from around -66 to -71 basis points per week (40.79% to 44.47% per year) for the Good Corporate Governance portfolio. For the Very Good Corporate Governance, although negative impacts from the crisis are found in every Panel, it is important to note that the impact is only significant in Panel C. Hence, clear negative impact is found to be only -36 basis points per week (-

20.55% per year) even after the market, size, value, and momentum factors are all controlled.

In summary, the result suggests that corporate governance level of a firm can be the factor to determine the effects that the firm may receive from the crisis. In particular, the strong corporate governance firms take less or no effects from the crisis but the firms with weak corporate governance are negatively affected by the crisis at higher magnitude.

### **4.3 Migration of Corporate Governance**

Corporate governance is not the function that stands still for any particular firm. In fact, a firm has the choice to adopt more corporate governance practices and to stop performing some corporate governance practices entirely. It is also highly probable for the regulators and corporate governance rating agencies to change the rules regarding the evaluation of corporate governance practices. Thus, it is possible that Corporate Governance Score of a firm can migrate to another group during a specific period. One analysis that certainly arises from that fact is on how the effects that the firms might get after their Corporate Governance Scores are changed. This study performs the analysis to capture the effects of getting higher or lower Corporate Governance Scores and explains the result in section 4.3.1 and 4.3.2, respectively.

#### **4.3.1 Effect from Getting Higher Corporate Governance Score**

In this section, Corporate Governance Score of the same group of firms are analyzed. This study checks if the Corporate Governance Score for the same firm this year is increased from last year or not. If it is found that Corporate Governance Score is higher compare to its last year score, this study then compares the intercept and coefficient between the current year data and the last year data from last fifty-two-week lagged weekly returns. For example, suppose a firm has the Corporate Governance Score of Excellent this year and the Very Good Corporate Governance Score last year, this study estimates the alpha and beta of that firm by using this year data and the last year data, and keep the result as a data point in the samples of the after and the before groups. This process is repeated for all firms in the period from year 2007 to 2011. In particular, 141 events of firms getting higher Corporate

Governance Scores are found in the analysis period. Table 4.6 reports descriptive statistics of intercept terms and coefficients of the firms along with their statistics of the difference in means between before and after.

**Table 4.6** Migration to Higher Corporate Governance Score

	Panel A		Panel B	
	$\alpha_0$ before	$\alpha_0$ after	$\beta_1$ before	$\beta_1$ after
Mean	0.0019	0.0013	0.6356	0.6697
Median	0.0013	0.0014	0.5708	0.5549
Maximum	0.0437	0.0257	2.0184	2.1605
Minimum	-0.0218	-0.0195	-0.6227	-0.2051
Std. Dev.	0.0083	0.0073	0.4794	0.5167
Skewness	1.4419	-0.0403	0.3111	0.9972
Kurtosis	8.8948	3.7932	3.0159	3.4293
Sum	0.2634	0.1855	89.6212	94.4231
Sum Sq. Dev.	0.0096	0.0075	32.1740	37.3814
Observations	141	141	141	141
Method	Df	Probability	Probability	
t-test	280	0.5537	0.5666	
Anova F-test	(1, 280)	0.5537	0.5666	

**Note:** This Table Reports Descriptive Statistics of  $\alpha_0$  and  $\beta_1$  of Firms that their Corporate Governance Scores are Moving up from the Equation (15).

$$R_{i,t} = \alpha_0 + \beta_1 AMRF_t + \varepsilon_t \quad (15)$$

The First and the Second Column of Panel A Report Descriptive Statistics of Alpha of the Firms before and after Changing of Corporate Governance Scores. The First and the Second Column of Panel B Report Descriptive Statistics of the Betas of the Firms before and after Changing of Corporate Governance Scores. Statistics of the Difference in Means between before and after are Reported at the Bottom of the Table.

It is found that the means of intercept terms of before and after analysis are 19 and 13 basis points, respectively. However, statistics test of the difference in means shows that they are insignificantly different. Regarding their market risk coefficient, the results shows that means of the betas are reported to be 0.63 and 0.66 for before and after sample, respectively. Nevertheless, it is insignificantly different between those two coefficients. Thus, the result in this study concludes that on average, there is no change in risk and return after the firms receive higher Corporate Governance Score.

#### **4.3.2 Effect from Getting Lower Corporate Governance Score**

This section further studies Corporate Governance Score of the same group of firms by checking if the Corporate Governance Score of the same firm this year is at a lower level compared to last year's or not. If it is found that Corporate Governance Score is getting lower compared to the Score last year, this study then compares the intercept and coefficient between this year data and the last year data from last fifty-two-week lagged weekly returns. For example, suppose a firm has the Corporate Governance Score of Good this year and the Very Good Corporate Governance last year, this study estimates the alpha and the beta of that firm by using this year data and the last year data, and keeps the result as a data point in the samples of after and before groups. This process is repeated for all firms in the period from year 2007 to 2011. In particular, 89 events of getting lower Corporate Governance Scores are found in the analysis period. Table 4.7 reports descriptive statistics of intercept terms and coefficients of firms along with their statistics of the difference in means between before and after.

It is found that the means of intercept terms of before and after analysis are 34 and -5 basis points, respectively. The statistics test of the difference in means shows that they are significantly different and the mean of abnormal returns before any changes is significantly more than the abnormal returns after the firms are graded at lower Corporate Governance Scores. Although this study does not show the result from Satterthwaite-Welch t-test and Welch F-test that allow for unequal cell variances, they are tested and the result is quite similar. Regarding their market risk coefficients, the results shows that means of the betas are reported to be 0.45 and 0.58

for before and after sample groups. Moreover, those two coefficients are found to be significantly different and means of the betas are significantly larger after the firms get lower Corporate Governance Scores. Hence, the result in this study concludes that on average, there are significant changes, resulting in higher risks and lower returns after the firms receive lower Corporate Governance Score.

**Table 4.7** Migration to Lower Corporate Governance Score

	Panel A		Panel B	
	$\alpha_0$ before	$\alpha_0$ after	$\beta_1$ before	$\beta_1$ after
Mean	0.0034	-0.0005	0.4533	0.5835
Median	0.0029	-0.0005	0.4277	0.5490
Maximum	0.0374	0.0148	1.6207	1.9453
Minimum	-0.0235	-0.0218	-0.5245	-0.6390
Std. Dev.	0.0082	0.0060	0.4354	0.4734
Skewness	0.6854	-0.6041	0.5510	0.4841
Kurtosis	7.1786	4.5657	3.3288	3.2808
Sum	0.3051	-0.0452	40.3448	51.9310
Sum Sq. Dev.	0.0060	0.0032	16.6822	19.7195
Observations	89	89	89	89
Method	Df	Probability	Probability	
t-test	176	0.0004	0.0578	
Anova F-test	(1, 176)	0.0004	0.0578	

**Note:** This Table Reports Descriptive Statistics of  $\alpha_0$  and  $\beta_1$  of Firms that their Corporate Governance Scores are Moving Down from the Equation (15).

$$R_{i,t} = \alpha_0 + \beta_1 RMR_{i,t} + \varepsilon_t \quad (15)$$

The First and the Second Column of Panel A Report Descriptive Statistics of  $\alpha_0$  of the Firms before and after Changing of Corporate Governance Scores. The First and the Second Column of Panel B Report Descriptive Statistics of

Beta of the Firms before and after Changing of Corporate Governance Score. Statistics of the difference in Means between before and after are Reported at the Bottom of the Table.

#### 4.4 Robustness Test

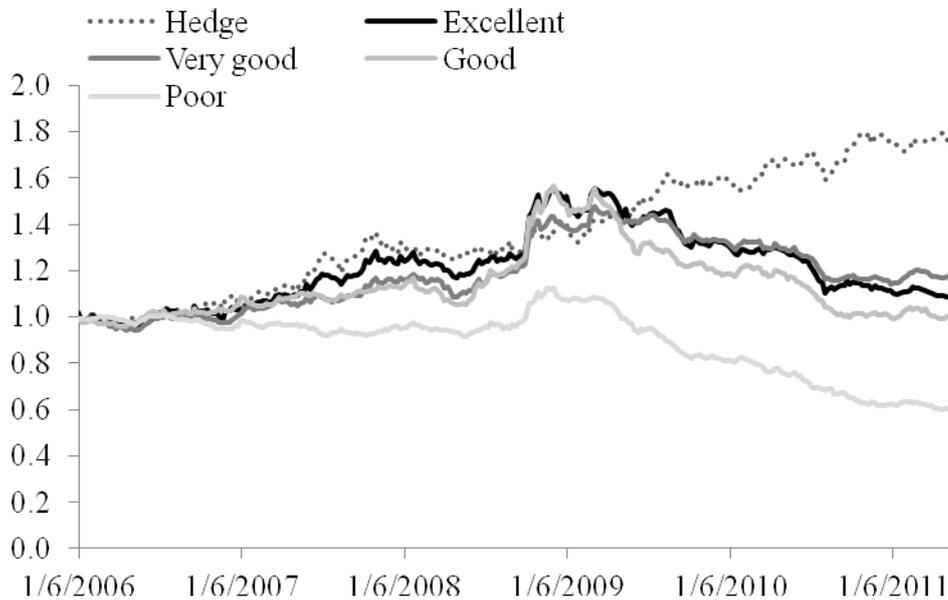
The robustness tests to confirm that different practices of corporate governance can bring about different returns are performed in this section. Specifically, this study checks if significant returns are robust after adjustments for the firms' industries returns or not. Precisely, the industry-adjusted return,  $R_{i,t}^{adj}$ , (Johnson et al., 2009) will also be used since the industries and corporate governance both contribute to equity return. The two-digit GICS are used to cluster the industries.

$$R_{i,t}^{adj} = R_{i,t} - \sum_{j=1}^J w_j R_{j,t} \quad (24)$$

where

- $R_{i,t}$  is the return from investment in equity i in week t  
 $R_{j,t}$  is the return from investment in equity j in week t where all j are sharing the same industry as i  
 $w_j$  is weight of firm j within industry portfolio

Initially, this study generates the cumulative returns using industry-adjusted returns from each Corporate Governance Score group and find that the hedge portfolio, with long position on the Excellent Corporate Governance Score group and short position on the Poor Corporate Governance Score group, still yields about 12% per year after industry adjustment. However, this extra return is explained largely by the firms in the Poor Corporate Governance Score group performing poorly after adjusting for their industry return rather than the superior performance of the strong corporate governance firms.



**Figure 4.2** Industry-Adjusted Corporate Governance Score Portfolios

**Note:** Figure 4.2 Reports Industry-Adjusted Performances of Equity Portfolios in the Stock Exchange of Thailand from January 2006 to December 2011. All data Points are Initialized with one and Cumulatively Multiplied by Asset Return from the Start to the end of Analysis Period. Corporate Governance Portfolios are Formed Each Year at the 1<sup>st</sup> January of Each Year by Using the Equal-Weighted Performance of the Firms within the Same Corporate Governance Score Group Based on the Corporate Governance Report from IOD in the Same Year. The Return from Each Stock is Adjusted by Industry's Return in the Same Period. The Industry of Each Stock comes from GICS Data of the Same Year. Hedge Return Represents the Cumulative Differences between Industry-Adjusted Return of the Excellent Corporate Governance Portfolio and Industry-Adjusted Return of the Poor Corporate Governance Portfolio.

The relation between corporate governance and industry-adjusted weekly return is displayed by Figure 4.2. The difference between Figure 4.2 and Figure 1.1 is that the equity return from each equity stock is deducted by its industry return before the forming of Corporate Governance Score portfolios. Interestingly, an investment of \$1 in the Poor Corporate Governance Score portfolio decreases to \$0.61 over the study period, after industry adjustment. The more intriguing result is that, after

industry adjustment, the Excellent, the Very Good, and the Good Corporate Governance Score portfolios yield almost identical results. In particular, an investment of \$1 in the Excellent, the Very Good, and the Good Corporate Governance Score portfolios yield only \$1.11, \$1.17, and \$1.02 at December 2011, respectively. Even though, they are positive returns, the result shows that corporate governance factor alone has less impact on the equity return after industry adjustment. This study further finds the difference between investing in the strong and the weak corporate governance portfolios after industry adjustment. Buying Excellent Corporate Governance portfolio and short selling Poor Corporate Governance portfolio yields a very decent return equivalent to 11.26% per year. In other words, Figure 4.2 reconfirms that there is a huge gap between returns from strong and weak corporate governance firms. Hence, from the result, the ex post investment strategy is changed from investing in strong corporate governance assumed earlier in Figure 1.1 to betting that the firms with weak corporate governance will perform poorly.

To get a clear perspective of returns, firms with different level of Corporate Governance must be judged with the return effects from their respective industries. In the other words, if any Corporate Governance portfolios yield the intercept coefficient ( $\alpha_0$ ) significantly more than zero, it can be interpreted that earnings from investing in the portfolio of firms with that particular Corporate Governance Score should yield a better return than passive investment. The results are reported in section 4.2.1, 4.2.2, and 4.2.3 for the different clusters by corporate governance measurements, portfolios of Corporate Governance Characteristics, Ownership of BOD, and Corporate Governance Score, respectively.

#### **4.4.1 Corporate Governance Characteristics**

The results of portfolios with different CGCs are reported in Table 4.8. The table reports estimated results from three regression equations of equal-weighted weekly returns for portfolios of firms in Panel A for equation (15), Panel B for equation (16), and Panel C for equation (17) by using industry-adjusted returns as a dependent variable.



Table 4.8 (Continued)

Panel B		ALPHA		RMRF		SMB		HML		UMD		Diff
	SE	0.0004		0.0326		0.0478		0.0317				
NOM(1)	COEF	-0.0007	**	-0.2766	***	-0.3396	***	-0.2201	***			0.0002
	SE	0.0003		0.0203		0.0447		0.0297				
NOM(0)	COEF	-0.0009	***	-0.3884	***	-0.1149	**	-0.1176	***			
	SE	0.0003		0.0296		0.0448		0.0304				
CGC(1)	COEF	-0.0003		-0.2229	***	-0.4902	***	-0.3543	***			0.0006
	SE	0.0005		0.0245		0.0660		0.0507				
CGC(0)	COEF	-0.0009	***	-0.3567	***	-0.1717	***	-0.1339	***			
	SE	0.0003		0.0255		0.0402		0.0250				
DIS(1)	COEF	-0.0009	***	-0.3375	***	-0.2064	***	-0.1563	***			-0.0006
	SE	0.0003		0.0242		0.0389		0.0249				
DIS(0)	COEF	-0.0003		-0.2742	*	-0.7257	***	-0.3809	**			
	SE	0.0019		0.1402		0.2496		0.1759				
CGP(1)	COEF	-0.0009	***	-0.3382	***	-0.2080	***	-0.1554	***			-0.0015
	SE	0.0003		0.0229		0.0380		0.0243				
CGP(0)	COEF	0.0006		-0.2416	**	-0.3478	*	-0.4244	***			
	SE	0.0015		0.1179		0.1866		0.1409				
Panel C		ALPHA		RMRF		SMB		HML		UMD		Diff
IND(1)	COEF	-0.0013	***	-0.3152	***	-0.1818	***	-0.1472	***	0.0381	*	-0.0008
	SE	0.0003		0.0177		0.0366		0.0262		0.0212		
IND(0)	COEF	-0.0005		-0.3375	***	-0.2675	***	-0.1411	***	0.1243	***	
	SE	0.0004		0.0349		0.0589		0.0436		0.0301		
CCS(1)	COEF	-0.0010	***	-0.3387	***	-0.2371	***	-0.1668	***	0.0596	***	0.0006
	SE	0.0003		0.0209		0.0380		0.0288		0.0224		
CCS(0)	COEF	-0.0016	***	-0.2400	***	0.0089		-0.0269		0.0446		
	SE	0.0006		0.0265		0.0782		0.0519		0.0372		
AUD(1)	COEF	-0.0009	***	-0.2174	***	-0.1393	***	-0.0981	***	0.0376	***	0.0015
	SE	0.0002		0.0130		0.0241		0.0175		0.0137		
AUD(0)	COEF	-0.0024		0.9302	***	2.0143	***	0.3285		-0.5647	**	
	SE	0.0047		0.1903		0.5092		0.3255		0.2625		
REM(1)	COEF	-0.0008	**	-0.2653	***	-0.3066	***	-0.2053	***	0.0366	*	0.0006
	SE	0.0003		0.0177		0.0419		0.0295		0.0191		
REM(0)	COEF	-0.0014	***	-0.3817	***	-0.1027	**	-0.1005	***	0.0865	***	
	SE	0.0003		0.0267		0.0439		0.0332		0.0282		
NOM(1)	COEF	-0.0009	***	-0.2675	***	-0.3354	***	-0.2148	***	0.0323	*	0.0004
	SE	0.0003		0.0192		0.0436		0.0304		0.0187		
NOM(0)	COEF	-0.0013	***	-0.3650	***	-0.1044	**	-0.1039	***	0.0826	***	
	SE	0.0003		0.0241		0.0403		0.0316		0.0264		
CGC(1)	COEF	-0.0005		-0.2099	***	-0.4844	***	-0.3467	***	0.0461	*	0.0007
	SE	0.0005		0.0246		0.0649		0.0496		0.0270		
CGC(0)	COEF	-0.0012	***	-0.3396	***	-0.1640	***	-0.1239	***	0.0605	***	
	SE	0.0003		0.0214		0.0370		0.0267		0.0219		
DIS(1)	COEF	-0.0011	***	-0.3213	***	-0.1990	***	-0.1467	***	0.0576	***	-0.0015
	SE	0.0003		0.0204		0.0361		0.0263		0.0207		
DIS(0)	COEF	0.0003		-0.3183	***	-0.7457	***	-0.4069	**	-0.1565		
	SE	0.0019		0.1207		0.2563		0.1853		0.1735		
CGP(1)	COEF	-0.0011	***	-0.3224	***	-0.2008	***	-0.1461	***	0.0560	***	-0.0012
	SE	0.0003		0.0194		0.0351		0.0256		0.0201		

**Table 4.8** (Continued)

Panel C		ALPHA	RMRF		SMB		HML		UMD		Diff
CGP(0)	COEF	0.0001	-0.2091	**	-0.3331	*	-0.4052	***	0.1155		
	SE	0.0015	0.1042		0.1888		0.1431		0.0967		

**Note:** This Table Reports Estimated Results from the three Regression Equations of Equal-Weighted Weekly Returns for Portfolios of Firms Sorted by the Eight Corporate Governance Characteristic, Separately in Panel A, B and C. Details of Each Row can be found in Table 3.4. The Portfolios are Reset every January by Using the Firms' End-of-the-Year Corporate Governance Characteristics. The Sample Period is from January 2006 to December 2011. Coefficients and Standard Errors are Reported in the First and the Second Row of Each Regression by Using the Acronyms of COEF and SE Respectively. Significant at the 10 Percent, 5 Percent, and 1 Percent Levels are Indicated by \*, \*\*, and \*\*\* Respectively.

The coefficients and standard errors of the intercept term and abnormal return are reported in the first and the second row of each regression by using the acronyms of COEF and SE, respectively. The last column, Diff, displays the intercept from regression of the portfolio of buying long firms that practice CGC and selling short firms that do not practice CGC with the same risk factors.

For the firm that has at least one-third independence of BOD, Panel A shows that IND(1) has a significantly negative alpha, -12 basis points, while alpha from IND(0) portfolio is not significantly different from zero. This behavior is also repeated in Panel B and C for size, value, and momentum risk factors. However, the degree of difference in alpha is decreased when more risk factors are included, -11 basis points in Panel B to -8 basis points in Panel C. To conclude, the firms that have at least one-third independence of BOD are performing worse than the firms that have less than one-third independence of BOD, adjusting for the industry effect, by around minus 9.5 basis points per week. It might be possible to conclude that the market does not value firms with high number of independent directors, as investors may view that having a smaller number of independent directors can lead to the lower cost of management.

For Chairman and CEO separation, it is found that both alphas for the portfolios of firms with/without Chairman and CEO separation portfolios are negative, -9 basis points for CCS(1) and -14 basis point for CCS(0). However, the firms with Chairman and CEO separation seem to perform better by 5 basis points per week. When Panel B and C are examined the CCS(0) portfolio is found to be creating higher negative abnormal returns than CCS(1) by the same degree. Hence, it is safe to assume that, ex post, the firms with Chairman and CEO separation generate better abnormal returns than the firms without Chairman and CEO separation by approximately 6 basis points per week (3.17% per year). Next, there is an obvious difference in abnormal returns between the firms that have an audit committee and the firms that don't have one. After industry adjustment, the firms with an audit committee create higher negative impact than the firms that do not have an audit committee in every performance-attribution model. In particular, it is found that alpha of AUD(1), -9 basis points, is worse than AUD(0) insignificant alpha in Panel A. Although this difference in alpha is changing in Panel B and C, it is found that at least the firms with an audit committee create lower abnormally returns than the firms that do not an have audit committee.

The portfolios of firms that have a remuneration committee and the portfolios of firms that do not have a remuneration committee are then compared. Although Panel A shows that alpha from REM(1), -8 basis points, is better than REM(0), -11 basis points, this very small magnitude is noted and this evidence is confirmed in Panel B and C. This study does find a difference in alphas between the firms that have a remuneration committee and the firms that have none, but the degree is no greater than 6 basis points per week after industry adjustment. This small magnitude of difference is found also, when the analysis is turned to the Nomination Committee Characteristic. Although having a nomination committee seems to be better, the differences in alphas between the firms that have a nomination committee and the firms that do not have one are found to be only 1, 2, and 4 basis points per week in Panel A, B, and C respectively. The results only suggest a small difference in performance among firms, determined by Nomination committee practice dimension.

Similarly, the firms that have a corporate governance committee also seem to produce a small difference in abnormal returns compared with the firms that do not

have one. To elaborate, this study finds that alphas for the with and the without Corporate Governance Committee portfolios are insignificant for CGC(1) but significant for CGC(0), -10 basis points, in Panel A and this result is repeated in Panel B and C. In sum, the firms without a corporate governance committee perform worse than firms with a corporate governance committee. However, the differences between the last two CGCs – the disclosure of director’s fees and individual remuneration for executives and written corporate governance policy are found to be the opposite of the previous results. In particular, Panel A through Panel C show that the comparisons of alphas between the firms that practice and do not practice the last two CGCs both yield negative results. Therefore, the analysis can only conclude that there is no positive abnormal return contribution from practicing the last two CGCs.

#### 4.4.2 Ownership of Board Members

Table 4.9 shows the estimated results from the three regression equations, which the dependent variable is the weekly industry-adjusted returns from portfolios of firms with different amount and percentage of BOD ownership. The intercept term, alpha, of each corporate governance portfolio is discussed in this section.

**Table 4.9** Robustness Results for BOD Portfolios

Panel A		ALPHA		RMRF		SMB		HML		UMD
OAH	COEF	-0.0002		-0.2352	***					
	SE	0.0004		0.0284						
OAM	COEF	-0.0011	***	-0.2933	***					
	SE	0.0003		0.0223						
OAL	COEF	-0.0013	***	-0.2766	***					
	SE	0.0004		0.0124						
OPH	COEF	-0.0008	**	-0.2770	***					
	SE	0.0004		0.0225						
OPM	COEF	-0.0007	**	-0.2979	***					
	SE	0.0004		0.0261						
OPL	COEF	-0.0013	***	-0.2304	***					
	SE	0.0004		0.0142						
Panel B		ALPHA		RMRF		SMB		HML		UMD
OAH	COEF	0.0000		-0.3320	***	-0.4080	***	-0.2427	***	
	SE	0.0004		0.0301		0.0522		0.0350		

**Table 4.9 (Continued)**

Panel B		ALPHA		RMRF		SMB		HML		UMD
OAM	COEF	-0.0011	***	-0.3334	***	-0.1688	***	-0.1067	***	
	SE	0.0003		0.0239		0.0456		0.0300		
OAL	COEF	-0.0012	***	-0.3071	***	-0.1272	***	-0.1359	***	
	SE	0.0004		0.0167		0.0441		0.0386		
OPH	COEF	-0.0007	**	-0.3219	***	-0.1885	***	-0.1314	***	
	SE	0.0003		0.0238		0.0448		0.0320		
OPM	COEF	-0.0007	**	-0.3471	***	-0.2074	***	-0.1184	***	
	SE	0.0003		0.0269		0.0471		0.0284		
OPL	COEF	-0.0011	***	-0.3023	***	-0.3013	***	-0.2426	***	
	SE	0.0004		0.0189		0.0475		0.0422		
Panel C		ALPHA		RMRF		SMB		HML		UMD
OAH	COEF	-0.0003		-0.3144	***	-0.4001	***	-0.2323	***	0.0623 **
	SE	0.0004		0.0258		0.0505		0.0366		0.0258
OAM	COEF	-0.0013	***	-0.3151	***	-0.1605	***	-0.0959	***	0.0648 ***
	SE	0.0003		0.0200		0.0411		0.0310		0.0246
OAL	COEF	-0.0013	***	-0.3013	***	-0.1246	***	-0.1325	***	0.0204
	SE	0.0004		0.0180		0.0443		0.0376		0.0278
OPH	COEF	-0.0009	***	-0.3079	***	-0.1822	***	-0.1232	***	0.0494 **
	SE	0.0003		0.0210		0.0433		0.0318		0.0208
OPM	COEF	-0.0010	***	-0.3255	***	-0.1977	***	-0.1057	***	0.0764 ***
	SE	0.0003		0.0217		0.0406		0.0304		0.0269
OPL	COEF	-0.0012	***	-0.2967	***	-0.2988	***	-0.2394	***	0.0197
	SE	0.0004		0.0201		0.0482		0.0417		0.0271

**Note:** This Table Reports Estimated Results from the three Regression Equations of Equal-Weighted Weekly Returns for Portfolios of Firms Sorted by the Six Portfolios of Different Amount/Percentage of Ownership BOD Ownership Separately in Panel A, B and C. Details of Each Row can be Found in Table 3.6. The Portfolios are Reset every January by Using the Firms' End-of-the-Year BOD Ownership Information in Form 56-1. The Sample Period is from January 2006 to December 2011. Coefficients and Standard Errors are Reported in the First and the Second Row of Each Regression by Using the Acronyms of COEF and SE, Respectively. Significant at the 10 Percent, 5 Percent, and 1 Percent Levels are Indicated by \*, \*\*, and \*\*\* Respectively.

The results can be explained for both amount and percentage of BOD ownership. For the portfolios with different amount of BOD ownership, Panel A of Table 4.9 shows that two-digit GICS adjusted portfolios with different amount of BOD ownership generate significantly negative abnormal returns for OAM, and OAL, at -11 basis points, and -13 basis points, respectively. From this result, it can be interpreted that the firms with high amount of BOD ownership, OAH, seem to generate better abnormal returns than the firms with lower amount of BOD ownership, OAM and OAL. This difference in alphas is repeated in Panel B and C, when one analyzes the group of portfolios with more risk factors. After industry adjustment, the intercept coefficients that are reported for OAM and OAL are -11 basis points and -12 basis points in Panel B, respectively, and -13 basis points for both OAM and OAL in Panel C. In summary, it is found that the firms with lower amount of BOD ownership generate negative abnormal returns to investors higher than the firms with higher amount of BOD ownership.

For the portfolios with different percentage of BOD ownership, Panel A of Table 4.9 shows that the portfolios with different percentage of BOD ownership generate significant alphas and their degrees are -8, -7, and -13 basis points for OPH, OPM, and OPL, respectively. From this, it can be interpreted that the firms with low percentage of BOD ownership, OPL, seem to have the highest negative returns compared to the other two after adjusting for industry effect. This pattern is to be repeated in Panel B and C. In Panel B, the alphas of OPH, OPM, and OPL are -7, -7, and -11 basis points respectively, while Panel C shows that the alphas of OPH, OPM, and OPL are -9, -10, and -12 basis points respectively. In conclusion, it is found that the firms with higher percentage of BOD ownership, ranked higher than the 70<sup>th</sup> percentile, is an investment that generate less negative abnormal returns for investors, when compared to the firms with lower percentage of BOD ownership, after adjustment for their industry returns.

#### **4.4.3 Corporate Governance Score**

Table 4.10 shows the estimated results from the three regression equations, which the dependent variable is the weekly industry-adjusted returns from the Hedge, Excellent, the Very Good, the Good and the Poor Corporate Governance Score

portfolios. The intercept, alpha, of each Corporate Governance Scores portfolios are the focused results.

**Table 4.10** Robustness Results for IOD Portfolios

Panel A		ALPHA		RMRF							
HEDGE	COEF	0.0018	**	0.1425	*						
	SE	0.0008		0.0757							
EXCELLENT	COEF	-0.0001		-0.1234	*						
	SE	0.0008		0.0703							
VERY GOOD	COEF	0.0001		-0.1948	***						
	SE	0.0005		0.0396							
GOOD	COEF	-0.0002		-0.3474	***						
	SE	0.0005		0.0315							
POOR	COEF	-0.0019	***	-0.2659	***						
	SE	0.0004		0.0126							
Panel B		ALPHA		RMRF		SMB		HML			
HEDGE	COEF	0.0020	***	0.0439		-0.4166	***	-0.2060			
	SE	0.0007		0.0724		0.0979		0.0632			
EXCELLENT	COEF	0.0002		-0.2210	***	-0.4087	***	-0.3480			
	SE	0.0007		0.0681		0.0954		0.0597			
VERY GOOD	COEF	0.0003		-0.2913	***	-0.4080	***	-0.1888			
	SE	0.0005		0.0406		0.0666		0.0428			
GOOD	COEF	-0.0001		-0.4034	***	-0.2347	***	-0.1771			
	SE	0.0005		0.0327		0.0595		0.0393			
POOR	COEF	-0.0018	***	-0.2649	***	0.0078		-0.1418			
	SE	0.0003		0.0161		0.0400		0.0343			
Panel C		ALPHA		RMRF		SMB		HML		UMD	
HEDGE	COEF	0.0009		0.1136	**	-0.3850	***	-0.1649	***	0.2471	***
	SE	0.0006		0.0567		0.0896		0.0580		0.0470	
EXCELLENT	COEF	-0.0008		-0.1552	***	-0.3789	***	-0.3091	***	0.2333	***
	SE	0.0006		0.0536		0.0863		0.0576		0.0454	
VERY GOOD	COEF	-0.0002		-0.2639	***	-0.3956	***	-0.1726	***	0.0973	***
	SE	0.0005		0.0338		0.0629		0.0439		0.0318	
GOOD	COEF	-0.0005		-0.3715	***	-0.2203	***	-0.1583	***	0.1129	***
	SE	0.0005		0.0271		0.0519		0.0388		0.0297	
POOR	COEF	-0.0017	***	-0.2687	***	0.0061		-0.1441	***	-0.0138	
	SE	0.0003		0.0168		0.0402		0.0335		0.0214	

**Note:** This Table Reports Estimated Results from the three Regression Equations of Equal-Weighted Weekly Industry-Adjusted Returns for Portfolios of Firms

Sorted by Corporate Governance Score, Separately in Panel A, B and C. The Hedge Row Contains Performance-Attribution of the Returns from the Industry-Adjusted Excellent Corporate Governance Portfolio Minus the Returns from the Industry-Adjusted Poor Corporate Governance Portfolios. The Portfolios are Reset every January by Using the Firms' Corporate Governance Scores in the Same Year. The Explanatory Variables are RMRF, SMB, HML, and UMD Depending on the Estimation Models. The Sample Period is from January 2006 to December 2011. Coefficients and Standard Errors are Reported in the First and the Second Row of Each Performance-Attribution Regression. Significant at the 10 Percent, 5 Percent, and 1 Percent Levels are Indicated by \*, \*\*, and \*\*\* Respectively.

Table 4.10 presents the data in the same way as Table 4.3 does but is looking especially for the intercept terms, as they can be viewed as the abnormal returns, adjusted for industry effects. For the Hedge portfolio that buys the Excellent Corporate Governance portfolio and sells short the Poor Corporate Governance portfolio, this study found, in equation (15), the alpha to be 18 basis points per week, or about 9.80% per year, which is within the 5% significant level. This significant result is found also in equation (16) with the abnormal return of 20 basis points per week, or about 10.95% per year. Nevertheless, the significant abnormal return is vanished when equation (17) is used as an estimating model.

The significant negative return from the Poor Corporate Governance portfolio can be clearly observed from all the models. Panel A, B, and C in Table 4.10 report negative abnormal returns from this portfolio at 19, 18, and 17 basis points per week or at the average of -9.80% per year. It means that, after industry adjustment, receiving Poor Corporate Governance Score is a factor that deteriorates the return. However, buying the firms with superior Corporate Governance Scores does not create abnormal returns. The Excellent, the Very Good, and the Good Corporate Governance Score portfolios are shown as investments with no significant abnormal returns.

## CHAPTER 5

### CONCLUSIONS, DISCUSSIONS, AND RECOMMENDATIONS

#### 5.1 Conclusions

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 when considering a sound investment. This study has explained the concept of corporate governance and its effects on equity returns. It begins by showing the models of corporate governance and the firms' performances to initiate the wakes of explanatory effects that the firms could receive from having different level of corporate governance practices. From the theoretical model, this study finds that stronger corporate governance can act as a function to prevent the insiders' extraction of private benefits, hence, contributing to the value of the firms to the shareholders. Therefore, everything else being equal, equity returns between the firms with weaker corporate governance and the firms with stronger corporate governance can be different. The models in this study also purpose that better market values or better equity returns can be expected from the firms with better corporate governance. However, when the level of corporate governance increases, the value of having superior governance diminishes.

In addition, empirical evidence is employed in this study to provide a bridge between what theoretical models state and how the real world actually is. By using the sample of listed stocks in the SET during the 2006 to 2011 period, this study demonstrates the ex post effects of corporate governance, using the Corporate Governance portfolios that are formed from the three measurements of corporate governance including Corporate Governance Characteristics, Ownership of Board Member and IOD's Corporate Governance Scores.

Firstly, this study introduces the characteristics that are classified as good corporate governance under the Corporate Governance Characteristics (CGCs). Specifically, this study focuses on the eight CGCs, which are independence of the

board of directors (BOD), Chairman and CEO separation, an audit committee, a remuneration committee, a nomination committee, a corporate governance committee, disclosure of director's fees and individual remuneration for executives and a written corporate governance policy. From the descriptive analysis, this study finds that firms with and without each CGC are different in many ways. The firms that practice more CGCs are found to be generally bigger firms with lower book-to-market ratio and financed with less debt. From the firms' two-digit GICS codes, some major results are found based on the CGCs. In particular, firms in the Energy industry mostly have more than one-third independence of BOD, while firms in the Consumer Discretionary industry have the least proportion of independent members of BOD. Furthermore, Firms in the Energy industry commonly have a remuneration committee but it is less likely to find this committee among firms in the Materials industry.

This study shows that the investment results from the firms that practice CGCs differ from the firms that do not practice CGCs. For the return side, it is only found that a portfolio of firms that have less than one-third independence of BOD is generating abnormal return in various models. For the comparisons of risks among the firms in the CGCs dimensions, the study finds that the firms that have less than one-third independence of BOD are comparatively riskier than the firms that have at least one-third independence of BOD. Firms with Chairman-and-CEO-separation are also found to have relatively lower risks than the firms without Chairman-and-CEO separation. It is found that the firms without an audit committee are found to be riskier than the firms with an audit committee. Furthermore, even though the firms with a corporate governance committee is more sensitive to market movement than the firms without a corporate governance committee, the firms with a corporate governance committee are not exposed to size and value risks as other firms are. This study, however, does not find clear evidences on the effects of the firms having other committees.

The robustness test is done for the investigation of investment returns. It is found that the firms that have at least one-third independence of BOD perform worse than the firms that have less than one-third independence of BOD, filtered for the industry effects, by around -4.25% per year. The firms with Chairman-and-CEO-separation have better abnormal returns than the firms without Chairman-and-CEO-

separation by approximately 3.17% per year after industry adjustment. The firms with an audit committee are also found to fare better than the firms that do not have an audit committee by 8.11% per year. This study also finds a difference in alphas between the firms that have and do not have a remuneration committee, but the degree is no greater than 3.17% per year after adjustment for industry effect. Although the results suggest only a small difference in returns from having a nomination committee, the firms without a corporate governance committee perform significantly worse than firms with corporate governance committee by approximately 3.71% per year. The analysis could, however, only conclude that there is no positive abnormal returns contribution from the last two CGCs, disclosures of director's fees and individual remuneration for executives and written corporate governance policy after industry adjustment.

The Ownership of Board Members is the second corporate governance measurement focused in this study. The measurement is, in fact, an attempt to enrich the study of the CGC by adding a degree dimension in the variables, i.e. the variables would be classified into different groups by their degrees of BOD ownership instead of being only dummy variables. This study defines six groups of firms based on their ownership of BOD. Three groups are classified by the amount of BOD ownership and another three groups by percentage of BOD ownership. For the group of firms with different amount of BOD ownership, the average of the firms that have high amount of BOD ownership are significantly larger and have lower book-to-market, than the average firms in the market. Furthermore, analyzing on the profitability measures such as ROE and ROA seems to give the impression that firms with high amount of BOD are the only group that performs better than the market average. For the groups of firms with different percentage of BOD ownership, the firms with high percentage of BOD ownership are significantly smaller than the average of firms in the market. On the other hand, significantly larger sizes are found in the firms that have low percentage of BOD ownership. Tobin's Qs of the firms with high (low) percentage of BOD ownership are reported to be significantly high (low). Lastly, the profitability measures such as ROE and ROA point out that the firms that have high percentage of BOD ownership are the only group that performs better than the market average. Industry analysis has been conducted in a similar way, as in Corporate Governance

Characteristics, for the Owner of Board Members corporate governance measure. For amount of BOD ownership, the firms that have high amount of BOD ownership are found in the Consumer Discretionary industry. On the other hand, Utilities, Telecommunication Services, and Energy are the industries that have lower concentration of firms with high amount of BOD ownership. In summary, Health Care, Consumer Staples, and Consumer Discretionary are the industries with the highest percentages of the firms with high amount of BOD ownership, while the Energy, the Telecommunication Services, and the Utility industries have the firms with low amount of BOD ownership in abundance. For the percentage of BOD ownership, this study shows that Information Technology, Health Care, and Consumer Staples are the industries that are dominated by firms with high percentage of BOD ownership, while Energy, Telecommunication Services, and Utility are industries with high number of the firms with low percentage of BOD ownership.

This study also shows the impact of different degrees of Ownership of Board Members on the firms' risk exposures and abnormal returns. The results are explained separately for both amount and percentage of BOD ownership. For the amount of BOD ownership measure, the portfolios with different amount of BOD ownership are found to be significantly sensitive to the market movement and their degrees for coefficients of excess market returns are 0.67, 0.63, and 0.72 for the high, the moderate and the low amount of BOD ownership portfolios, respectively. From this result, it can be implied that the firms with high amount of BOD ownership are exposed to less risks than those with low amount of BOD ownership, this result of different degrees of risk exposure is also repeated when the portfolios are analyzed with more risk factors. For the percentage of BOD ownership measure, it is found that the firms with moderate percentage of BOD ownership, ranked between the 30<sup>th</sup> and 70<sup>th</sup> percentile, seem to be the least risky investments for investors compared to the firms with higher or lower percentage of BOD ownership.

For the robustness test on returns, the industry adjusted portfolios with moderate and low amount of BOD ownership firms generate significantly negative abnormal returns from the Sharp-Lintner's CAPM model at -5.88% and -6.99% per year, respectively. This difference in alphas is repeated when analyzing the portfolios with more risk factors. In general, the study finds that the firms with low amount of

BOD ownership generate negative abnormal return to investors higher than the firms with high amount of BOD ownership. For classification by percentage of BOD ownership, all portfolios with different percentage of BOD ownership generate significant alphas. The implication seems to be that the firms with higher percentage of BOD ownership, ranked higher than the 70<sup>th</sup> percentile, are investments that generate less negative abnormal returns for investors compared to the firms with low percentage of BOD ownership, exclusive of the returns from industry effects.

The Corporate Governance Scores of Corporate Governance Report from the Thai Institute of Directors are the last corporate governance measurement in this study. Generally, the measurement does not only provide the picture of a combination of the CGCs, but also it can show the level of corporate governance practice, like the degrees provided by the Ownership of Board Members measurement, but with many characteristics included. This part of the study begins by summarizing the characteristics of firms that have different Corporate Governance Scores. In particular, the study finds that the firms with Excellent Corporate Governance Score are mostly big, low book-to-market firms that earn high operating performance with less debt financing. In contrast, the Good and the Poor Corporate Governance firms are relatively small, high book-to-market firms that earn less operating performance compared to the market average. The Corporate Governance Scores measures are investigated using two-digit and four-digit GICS Code industry clustering. It finds that the Energy and the Commercial Banks industries seem to have better corporate governance practices. In contrast, the Consumer Discretionary and Materials are the two industries that are showing sign of poor corporate governance practices.

The main contribution of this study is on the differences between the strong and the weak corporate governance firms in term of risks and abnormal returns. The study finds that all corporate governance portfolios are subjected to systematic risk. However, the Excellent Corporate Governance portfolio is the only portfolio that is not exposed to market anomaly risks such as size, value, and momentum risks. In contrast, these risks factors significantly affect the Poor Corporate Governance portfolio. In other words, this study reveals different aspects for the risk criteria. Having strong governance is not an automatic criterion to having lower risk exposure to market. However, corporate governance does reduce other types of risks such as size, value, and momentum risks.

In addition, alpha from investing in Excellent corporate Governance Score firms and selling short of Poor Corporate Governance firms seems to be significant with the amount of around 9.80% per year. It comes from the fact that Excellent Corporate Governance portfolio generates positive abnormal return, while Poor Corporate Governance portfolio generates negative abnormal return. Moreover, the robustness industry-adjusted test result finds that the best corporate governance firms generate no significant abnormal returns after industry adjustment, but weak corporate governance firms generate significantly lackluster outcomes after industry adjustment. In general, after industry adjustment and everything else being equal, it must be asserted that buying superior corporate governance firms does not necessary create extra return. The Excellent, the Very Good, and the Good Corporate Governance Score portfolios are shown as investments with no significant abnormal returns. In summary, the results of this study suggest that investors do not view the firms with strong and weak corporate governance as the same type of investment. It should be noted also that when a firm already reaches adequate level of corporate governance, increasing the level of corporate governance does not yield superior return.

The study further investigates the effects of corporate governance during the crisis period. It is found that the risk factors for the portfolios are shifting during the period of declining market except for the Excellent Corporate Governance portfolio. Through the analysis, it is found that the level of risks significantly changes during crisis period for some of the weaker than Excellent Corporate governance firms. In particular, the during-crisis beta for the Very Good Corporate Governance portfolios is found to be increased by 0.11 during crisis and this market coefficient for the Good Corporate Governance and the Poor Corporate Governance portfolios also increase during crisis period by 0.10 and 0.26, respectively. Further analyses are done by using the three-factor and four-factor models. In particular, while the Excellent Corporate Governance Score portfolio is only exposed to market risk during crisis period, the Very Good Corporate Governance portfolio is faced with higher degree of the same risk. Sensitivities of Excellent Corporate Governance portfolio are decreased for market coefficient and momentum sensitivity. Moreover, it is found that the coefficients of the Poor Corporate Governance portfolio are changing up and down. Precisely, market and size factors are increased by 0.38 and 0.10, respectively, while

book-to-market and momentum factors are decreasing at -0.04 and -0.02. Therefore, the conclusion seems to be that risks of the firms with different corporate governance practices can change during crisis period when strong corporate governance does not only reduce other risks such as size, value, and momentum, but also prevent unexpected shift-up in the degree of risk sensitivity during crisis period.

This study further discovers the magnitude of effects that the firms with different Corporate Governance Scores might be affected during crisis period by using time-series regressions. With the Sharp-Lintner's CAPM, it is found that the strong corporate governance firms perform better than the weak corporate governance firms significantly, by as large a gap as approximately 40.78% per year. This significant difference is further explained by the following results from analyzing each corporate governance portfolio. Interestingly, it is found that the Excellent Corporate Governance portfolio is not affected by the crisis, since the insignificant crisis coefficient is found to be insignificantly differed from zero. However, the Poor Corporate Governance portfolio is the one that is heavily affected by the crisis, performing worse than the Excellent Corporate Governance portfolio by around 40.78% per year. The results from the three-factor and the four-factor models all confirm the negative impacts from weaker corporate governance practice. In particular, the results repeat that significant difference between the strong and the weak corporate governance firms come from the fact that the weak corporate governance firms significantly yield negative returns during crisis period, while the strong corporate governance firms are unaffected. For other corporate governance portfolios, significantly negative crisis coefficients are consistently founded in the Good Corporate Governance portfolio, while they are found more rarely in the Very Good Corporate Governance portfolio. For the Very Good Corporate Governance portfolio, although negative impact during crisis period is found only when four-factor model is applied, the degree of changes during crisis period is as small as -20.55%. For the Good Corporate Governance portfolio, the degree of changes during crisis period is ranged from around -35.78% to -44.47 % per year. In conclusion, the result suggests that the corporate governance level of firm can be the factor to determine how the firms are affected during crisis period. In particular, the strong corporate governance firms are hardly affected during crisis period but the firms with

weak corporate governance are heavily affected negatively during crisis period. In a sense, it is safe to say that the stronger corporate governance a firm has, the better safeguard it possesses to weather the fallout of crisis.

Last but not least, this study performs the analysis to capture the effects of getting higher or lower Corporate Governance Scores and explains the result. The result in this study concludes that on average, there is no change in risk and return after the firms receive higher Corporate Governance Score. However, it is found that on average, there are significant changes, resulting in higher risks and lower returns after the firms receive lower Corporate Governance Score.

## **5.2 Discussions**

This study sheds some light on the subject of corporate governance and equity returns. It does not explain only the characteristics of firms with different levels of corporate governance, but also discusses the effects of corporate governance in the contexts of risks and abnormal turns. The study becomes richer by the many different characteristics of the firms.

It is found that the hypothesis that strong corporate governance can lead to better equity returns is confirmed by most of the study's results, albeit not all. In fact, it is good to note that all corporate governance practice comes with the cost of implementation and, naturally, the cost and the benefits should be equally weighed for each individual firm. CGCs do well in explaining the effects from having each corporate governance practice in place. For instance, the Chairman and CEO separation, an audit committee and a corporate governance committee can be viewed as necessities for firms, since the benefits outweigh the cost. On the other hand, more independent directors, a remuneration committee, a nomination committee, strong disclosure, and corporate governance policy can all be viewed as extras. In another word, the decision on whether or not the firms should practice these corporate governance practices should be judged independently based on each characteristic's merit and the firm's specific rationale, including its readiness to implement such measure and whether or not the costs in doing so outweigh the gains.

The Ownership of Board Members can also be viewed as a gauge of practices. Generally, it can be argued that a firm, which its directors have some stock ownership is better than a firm, which its directors have no ownership at all. This is a very rational argument since it is generally believed that professional managers perform better when they have stakes (shared risks) in the firm, that is, there is gain/loss involved in their performances. This study therefore supports that the higher amount of stock ownership by the directors is the better. However, it should be noted that too high percentage of ownership can adversely result in negative repercussions. All in all, this study still suggests that a significant amount of BOD ownership is a must. However, it is not recommended that a firm has too much of BOD ownership for too large a portion of BOD ownership could lead to minority shareholders being taken advantages of.

Last but not least, Corporate Governance Scores can provide a clear picture of the relation between corporate governance and equity returns. From the result, strong corporate governance firms are obviously found to be well-protected investments against adverse market climate. The study reasserts that although, strong corporate governance does not generate abnormal returns but weak corporate governance firms perform worse when the market is facing with crisis. Furthermore, it is also useful to note that the effect on the firms from migrating to lower ranks of Corporate Governance Score is negative but investors do not value much the event of moving up a level in Corporate Governance Score. Therefore, even though firms do not think it is necessary to improve significantly on their corporate governance practices, they still need to maintain their level of corporate governance in order to avoid the negative effect.

The key question that a reader can raise is: "What do these results imply about the risk and abnormal returns in the future?" In fact, noticeable limitation of this study is the causality between future abnormal returns, ex post returns, and levels of corporate governance practices. Arguably the evidence does not imply that achieving a certain level of governance is a direct causation for equity return, or that firms with a certain level of corporate governance would perform better than others, as firms' performances may be driven by investor's expectation on uncertain risks that firms might face in future. However, the fact that corporate governance can be a filter for

good or bad investments in ex post analysis is something that should not be overlooked. Thus, the study still offers future opportunities for further investigations in the sense that corporate governance might be a “useful” candidate for another dimension to explain classes of stocks’ returns, apart from size and book-to-market and momentum, justifying the value of finding the relationship between corporate governance and firm’s performance.

### **5.3 Recommendations**

This study provides useful recommendations to many stakeholders who involved in the capital market. In this section, the benefits for market practitioners and academics are separately explained.

For the practitioners, they can gain 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. The result of this study suggests that an investment in a firm with a reasonable level of corporate governance practice is definitely better than an investment in a firm in weak corporate governance class, in terms of both risk and return. It also further suggests that the difference between strong and weak corporate governance could become magnified during crisis period. Although this study does not predict that a firm with strong corporate governance will perform better than a firm with weak corporate governance, the results in this study gives ex post examples that can lead to more deliberation and prudence when an investor, seeking a sound investment, incorporates corporate governance with other factors in his or her analysis.

For academics and scholars, the result in this study recommends further study on corporate governance issue. At present, the ultimate recommendation from this study comes from the current impact of the market’s corporate governance perception. However, the evidences from this study do not imply that having better governance is a direct causation for a firm’s future performance, or that a firm with better corporate governance alone would perform better than others, since a firm’s performance may be driven by some other unobservable characteristics of the firm. Although there are

some researches that explain causality between corporate governance and equity returns in the Anglo-Saxon markets, the analysis on the emerging market data would be a natural progression. Moreover, this study explains many corporate governance practices separately but does not explain the combination of those practices. Hence, cross sectional analysis between each corporate governance characteristics and/or ownership by board of directors structure might reveal further insights. In addition, a very interesting further study could also come from the thorough analysis of cost and benefits of adopting corporate governance practice on a one-by-one basis. Through the 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 firm's performance still offers plenty of future opportunities for further investigations.

In summary, though corporate governance may not be the only, or the perfect, indicator of how the firms perform overall in the capital market, it is safe to say that an investor would likely be better off, if he or she chooses a firm that can conduct and maintains itself with adequate level of corporate governance to protect its shareholders' interests than the one that does not.

## BIBLIOGRAPHY

- Aekkachai Nittayagasetwat and Wiyada Nittayagasetwat. 2006. An Analysis of the Stock Price Reaction to Corporate Governance Rating Announcements: The Case of Thai Listed Companies. **NIDA Business Journal**. 1: 99-111.
- Ahn, D. H.; Conrad, J. and Dittmar, R. F. 2003. Risk Adjustment and Trading Strategies. **Review of Financial Studies**. 16 (2): 459-485.
- Alba, P.; Claessens, S. and Djankov, S. 1998. **Thailand's Corporate Financing and Governance Structures**. World Bank Policy Research Working Paper, No. 2003.
- Ammann, M.; Oesch, D. and Schmid, M. M. 2011. Corporate Governance and Firm Value: International Evidence. **Journal of Empirical Finance**. 18: 36-55.
- Anderson, R. C.; Mansi, S. A. and Reeb, D. M. 2004. Board Characteristics, Accounting Report Integrity, and the Cost of Debt. **Journal of Accounting and Economics**. 37 (3): 315-342.
- Ang, J. B. 2008. A Survey of Recent Developments in the Literature of Finance and Growth. **Journal of Economic Surveys**. 22 (3): 536-576.
- Armour, J.; Deakin, S.; Sarkar, P., Siems, M., and Singh, A. 2009. Shareholder Protection and Stock Market Development: an Empirical Test of the Legal Origins Hypothesis. **Journal of Empirical Legal Studies**. 6 (2): 343-380.
- Attig, N.; Fong, W. M.; Gadhoun, Y. and Lang, L. H. P. 2006. Effects of Large Shareholding on Information Asymmetry and Stock Liquidity. **Journal of Banking and Finance**. 30 (10): 2875-2892.
- Bae, K.-H. and Goyal, V. K. 2009. Creditor Rights, Enforcement, and Bank Loans. **Journal of Finance**. 64 (2): 823-860.
- Bebchuk, L. A. and Cohen, A. 2005. The Costs of Entrenched Boards. **Journal of Financial Economics**. 78 (2): 409-433.

- Bebchuk, L. A.; Cohen, A. and Ferrell, A. 2009. What Matters in Corporate Governance? **Review of Financial Studies**. 22 (2): 783.
- Bebchuk, L. A.; Cohen, A. and Wang, C. Y. 2010. **Learning and the Disappearing Association Between Governance and Returns**. NBER Working Paper Series, No. 15912. Cambridge, MA: National Bureau of Economic Research.
- Bebczuk, R. 2005. **Corporate Governance and Ownership: Measurement and Impact on Corporate Performance in Argentina**. Retrived October10, 2011 from <http://www.iadb.org/res/publications/pubfiles/pubr-516.pdf>
- Beck, T.; Levine, R. and Loayza, N. 2000. Finance and the Sources of Growth. **Journal of Financial Economics**. 58 (1): 261-300.
- Bhagat, S. and Bolton, B. 2008. Corporate Governance and Firm Performance. **Journal of Corporate Finance**. 14 (3): 257-273.
- Bhagat, S.; Carey, D. and Elson, C. 1999. Director Ownership, Corporate Performance, and Management Turnover. **The Business Lawyer**. 54: 885-920.
- Black, B. S.; De Carvalho, A. G. and Gorga, É. 2012. What Matters and for Which Firms for Corporate Governance in Emerging Markets? Evidence from Brazil (and other BRIK Countries). **Journal of Corporate Finance**. 18 (4): 934-952
- Black, B. S.; Jang, H. and 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. and Rachinsky, A. 2006. Corporate Governance Indices and Firms' Market Values: Time Series Evidence from Russia. **Emerging Markets Review**. 7 (4): 361-379.
- Boyd, B. K. 2006. CEO Duality and Firm Performance: A Contingency Model. **Strategic Management Journal**. 16 (4): 301-312.
- Boyd, J. H. and De Nicolo, G. 2005. The Theory of Bank Risk Taking and Competition Revisited. **Journal of Finance**. 60 (3): 1329-1343.
- Bris, A. and Cabolis, C. 2008. The Value of Investor Protection: Firm Evidence from Cross-Border Mergers. **Review of Financial Studies**. 21 (2): 605-648.

- Brockman, P. and Chung, D. Y. 2003. Investor Protection and Firm Liquidity. **Journal of Finance**. 58 (2): 921-938.
- Brown, L. D. and Caylor, M. L. 2006. Corporate Governance and Firm Valuation. **Journal of Accounting and Public Policy**. 25 (4): 409-434.
- Brown, L. D. and Caylor, M. L. 2009. Corporate Governance and Firm Operating Performance. **Review of Quantitative Finance and Accounting**. 32 (2): 129-144.
- Carhart, M. M. 1997. On Persistence in Mutual Fund Performance. **Journal of Finance**. 52 (March): 57-82.
- Carvalho da Silva, A. L. and Leal, R. P. C. 2005. Corporate Governance Index, Firm Valuation and Performance in Brazil. **Brazilian Review of Finance**. 3 (1): 1-18.
- Chen, K. C. W.; Chen, Z. and Wei, K. C.J. 2009. Legal Protection of Investors, Corporate Governance, and the Cost of Equity Capital. **Journal of Corporate Finance**. 15 (3): 273-289.
- Chen, K. C. W.; Chen, Z. and Wei, K C J. 2011. Agency Costs of Free Cash Flow and the Effect of Shareholder Rights on the Implied Cost of Equity Capital. **Journal of Financial and Quantitative Analysis**. 46 (1): 171.
- Cheung, Y. L.; Jiang, P.; Limpaphayom, P. and Lu, T. 2008. Does Corporate Governance Matter in China?. **China Economic Review**. 19 (3): 460-479.
- Chi, J. D. 2005. Understanding the Endogeneity Between Firm Value and Shareholder Rights. **Financial Management**. 34 (4): 65-76.
- Claessens, S.; Djankov, S.; Fan, J. P. H. and Lang, L. H. P. 2002. Disentangling the Incentive and Entrenchment Effects of Large Shareholdings. **Journal of Finance**. 57 (6): 2741-2771.
- Claessens, S. and Laeven, L. 2003. Financial Development, Property Rights, and Growth. **Journal of Finance**. 58 (6): 2401-2436.
- Claessens, S. and Yurtoglu, B. 2012. **Corporate Governance in Emerging Markets: A Survey**. Retrieved April 5, 2012 from [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1988880](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1988880)

- Committee on the Financial Aspects of Corporate Governance. 1992. **Report of the Committee On The Financial Aspects of Corporate Governance: The Code of Best Practice**. London: Gee.
- Connelly, J. T.; Limpaphayom, P. and Nagarajan, N. J. 2012. Form Versus Substance: The Effect of Ownership Structure and Corporate Governance on Firm Value in Thailand. **Journal of Banking and Finance**. 36 (June): 1722-1743.
- Core, J. E.; Guay, W. R. and Rusticus, T. O. 2006. Does Weak Governance Cause Weak Stock Returns? An Examination of Firm Operating Performance and Investors' Expectations. **Journal of Finance**. 61 (2): 655-687.
- Core, J. E.; Holthausen, R. W. and Larcker, D. F. 1999. Corporate Governance, Chief Executive Officer Compensation, and Firm Performance. **Journal of Financial Economics**. 51 (3): 371-406.
- Cremers, K. J. and Nair, V. B. 2005. Governance Mechanisms and Equity Prices. **Journal of Finance**. 60 (6): 2859-2894.
- Da Silva, A. L. C. and Leal, R. P. C. 2006. Ownership, Control, Valuation and Performance of Brazilian Corporations. **Corporate Ownership and Control**. 4: 300-308.
- Dahya, J. and McConnell, J. J. 2005. Outside Directors and Corporate Board Decisions. **Journal of Corporate Finance**. 11 (1-2): 37-60.
- Dallas, G. S. 2004. **Governance and Risk: an Analytical Handbook for Investors, Managers, Directors, and Stakeholders**. Camden, ME: International Marine/Ragged Mountain Press.
- Dalton, D. R.; Daily, C. M.; Johnson, J. L. and Ellstrand, A. E. 1999. Number of Directors and Financial Performance: A Meta-Analysis. **Academy of Management Journal**. 42 (6): 674-686.
- Djankov, S.; La Porta, R.; Lopez-de-Silanes, F. and Shleifer, A. 2008. The Law and Economics of Self-Dealing. **Journal of Financial Economics**. 88 (3): 430-465.
- Douma, S.; George, R. and Kabir, R. 2006. Foreign and Domestic Ownership, Business Groups, and Firm Performance: Evidence From a Large Emerging Market. **Strategic Management Journal**. 27 (7): 637-657.

- Drobetz, W.; Schillhofer, A. and Zimmermann, H. 2004. Corporate Governance and Expected Stock Returns: Evidence from Germany. **European Financial Management**. 10 (2): 267-293.
- Erkens, D. H.; Hung, M. and 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. and French, K. R. 1993. Common Risk Factors in the Returns on Stocks and Bonds. **Journal of Financial Economics**. 33 (1): 3-56.
- Fama, E. F. and French, K. R. 1997. Industry Costs of Equity. **Journal of Financial Economics**. 43 (2): 153-193.
- Fama, E. F. and Jensen, M. C. 1983. Separation of Ownership and Control. **Journal of Law and Economics**. 26 (2): 301.
- Ferreira, M. A.; Massa, M. and Matos, P. 2010. Shareholders at the Gate? Institutional Investors and Cross-Border Mergers and Acquisitions. **Review of Financial Studies**. 23 (2): 601-644.
- Filatotchev, I.; Lien, Y. C. and Piesse, J. 2005. Corporate Governance and Performance in Publicly Listed, Family-Controlled Firms: Evidence from Taiwan. **Asia Pacific Journal of Management**. 22 (3): 257-283.
- Fisman, R. and Love, I. 2007. Financial Dependence and Growth Revisited. **Journal of the European Economic Association**. 5 (2-3): 470-479.
- Gompers, P.; Ishii, J. and Metrick, A. 2003. Corporate governance and Equity Prices. **Quarterly Journal of Economics**. 118 (1): 107-155.
- Hellmann, T. F.; Murdock, K. C. and Stiglitz, J. E. 2000. Liberalization, Moral Hazard in Banking, and Prudential Regulation: Are Capital Requirements Enough?. **American Economic Review**. 90, 2 (March): 147-165.
- Heugens, P. P.; Van Essen, M. and Van Oosterhout, J. H. 2009. Meta-Analyzing Ownership Concentration and Firm Performance in Asia: Towards a More Fine-Grained Understanding. **Asia-Pacific Journal of Management**. 26 (3): 481-512.
- Hou, K. and Robinson, D. T. 2006. Industry Concentration and Average Stock Returns. **Journal of Finance**. 61 (4): 1927-1956.

- Jackson, H. E. and Roe, M. J. 2009. Public and Private Enforcement of Securities Laws: Resource-Based Evidence. **Journal of Financial Economics**. 93 (2): 207-238.
- Jensen, M. C. and Meckling, W. H. 1976. Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure. **Journal of Financial Economics**. 3 (4): 305-360.
- Jitipol Puksamatanan and Aekkachai Nittayagasetwat. 2012. Determinants of Corporate Governance and Equity Returns: Evidence From the Thai Market. **Journal of International Finance and Economics**. 12 (2): 35-49.
- Johnson, S. A.; Boone, P.; Breach, A. and Friedman, E. 2000. Corporate Governance in the Asian Financial Crisis. **Journal of Financial Economics**. 58 (1-2): 141-186.
- Johnson, S. A.; Moorman, T. C. and Sorescu, S. 2009. A Reexamination of Corporate Governance and Equity Prices. **Review of Financial Studies**. 22 (11): 4753.
- Klein, A. 2002. Audit Committee, Board of Director Characteristics, and Earnings Management. **Journal of Accounting and Economics**. 33 (3): 375-400.
- Kouwenberg, R. 2006. **Does Voluntary Corporate Governance Code Adoption Increase Firm Value in Emerging Markets? Evidence from Thailand**. Retrieved June 12, 2012 from <http://papers.ssrn.com/so13/papers.cfm?abstract-id=958580>
- Kouwenberg, R. 2010. **An Investigation of the Corporate Governance of Thai Listed Firms During The Period 2000-2008**. CMRI Working Paper, 02/2010.
- La Porta, R.; Lopez-de-Silanes, F. and Shleifer, A. 1998. Law and Finance. **Journal of Political Economy**. 106 (6): 1113-1155.
- La Porta, R.; Lopez-de-Silanes, F. and Shleifer, A. 1999. Corporate Ownership Around The World. **Journal of Finance**. 54 (2): 471-517.
- La Porta, R.; Lopez-de-Silanes, F.; Shleifer, A. and Vishny, R. 2002. Investor Protection and Corporate Valuation. **Journal of Finance**. 57: 1147-1170.

- La Porta, R.; Lopez-de-Silanes, F.; Shleifer, A. and Vishny, R. W. 1997. Legal Determinants of External Finance. **Journal of Finance**. 52 (3): 1131-1150.
- La Porta, R.; Lopez-de-Silanes, F.; Shleifer, A. and Vishny, R. W. 2000. Investor Protection and Corporate Governance. **Journal of Financial Economics**. 58 (1-2): 3-27.
- Laeven, L. and Majnoni, G. 2005. Does Judicial Efficiency Lower the Cost of Credit?. **Journal of Banking and Finance**. 29 (7): 1791-1812.
- Lemmon, M. L. and Lins, K. V. 2003. Ownership Structure, Corporate Governance, and Firm Value: Evidence from the East Asian Financial Crisis. **Journal of Finance**. 58 (4): 1445-1468.
- Lewellen, S. and Metrick, A. 2010. **Corporate Governance and Equity Prices: Are Results Robust to Industry Adjustments**. Working paper, Yale School of Management.
- Limpaphayom, P. and Connelly, J. T. 2004. **Corporate Governance in Thailand**. Retrieved April 10, 2009 from [http://papers.ssrn.com/so13/papers.cfm?abstract\\_id](http://papers.ssrn.com/so13/papers.cfm?abstract_id)
- Lin, C.; Ma, Y.; Malatesta, P. and Xuan, Y. 2011. Ownership Structure and the Cost of Corporate Borrowing. **Journal of Financial Economics**. 100 (1): 1-23.
- Lins, K. V. 2003. Equity Ownership and Firm Value in Emerging Markets. **Journal of Financial and Quantitative Analysis**. 38 (1): 159-184.
- Lintner, J. 1965. The Valuation of Risk Assets and the Selection of Risky Investments in Stock Portfolios and Capital Budgets. **Review of Economics and Statistics**. 47 (1): 13-37.
- Lyon, J. D.; Barber, B. M. and Tsai, C. L. 1999. Improved Methods for Tests of Long-Run Abnormal Stock Returns. **Journal of Finance**. 54 (1): 165-201.
- McKnight, P. J. and 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.

- Miller, D. P. and Reisel, N. 2012. Do Country-Level Investor Protections Affect Security-level Contract Design? Evidence from Foreign Bond Covenants. **Review of Financial Studies.** 25 (2): 408-438.
- 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. and 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.
- Moskowitz, T. J. and Grinblatt, M. 1999. Do Industries Explain Momentum? **Journal of Finance.** 54 (4): 1249-1290.
- Organization For Economic Cooperation and Development (OECD). 2004. **OECD Principles of Corporate Governance.** Paris: OECD.
- Orbay, H. and Yurtoglu, B. B. 2006. The impact of Corporate Governance Structures on the Corporate Investment Performance in Turkey. **Corporate Governance: An International Review.** 14 (4): 349-363.
- Pathan, S.; Skully, M. and Wickramanayake, J. 2008. Reforms in Thai Bank Governance: The Aftermath of the Asian Financial Crisis. **International Review of Financial Analysis.** 17 (2): 345-362.
- Qian, J. and Strahan, P. E. 2007. How Laws and Institutions Shape Financial Contracts: The Case of Bank Loans. **Journal of Finance.** 62 (6): 2803-2834.
- Rajan, R. G. and Zingales, L. 1998. Which Capitalism? Lessons Form the East Asian Crisis. **Journal of Applied Corporate Finance.** 11 (3): 40-48.
- Rathinam, F. X. and Raja, A. V. 2010. Law, Regulation and Institutions for Financial Development: Evidence From India. **Emerging Markets Review.** 11 (2): 106-118.
- Rossi, S. and Volpin, P. F. 2004. Cross-Country Determinants of Mergers and Acquisitions. **Journal of Financial Economics.** 74 (2): 277-304.
- Sharpe, W. F. 1964. Capital Asset Prices: A Theory of Market Equilibrium Under Conditions of Risk. **Journal of Finance.** 19 (3): 425-442.
- Shleifer, A. and Vishny, R. 1997. A Survey of Corporate Governance. **Journal of Finance.** 52 (2): 737-783.

- Song, F. M.; and Lei, A. C. H. 2008. **Corporate Governance, Family Ownership, and Firm Valuations in Emerging Markets: Evidence from Hong Kong Panel Data**. Retrieved April 10, 2009 from <http://ssrn.com/abstracts1100710>
- Starks, L. and Wei, K. D. 2004. **Cross-Border Mergers and Differences in Corporate Governance**. Retrieved April 10, 2012 from [http://jcooney.ba.ttu.edu/Finance\\_Department\\_Fall\\_2004\\_Seminar\\_Series\\_files/cross-border%20merger%20paper%20july%202004.pdf](http://jcooney.ba.ttu.edu/Finance_Department_Fall_2004_Seminar_Series_files/cross-border%20merger%20paper%20july%202004.pdf)
- Weir, C.; Laing, D. and McKnight, P. J. 2002. Internal and External Governance Mechanisms: Their Impact on the Performance of Large UK Public Companies. **Journal of Business Finance and Accounting**. 29 (5-6): 579-611.
- Williamson, O. E. 1998. The Institutions of Governance. **The American Economic Review**. 88 (2): 75-79.
- Wurgler, J. 2000. Financial Markets and the Allocation of Capital. **Journal of Financial Economics**. 58 (1): 187-214.
- Yeh, Y.; Lee, T. and Woidtke, T. 2001. Family Control and Corporate Governance: Evidence from Taiwan. **International Review of Finance**. 2 (1-2): 21-48.
- Yupana Wiwattanakantang. 2001. Controlling Shareholders and Corporate Value: Evidence from Thailand. **Pacific-Basin Finance Journal**. 9 (4): 323-362.
- Yurtoglu, B. 2003. Corporate Governance and Implications for Minority Shareholders in Turkey. **Journal of Corporate Ownership and Control**. 1 (1): 172-186.
- Zingales, L. 1998. **Corporate Governance, The New Palgrave Dictionary of Economics and Law**. London: MacMillan.

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